

ITPS-VI/17/Report

Report of the Sixth Working Session of the Intergovernmental Technical Panel on Soils

Rome, Italy, 20-24 March 2017



**Food and Agriculture
Organization of the
United Nations**

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INTERGOVERNMENTAL TECHNICAL
PANEL ON SOILS

ITPS-VI/17/Report

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1. Opening of the session

The sixth working session of the Intergovernmental Technical Panel on Soils (ITPS) was held at the FAO Headquarters in Rome from 20th to 24th of March. Mr. Eduardo Mansur (Director Land and Water Division, FAO) welcomed the members, recalling the important work carried out at the last ITPS meeting, which had led to the organization of the Global Soil Organic Carbon Symposium. He highlighted that the symposium would be attended by high level personalities such as H.E. Mr. Jioji Konousi Konrote, President of the Republic of Fiji, Ms. Monique Barbut, Executive Secretary of the UNCCD, and Mr. Abdalah Mokssit, IPCC Secretary. Additionally, Mr. Kamernu Vella, EU Commissioner for the Environment, Mr. Stéphane Le Foll, French Minister for Agriculture, AgriFood and Forestry, and Ms. Elena Manaenkova, Deputy-Secretary General WMO, would send a video message. Mr. Mansur stressed that the presence of Mr. Konrote was also linked to the upcoming UNFCCC COP23, whose Presidency rested with the Republic of Fiji, and that it was indeed important to stress the strong connection between soils and climate. In the context of sustainable soil management contributing to climate change adaptation and mitigation, Mr. Mansur recalled that the Voluntary Guidelines for Sustainable Soil Management were now entering into the implementation phase. Finally, he acknowledged the work of the ITPS in promoting concrete activities on soil and seeking collaboration with other international panels.

2. Adoption of the Agenda, Timetable and election of the Rapporteur

The agenda was endorsed as initially proposed. Mr. Bhanooduth Lalljee agreed to be rapporteur for the session with the support of the GSP Secretariat.

3. Report on the work performed since the 5th working session of the ITPS

The Chairperson, Mr. Montanarella presented the main activities that ITPS performed since its 5th working session: contributions to the development/execution of Implementation Plans, preparation of a soil chapter for the Global Land Outlook, review of and contribution to the IPBES Land Degradation Assessment and Restoration report, preparation and organization of the Global Symposium on Soil Organic Carbon, review of candidatures for the Glinka World Soil Prize and others.

He then invited the ITPS Chairs assigned to GSP Pillars and the leaders of the four thematic working groups to briefly report on performed activities.

- Mr. Dan Pennock, ITPS Chair for Pillar 1, recalled the appointment of Ms. Liesl Weise as Chair of the corresponding Pillar working group. The drafting of the implementation plan for the pillar could not be undertaken fully, given the importance of preparing the Voluntary Guidelines for Sustainable Soil Management (VGSSM) that were finally endorsed in December 2016. The VGSSM would in effect be the overarching framework for developing the Pillar 1 Implementation Plan. A major challenge for the implementation of the guidelines was the availability of significant resources, while the GSP Secretariat informed that efforts were made to mobilize resources. A concept note for the implementation of the guidelines was under preparation and would be submitted to the ITPS for consideration. Mr. Vargas informed about an event called: Infopoint “Voluntary Guidelines for Sustainable Soil Management: why is it important? How can we promote them in the EU cooperation activities and inside the EU?” organised by the European Commission on 6 March, contributing to greater attention of the European Commission to the guidelines. Mr. Montanarella recommended to the GSP Secretariat to present the

VGSSM at all possible venues including the UNCCD COP13 and the 2nd Global Soil Biodiversity Conference (both in China, October 2017).

- Ms. Maria de Lourdes Mendonça Santos Brefin, ITPS Chair for Pillar 2, presented the implementation plan for Pillar 2, highlighting that this was endorsed at regional level and the clear link to the VGSSM. Additionally, she presented a road map for the next five years: (1) implementation, (2) assessment, (3) monitoring, and (4) reformulation of the plan. During the discussion, the importance of reviewing the scope of the GSP fund raising mechanism was stressed.
- Mr. Brajendra, ITPS Chair for Pillar 3, also acknowledged that it had not been possible to develop the global implementation plan for this pillar. However, some regions such as the Asian one were working on their regional implementation plans. In effect, ongoing regional activities for Pillar 3 would serve as baseline for the development of the global plan.

