Global Assessments, the Rio Conventions, and the SDGs

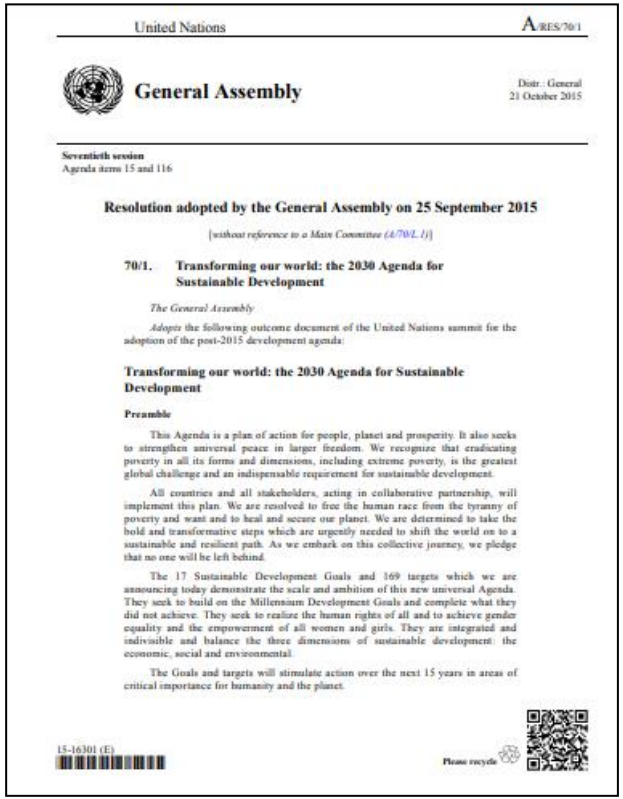
25 YEARS

United Nations
Convention to Combat Desertification

New Delhi, COP14 Media Training
1-2 Aug 2019

Transforming our world: the 2030 Agenda for Sustainable Development

United Nations
Convention to Combat Desertification



United Nations A/RES/70/1

General Assembly

Distr.: General
21 October 2015

Seventieth session
Agenda items 15 and 116

Resolution adopted by the General Assembly on 25 September 2015

[*without reference to a Main Committee (A/70/L.1)*]

70/1. Transforming our world: the 2030 Agenda for Sustainable Development

The General Assembly

Adopts the following outcome document of the United Nations summit for the adoption of the post-2015 development agenda:

Transforming our world: the 2030 Agenda for Sustainable Development

Preamble

This Agenda is a plan of action for people, planet and prosperity. It also seeks to strengthen universal peace in larger freedom. We recognize that eradicating poverty in all its forms and dimensions, including extreme poverty, is the greatest global challenge and an indispensable requirement for sustainable development.

All countries and all stakeholders, acting in collaborative partnership, will implement this plan. We are resolved to free the human race from the tyranny of poverty and want and to heal and secure our planet. We are determined to take the bold and transformative steps which are urgently needed to shift the world on to a sustainable and resilient path. As we embark on this collective journey, we pledge that no one will be left behind.

The 17 Sustainable Development Goals and 169 targets which we are announcing today demonstrate the scale and ambition of this new universal Agenda. They seek to build on the Millennium Development Goals and complete what they did not achieve. They seek to realize the human rights of all and to achieve gender equality and the empowerment of all women and girls. They are integrated and indivisible and balance the three dimensions of sustainable development: the economic, social and environmental.

The Goals and targets will stimulate action over the next 15 years in areas of critical importance for humanity and the planet.

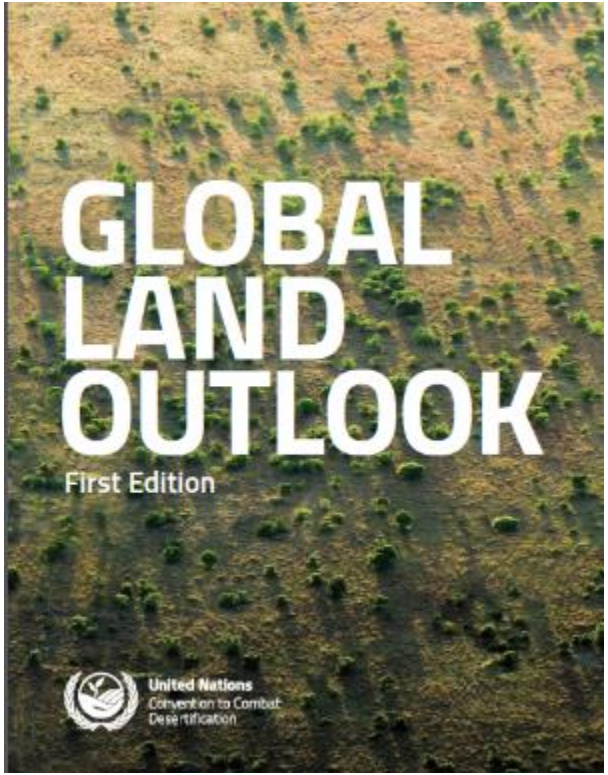
15-16301 (E)

Please recycle

The SDGs of Agenda 2030 are laudable goals

Global Land Outlook

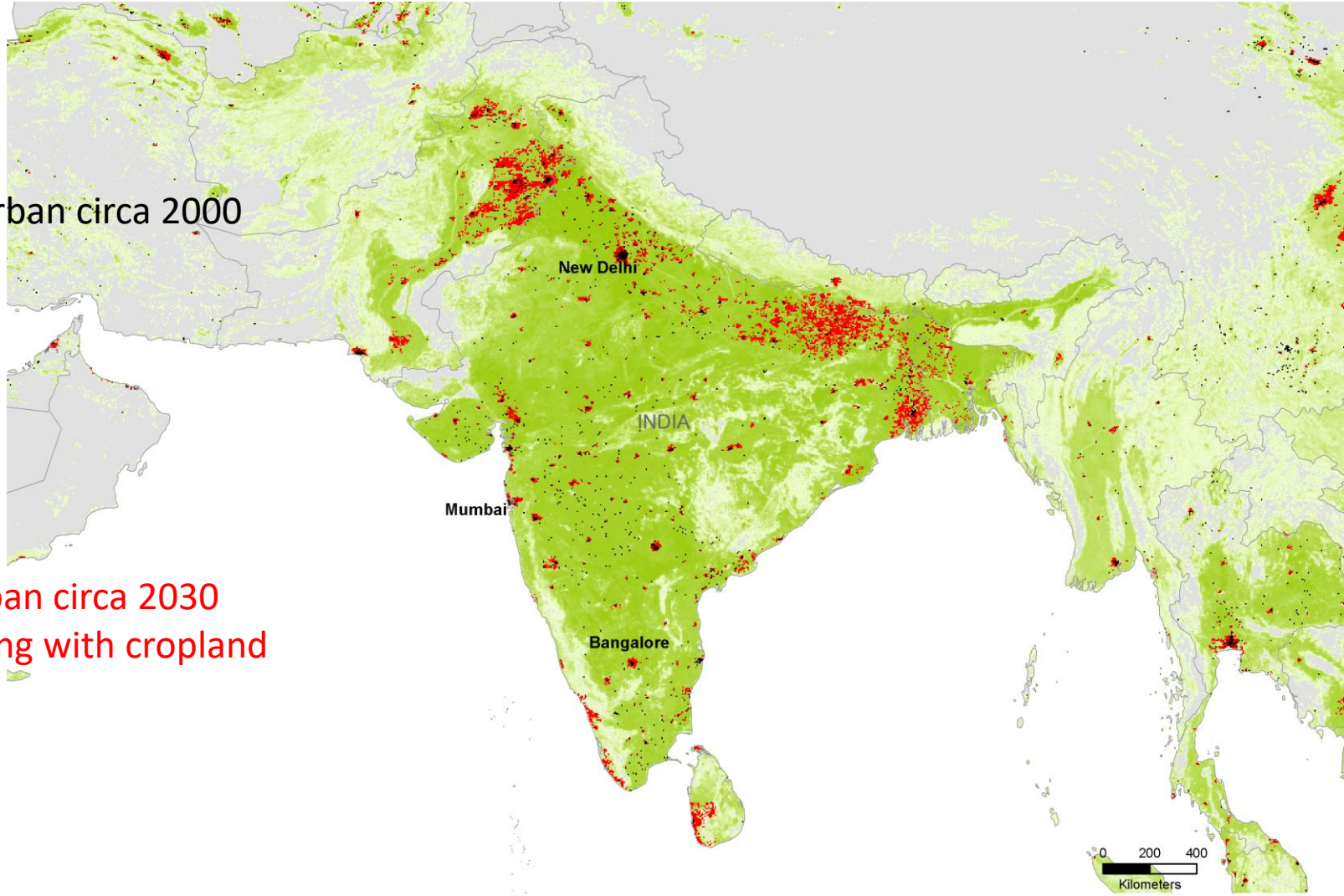
- **Land is finite** in quantity. Competing demands for its goods and services are increasing pressures on land resources in virtually every country.
- **Over 1.3 billion people trapped** on degrading agricultural land
- **Land transformation** in **rural areas** is **unprecedented** in terms of both speed and scale
- **70 per cent of agricultural land** is now used to grow **feed crops and livestock production**
- **Consumption** of natural resources **doubled in 30 years**
- **3 planets to meet 2050 natural resource demands**



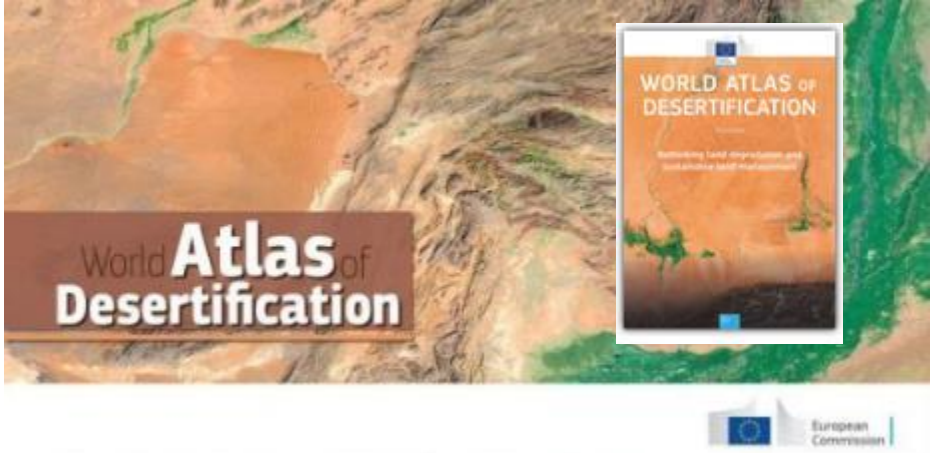
https://www.unccd.int/actions/global-land-outlook-glo

Black: Urban circa 2000

Red: Urban circa 2030
competing with cropland



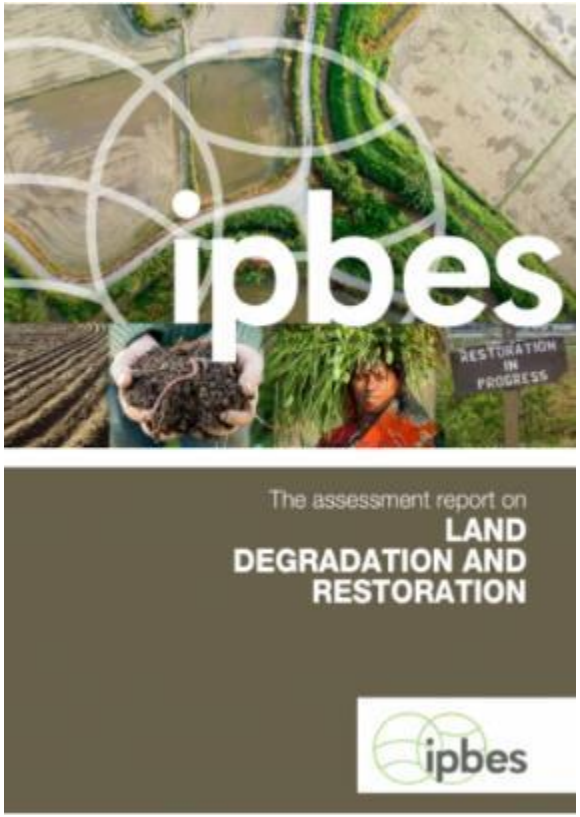
World Atlas on Land Degradation and Desertification (WAD)



- Between **1998-2013**, **20-30 per cent of Earth's vegetated land surface** showed persistent **declining trends in productivity**: 20% of cropland, 16% forest land, 19% grassland, and 27% rangeland.
- In 2000, a projected **2% (30 million ha) of croplands** globally were in areas that would be **urbanized by 2030**
- Some old some new **drivers of land degradation** at a global scale. **Urbanization, climate change and dietary changes**, which will **exacerbate the demand for land** and natural resources are part of these underlying trends.

https://wad.jrc.ec.europa.eu/

Panel on Biodiversity and Eco Services



- Wellbeing of over **3.2 billion people undermined** by land degradation
- **Biodiversity loss** to reach **38–46%** by 2050**. Leading causes** are habitat transformation (i.e., **conversions, to farmland and settlements**) and habitat **degradation**.
- **Land restoration and rehabilitation** can have **significant co-benefits** for all SDGs
- There is a **difference in the co-benefits** of the **restoration *process*** and of the ***restored land*.**
- **A landscape approach,** which includes targeting investments, **is the key** to increasing the total return on land restoration investments.

https://www.ipbes.net/deliverables/3bi-land-degradation

IPBES on Biodiversity

- **1 million species** are threatened by extinction largely because **75% of the land surface has been altered**
- These **(negative) transformational changes** are creating the conditions for a biological evolution **so rapid**, it is **visible just over a few years**.

- The **conversion of land** for agriculture is the leading driver of land-use change, with **meeting the demand for food, feed, fibre and bioenergy** production in the lead. **Forests, wetlands and grasslands and savannas are paying the price.**

https://www.ipbes.net/news/ipbes-global-assessment-

IPCC Special Report on Land and Climate

- An IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems

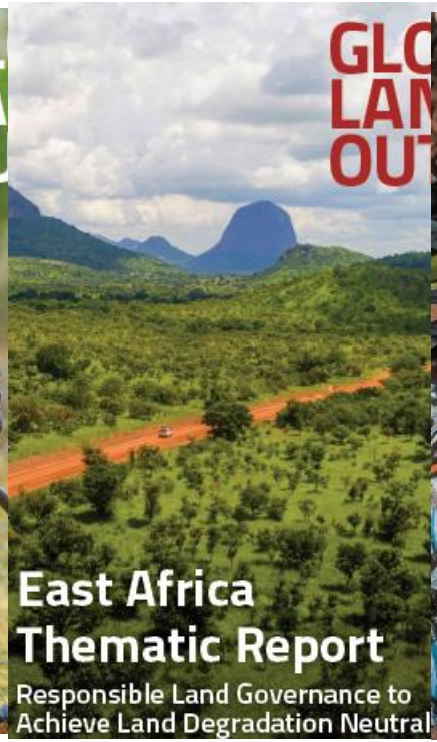
- The press conference to present the approved Summary for Policymakers is scheduled for 10:00 (CEST)/ 13:30 (IST) on 8 August 2019.

