

GLOBAL SOIL PARTNERSHIP

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PARTNERSHIP



**FOOD AND AGRICULTURE
ORGANIZATION**
—
of **THE UNITED NATIONS**

*Food
for
all*



1. Why are Soils so Important?

SOIL IS A LIMITED RESOURCE

“Because it is everywhere, we tend to overlook the fact that soil is a limited natural resource”.

On top of that, the world's limited area of *fertile soils* are increasingly under pressure from competing land uses. Soil degradation threatens this vital resource, weakening efforts to increase food production for a growing population.




Poor soil
management,
could lead to
Degradation



Why Soils? Soils are Finite on a Human Time Scale

- Worldwide soil is being eroded (carried away by wind and runoff) much faster than it is being replenished. In Somalia: **an average of 100 tons/ha of topsoil per year is lost (SWALIM, 2009).**
- However, natural soil formation is a very slow process – **2 - 2.5 cm of soil formation, requires approx. 1000 years.**





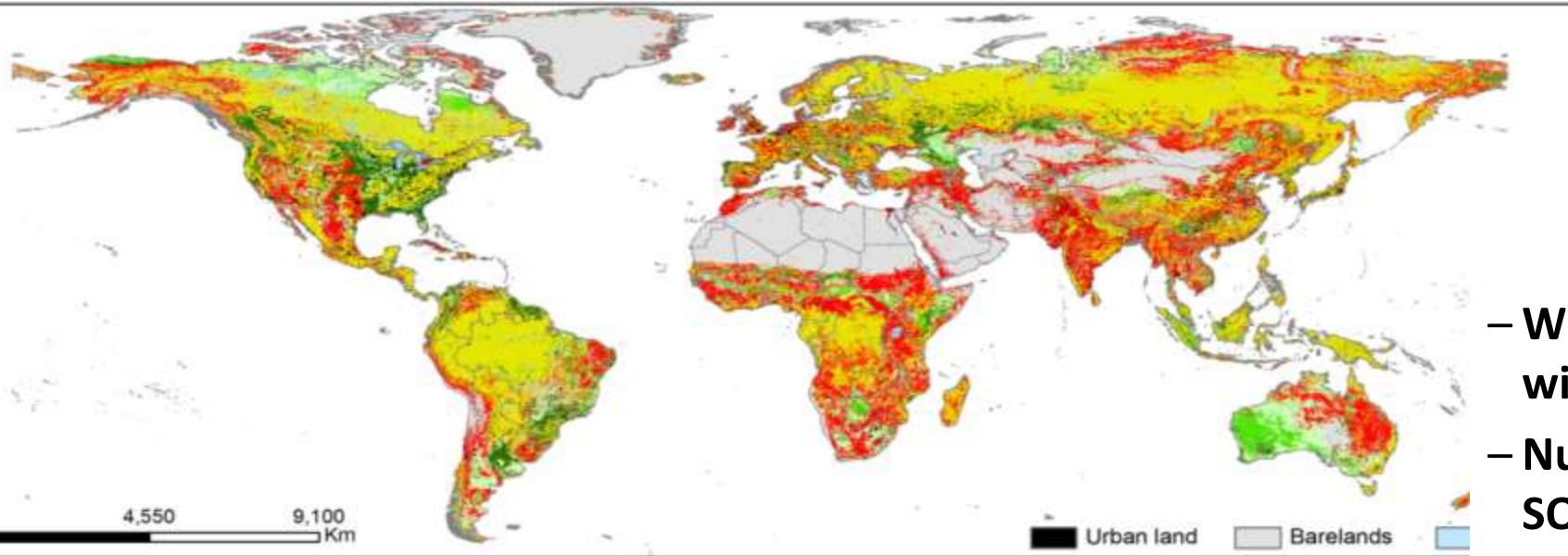
What are the Challenges for Soils: Past, Present and Future?

