

Pacific-V/22/Report



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



Report of the Fifth Meeting of the Pacific Soil Partnership

Online meeting, 12 and 13 April 2022

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FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

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1. Introduction

The fifth meeting of the Pacific Soil Partnership took place on 12 and 13 April 2022 (see agenda in Annex I). Due to the ongoing COVID-19 pandemic, the meeting was held virtually on the online platform Zoom. Twenty-four participants from 10 Pacific countries, including representatives from the Global Soil Partnership (GSP) Secretariat and the FAO sub regional office for the Pacific Islands, attended the meeting (see Annex II). The meeting aimed to (i) remind national focal points about their role, (ii) inform the national focal points on GSP's activities of regional interest, (iii) update each other on national activities on soil, (iv) define the ASP work plan in the new GSP Action Framework, and (v) present the ongoing work on the Status of the World's Soil Resources report 2025, being written.

Ms Malia Talakai, from the FAO Subregional Office for the Pacific Islands, opened the meeting on behalf of Ms. Xiangjun Yao (Subregional Coordinator) by highlighting the multi-face role of soils in the Pacific islands in providing ecosystem services and supporting food production. Ms Talakai briefly recalled the main soil threats affecting Pacific soils and the efforts made by different FAO initiatives to support farmers in facing them, describing the regional and global framework in which such activities are developed. Mr Ronald Vargas, Secretary of the Global Soil Partnership (GSP), updated country representatives on the new action framework of the GSP, which will be discussed during the GSP 10th Plenary Assembly (23-25 May 2022). The current organization in pillars of actions will be converted in a more action-oriented framework, aiming to identify new clear targets and indicators to better respond to challenges such as climate change and food insecurity. All national focal points were encouraged to attend the Assembly. Mr Vargas informed participants that the eventual institutionalization of the GSP as a statutory body of FAO will be also discussed during the 10th GSP Plenary Assembly. Lastly, Mr Vargas remarked the GSPs' complete availability to support initiatives in the Pacific regions which aim to promote sustainable use of soil resources. Mr Peter Wilson, Chair of the Pacific Soil Partnership, provided an overview of the many soil-related activities implemented (and under implementation) in the region, especially those concerning the improvement of extension services, soil laboratories, and development of maps. New members of the Intergovernmental Technical Panel on Soils (ITPS) from the Pacific were presented; Mr Brajesh Singh (Australia) and Mr Ravendra Naidu (Fiji) introduced themselves and shared their vision on the upcoming challenges for the sustainable management of soils in the region.

2. GSP developments of regional interest

Ms Caon presented GSP activities of regional interest, requesting NFPs to take action to facilitate their implementation at the national level:

- **SoiLEX**

Is a GSP tool to promote soil governance. It is designed to provide countries with easy access to information on existing soil protection and soil degradation prevention legal instruments. Ms Caon requested NFPs to respond to the SoiLEX [questionnaires](#), contribute to the regional legal analysis, support the update and growth of SoiLEX and promote the use of SoiLEX at the country level since this tool could encourage countries to improve their legislation systems.

- **Global Soil Doctors Programme**

The programme is a farmer-to-farmer training programme to build the capacity of local farmers on sustainable soil management and support the work of national extension services. The programme relies on the identification of a national promoter to closely work with the GSP on the implementation of the programme at the national level. The promoter supports the GSP in identifying and training champion farmers to become Soil Doctors, who then

support other farmers on the practice of sustainable soil management by using educational materials and soil testing kits. Additional information on the implementation of the programme in the region is provided in Section 5.

- **International Network on Black Soils (INBS)**

At present, there is no country from the Pacific in this network. Countries with soils that fall under the following definition were kindly invited to register to the INBS:

“Black Soils are characterized by a thick, dark-colored soil horizon rich in organic matter. Due to their inherent high fertility, these soils remain very sensitive to anthropogenic intervention and are prone to severe degradation. Because of their high soil organic carbon (SOC) content, they are also very sensitive and can be potential large sources of greenhouse gases. Extensively and intensively farmed, they constitute the food basket for many countries. Notwithstanding the relatively small percentage (7%) of the world’s ice-free land surface Black Soils cover, it is crucial to promote their conservation and sustainable use to maintain their functioning in order to sustain their supporting food security while protecting the environment and mitigating climate change.”

Note that, the distribution of black soils is being reported in the global black soil map.

NFPs from INBS member countries were kindly invited to support the development and endorsement of an International Agreement on Black Soil Conservation, the International Guidelines on Sustainable Black Soil Management and an international platform of open courses on best available practices in black soil management.