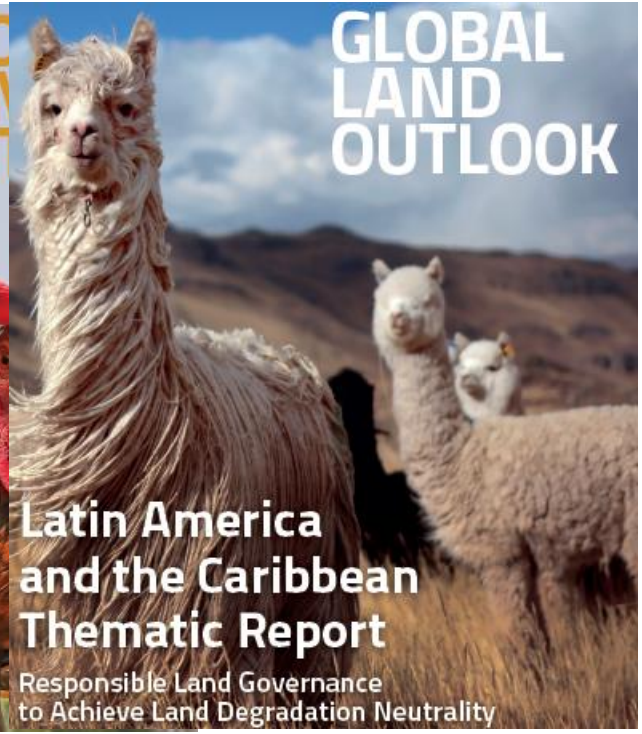
Release 08 August 2019

Media Registration

https://www.ipcc.ch/report/srccl/

Global Land Outlook regional reports





Conservation, sustainable management and restoration

A focus on the conservation, sustainable management and restoration of the land base is the central tenet of a more secure future

Land use planning at landscape level

Multiple partners working together at a landscape scale to achieve food and water security, biodiversity conservation, climate mitigation and adaptation and sustainable cities

Creating the enabling environment

Addressing massive global economic inequality, lack of tenure security, unequal gender relationships, particularly in agriculture, and the need for long-term work for small farmers

Increased efficiency and the reduction of waste

A focus on efficient agriculture to reduce pollution and resource use, renewable energy sources, and sustainable levels of production and consumption

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Land and synergies: Land is clearly central to the achievement of all SDGs

SDG 15.3 is the land target

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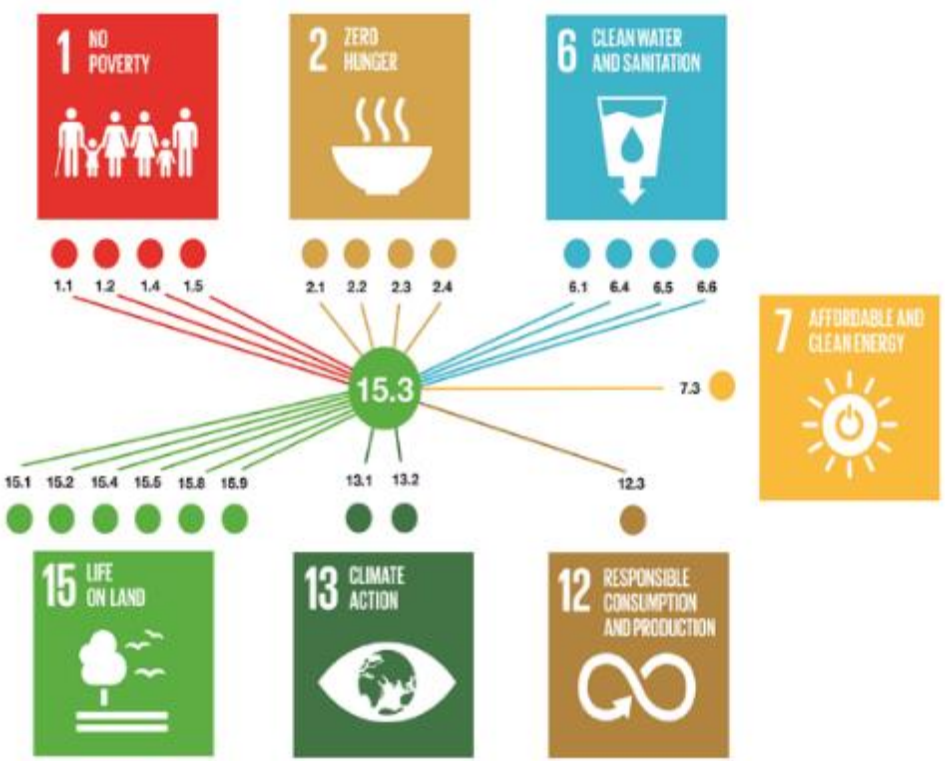
By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world



Land can accelerate many SDGs...

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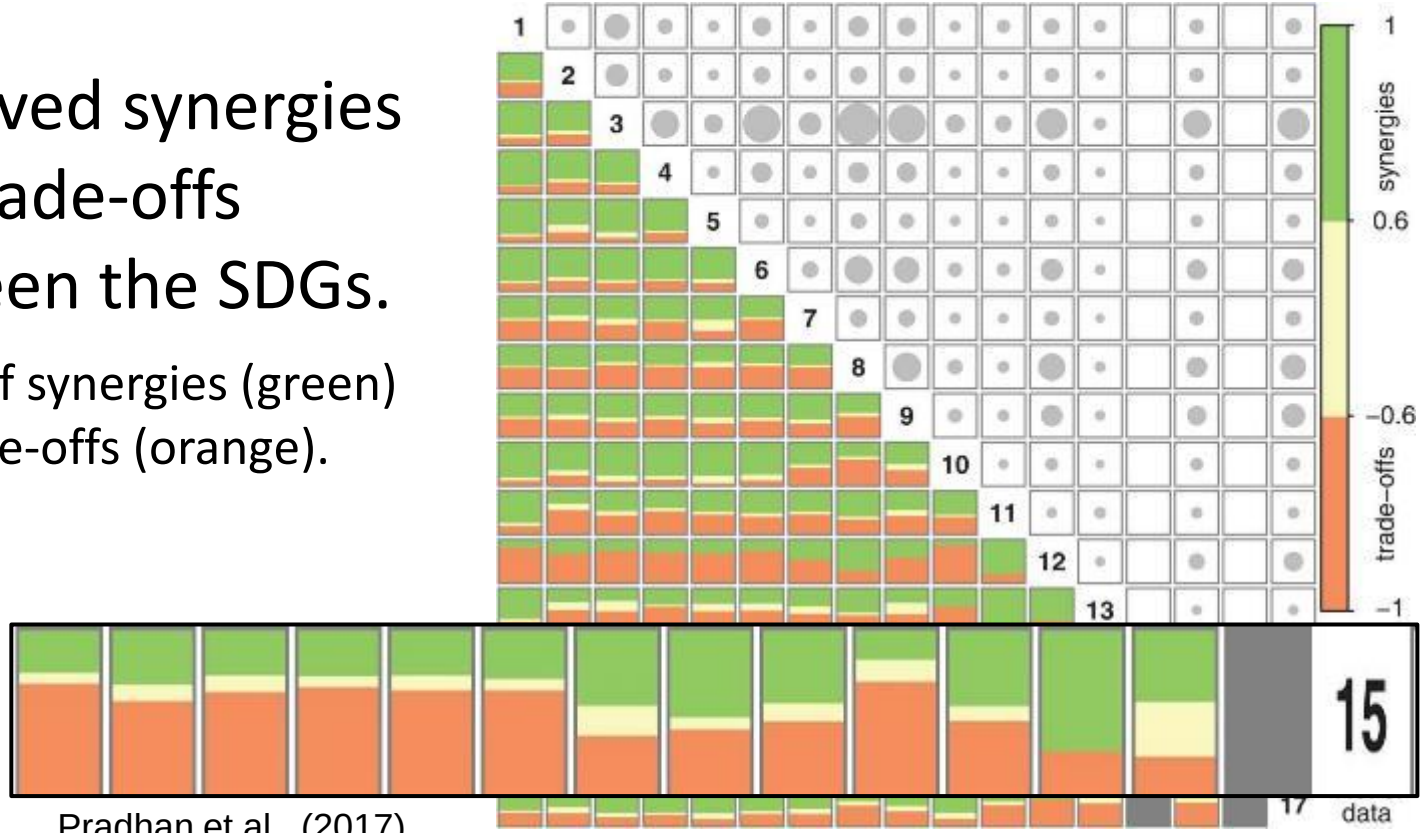
...but SDGs compete for the same land resources.

Synergies also mean trade-offs

Observed synergies and trade-offs between the SDGs.

Shares of synergies (green) and trade-offs (orange).

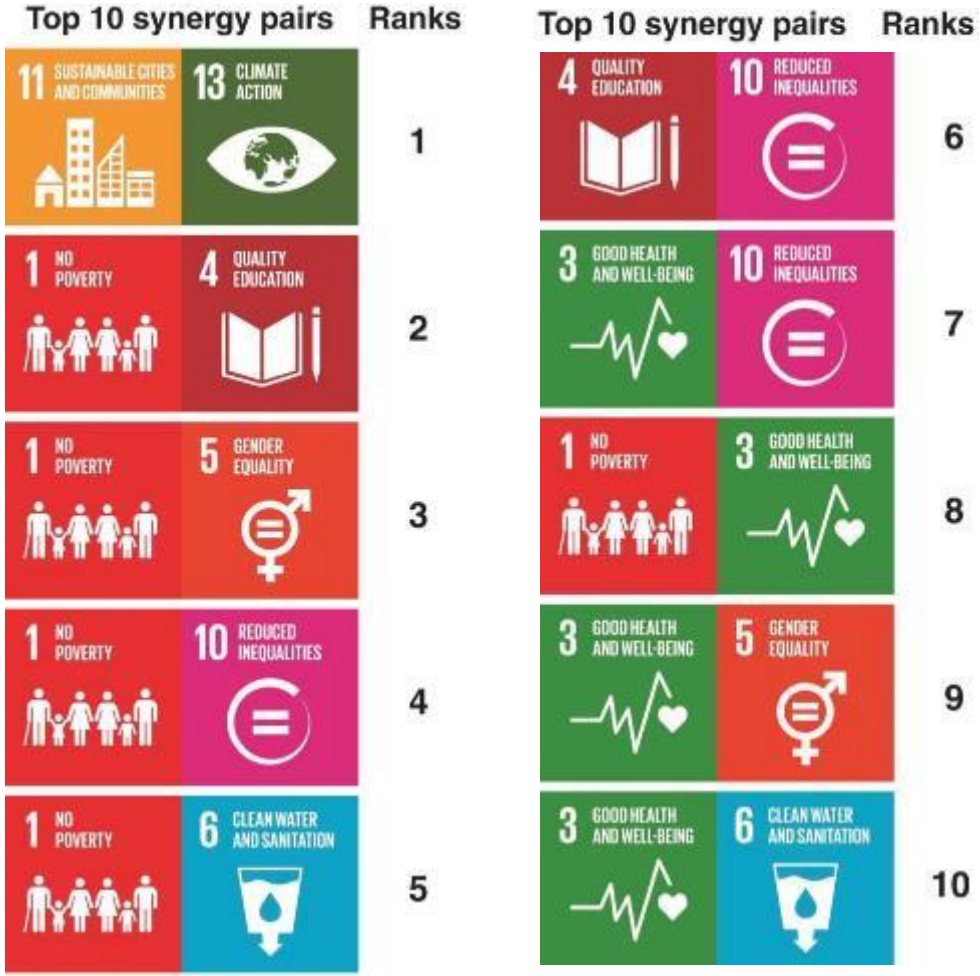


Pradhan et al. (2017)

Source: Figure 2 doi:10.1002/2017EF000632

The top synergies among SDGs are not surprising

Pradhan et al. (2017)



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Source: Figure 3 doi:10.1002/2017EF000632

…and the top trade-offs should not be surprising either

Pradhan et al. (2017)

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Source: Figure 3 doi:10.1002/2017EF000632

How can navigate the inevitable SDG trade-offs?

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On one side of the equation:

Decoupling natural resource use and environmental impacts from economic growth

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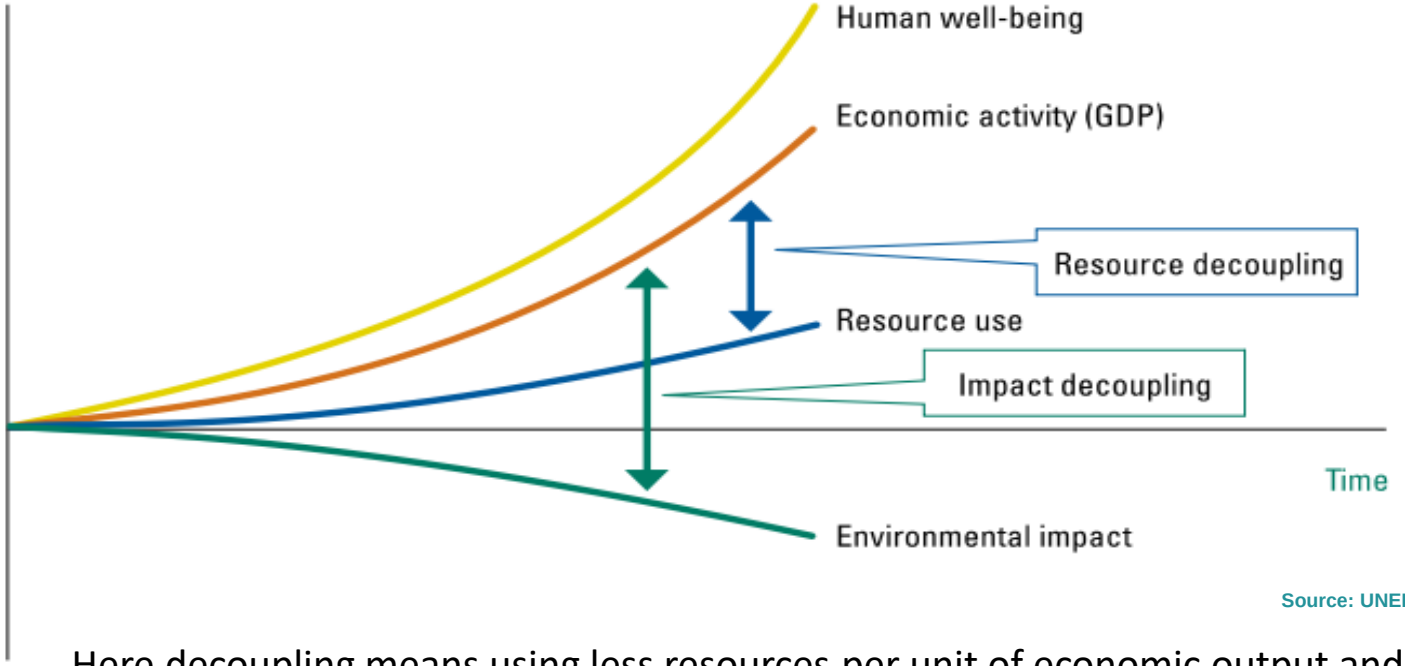

Source: UNEP IRP 2011

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Indicator 12.2.1:
Material Footprint

Here decoupling means using less resources per unit of economic output and reducing the environmental impact of any resources that are used or economic activities that are undertaken

Is decoupling possible?

