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Report on normative tools and actions on sustainable soil management: for information and decision (GSPPA: IX/2021/5)

Executive Summary

- The [Voluntary Guidelines for Sustainable Soil Management](#) (VGSSM), which were endorsed by the 155th session of the FAO Council in December 2016, were developed through an inclusive process with the aim to provide general technical and policy recommendations on sustainable soil management (SSM) for a wide range of committed stakeholders.
- The implementation of the VGSSM has been a priority of the Secretariat and attention is continuously given to disseminating the VGSSM.
- The implementation of the VGSSM is now complemented by the [Protocol for the Assessment of Sustainable Soil Management](#).
- It will be important to explore the possibility of establishing a mechanism for fostering compliance with the VGSSM for any intervention, particularly in relation to projects focused on soil organic carbon sequestration or any associated with soil health.
- [The International Code of Conduct for the Sustainable Use and Management of Fertilizers](#) (The Fertilizer Code) is a normative tool that provides a set of recommendations for the judicious use and management of fertilizers to prevent its misuse, underuse and overuse.
- The GSP Secretariat together with the Intergovernmental Technical Panel on Soils (ITPS) has prepared an implementation plan that is currently under execution.
- The Recarbonization of Global Soils (RECSOIL) was established in 2019 but was officially launched on 17th June 2020 through a webinar to observe the World Day to Combat Desertification.
- RECSOIL is an initiative for scaling up the adoption of soil organic carbon (SOC)-centred sustainable soil management (SSM) practices to boost soil health.

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- In RECSOIL, there are two paths, the Green Path and the Carbon Credit Path. The Green path is entirely focused on enhancing soil health and the provision of ecosystem services by sequestering atmospheric CO₂, reducing the emissions of CO₂ and N₂O. The Carbon credit path is instead focused on generating transferable carbon credits that can mobilize funding.
- RECSOIL is an initiative that can make significant impact on the ground and boost soil health, reduce soil degradation and enhance s livelihoods. Investment is needed in order to scale up sustainable soil management.
- The Global Soil Doctors Programme was launched on October 5th 2020 as a tool for scaling up sustainable soil management by promoting the establishment of a farmer-to-farmer training system, and, by doing so, support extension services at field level.
- There is huge interest in the implementation of the Soil Doctors in many countries around the world. The GSP Secretariat is working towards responding to these requests by providing trainings that include the Soil Doctor Kit.

Suggested actions by the GSP Plenary Assembly

The Plenary Assembly may wish to:

- express appreciation for the efforts made in the implementation of the Voluntary Guidelines for Sustainable Soil Management (VGSSM);
- encourage members and partners to actively participate in the upcoming survey on the adoption of the VGSSM;
- invite members to use the VGSSM and its Protocol for Assessing Sustainable Soil Management;
- endorse the recommendation for fostering compliance with the VGSSM in projects/interventions, including a system of rewarding those users that implement practices in the field that are compliant with the VGSSM, and invite the Secretariat to submit a proposal to the next Plenary Assembly;
- invite countries and partners to adopt the Fertilizer Code and report the outcomes to the Secretariat;
- thank the resource partners that are supporting the implementation of the Fertilizer Code and invite other donors to support the execution of the implementation plan of the Fertilizer Code;
- invite members, partners, focal points and all stakeholders to respond to the National Survey on the Use and Management of Fertilizers;
- acknowledge the progress made in the establishment and implementation of RECSOIL;
- encourage members and partners to adopt and join RECSOIL global but also at national levels;
- invite donors and resource partners to provide financial resources to RECSOIL initiative (RECSOIL MUL) so that actions on the ground can be implemented;
- encourage countries to explore opportunities for having RECSOIL projects submitted to the Global Environment Facility (GEF) and the Green Climate Fund (GCF);
- acknowledge the outstanding work done in the development and implementation of the Global Soil Doctors Programme;

- thank the resource partners who have financially supported the Global Soil Doctors Programme, and encourage new resource partners to fund the upcoming implementation activities; and
- encourage governmental agencies and organizations working on agricultural extension at the field level to adopt the Global Soil Doctors Programme.

