Land Degradation Neutrality (LDN) in Kenya: The Economic Case

LDN socioeconomic dimensions in Kenya

Land is a source of sustenance and well-being for present and future generations.

An estimated 8.9 million people were living in degrading agricultural areas in 2000. This is about 36% of the Kenya's rural population. That number grew by another 1.8 million people by 2010, making up **a total rural population of 10.8 million living on degrading agricultural areas by the end of that year**. This represents an increase of 21% for this decade (see table 1 for further details).

Table 2: Annual cost of land degradation in Kenya

Total annual cost of land degradation (in USD of 2007)	1.5 billion USD
Share of the cost of LD due to provisioning ecosystem services	66%
Cost of land degradation as % of GDP	5%
GDP 2014	61 billion USD
GDP per capita 2014	1358 USD

Source: Nkonya et al. 2016; UNSD 2016.

Moreover, research[1] shows that **the state of the land, whether it is improving or degrading, has a significant effect on the effectiveness of policies to alleviate poverty**, making land an accelerator (or decelerator) of such measures.

The annual cost of land degradation in Kenya is estimated at 1,5 billion USD. This is equal to 5% of the country's GDP (see table 1).

Empirical evidence from global assessments on land degradation[2] shows that **the returns of taking action against land degradation are estimated at 4 US dollars for every dollar invested in restoring degraded land**.

Sustainable Development Goal 15, 'Life on Land', and its target 15.3 on Land Degradation Neutrality (LDN), in particular, encourages nations to strive for a land degradation neutral world by halting desertification and restoring degraded land by 2030. The UNCCD country Parties decided to pursue Land Degradation Neutrality during the 12th session of the Conference of the Parties, in October 2015. Countries were invited to set voluntary national LDN targets through the LDN Target Setting Programme. By October 2016, 102 countries had joined the process.

The new post-2015 development agenda is a unique opportunity for countries to curb the growing threats of land degradation and reap multiple socioeconomic benefits of LDN instead. Investments in land advance the accomplishment of other national SDGs on issues such as poverty eradication, economic growth, food security, gender equality and climate stabilization.

Table 1: Population in degrading agricultural areas in Kenya

Population categories	2000	2010	% change from 2000 to 2010
Rural population on all degrading agricultural land	8,982,140	10,850,937	21%
Share (%) of rural population on all degrading agricultural land	35.9%	36.7%	2.0%
Rural population on all remote degrading agricultural land	1,951,610	2,381,968	22%
Share (%) of rural population on all remote degrading agricultural land	7.8%	8.0%	3%
Rural population	25,001,300	29,599,100	18%
Total population	30,659,800	36,930,000	20%

Source: Barbier and Hochard 2014.

Africa's Regional Outlook

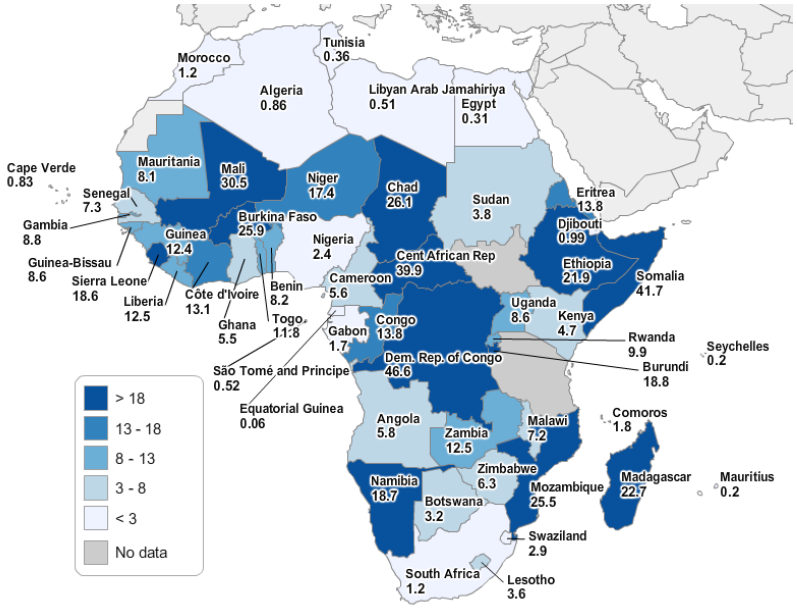
Africa accounts for the second largest share (22%) of the total global cost of land degradation after the Asia region, and is estimated at about 65 billion United States dollars. This amounts to about 5% of the region's Gross Domestic Product (GDP) – see table 3**.** The costs as a share of the GDP are much higher for some countries. For instance, the costs of land degradation for the Democratic Republic of Congo are estimated at 46% of the GDP (see map 1-a). A substantial share of this land degradation cost is from the loss of global ecosystem services as carbon regulation flows.

I**n Africa, 184 million people live in degraded agricultural areas, which is about 23% of the total population.** In Rwanda, this figure rises to 76% of the country's rural population or about 6.7 million people. In Ethiopia, the percentage of people living in degraded areas reached 34% in 2010, that is, 25 million people.

