



Food and Agriculture
Organization of the
United Nations



PILLAR 3

PROMOTE TARGETED SOIL RESEARCH FOR EUROPE AND BEYOND

Coen Ritsema, Gergely Toth and other ESP Pillar 3 members



EUROPEAN SOIL
PARTNERSHIP

PILLAR 3 – GSP background

Defined opportunities within GSP Pillar 3 for improved promotion of soil research and development

- Relevance of soil research and development in today's society
- Interdisciplinary nature of soils
- Gaps, priorities and synergies with related productive, environmental and social development actions
- Coordination to strengthen global soil R&D activities

Recommendations of GSP Pillar 3

- Encourage inter- and transdisciplinary soil research and development ...
- Capitalize on existing R&D research initiatives and outputs through meta-analysis / synthesis reviews ...
- Compile for all partners evidence of the return of investment in soil research ...
- Foster synergy and engagement between research and end-user communities, and donor agencies ...

GSP Pillar 3 links to all other Pillars

- Pillar 1 – Promote sustainable management of soil resources and sustainable productivity
- Pillar 2 – Encourage investment, cooperation, policy, education, awareness and extension in soils
- Pillar 4 – Enhance the quantity, quality and availability of soil data and information
- Pillar 5 – Harmonization of methods, measurements and indicators for sustainable use of soil resources



PILLAR 3 – ESP background

State of European soils

- According to a.o. the SWSR-2015, soils in Europe are affected by multiple degradation phenomena, like erosion, pollution, loss of SOC, salinization, sealing, loss of soil biodiversity, compaction and waterlogging
- Degradation rates are alarming and action is required at multiple levels to counteract these trends
- Lessons from the past indicate that soil restoration is more complex and expensive compared with timely implementation of targeted prevention and remediation measures

EU policy context

A wide array of European and national soil policy instruments are available (Soil Wiki, Ecologic):

- 35 EU instruments, like WFD, Soil Thematic Strategy, Nitrates Directive, CAP, EIA Dir., Waste Framework Dir, etc
- > 670 Member States instruments (majority regulatory binding, others regulatory non-binding or non-regulatory)

International policy context

- SDGs
- UNFCCC
- UNCCD
- UNCBD



PILLAR 3 - ESP OUTPUTS

Recommendation 1

Define a prioritized soil research agenda for Europe to advance the state of knowledge in a.o. the field of soil characterization, dynamic soil processes, soil quality assessment, soil management, soil improvement, and provision of ecosystem services.

Action

Link with and build further upon a range of on-going initiatives defining soil research agenda's for specific EU audiences. Besides the EU-funded project INSPIRATION (stakeholder driven) and the European Academies Science Advisory Council (policy driven), the ESP Pillar 3 consortium aims to define specific soil research needs in addition (science driven). These different agenda's will be merged and integrated to a commonly agreed and coherent European soil research agenda serving multiple purposes and fora.

- Possible partners: Wageningen University, JRC, NIOO, and others
- Timeline: 2017-2018
- Budget and funding: 50 k€ (in-kind?)

Outcome 1

- An integrated and prioritized soil research agenda for the EU, addressing needs of different audiences, and linked to productive, environmental, social, and policy aspects.



PILLAR 3 - ESP OUTPUTS

Recommendation 2

Create strategic links between research entities, end-user communities and donor organizations to effectively embed soil research priorities across global, European, and national research programmes and projects

Action

Inventory of relevant fora and foster synergy and active collaboration to broaden the soil research focus at multiple levels, and enhance its related environmental, social, economic and policy impact. Stipulate the essential role of soil sciences more explicitly in a range of grand environmental and societal challenges, like climate change, biodiversity, desertification, food security, and economic welfare.

- Possible partners: Pillar 3 members
- Timeline: 2017-2020
- Budget and funding: 40 k€

Outcome 2

- Better positioning and embedment of soil research priorities across global, European and national research programmes and projects, in order to contribute to achieving the SDGs, UN conventions, and European and national policy targets, including fulfilling specific stakeholder needs.



