Economic rewards of better land management: Estimated 2.3 billion tons of crops worth $1.4 trillion

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Adopting proven sustainable land management practices could raise world crop supplies by an estimated 2.3 billion tonnes, worth $1.4 trillion, experts say in a study being released at a major global desertification conference.

Conducted by the international Economics of Land Degradation initiative, the scientific interim report says land's economic value "is chronically undervalued and commonly determined by immediate agricultural or forestry market values."

"This focus on short-term gain motivates the highest extraction rates possible from land, leading to unsustainable land management and degradation (the reduction or loss in biological or economic productivity)."

The study highlights the need for a "total economic approach" to tackling global land degradation, "a serious global problem" exacerbated by decreasing crop yields and a fast-growing human population.

The value of benefits far outweigh the cost of prevention and remediation in most situations, according to the study, and valuing land and related ecosystem services is both urgent and necessary to focus attention on a rising world crisis.

Issued at the 11th session of the Conference of Parties to the UN Convention to Combat Desertification, Windhoek, Namibia (Sept. 16-27), the study says 10 to 20% of drylands and 24% of the world's usable lands are degraded, resulting in estimated economic losses of US $40 billion per year.

And the problem affects in particular the world's 1.2 billion rural poor – those who depend directly upon the land for sustenance and income.

For the 2 billion people living in drylands, annual global losses of arable land can amount to 8 to 10 million hectares per year—an area roughly the size of Austria.

Land degradation "is mainly the result of land mismanagement, drought related-famines, and misperceptions of plentiful food production, large food stocks in Europe, open land frontiers, relatively cheap subsidized food, low land prices, and abundant energy and water resources," according to the study.

By 2050, an increase of at least 70 to 100% in food production from existing land resources may be needed, the study warns.

"If agricultural land productivity remains at its current levels, an estimated 6 million hectares of land (roughly the area of Norway) would need to be converted to agricultural production every year until at least 2030 to satisfy this growing demand."

A combination of rising land prices since 2007 / 2008 and "the proliferating rush of foreign investors seeking to buy or lease land is a signal that the world is waking up to threats from land degradation and closing frontiers. Despite this interest, levels of investment in land remain far below those needed to meet the rising demands for food and land-related services. Agricultural investments to the order of US $30

billion per year are needed to feed our growing global population."

The study details, with examples, a method of calculating the competing economic values of alternative land uses.

"By providing the scientific community, governments, and the private sector with a scalable, adaptable toolbox for total economic valuations, the initiative is intended to help prevent and/or reversal land degradation globally," says lead author Richard J. Thomas, Associate Director of the UN University's Canadian-based Institute for Water, Environment and Health (UNU-INWEH).

The initiative "will also reduce social tensions arising from this issue, in recognition of the limits of finite resources. Sustainable land management can provide environmental, economic, and social benefits for the greater good on a long-term scale, and can be arrived at with the assistance of the tools and methodologies outlined in the report."

The study says that putting economic values as inclusive as possible "will allow for the clearest picture of land and land service values, and provide a foundational platform to guide land use, investment and equitable planning decisions that do not result in the further impoverishment of rural farmers or degradation of land."

Analyses included in the study reveal a lack of capacity in developing nations of Africa, Asia, Central and South America to research and implement their own solutions to land degradation, as well as global failures to promote sustainable land management among critically important local farmers and other stakeholders.

ELD's large database of case studies has been made available and further reports aimed at the scientific community, governments and the private sector are planned over the next two years.

In addition to Dr. Thomas, authorship of the report was led by Emmanuelle (Emma) Quillérou and Naomi Stewart of UNU-INWEH. Major contributors were Lucie Andeltova and Mark Schauer (ELD Secretariat at GIZ and the Germany Centre for Development Research), Stacey Noel (Stockholm Environment Institute), Edward Barbier (University of Wyoming) and Simone Quatrini (The Global Mechanism of the UNCCD).

Says Zafar Adeel, Director of UNU-INWEH: "International action on achieving sustainable land management and preventing massive land degradation can only be triggered when we know the cost of inaction. Land degradation today is largely a mismanagement problem, and one that needs to be fixed in a hurry given rising populations and slowing growth in crop yield. Sound economic valuations are thus an essential policy tool for the international community, and this study aims to provide precisely that."

Provided by United Nations University

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