

BRIEFING NOTE

September 2014

# Pastoralism and the green economy – a natural nexus?

**Pastoralism – extensive livestock production in the rangelands** – is one of the most sustainable food systems on the planet. Pastoralists safeguard natural capital in more than a quarter of the world’s land area. Pastoralism is both a livestock management system and a way of life that provides globally important ecosystem services, which are enjoyed far beyond the boundaries of the rangelands. Herd mobility is central to sustainable pastoralism and can be practiced at different scales depending on local conditions: from short-term localised movements to long-range seasonal migrations.



Argentina - Credit: Pablo Manzano

The “**Green Economy**” is a vision of a future where greater material wealth does not increase environmental risk, ecological scarcity or social disparity. Moving towards a Green Economy requires growth in production and consumption without continuing to jeopardise natural capital and social equity. As economies and populations grow, so does the demand for animal products, including milk, meat and fibre. Pastoralism can play a significant role in fulfilling this demand whilst continuing to protect rangeland biodiversity and ecosystem services.

Many countries possess large areas of rangelands that are managed through pastoralism and which already make a major contribution to environmental sustainability as well as the agrarian economy. However, the environmental role of pastoralism is often ignored and is undermined by unsuitable policies and investments. With better policies and fewer disincentives governments can enable pastoral development whilst protecting rangeland environmental services that benefit the whole society.

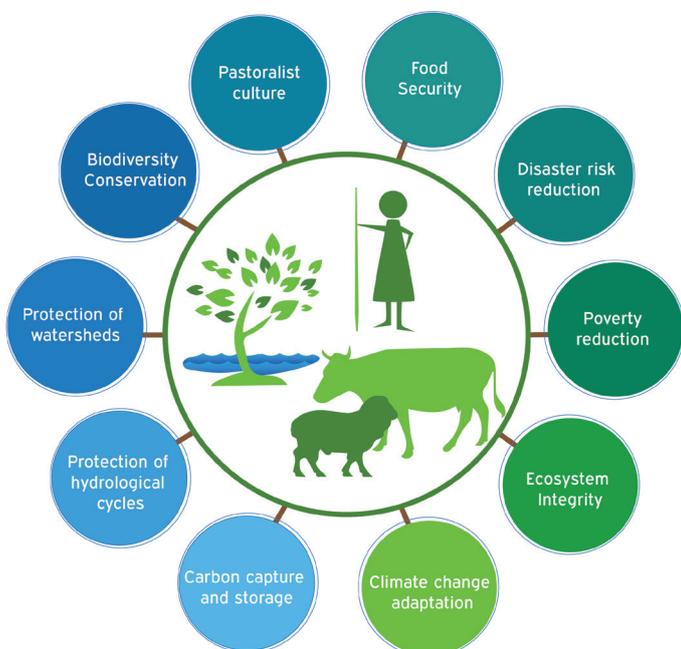
# The economic and environmental benefits of pastoralism

Many herbivores depend on rangelands, but it is less well-known that rangelands also depend on these species in return. For example, the action of large herds of ungulates creates the conditions suitable for the plant communities that characterise rangelands. When these herds are removed or are restricted from movement rangeland ecology and ecosystem functions breakdown. Well-managed domestic herds can provide many of the environmental services that wild herds provide, promoting pasture growth and biomass, and maintaining desired grass, shrub and tree species. Sustainable pastoralism contributes to soil formation, soil fertility and soil carbon, water regulation, pest and disease regulation, biodiversity conservation and fire management. In addition pastoralism contributes to economic growth and resilient livelihoods in lands that are exposed to unpredictable climates and numerous natural hazards.

