

Status of the World's Soil Resources Report (SWSR)

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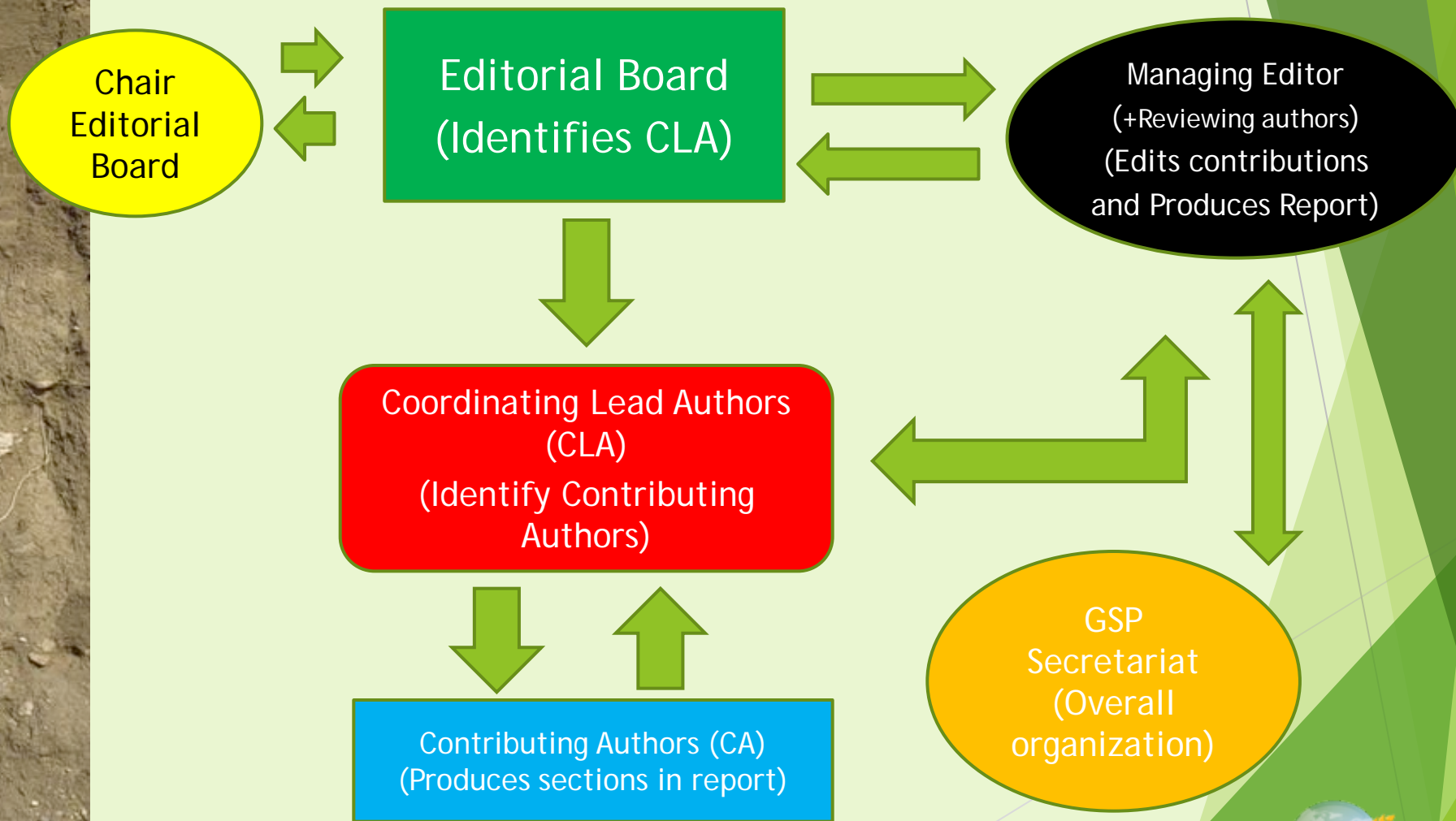


