



ETHIOPIAN BIODIVERSITY INSTITUTE ENSURING LAND DEGRADATION NEUTRALITY IN ETHIOPIA



**Outreach Material for School Childrens,
Farmers, Agricultural Extension Agents
and other Land Users**

May 2024
ADDIS ABABA



Ethiopian Biodiversity Institute
Biodiversity and Ecosystem Services Network (BES-Net) Phase II Project

Ensuring Land Degradation Neutrality in Ethiopia

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Overview of Land Degradation and Land Degradation-Neutrality

The simplest definition of land degradation is a process in which the value of the biological and physical environment is affected by a combination of human activities upon the land.

Land degradation neutrality on the other hand is defined as a condition whereby the amount and quality of land resources necessary to support environmental functions and services to enhance food security remain stable, or increase, within specified time and geographical location and ecosystems.

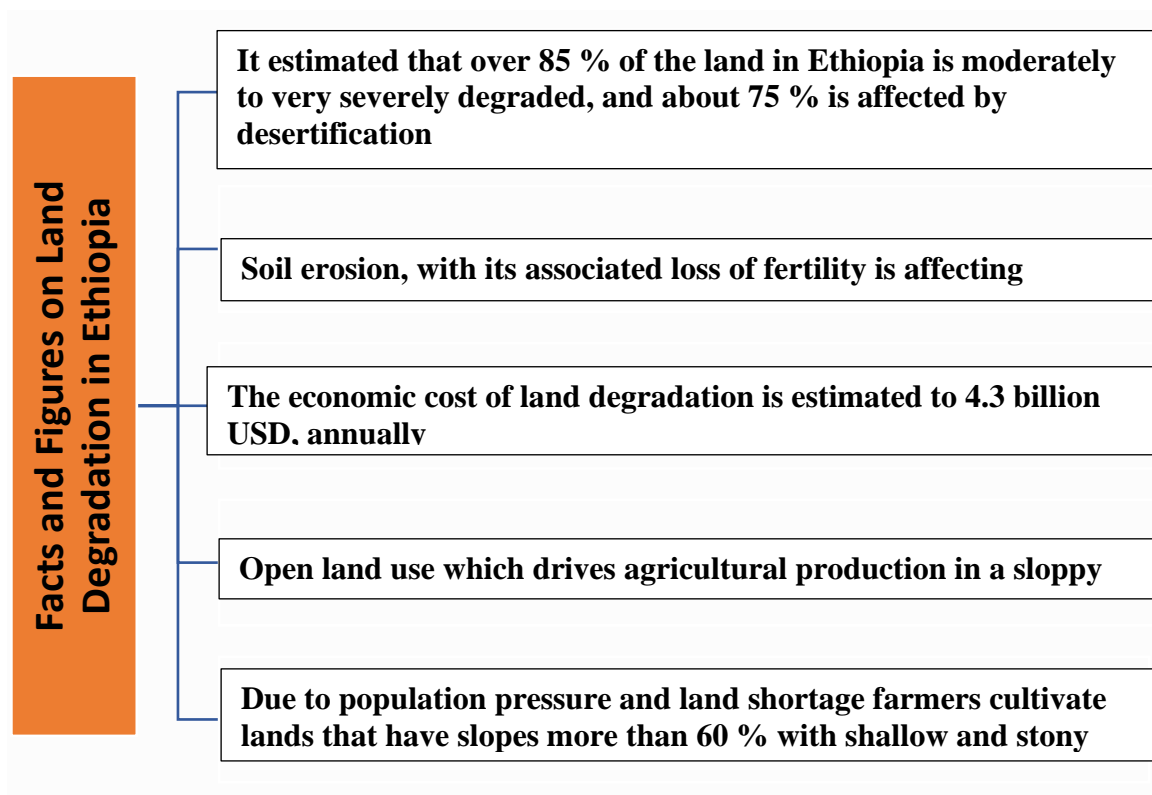
Land degradation is (LD) a process in which the value of the biological and physical environment is affected by a combination of human activities upon the land.

