

# Land Degradation Neutrality (LDN)

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# Outline

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## Definition

- ▶ Land Degradation Neutrality [in affected areas][in arid, semi-arid and dry sub-humid areas] is a state whereby the amount and quality of land resources, necessary to support ecosystem functions and services and enhance food security, remains stable or increases within specified temporal and spatial scales and ecosystems.

## Rationale of LDN

- ▶ Over the last three decades the issues of sustainability have been addressed and policy options have been proposed at the global, regional and sometimes at the national level to revert the negative trends on the social, economic and environmental aspects of development. But still, we are in front of a scenario that indicates that if land resources are not managed in a sustainable manner, the inter-generational issue of sustainable development will not be achieved.

# Rationale of LDN

- ▶ At Rio+20, world leaders decided to establish an inclusive and transparent intergovernmental process open to all stakeholders, with a view to developing global sustainable development goals to be agreed by the UNGA. Among SDGs to be attained by 2030 that have been proposed so far by Open-ended Working Group (OWG), “Protection and promotion of sustainable use of terrestrial ecosystems, halt desertification, land degradation and biodiversity loss” builds upon concept of land degradation neutrality (LDN).
- ▶ COP11 of UNCCD established an intergovernmental working group (IWG) in order to (i) establish a science-based definition of LDN in arid, semi-arid and dry sub-humid areas; (ii) develop options relating to arid, semi-arid and dry sub-humid areas that Parties might consider should they strive to achieve LDN; and (iii) advise the Convention on the implications for its current and future strategy, programmes and the resource requirements.

# What is LDN?

- ▶ **LDN is a forward-looking option for affected countries to voluntarily and according to their particular circumstance address their own challenges of sustainable land management. With implementation of LDN through NAPs and translating successes in reverting land degradation, they can ensure improved livelihoods for vulnerable populations and better functioning ecosystems.**
- ▶ **A LDN approach answers questions of addressing food security, poverty reduction and improved conditions of terrestrial ecosystems; this is a mandate that UNCCD needs to undertake strongly through a project of which lessons can be drawn on the options and methodologies available for achieving land degradation neutrality at local and national level.**

# Measuring progress in implementation of CCD

- ▶ COP11 also invited affected country Parties to establish voluntary national targets for performance and progress indicators, in order to measure progress in implementing the NAPs.
- ▶ Parties further decided to establish a consistent approach to measure progress towards achieving the objectives of Convention and encouraged affected country Parties to establish targets using the progress indicators adopted by the COP, taking into account regional and national specificities. The new approach is based on a broader use of readily available global data sources, aiming at decreasing the reporting burden on country Parties by limiting data collection efforts at national level and putting greater emphasis on data quality improvement and interpretation.

# Strategic Approach

- ▶ The approach is to demonstrate that the various elements of the Convention (strategic objectives, NAP and monitoring and assessment framework) could effectively interact together and lead to identification and achievement of tangible LDN results at country level.
- ▶ The project is geared to provide evidence-based input to and complementing work of the IWG, as well as ongoing consultations on SDGs. Outputs and lessons-learned through the LDN project will also feed and hopefully ease further negotiations at UNCCD COP12 and provide valuable contributions to other international forums, in particular UNFCCC COP20 to be held in Paris in 2015.

# The LDN indicators framework

## Tier 1: Trend in Land cover/use

- ▶ Land Cover Change would be considered especially for critical transitions from semi-natural land cover classes (Forest, shrubs, grasslands and sparsely vegetated areas) to cropland and to artificial surfaces, from cropland to artificial surfaces as well as from cropland to semi-natural land cover types. The change would be expressed as area per change class in hectares/square kilometers or proportion of total land over time.

# The LDN indicators framework

**Land use/cover data can also be aggregated to estimate the following critical transitions:**

- ▶ **Conversion from natural and semi-natural ecosystems to agriculture: Hectares of changes from forest, shrubland/grassland and wetland to cropland per square kilometer;**
- ▶ **Conversion of forest to other land categories (deforestation rate): Hectares of changes from forest to shrubland/grassland, cropland, wetland, artificial areas, or bare land/other areas;**
- ▶ **Conversion to artificial areas: Hectares of changes from forest, shrubland/grassland, cropland and wetland to artificial area;**
- ▶ **Conversion to bare land: Hectares of changes from forest, shrubland/grassland, cropland, and wetland to bare soil;**

# The LDN indicators framework

- ▶ **The second way, to be further explored based on available methodologies, is to assign to each Land Productivity Dynamics (LPD) code an estimated quantitative value, expressed in %, of decline in the standing biomass carbon content. Indeed, there is a direct link between biomass productivity and its carbon content. When biomass productivity declines soil carbon content is likely to decline shortly after, especially in tropical areas where mineralization is fast due to higher temperature that boosts microbiological activity. When biomass increases, soil carbon content improves as well, except if biomass increase is based on external chemical nutrient imports. This procedure provides the possibility of estimating the evolution of national carbon stock, disaggregated by main land cover classes.**

# The LDN indicators framework

## Tier 2a: Land productivity trends and soil organic carbon content

- ▶ The first way aims at locating the areas that show signs of land productivity decline and stress, as they can be interpreted as advanced or early signs of land degradation. It is therefore recommended to pay particular attention in all land cover classes to the areas classified with the codes 1 to 3.

