



Продовольственная и
сельскохозяйственная организация
Объединенных Наций



ОСТАНОВИМ ЭРОЗИЮ ПОЧВ
СПАСЕМ НАШЕ БУДУЩЕЕ
**Всемирный
день почв**

5 ДЕКАБРЯ 2019



Global Soil Partnership
Yuxin Tong

Soil erosion: a global challenge

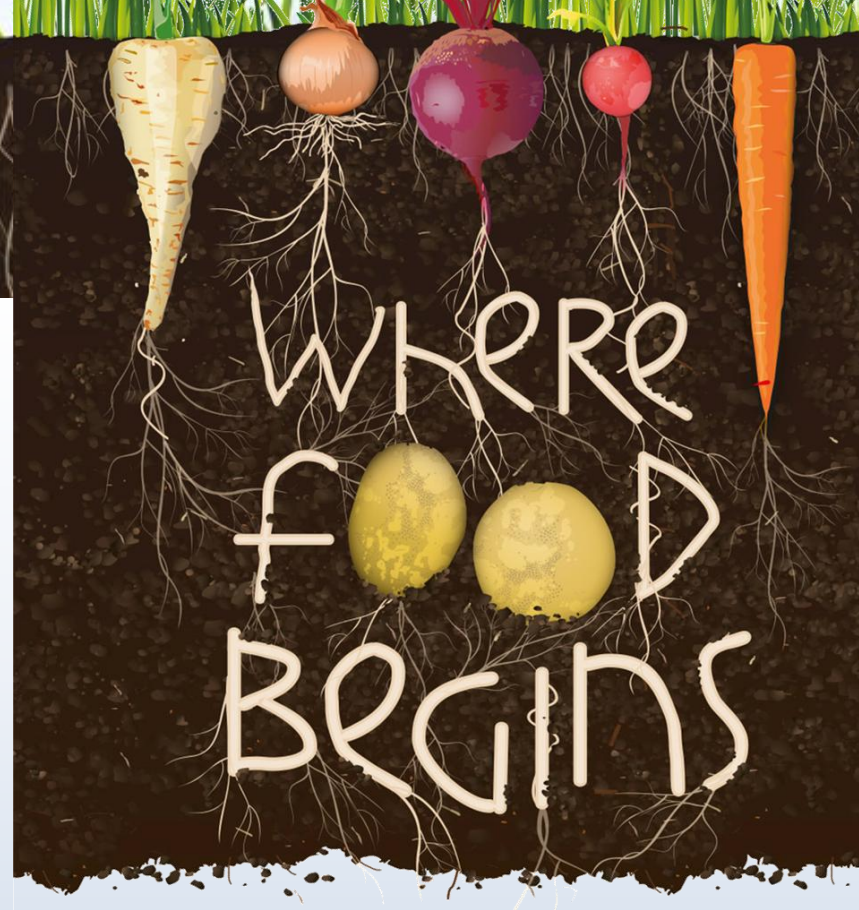
Yuxin Tong, GSP Secretariat, FAO