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If the flows of consumption and production can be linked to land, policies to minimize impact are much more feasible

Trase.Earth seeks to transform our understanding of commodity supply chains by increasing transparency, **revealing the links to environmental and social risks**, and **creating opportunities to improve the sustainability** of how these commodities are produced, traded and consumed.

On the other side of the equation

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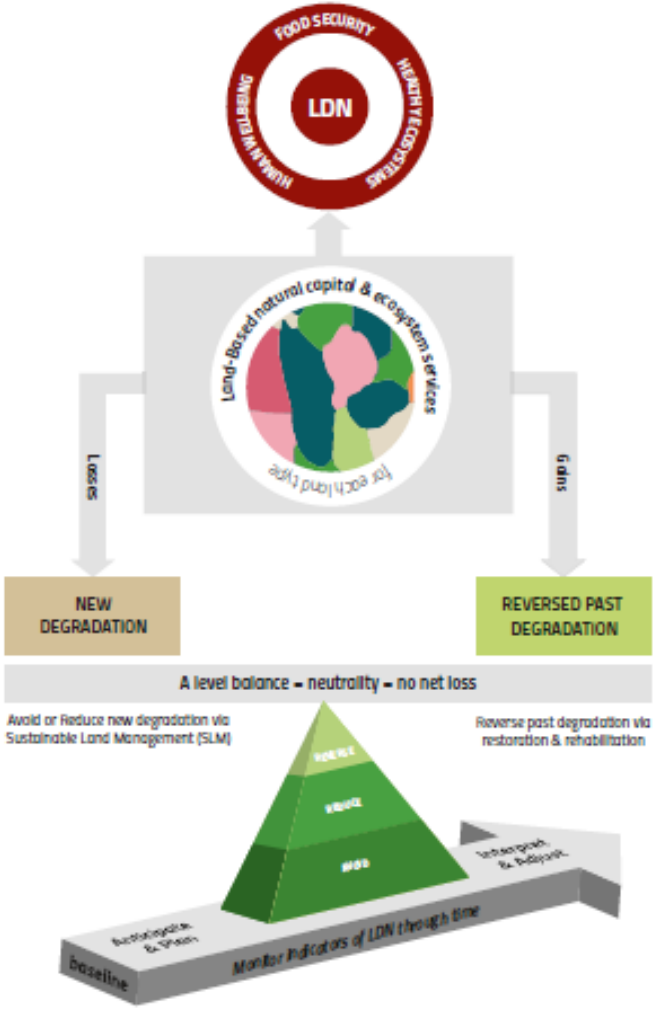
A balanced approach is needed.

- One that **anticipates new degradation** even as we plan to reverse past degradation
- One that **considers tradeoffs** among competing interests across the landscape

LDN provides the framework for this.



Land Degradation Neutrality (LDN)

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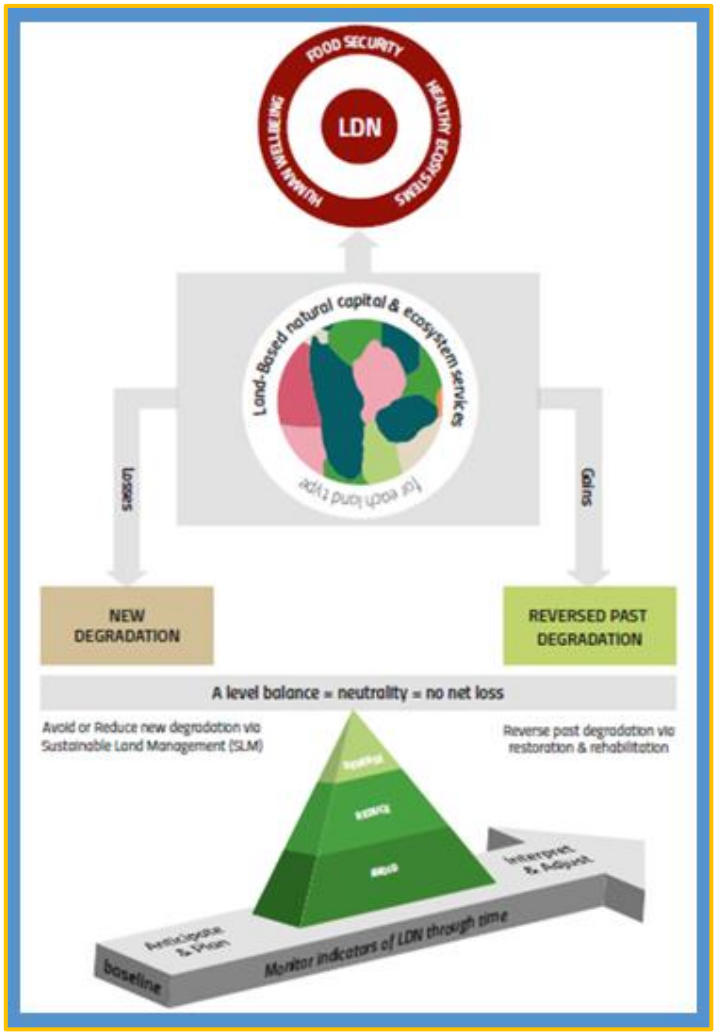
"A state whereby the amount and quality of land resources necessary to support ecosystem functions and services and enhance food security remain stable or increase within specified temporal and spatial scales and ecosystems"

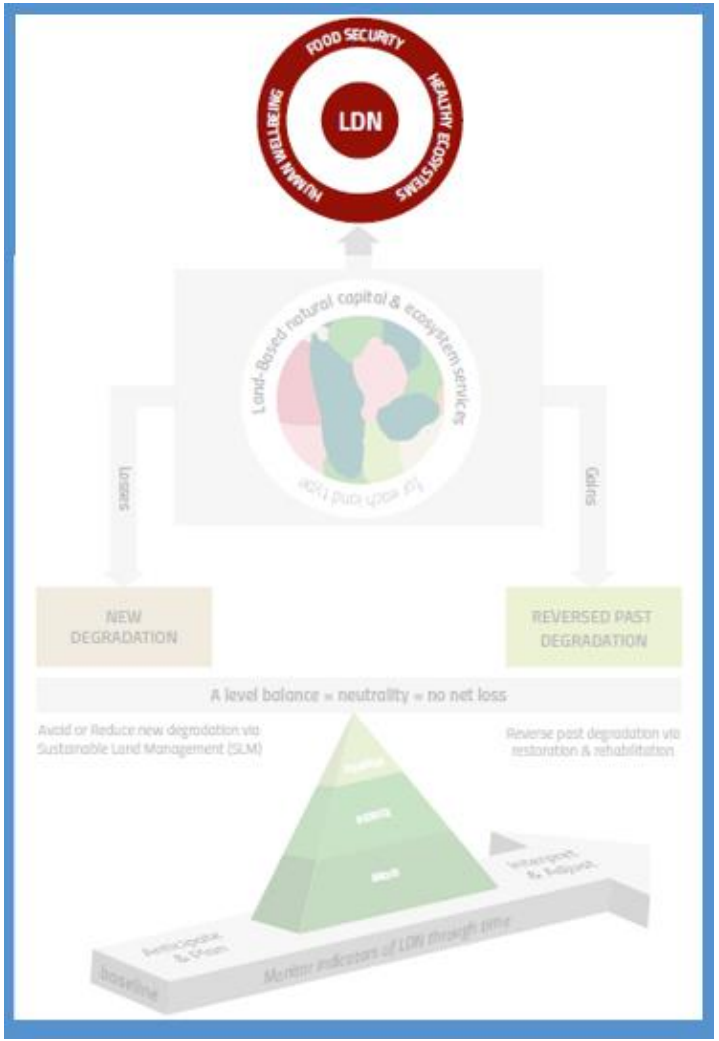
UNCCD COP12 October 2015

Land Degradation Neutrality

- LDN seeks to **maintain natural capital** and the **ecosystem services** that flow from it
- LDN is about keeping **land in balance**
- Keeping land in balance provides the basis for **keeping food, carbon and biodiversity in balance** as well.
- LDN is about achieving **multiple benefits**
- LDN provides a framework with **multiple entry points** which facilitate **optimizing the synergies** among the Rio Conventions (Climate Change, Biodiversity, Land Degradation)



https://knowledge.unccd.int/publication/ldn-scientific-conceptual-framework-land-degradation-neutrality-report-science-policy



The Vision of LDN

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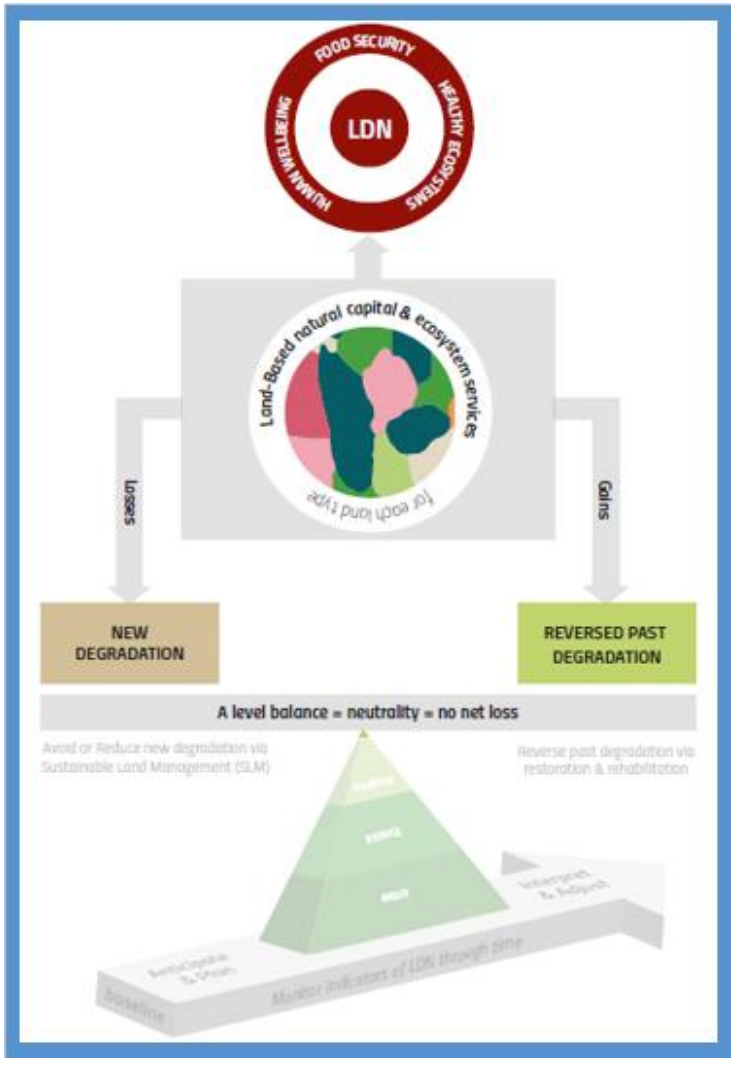
Human wellbeing

Food security

Healthy ecosystems

The goal of LDN is maintaining or enhancing the land resource base - in other words, the stocks of **natural capital** associated with land resources and the **ecosystem services** that flow from them



Mechanism for achieving neutrality

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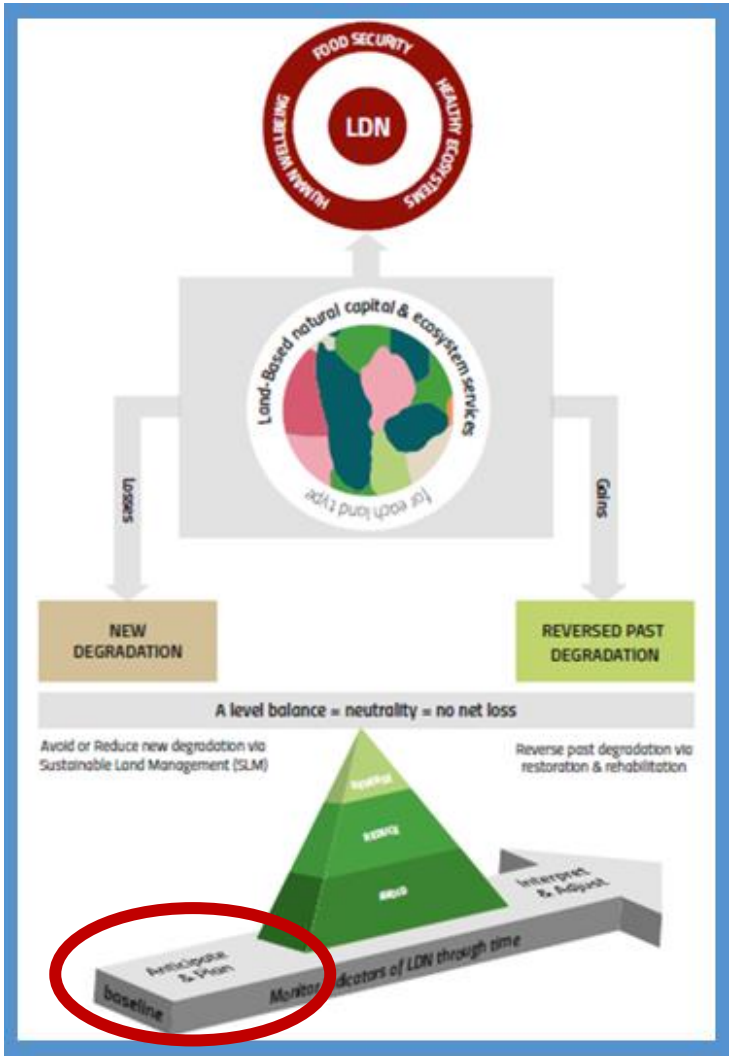
Neutrality = ***no net loss*** compared to the reference state (baseline)

Baseline is NOW (current condition)

Counterbalancing future land degradation (anticipated **losses**) through planned measures to achieve equivalent **gains** elsewhere within the same **land type**

“like for like”



