PILLAR 4

Enhance the quantity and quality of soil data and information: data collection, analysis, validation, reporting, monitoring and integration with other disciplines

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EUROPEAN SOIL PARTNERSHIP

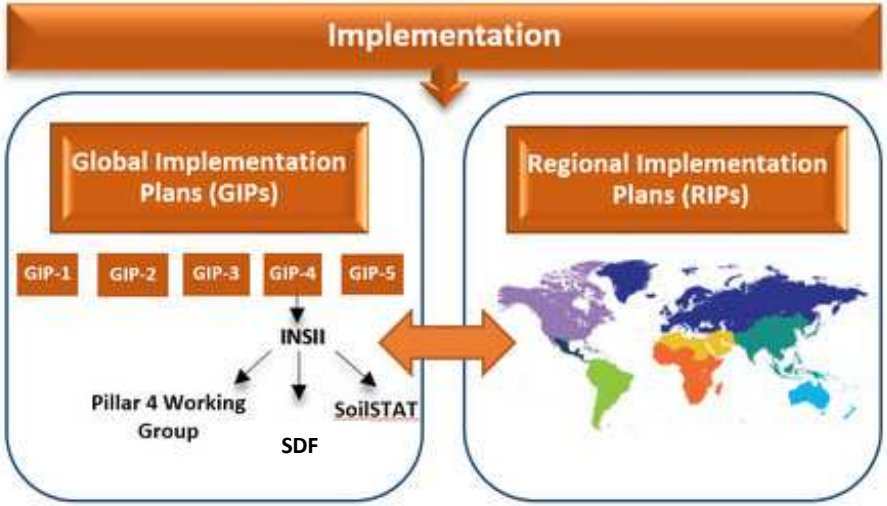
PILLAR 4 **BACKGROUND**

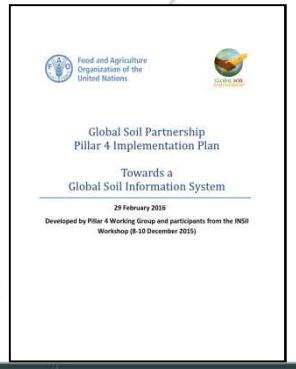
GSP pillar 4

- Answering critical questions at the global scale
- Supplying fundamental soil data for understanding Earth-system processes to enable management of the major natural resources

Pillar 4 Implementation Plan

Network of International Soil Information Institutions (INSII) reviewed and revised draft Global IP and is supported by a technical working group of soil information experts (Pillar 4 Working Group).




Food and Agriculture Organization of the United Nations

Global Soil Partnership
Pillar 4 Implementation Plan

Towards a
Global Soil Information System

29 February 2016

Developed by Pillar 4 Working Group and participants from the INSII Workshop (8-10 December 2015)


Draft European Soil Partnership Implementation Plan 2017-2020

Draft for discussion
24 March 2017

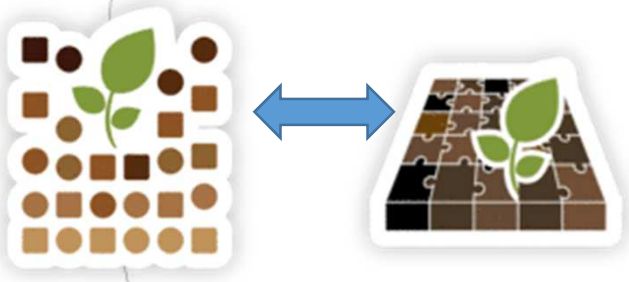
PILLAR 4 **BACKGROUND**

Adapt GSP Implementation Plan in the European Region

- Monitoring
- Provision of profile data
- Provision of polygon data
- Provision of data for spatial grids

- build on national and within-country systems
- Integrate the soil information into GEOSS

Close links with Harmonisation (Pillar 5)



Very much guided by GSP

GEOSS - Global Earth Observing System of Systems

Monitoring, forecasting, and status reporting (SoilSTAT) – largely lead by FAO

Monitoring system to measure changes in soil quality through time to assess efficacy of sustainable soil management

- Establish Inventory of existing soil policies and monitoring (eg http://ecologic.eu/13090, LUCAS, BioSoil) to inform monitoring and identify gaps
- Establish a realistic reporting time frame
- **Make use of existing reporting structures with Europe**

