

Putting Economic and Environmental Sustainability Hand in Hand to Protect Our Lands

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Paddy fields near Hetauda, Nepal, with the Himalayas in the background.

Land degradation is an underestimated global concern with far-reaching implications affecting the ability of land to provide food and incomes. Globally, a large portion of the vulnerable human populations—the rural poor—live on degrading and less-favored agricultural lands without market access. Heterogeneous solutions that ensure both economic and environmental sustainability are needed at multiple scales.

On a policy level, awareness of land and soil degradation is increasing. Last year all countries adopted a set of goals as part of the 2030 Agenda for Sustainable Development. The specific goal on land degradation includes a commitment for countries to take steps to achieve a land-degradation neutral world. This commitment is universal; it will apply to developed as well as developing countries and covers lands with sufficient rainfalls for agriculture as well as drylands across political borders.

However, a recent publication claims ‘the end of desertification’ and calls for a more nuanced approach to the serious problem of global land degradation that moves away from the emotional rhetoric of expanding deserts and sand-covered villages, forcing people to migrate into an uncertain future.¹ Such doom and gloom stories dominated international discussions in the late 20th century and provided the arguments for the establishment of a UN Convention to Combat Desertification, which is now specifically addressing this issue. Others have countered this direction of thoughts with a more optimistic view of how populations can survive by building on traditional knowledge in a new paradigm for people, ecosystems, and development.

Despite these debates, no one contends that land degradation is not a very real and serious problem. This is especially so for the sectors of society who are mainly smallholder farmers in drylands and characterized as being the poorest, hungriest, least healthy, and most marginalized people on Earth. These people depend on land as the basis for their economic development and opportunities, as small as they might be. A sustainable management and rehabilitation approach of land must thus be engaged for their survival and well-being.

Technical solutions to preventing and/or reversing land degradation abound, and yet the problem persists. This is mainly due to a lack of enabling institutions and policies, which can facilitate the investments needed as well as limited knowledge exchange and dissemination amongst people affected by the impacts of land degradation. Economic arguments based around the total economic value and the use of robust cost–benefit analyses can provide a common language for stakeholders to work from. It can also help determine the most equitable and fair distribution of benefits that often result from sustainable land management. This is why the Economics of Land Degradation (ELD) Initiative was set up—it is an international collaboration of researchers and stakeholders that aims to establish a network of practitioners sharing knowledge and tools to enable better decision making in land management, using the most robust economic understandings hand in hand with understandings of socio-economic drivers and outcomes.



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A farmer on a water buffalo in Southern Terai, Nepal.

For example, people living in marginalized rural areas have survived for centuries by coping with adverse conditions of climate and political isolation. Many of them still rely heavily on agricultural and especially livestock production. Rangeland grazing is often the most efficient means to harvest and concentrate the meager, but very widespread nutrients found in range vegetation into useful products such as meat, milk, and fiber. Still, in general terms, only 50 percent or less of household income in these regions comes from this form of extensive agriculture. It also can be supplemented by more intensive production where water is available near river courses and oases, or when groundwater is tapped—which is often unsustainable.

When we look into the future, it is probable that this type of livelihood will not support the expected numbers of people populating the regions in dryland areas, especially when considering that areas such as North Africa and the Middle East have some of the highest birth rates. We need powerful economic arguments to shift the policies that influence land use decisions to sustainable land management.

In the meantime, a booming population of young people who will not be able to find employment in traditional agriculture and other land-management systems is developing. Land deterioration, depletion of both water and land, deforestation, and desertification are slow-onset processes that can become a factor for mobility. Migration and urbanization are already happening, and are complex and diverse phenomena with multiple drivers leading to them. Widespread land degradation (in terms of loss of nutrients, soil erosion, salinization, and pollution) is one of

these drivers and is likely to add to outmigration from rural areas, general discontent, and possible linkages to overseas migration.

A different approach of managing the land can mitigate the issue. So what types of farmers will be needed in the near and longer term? In this debate, the link between land, its valuation, and misuse comes into play. It is clear from the studies of the ELD Initiative that we generally underestimate the value of land, and in some locations there is a large disconnect between the financial and true value of land.

The cost of land degradation does not only include the loss of harvests and declined livelihoods but also the loss of ecosystem services provided by the land. Given that agriculture, although the mainstay, is increasingly insufficient to provide viable livelihoods, we need to look at land from its multifunctional and multisectoral aspects. The approach of the ELD Initiative, which embraces a total economic valuation methodology, addresses this multifaceted approach through a cost–benefit analysis. This approach includes land as a provider of ecosystem services, therefore including its value and additional income generation through the energy, water, and food sectors and potential for tourism in expansive areas that attract visitors.

In developing solutions to something as complex as land degradation, it is important to understand the nature of how factors like the environment and socio-economics interact, and then create knowledge portals while building capacity globally. To contribute to these efforts, the ELD Initiative has undertaken case studies in regions across the world to support the knowledge base that underscores enhanced, accurate land valuations. This includes studies on the value of ecosystem services and scenarios of land use in different places around the world as well as stakeholder consultations globally. It also supports the ongoing work of the scientific community through reports highlighting the latest research, policy-makers through targeted briefs, and the private sector through guidelines for sustainable business practices and strategies. The ELD Initiative also endeavors to build capacity with stakeholders through the development of practitioners' and users' guides that share step-by-step outlines on how to undertake a total economic valuation for an individual area or region.



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A Taru woman selling homegrown produce at a local market in Rajbiraj, Nepal.

Understanding the many ecosystem services provided and valuing them, even when they are normally not included in the market and decision-making processes, then leads to the concept not of farmers tilling these degraded lands, but rather a concept of farmers and other land managers as stewards of the land who ought to be rewarded for their multifaceted activities in preserving ecosystem habitats, of safeguarding water supplies, of contributing to carbon sequestration, and all the many aspects connected to the sustainable management of land.

There is a need to define ‘future farmers’ and ensure that society supports their stewardship activities and that they reap sufficient benefits that can attract them to remain on the land, as developing countries’ long-term economic growth is highly dependent on natural resources. Their continued support in the management of land can indeed create new centers of sustainable activity that are likely to be a major source of economic growth and advancement in newly developing economies. They will also attract young people to remain in rural towns, thus securing much-needed resource bases while developing community-level capacity and resilience against fluxes in the market or environmental shifts. These areas must also be seen as new progress regions for the private sector, well supported by congenial, enabling environments, to encourage diverse and healthy investments. The establishment of these regions is largely the responsibility of national governments, as they provide a larger framework for land uses. The ELD Initiative aims to work with ministers and nations to support their understanding of these types of economic contexts before making decisions around land use, change, and management.

Economics can be used as a universal language, helping both to raise awareness for the issue of degrading land and the loss of the basis of production to policy makers, and to support good decision making in this context. It pays to invest in the rehabilitation of land, as the results of the ELD Initiative studies in a number of different projects indicate. This, and other on-going efforts to produce economic understanding of terrestrial ecosystem value will result in the sustainable management and conservation of land as the crucial resource for economic development and food security for future generations, and contribute greatly to land degradation neutrality.

References

1. Behkne, R & Mortimore, M (eds). *The End of Desertification? Disputing Environmental Changes in the Drylands* (Springer, New York, 2016).