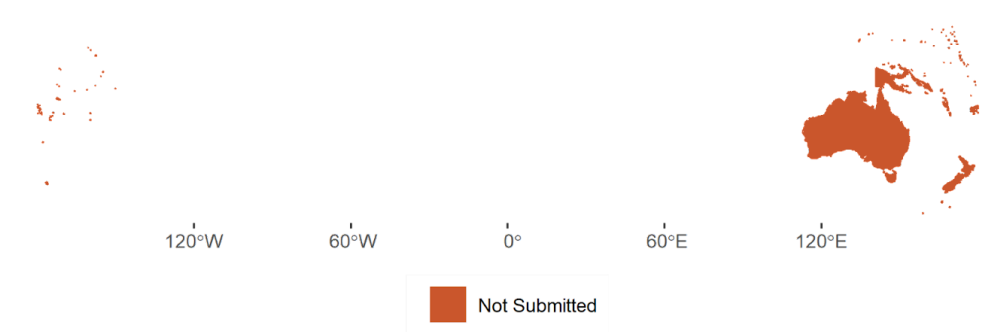
- **Activities on Salt-affected Soils**

Activities on salt-affected soils fall under the coordination of the International Network on Salt-Affected Soils (INSAS), which is organized in four working groups: (WG1) Assessment: Mapping, assessing and monitoring of salt-affected soils; (WG2) Sustainable management of salt-affected soils (practices, policy); (WG3) SAS and crops: Halophyte agriculture and salt-tolerant crops; (WG4) SAS and Water: Integrated soil and water management under saline/sodic conditions. NFPs were encouraged to share word on this network and to invite their national experts on the topic to join the working groups. They were also invited to complete a questionnaire on the status of monitoring and management of salt-affected soils by contacting the INSAS coordinator, Ms. Maria Konyushkova at maria.konyushkova@fao.org.

Ultimately, NFPs were reminded that INSAS activities build on the recommendations of the Global Symposium on Salt-Affected Soils, which was held virtually in October 2021. The symposium’s forthcoming outcome document was advertised.

- **Digital soil mapping**

The GSP is currently working on the development of the Global Soil Organic Carbon Sequestration Potential Map (GSOCseq v1.1), see figure 1. At present, no country from the Pacific region has submitted their national GSOCseq maps. Note that, Cook Islands, Micronesia and Tokelau have nominated their experts to follow up on this work while Australia and New Zealand asked to remain blank. National experts and NFPs were asked to reach out to Ms Isabel Luotto (Isabel.Luotto@fao.org) to report on the preparation of the map and to seek technical support.



Source: UN, 2020. Map of the World, United Nations.

Figure 1. Submission of national maps to the Global Soil Organic Carbon Sequestration Potential Map (GSOCseq v.1.1)

In terms of the Global Salt-Affected Soils Map (GSASmap v1.0), Papua New Guinea, Western Samoa, American Samoa, Guam, Marshall Islands and Micronesia submitted their maps before the meeting, see figure 2. National experts and NFPs were asked to reach out to Mr Christian Omuto (Christian.Omuto@fao.org) to report on the preparation of the map and to seek technical support.