Soil Productivity and Degradation

- Over 50 years, **world production of cereals coarse grains, roots and tubers, pulses and oil crops** has grown from 1.8 million tones to 4.6 billion tones.
- These huge gains were often accompanied by **negative effects on agriculture's natural resource base** (externalities)
- The **land degradation** effects are so serious that they jeopardize future productive potential
- Many of today's production systems are unsustainable:
 - **overuse of fertilizer in some parts of the world → serious nitrate build up in water resources** that threatens vast areas.
 - extreme **under-use of organic fertilizer in most parts of sub-Saharan Africa → soil nutrients exported with harvested crops are not being replenished**, leading to soil degradation and declining yields.

Soil degradation status and trends

- Soils of varying degradation status (low to high) show **increasing degradation trends (GLADIS, 2011):**



Land degradation classes



- Low status; Medium to Strong degradation
- Low status; Weak degradation
- Low status; Improving

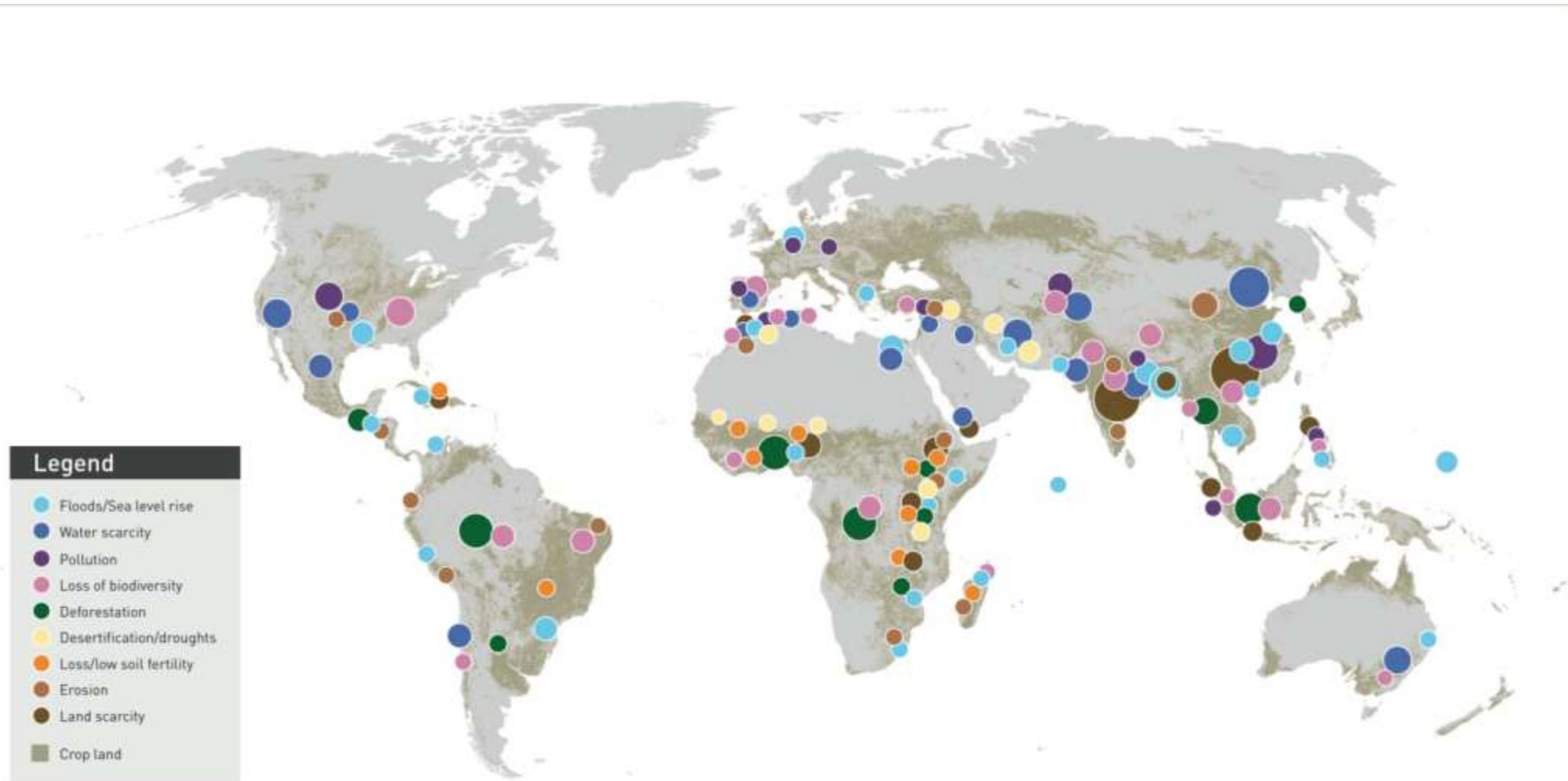
- High status; Medium to Strong degradation
- High status; Stable to improving