### Data can be aggregated to calculate:

- ▶ Rate of forest productivity decline, expressed in % of the total area of forest land:  
<(forest area with codes 1, 2, 3 / total forest area 2010)>
- ▶ Rate of grass productivity decline, expressed in % of the total area of grass land:  
<(grassland area with codes 1, 2, 3 / total grassland area 2010)>
- ▶ Rate of cropland productivity decline, expressed in % of the total area of crop land:  
<(cropland area with codes 1, 2, 3 / total cropland area 2010)>

# LDN indicators framework

**As default data, to be used in absence of better research data, nationally available, it is recommended to assign the following value:**

- ▶ **Declining productivity: - 3% in 10 years (i.e. 3 per one thousand annually) Early signs of decline: - 2% in 10 years (i.e. 2 per one thousand annually) Stable but stressed: - 1% in 10 years (i.e. 1 per one thousand annually)**
- ▶ **Encroaching grassland and cropland under intensive mono- cropping deserve special attention:**
  - ▶ **Grassland encroachment is a direct consequence of overgrazing of grassland. It can occur in any grassland ecosystem. When grass is overgrazed, grass dies and bushes invade the space left bare. The land cover subsequently becomes a forest-like ecosystem, which is neutral or positive from the point of view of carbon storage. It is possible to return progressively to grassland if sustainable grazing practices are applied but it takes resources and time (removing the bush after several years of soil restoration and re-establishing artificially herbaceous species afterwards.**
  - ▶ **In the case of intensive mono-cropping, biomass generally improves in the first years, thanks to input of chemical fertilizers. But soil carbon content declines. After a few years (10-20 years), yields are reduced (and therefore land productivity) due to soil microbiological (and therefore carbon content) impoverishment and acidification.**

# The LDN indicators framework

## Tier 2b: Identification of critical processes

- ▶ Numerical estimates of all indicators are being compiled and will be provided to countries in excel tables to facilitate the identification of critical processes. Figure on the next slide presents a screenshot showing an illustrative example of table for the identification of critical processes for a given country.

# Setting LDN Target

## Step 1: identifying negative trends

- Identify, map and quantify the negative trends indicating signs and risks of land degradation.

## Step 2: identifying land management options

- Identify land management options that can stop or reverse the identified negative trends and therefore lead to the expected LDN situation in a voluntary assumed time frame as an integral part of the NAP.

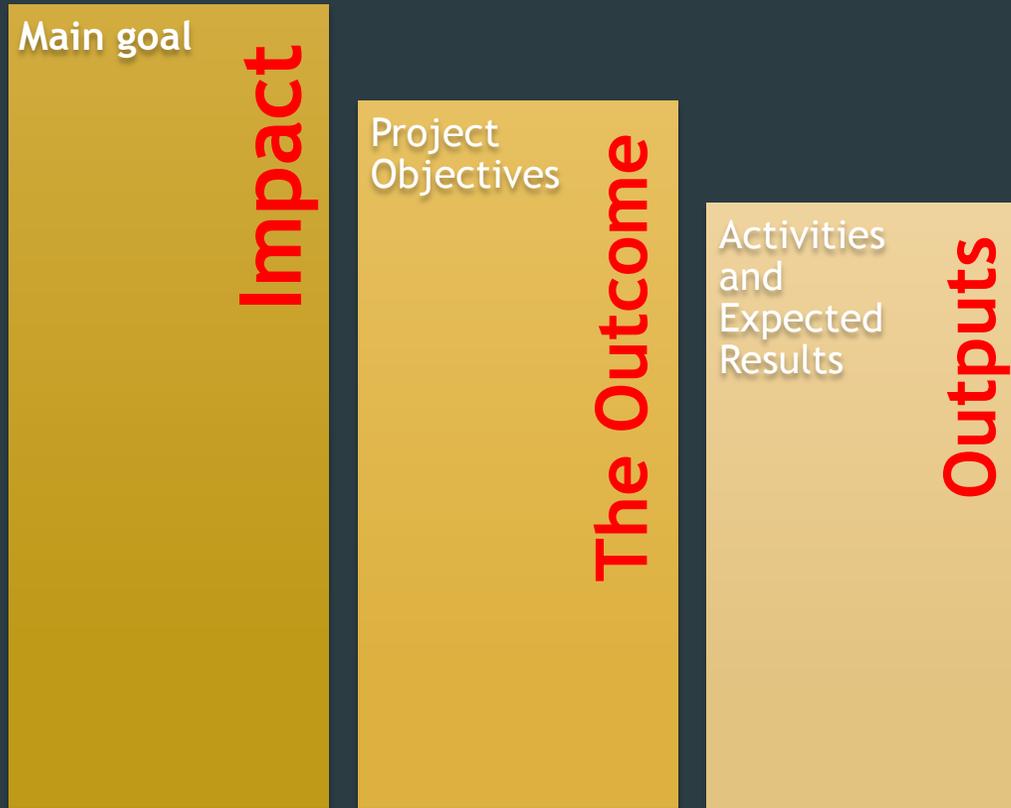
## Step 3: reviewing the national action programme