Integrated land use planning

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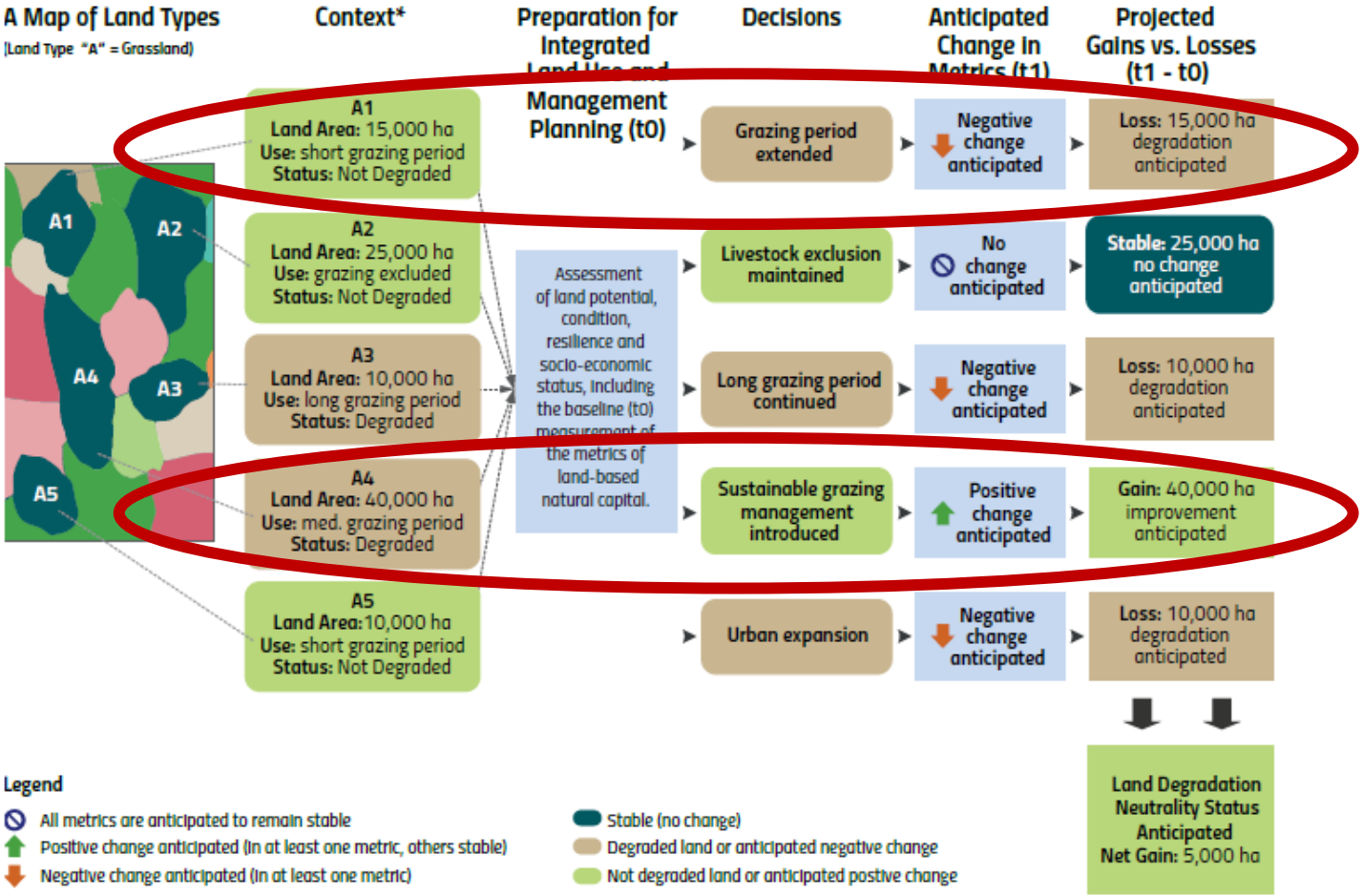
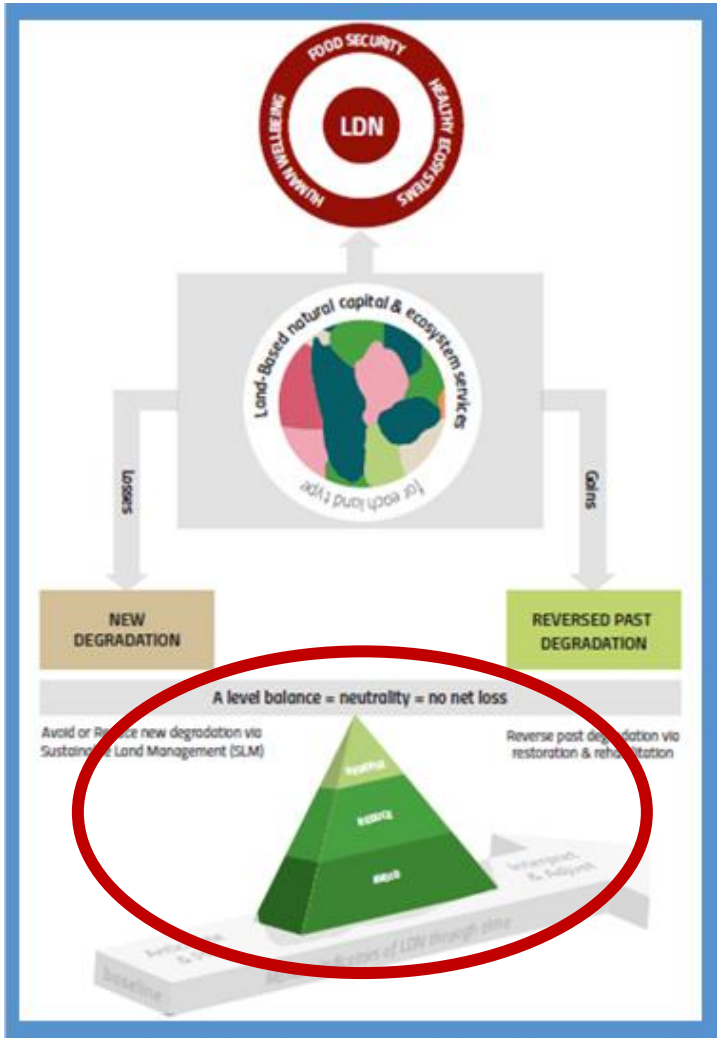
LDN planning (which begins with target setting) involves anticipating where degradation is likely so that the optimal mix of interventions across the landscape to achieve neutrality can be pursued.

- Occurs at multiple levels
- Leverages existing land use planning

Optimizing land use planning and management decisions across the landscape





Response Hierarchy

Prevention is better than cure

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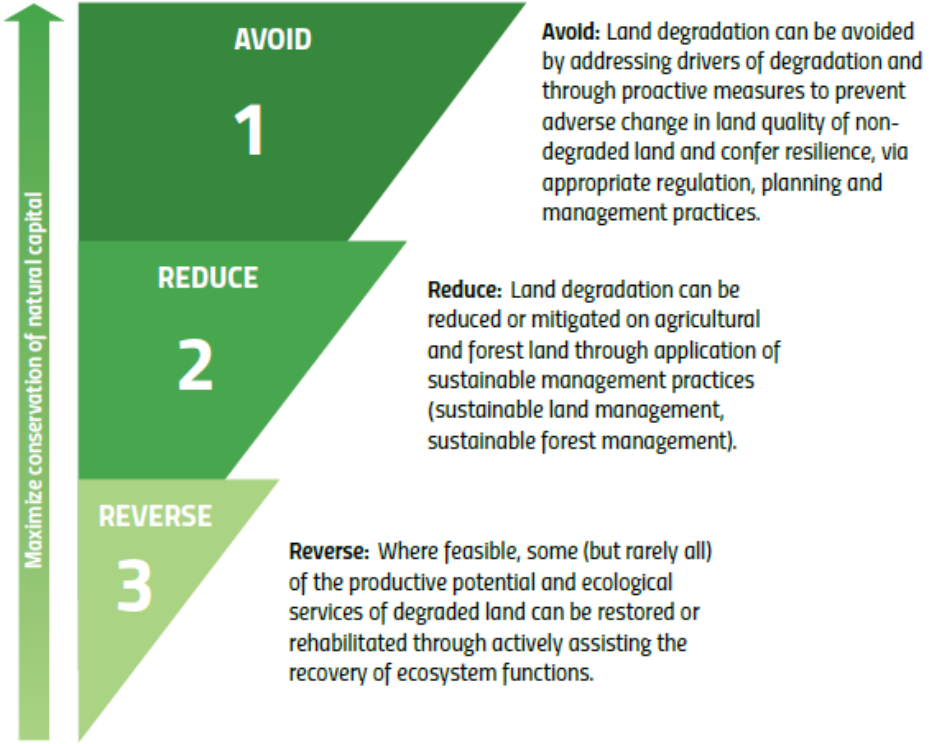
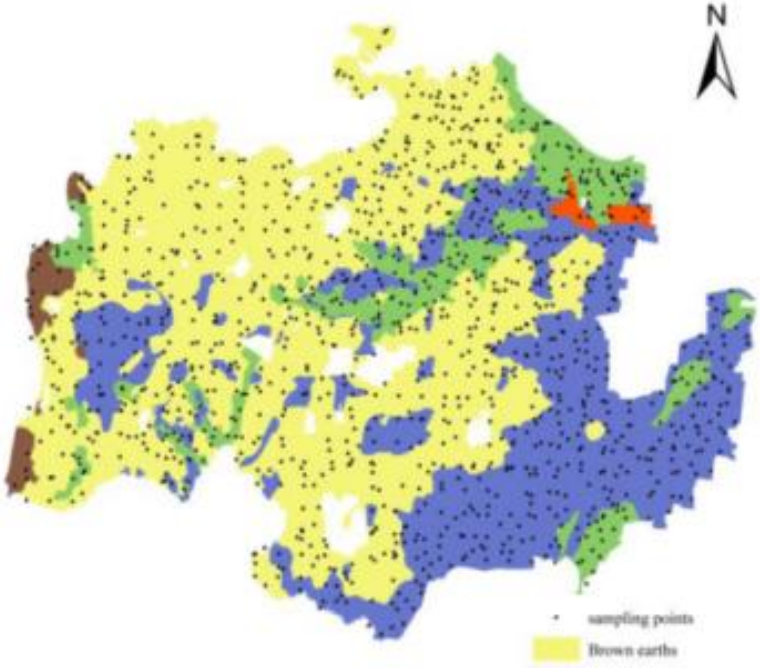


Avoid: Land degradation can be avoided by addressing drivers of degradation and through proactive measures to prevent adverse change in land quality of non-degraded land and confer resilience, via appropriate regulation, planning and management practices.

Reduce: Land degradation can be reduced or mitigated on agricultural and forest land through application of sustainable management practices (sustainable land management, sustainable forest management).

Reverse: Where feasible, some (but rarely all) of the productive potential and ecological services of degraded land can be restored or rehabilitated through actively assisting the recovery of ecosystem functions.

Integrated land use planning is the key to achieving LDN



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Using the best information available

- Land degradation status
- Land potential
- Resilience
- Socio-economic data
- Gender considerations

In order to

- Optimize the spatial mix of possible interventions
- Navigate trade-offs

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It is about having the right information…

…to do the right thing in the right place at the right scale

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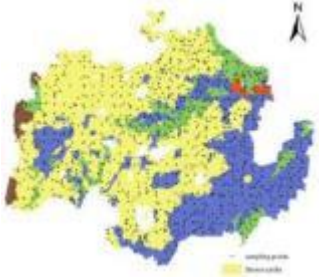
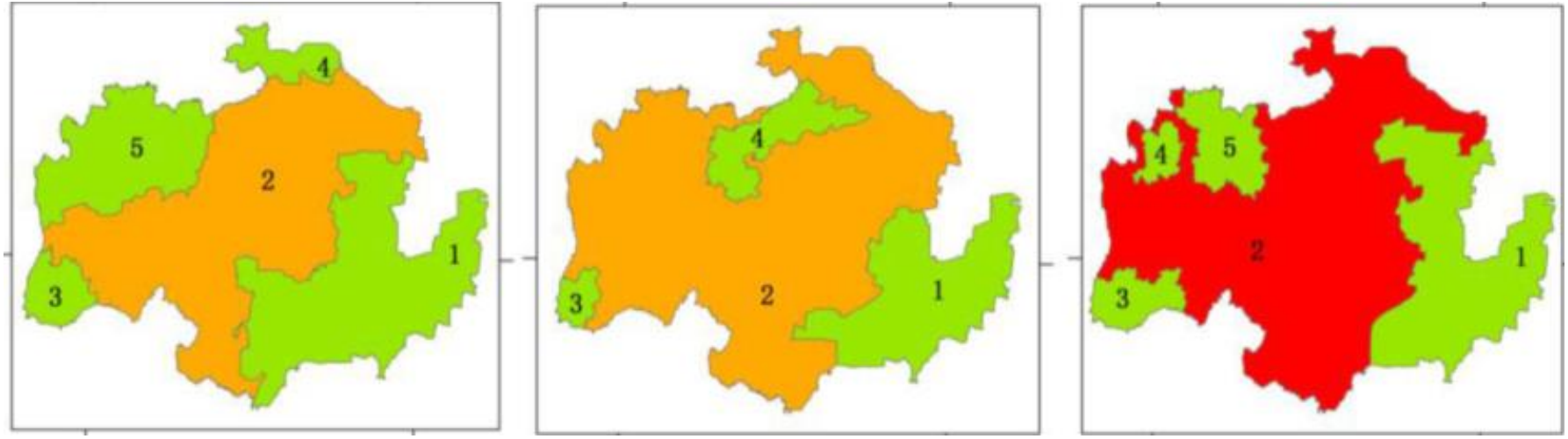
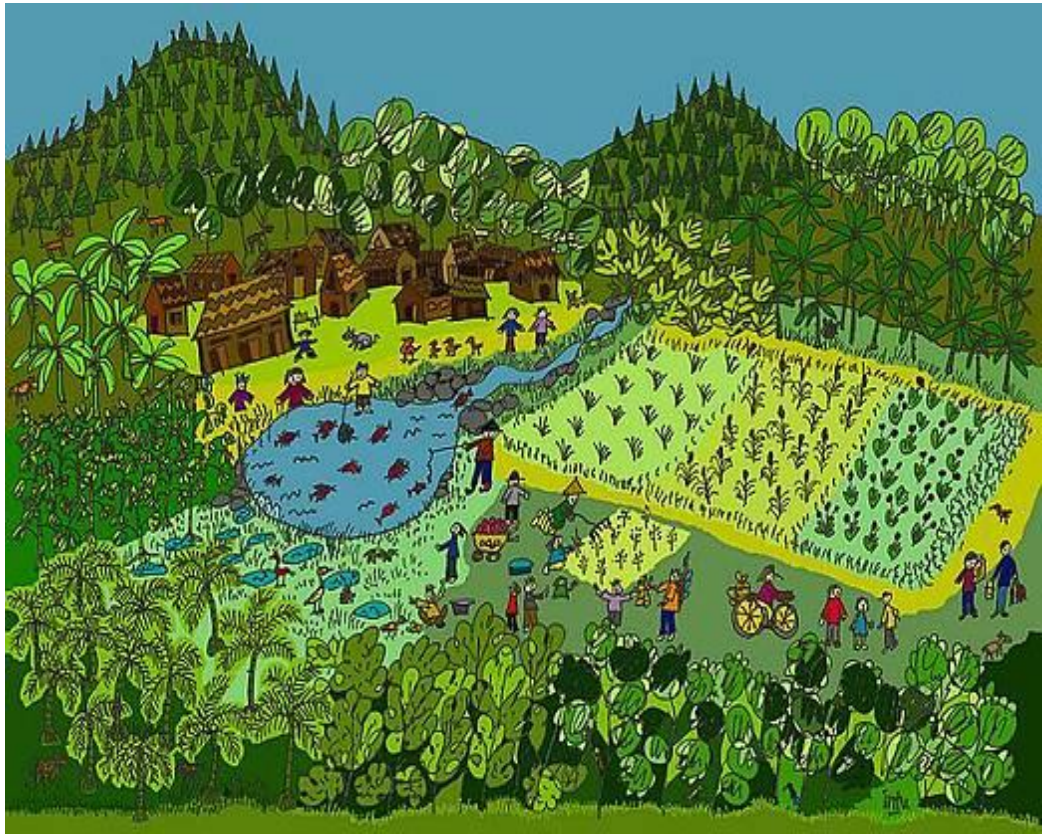