Mr. Vargas advised that writing an implementation plan on research was quite difficult since many institutions were involved. Therefore, attention should be placed on identifying gaps that could be filled by the GSP. The upcoming World Congress of Soil Science (Brazil, August 2018) provided an opportunity for bringing the wider soil research community on board in this delicate process.

It was agreed that some ITPS members would write a short paper on research priorities to serve as baseline for drafting the implementation plan and for guiding future GSP research-oriented activities. In this context, a leading role was assigned to Mr. Rainer Horn.

- Mr. Neil McKenzie, ITPS Chair for Pillar 4 and Chair of the thematic working group on “Improved soil data and information systems”, recalled the milestones in the development of the Pillar 4 implementation plan, focusing on the establishment of the International Network of Soil Information Institutions (INSII). He also expressed some concern about having lost the momentum generated by the International Year of Soils for raising funds to implement activities under Pillar 4. He pointed out to slow progress made in INSII, to the extent that a chair was not yet appointed. Hence, efforts needed to be made to revitalize INSII and the whole Pillar 4 implementation plan. The Secretariat underlined that there was a group of stakeholders who delayed the process by bringing up continuous issues, while this could be expected given the scope of Pillar 4. However, there was now a huge opportunity to respond with concrete actions, an example of this being the Global Soil Organic Carbon Map. In order to move forward, the GSP Secretariat would submit to the 5th GSP Plenary Assembly, documents on: an arrangement to formalize INSII and the need for appointing a Chair, the GSP IP policy (which was produced by the Pillar 4 Working group), and the results of a Call for the GSP Soil Data Facility (to be launched in April). It was important that the ITPS Pillar 4 chair and other Pillars’ chairs be fully proactive in this delicate process.
- Mr. Bhanooduth Lalljee, ITPS Chair for Pillar 5, acknowledged the role of Mr. Rainer Baritz as Chair of the Pillar 5 working group, highlighting that the implementation plan was currently under development.
- Mr. Gunay Erpul, Chair of the thematic working group on “sustainable soil management and assessment of soil degradation and restoration”, focused on the collaboration between the ITPS, IPBES and other

mechanisms. The collaboration with IPBES covered writing and review of the Land Degradation and Restoration Assessment (LDRA). Thereafter, his working group or individual members: (1) reviewed a policy brief on LDR by PBL-Netherlands Environmental Assessment Agency, (2) reviewed a source book on sustainable soil/land management for climate-smart agriculture, (3) wrote a chapter for the Global Land Outlook by the UNCCD, (4) participated to the EUROSIL' 16 expert forum on land degradation neutral world (LDN), (5) gave interviews on sustainable soil management, and (6) linked the work done to the Future Policy Award.

- Mr. Miguel Taboada, Chair of the working group on: “the global management of soil organic matter” reported that to date: (1) the geographical scope of the assessment was submitted to ITPS members and GSP Regions, (2) experts reviewed the scientific literature produced after the publication of the SWSR 2015 focusing on meta-analysis articles published after 2013, and (3) the ITPS presented soil organic carbon stock changes in rangelands and grasslands to the Technical Advisory Group (TAG) of the Livestock Environmental Assessment and Performance Partnership (LEAP).
- Mr. Gary M. Pierzynsky, Chair of the working group on: “sustainable nutrient management aiming to stabilize or reduce global nitrogen (N) and phosphorous (P) fertilizer use while simultaneously increasing fertilizer use in regions of nutrient deficiency” reported that the working group had been somehow inactive until very recently. However, his institution was writing a project proposal for Africa to which ITPS members can contribute by helping to identify the stakeholders to involve. He recalled that soil fertility involved working also on those issues influencing overall nutrients availability such as soil salinity and acidity.

In conclusion, Mr. Montanarella underlined the importance of having active chairs for bringing forward activities in the working groups, and of firm commitments to the assigned work. He asked the chairs to keep an active communication flow with all ITPS members.