Land degradation neutrality (LDN) is a condition whereby the amount and quality of land resources necessary to support environmental functions and services to



Figures 1. Overview of land degradation

❖ Facts and Figures on Land Degradation in Ethiopia



❖ Causes of Land Degradation

Though land degradation is caused by both human and natural causes, human activities are the major drivers of land degradation.

The main human causes attribute to:

- Land clearance and deforestation for search new agricultural land and other economic activities
- Depletion of soil nutrient due to poor farming practices,
- overgrazing and open grazing regime,
- over harvesting of natural resources such as timber, mineral, water, etc
- poor land use planning, and unsustainable extractive mining

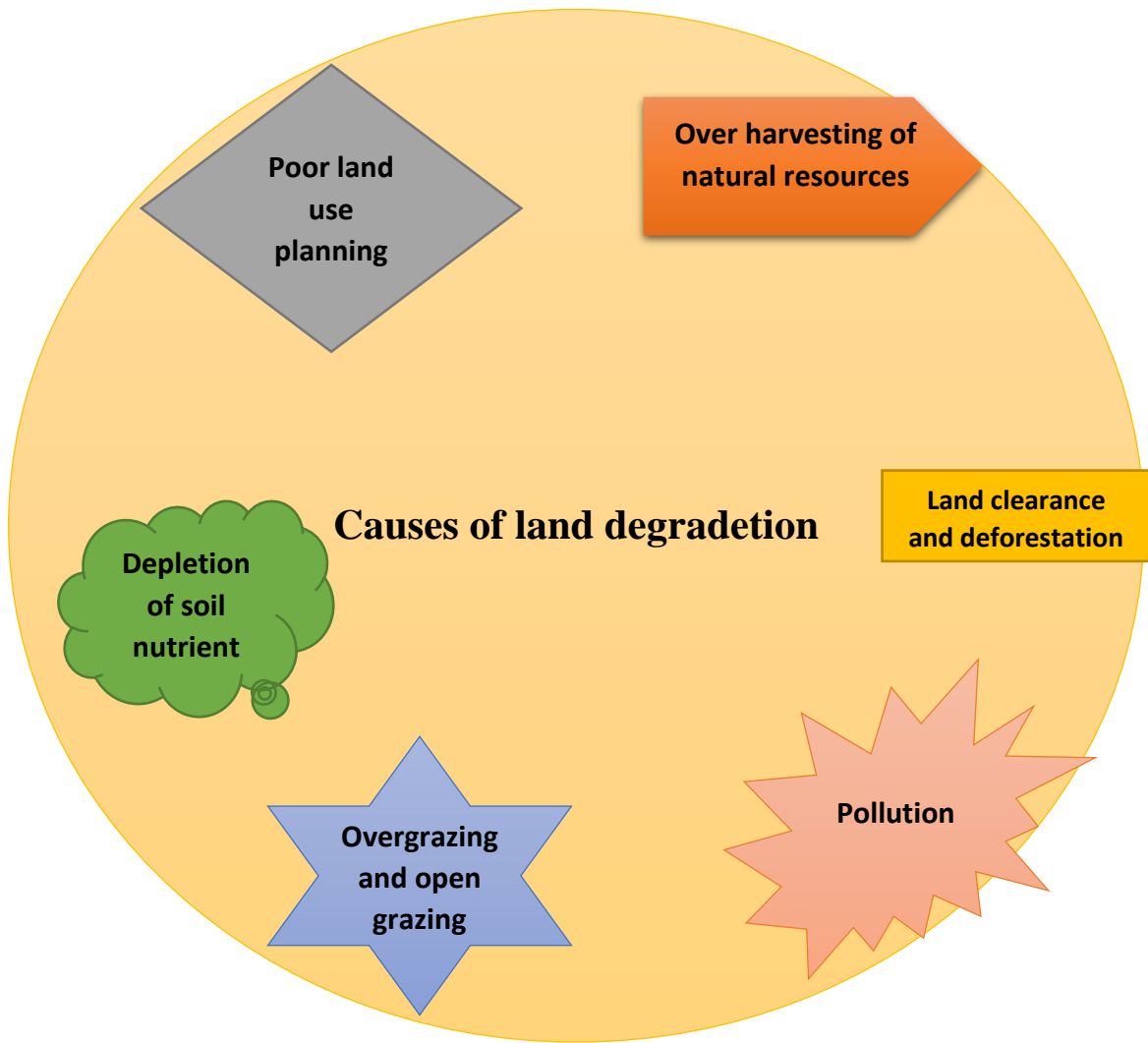


