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Mobile Pastoralism as a retro-innovation for a sustainable future

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Abstract. Mobile pastoralists the world over share a common understanding of the rangelands they live in and a common ability to read these landscapes and be part of it. There is a strong linkage between the maintenance of mobile pastoralism and the protection of rangeland ecosystems. Yet they are also facing unprecedented challenges and the very same pressures that threaten rangelands also threaten their itinerant ways of life. However the voice of the mobile pastoralist is little heard in the cacophony of modern existence and general discord with the natural world. This manuscript, considering the many benefits of mobile pastoralism for rangeland ecosystems, raises suggestions for reflection towards ensuring the needed shift for conservation of mobile pastoralism and rangelands and promotes the International Year of Rangelands and Pastoralists (IYRP) initiative as a global opportunity to increase knowledge and understanding and to develop sustainable actions for conserving these ecosystems and the pastoralists who rely on them.

Keywords. Mobile Pastoralism – Rangelands – Biodiversity – Solutions – IYRP.

Le pastoralisme mobile en tant que rétro-innovation pour un avenir durable

Résumé. Les pasteurs mobiles du monde entier partagent une compréhension commune des terres de parcours dans lesquelles ils vivent et une capacité commune à lire ces paysages et à en faire partie. Il existe un lien étroit entre le maintien du pastoralisme mobile et la protection des écosystèmes de parcours. Cependant, les pasteurs font également face à des défis sans précédent et les pressions mêmes qui menacent les pâturages menacent également leurs modes de vie itinérants. Cependant, la voix du pasteur mobile est peu écoutée dans la cacophonie de l'existence moderne et de la discordance générale avec le monde naturel. Ce manuscrit, prenant en compte les nombreux avantages du pastoralisme mobile pour les écosystèmes de parcours, suggère des pistes de réflexion pour assurer la transition nécessaire en faveur de la conservation du pastoralisme mobile et des parcours, et promeut l'initiative de l'Année internationale des pâturages et des pasteurs (IYRP) en tant qu'opportunité mondiale d'accroître comprendre et développer des actions durables pour la conservation de ces écosystèmes et des pasteurs qui en dépendent.

Mots-clés. Pastoralisme mobile – Pâturages – Biodiversité – Solutions – IYRP.

I – Introduction

Mobile pastoralism, which is entirely different in essence to intensive livestock production systems, has offered the most sustainable way to make the most of the Earth's rangelands, as it is the case in Mediterranean (Hobbs *et al.*, 2008b).

Particularly their mobility and the common property systems they depend on have allowed them to access and conserve forage and water resources that are unevenly distributed and vary over time (Reid *et al.*, 2008).

This strong linkage between the maintenance of mobile pastoralism and the protection of rangeland ecosystems has been supported by a growing body of evidence (Yilmaz *et al.*, 2019) considering particularly that rangeland landscapes account for between one quarter and one half of the world land area and are dependent on herbivore action for their maintenance which is mostly ensured by pastoral grazing management (McGahey *et al.*, 2014).

The examples of this linkage with rangeland biodiversity include but are not limited to: **Generation of spatial heterogeneity** (Coughenour, 2008; Manzano-Baena & Salguero-Herrera, 2018); **Increasing plant species diversity** (Coughenour, 2008); **Promoting diversity of species of different taxonomic groups** (Stein *et al.*, 2014; Hevia *et al.*, 2013); **Contributing to diversity of wild herbivores** (Coughenour, 2008); **Dispersing seeds** (Manzano & Malo, 2006); **Contributing to soil nutrient cycling** (Coughenour, 2008); **Preventing water pollution** (Mekonnen & Hoekstra, 2012; Manzano-Baena & Salguero-Herrera, 2018); **Contributing to nutrient cycling** (Yilmaz *et al.*, 2019); **Preventing wildfires** (Manzano-Baena & Salguero-Herrera, 2018); **Increasing ecosystem resilience** (Coughenour, 2008); **Maintaining connectivity by creating ecological corridors** (Yilmaz *et al.*, 2019, Galvin, 2008; Coughenour, 2008; Worboys *et al.*, 2016; Hobbs *et al.*, 2008a; Galvin, 2009); **Avoiding isolation and fragmentation of rangeland ecosystems** (Yilmaz *et al.*, 2019).

II – Mobile pastoralism, rangelands and historic injustices

In contrast to the traditional view of conservationists that mobile pastoralists are unconcerned of the ecological consequences of their actions (Fernandez-Giménez, 2000), pastoralists themselves bear the highest costs of degraded rangelands (Naimir-Fuller *et al.*, 2012).

Their traditional ecological knowledge, along with the strategy of mobility and common property systems, is an important source of information that complements institutionalized conservation and moves towards a more holistic understanding of rangeland ecosystems (Yilmaz *et al.*, 2019).

With their traditional ecological knowledge ensuring attentiveness to environmental variability and shifts, mobile pastoralist communities also provide a crucial foundation in researching and responding to climate change and developing geographically-specific adaptation and mitigation strategies (Yilmaz *et al.*, 2019; Fernández-Giménez and LeFebvre, 2006).