4. Follow up to the plan for the preparation of the “Status of World’s Soil Resources” report 2020

Mr. Freddy Nachtergaele, managing editor of the Status of the World’s Soil Resources (SWSR) report 2015 presented on behalf of the GSP Secretariat a proposal for preparing the SWSR 2020, building on the experience gained from the first version. He recalled the creation of four ITPS working groups dealing with the most crucial issues highlighted by the SWSR 2015 (see section 3 of this document), and the request from the Fourth Plenary Assembly of the GSP to address how governments’ participation would be ensured while preparing the SWSR 2020. Therefore, he proposed to take the following steps for the next version of the SWSR: (1) establish an editorial board with ITPS members with due geographical balance, (2) the Secretariat to undertake a systematic review of literature on soil change between 2015 and 2019, (3) each working group to prepare a specific chapter focused on progress and sustainable solutions to the threat they were dealing with, (4) a number of regional meetings (or email conferences) to be organized that would aim at obtaining an evaluation of soil change in each country of each region, and (5) a socio-economic study to be subcontracted to evaluate drivers, impacts and costs of soil change. Ultimately, all reports/chapters would have to be brought together by mid-2019 by an Editorial Manager who would also organize a peer review/rewrite of the draft text before March 2020. The ITPS would then endorse the final text and the GSP Plenary Assembly would acknowledge the availability of the SWSR

2020 in the first half of 2020. Desktop editing and publishing of the report should then be ensured in order to launch it formally during World Soil Day 2020.

The Secretariat reminded ITPS members that the GSP Plenary Assembly had agreed to extend their mandate by one year. Additionally, the need to work with regions and countries right from the beginning of the process was highlighted. Emphasis was put on the work under Pillar 4, which would compensate for lack of sufficient data. Data availability also depended on the soil threats at hand, for instance, data on soil biodiversity could not be updated in a few years only. Therefore, it had to be made clear which data would be fully quantitative and which ones would only be based on expert opinion. In order to produce a sound report, the knowledge gaps inherent to the SWSR 2015 should be addressed in the SWSR 2020. Following this proposal, Mr Pavel Krasilnikov volunteered to draft Terms of Reference for the SWSR2020 process, and decisions were made accordingly:

- A scoping team was established: Mr. Pavel Krasilnikov (Chair), Mr. Brajendra, Mr. Peter de Ruitter, Mr. Miguel Taboada, Mr. Rainer Horn, Mr. Bhanooduth Lalljee, Mr. Martin Yemefack, Ms. Botle Mapeshoane, Mr. Gary Pierzynski, Mr. Gunay Erpul, Mr. Amanullah, Ms. Maria de Lourdes Mendonça Santos Brefin, Mr. Kazuyuki Yagi and Mr. Gan Lin Zhang. The team had to submit the scoping report by 20 May 2017.
- The editorial board was formed: Mr. Luca Montanarella (Chair), five thematic editors (Mr. Neil McKenzie, Mr. Miguel Taboada, Mr. Gunay Erpul, Mr. Gary Pierzynski and Mr. Peter de Ruitter) and 7 regional representatives (Mr. Rainer Horn, Mr. Dan Pennock, Mr. Siosuia Halavatau, Mr. Brajendra, Mr. Talal Darwish, Mr. Juan Antonio Comerma, Ms. Botle Mapeshoane)

While the need to properly acknowledge contributing authors to the report was noted, the GSP Secretariat would request resource partners to support this process.

5. Follow up to the GSP Plans of Action/Implementation Plans

Discussions focused on two core outputs:

- a) *Global Soil Organic Carbon Map (GSOCMap) and the Pillar 4 Implementation Plan*: in addition to what Mr. McKenzie reported on Pillar 4 and the improvement of soil data and information systems (see above), Mr. Rainer Baritz (GSP Secretariat) updated the panel on the development of the GSOCMap. To date, 73 countries had nominated a GSOCMap contact point and started the process of developing the national maps as per the agreed technical specifications. 107 countries have participated in training activities or were planned to attend regional training, and 5 countries were currently implementing Technical Cooperation Projects for establishing their national soil information systems. The GSP Secretariat has sought to motivate national focal points to appoint reference experts for the development of the map and in some cases to put them in touch with the national institutions holding the data and information. Training activities were organized in most of the regions in order to meet the request of countries to build capacity on digital soil mapping and to ease the development of the national SOC maps. The technical guidelines for sharing national data/information to compile a Global Soil Organic Carbon map (GSOC17) were published in December 2016 and the cookbook on “Soil organic carbon mapping” was expected in April 2017. Together, these two documents would address countries’ needs to have guidelines for developing national maps using the data already available.