The SLM cornerstone of LDN

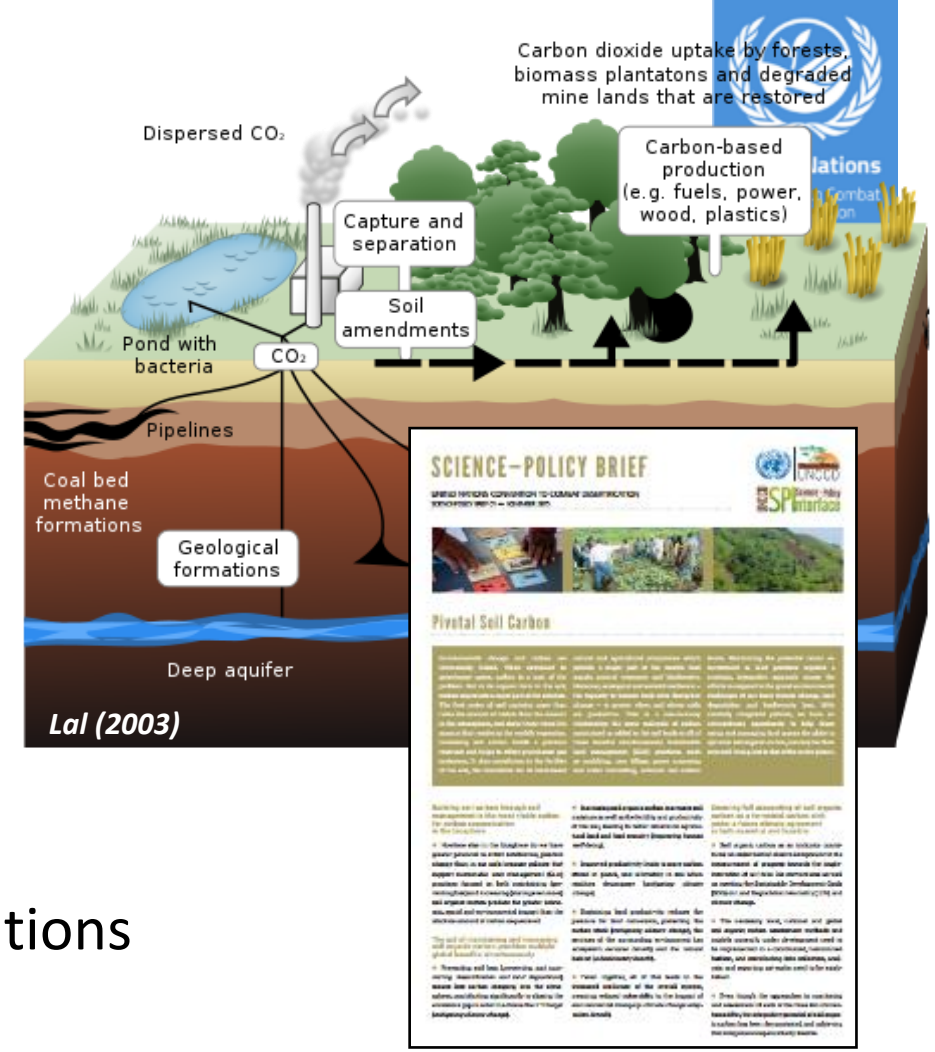


Sustainable Land Management can be defined as the use of land resources, including soils, water, animals and plants, for the production of goods to meet changing human needs, while simultaneously ensuring the long-term productive potential of these resources and the maintenance of their environmental functions.

Source: WOCAT

Pivotal soil carbon

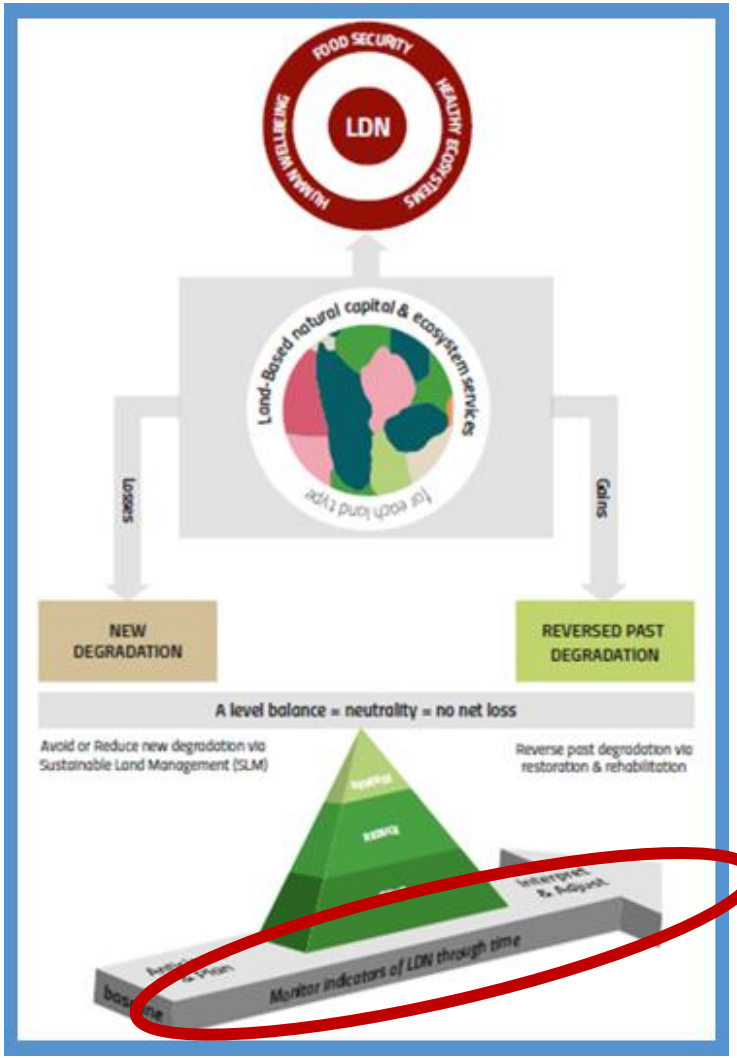
- Stores atmospheric C
  - Cost effective climate mitigation measure
- Improved water holding capacity
  - Buffer against drought
- Improved soil fertility
  - Nutrient store and supply
  - Improved productivity / yields
- Improved soil structure
  - Improved workability
- Improved soil habitat soil organizations
  - Improved biodiversity



What should we measure?

For harmonization of LDN monitoring, 3 essential variables are measured in all countries.

Countries also measure any other relevant indicators



Monitoring and learning

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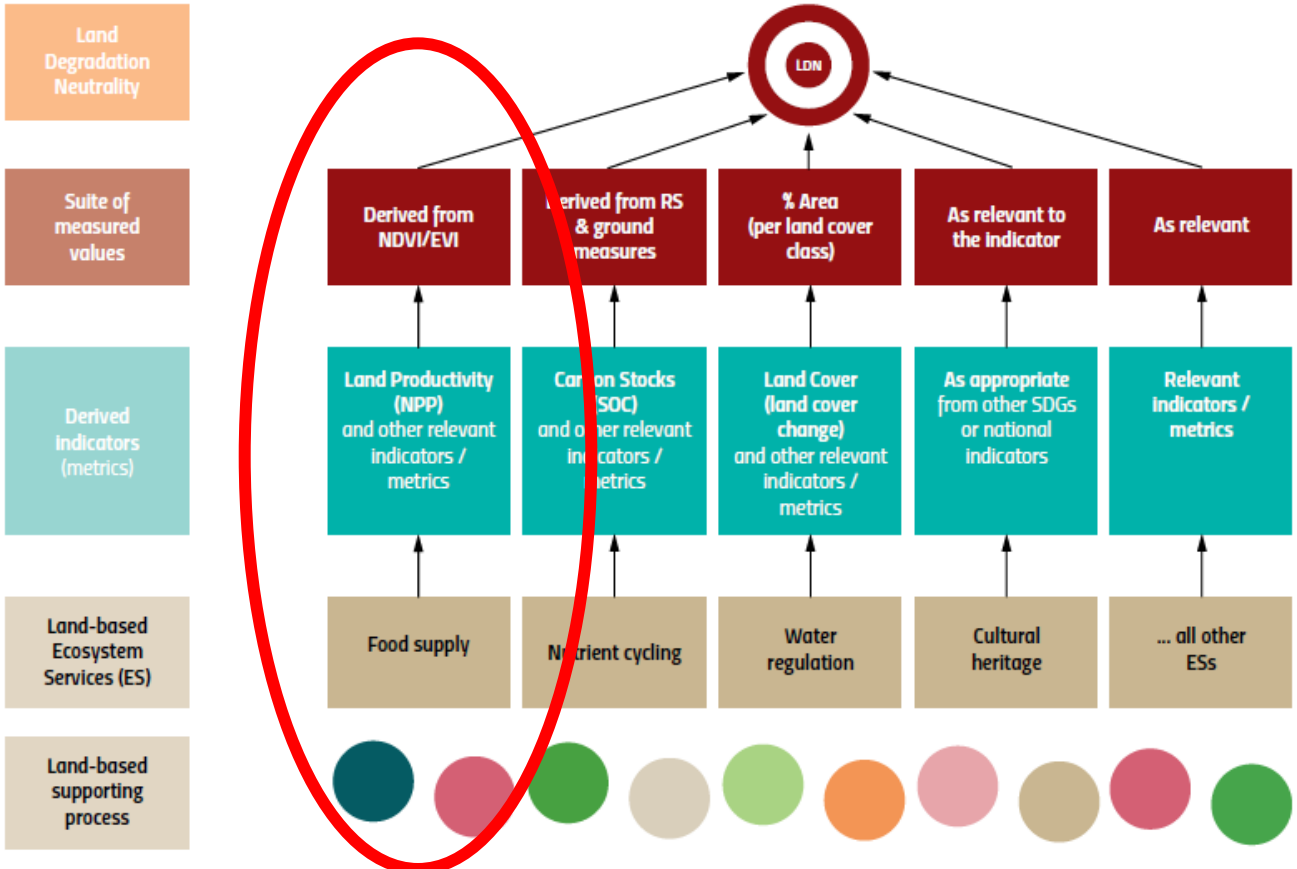
- Global indicators: Land cover, land productivity and soil organic carbon
- “One out, all out”, area basis
- Complemented by:
  -Locally-relevant indicators
  -Process indicators
  -Outcome indicators
- Verified using local knowledge (multi-stakeholder platforms nested across scales)

Selection of indicators based on ecosystem functions that provide ecosystem services

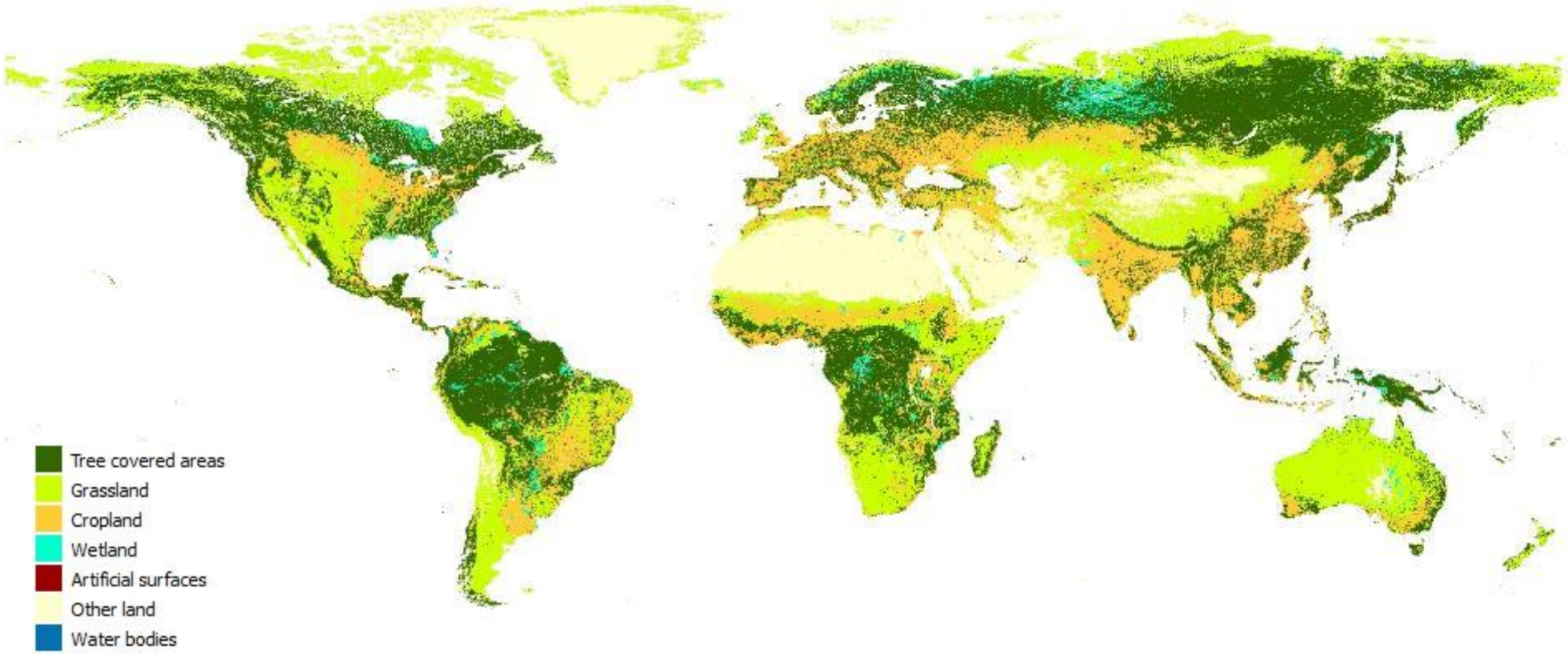


The framework does not prescribe how to measure the indicators.