GLOBAL SOIL
PARTNERSHIP

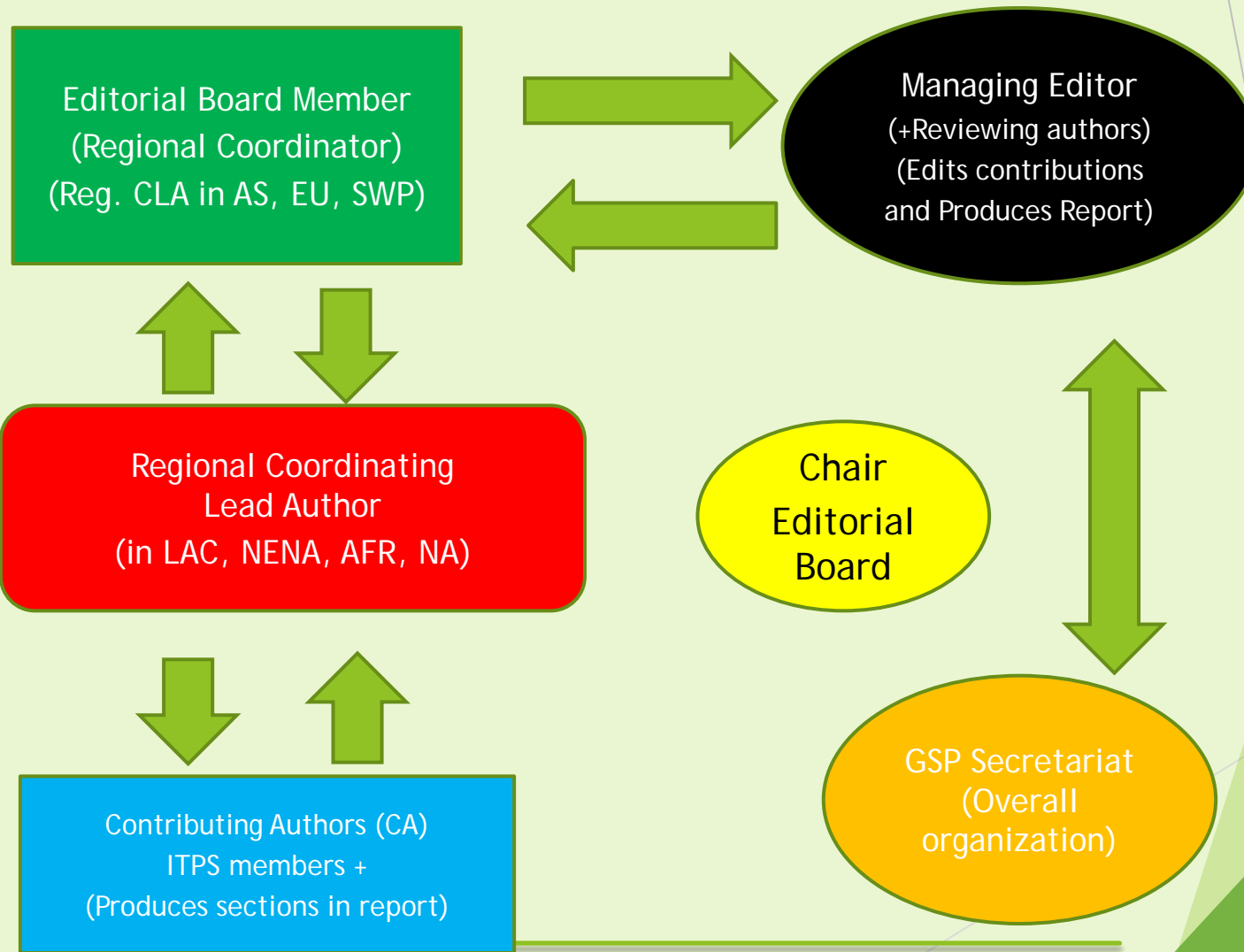
Objectives of the report

- ▶ It aims for an assessment of **global soil resources**, set within a framework of **ecosystem services**. It presents the **threats** to soil functions and their **impacts** on ecosystem services.
- ▶ The report provides a global **scientific** assessment of current and projected soil conditions built on **regional data analysis** and expertise.
- ▶ The report explores the implications of soil conditions for **food** security, **climate change**, **water** quality and quantity, **biodiversity**, and **human** health and wellbeing.
- ▶ It is based on the best available soil information, *including an **uncertainty evaluation** of the data.*
- ▶ *It results in the identification of soil-related **knowledge gaps** that constrain the achievement of sustainable development.*
- ▶ A Synthesis Report summarizes the findings and includes **recommendations** for action by policymakers.

How the global report was produced



How the regional assessment report was produced



Contents and Coordinating Lead Authors

Part I: Global Soil Resources: Maria Gerasimova (Russia), Thomas Reinsch (USA) and Peter Smith (UK)

Part II: Global Soil change: André Bationo (Burkina Faso) and Srimathie Indraratne (Sri Lanka).

Part III: Impacts and Responses: Miguel Taboada (Argentina) , Chencho Norbu (Bhutan) and David Robinson (UK).

Regional assessments of soil change are coordinated by: V. Chude (Africa South of the Sahara), K. Yagi (Asia), Pavel Krasilnikov (Europe), M.L. Mendonça (Latin America and the Caribbean), Seyed Kazem Alavi (Near East and North Africa), Dan Pennock (North America), Neil McKenzie (Southwest Pacific and Antarctica).