During the discussion, members enquired about data harmonization at national level when compiling the global map because of differences in the sampling scheme and age of the data. Mr. Baritz explained that

specifications in the guidelines were kept as low as possible in order not to prevent countries from using their data. However, the guidelines provided specifications on the quality of the metadata to be used and referred to the grid map of ISRIC. Harmonization was still an issue to address so that the contribution of the ITPS to sort it out would be appreciated. A solution would be to consider the map as a baseline covering the period 1950-2010 and to use it as a tool for pushing policy makers to act on soil protection and launch monitoring programs on SOC stocks. In this context, the role of the ITPS in this process would be: (1) the ITPS working group on “the global management of soil organic matter” to support the preparation of the map from the SOC management point of view, (2) the ITPS to contribute to the development of the map through its representatives in Pillar 4 (reference person, Mr. McKenzie), and (3) the ITPS would review the map and take scientific responsibility over its publication (to be done during a working session between October and November 2017).

A small ITPS working group (Mr. Neil McKenzie, Gan Lin Zhang, Mr. Miguel Taboada, Mr. Martin Yemefack, Mr. Bhanooduth Lalljee, Mr. Nsalambi V. Nkongolo and Mr. Talal Darwish) was formed to support the Secretariat in this process.

- b) *Implementation of the Voluntary Guidelines for Sustainable Soil Management (VGSSM):* as this item had been widely discussed, the GSP Secretariat only informed about a proposal for the implementation of the VGSSM to be submitted to the European Commission and other donors for consideration. Once the draft would be available, it would be shared with ITPS.

6. Review of progress on: a) assessment at global level of the impact of Plant Protection products on soil functions and soil ecosystems; and b) assessment at global level of the potential of soil protection for increased resilience in a context of climate change

Mr. Dan Pennock presented the concept note for the assessment of impact of plant protection products on soil functions and soil ecosystems, with the expectation to have a final document (as short as the VGSSM) to be submitted to the GSP Plenary Assembly. He also underlined how the gaps identified by the assessment would feed into the implementation plan for Pillar 3. The ITPS suggested: (1) to expand chapter 4 in the concept note in order to have a focus on the use of glyphosate, (2) to contract someone for doing a meta-analysis, (3) to broaden the topic of the assessment in order to cover heavy metals, (4) to advice on good practices, and (5) to present also the consequences of not using pesticides on food production. Ultimately, it was agreed to report only on progress in writing the assessment to the Plenary Assembly without presenting the document itself. Financial resources needed for writing the assessment would be drawn to the attention of the Plenary and a small ITPS team would be identified for supporting writing of the document. The progress made would also be presented to a seminar on Soil Contamination that the Secretariat was organizing, concomitant to the GSP Plenary Assembly in June 2017.

7. Preparation of and debriefing on the GSOC17 and follow up activities

On Monday 20th March, ITPS members were briefed on the roles they should play at the symposium and on the expected outcomes of their participation. In this regard, Ms. Liesl Wiese presented the outline of the outcome document and the key questions that would have to be answered for each theme. Reference was also made to

publishing a special issue in the Global Change Biology journal and the establishment of the International Network of Black Soils.

On Friday 24th March, a debriefing session on the GSOC17 event was carried out. While there was some concern about many topics such as humid tropics and soil biodiversity being neglected, the ITPS appreciated how knowledge and experience mingled at the symposium and the fact that many participants expressed the need to include soils and soil organic carbon in the political agenda.