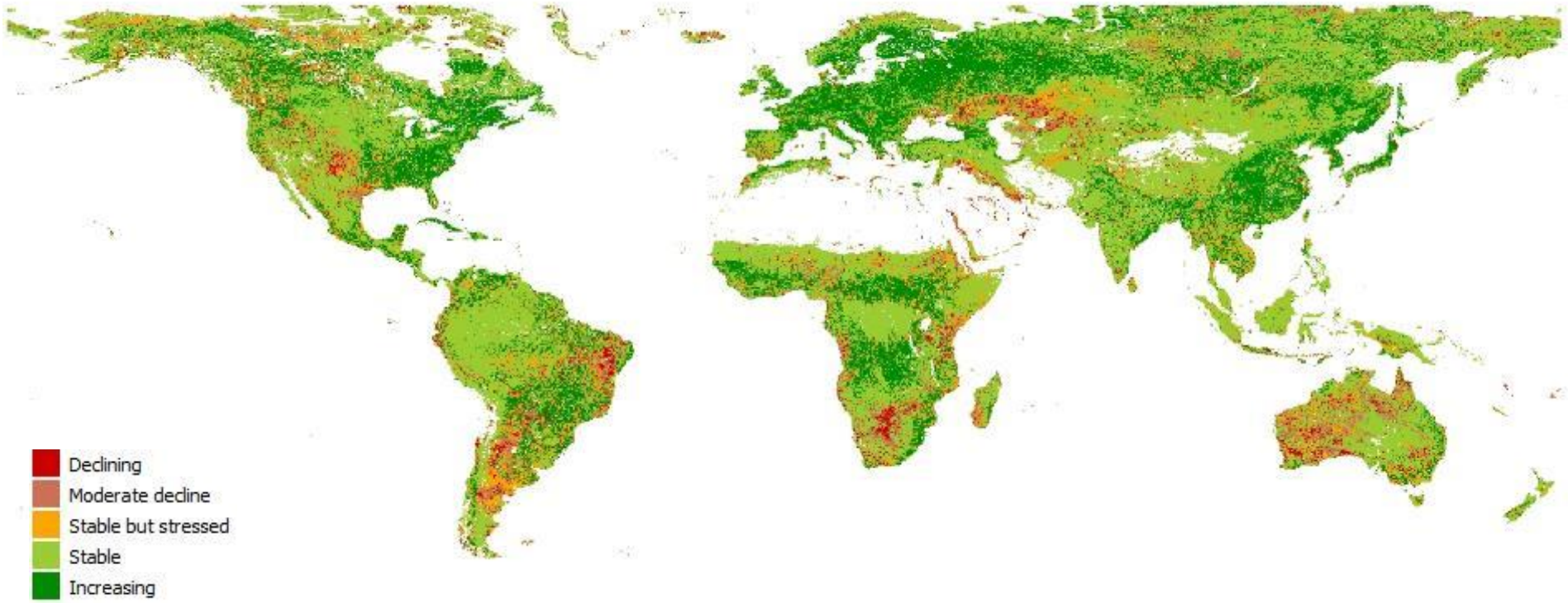
It recommends effort to achieve consensus on **common criteria** and **standards** to harmonize application.

Monitor indicators relative to the baseline

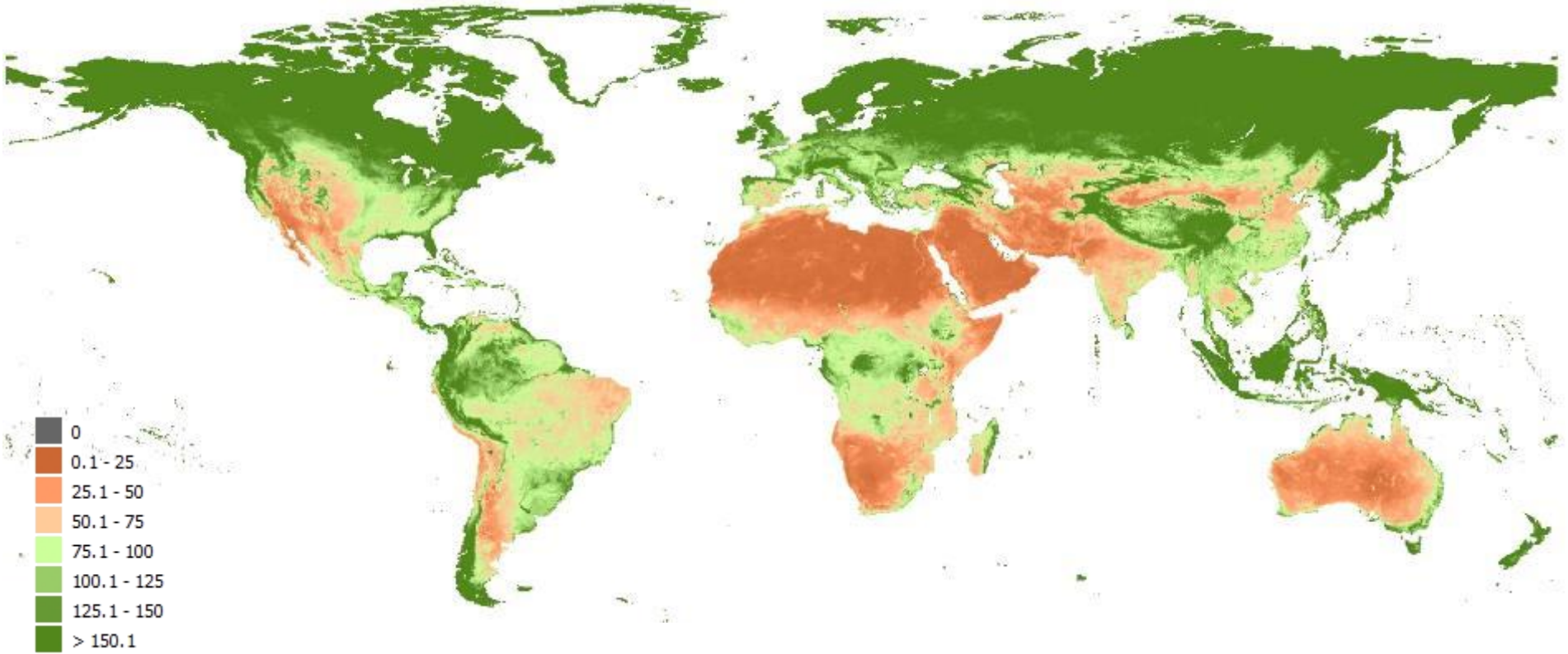
Default Land Cover data



Default land productivity dynamics data



Default global soil organic carbon data



The combination = SDG indicator 15.3.1

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SDG Target 15.3:

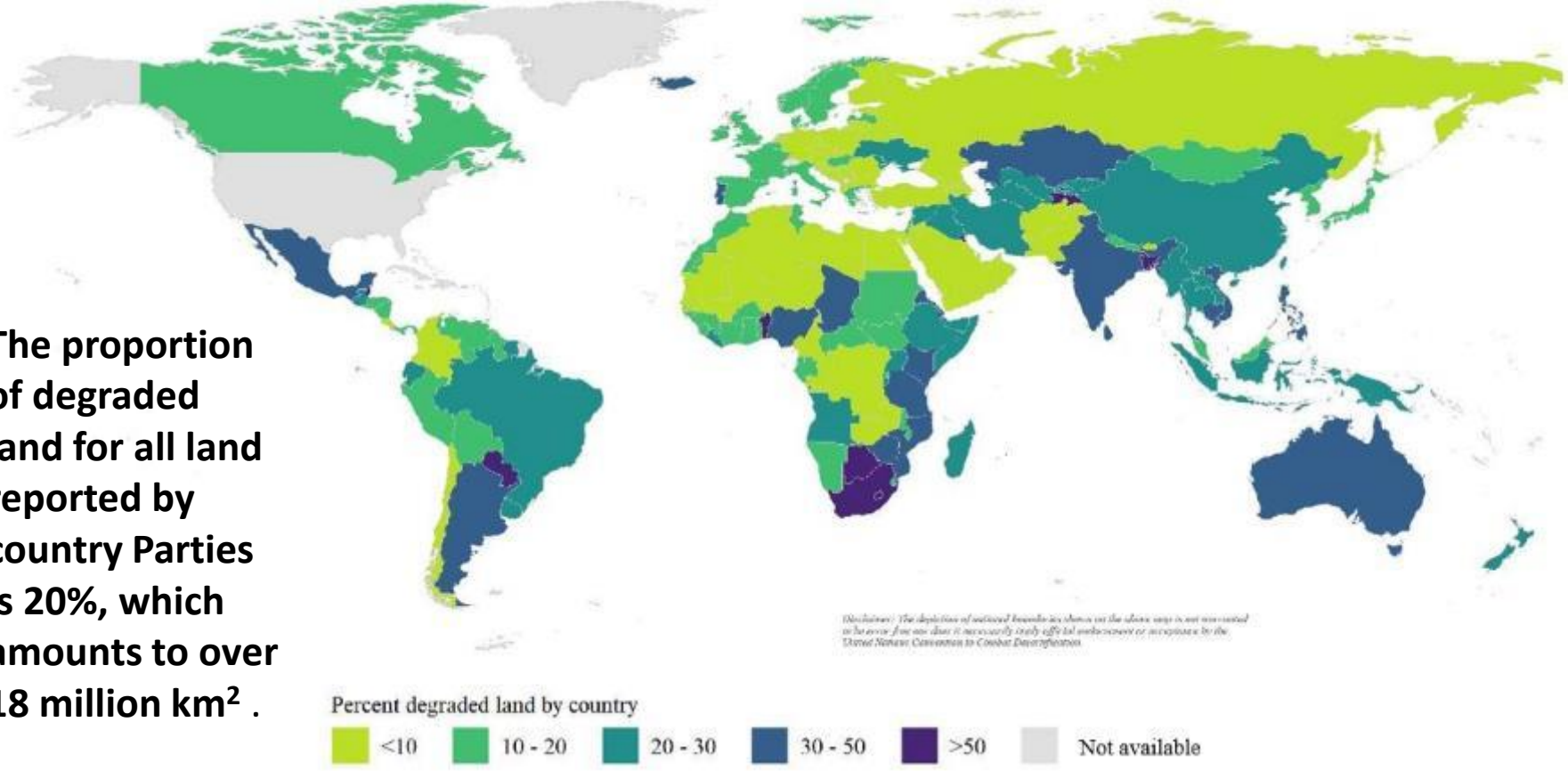
"By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land-degradation neutral world"

SDG Indicator 15.3.1:

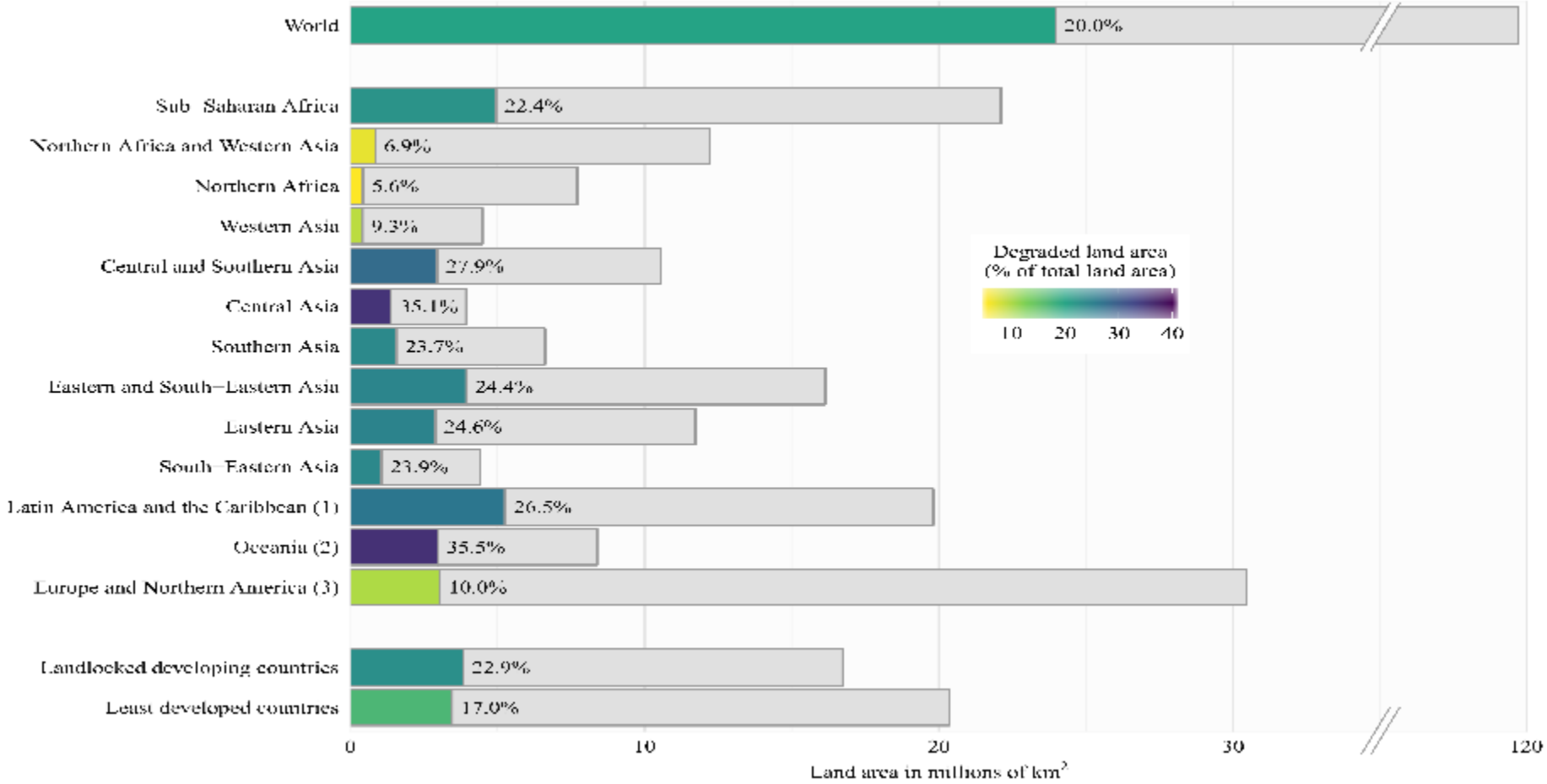
Proportion of land that is degraded over total land area.

What was the outcome for SDG 15.3.1 reported by countries in 2019?

The proportion of degraded land for all land reported by country Parties is 20%, which amounts to over 18 million km^2 .



Submission 2019 Report for 15.3.1 (163 countries)



Guiding principles

Principles are provided to govern application of the framework and to help prevent unintended outcomes during implementation and monitoring of LDN.