Figure 2. Major causes of land degradation



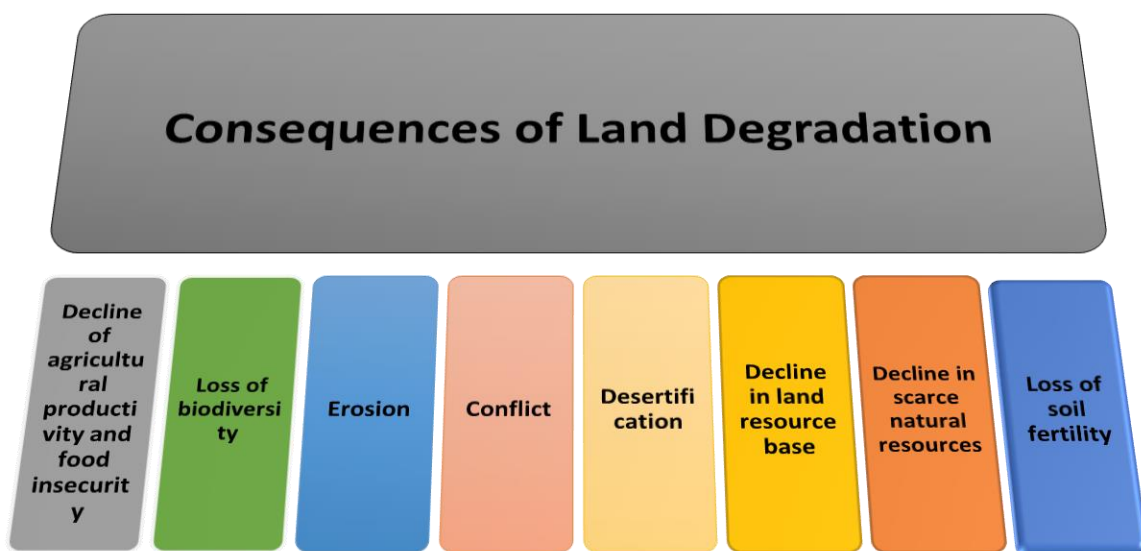
Figure 3. Deforestation (Source: www.sciencephoto.com)



Figure 4a) Overgrazing (Source: www.kullabs.org) Figure 4b) Pollution (Source: www.cbsnews.com)

❖ Consequences of Land Degradation

Among others, land degradation has the following consequences



❖ Measures for addressing Land Degradation

- ❖ Once a landscape has been degraded to the point that ecosystem services delivery is declined, communities and governments may intervene to restore a landscape to its original state. Restoration of degraded land requires measures that enable it to rehabilitate and acquire its healthy and productive position. Such measures enhance generation of ecosystem goods and services by nurturing alternative and best possible complementarities.