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Soils

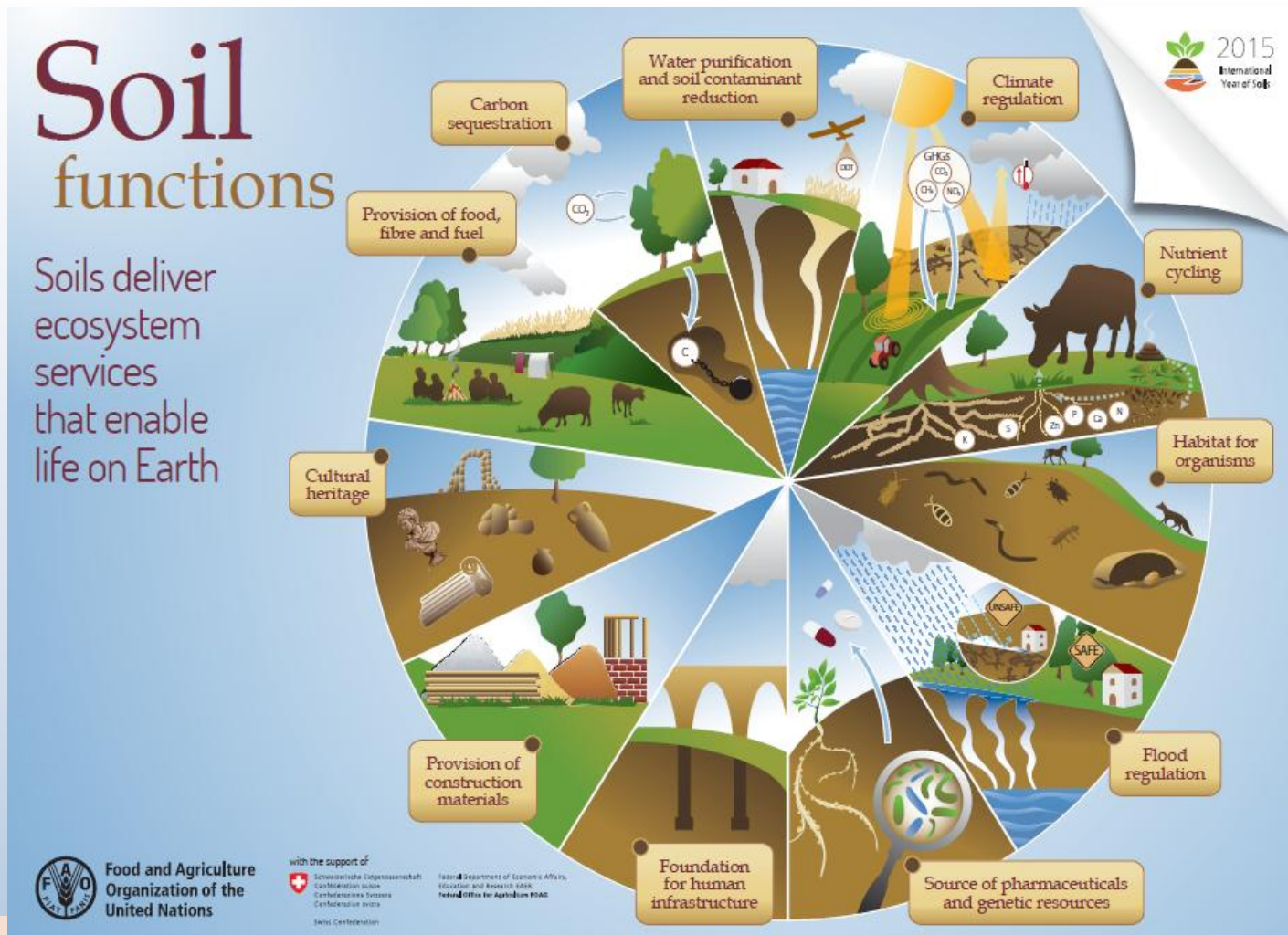
The foundation for life
No soil, no life!



Protecting our soils
means moving towards
#Zerohunger

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Soils provide key ecosystem services