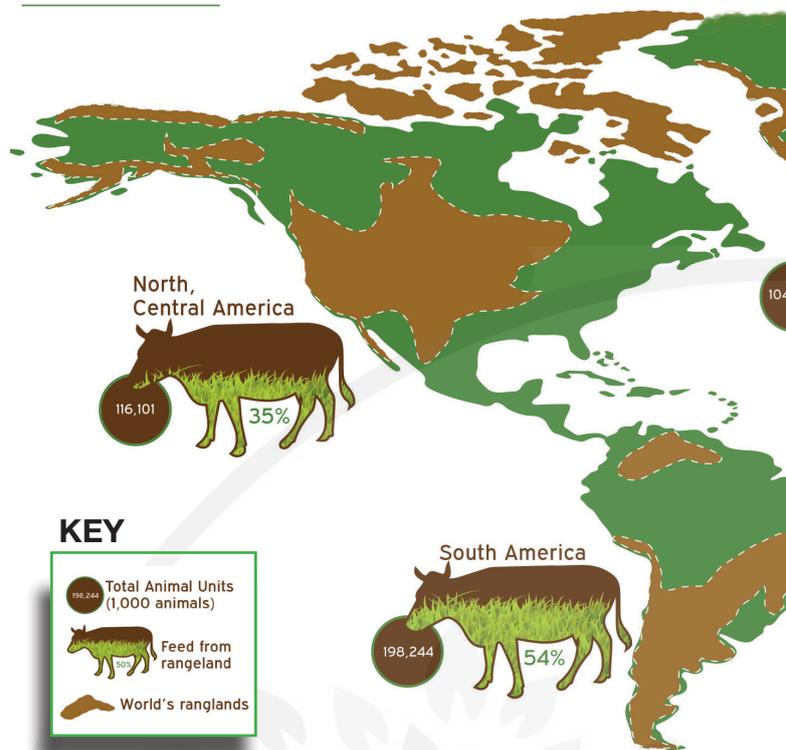
## Sustainable Land Management

Rangeland ecosystems are herbivore-dependent and too few livestock or insufficient herd movement can be a major factor in degradation: de-stocking, fixed stocking rates, and sedentization cannot be assumed to deliver sustainable rangelands management. Pastoralism depends on rangeland vegetation and other natural resources for productivity and sustainable pastoralism protects these basic assets. In the process it protects the soil and the biodiversity that sustains soil formation, hydrological cycles and other vital aspects of sustainable land management.

### Multiple benefits of sustainable pastoralism



### Rangelands and livestock production worldwide



## Conservation of Biodiversity

Pastoralism depends on diversity and translates the management of biological and seasonal diversity into livelihood resilience in environments that are often unpredictable. Sustainability depends to a large extent on the capacity of pastoralism to protect biodiversity. Pastoralists also require movement on a large scale and maintain corridors and connections between habitats that benefit biodiversity. In many countries pastoral rangelands are an integral part of national conservation strategies.

## Climate Change mitigation

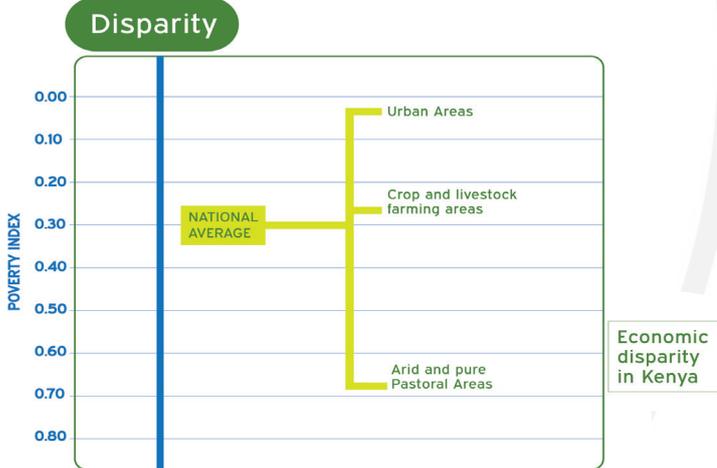
Improved grazing management on the world's five billion hectares of grasslands could sequester 409 million tonnes CO<sub>2</sub> equivalent per year: almost 10% of annual anthropogenic carbon emissions. The rangelands also store around 30% of the world's soil carbon; more than the total in the atmosphere. Considering the natural rate of carbon emissions from rangelands and the positive environmental externalities of pastoralism the system has lower emissions per unit of production than other livestock production systems.

## Poverty reduction

Pastoral poverty, particularly in the developing world, is the outcome of long-term underinvestment in basic human development: in education, health, security and good governance. On a purely economic basis pastoralism contributes strongly to rural economies, but this wealth is not translated into development. Governments can only overcome pastoral poverty by recognising the merits of the system and adapting basic services to the pastoral context. With appropriate support pastoralism contributes to poverty reduction by improving food security and creating a resilient economy in environments characterised by climate hazards and unpredictability.