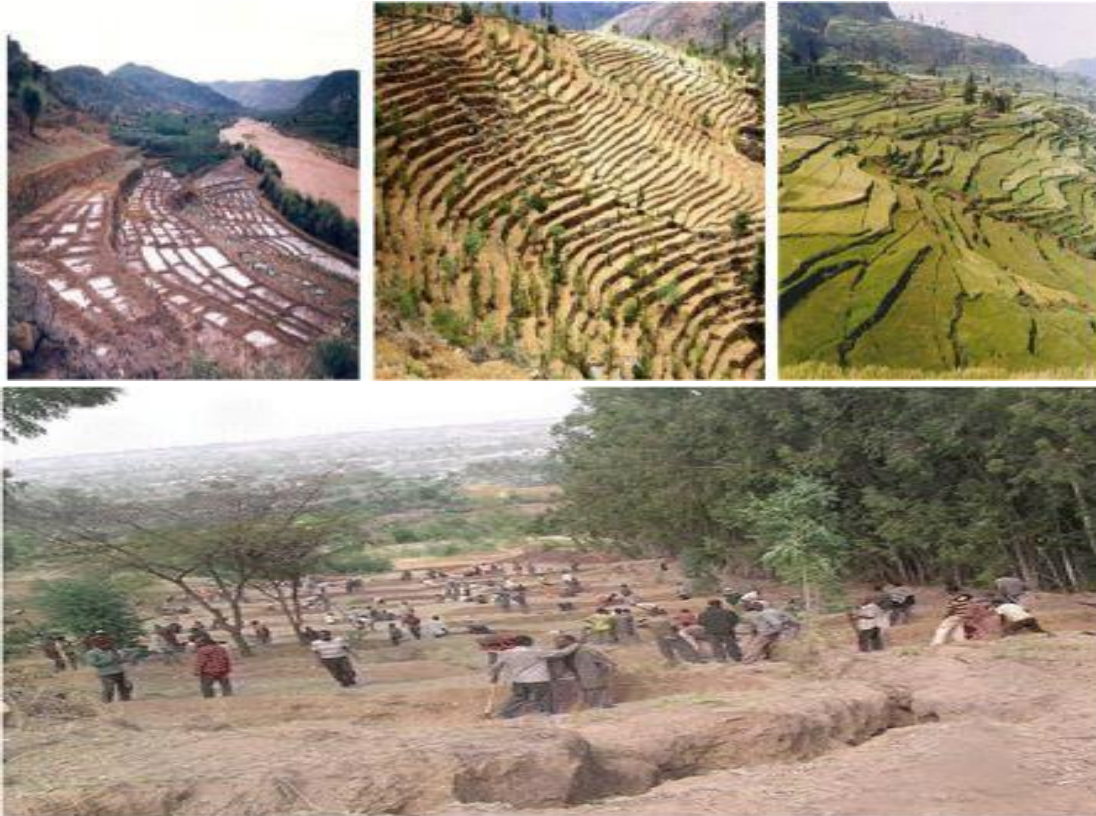
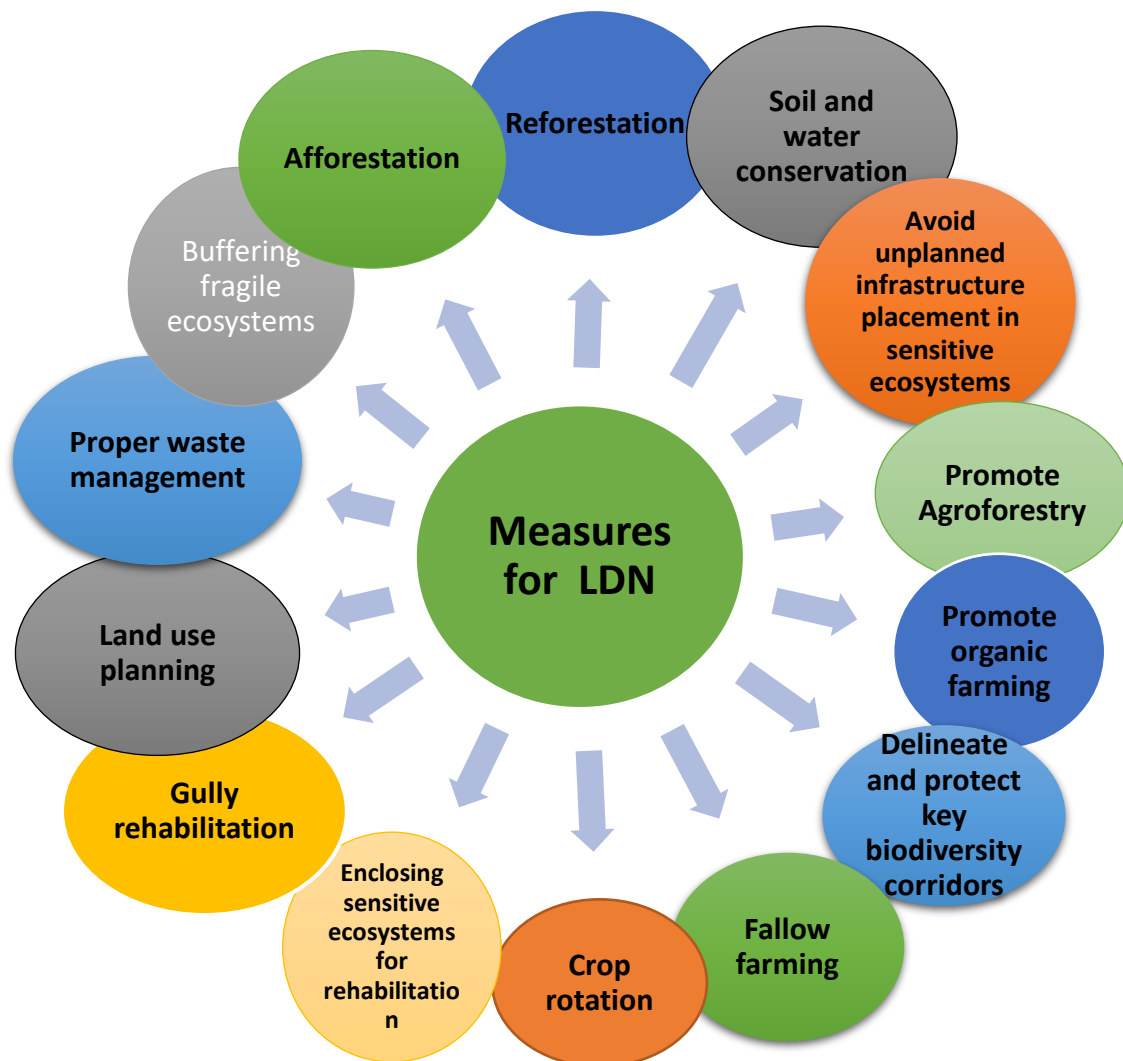