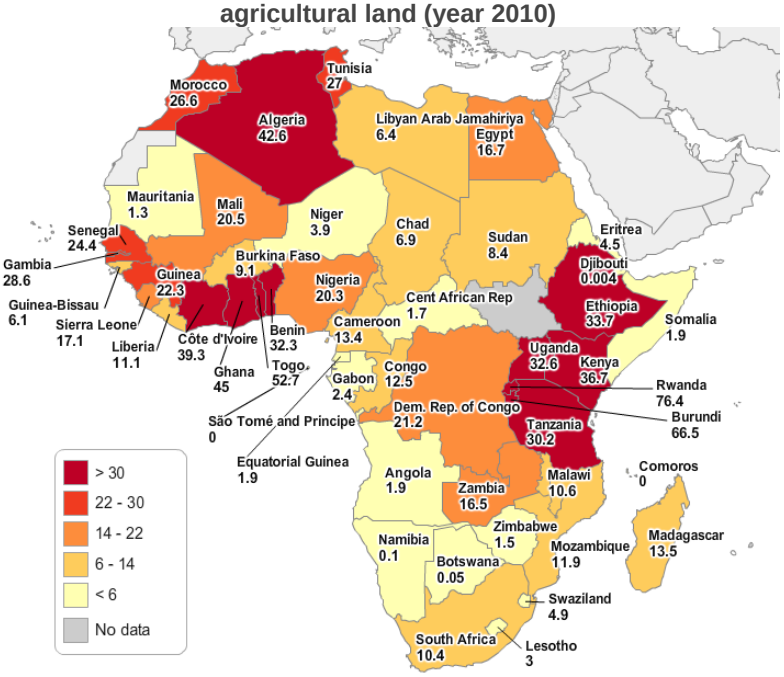
Map 1-b provides an overview of the percentage of people in Africa living in degrading agricultural areas.

Analyses comparing the costs of halting land degradation versus the business as usual scenario show that the cost of action is lower than the cost of inaction. In fact, the social returns of taking action are significant. I**n Sub-Saharan Africa, an investment of one US dollar in the restoration of degraded land returns four US dollars.**

Map 1-a: Percentage of the cost of land degradation in GDP (year 2007)



Map 1-b: Percentage of rural population on all degrading agricultural land (year 2010)



Source: Nkonya et al. 2016; Barbier and Hochard 2014.

Global Overview

At present, approximately 25% of the global land surface is degraded, which has led to a reduction in and loss of ecosystem services. Every year, we lose an **estimated USD 295 billion from global land degradation.**

Estimates also suggest that **about 1.5 billion people worldwide (or 32% of the global rural population) lived in degrading agricultural areas in 2010**. The most affected region is Asia, with a population of 1.1 billion living in degrading agricultural areas. Table 3 contains a breakdown of the population living in degraded agricultural areas and the costs of land degradation by region, sub-region and the total world.

The social returns of taking action at a global level are estimated at five US dollars for every US dollar invested in the restoration of degraded land.

Table 3: Cost of land degradation and population on degrading agricultural land at regional, sub-regional and globa

Regions and subregions	Rural population on all degrading agricultural land (year 2000; in millions)	Rural population on all degrading agricultural land (year 2010; in millions)	Percentage change from 2000 to 2010 in the rural population on all degrading agricultural land	Total annual Cost of land degradacion (in millions of USD of 2007)	Percentage of the annual cost of land degradation in global GDP (year 2007)
Africa	**137**	**184**	**34.7%**	**64,873**	**5%**
Eastern Africa	57	79	39.4%	19,185	13%
Middle Africa	13	18	38.7%	16,691	12%
Northern Africa	25	30	19.9%	4,825	1%
Southern Africa	2	2	1.6%	5,885	2%
Western Africa	41	56	37.5%	18,287	5%
Asia	**1,061**	**1,177**	**10.9%**	**83,725**	**1%**
Central Asia	15	17	11.7%	5,821	4%
Eastern Asia	592	611	3.2%	31,471	0%
South-Eastern Asia	127	167	31.2%	13,957	1%
Southern Asia	295	345	16.8%	26,443	1%
Western Asia	32	37	16.2%	6,031	0%
Europe	**81**	**76**	**-6.5%**	**35,097**	**0%**
Eastern Europe	42	38	-10.9%	26,152	1%
Northern Europe	10	10	4.1%	2,979	0%
Southern Europe	19	18	-5.0%	3,347	0%
Western Europe	9	9	-1.2%	2,620	0%
Latin America and the Caribbean	**41**	**48**	**17.8%**	**60,514**	**2%**
Caribbean	2	2	9.0%	893	1%
Central America	10	12	17.1%	9,374	1%
South America	29	34	18.8%	50,247	2%
Northern America	**11**	**11**	**7.5%**	**35,813**	**0%**
Northern America	11	11	7.5%	35,813	0%
Oceania	**1**	**1**	**-0.1%**	**15,341**	**1%**
Australia and New Zealand	0.7	0.6	-13.7%	15,315	1%
Melanesia	0.2	0.3	47.7%	23	0%
Micronesia	-	-	0.0%	1	0%
Polynesia	-	-	0.0%	1	0%
Total World	**1,331**	**1,497**	**12.4%**	**295,363**	**1%**

Source: Nkonya et al. 2016; Barbier and Hochard 2014; UNSD 2016.

References

[1] Barbier E. and Hochard J., 2014. "Land Degradation, Less Favored Lands and the Rural Poor: A Spatial and Economic Analysis." A Report for the Economics of Land Degradation Initiative. http://eld-initiative.org/index.php?id=111

[2] Nkonya, E., Mirzabaev, A., and von Braun, J., 2016. Economics of Land Degradation and Improvement – A Global Assessment for Sustainable Development.. Springer. http://link.springer.com/book/10.1007%2F978-3-319-19168-3.

[3] UNSD, 2016. National Accounts Estimates of Main Aggregates. United Nations Statistics Division. Retrieved from http://unstats.un.org/unsd/snaama/dnlList.asp

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