Timeline (1)

- ▶ July 2013: Decision taken by ITPS to produce a report on the Status of the World's Soil Resource and appointment of an editorial board.
- ▶ February 2014: First meeting of the Editorial Board.
- ▶ April 2014: ITPS meeting: Table of Contents agreed, Managing editor appointed, Coordinating Lead Authors designated.
- ▶ May - November 2014: Draft sections submitted and Zero Draft Report produced.
- ▶ December 2014: Second meeting Editorial Board.
- ▶ January -March 2015 Peer review and final draft SWSR report
- ▶ February - March 2015 Preparation draft policy report
- ▶ **April 2015 ITPS discussion/approval of reports**

Timeline (2)

- ▶ April -May 2015 Copy Editing Synthesis Report and Translation in 6 languages.
- ▶ June 2015 Plenary GSP to approve Synthesis Report for Policy Makers
- ▶ July - September 2015 Copy Editing Main Report
- ▶ October 2015 Printing both reports
- ▶ 5 December 2015 Presentation reports on World Soils Day.(UN FAO, Rome)

Conclusion

Contributors/Contributions

1. Many (205) contributors have been mobilized.
2. Contributors had predominantly a University/Research background (85%), came from many different nations (60) and had a reasonable gender balance (20% women).
3. 90 % of the draft contributions have been received within 7 months of the initial requests. A 600 page report has been compiled in less than a year.
4. A number of high level soil experts and important soil stakeholders/organizations were involved.
5. Some experts and stakeholder organizations were not involved.
6. The report is twice as voluminous as planned.

Conclusions (Quality)

Overall, based on the number (2242), the median date of publication (2006) of the references, and the dominance of references from the XXIst Century (>78%) the overall quality of the report appears to be quite good.

Weak points are:

1. The relatively low number of contributors and the date of references in Africa.
2. The low number of contributors and number of references in Europe and Eurasia.
3. The date of reference in Chapter 3 (which deals partly with the history of soil science (oldest ref: 1853))

Status of World's Soil Resources 2015

Main findings:

Soil erosion, loss of soil organic carbon and soil contamination remain in most regions of the world the main threats to soil functions

Threat to soil function	Condition and Trend				
	Very poor	Poor	Fair	Good	Very good
Soil erosion	↙ NENA	↙ A ↙ LAC	↗ E ~ SSA ↗ NA ↗ SP		
Organic carbon change		~ A ~ E ↙ LAC ↙ NENA ↗ SSA	↗ NA ~ SP		
Contamination	↙ NENA	↙ A ↗ E	~ LAC	↙ SSA ↗ NA ↗ SP	
Soil acidification		↙ A	↗ E ~ LAC ~ SSA ↙ SP	↗ NA	~ NENA
Salinization and sodification		~ A ↙ E	↙ LAC ↙ NENA	~ NA ~ SP	
Loss of soil biodiversity		↙ NENA	~ A ↙ E ~ LAC ↙ SSA	~ NA ~ SP	
Waterlogging			↙ A ~ E ~ LAC	~ SSA ~ NA ~ NENA ~ SP	
Nutrient imbalance		↙ A ~ E ↗ SSA ↙ NA	~ LAC ↙ SP	~ NENA	
Compaction		↙ A ↙ LAC ↙ NENA	~ E ~ NA ~ SP	~ SSA	
Sealing and capping	↙ NENA	↙ A ↙ E	~ LAC ↙ NA	~ SSA ↙ SP	

2015

International Year of Soils



STATUS OF THE WORLD
SOIL RESOURCES REPORT



Symbol	Description
NENA	Near East and North Africa
LAC	Latin America and the Caribbean
NA	North America
E	Europe and Eurasia
A	Asia
SP	Southwest Pacific
SSA	Africa South of the Sahara
-	Stable
~	Variable
↙	Deteriorating
↗	Improving

Summary for Policy makers

1. Sustainable soil management can increase the supply of healthy food for the most food insecure among us. Specifically we should minimize further degradation of soils and restore the productivity of soils that are already degraded in those regions where people are most vulnerable.
2. The global stores of soil organic matter (i.e., soil organic carbon (SOC) and soil organisms) should be stabilized or increased. Each nation should identify locally appropriate SOC-improving management practices and facilitate their implementation. They should also work towards a national-level goal of achieving a stable or positive net SOC balance.
3. Compelling evidence exists that humanity is close to the global limits for total fixation of nitrogen and regional limits for phosphorus use. Therefore we should act to stabilize or reduce global N and P fertilizer use while simultaneously increasing fertilizer use in regions of nutrient deficiency. Increasing the efficiency of N and P use by plants is a key requirement to achieve this goal.
4. The regional assessments in the SWSR report frequently base their evaluations on studies from the 1990s based on observations made in the 1980s or earlier. We must improve our knowledge about the current state and trend of the soil condition. An initial emphasis should be on improving observation systems to monitor our progress in achieving the three priorities outlined above.

Sustainable Soil
Management
(SSM)

Crucial
importance of
Soil Organic
Carbon (SOC)

Improved
Management of
Fertilizers

Lack of Data and
Information

Thank you!



Status of the World's Soil Resource