Reflections made by members around the GSOC17 included:

- Soil modelling and mapping needed to be adapted to the regional contexts (regional assessment for improving global modelling);
- The GSP should maintain consistency in all initiatives it promotes (e.g. VGSSM, GSOC17, etc.). In this regard, it was urgent to move forward developing the global implementation plans for the 5 pillars of the GSP;
- The VGSSM implementation should focus on how they can be used at the local level;
- There was need to advice on the use of the tools already available. This can be reflected in the SWSR 2020;
- Representatives from the regions should be better involved in global activities such as the symposium, otherwise impacts at the regional and national level would be limited;
- It was important to increase the attention on drylands by linking the SOC to the SDGs;
- It was important to invest in long-term experiments and explore the interaction of soil science with other disciplines in order to create a pertinent database;
- Many countries were already aware about the status of their soils so that it was not necessary to make extra assessment. What was important was to promote the adoption of sustainable soil management practices;
- Due attention should be paid on preserving soils from losing C instead of the consequences of C loss;
- There was the need to better relate SOC to plant breeders and plant physiology in order to improve C sequestration from the atmosphere;
- Attention should be given to SOM of which SOC belongs;
- There was a need to educate policy makers in order to promote the endorsement of concrete policies on soil;
- The symposium was weak in arguing on the use of inorganic fertilizers;
- Data on SOC content depended on the sampling strategy so that it was important to be critical when doing the analysis;
- It was important to translate data on SOC into something easy to understand such as food production. Therefore, it might useful to translate C sequestration into kcal and the amount of food produced under specific soil management systems;
- Stable SOC assessments should be established when aiming to get results from long-term studies.

With reference to the outcome publication from the symposium:

- The outcome document will be reviewed by the ITPS, UNCCD/SPI, IPCC and the WMO, and will be presented to various venues. It will be also submitted to the President of the Republic of Fiji with the hope that it could be widely distributed at the COP23. The outcome document will be shared with the three scientific panels on 28 March to provide their comments by 31 March;

- About 20 abstracts will be submitted to the Global Change Biology journal for a special issue on SOC. An editor from each of the panels will be identified; the editor for the ITPS will most likely be Mr. Peter de Ruiter because of his proven experience. Mr. de Ruiter however raised concern about the focus of the journal and the special issue under discussion. Therefore, a cross-check with the journal on the possibility to contribute to it was recommended;
- The idea of having a book of proceedings was turned down;
- It was agreed that besides the outcome report, a policy brief would be produced.

Some reflection (especially about the definition of black soils) was made around the International Network of Black Soils, which was launched during the symposium. In this case, the ITPS will review the existing concept note and will also take a look at the Terms of Reference for the network. Both documents will be then submitted to the GSP Plenary Assembly in June 2017.

Ultimately, it was agreed to establish two working groups for: (1) the implementation of the VGSSM focusing on SOC management, and (2) writing the MRV guidelines. This also linked to the development of the GSOMap, which will be presented as an ITPS product.

8. Report on the collaboration between ITPS and the SPI of UNCCD, IPBES and IPCC

The ITPS chair provided a general summary regarding ongoing collaboration between ITPS and other UN panels – an aspect stressed by the GSP Plenary Assembly. He started with IPCC and IPBES as their representatives were not present, and then he welcomed the SPI/UNCCD chair and secretary for an open discussion about the agreed workplan.

IPCC

Mr. Montanarella acknowledged the successful interactions the ITPS has been having with IPCC. First, the ITPS was accepted as official observer of the IPCC. The main collaboration was in the organization of the Global Symposium on Soil Organic Carbon. This indeed constituted a milestone and proved to be very effective. The next activity was to respond to a call for nomination of authors, in relation to the IPCC Special Report on Climate change and land degradation.

IPBES

Collaboration with IPBES was ongoing with ITPS members actively contributing to the review of the Land Degradation and Restoration assessment report (LDRA), as well as providing a review as requested. Furthermore, FAO would be hosting the Third Author Meeting of the LDRA, planned for 17-21 July 2017. The role of Mr. Gunay Erpul as contact person with IPBES and the need for long-term cooperation with the panel were highlighted.

SPI of the UNCCD

Mr. Montanarella welcomed Ms. Anette Cowie, MR. Victor Castillo and Mr Hamid Custovic from the SPI and UNCCD Secretariat. He recalled that at his Fifth meeting, the ITPS committed to contribute to the Global Land Outlook (GLO) with a chapter on soil threats and to develop a Global SOC map to be used as input layer for the matrix of the land degradation neutrality objective. In this regard, the ITPS had submitted in due time the chapter for the GLO to the Editorial Board but found out that this was not included in the current version of the Outlook during the review phase. In the meantime, the UNCCD Secretariat had sent comments to the chapter

and the GSP Secretariat was going to submit it to the responsible coordinators, Mr Gary Pierzynski and Mr. Brajendra Parmar. A revised version of the Chapter will be submitted to the UNCCD Secretariat once ready.