These principles are central to how LDN can encourage responsible governance and help safeguard land tenure

Guiding Principles (1)

Principles govern application of the framework, and prevent unintended outcomes during implementation of LDN

1. **Maintain or enhance land-based natural capital.**
2. **Protect the rights of land users.**
3. **Respect national sovereignty.**
4. **For neutrality, the LDN target equals (is the same as) the baseline.**
5. **Neutrality is the minimum objective: countries may be more ambitious.**
6. **Integrate planning and implementation of LDN into existing land use planning processes.**
7. **Counterbalance anticipated losses in land-based natural capital with interventions to reverse degradation, to achieve neutrality.**
8. **Manage counterbalancing at the same scale as land use planning.**
9. **Counterbalance "like for like" (within the same land type). Not between conservation and production areas.**
10. **Balance economic, social and environmental sustainability.**

Guiding Principles (2)

11. Base land use decisions on multi-variable assessments, considering land potential, land condition, resilience, social, cultural and economic factors.

12. Apply the response hierarchy : Avoid > Reduce >Reverse.

13. Apply a participatory process including stakeholders in designing, implementing and monitoring LDN.

14. Reinforce responsible governance: protect human rights, including tenure; ensure accountability and transparency.

15. Monitor using the three UNCCD land-based global indicators: land cover, land productivity and carbon stocks.

16. Use “one-out, all-out” to interpret the three global indicators.

17. Use national and sub-national indicators to aid interpretation and fill gaps.

18. Apply local knowledge to verify and interpret monitoring data.

19. Apply a continuous learning approach: anticipate, plan, track, interpret, review, adjust, create the next plan

The UNCCD Drought Initiative

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- national drought preparedness plans
- regional efforts to reduce drought vulnerability and risk, and
- toolbox to boost the resilience of people and ecosystems to drought

The Three key pillars

SO 1: Improve the condition of affected ecosystems, combat desertification/ land degradation, promote SLM & contribute to LDN

SO 2 : I improve the living conditions of affected populations

SO 3 : To mitigate, adapt to, & manage effects of drought in order to enhance resilience of vulnerable populations & ecosystems

- ✓*Expected impact 3.1: Ecosystems' vulnerability to drought is reduced, including through sustainable land & water management practices.*
- ✓ *Expected impact 3.2: Communities' resilience to drought is increased.*

SO 4 : Generate global environmental benefits through effective implementation of the UNCCD

SO 5 : Mobilize substantial, additional financial & non-financial resources to support the implementation of the Convention by building effective partnerships at global & national level.

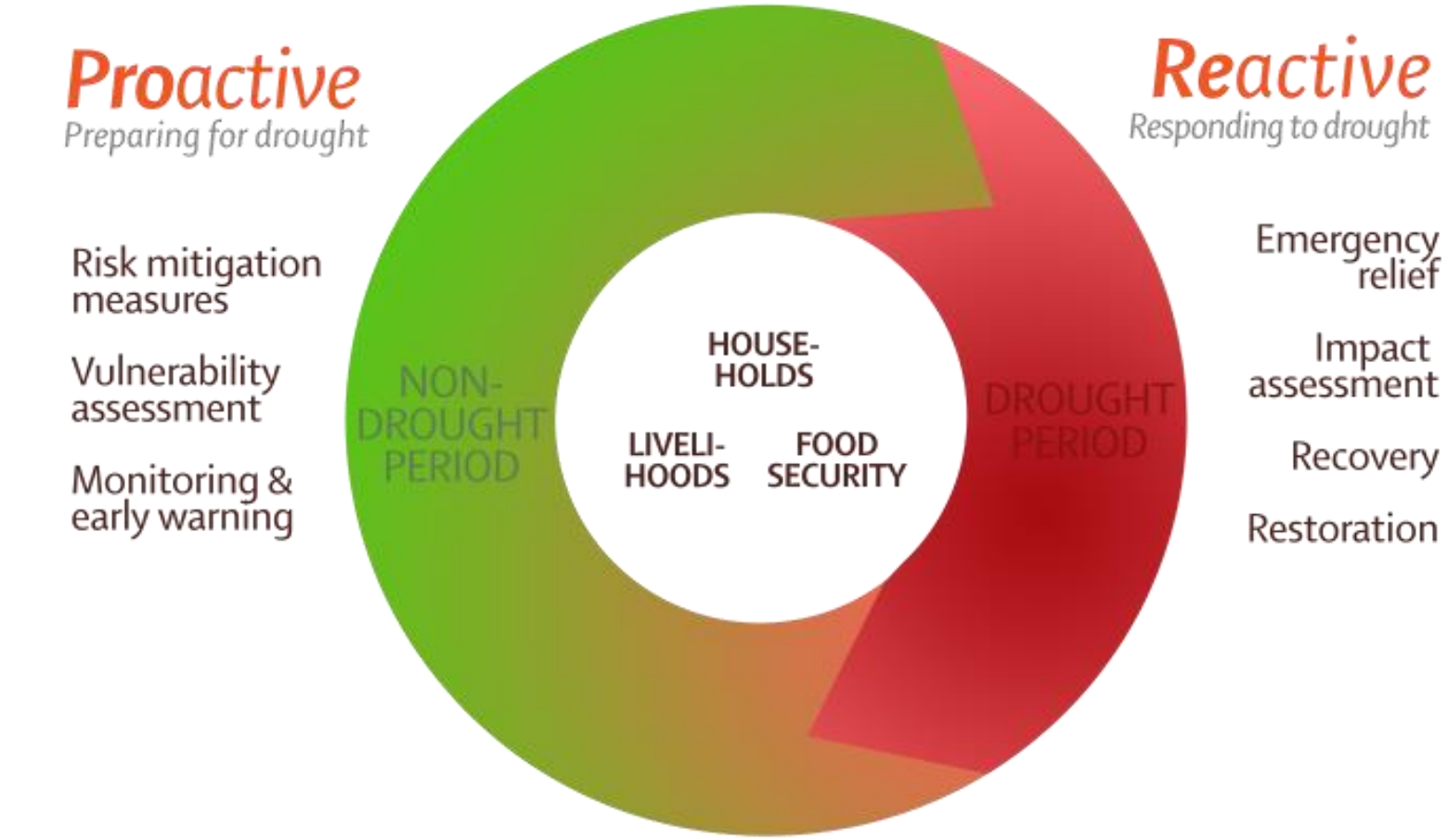
The Three key pillars

Monitoring & Early Warning Systems

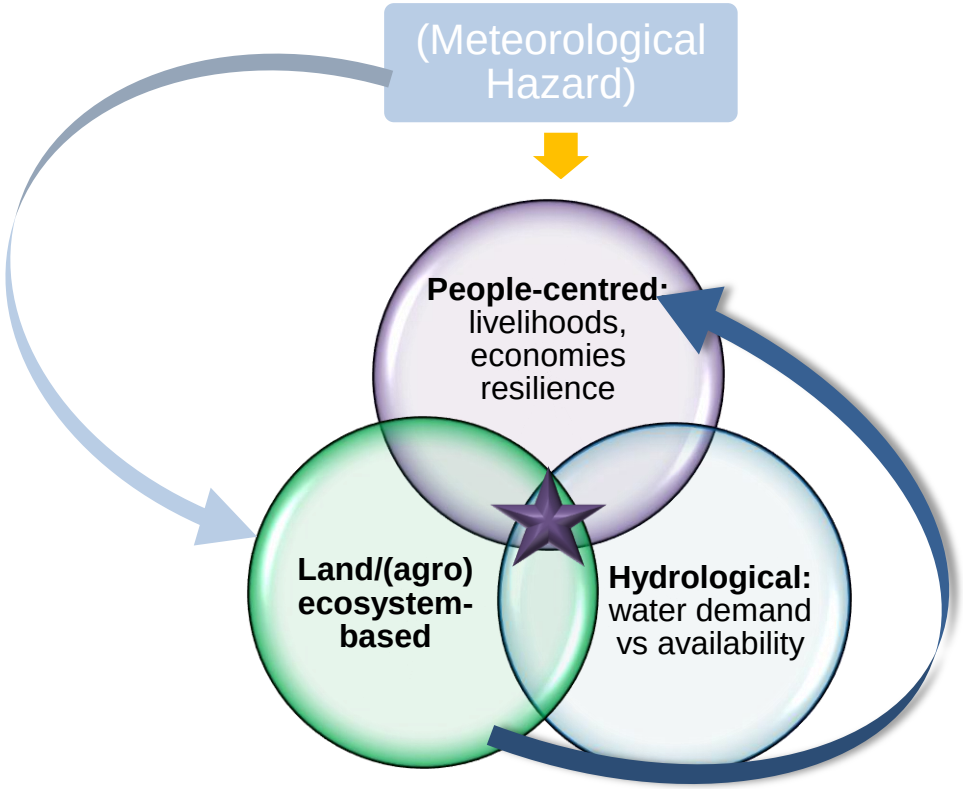
Vulnerability & Risk Assessment

Risk Mitigation Measures

Planning early is key to achieving drought resilience



Three dimensions of drought impact & vulnerability

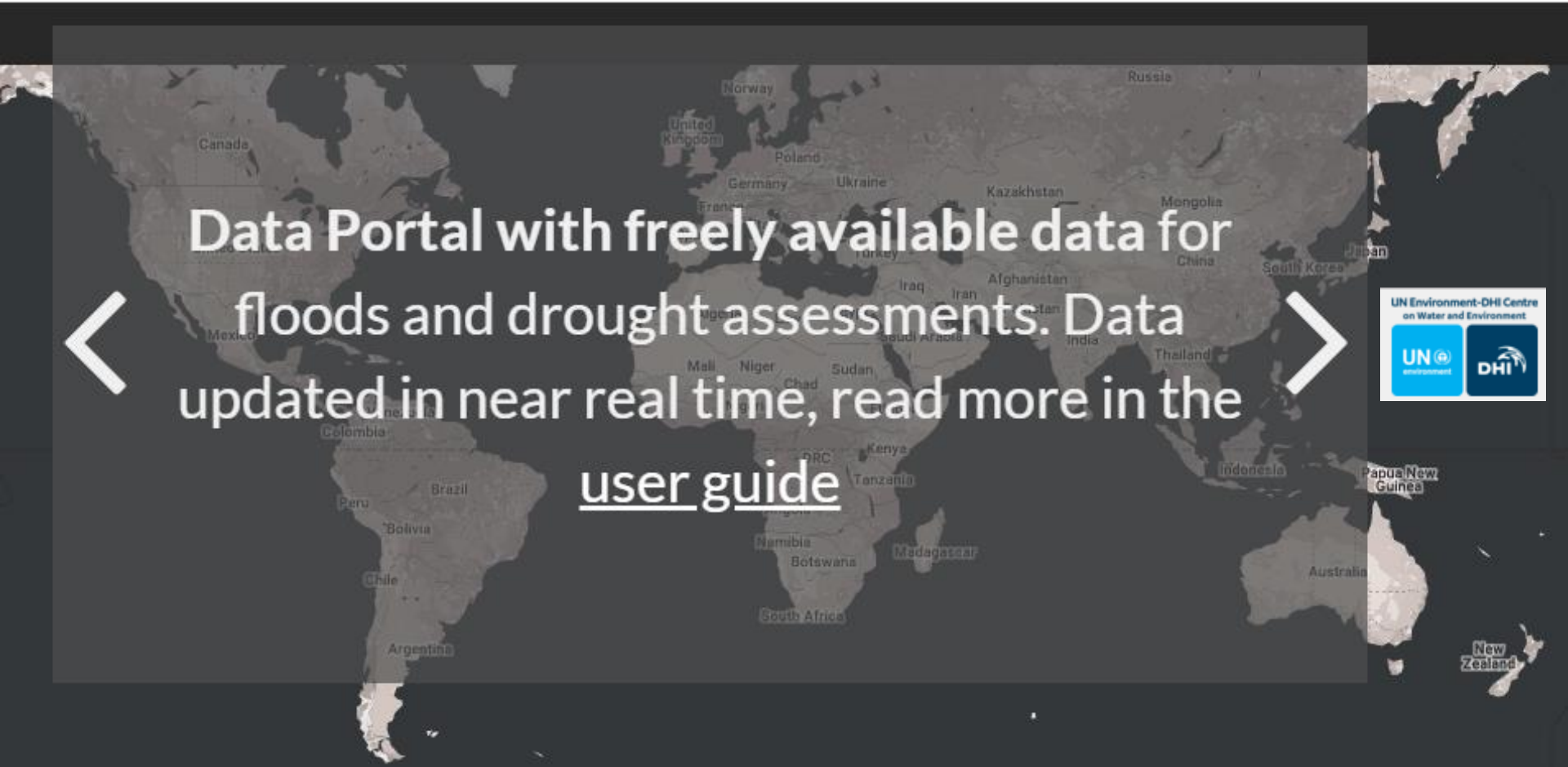


Source: Caroline King-Okumu, 2019

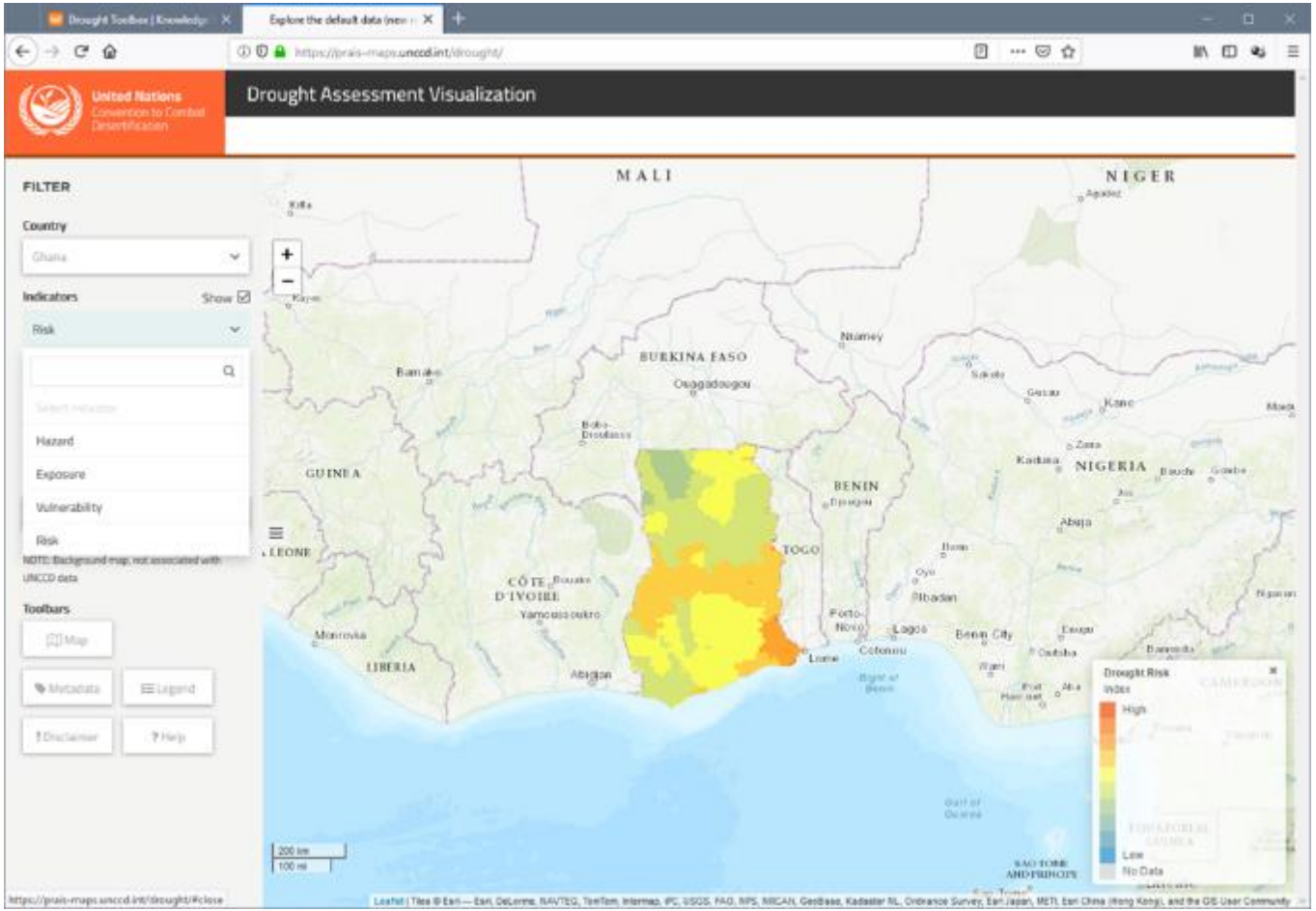
Sneak preview: The Drought Toolbox

The Drought Toolbox is currently being developed as part of the Drought Initiative by the close partnership collaboration of the UNCCD, WMO, FAO, GWP, National Drought Mitigation Center (NDMC) of the University of Nebraska, and UNEP-DHI.