Soil profile/point data

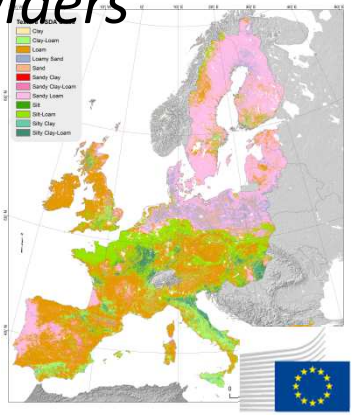
Comprehensive soil profile and analytical database – Tier 1
World reference soil profile and analytical database – Tier 2 (more rigorous requirements)

- Identify/collate existing datasets (national soil surveys, Academic institutions, private laboratories, European level datasets eg SPADE, LUCAS…..) particularly new data
- Overcome/respect concerns over Intellectual Property Rights
- Building/reinvigorating networks of data providers
- Develop a distributed system

Spatial data

Revise and update the digital Soil Map of the World with the design scale 1:1M from national soil polygon data sets

- European soil data already exists but could be improved (Atlas, 2018)
  - *Overcome/respect concerns over Intellectual Property Rights*
  - *Building/reinvigorating a network of data providers*
  - *Developing a distributed system (GS-Soil)*



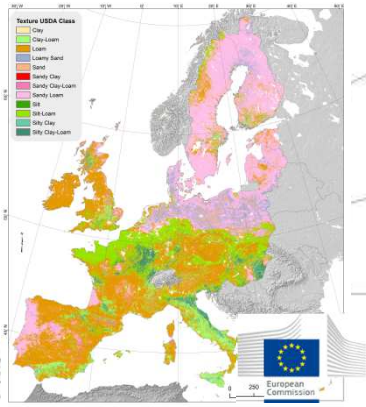
Global/European grids (soil property maps)

Harmonized World Soil Database *(underway)*

Fine-resolution grid of soil properties

- Digital soil mapping techniques
- Relatively new science
- Limited number of technical experts
- Requires comprehensive soil profile database

Current position



- Europe is relatively data rich though data are aging
- There are EU-level initiatives (eg LUCAS)
- Many national initiatives
- INSPIRE directive/ISO standards
- We have existing networks:
    - European Soil Bureau Network (ESBN)
    - National Reference Centres Soil of the European Information and Observation Network (EIONET)

- We have European data centres:
    - European Data Centre (ESDAC),
    - European Topic Centre on Urban, Land and Soils (ETC ULS)

We need to build on these and fill gaps in the European Region rather than starting from fresh. We can use existing standards (INSPIRE/ISO) and networks and the development of a global Soil Organic Matter spatial dataset gives us an opportunity to develop and expand our networks, share data and show we can deliver a key product.

Key challenges for European Soil Partnership – Pillar 4

- Overcome/respect concerns over Intellectual Property Rights
- Build/reinvigorate networks of data providers/soil information institutions
- Europe is data-rich but often poor at sharing
- Data are often quite old, we need to collate new soil data

- Develop a distributed system
- Build technical capacity
- Be INSPIRE compliant
- Data harmonisation (particle size, pH, organic C) with Pillar 5

- Identify/establish monitoring network
- Funding – who pays? (in kind requires goodwill)
- Identify a key Institution that can act as a '*Figure head*'/manage data if required

Timeline for SOC map/spatial dataset

Activity	Description and due date
Guidelines for GSOC mapping (GSP Secretariat and P4WG)	– Final Version to be published and distributed by 31st January 2017. – Summary of specifications provided as overview by GSP Secretariat: January 2017 (including a website)
Recipe book (INSII members and invited experts)	– The book is envisaged to be completed by February 2017, so that it could be used in training sessions and by INSII members
Country extracts of the global (empty) 1 km grid (30 arcseconds)	– To raster shall be provided to all member countries by February 2017.
Capacity development	– Regional and national training sessions for SOC mapping through the Regional Soil Partnerships, where needed, January-May 2017
Development of national SOC maps (INSII members)	– Dec 2016/Jan 2017: preparation of national work plans to develop SOC maps. INSII members to share and discuss work plans with national GSP focal points, and then inform the GSP Secretariat. – Dec 2016 - Aug 2017: preparation of national SOC maps; production of metadata and data sharing
Status of national contributions (INSII members)	– INSII members are invited to participate in the Global Symposium on Soil Organic Carbon, FAO headquarter, Rome, 21-23 March 2017 – Selected countries may present case studies on SOC mapping
Map collection (GSP Secretariat, supported by SDF)	– Aug 2017
Modification/adjustment of national SOC maps where necessary	– Sep – Nov 2017
Final GSOC map	– 5 Dec 2017 (World Soil Day)

PILLAR 4 **DISCUSSION BY THE ESP PLENARY**