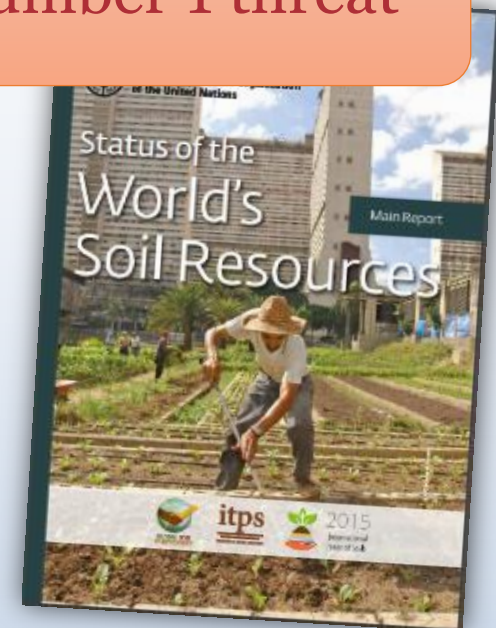


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Global soils at risk

Global Summary of Threats to Soil Functions										
Region	Soil erosion	Organic matter change	Nutrient imbalance	Salinization	Sealing	Biodiversity	Pollution	Acidification	Compaction	Logging
Sub-Saharan Africa	Poor	Poor	Poor	Fair	Good	Fair	Good	Poor	Good	Good
Asia	Poor	Poor	Poor	Poor	Poor	Fair	Poor	Poor	Poor	Fair
Europe and Eurasia	Fair	Poor	Poor	Poor	Poor	Fair	Poor	Poor	Fair	Fair
Latin America and the Caribbean	Poor	Poor	Poor	Poor	Fair	Poor	Fair	Fair	Poor	Fair
Near East and North Africa	Very Poor	Poor	Good	Fair	Very Poor	Poor	Very Poor	Good	Poor	Good
North America	Fair	Fair	Poor	Good	Fair	Good	Good	Poor	Fair	Good
Southwest Pacific	Fair	Fair	Fair	Good	Good	Good	Good	Fair	Fair	Good

Number 1 threat



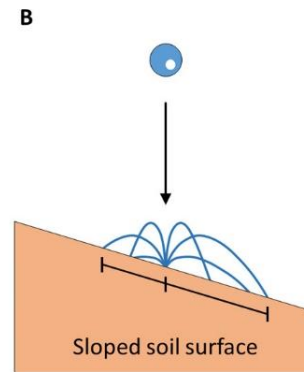
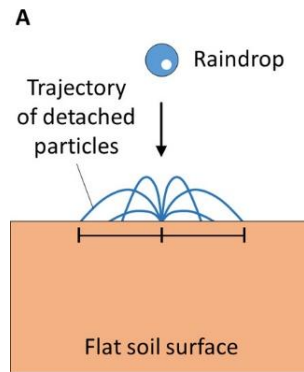
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Soil erosion

Natural causes

« Accelerated removal of topsoil from the land surface » (FAO & ITPS, 2015)

WATER EROSION / SPLASH EFFECT



(Fernandez-Raga et al., 2017)

WIND EROSION



*Dust and storm,
Nyngan, Australia
Photo: Peter
Robey/DPIE*

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Soil erosion

Human-induced causes

« Accelerated removal of topsoil from the land surface » (FAO & ITPS, 2015)



Soil erosion is significantly increased and accelerated by unsustainable human activities (up to 1 000 times)



**IMPROPER LAND-USE
CHANGES**

CONSTRUCTION ACTIVITIES

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Different patterns of soil erosion



GULLY



SHEET AND RILLS



SUBSURFACE



STREAM-BANK



COASTAL



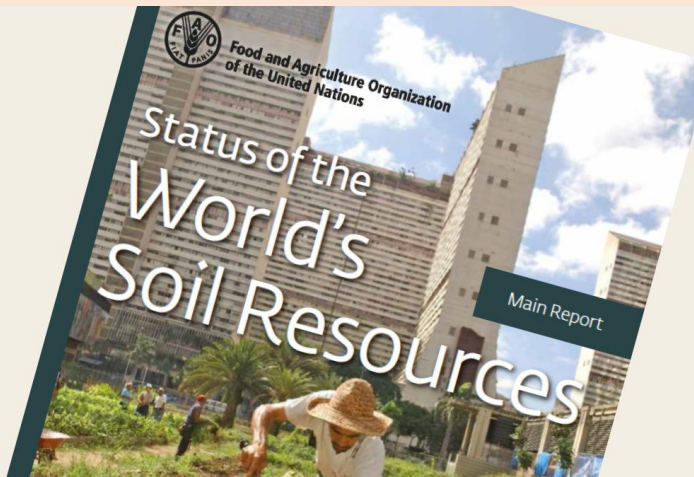
CROP/ROOT-HARVESTING

Soil erosion

The issue

33% of the Earth's soils are already degraded and **over 90% could become degraded by 2050**

Half of the topsoil on the planet has been **lost in the last 150 years.**



“One of the **biggest soil threat**”