Despite their important role in maintaining and conserving biodiversity and rangelands, mobile pastoralists particularly in the last century have suffered from historic injustices such as, *inter alia*, grabbing-dispossession (either by expropriation or privatization) of the rangelands and migration routes they use (Yilmaz *et al.*, 2019).

These threats, as a main domain of concern, break down the traditional management systems of mobile pastoralists and lead to a weakening of their social-ecological resilience. When their traditional capability to develop sustainable solutions cannot cope with such externally imposed changes, they either abandon the practice completely or diversify and differentiate their management systems, which can lead to the development of responses that in some cases may create conflict with wildlife or institutionalized conservation mechanisms, such as overgrazing (Yilmaz *et al.*, 2019).

Unfortunately, not looking the root causes of this problem, the general view among conservationists has been that traditional pastoralism is environmentally harmful and incompatible with nature conservation. Thus conservationists unfortunately contributed to justification of policies that restricts access to rangelands and to transform traditional pastoralism towards intensive livestock production (Yilmaz *et al.*, 2019).

III – Gaps and opportunities

Thus despite the need to conserve mobile pastoralism with its many benefits for rangelands, which are one of the most imperilled and the least protected ecosystems on earth, vastly under-represented in the world's protected area system, mobile pastoralism has not been paid enough attention by the global community (Yilmaz *et al.*, 2019). Acknowledging the recent endeavours of some global stakeholders such as FAO, unfortunately the responses developed within the diversity of local ac-

tors are mostly not enough recognised and consolidated with those limited number of global actions. This is one of the leading reasons why the knowledge we have of the multiple benefits the practise provides to both humankind and nature, its current situation, the drivers of the threats and the gaps and needs that conservation efforts should address, is still lacking and fragmented. It is also not easy to access the existing information by many of those who would need it most and the lack of efficient transfer of the existing knowledge leads to limited use for actions on the ground (Johnsen *et al.*, 2019).

In order to address this need to increase knowledge and understanding and to develop sustainable actions for conserving these unique ecosystems and the pastoralists who rely on them, there is an alliance of many organizations working together towards gaining a United Nations resolution designating an International Year of Rangelands and Pastoralists (IYRP, 2018).

With contributions of this global alliance, the Government of Mongolia has already initiated the official process at the level of Committee on Agriculture (COAG) of FAO. Thus, the proposal for IYRP, to be included in the agenda of the 27th session of COAG in October 2020, has been submitted to COAG secretariat in June 2019 by Government of Mongolia with other supporting countries.

In line with the IYRP initiative, to ensure the needed shift for conservation of mobile pastoralism and rangelands, the following recommendations are strongly suggested:

- Rangelands should be managed in full compliance with the inherent rights of mobile pastoral communities, especially their land and other natural resources-related rights, avoiding policies harming the physical, cultural and spiritual integrity of communities such as forced evictions, sedentarisation and restrictions to their mobility.
- Accordingly national authorities should develop policies, mechanisms and measures, which differentiate between pastoralism and intensive livestock production systems and ensure effective participation of mobile pastoral communities in the governance and management of rangelands. This approach should also recognise the traditional ecological knowledge of mobile pastoralists including traditional common property systems as an integral part of new collaborations going forwards.
- A new understanding, based on respect, dialogue, basic human compassion addressing the root causes of any conflicts including land degradation in rangelands is urgently required in areas where conflict has arisen or has the potential to arise.
- Rangeland authorities should be supported in order to find mutually beneficial solutions regarding governance and management of rangelands, starting with the development of good practice guidelines, fully informed by mobile pastoralist communities.
- The role of mobile pastoralists in maintaining rangeland ecosystems and avoiding fragmentation between wider landscapes needs to be better assessed and recognised by the conservation community and concerned states.
- Scientific community and civil society should contribute to global movement to declare an International Year of Rangelands and Pastoralism by actively engaging and influencing the relevant official authorities in their countries to support the proposal for IYRP submitted to COAG-FAO by the Government of Mongolia.
- Governments should support the proposal for IYRP submitted to COAG-FAO by the Government of Mongolia to be included in the agenda at the regional/block meetings and then vote in favour of the proposal at the 27th session of COAG in October 2020 and finally at the UN General Assembly.

