GLOBAL SOIL PARTNERSHIP

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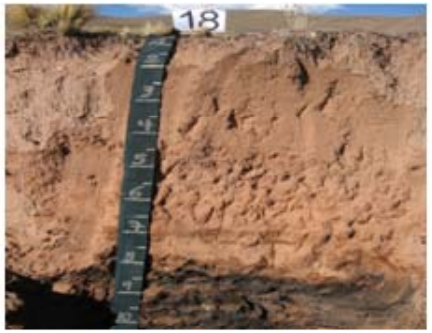
Nairobi, 25 March 2013

GLOBAL SOIL PARTNERSHIP

GENERAL PERCEPTION ABOUT SOILS

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

PROVISSION OF ECOSYSTEM SERVICES BY SOILS



Life support services

- The soil renews, retains, delivers nutrients and provides physical support for plants;
- It sustains biological activity, diversity, and productivity;
- The soil ecosystem provides habitat for seeds dispersion and dissemination of the gene pool for continued evolution.

Provision services

- Soil is the basis for the provision of food, fibre, fuel and medicinal products to sustain life;
- It holds and releases water for plant growth and water supply.

Regulating services

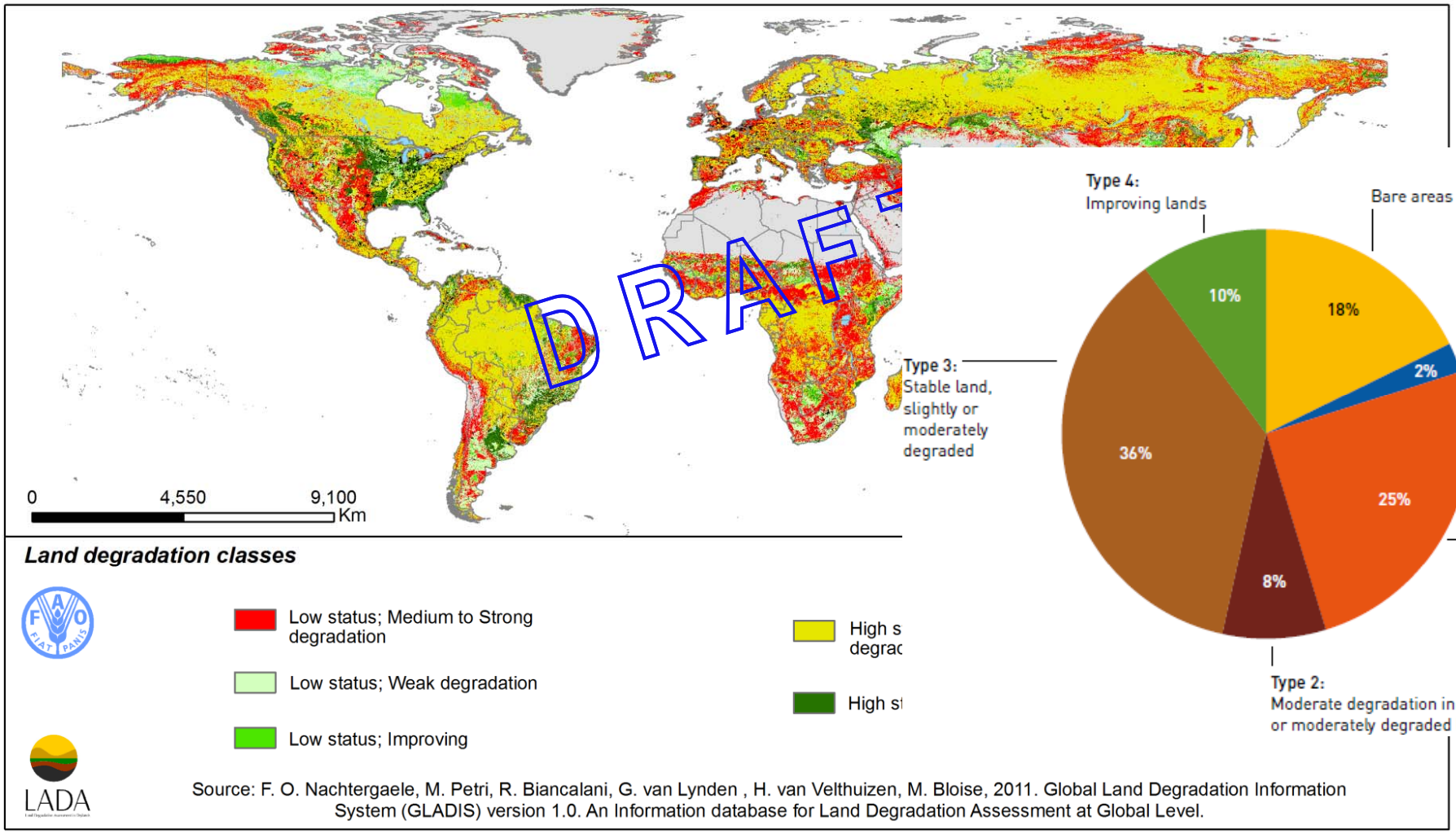
- The soil plays a central role in buffering, filtering and moderation of the hydrological cycle;
- It regulates the carbon, oxygen and plant nutrient cycles (such as N, P, K, Ca, Mg and S) affecting the climate and plant production;
- Soil biodiversity contributes to soil pest and disease regulation. Soil micro-organisms process and break-down wastes and dead organic matter (such as manure, remains of plants, fertilizers and pesticides), preventing them from building up to toxic levels, from entering water supply and becoming pollutants.