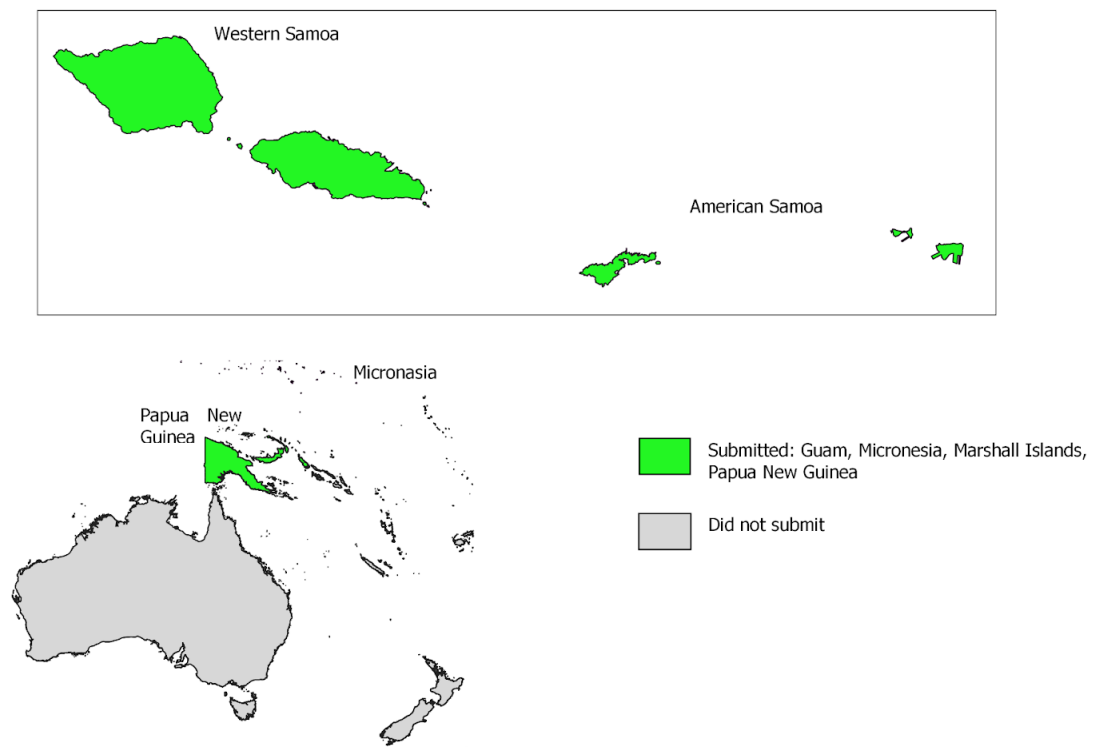


Figure 2. Submission of national maps to the Global Salt-Affected Soils Map (GSAS v.1.0)

Because of the role of the International Network of Soil Information Institutions (INSII) in defining the criteria and technical guidelines for the preparation of global maps, NFPs were kindly asked to

update or nominate their experts in INSII. Additional information on the implementation of digital soil mapping activities in the region is provided in Section 5.

- **Global Soil Laboratory Network (GLOSOLAN)**

The [Global Soil Laboratory Network \(GLOSOLAN\)](#) was established in 2017 to harmonise soil laboratory methods and data and build laboratories' capacity in soil analysis. At present, the network consists of 827 laboratories from 151 countries and focuses its work on internal and external quality control, the harmonisation of Standard Operating Procedures (SOPs), and capacity building on a large number of topics including the purchasing, use and maintenance of laboratory equipment. GLOSOLAN operates through [Regional](#) and [National Soil Laboratory Networks](#) (RESOLANs and NASOLANs). In the Pacific region, GLOSOLAN operates through the Pacific Soil Laboratory Network (ASPAC) that was established under the existing [Australasian Soil and Plant Analysis Council \(ASPAC\)](#) in 2019. See Section 5.

Looking at the role of NFPs in this activity, Ms. Caon kindly requested to ensure that they have nominated a [National Reference Laboratory](#) to downscale GLOSOLAN activities and to trigger actions in the country, including establishing National Soil Laboratory Networks. NFPs were also asked to motivate laboratories to participate in GLOSOLAN meetings and training sessions, to support the establishment of NASOLANs and to translate GLOSOLAN materials into their local languages as needed.

- **International Network on Fertilizer Analysis (INFA)**

INFA was established in December 2020 to build and strengthen the capacity of laboratories in fertilizer analysis laboratories and improve quality standards. At present, the network counts on 154 members from 80 countries; only 4 of these labs are from the Pacific. INFA operates through three working groups on (WG1) the harmonisation of methodologies for fertilisers analysis, (WG2) capacity building of fertiliser laboratories, and (WG3) governance, policy and regulation of fertiliser use.

INFA kindly requested NFPs to encourage soil laboratories and other key stakeholders in their country to join the network, to facilitate the implementation of activities related to the inter-comparison tests to be performed, and to facilitate the search and access to information related with regulatory frameworks regarding fertiliser use, and imports at the national, regional, and global levels.

- **Soil biodiversity**

Activities on soil biodiversity are coordinated by the International Network of Soil Biodiversity (NETSOB), which is the implementing body of the Global Soil Biodiversity Observatory (GLOSOB). GLOSOB aims to monitor and forecast the condition of soil biodiversity and soil health and will serve as the framework for developing policies, promoting good practices, and developing national capacities on the state-of-art tools and methods on soil biodiversity and soil health assessment and maintenance. NETSOB is connected to the Global Soil Biodiversity Initiative (GSBI) and to the Convention on Biological Diversity (CBD). Its work is organized into four working groups, (WG1) measurement, and assessment and monitoring of soil biodiversity, (WG2) policies and legal instruments related to soil biodiversity, (WG3) economics of soil biodiversity, and (WG4) sustainable use, management and conservation of soil biodiversity.

NFPs were kindly asked to invite their experts to join NETSOB and its working groups. The coordinator of NETSOB is Ms Rosa Cuevas Corona (Rosa.CuevasCorona@fao.org).

- **Soil pollution**

The GSP is currently investing in three activities on soil pollution:

1. The writing of technical guidelines for assessing, mapping, monitoring and reporting soil pollution. Interested experts were asked to contact Mr Sergejus Ustinov (Sergejus.Ustinov@fao.org)
2. The launch of the International Network on Soil Pollution (INSOP) in April 2022 to stop soil pollution and achieve the global goal of zero pollution. INSOP will work to improve knowledge on the full cycle of soil pollution, strengthen technical capacities and legislative frameworks for the prevention of soil pollution, and will promote the exchange of experiences and technologies for the sustainable management and remediation of polluted soils. Institutions and individuals can join the network and contribute to its workplan.
3. The launch of pilot site studies to assess and manage/remediate contaminated agricultural soils. This activity aims at agricultural areas contaminated or that may be contaminated by heavy metals due to agricultural practices. Eventually, this project will support national/local governments in developing a methodology to perform a risk assessment and define which practices can be adopted to reduce the availability of heavy metals in soils and hence reduce the uptake by plants and the contamination of the food chain. If interested, countries are encouraged to contact Ms Natalia Rodriguez Eugenio (Natalia.rodriguezeugenio@fao.org) with the region's basic information on hydrogeology and agricultural practices.