Figure 5. Based on experiences, the following measures are identified as useful techniques for land degradation neutrality.

Based on experiences, the following measures are identified as useful techniques for land degradation neutrality.

- Soil and water conservation
- Reforestation of degraded forest land
- Afforestation of new forest area
- Gully rehabilitation
- Enclosing sensitive ecosystems for rehabilitation
- Crop rotation

- Practice cover farming/regenerative agriculture
- Fallow farming
- Buffering riversides, wetlands and other fragile ecosystems
- Promote organic farming
- Promote Agroforestry
- Properly manage wastes
- Catchment land use planning
- Delineate and protect key biodiversity corridors
- Avoid unplanned infrastructure placement in sensitive ecosystems



❖ Roles of Stakeholders to ensure (LDN)

Policy makers

- Enact policies, laws and regulations relevant to land and land resources management

- Coordinate policy implementation
- Mobilize finance and human resources for proper implementation of policy and laws
- Institutional set-up and capacity strengthening

Local government executing agencies

- Plan, direct and implement land rehabilitation and restoration endeavours
- Lead local land use planning and law enforcement
- Put in place local stakeholder coordination mechanism for land degradation neutrality
- Build capacities of local stakeholders
- Mobilize and coordinate communities and other stakeholders for LDN
- Implement a framework of monitoring and evaluation for LDN

Non-Governmental Organizations (NGO)

- Engage to community capacity building for LDN
- Provide technologies and innovation for LDN
- Facilitate exchange of lessons and scale-up LDN best practices
- Facilitate rural finance solutions for innovative enterprises and CBOs

Education and Research institutions

- Train quality human power on natural resources management, monitoring and analysis
- Present tools and information for tracking land resources change
- Provide up to date research product relevant to Sustainable land management

Community based organizations (CBOs)

- Lead community level natural resources management planning, implementation and monitoring
- Mobilize participatory degraded land rehabilitation activities
- Coordinate existing resources including indigenous knowledge for land rehabilitation, restoration, transformation and efficient use
- Enforce community by-laws on resource protection, management and utilization
- Collaborate with other stakeholders to fulfil LDN targets and outcomes

The Public

- Participate in massive land rehabilitation activities and other public works

- Contribute labour, skill and finance when deemed necessary for land rehabilitation
- Translate trainings, advices and technologies provided by different stakeholders into action to fulfil sustainable land management targets

❖ Mobilizing school children and extension workers for ensuring land degradation neutrality

Primary schools and Farmer Training Centres are in the community and have special roles to play to fulfil land degradation neutrality.