Cultural services

- Soil provides support for urban settlement and infrastructure;
- In some cultures, soils may also be of specific spiritual or heritage value.
- Soils are the basis for landscapes that provide recreational value.

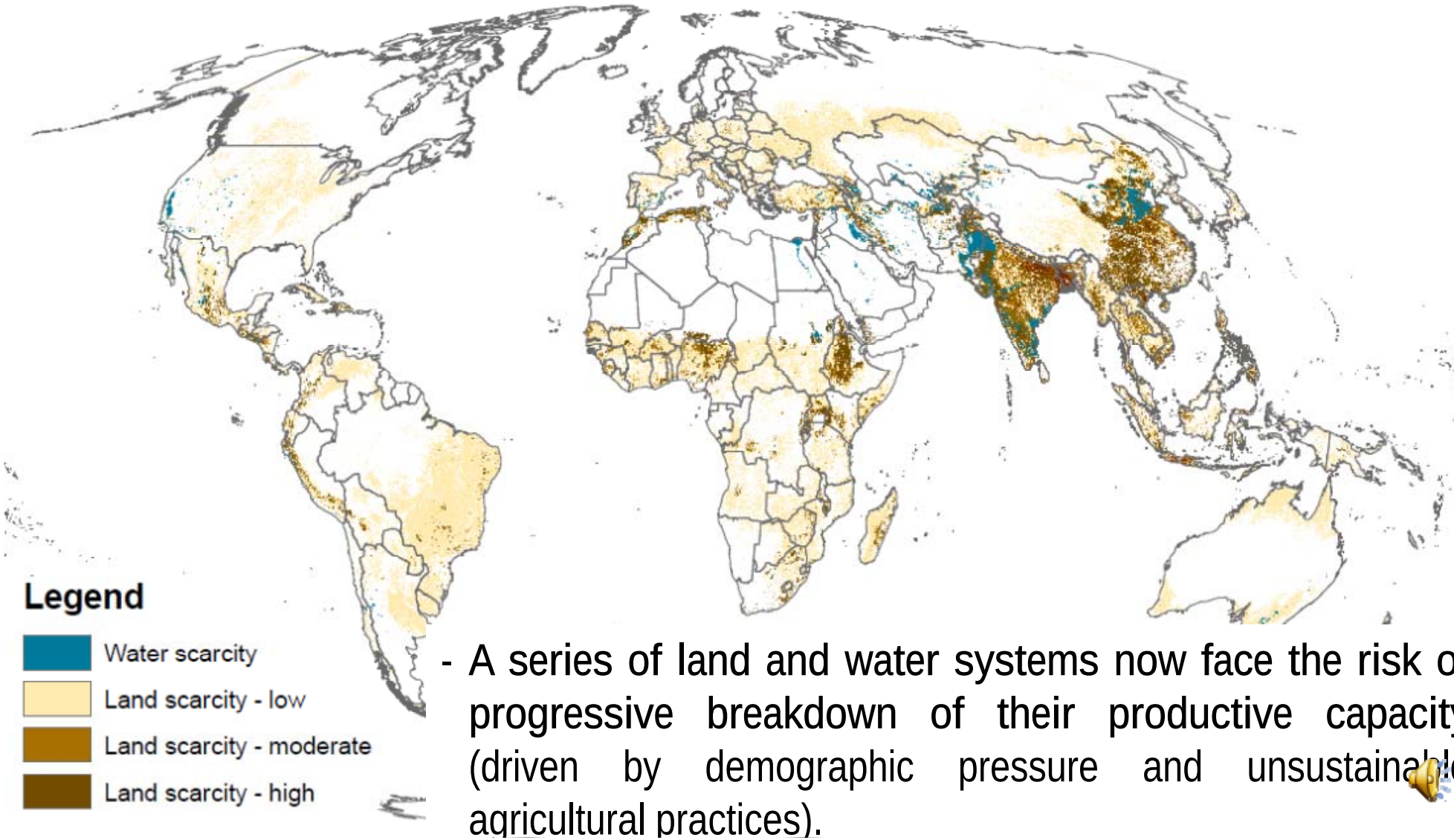
SOIL DEGRADATION AND FOOD SECURITY

Land degradation affects soil health



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

SYSTEMS AT RISK (SOLAW)