3. National updates on soil

Countries were invited to share their progresses and news on soil.

Australia

Ms Sarah Burr shared with meeting participants the main achievements of the country in terms of promoting sustainable soil management (SSM) practices. The National Soil Strategy for the 2021-2041 period was released, providing a clear roadmap on the measures that will be implemented to value, manage and improve the country soils. The three key goals are to (i) prioritize soil health, (ii) empower soil innovation, and (iii) strengthen soil knowledge and capability. Soil resilience, health and productivity will be supported by a series of activities (including education and monitoring) that are included in the Australia's National Soil Package 2021-2025. The importance of healthy soils in the country was highlighted thanks to the awareness raising initiatives organized by the National Soils Advocate. A diverse group of stakeholders was also involved in other awareness raising activities on soil-related issues of national interest. Major initiatives on soil research were developed to better understand how soil conditions are affected by different practices and interventions. For this purpose, the collaboration and knowledge sharing between different institutions were facilitated. Researchers were also supported in identifying priority gaps in soil science thanks to the measures included in the National Soil Package. Moreover, Ms Burr informed participants about the many soil research project financially supported by the Centre for International Agricultural Research (ACIAR) to improve SSM practices in both Pacific and Asian countries. Other initiatives aimed to explore potential application of low-cost, accurate technological solutions for measuring soil carbon. National organizations are also funding soil researches on new extension models to promote SSM, soil information systems and to

better develop knowledge and capacity in soil research. The recently published national soil strategy also targets boosting of soil data by performing more soil tests, reviewing the existing data sources and establishing the national soil information system (ANSIS). Ms Burr also informed participants of a CSIRO project that aims to support collaborations among soil scientists, industry and landholders to develop and validate soil carbon measurement approaches. The efforts made to develop the Pacific Soil Portal were mentioned as well. Using a consultation process, feedback from hundreds of Australian stakeholders on the importance of harmonizing soil testing methodologies and indicators were collected. This led to the implementation of many initiatives which aim to develop a soil spectral analysis platform and the harmonization of soil survey and testing methodologies.

Cook Islands

Mr William Wigmore presented the practices developed to face the main soil threats affecting the islands. These mostly aim to better manage saline soils caused by seawater intrusions and to boost soil fertility (use of green manure, compost, mulching). The interest in the latter and in other alternatives to farm inputs increased recently as the cost of fertilizers increased dramatically. In addition to that, minimum tillage techniques were promoted. However, Mr Wigmore stated that the islands composing the country (and others in the region) would need a better legislation and policies on how to improve soil management in a sustainable way. Many initiatives were implemented to raise awareness on soils (also via demonstration sites), with a particular focus on enhancing the linkages among key institutions, stakeholders, and local communities (targeting women and young groups). Investments on building the capacity of extension agents were made as well. These play a key role in disseminating the research outcomes to the farmers. Soil-related research activities targeted the use of mucuna as green manure to improve soil fertility and the application of specific composts in atoll farming systems. The use of improved machineries led to reduce tillage in the production of short-term crops. The work done on soil suitability mapping was described as well. No soil laboratory is present in the islands, due to their small size and challenges in training qualified personnel.

Fiji

Mr Ami Sharma informed participants about the activities implemented in the country on the promotion of the sustainable use of fertilizers based on farm conditions. Initiatives on SSM regarded training on different field practices, like agroforestry, crop rotation and fallowing, and the use of cover crops. Farmers were involved on a massive exercise on soil testing, implemented using mobile laboratory facilities. Activities on awareness raising were organized in collaboration with research partners operating in the region. A research was conducted by the Ministry of Agriculture of Fiji alongside experts at CSIRO on nutrient cycling. The research was developed using an integrated approach, thus including the need of good-quality soil data, the budget limitations, and the site-specific requirements. Information on country's soils were reported in the Pacific Soil Portal, to enable sustainable soil management in the farming systems of the country and region. Mr Sharma also informed participants of the initiatives implemented in the soil laboratories of Fiji to monitor the quality of the analytical data produced. These consisted of both internal quality control (QC) procedures (in-house reference samples and QC charts) and the participation of inter-laboratory comparisons.

Micronesia

Mr Elias Trisden informed participants that the main activities implemented to promote SSM focused on the correct use of compost. This was mainly supported by the governmental extension agents which are in touch with the local communities. Mr Trisden informed that efforts will be made to organize celebrations for the next World Soil Days.