Therefore, identifying key roles of school children and extension workers is crucial. In this regard key entry points are proposed to school children and extension workers for them to contribute to LDN targets.

ROLE OF SCHOOL CHILDREN

There are roles that school children can play to reduce land degradation and enhance landscape restoration.

Consider the following actions:

- Plant & care trees
- Reduce Recycle and re-use products
- Safely dispose waste
- Efficiently use resources
- Care for soil
- Educate others
- Participate in environmental clubs

HOW CAN SCHOOL CHILDREN CONTRIBUTE TO LAND DEGRADATION NEUTRALITY?

There are several way school children and youth can contribute to land degradation neutrality, among others, they can contribute the following activities in their school, at home and in their neighbourhood.

- Start your own initiative or volunteer work with your school environment club or Environmental Organization to plant trees, waste collection, public education and so on.
- Reduce paper waste in your school and at home: example donate your old text book to your juniors or needy neighbours

- Save scarce resources such as water and trees: only 0.03% out of 70% of water available to us is freshwater and the remaining portion needs treatment, which is costly. Therefore, use water efficiently and off taps when not in use.
- Buy Sustainable Products: plastic items are toxic to our planet since they persist for long time to decay. Therefore, use biodegradable items such as locally produced bags, pens, water jars and so on
- Properly dispose hazardous or harmful household waste such as electronics and plastics.
 - Know that soil is a base of life on earth, without soil crop cannot grow, bear fruit and feed human being and other living things on earth. Therefore, care about soil health!
- It is late to plant trees, but it is not too late, so plant more trees in your school, at home and in your neighbourhood!



There are roles that school children can play to reduce land degradation and enhance landscape restoration.

Consider the following actions:

- Plant & care trees
- Reduce Recycle and re-use products
- Safely dispose waste

Figure 6. school children's role

HOW CAN AGRICULTURAL EXTENSION WORKER CONTRIBUTE TO LAND DEGRADATION NEUTRALITY?

Agricultural extension worker is a knowledge information service provider to farmers and his/her fellow colleagues. It is believed that agricultural extension worker is a partner of farmers, farmer organizations and a knowledge broker at Farmer Training Centre (FTC).

Knowledge information services provided by agricultural extension worker touch every corner of agronomical and natural resources management endeavour.

However, extension worker has to customize knowledge service provision and technical recommendations to a local context.

Therefore, agricultural extension worker can contribute to land degradation neutrality in the following ways.

- Raise public awareness on socio-economic importance of land resources

- Integrate LDN priorities into extension service provision
- Map out land degradation severity, key drivers of degradation and recommend area specific land rehabilitation measures
- Identify existing and anticipated opportunities for coordinated land rehabilitation and restoration measures to achieving LDN targets
- Promote agriculture-based landscape restoration measures
- Compile and disseminate best practices of integrated landscape restoration.
- Provide scientific information relevant to watershed management planning and implementation
- Advocate sustainable production and monitor practices hindering sustainable land management
- Facilitate experience sharing between community groups on sustainable land management
- Acknowledge land rehabilitation and restoration champions
- Use guidelines of LDN to guide farmers' actions



Figure 7. Community mobilization

ROLES OF AGRICULTURAL EXTENSION WORKER

- Raise community Awareness
- Identify drivers of land degradation
- Map-out land degradation severity
- Integrate areas specific LDN recommendation
- Promote Sustainable production practices
- Facilitate experience sharing
- Acknowledge LDN champions
- Guideline for LDN