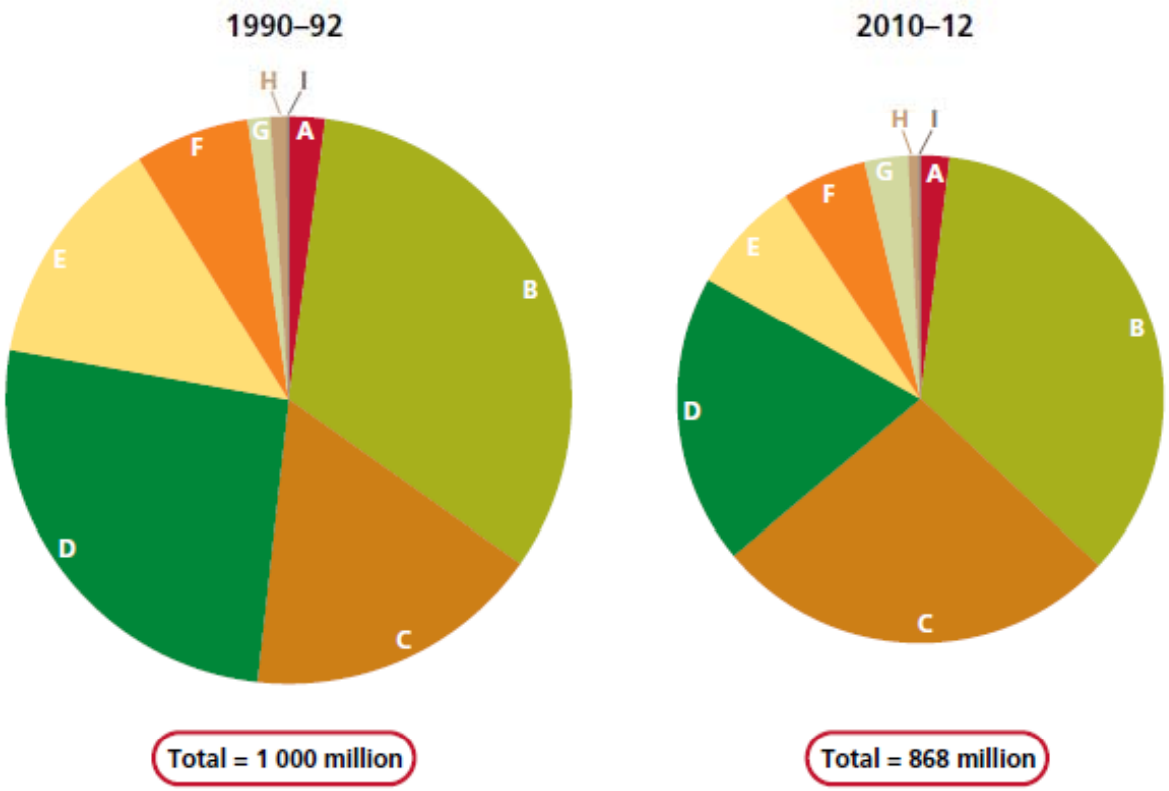


- A series of land and water systems now face the risk of progressive breakdown of their productive capacity (driven by demographic pressure and unsustainable agricultural practices).

STATUS ON FOOD INSECURITY 2012

FIGURE 4

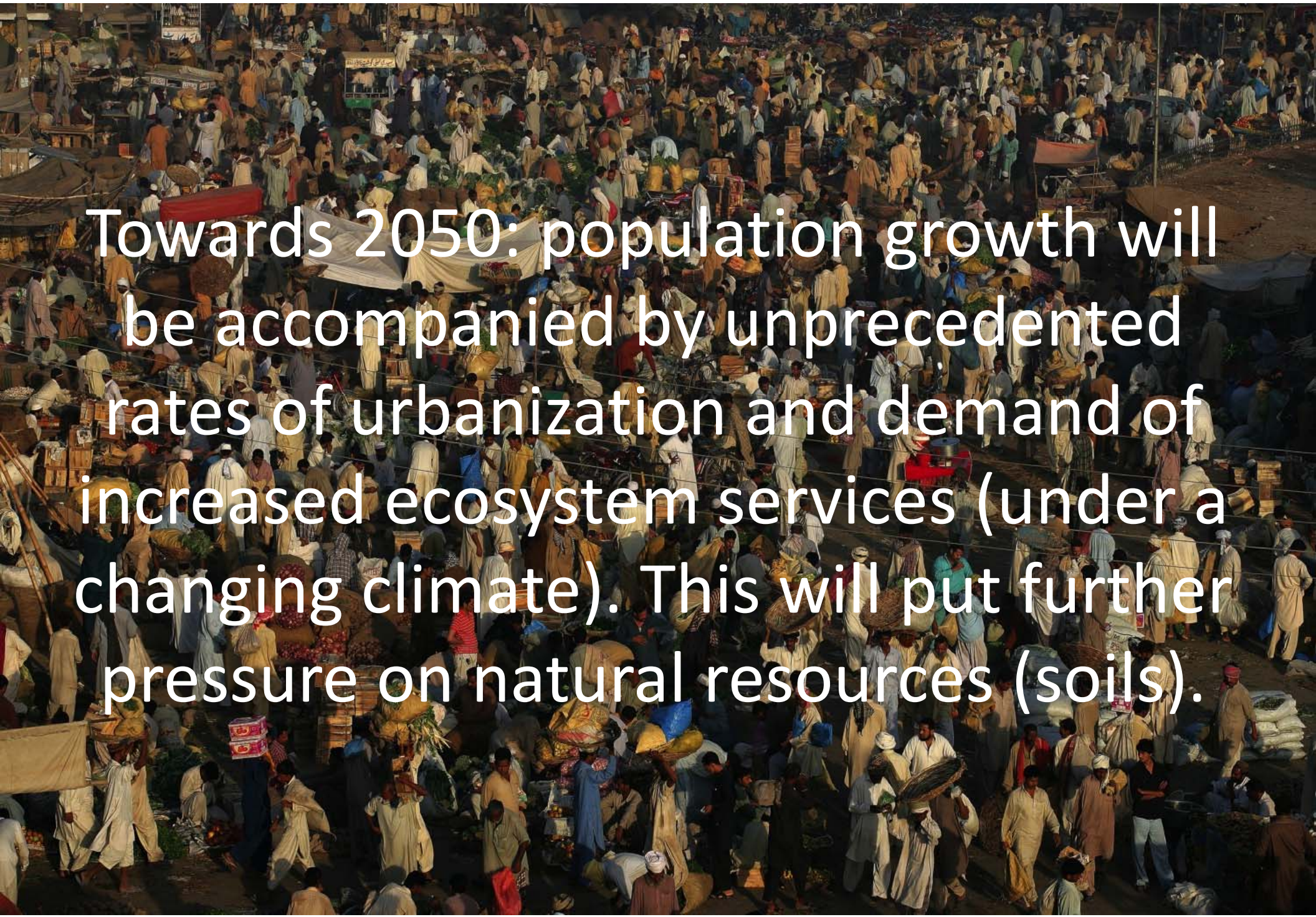
The distribution of hunger in the world is changing
Number of undernourished by region, 1990–92 and 2010–12