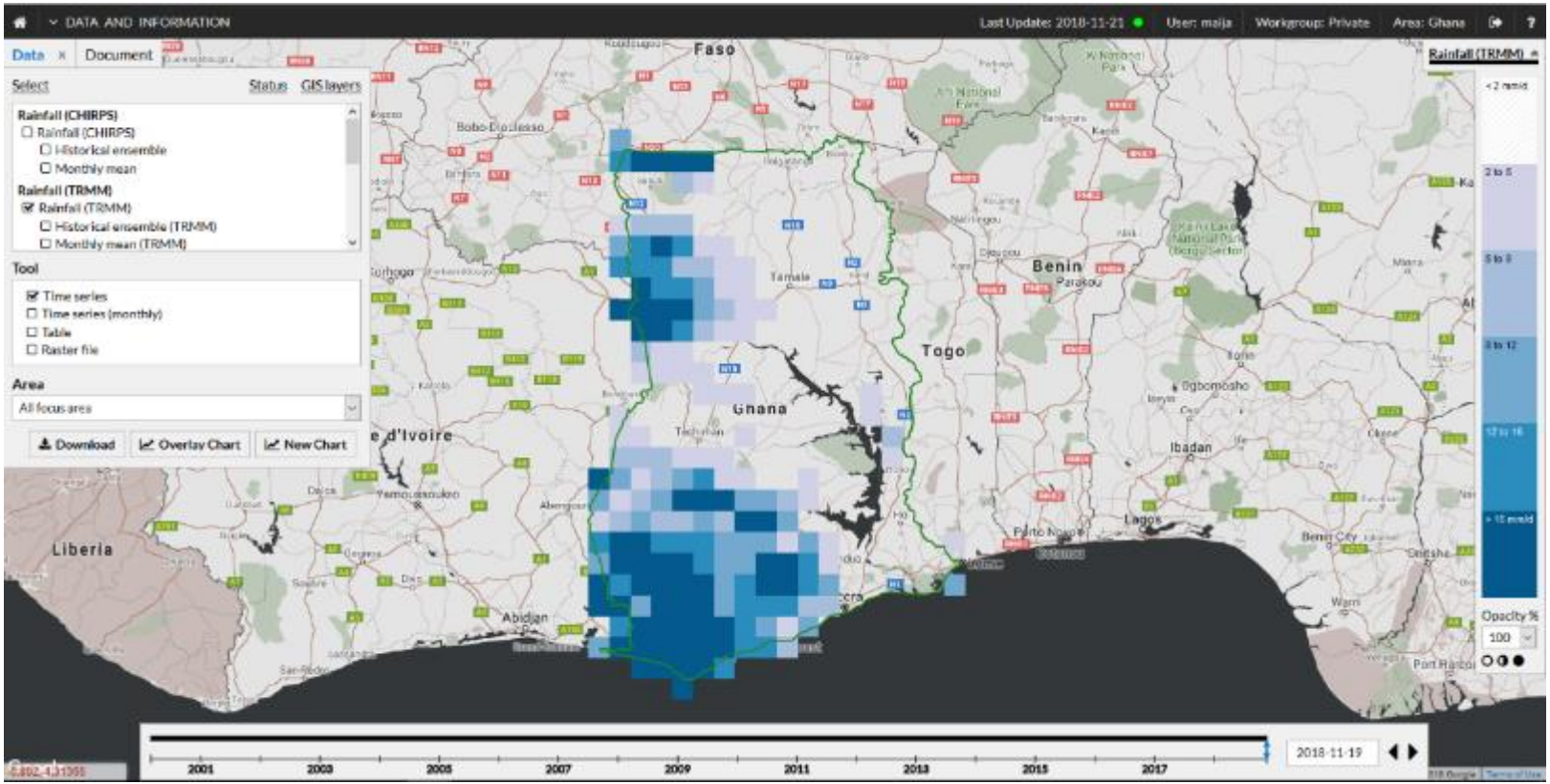
Drought monitoring and early warning tools



Interaction visualization tools for assessing drought



…involving drought-relevant data sets

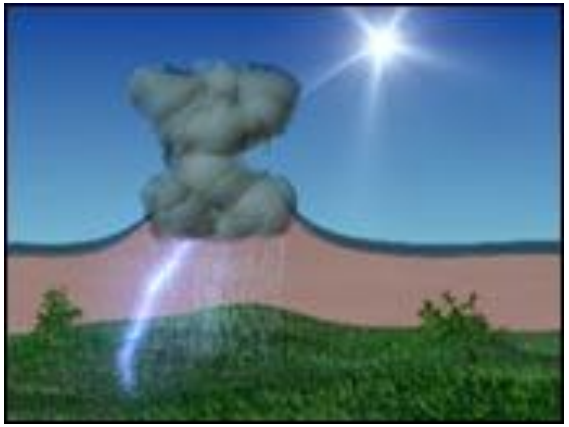


Example: Tropical **Rainfall** Measuring Mission (**TRMM**) data

Generally speaking…

There are three main contributors to drought:

- Land and sea surface temperatures
- Atmospheric circulation patterns
- Soil moisture



Each of these physical parameters is linked to the others intricately; changing any one of them significantly will typically set up a chain of events that causes the other parameters to change.

https://earthobservatory.nasa.gov/features/NAmerDrought/NAmer_drought_2.php

Image credit: Susan Byrne, NASA GSFC

This means…

United Nations
Convention to Combat Desertification

Anything which reduces the water holding capacity of soil…

Anything which consumes more soil moisture…

…contributes to water scarcity.

In current policy and practice in your country, what factors trigger a response to drought?

Credit: Matthew T Rader @matthew_t_rader https://unsplash.com/photos/2nAWr7kVspY

How large is the problem? Very large.

Global map of drought vulnerability

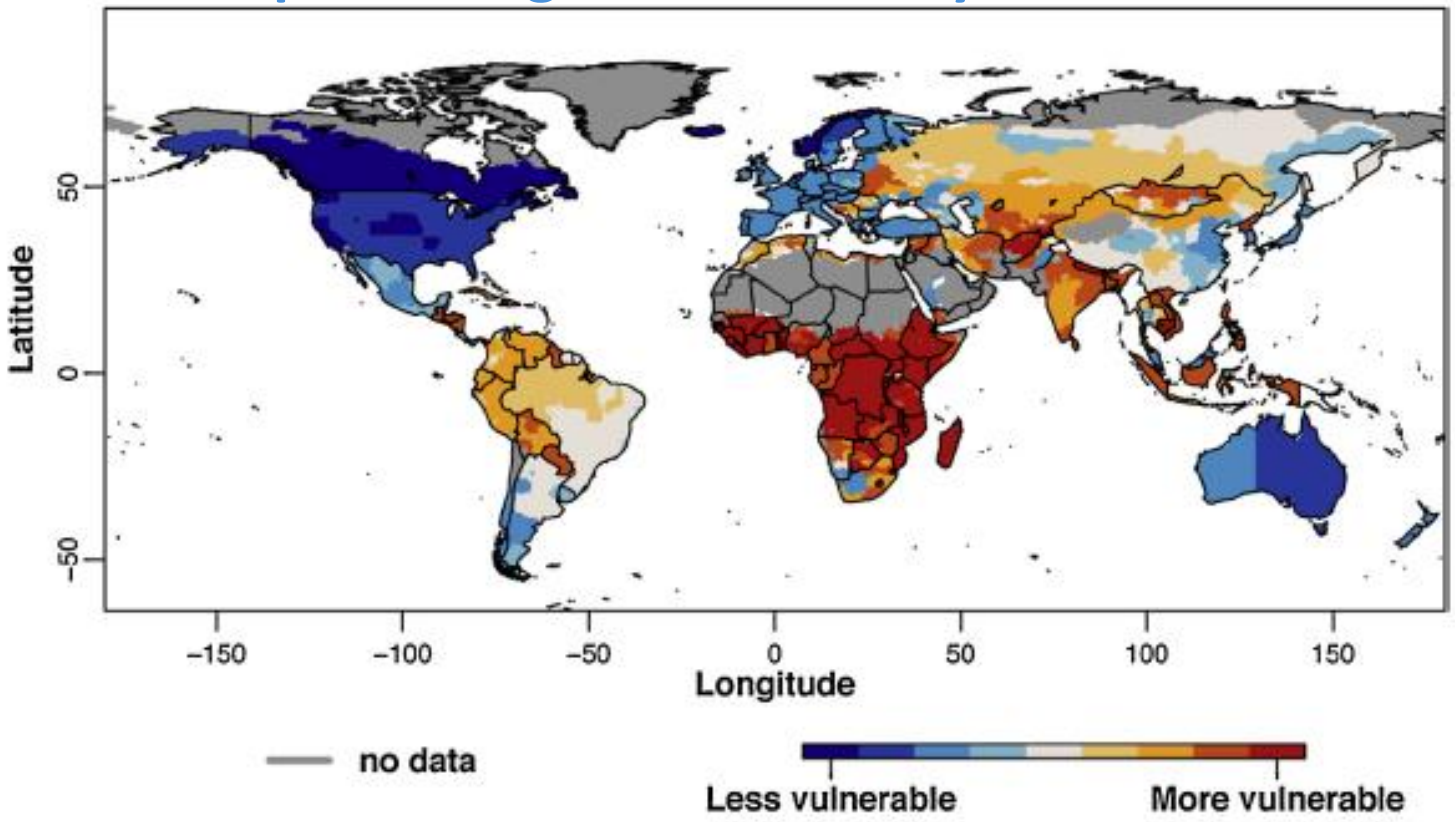
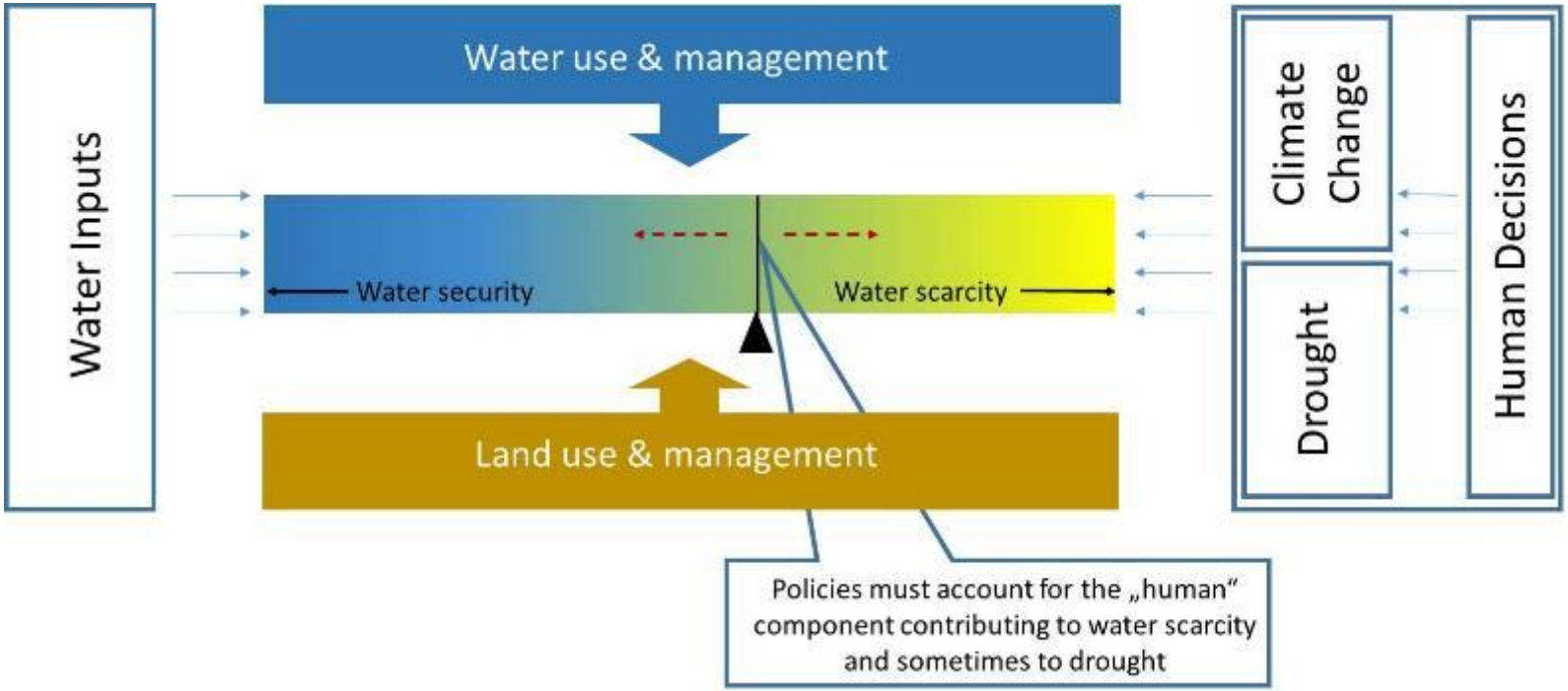


Fig. 6. Global map of drought vulnerability.

Carrao et al. 2016

Which is why policies focus on the land-drought nexus are so important



Thank you!

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