Nauru

Ms Marissa Cook presented the efforts made in the country to promote the production and use of compost to farmers. National experts organized several initiatives to raise the awareness on soils, targeting different community groups. Ms Cook also provided an overview of the recent studies which focused on the soils of the island and their ecosystem services, and the workshops organized to highlight the importance of soil characterization and site-specific amendments in agricultural production.

New Zealand

Mr Peter Wilson reported on behalf of Ms Megan Balks some of the updates from the country. Some of these focused on the role of soil to mitigate climate change. The efforts made by country experts to develop the Pacific Soil Portal – where soil data on many islands of the region are reported – was mentioned as well, together with the survey activities. In addition to that, the soil description handbook was reviewed. Experts from the country dealing with soil information are involved in INSII and GLOSIS. In this regard, it was reported how soil data was shared with indigenous people, in a framework of soil sovereignty. Several activities were implemented to build the national capacity on soil spectroscopy, in collaboration with CSIRO.

Niue

Mr Poi Okesene reported about the activities successfully implemented in the country aiming to promote sustainable soil management practices, such as mulching and composting, the adoption of legumes cover crops, and agroforestry. Mr Okesene also informed participants about the support given to the organic farmers association of the island and the many initiatives held to raise the awareness on soil at the national level. Due to the size of the country, other activities were implemented occasionally on a local basis (e.g. how to improve biochar, together with the private sector). No soil laboratory is currently operating in the country, as it would not be economically sustainable. Soil samples are usually shipped to other countries in the region for analysis.

Samoa

Mr Anesone Vaai presented on behalf of Mr David Hunter and Mr Seuseu Tauati about the strategies developed in the country to optimize the use of the available agricultural land in a sustainable way. Cover crops, agroforestry, and application of manure obtained from local resources as an alternative of chemical fertilizers are the main actions undertaken. However, Mr Vaai expressed the need for engagement to develop (i) a strategy to better store carbon in soils, and (ii) a national soil management policy based on scientific evidences. While soil science is well covered in the country's education system, an adequate awareness raising campaign is missing. Moreover, Mr Vaai reported that Samoa lacks a well-structured extension service on SSM for farmers. The few researches conducted (and currently ongoing) in the country concern nutrient cycling, the potential application of alternative organic fertilizers derived from by-products of biogas, greenhouse gas emissions from agricultural activities, and the monitoring of contamination level caused by herbicide use. Mr Vaai informed that a large quantity of soil data was collected in the country by different organizations. Still, country experts on soil mapping and data managing need to be trained and guided on how to better manage such data. In this regard, better engagement with GLOSIS was requested. The participation of soil laboratories operating in the country in GLOSOLAN was mentioned as well. Lastly, Mr Vaai highlighted the need of build the capacity of country experts on how to develop SSM practices starting from the analytical data produced by laboratories.

Solomon Islands

Mr Jules Damutalau provided an overview of the main farming systems developed in the country, linking them to the different soil threats affecting farmers. These are located (i) in the mountain areas of the archipelago, where terraces were identified as the best practices to face soil erosion, (ii) at the coastal areas, where sea level rise and seawater intrusion represent the main menaces, and (iii) in the atolls, where the sandy soils cultivations were recently developed. Mr Damutalau reported about the on-farm demonstrations to promote the adoption of SSM to farmers (especially composting, green manuring, mulching, cover cropping and plant contours). Agricultural extension services and organic farming were promoted as well, and the role of women in agriculture at national level was empowered. Policies on community land use planning and climate change were developed as well. Still, Mr Damutalau informed participants about the need for an assessment in sustainable soil management conducted on a national scale. The celebrations of the World Soil Day were also mentioned. These were used to reach and group together all soil-stakeholders of the country. Main researches conducted concerned soil amendment, soil biodiversity and how to better face soil erosion using contour farming and cover crops.

4. National focal points and National Soil Partnerships

Ms Isabelle Verbeke, communication officer from the GSP Secretariat, concluded the first day by introducing participants to the role and responsibilities of the national focal points (NFPs), which are:

- To promote sustainable soil management. As a nominee by the government, NFPs are encouraged to refer to the revised World Soil Charter, which stipulates recommended actions by governments;
- To act as a contact person in the country, to share and distribute relevant communications, information material, invitations to symposiums, meetings, webinars among networks in their country;
- To consolidate regional soil partnerships and actively engage in the annual regional assemblies, like the NENA Soil Partnership;
- To bring all actors at the national level together and ensure coordination among the different national stakeholders dealing with soils;
- To promote GSP tools, priorities and activities and the wealth of resources available at the country-level;
- To identify potential new partners in their own country and liaise with them;
- To create a soil mailing list in each country to be used by the GSP as a channel to disseminate newsletters;
- To facilitate the GSP implementation and awareness-raising activities/actions/contests. It is important to include all actors in the GSP activities, for example, not only soil scientists but also teachers, students, and children, to celebrate World Soil Day; and
- To promote the inclusion of soils in the national agenda and at international conventions.