	Number of undernourished *(millions)* 1990–92	2010–12
A Developed regions	20	16
B Southern Asia	327	304
C Sub-Saharan Africa	170	234
D Eastern Asia	261	167
E South-Eastern Asia	134	65
F Latin America and the Caribbean	65	49
G Western Asia and Northern Africa	13	25
H Caucasus and Central Asia	9	6
I Oceania	1	1

Note: The areas of the pie charts are proportional to the total number of undernourished in each period. All figures are rounded.
Source: FAO.

2. Challenges to soil resources by 2050


Towards 2050: population growth will be accompanied by unprecedented rates of urbanization and demand of increased ecosystem services (under a changing climate). This will put further pressure on natural resources (soils).

Towards 2050: food demand

food production needs

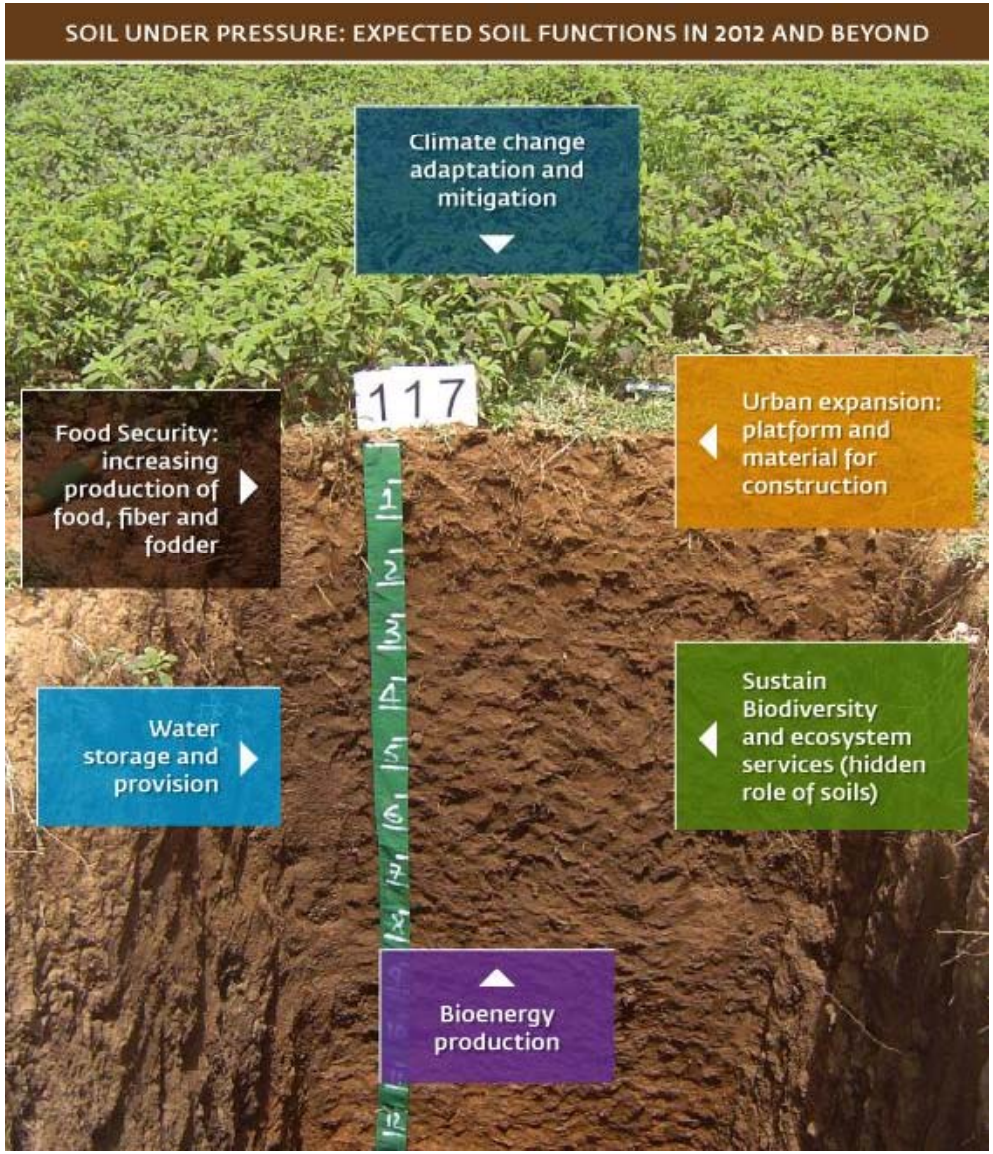
+60%

globally

+100%

