

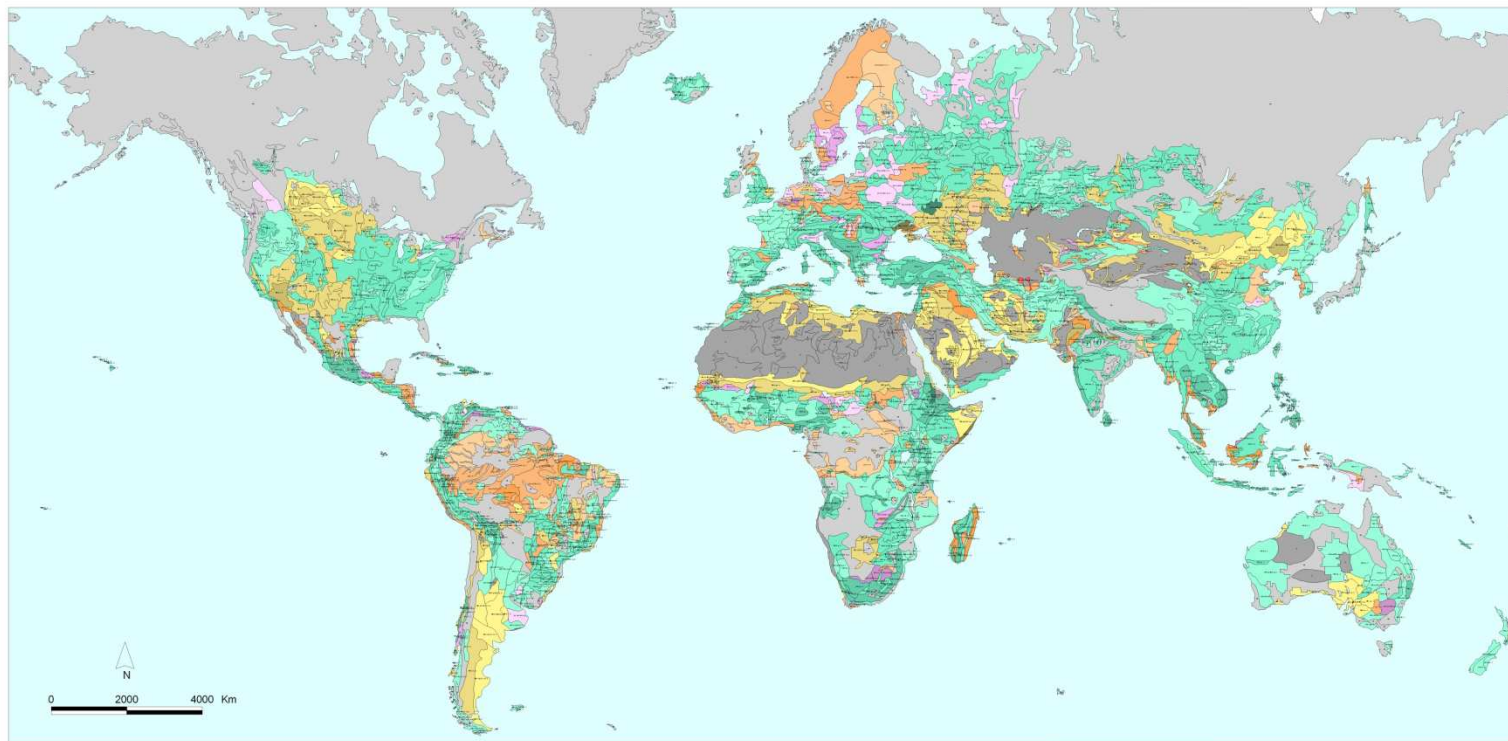
Soils in the Water, Food and Climate Nexus:

The Concept of Land Degradation Neutrality

Knut Ehlers

Soil degradation – a global challenge:

GLOBAL ASSESSMENT OF THE STATUS OF HUMAN-INDUCED SOIL DEGRADATION (1990)



DEGRADATION SEVERITY (Extent + Degree)