Source: F. O. Nachtergaele, M. Petri, R. Biancalani, G. van Lynden, H. van Velthuisen, M. Bloise, 2011. Global Land Degradation Information System (GLADIS) version 1.0. An Information database for Land Degradation Assessment at Global Level.

- Water and wind erosion
- Nutrient and SOM depletion
- Acidification
- Salinisation
- Compaction
- Contamination

SYSTEMS AT RISK (SOLAW)





2. Global Soil Partnership

Soils situation today: Major concern

- **Soil data** - fragmented, partly outdated (fertility, SOC,...), heterogeneous-difficult to compare, not easy accessible, not responding to users demands.
- **Soil capacities** - increasingly a scarce resource (loss of soil expertise & skills).
- **Soil knowledge & research** - fragmented (fertility, CC, ecology), not accessible for use by various disciplines/for decision making, not tailored to address problems/development agendas of today.
- **Awareness & investments in soil management** - extremely low compared to the needs that soil is a precious resources & requires special care from its users.
- **Soil policy:** Often perceived as a 2nd-tier priority; lack of international governance body to support coordinated global action on their management.

Need for compatible and coordinated soil policies – A unified and authoritative voice is needed to better coordinate efforts and pool limited resources.

Why a Global Soil Partnership?

The GSP was launched by FAO, with the support of EC-JRC, in Sept. 2011 and established by FAO Council last week:

- Improve global coordination /governance of the world's soil resources through an intergovernmental mechanism;
- Put national and regional needs in the centre.
- Involve local institutions and communities to create ownership.
- Catalyse effective and coordinated of soils policies and investments to guarantee healthy and productive soils for food security and sustained ecosystem services.



*200 participants; 100 countries
120 organizations; (int./reg./
national institutes; soil science
networks; NGOs; universities
research;farmers associations)*

GSP Vision and Mission

- **The Vision of the GSP** is the improvement of the global governance of the limited soil resources of the planet in order to guarantee healthy and productive soils for a food secure world, as well as sustain other ecosystem services on which our livelihoods and societies depend including water regulation and supply, climate regulation, biodiversity conservation and other cultural services.
- **The Mission of the GSP** is to develop capacities, build on best available science, and facilitate the exchange of knowledge and technologies between stakeholders, for sustainable management of soil resources at all levels with a view to enhancing food security, protecting ecosystem services, and contributing to poverty alleviation in an era of increasing human demands and climate change.

Progress in GSP establishment

3. Networking and Actions to address soils issues in the field

FAO is funding **Regional Soil Partnerships to develop soil information systems:**

- **Asia:** coordinated by Soil Science institute, Chinese Academy of Sciences; 1st meeting -16 countries & many institutions → **Nanjing Communiqué** (11 Feb 2012)
- **MENA:** coordinated by the Ministry of Agriculture Jordan and ICARDA; 1st meeting early April; in addition to an **Amman communiqué** agreed
- **Latin America:** coordinated by EMBRAPA, Brazil, & Argentina; 1st meeting was held in April 2012;.
- **Africa:** to be developed in consultation with TSBF-CIAT, ICRAF , Afnet network and other partners

The RSPs will prioritise and implement the GSP plans of actions, while addressing local needs with local experts and fostering south-south cooperation and collaboration (e.g. Globalsoilmap.net, Global soil forum etc.)

Progress in GSP establishment

4. GSP Workshop "Towards Global Soil Information: activities within the GEO Task on Global Soil Data" March 2012, FAO HQ Rome.



The workshop aim was to review the state of the art of tools and techniques for mapping soils at global and regional scales as an input for defining future activities for implementation under the GSP. Soil data/information user demands were also reviewed.



THANK YOU