In addition, Ms Verbeke explained and advertised the National Soil Partnerships (NSPs) which comprise all interested and active partners in a country willing to contribute to sustainable soil management under the framework of the GSP. At present, there are no National Soil Partnerships in

the region. Finally, she touched on NSPs structural governance, main functions, operational tasks, and the way to establish an NPS, which are also available on the [GSP website](#).

5. Pacific Soil Partnership work plan for the years 2022-2023

This session aimed to discuss the Pacific Soil Partnership work plan for the years 2022-2023. Due to the ongoing work on the new GSP action framework. It was noted that this was likely the last time that activities were organized and discussed by Pillars of Action.

- **Pillar 1**

Ms Carolina Cardoso Lisboa (GSP Secretariat) informed participants about the GSP initiative on the recarbonization of global soils (RECSOIL) that aims to scale-up the implementation of SSM practices (SOC-centered) while helping to decarbonize the economy and fostering sustainable development. The initiative will provide technical support and improve the national and regional capacities on SSM while providing financial support to smallholder farmers through payment of annual financial incentives to support the transition and implementation of SSM. The implementation of RECSOIL happens in six steps:

- Step 1 – Identification of priority areas at regional level: supported by GSOCmap, GSOCseq (optional GloSIS maps) coupled with National Soil data information;
- Step 2 – Identification of Farmers Associations and stakeholders: description of roles and responsibilities;
- Step 3 – RECSOIL-Terms of Agreement (ToR), bilateral and multilateral agreements with Farmers Associations, Technical and Extension services/advisers;
- Step 4 – Extension program support: Soil Doctors Program and technical training: MRV Protocols and capacity development: GLOSOLAN
Financial incentives, 1st payment: Implementation-Based approach: based on total costs of SSM implementation, X% total cost (annual fees over a period of 4 years, 1st at time 0);
- Step 5 – Implementation of SSM: supported by VGSSM + Fertilizer Code + RECSOIL Technical Manual + other GSP tools;
- Step 6 – MRVs: Green Path, SSM Protocol and C-Market Path, MRV Protocol and support from GLOSOLAN for laboratory analysis
2nd payment: Result-Based approach: , Green Path: compliance with SSM (4 years after implementation) and C-Market: t CO₂e / year.

The project is currently being implemented in pilot countries in Asia, Latin America and Africa. Based on the existing tools already present in a country or region, RECSOIL can be adapted case to case, involving different actors from soil laboratories to farmers associations. In this regard, Ms Cardoso stressed the important role that RECSOIL might play in facilitating the implementation of SSM by farmers.

Participants were encouraged to contact Ms Cardoso for further information at Carolina.CardosoLisboa@fao.org.

- **Pillar 2**

- **Global Soil Doctors Programme**

In addition to what reported by Ms Caon in Section 3, Ms Silvia Pioli (GSP Secretariat) informed participants that the implementation of the programme is currently under

discussion in Tonga. After a preliminary meeting with Dr Siosuia Moala Halava, the attention is now focused on identifying a suitable promoter (extension service), find the proper location where to implement a pilot in harmonization with existing projects, and discussing the translation of programme material and the budget.

Other countries showed interest in the programme that could be the best tool to generate data and implement sustainable soil management practices in the Pacific Islands.

Ultimately, Ms Pioli invited participants to contact the Soil Doctors programme coordinators (Silvia.Pioli@fao.org, carolina.oliverasanchez@fao.org) to get more information about the possibility to implement the programme in more NENA countries.

- **Policy brief**

Building on the successful publication of policy briefs in other regions and their positive impact on the mobilization of financial resources, the GSP Secretariat proposed this activity to the Pacific Soil Partnership. The region suggested to initiate this activity after the implementation of the Global Soil Doctors programme, as that could support generating data to report in the documents.

- **Pillar 4**

In addition to what was reported by Ms Caon in Section 3, Ms Isabel Luotto (GSP Secretariat) presented the GSP activities on soil information and data. Ms Luotto invited focal points to follow up with national experts who are working or have not yet start working on the soil thematic maps to report on progresses and to seek technical support, by contacting:

- Ms Isabel Luotto (Isabel.Luotto@fao.org) for the Global Soil Organic Carbon Sequestration Potential Map (GSOCseq) v1.1. Once national experts are selected, the GSP Secretariat will organize a regional Pacific online/in person training on SOC sequestration potential modeling and mapping.
- Mr Christian Omuto (Christian.Omuto@fao.org), GSP Secretariat, for the Global Salt-Affected Soils Map (GSASmap) v1.0. A regional training and harmonization workshop was held between 4th and 15th May 2020 and was attended by 23 participants from 20 countries in the Pacific region.
- Mr Marcos Angelini (Marcos.Angelini@fao.org), GSP Secretariat, for the Global Black Soil Distribution Map (GBSmap).