Water erosion	Wind erosion	Chemical deterioration	Physical deterioration	Stable terrain	Other
<ul style="list-style-type: none"> - Loss of topsoil - Terrain deformation/mass movement 	<ul style="list-style-type: none"> - Loss of topsoil - Terrain deformation - Overblowing 	<ul style="list-style-type: none"> - Loss of nutrients/organic matter - Salinization/alkalinization - Acidification - Pollution 	<ul style="list-style-type: none"> - Compaction/crusting - Waterlogging - Subsidence of organic soils 	<ul style="list-style-type: none"> - Stable under natural conditions - Stable without vegetation - Stabilized by human intervention 	<ul style="list-style-type: none"> - Non used wasteland - Ocean, inland water
<ul style="list-style-type: none"> ■ Low ■ Medium ■ High ■ Very high 	<ul style="list-style-type: none"> ■ Low ■ Medium ■ High ■ Very high 	<ul style="list-style-type: none"> ■ Low ■ Medium ■ High ■ Very high 	<ul style="list-style-type: none"> ■ Low ■ Medium ■ High ■ Very high 	<ul style="list-style-type: none"> ■ Stable 	

Soil degradation – a global challenge:

GLOBAL ASSESSMENT OF THE STATUS OF HUMAN-INDUCED SOIL DEGRADATION (1990)

More than **20%** of all land affected

5-10 mio. ha additionally degraded each year

24 bil. t. topsoil lost due to erosion

16.5% potential yield decline in Africa until 2020

1.5 bil. people directly affected

DEGRADATION SEVERITY (Extent + Degree)