With reference to the Global SOC map, the process was ongoing and countries are working on the preparation of their national SOC maps. The expected launch of the GSOCMap was on 5 December 2017. The SPI-UNCCD affirmed to be interested in the topic and asked the ITPS to write a long-term proposal on it which will be brought to the attention of the SPI for a constructive exchange. Once the SPI approves the proposal, this can be presented at the UNCCD COP13 for consideration.

An assessment of global soil erosion was also part of the planned activities and Mr. Gunay Erpul informed that a tentative map was produced by the Joint Research Centre and that there was still some work to do.

Finally, the main topic of discussion was the just finalized Global Symposium on Soil Organic Carbon which was a very successful event in which the collaboration with SPI-UNCCD was quite fruitful. SPI colleagues asked about follow up activities, particularly in relation to the Outcome Document, the special issue on Global Change Biology journal and the way forward. The GSP Secretariat recalled that a draft outcome document would be prepared and sent to the scientific committee (composed of ITPS, IPCC, SPI-UNCCD and WMO) asking for their review, then a final version would be prepared. On the special issue, a proposal containing the abstracts that were suggested by the three panels will be submitted to ITPS, IPCC and SPI-UNCCD for consideration. Each panel will be asked to nominate an editor.

Mr. Castillo suggested that the GSP present the VGSSM to the UNCCD COP13 through the national focal points, which have the mandate to present proposals.

In conclusion, Mr. Castillo invited the ITPS to attend the next SPI meeting (April 2017) in order to discuss on further collaboration in the framework of the land degradation neutrality target. This would also help in identifying the role and contribution that the SPI-UNCCD could give to upcoming activities identified by the GSP Secretariat at the closure of the symposium.

9. Follow-up to the 4pour1000 Initiative

Mr. Montanarella welcomed the Executive Secretary (Mr Paul Luu), Chair (Ms. Magaly Garcia) and the members of the Scientific and Technical Committee of the 4/1000 initiative. After a tour de table a brief presentation to the initiative was made. After that, the floor was open for discussion about potential synergies and collaboration between the ITPS and the 4/1000. Representatives from the 4pour1000 acknowledged the achievements of the GSP and the ITPS, especially in relation to the GSOC17 and expressed their will to join in these efforts. In this context, they saw the 4pour1000 and the GSP as complementary, highlighting that the work of the two groups should be harmonized in order to avoid duplications. Therefore, the objectives of the initiative on SOC management and their strategy for achieving them was reviewed by the ITPS in order to explore the possibility for the initiative to contribute to the implementation of the VGSSM. The 4pour1000 initiative aimed to increasing soil carbon sequestration and decreasing its losses into the atmosphere. In order to achieve its objectives, the design of new generation, long-term experiments was considered fundamental as well as the integration of soil degradation into the conceptual framework of the initiative. Indeed, carbon losses from the soil cannot be reduced if soil degradation is not addressed.

Based on the reflection that goals on SOC stocks are easier to achieve in the northern hemisphere than in the southern one, the idea of developing a joint project on SOC and the practice of SSM in drylands was mentioned. The project should focus on increasing carbon stocks in soil by considering climate factors, fertilization and other

factors related to root development and C sequestration. This would also link to the Land Degradation Neutrality target and the activities of the UNCCD. The ITPS could also contribute to the development of the research program of the 4pour1000 so as to include, for instance, soil microorganisms in the picture. Overall, it was important to motivate donors to invest.

In conclusion, the meeting confirmed the leading role of the GSP on SOC management and the interest of the initiative to collaborate. However, collaboration should be transparent, inclusive and of a win-win nature for both parties. It was agreed that the 4pour1000 initiative could contribute to the execution of activities under GSP Pillars 4 and 5 on soil information and harmonization. Therefore, Mr. McKenzie and Mr. Lalljee will prepare a short concept note on harmonization of methods to be presented to the next 4pour1000 meeting in Montpellier by Mr. Montanarella or another ITPS member in the region.