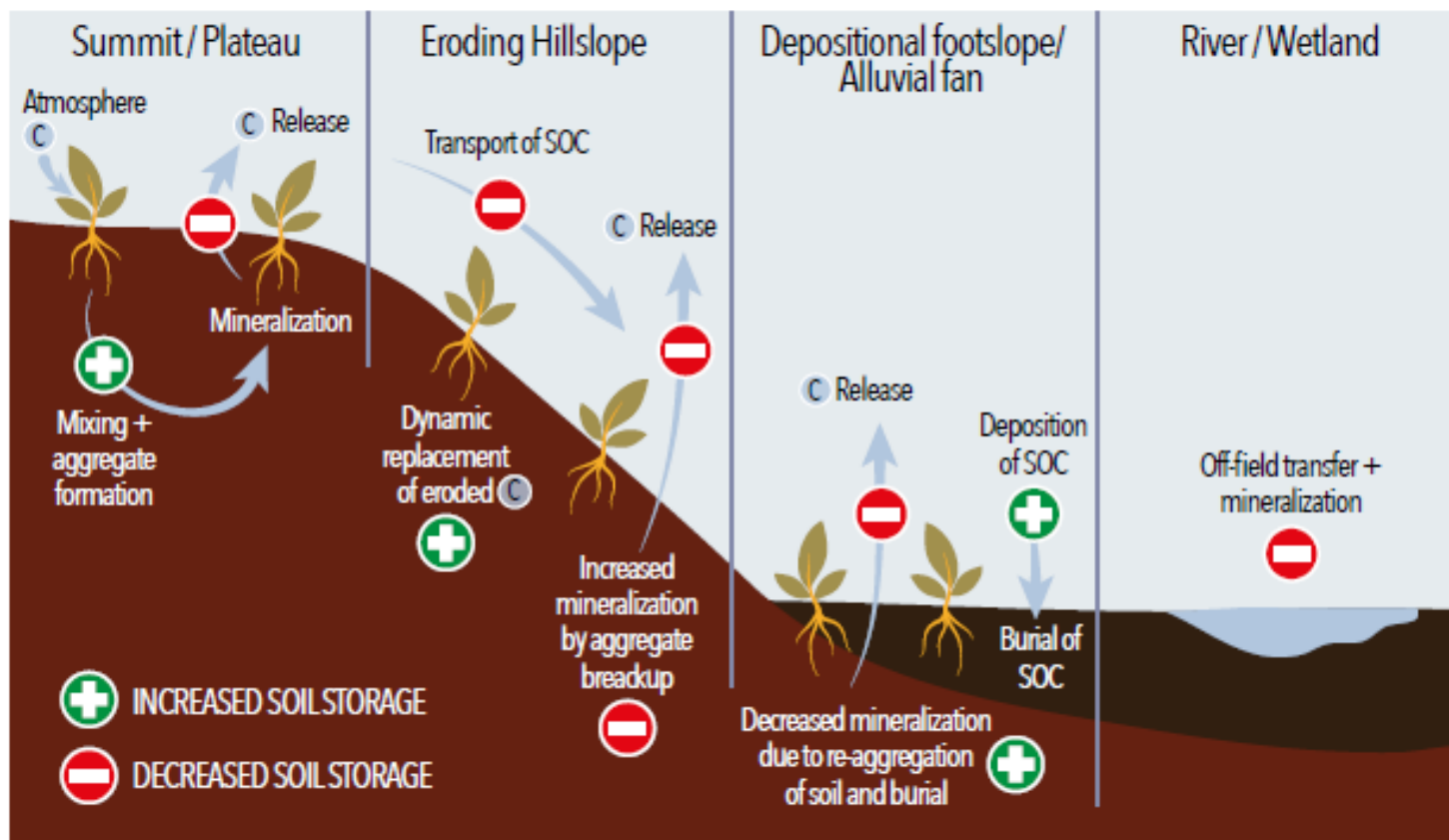
(FAO & ITPS, 2015)

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Consequences of soil erosion

On-site consequences

Loss of soil quality and C emissions



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Consequences of soil erosion

On-site consequences



Crop production loss

0.3% of annual global crop yield reduction per year, equivalent to a **total reduction of about 10% by 2050**.