PILLAR 3 - ESP OUTPUTS

Recommendation 3

Compile information on the return of investment in soil research, stressing the cross-cutting role of soils in grand environmental and societal challenges, and the importance of soil properties, functions and provision of ecosystem services thereupon.

Action

Assessing a detailed review on economic costs of soil degradation and value of its rehabilitation, accounting for different soil threats and currently existing restoration options. Unravel causes for non-action, and identify potentials for improvement, and how targeted soil research investments might contribute to design more appropriate and cost-effective technologies and approaches for reversing degradation across different climatic and socio-economic environments.

- Possible partners: ISRIC, PBL, Wageningen University, and other Pillar 3 members
- Timeline: 2018-2019
- Budget and funding: 100 k€

Outcome 3

- A database with soil threats versus applicable rehabilitation measures, including related costs and benefits, and information on the estimated return of investments in dedicated soil research to develop more appropriate and cost-effective technologies for this purpose.



PILLAR 3 - ESP OUTPUTS

Recommendation 4

Assess existing soil research partners, facilities, infrastructures, and soil research programs across Europe, and development of a soil knowledge hub for different audiences

Action

Detailed inventory of existing soil research groups, existing laboratory and field experimental and monitoring facilities, long-term observatories, and infrastructures across Europe. Preparation of an overview of the existing soil research programs in Europe, including scope and aims. Designing and developing a web-based soil knowledge hub for providing soil related information and an active discussion platform for different individuals and audiences.

- Possible partners: ESP Pillar 3 members
- Timeline: 2017-2020
- Budget and funding: 150 k€

Outcome 4

- An overview of existing soil research partners, available facilities and infrastructures, and soil research programs across Europe, including an active soil knowledge hub for interested users



PILLAR 3 - ESP OUTPUTS

Recommendation 5

Encourage inter- and transdisciplinary research and development to support the five ESP Pillars, ensuring creation of linkages, fine-tuning, synergy, integration, and coherent action.

Action

Foreseen inter- and transdisciplinary research initiatives aim to enhance the development of appropriate sustainable soil management practices and systems, the applicable use of soil information, the harmonization of methods and determination of best indicators, and the dissemination of research results beyond the scientific community, to globally support economic growth, environmental sustainability and social development.

- Possible partners: All ESP Pillar 3 members
- Timeline: 2017-2020
- Budget and funding: 40 k€

Outcome 5

- A range of specific research and development initiatives contributing to one or more of the other ESP Pillars



PILLAR 3 - ESP OUTPUTS

Recommendation 6

Actively promoting the European Soil Partnership programme, specifically the one of Pillar 3, across different events and audiences using a range of dedicated means.

Action

Numerous and diverse soil networks are active at different levels related to amongst others research, investigating, monitoring, communication, awareness, and education. It is envisioned to enhance synergies between activities of these networks and those of ESP Pillar 3, including through various EU and other projects. A long-list of soil science events during 2017-2020 will be prepared, interesting for active participation by ESP Pillar 3 members for targeted dissemination, communication, networking and collaboration purposes.

- Possible partners: All ESP Pillar3 members
- Timeline: 2017-2020
- Budget and funding: 50 k€

Outcome 6

- Extensive list of congress, symposia, network events, and workshop participation by ESP Pillar 3 members, including related contributions like oral and poster presentations, and (co)convenor of dedicated sessions



PILLAR 3 - DISCUSSION and NEXT STEPS

Comments/remarks

- General comments pertaining to Pillar 3
- Specific comments

Role of the national focal points

- Involvement
- Identification of national institutions that can contribute
- xxxx

Working group on pillar 3

- Who is willing (or knows someone) to contribute actively to the WG pillar 1 (set a timeline)
- Concrete main tasks
- xxxx



PILLAR 3 - DISCUSSION and APPROVAL BY THE ESP PLENARY