5.1 Compliance with the Voluntary Guidelines for Sustainable Soil Management

1. The [Voluntary Guidelines for Sustainable Soil Management](#) (VGSSM), which were endorsed by the 155th Session of the FAO Council in December 2016, were developed through an inclusive process with the aim to provide general technical and policy recommendations on sustainable soil management (SSM) for a wide range of committed stakeholders.
2. In fact, the VGSSM present generally accepted, practically proven and scientifically based principles to promote SSM and include guidance to all stakeholders on how to translate these principles into practice, be it for farming, pastoralism, forestry or more general natural resource management. The guidelines focus mostly on the provision of ecosystem services and elaborate on the principles outlined in the revised World Soil Charter, taking into account the evidence provided in the Status of the World's Soil Resources (SWSR) report.
3. The implementation of the VGSSM has been a priority of the Secretariat and attention is continuously given to disseminating the VGSSM, which were initially published in the FAO languages, and are being translated into local languages as needed.
4. The implementation of the VGSSM is now complemented by the [Protocol for the Assessment of Sustainable Soil Management](#), which was endorsed by the 8th GSP Plenary Assembly in ad-hoc session in September 2020.
5. The protocol constitutes a fundamental tool to assess if any intervention implemented in the field, such as improvement of productive systems, innovation and new technologies, ecosystem restoration and carbon sequestration, is carried out in a sustainable manner according to the Intergovernmental Technical Panel on Soils (ITPS) definition of sustainable soil management.
6. After 5 years of existence of the VGSSM, it is important to assess how the different stakeholders used it. Thus, an online survey will be launched by the GSP Secretariat in semester II-2021.
7. Furthermore, it will be important to explore the possibility of establishing a mechanism for fostering compliance with the VGSSM for any intervention, particularly in relation to projects focused on soil organic carbon sequestration or any associated with soil health.
8. The GSP Secretariat is also exploring with other FAO divisions a due diligence tool to advocate for the implementation of the VGSSM by the development banks.
9. The establishment (by national governments) of rewarding systems on the implementation of sustainable soil management under the framework of the VGSSM is also a possibility.

5.2 International Code of Conduct for the Sustainable Use and Management of Fertilizers

10. [The International Code of Conduct for the Sustainable Use and Management of Fertilizers](#) (The Fertilizer Code) is a normative tool that provides a set of recommendations for the judicious use and management of fertilizers to prevent its misuse, underuse and overuse. The Fertilizer Code

was developed in response to the Committee on Agriculture's (COAG) request to increase food safety and the safe use of fertilizers. It is also a response to the third United Nations Environment Assembly (UNEA3) declaration on soil pollution, while ensuring enhanced support to the implementation of the Voluntary Guidelines for Sustainable Soil Management (VGSSM).

11. The Fertilizer Code was jointly developed by the ITPS and experts from academia, industry, civil society and the farming community and it was endorsed by the 41st Session of the FAO Conference in June 2019. Since then, The Fertilizer Code has been translated into [six languages](#) and various activities have been planned for its adoption.
12. The global implementation plan focuses on the dissemination of the Fertilizer Code; the capacity development for the implementation of the sustainable management of fertilizers; the establishment of a holistic approach to sustainable soil and nutrient management; and the strengthening of policy environment.
13. Two projects financed by the Chinese government are being implemented in sub-Saharan Africa. The projects focus on building national capacities on the sustainable use and management of fertilizers and soil fertility, improving the national information system on soils and fertilizers, guiding in decision-making, validating current practices and identifying opportunities for improving them and strengthening capacities through trainings and educational courses for different stakeholders.
14. The Soils4Nutrition project financed by the German government, focuses on the demonstration that micronutrient contents of soils and crops can increase through the adoption of sustainable soil management practices, in association with capacity development and training activities for farmers, national agricultural research and extension research personnel.
15. In order to support the national capacities development to implement sustainable use and management of fertilizers the [International Network on Fertilizer Analysis](#) (INFA) was established in December 2020 (document 9.3).
16. A National Survey on the Use and Management of Fertilizers will define priority areas for The Fertilizer Code implementation, gaps and main obstacles to sustainable fertilizer management in the participant countries. The survey will be associated with a video for the dissemination of The Fertilizer Code and further engage the key actors.
17. The new implementation activities include videos for the Edusoiils platform (China's South-South Cooperation Assistance Fund project), video interviews, Micronutrients Encyclopaedia, global maps of nutrients and a Nitrogen Webinar.

5.3 RECSOIL: recarbonization of global agricultural soils

18. There is a collective call from society and leaders to decarbonize the economy; the GSP response to this is RECSOIL: the recarbonization of global soils.
19. [RECSOIL](#) was established in 2019 and officially launched on 17th June 2020 through a webinar to observe the World Day to Combat Desertification.
20. RECSOIL is an initiative for scaling up the adoption of soil organic carbon (SOC)-centred sustainable soil management (SSM) practices to boost soil health. The main priorities are to: a) mitigate climate change by preventing further SOC and other greenhouse gases (GHG) losses and increase SOC stocks; b) adapt to climate change and build resilience of agri-food systems;