in developing countries

SOILS ARE UNDER INCREASING PRESSURE



RIO+20
the future we want

206. We recognize the need for urgent action to reverse land degradation. In view of this we will strive to achieve a land degradation neutral world in the context of sustainable development. This should act to catalyze financial resources from a range of public and private sources.

The global agenda provides a great opportunity for soil resources as its sustainable management is a key element for its achievement.

100%	Zero	All	100%	Zero
access to adequate food all year round	stunted children less than 2 years	food systems are sustainable	increase in smallholder productivity and income	loss or waste of food

Hunger can be eliminated in our lifetimes.

3. What are the responses on soils now?

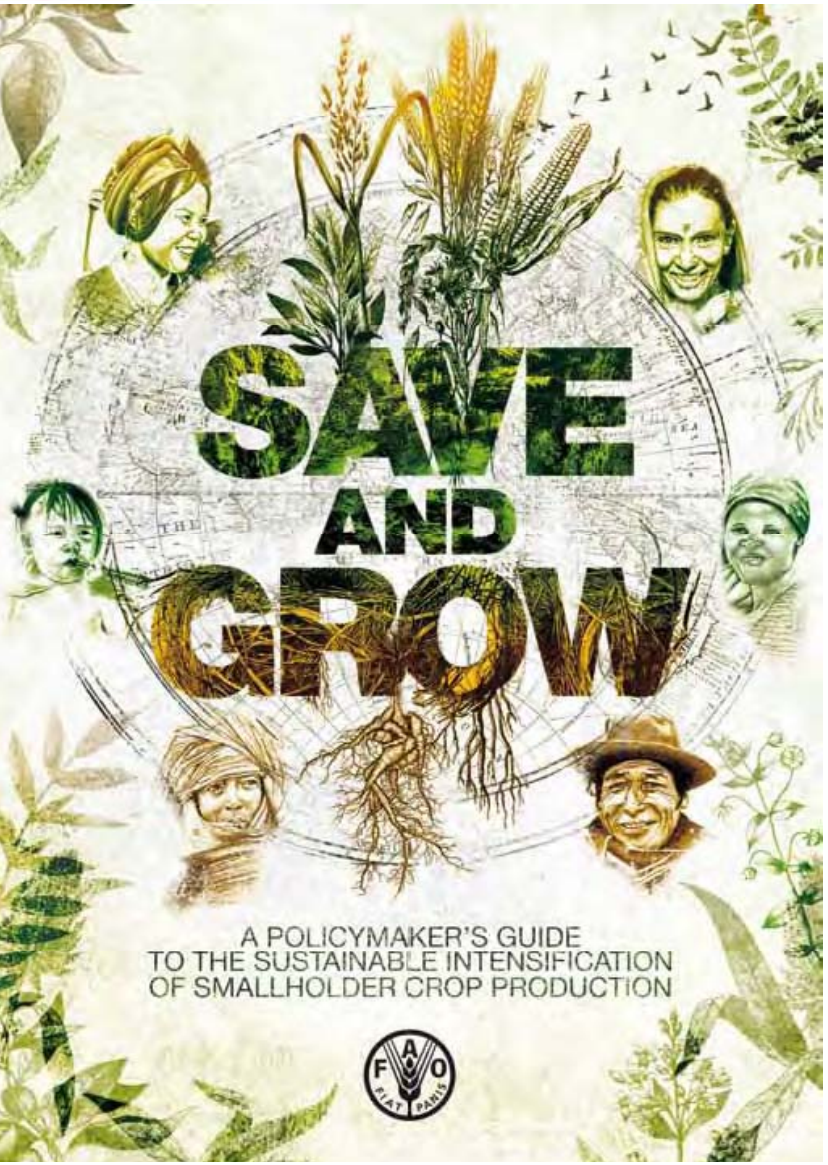
WHERE WE ARE TODAY?