Water erosion

- Loss of topsoil
- Terrain deformation/mass movement

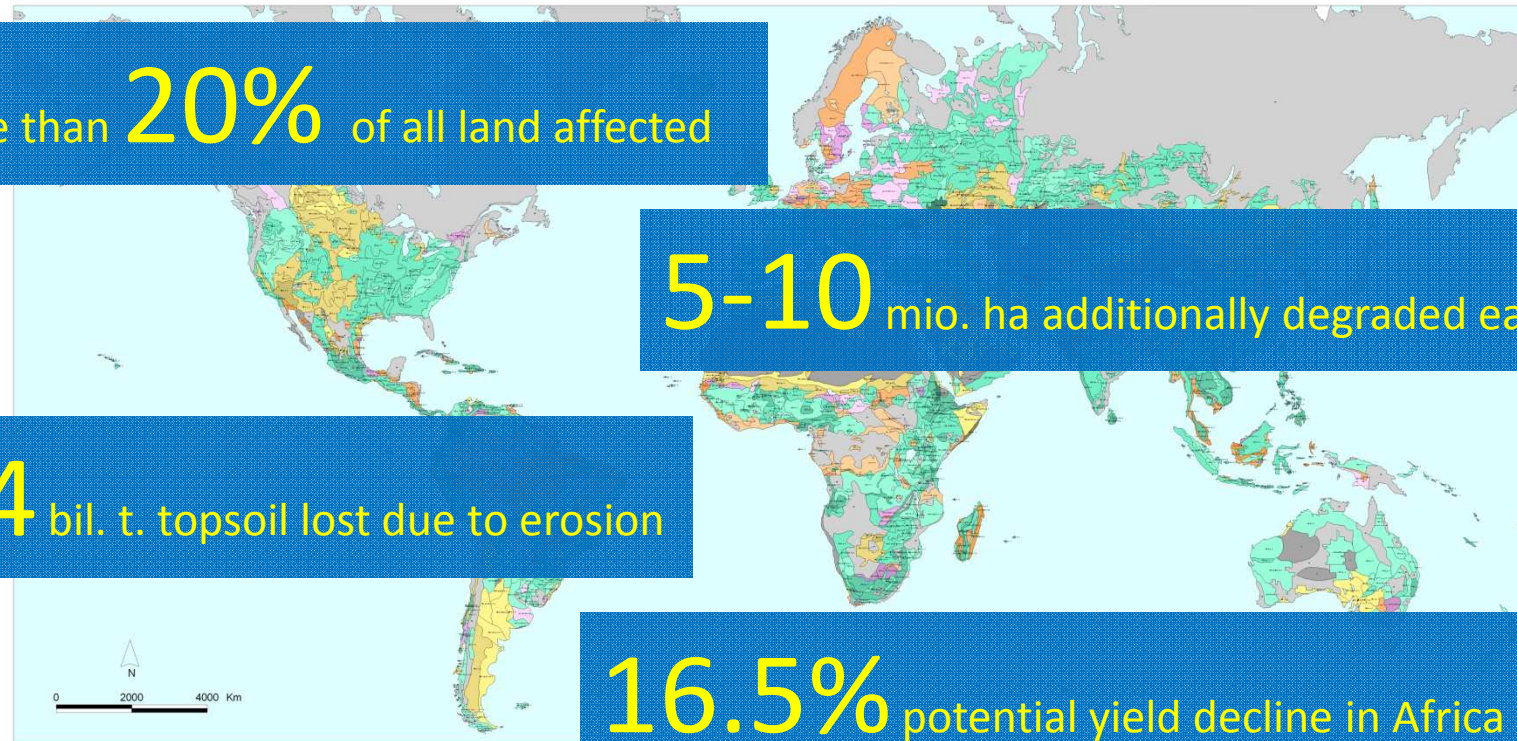
Low
Medium
High
Very high

Very high

Very high

Very high

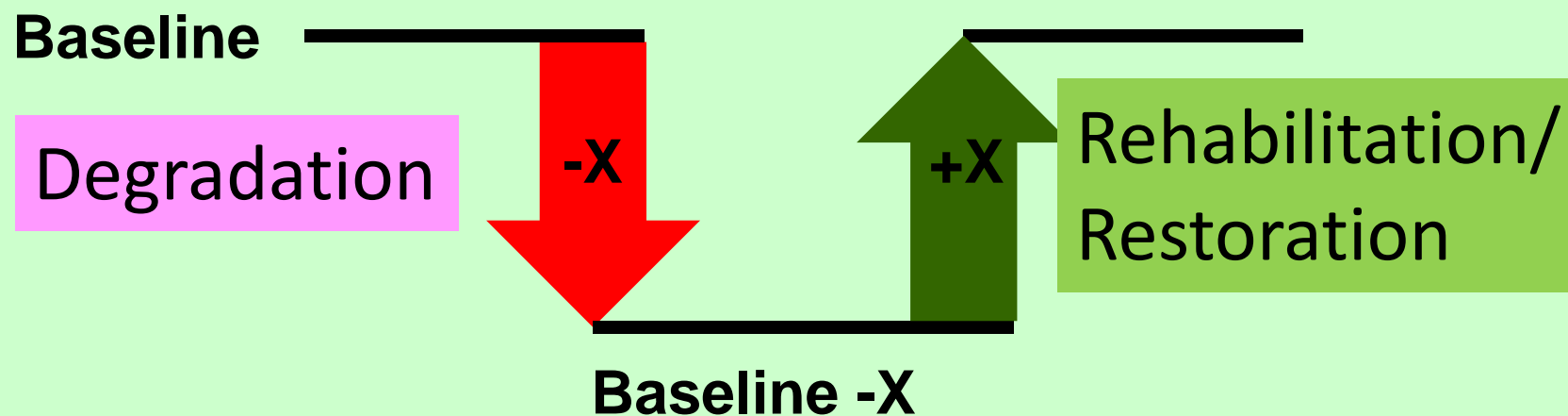
Non used wasteland
Ocean, inland water



Rio+20 Outcome Document – „The Future We Want“

- Para 205: “We stress that desertification, land degradation, and drought are challenges of a global dimension and continue to pose serious challenges to the sustainable development of all countries...”
- Para 206: “We will strive to achieve a land degradation neutral world in the context of sustainable development...”

Land Degradation Neutrality:



1. Minimize land degradation.
2. Offset unavaiodable land degradation by restoration and rehabilitation efforts.

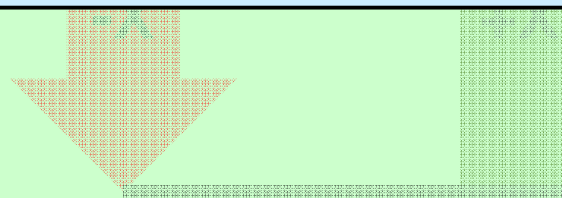
Land Degradation Neutrality: What remains to be done?

Assessment + Monitoring:

Indicators <-> Definition

- find balance between production and other ecosystem oriented indicators.

Degradation



Restoration/
Restoration

Baseline -X

Land Degradation Neutrality: What remains to be done?

Assessment + Monitoring:

Indicators <-> Definition

- find balance oriented indicators

Timing:

- 2020, 2030, open end?
- Ambition vs. feasibility

Degradation

Baseline -X

Land Degradation Neutrality: What remains to be done?

Assessment + Monitoring:

Indicators <-> Definition

- find balance oriented indicators

Timing:

Scale for offsetting:

global/regional/national

- Localized costs and impacts

Land Degradation Neutrality: What remains to be done?

Assessment + Monitoring:

Indicators <-> Definition

Framework:

- Multi disciplinary, cross-sectoral approach
 - > drivers and effects have strong interlikages with natural and socioeconomic factors
- From a global goal to local action
 - > anchoring on global/national/local levels

Thank you for your attention!

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