- c) unlock the co-benefits associated with soil organic carbon including the provision of vast ecosystem services; d) enhance farmers' incomes; e) contribute to food security and nutrition by producing food rich in micronutrients and free of pathogens and contaminants; f) reduce soil biodiversity loss and manage it for green recovery.
21. RECSOIL focuses on agricultural soils as there is high potential for removing atmospheric CO₂ and store it in these soils.
 22. In RECSOIL, there are two paths, the Green Path and the Carbon Credit Path. The Green path is entirely focused on enhancing soil health and the provision of ecosystem services by sequestering atmospheric CO₂, reducing the emissions of CO₂ and N₂O. Here, the compliance with the VGSSM is central and there are no carbon credits associated to it. The Sustainable Soil Management protocol is compulsory for measuring the ecosystem services gains/impacts and the [protocol for measurement, monitoring, reporting and verification of soil organic carbon](#) (GSOC MRV) is used complementary to quantify the SOC and GHG. The Carbon credit path is instead focused on generating transferable carbon credits that can mobilize funding.
 23. RECSOIL works as follows: a) A feasibility assessment of the current SOC stocks and the potential to sequester SOC is made and the productive systems/value chains and farmers identified; b) If farmers and farmers associations in those potential soils are interested to be part of RECSOIL, an agreement is reached; c) Farmers are central to RECSOIL as they need to adopt good practices, in turn they receive technical support through all the cycle (maximum years if linked to carbon credit markets) and financial incentives; d) After adoption of good practices, there is a need to measure, report and verify the impacts of such change. Thus, based on the investment source, a decision is made from the beginning on whether it follows the Green or the Carbon Credit Path and the protocols are used accordingly.
 24. The Secretariat and ITPS have been advancing the preparation of important tools to implement RECSOIL. These tools include: a) the compliance with the [Voluntary Guidelines on Sustainable Soil Management](#) (VGSSM); b) [Global Soil Organic Carbon map](#) (GSOCmap); c) [Global Soil Organic Carbon Sequestration Potential map](#) (GSOCseq, launched during the first day of this PA); d) [GSOC-MRV Protocol](#): A protocol for measurement, monitoring, reporting and verification of soil organic carbon in agricultural landscapes; e) [Protocol for the Assessment of Sustainable Soil Management](#); f) Recarbonizing soils: A technical manual of good practices (launched during the first day of this PA); g) [Global Soil Doctors programme](#).
 25. Today there is a huge interest in Soil Organic Carbon sequestration in the climate finance mainly focused on the generation of carbon credits to offset emissions and the private sector is trying to lead this.
 26. It is important to note that while there are discussions going on in terms of the associated investment risks with SOC, there is a scientific back-up that the investment on soil health will surely yield multiple benefits including SOC maintenance and sequestration. The key issue is that we should focus on boosting soil health for obtaining multiple benefits (given the crosscutting nature of soils) for all, and not only merchandize SOC for profit interests only.
 27. RECSOIL is an initiative that can make significant impact on the ground and boost soil health, reduce soil degradation and enhance farmers' livelihoods. Investment is needed in order to scale up sustainable soil management.

28. With some funds provided by donors, the Secretariat is moving into the implementation of RECSOIL at field level following the Green Path. An open call will be launched in Semester II-2021.
29. The Secretariat has been supporting the testing of RECSOIL in Costa Rica by including RECSOIL into the Payment for Ecosystem Services PSA2. Similarly, the Secretariat has been providing technical support to Mexico in preparing and submitting a project proposal RECSOILMEX to the Green Climate Fund (GCF). Mexico has included RECSOILMEX as country priority to the GCF.

5.4 Soil Doctors

30. The Global Soil Doctors programme is a farmer-to-farmer training initiative that aims to support farmers in enhancing their capacities and knowledge on sustainable soil management. This programme was designed to support national and local Extension Services where the aim is to empower farmers within a community by training a lead farmer (Soil Doctor) in the diffusion of methods and tools to detect soil degradation problems and to provide solutions on the ground.
31. The [Global Soil Doctors Programme](#) includes a set of tools composed of educational materials (manual for the programme implementation, 25 posters about different topics, field exercises, etc.) and a soil testing kit for assessing soil condition as well as a set of good practices under the Voluntary Guidelines for Sustainable Soil Management.
32. The launch in October 2020 was attended by 711 participants from 139 countries and provided the basis for the implementation of the Global Soil Doctors Programme around the world.
33. A global survey addressed to the potential promoters of the Programme, in different UN languages allowed for a better understanding of the financial and technical needs for the implementation of the Programme. The resulting roadmap and training guidelines will allow facilitating the implementation in the field and at the same time provide a flexible methodology.
34. Some ongoing FAO projects started with the implementation of the programme and assumed the translation of the educational materials into FAO languages and also to some local languages like Bangla, Chichewa, Chibutuka and Kazak. These pilots will allow to implement an important number of trainings since the second half of 2021.
35. A specific module called "Soils 4 nutrition" was created in the framework of a German cooperation project, aimed at improving nutrition through the soil, crop, and human continuum, particularly in locally produced and consumed foods.
36. A number of national institutions are developing collaboration projects for the implementation of the Global Soil Doctors Programme, at the national and regional level as for example Bolivia, Colombia, Ecuador, and Mexico in Latin America, Gambia, Turkey, and Thailand in the Lakang-Mekong basin. GSP partners such as Better Cotton Initiative and Wisconsin University are implementing the Soil Doctors in their activities. The common point among all these proposals is the willingness to establish a training program that promotes sustainable soil management at farmer level.