Farm profitability and revenues

At EU level, soil erosion affects over 12 million hectares of land – about 7.2% of the total agricultural land – and leads to **€1.25 billion loss in crop productivity** and €155 million in the gross domestic product (GDP) loss



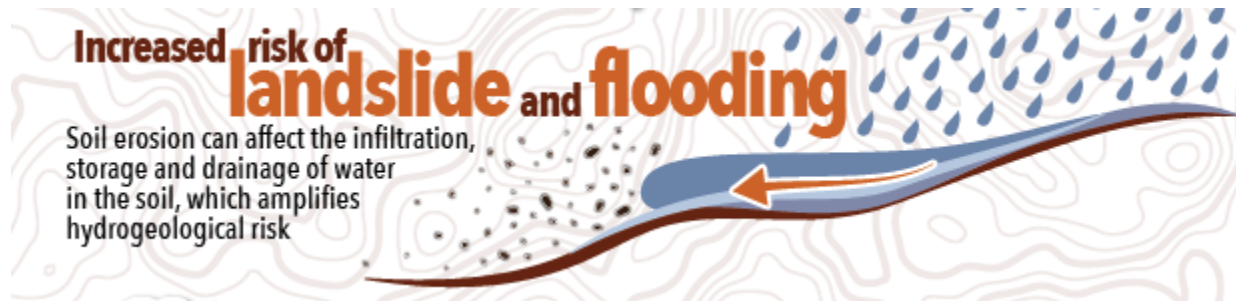
Land abandonment and migration

Over 68 million people have been displaced from their homes worldwide, many for issues related to climate. Soil erosion only exacerbates the effects of climate change

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Consequences of soil erosion

Off-site consequences

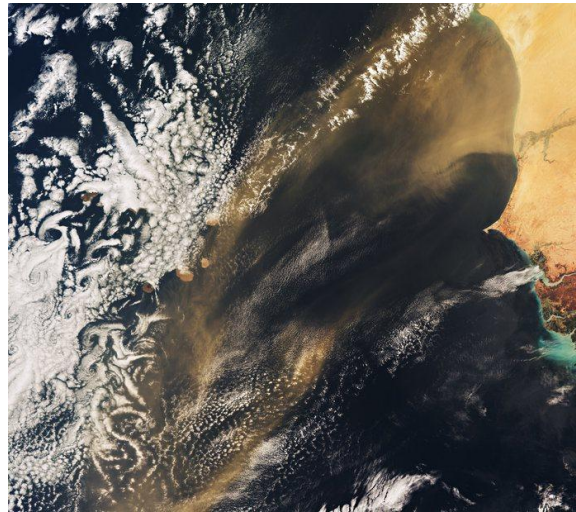


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Consequences of soil erosion

Off-site consequences

Even seen from **space**



**A worldwide issue
with no borders**

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How does the Global Soil Partnership address soil erosion ?

*“The mandate 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”*



Pillar 1
Promoting **SSM**



Pillar 2
Encourage
investment,
technical
cooperation,
policy, education,
awareness and
extension



Pillar 3
Promoting
research and
development



Pillar 4
Improvement of
soil information
and data



Pillar 5
Harmonization of
methods,
measurements and
indicators

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[http://www.fao.org/
global-soil-partnership/en/](http://www.fao.org/global-soil-partnership/en/)

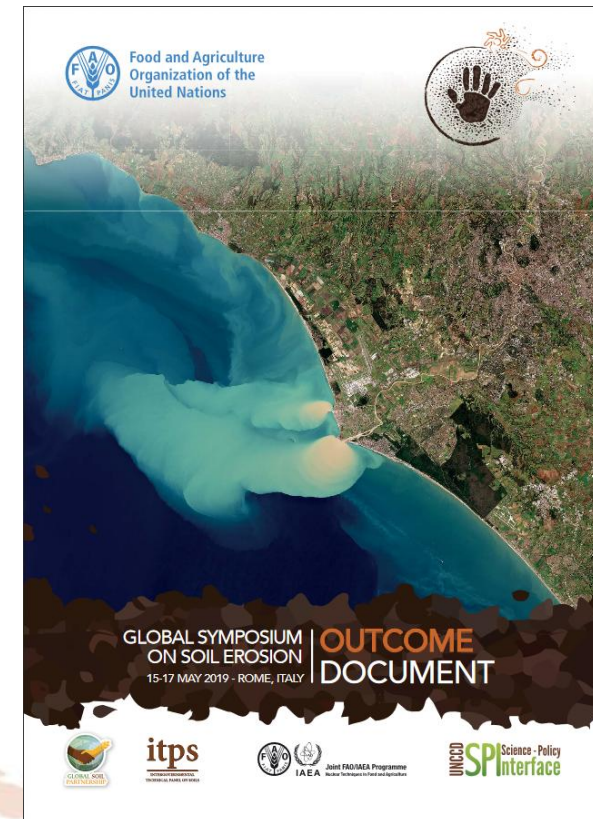
Soil erosion, Key focus of the GSP/ITPS in 2019