Moreover, Ms Luotto presented the International Network of Soil Information Institutions (INSII), which is composed by nationally mandated institutions and GSP partners developing the Global Soil Information System (GLOSIS). In this regard, Ms Luotto kindly asked NFPs to confirm that their current country - network contact for INSII is up to date and complete (database is accessible [here](#)).

- **Pillar 5**

In addition to what was reported by Ms Caon in Section 3, Mr Rob de Hayr (ASPAC facilitator), reported on the Pacific Soil Laboratory Network (ASPAC), which held its 3rd meeting in November 2021. The network currently counts 77 soil laboratories from 9 Pacific countries: Australia, Fiji, Guam, New Caledonia, New Zealand, Papua New Guinea, Samoa, Solomon Islands and Tonga. In 2021, the following activities were implemented:

- Survey sent to Pacific laboratories regarding resource and support needs. Main findings:
 - Most of the countries reported that their government provides them with technical support (equipment and consumables) or with economic support (subsidies, hiring of laboratory personnel).
 - Regional networks are the best way to identify and implement regional-specific activities
 - Main needs for improvement in the region include training of laboratory staff, adoption of more sustainable methods and harmonization of standard operating procedures
 - Priority training topics are: implementation of standard operating procedures (SOPs), equipment use and maintenance and internal quality control.
 - The majority of respondents (70%) think that GLOSOLAN/ASPAC should facilitate the communication between soil laboratories and the central government
 - 64% of respondents think that regional and national governments are somewhat aware of the importance of soil laboratories in producing good-quality soil data but GLOSOLAN/ASPAC should prepare some awareness material about it
- Revised *SPACNET Method Manual* reviewed. Otherwise, the revision of the *Soil Chemical Methods – Australasia (“Green Book”)* is stalled.

The following activities are under implementation:

- Work with stakeholders to leverage financial support (DFAT, MFAT, ACIAR, Manaaki Whenua – Landcare Research, SPC)
- FAO support is being provided to develop laboratories in Vanuatu and the Solomon Islands through GLOSOLAN related projects

Upcoming activities:

- ASPAC Executive to hold a Strategic Planning meeting in early 2022:
 - 1, 3 and 5 years work plan based on regional and member needs
 - Identify mentors and champions for developing laboratories
- Support the implementation of the Australian “National Soil Strategy”
- Regional Spectroscopy Plenary in early 2022
- 17th International Symposium on Soil and Plant Analysis (ISSPA) 2023 in Santiago, Chile

In 2021, the [Australasian Soil and Plant Analysis Council \(ASPAC\)](#) provided the following support to laboratories in the region:

1. Sponsored membership to ASPAC
 - 11 laboratories registered — Fiji 4, Samoa 2, Papua New Guinea 2, Guam, Nouvelle Calédonie, Solomon Islands
2. Inter-laboratory Proficiency Program
 - Arranged financial support for Pacific labs participation in the Inter-laboratory Proficiency Program from ACIAR
 - Only 2 labs participated in the 1st round 2022, not enough participation in 2021 to report on performance across all labs
 - Changes to biosecurity rules in some countries have made import of soil samples more costly and administratively difficult
 - Lab closures and staff unavailability due to COVID-19

3. 2020 and 2021 training schedule postponed due to COVID-19 restrictions.

6. Status of the World's Soil Resources (SWSR) report 2025

Ms Lucrezia Caon introduced participants to the Status of the World's Soil Resources (SWSR) report 2025 on behalf of Ms. Megan Balks (Editorial Board member from the Intergovernmental Technical Panel on Soil). The report is the continuation of the SWSR 2015 report to update the scientific community on soil information gathered in the 2015-2025 period, and to make such information available to policy makers and other decision makers involved in SSM. The SWRS 2025 report will focus on eight risks to soil functions that are linked to the UN Sustainable Development Goals (SDGs). These are:

- Soil erosion;
- Nutrient mismanagement;
- Salinization and sodification;
- Soil carbon change;
- Pollution;
- Soil sealing and urbanization;
- Soil biodiversity change;
- Physical degradation.

Focal Points will be asked to nominate regional experts to join the Editorial Board, which is currently composed by ITPS members. This should be done by December 2022, according to the proposed timetable. The final report will be published in 2025, during the celebrations of the World Soil Day.

7. Conclusions and way forward

The Pacific Soil Partnership agreed on meeting in June 2022 to align its structure and work plan to the decisions made at the 10th GSP Plenary Assembly. The sixth Pacific Soil Partnership meeting will take place in February 2023. The meeting will be either in person or virtual depending on the availability of financial resources, the presence of a hosting country, and the COVID-19 situation.