“Soils are considered a second –tier priority at the decision making/taking level”

- Apart from soil scientists and farmers, there is a lack of knowledge about the importance of this resource (not only for its role in agriculture, but beyond) from civil society to decision takers.
- Soil investment, in the different areas is far comparing with the needs.
- Soil degradation is increasing in terms of status and area, but yet soils (hidden resource) keeps providing us with services and goods.
- Soil scientists are becoming scarce, need to develop capacities and make this profession attractive. National Soil Institutions requires strengthening.
- An interdisciplinary perspective is needed, the crosscutting issue of soils has to be in the centre of agricultural and environmental development processes.
- Soil data and information is fragmented, outdated and not responding to needs.

4. Towards a Global Soil Partnership

SUSTAINABLE INTENSIFICATION OF AGRICULTURE



The challenge

To feed a growing world population, we have no option but to intensify crop production. But farmers face unprecedented constraints. In order to grow, agriculture must learn to save.

Soil health

Agriculture must, literally, return to its roots by rediscovering the importance of healthy soil, drawing on natural sources of plant nutrition, and using mineral fertilizer wisely.

Why a Global Soil Partnership?

Available online at www.sciencedirect.com

SciVerse ScienceDirect

Current Opinion in Environmental Sustainability

Global governance of soil resources as a necessary condition for sustainable development

Luca Montanarella[1] and Ronald Vargas[2]

In the current era of multiple crises, from food price, through climate change to economic failure, policy makers around the world are exploring opportunities to make a shift to a green economy. The international community is seeking new ways of developing the concept of sustainable development up to and beyond the Earth Summit in 2012, mainly with regards to practical ways for the coherent implementation of the three pillars of sustainability, moving away from trade-offs to synergies between the economic, social and environmental dimensions of development. Within that context, special attention to global soil resources should be paid, given that global soil resources constitute the basis for the provision of ecosystem services and at the same time those are limited and currently under pressure by various threats including competing land uses, such as energy production, housing and infrastructure, nature protection, mining and industrial activities. Future food security

Introduction

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs [1]. Given the current population growth trends and the forecasted global population of more then 9.3 billion by 2050 [2], it seems a rather ambitious target to achieve. Non-renewable natural resources are being depleted at a rate that will certainly not allow future generations to meet their own needs, unless we adopt a new approach to the management of these resources. Sources of minerals, metals and energy, as well as stocks of fish, timber, water, fertile soils, clean air, biomass, biodiversity are all under pressure, as is the stability of the climate system. Whilst demand for food, feed and fiber may increase by 70% by 2050, 60% of the world's major ecosystems that help produce these

GSP Officially Endorsed by 193 countries

- During the last COAG 23 Session, the Committee, 193 member countries to FAO endorsed the establishment of the Global Soil Partnership, and welcomed the update provided by the Secretariat.

- At the 145 FAO Council the GSP ToRs have approved and country members of FAO urged its implementation.

May 2012

منظمة الأغذية والزراعة للأمم المتحدة | 联合国粮食及农业组织 | Food and Agriculture Organization of the United Nations | Organisation des Nations Unies pour l'alimentation et l'agriculture | Продовольственная и сельскохозяйственная организация Объединенных Наций | Organización de las Naciones Unidas para la Alimentación y la Agricultura

COMMITTEE ON AGRICULTURE

29. The Committee endorsed the initiative of the establishment of the Global Soil Partnership, and welcomed the update provided by the Secretariat.

30. The Committee suggested the establishment of an Open-Ended Working Group to review the

CL 145/LIM/7 Rev.1

December 2012 E

منظمة الأغذية والزراعة للأمم المتحدة | 联合国粮食及农业组织 | Food and Agriculture Organization of the United Nations | Organisation des Nations Unies pour l'alimentation et l'agriculture | Organización de las Naciones Unidas para la Alimentación y la Agricultura

COUNCIL

Terms of Reference of the Global Soil Partnership (GSP)

1. Background

1. Soil is the thin layer of material (organic and inorganic) on the Earth's surface that has been subjected to and influenced by environmental factors (parent material, climate, organisms, topography and time) providing the basis for plant establishment and growth and the provisioning of ecosystem services. Soil is a finite natural resource. On a human time-scale it is non-renewable. Soil is the foundation of agricultural development and sustainable development and provides the basis for food, feed, fuel, fibre, water availability, nutrient cycling, organic carbon stocks, biodiversity, and a platform for construction. The area of fertile soil is limited and is increasingly under pressure due to climate change and competing, unsuitable land uses, resulting in increasing degradation. Currently, 46% of the world's land is considered to be degraded. Urgent action is needed to reverse this trend. Healthy soils are required to feed the growing world population and meet their further needs. It is considered that this can only be ensured through a strong partnership which takes into account the existing initiatives and institutions.

