



Can pastoralists benefit from payments for ecosystem services?

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Payments for ecosystem services (PES) schemes are gaining popularity as an environmental and development policy tool, linked to poverty reduction as well as [enhancing ecosystem sustainability](#). Spurred by environmental motives, different financial and non-financial incentive schemes are designed, theoretically to create positive social and environmental impacts. For example, as part of the European Common Agricultural Policy (CAP), payments for agri-environmental measures are offered.

Yet PES schemes are controversial. Such policy approaches based on market incentives assume a pattern of human behaviour, which is often assumed to be economically “rational” and dictated by very often individualised incentive structures. Critics argue that social, cultural and political factors are excluded by such a market-based approach to environmental policy. Within the [Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services](#) (IPBES), a [controversy has raged](#) around the use of ‘ecosystem services’ as the dominant policy tool. Alternative, more holistic perspectives have been offered – such as the idea of [‘nature’s contribution to people’](#) – that challenge what is deemed a western, individualistic economic framing.

This debate raises the question of whether PES schemes, based on market incentives, can work in pastoral settings, as is often assumed by policymakers and development organisations. Although the experience of PES schemes is relatively common in the agricultural, forestry and, to a certain degree, marine sectors, their application in pastoral rangeland settings is limited.

Recently, I was commissioned by the CGIAR Research Programme on Livestock, led by the International Livestock Research Institute (ILRI) in partnership with the International Centre for Agricultural Research in the Dry Areas (ICARDA), to produce [a study to explore the practicalities of operationalising PES in pastoralist and agro-pastoralist rangeland production systems](#) in developing countries.

The study's emphasis is on what aspects must be assessed and what practical steps might be needed to move PES systems from theoretical proposals to effective functioning systems, resulting in a [preliminary scoping protocol](#). This is designed to comprehensively guide practitioners to unearth and evaluate the risks and opportunities of operationalising PES schemes in different pastoral contexts.

Such incentives systems are an extremely complex policy tool. Similar [challenges](#) found in using [agri-environmental measures for the CAP](#) are also found in many PES schemes. For example, several concepts are embedded within such incentives, including willingness to comply, opportunity costs, time allocations, reciprocity, trust, and smoothing income and consumption flows.

Simple, standardised incentives may not work effectively in pastoral settings under uncertain conditions (political, climate, economic and social). For example, incentive structures on grazing rights would need to be continuously adapted in order to respond to variability. Institutionalising incentive systems from outside, even with lengthy participatory processes, risks making local negotiation mechanisms rigid, undermining capacities to respond to uncertainty.

While PES schemes may offer an opportunity to bridge pastoral livelihood systems with sustainable rangeland ecosystem service provision, context-specific assessments will be required. For example, PES schemes do not necessarily treat the root cause of unsustainable rangeland management, which may be due to breakdown of land control, restriction of movements, urbanisation, and grazing land encroachment from competing sectors. Rather, PES schemes treat the symptoms by influencing behaviour.

Thus the sustainability of PES tools is questionable if used alone, and without a comprehensive understanding of the root causes of unsustainable rangeland management and local dynamics. On the other hand, PES schemes could play a role in asserting pastoralists' rights on rangelands, as ecosystem services could be recognised as forms of investments, increasing the value of rangelands.

The CGIAR study follows a framework that encompasses the complexities of pastoral systems—the political, legal, institutional, social, environmental and financial aspects that determine PES scheme design—and allows a critical examination of these factors. Policy and regulation, legal frameworks, customary natural resource governance and land tenure regimes, governance and institutions and the knowledge base have been identified as the most important determining factors for operationalising PES in rangeland settings. These factors influence the PES scheme structure (buyers, sellers, intermediaries and knowledge providers), which in turn affect the three dimensions used to evaluate PES effectiveness (environmental, economic cost and social

effectiveness). As part of the study, determining aspects such as the monitoring and evaluation plan, cost assessments, cultural factors or equity concerns are also assessed.

Ultimately, much deeper considerations need to be made on the benefits and costs of such incentives schemes. For example, one evident gap is in the lack of cost-effective and reliable capacities to measure and monitor ecosystem service outputs provided by more sustainable rangeland management practices. Furthermore, establishing causality between incentives, changes in behaviour, and changes in ecosystem service outputs in uncontrolled contexts is extremely difficult.

Given the multiple challenges in pastoral contexts, it is unlikely that market-based PES schemes alone will change behaviour or maintain practices that produce favourable rangeland ecosystem outcomes. Instead, PES schemes should be viewed as one of a number of options. Perhaps as an initial stimulation for process change, which should then lead to ecosystem provision without the need of incentives.

Creative pathways can be used to direct such process changes and overcome some of the challenges highlighted. Examples of complementary solutions discussed in the study include: the use of non-financial incentives, designing landscape-based and community-wide PES schemes, linking PES schemes with extractive industries (through biodiversity offset programmes), as well as community-based natural resource management practices (grazing reserves, fodder banks), indigenous breed conservation (biocultural community protocols and niche markets) and nature conservation programmes.

Given the huge value of rangelands as sites of biodiversity, carbon storage and water management, for example, the key question remains, can a market-based solution provide the sort of policy framework that is needed, or is a wider perspective required that sees pastoral ecosystems and livelihoods as more integrated systems, requiring complementary solutions in highly uncertain environmental, market and governance settings?

Image credit: Dr Antonello Franca, APPIA