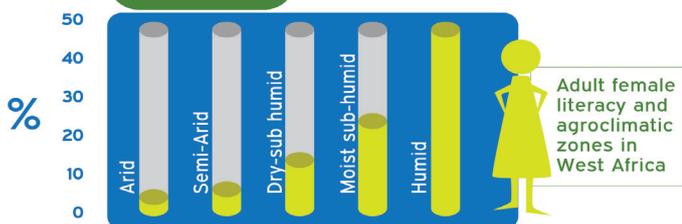
Social inequity and pastoralist poverty



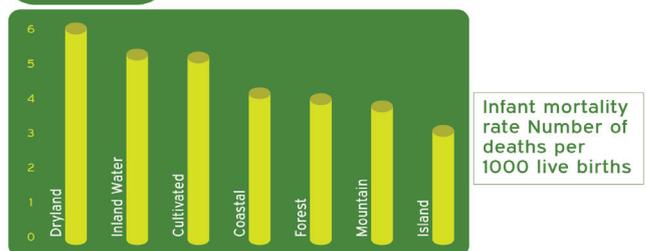
## Economic growth

Pastoralism is uniquely adapted to utilize the great diversity and unpredictability of rangeland resources, delivering a wide range of values from areas of low productivity that are ill-suited to capital intensification. Although pastoralism is considered a low-input low-output system, it makes intensive use of available natural, human and social capital to produce an array of economic, environmental and social goods and services. Pastoralism has been shown to be 2 to 10 times more productive per unit of land than more capital-intensive alternatives in the rangelands. Investments must be tailored to the needs and potential of the system, and to capitalise on the diversity and unique environmental services of pastoralism.

### Education



### Health



*On economic performance alone, pastoralism and drylands perform well. Pastoral poverty is the outcome of failure in basic human development.*

# Enabling Pastoralism for a Green Economy

## Sustainably strengthen the pastoral economy

**Build equitable value chains and improve market access** through marketing infrastructure, information services, investment in niche markets and sustainable tourism, certification of high-value products, and payments for ecosystem services.

**Promote innovation and investment in the pastoral economy** by removing disincentives to domestic trade of pastoral goods and investing in innovative approaches to livestock production and health, indigenous breed development, economic diversification, and incentivising services such as savings and credit.

**Create equity in global markets and fair trade** by reforming international trade policies that distort agricultural markets and undermine pastoralist economies, removing unfair subsidies for livestock production, and levying appropriate tariffs for the environmental costs of different sectors.

**Strengthen rights and governance over rangeland resources**—including communal rights over grazing areas, water sources, forests, livestock corridors and wildlife—through capacity building and awareness-raising for better application of national laws, building institutions for natural resource management, and empowering pastoralists through knowledge sharing and respect for Free, Prior and Informed Consent.

**Integrate pastoralists into the development mainstream** by improving representation in decision making and promoting innovation in the provision of basic services, including education, health, communications, safe water, and renewable energy.

## Invest in the environmental services of pastoralism

**Establish a global development framework for sustainable pastoralism** that reinforces existing international commitments, addresses sub-national development disparities, and responds to the current under-representation of pastoralism in the global discourse, whilst protecting against harmful investments, such as “land grabbing” for biofuel production.

**Create intersectoral mechanisms** to ensure coherent investment and policies for pastoral ecosystems and to maximise resource efficiencies across multiple sectors, such as agriculture, water, forests and wildlife.

**Capitalise on the environmental benefits of pastoralism** by marketing ecosystem goods and services and promoting awareness of the environmental values of rangeland biodiversity, genetic diversity of breeds, the cultural values of pastoralism and the health benefits of pastoral products.

**Adopt a dualistic approach to livestock sector development** by disaggregating the costs and benefits of intensive and pastoral livestock sectors in economic planning and developing differentiated policies and investments for intensive and extensive sub-sectors.

**Address information gaps on sustainable pastoralism** by improving data on pastoralist development indicators and rangeland ecology, strengthening respect for indigenous knowledge, gathering evidence of the multiple benefits of pastoralism and using Total Economic Valuation and Cost Benefit analysis to evaluate investment options and good practice and policy.

## Conclusion

Pastoralism lies at the nexus of the three pillars of sustainability and provides a combination of social, environmental and economic benefits. It exploits vast areas of land that may be best suited to multi-purpose use: extensive production of high quality food products combined with delivery of high value ecosystem services. Policies, public services and investments have to be tailored to support this combination of uses and to ensure that the full range of benefits are adequately compensated and protected.