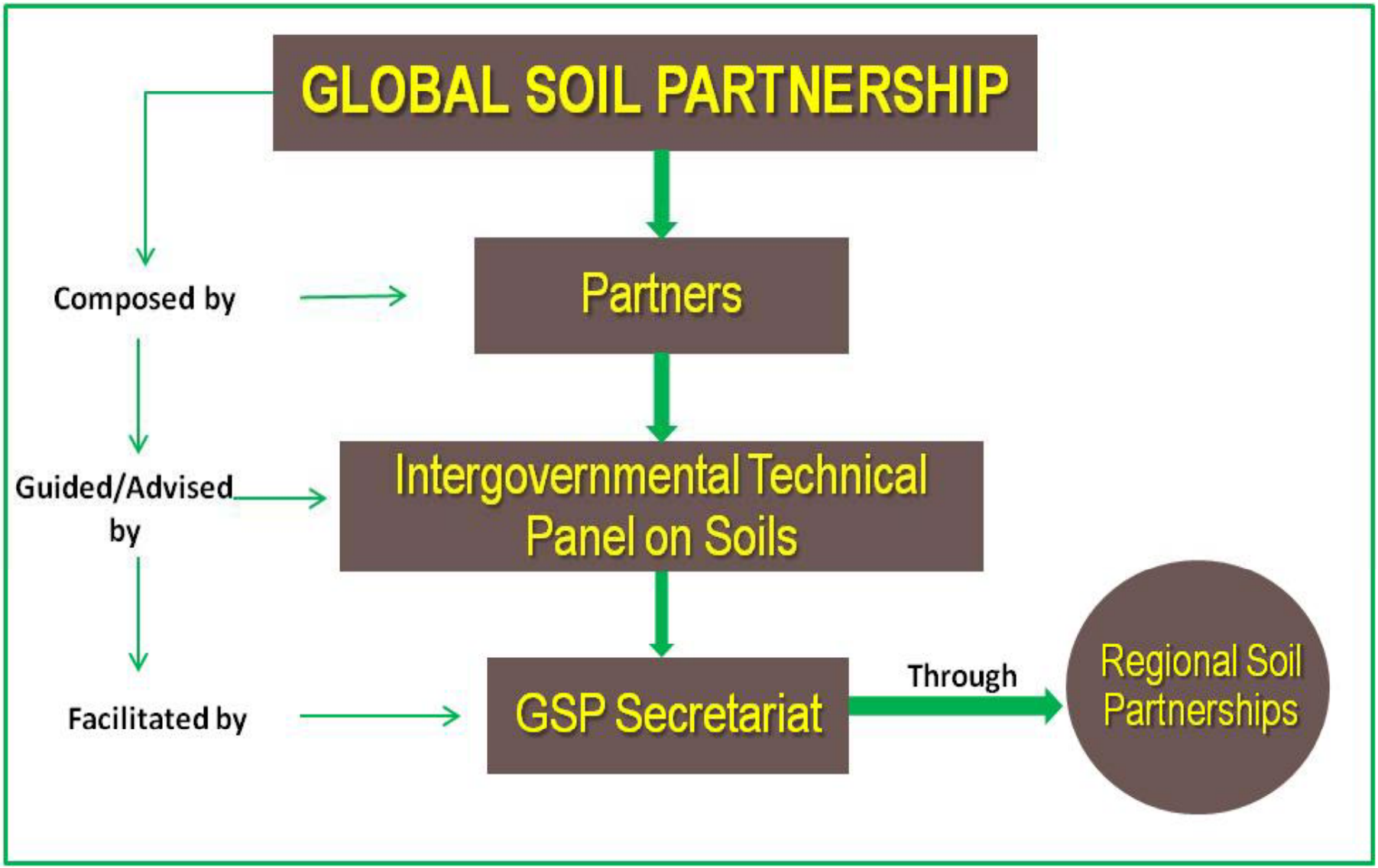
2. During its Twenty-third Session which took place from 21 to 25 May 2012, the FAO Committee on Agriculture (COAG) endorsed the initiative for the establishment of the Global Soil Partnership.

3. The present Terms of Reference are based on the GSP Background paper prepared by a Technical Working Group composed of soil scientists established by FAO after the GSP meeting held from 7 to 9 September 2011. The Terms of Reference have been reviewed by an Open-Ended Working Group composed of Permanent Representatives which was set up upon COAG recommendation at its Twenty-third Session.

GSP Vision

- The vision of the GSP is to improve 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 support other essential ecosystem services, in accordance with the sovereign right of each State over its natural resources. The GSP should become an interactive and responsive partnership.

Structure of the GSP



GSP Pillars of Action

1. Promote **sustainable management** of soil resources and **improved global governance** for soil protection and sustainable productivity;
2. Encourage i**nvestment, technical cooperation, policy, education awareness and extension in soils**;
3. Promote **targeted soil research and development** focusing on identified gaps, priorities and synergies among economic/productive, environmental and social dimensions;
4. **Enhance the quality and availability of soil data and information**: *collection, analysis, validation, reporting, monitoring, integration with other disciplines;*
5. **Harmonize and establish voluntary guidelines of methods, measurements and indicators** for soil protection and sustainable management.