Annex I. Agenda



Food and Agriculture
Organization of the
United Nations



Fifth Pacific Soil Partnership Meeting

12 and 13 April 2022

from 7AM to 9AM AEDT or GMT+11 (Sydney time)

Virtual meeting

<i>12 April 2022</i>	
7:00 – 7:10 GMT+11	Welcome and Opening Remarks Mr. Ronald Vargas, GSP Secretary, FAO Mr. Peter Wilson, PSP Chair Ms. Xiangjun Yao, <u>FAO</u> Representative and Sub-Regional Coordinator for the Pacific Islands
7:10 – 7:15 GMT+11	Approval of the agenda and group picture Ms. Lucrezia Caon, GSP Secretariat
7:15 - 7:35 GMT+11	Item 1. Introduction to GSP and communication activities <ul style="list-style-type: none">• GSP focal points clarifications• National Soil Partnership webpages Ms. Isabelle Verbeke, GSP Secretariat
7:35 - 7:55 GMT+11	Item 2. GSP developments of regional interest Ms. Lucrezia Caon, GSP Secretariat
7:55 – 9:00 GMT+11	Item 3. National updates on soil <ul style="list-style-type: none">• Australia, Ms Sarah Burr• Cook Islands, Mr. William Wigmore• Fiji, Mr. Ami Sharma• Micronesia, Mr. Elias Trisden• Nauru, Ms. Marissa Derime Cook• New Zealand, Ms. Jessica Anderson - presented by Peter Wilson• Niue, Mr. Poi Okesene• Samoa, Mr. Anesone Vaai on behalf of Mr. David Hunter• Solomon Islands, Mr. Jules Damutalau
9:00 GMT+11	Closure of the day

13 April 2022

7:00 – 7:15
GMT+11

Item 4: GSP Pillars updates and way forward

- **Pillar 1.**
RECSOIL: Recarbonization of global agricultural soils
Ms. Carolina Cardoso Lisboa, GSP Secretariat, FAO
- **Pillar 2.**
 - Policy brief
Mr. Filippo Benedetti, GSP Secretariat
 - Soil Doctors programme
Ms. Silvia Pioli, GSP Secretariat, FAO
- **Pillar 4.**
 - Soil Information and Data
Ms. Isabel Luotto, GSP Secretariat, FAO
- **Pillar 5.**
 - ASPAC updates
Mr. Rob de Hayr, ASPAC Facilitator

7:15 – 7:45
GMT+11

Item 5: Collaboration with the Koronivia Joint Work on Agriculture

Mr. Siosiua Halavatau, PSP vice-Chair

7:45 -9:00
GMT+11

Item 6. Status of the World's Soil Resources report 2025

Ms. Lucrezia Caon, GSP Secretariat on behalf of Megan Balks, ITPS, Editorial Board

9:00 GMT+11

Closure of the meeting

Annex II. List of participants

Mr Ronald Vargas, FAO

Ms Lucrezia Caon, Global Soil Partnership, FAO

Mr Filippo Benedetti, Global Soil Partnership, FAO

Ms Isabelle Verbeke, Global Soil Partnership, FAO

Ms Carolina Cardoso Lisboa, Global Soil Partnership, FAO

Ms Silvia Pioli, Global Soil Partnership, FAO

Ms Isabel Luotto, Global Soil Partnership, FAO

Ms Malia Talakai, FAO

Ms Xiangjun Yao, FAO

Country	Name and Surname	Institution
Australia	Sarah Burr	Australian Government
Australia	Peter Wilson	CSIRO
Australia	Rob de Hayr	DES – ASPAC
Australia	Ravi Naidu	ITPS
Australia	Mumbi Kamau	Australian Government
Australia	Brajesh Singh	ITPS
Cook Islands	William Wigmore	Ministry of Agriculture
Fiji	Siosua Halavatau	SPC
Fiji	Ami Sharma	Ministry of Agriculture
Fiji	Viliamu Iese	Pacific Centre for Environment and Sustainable Development (PaCE-SD) The University of the South Pacific
Fiji	Rohit Lal	Ministry of Agriculture
Micronesia	Elias Trisden	COM-FSM CRE
Micronesia	Nat Tuivavalagi	College of Micronesia-FSM
Nauru	Marissa Cook	Agriculture Division Department of Commerce, Industry & Environment Government Offices
Niue	Poi Okesene	Department of Agriculture, Forestry and Fisheries
Niue	Marissa Derime Cook	Department of Commerce, Industry and Environment
Papua New Guinea	Francis Daink	Department of Agriculture and Livestock
Samoa	Tilafono David Hunter	Ministry of Agriculture and Fisheries
Samoa	Anesone Vaai	Scientific Research Organization of Samoa (SROS)

Solomon Islands	Jules Damutalau	Ministry of Agriculture and Livestock
Solomon Islands	Elda Leah Wate	MAL Deputy Secretary of Administration and Strategic Planning
Tonga	Viliami T. Manu	Ministry of Agriculture, Food and Forestry
Tonga	Vunivesi Minoneti	Ministry of Agriculture, Food and Forestry