References

- Coughenour, M.B., 2008.** Causes and Consequences of Herbivore Movement in Landscape Ecosystems. In: K.A. Galvin, R.S. Reid, R.H. Benke Jr. and N.T. Hobbs (eds.) *Fragmentation in Semi-Arid and Arid Landscapes*. Dordrecht, Netherlands: Springer. http://dx.doi.org/10.1007/978-1-4020-4906-4_3
- Fernandez-Giménez, M.E., 2000.** The role of Mongolian nomadic pastoralists' ecological knowledge in rangeland management. *Ecological Applications* 10: 1318-1326. doi.org/10.1890/1051-0761(2000)010[1318:TROMNP]2.0.CO;2
- Fernandez-Giménez, M.E. and LeFebvre, S., 2006.** Mobility in pastoral systems: dynamic flux or downward trend? *International Journal of Sustainable Development and World Ecology* 13 (5): 341-62. <https://doi.org/10.1080/13504500609469685>
- Galvin, K.A., 2008.** Responses of Pastoralists to Land Fragmentation: Social Capital, Connectivity and Resilience. In: K.A. Galvin, R.S. Reid, R.H. Benke Jr. and N.T. Hobbs (eds.) *Fragmentation in Semi-Arid and Arid Landscapes*. Dordrecht, Netherlands: Springer. doi.org/10.1007/978-1-4020-4906-4_15
- Galvin, K.A., 2009.** Transitions: Pastoralists Living with Change. *Annual Review of Anthropology* 38: 185-198. doi.org/10.1146/annurev-anthro-091908-164442
- Hevia, V., Azcarate, F.M., Oteros-Rozas, E. and Gonzalez, J.A., 2013.** Exploring the Role of Transhumance Drove Roads on the Conservation of Ant Diversity in the Mediterranean Agroecosystems. *Biodiversity and Conservation* 22: 2567–2581. doi.org/10.1007/s10531-013-0539-8
- Hobbs, N.T., Reid, R.S., Galvin, K.A. and Ellis, J.E., 2008a.** Fragmentation of arid and semi-arid ecosystems: Implications for people and animals. In: K.A. Galvin, R.S. Reid, R.H. Benke Jr. and N.T. Hobbs (eds.) *Fragmentation in Semi-Arid and Arid Landscapes*, pp. 25-44. Dordrecht, Netherlands: Springer. doi.org/10.1007/978-1-4020-4906-4_2
- Hobbs, N.T., Galvin, K.A., Stokes, C.J., Lockett, J.M., Ash, A.J., Boone, R.B., Reid, R.S. and Thornton, P.K., 2008b.** Fragmentation of rangelands: implications for humans, animals, and landscapes. *Global Environmental Change* 18(4):776-785. doi.org/10.1016/j.gloenvcha.2008.07.011
- IYRP Open Flyer 2018.** https://globalrangelands.org/sites/globalrangelands.org/files/IYRP%20flyer%20October%202018_2.pdf
- Johnsen, K.I., M. Niamir-Fuller, A. Bensada, and A. Waters-Bayer, 2019.** A case of benign neglect – Knowledge gaps about sustainability in pastoralism and rangelands. UN Environment and GRID-Arendal.
- Manzano, P. and Malo, I.E., 2006.** Extreme long-distance seed dispersal via sheep. *Frontiers in Ecology and the Environment* 4: 244-248. doi.org/10.1890/1540-9295(2006)004[0244:ELSDVS]2.0.CO;2
- Manzano-Baena, P. and Salguero-Herrera, C., 2018.** Mobile Pastoralism in the Mediterranean: Arguments and evidence for policy reform and to combat climate change. Gland, Switzerland: Mediterranean Consortium for Nature and Culture. http://medconsortium.org/wp-content/uploads/2017/12/MobilePastoralismMother-Document_December2017_ForWeb.pdf
- McGahay, D., Davies, J., Hagelberg, N. and Ouedraogo, R., 2014.** Pastoralism and the Green Economy – a natural nexus? Nairobi: IUCN and UNEP.
- Mekonnen, M.M. and Hoekstra, A.Y., 2012.** A global assessment of the water footprint of farm animal products. *Ecosystems* 15: 401-415. doi.org/10.1007/s10021-011-9517-8
- Niamir-Fuller, M., Kerven, C., Reid, R. and Milner-Gulland, E., 2012.** Co-existence of wildlife and pastoralism on extensive rangelands: competition or compatibility? *Pastoralism: Research, Policy and Practice* 2 (8): 1-4. doi.org/10.1186/2041-7136-2-8
- Reid, R.S., Galvin, K.A. and Kruska, R.S., 2008.** Global significance of extensive grazing lands and pastoral societies: An introduction. In: R.S. Reid, K.A. Galvin, R.H. Benke Jr. and N.T. Hobbs (eds.) *Fragmentation in Semi-Arid and Arid Landscapes: Consequences for Human and Natural Systems*, pp. 1-24. Dordrecht, Netherlands: Springer. doi.org/10.1007/978-1-4020-4906-4_1
- Stein, A., Gerstner, K. and Kreft, H., 2014.** Environmental heterogeneity as a universal driver of species richness across taxa, biomes and spatial scales. *Ecology Letters* 17: 866–880. doi.org/10.1111/ele.12277
- Worboys, G.L., Ament, R., Day, J.C., Lausche, B., Locke, H., McClure, M., Peterson, C.H., Pittock, J., Tabor, G. and Woodley, S. (Eds.), 2016.** Advanced Draft, Area of Connectivity Conservation Guidelines IUCN. Gland, Switzerland: IUCN.
- Yilmaz, E., Zogib, L., Urivelarrea, P., Çağlayan, S.D., 2019.** Mobile Pastoralism and Protected Areas: Conflict, Collaboration and Connectivity. *Parks – International Journal of Protected Areas and Conservation* 25.1, May 2019.