- Review NAPs to ascertain if it encompasses the necessary legal, financial, scientific and administrative frameworks and land management options to efficiently and timely stop or reverse the identified negative trends.

## Step 4: setting LDN national voluntary targets

- Set targets for achieving land degradation neutrality in terms of time and resources needed for implementation of identified management and policy options.

# The Results Framework



# The Results Framework

## Impact

### Main Goals:

- ▶ The long-term aim of LDN project is to contribute to reaching an agreement among Parties by 2017 (UNCCD COP 13) by which every affected country party adopts its own national voluntary target to achieve land degradation neutrality, and reports to the COP every two years on implementation of their NAPs and progress made towards achieving such target.

# The Results Framework

## The Outcome

### **Project objective:**

- ▶ At the end of the project, a representative sample of affected country Parties translate the land degradation neutrality goal into national voluntary targets, making use of the implementation framework and the monitoring and assessment mechanisms established within the UNCCD process.

# The Results Framework

## Activities and expected results:

### Outputs

- ▶ The project will support participating countries to effectively plan measures for preventing future land degradation, reducing drivers and impacts of current land degradation processes and rehabilitating degraded land, as key priorities in efforts toward land degradation neutrality. It will also support them in setting targets in achieving land degradation neutrality, which will assist to focus implementation and to assess progress. The targets will serve awareness raising and advocacy on benefits of land degradation neutrality, particularly for seeking political commitment and fundraising for related action.

# The Results Framework (Cont.)

## Outputs

### Activities and expected results (Cont.):

- ▶ The national targets on land degradation neutrality will be fully integrated into participating countries' NAPs to implement the UNCCD. While each national set of targets represents a country-specific and time-bound framework, together they represent a significant amount of information of potential ways of achieving land degradation neutrality and improving effectiveness of national programming for UNCCD implementation, as well as related assessment methodologies.

# Components of the Project

- ▶ 1. Establishment of a collaborative **project implementation framework**; including formal engagement of partner countries, establishment of international/national groups of consultants as well as LDN multi-stakeholders national working groups composed of members from relevant government institutions, as well as from science, business, civil society and local communities, land users and other stakeholders (land managers, farmers organizations, etc.);
- ▶ 2. Review of progress **in the formulation and implementation of National Action Programmes (NAPs)** is a critical first step in understanding to which extent and how partner countries are aligning their NAPs to The Strategy, to identify how land degradation neutrality is or can be incorporated into the NAP formulation/implementation process and to analyze the thematic areas where eventual difficulties are faced and how these can be overcome;

## Components of the Project (Cont.)

- ▶ 3. Based on the outcome of the above review, the LDNp will then focus on supporting/guiding partner countries in **the planning of LDN implementation as part of the NAP**, in particular by setting appropriate national targets based on available scientifically-sound data and designing robust implementation frameworks;
- ▶ 4. Finally, based on a collective effort of country partners, the outcomes of the LDN national exercises will be systematized, and lessons learned will be drawn for assessment. These will then be shared through **international outreach and communication** to UNCCD Parties for their consideration, and thereby provide practical inputs to the international consultations aimed at making progress towards achieving LDN.

# The countries were entrusted as the first group to operate the LDN project (14).

- ▶ The secretariat has signed MOU with 14 national consultants - one to work in each proposed partner country - in order to assist the NFPs and the Project Manager in the implementation of the LDN Project. Country Consultants are recruited locally, for a duration of six months (end of Sept.), and should be resident in the country that s/he will work. The proposed partner countries are:

**Africa: Algeria, Ethiopia, Chad, Namibia, Senegal;**

**CEE: Armenia, Belarus;**

**Asia: Bhutan, Indonesia, Myanmar;**

**LAC: Costa Rica, Grenada, Nicaragua, Panama.**

**The Manager of LDN Project is: Alain Retiere (France).**



**Thank you for your attention!**