May 2019 –
GSE19

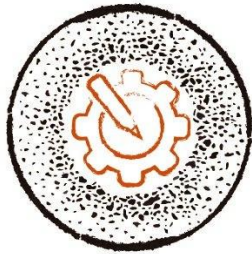
World
Soil Day

Implem-
entation



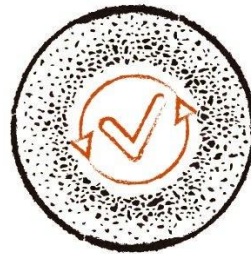
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Implementation of the GSER recommendations



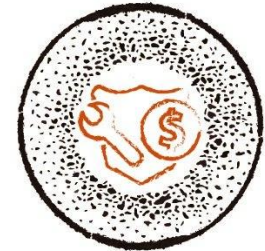
THEME 1:

Soil erosion assessment tools and data; creation, consolidation and harmonization



THEME 2:

Policies and practices in action to address soil erosion



THEME 3:

The economics of soil erosion prevention, management, remediation

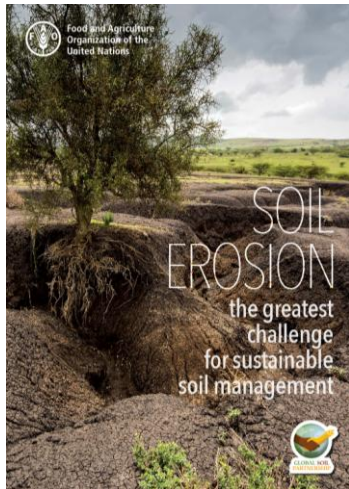
**Capacity-development
Awareness-raising
Data and information**



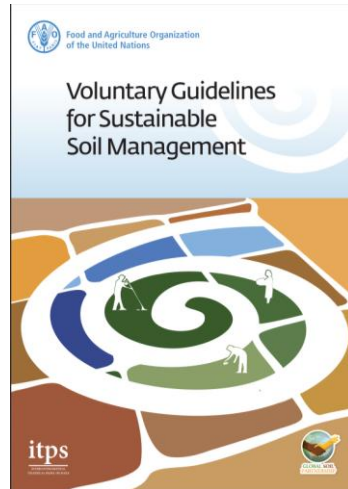
Country-driven

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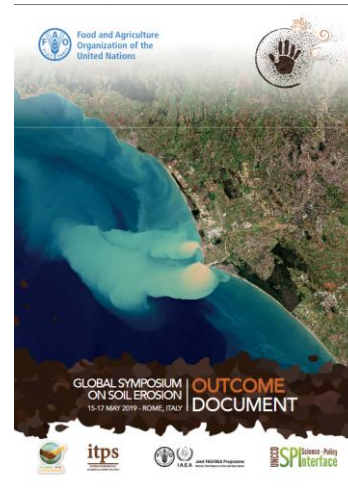
More references...



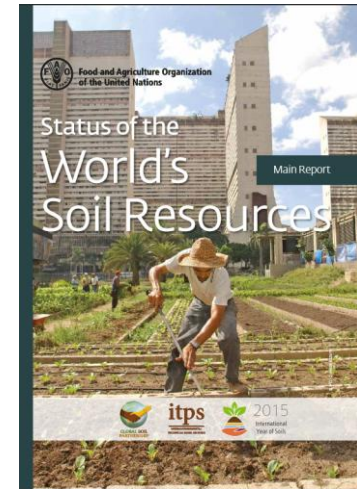
<http://www.fao.org/3/ca4395en/ca4395en.pdf>



<http://www.fao.org/3/a-bl813e.pdf>



<http://www.fao.org/3/ca5697en/ca5697en.pdf>



<http://www.fao.org/3/i5199e/i5199e.pdf>

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The background features a large, thick, orange-brown curved line at the top, representing a horizon or a boundary. Below this line, the area is filled with numerous dark brown, irregular, and fragmented shapes of varying sizes, which visually represent soil particles being eroded or washed away. The overall effect is one of significant soil loss.

**STOP SOIL EROSION
SAVE OUR FUTURE**



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2019