10. Report to the Fifth GSP Plenary Assembly and ITPS publication for 2017

The ITPS chair recalled that a report to the fifth GSP Plenary Assembly should be made, so he asked for suggestions in this regard. It was agreed that Mr. Dan Pennock would prepare a note on the achievements related to the assessment at global level of the impact of Plant Protection products on soil functions and soil ecosystems, and to the assessment at global level of the potential of soil protection for increased resilience in a context of climate change. The note should be ready by the third week of April in order to be integrated into the overall ITPS progress report and be submitted to the GSP Plenary Assembly by the 20 of May. Additionally, the GSP Secretary would share all documents from Pillar 4 with ITPS members so to ensure they were fine for submission.

Mr. Montanarella concluded this item by summarizing present publishing commitments of the ITPS:

- Special issue of the Global Change Biology journal;
- Policy brief: 2 pages to be produced building on the outcome document of the GSOC17;
- Eventually a book of proceedings working only with the abstracts.

Mr. Vargas proposed to the ITPS to contribute to the writing of a book on soil and plant health by the International Plant Protection Convention (IPPC). Therefore, he undertook to share the draft of this book with the ITPS for consideration and proposed that Mr. Pennock take the leadership over this activity, building on the work he is already doing on plant protection products.

11. Date and venue of the next meeting

Possible venues for the next ITPS meeting were discussed looking at the need to rotate them. The opportunities of the World Congress of Soil Science, COP23 were mentioned. Therefore, it was proposed to organize the meeting in Rio de Janeiro (Brazil) or in the Fiji islands. Additionally, Nepal and Turkey were proposed because of their location and differences in land use systems. The GSP Secretariat would explore this issue according to specific comparative advantages and especially taking account of needs in terms of planned activities.

In this regard, the need was highlighted for the ITPS to meet before the launch of the global SOC map on 5 December 2017. In this case, the ITPS meeting might be combined with that of the INSII.

The GSP Secretariat would advise the ITPS accordingly.

12. Any other business

None.

13. Closing of the meeting

Mr. Eduardo Mansur emphasized the success of the symposium, stressing that the bar was now set very high not only for the GSP and ITPS but also for the entire AGL Division at FAO. There was now the need to raise the visibility of SOC in the policy agenda and to take advantage of the organization of two Conferences of the Parties this year, UNCCD COP13 and UNFCCC COP23. Raising the importance of soil organic carbon at the COPs would provide an excellent entry point to broaden the attention of policy makers and other stakeholders on soils and the ecosystem services they provide. The delivery of the global SOC map during World Soil Day 2017 represented a huge commitment that the GSP could not fail to achieve.

ANNEX: List of Participants

ITPS Members

Africa

Mr. Nsalambi V. Nkongolo (Democratic Republic of Congo)
Mr. Bhanooduth Lalljee (Mauritius)
Mr. Martin Yemefack (Cameroon)
Ms. Isaurinda dos Santos Baptista Costa (Cape Verde)
Ms. Botle Mapeshoane (Lesotho)

Near East and North Africa

Mr. Talal Darwish (Lebanon)
Mr. Ahmad S. Muhaimeed (Iraq)

Latin America and Caribbean

Mr. Juan Antonio Comerma (Venezuela)
Mr. Miguel Taboada (Argentina)
Ms. Maria de Lourdes Mendonca Santos Breffin (Brazil)
Mr. Fernando Garcia Préchach (Uruguay)

North America

Mr. Dan Pennock (Canada)
Mr. Gary M. Pierzynski (United States of America)

Asia

Mr. Gan-Lin Zhang (China)
Mr. Brajendra (India)
Mr. Amanullah (Pakistan)
Mr. Kazuyuki Yagi (Japan)

Europe

Mr. Luca Montanarella (Italy)
Mr. Gunay Erpul (Turkey)
Mr. Peter de Ruiter (The Netherlands)
Mr. Pavel Krasilnikov (Russian Federation)
Mr. Rainer Horn (Germany)

South West Pacific

Mr. Neil McKenzie (Australia)
Mr. Siosua Moala Halavatau (Tonga)

GSP Secretariat

Mr. Ronald Vargas
Ms. Liesl Wiese
Ms. Lucrezia Caon
Mr. Rainer Baritz