ESTABLISHMENT OF REGIONAL SOIL PARTNERSHIPS


Nanjing, China
8-11 February 2012

Amman, Jordan 1-5 April 2012


Mar del Plata, Argentina
16-20 April 2012


Accra, Ghana 5-7 February 2013

STATUS OF GLOBAL AND REGIONAL SOIL INFORMATION

With the current global and regional soil information available, **the soil science community is limited in its capacity to provide accurate and updated information to the different soil users**.

Considering the challenges of food security, climate change adaptation and mitigation, and further provision of ecosystem services, the **soil science community should clearly respond to the natural needs for improved, up-to-date, quantitative and applied soil data and information.**

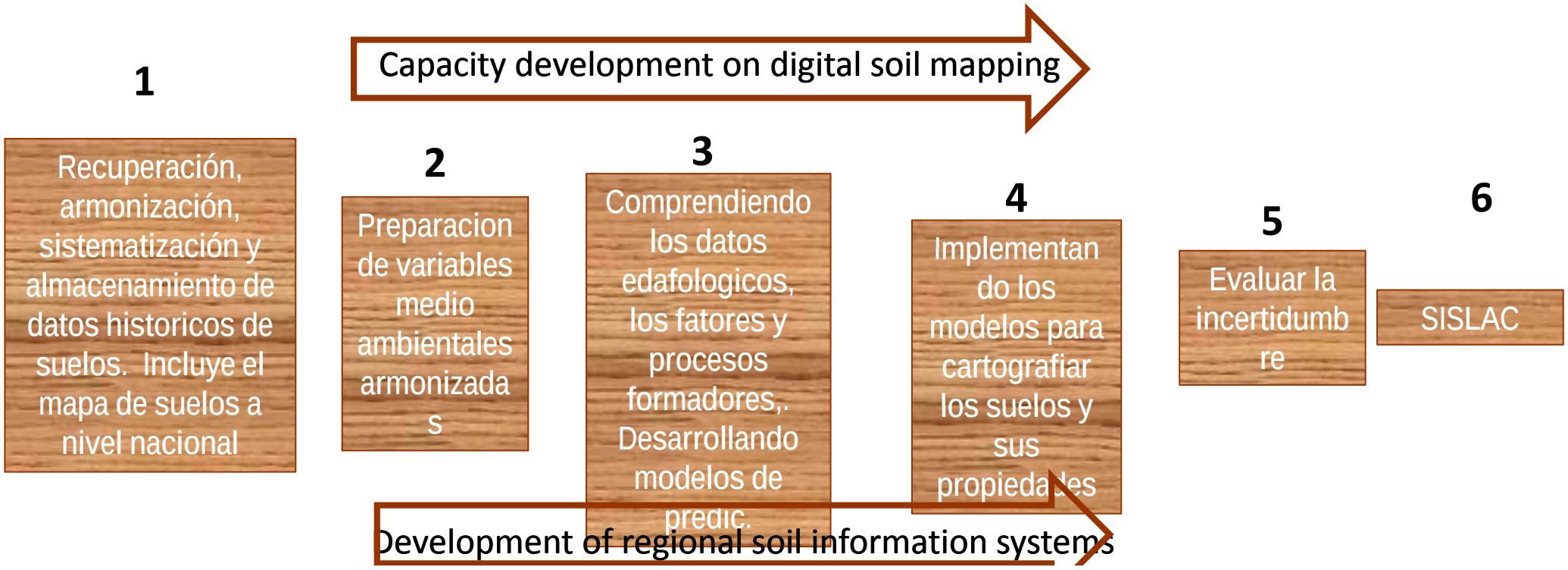
In an era of financial crisis and increasingly limited financial resources, it is of prime importance that the **soil science community join together with a common voice and message in order to request donors to support an integrated plan of action in terms of soil data and information**. GSP Plan of Action Pillar4.

REGIONAL SOIL INFORMATION SYSTEMS

-Capacity development and financial support for developing National Soil Legacy Databases under harmonzied framework in Asia, LAC and MENA.

- Capacity development on Digital Soil Mapping in LAC.

Both activities in partnership with regional and national soil institutions



UPCOMING ACTIVITIES

1. **Establishment of regional soil partnerships and development of plan of actions.**

2. **Organization of technical workshops as an input for plan of actions.** In December “soil spectroscopy: a useful tool for soil monitoring?”

3. **Awareness raising on the importance of soils. World Soil Day (5th December).** To be decided at the upcoming UNGA. At next FAO Council, decision on Celebration of **International Year of Soils 2016**. Summer of Soils (Sweden, July 2013). Global Soil Week (Berlin, October 2013).

4. **Organization of first GSP Plenary Assembly and establishment of Intergovernmental Panel on Soils.**

HOW TO BECOME A PARTNER?

http://www.fao.org/globalsoilpartnership/become-a-partner/en/

WE NEED YOUR ACTIVE PARTICIPATION!