

July 2023

E



Food and Agriculture
Organization of the
United Nations



Global Soil Partnership Plenary Assembly

Eleventh session

Hybrid, 12–14 July 2023

Report on Regional Soil Partnerships (GSPPA: XI/2023/8)

Executive summary

- An effective network of Regional Soil Partnerships (RSPs) is key to the achievement of the Global Soil Partnership (GSP)'s mandate and objectives, as specified in its terms of reference (ToRs). To date, all regions and, in many cases, subregions have established RSPs.
- The seven RSPs have implemented various activities and initiatives in line with GSP global activities and other considered priorities for each region, obtaining significant results.
- The Secretariat has continued to make use of all available funds and opportunities to support the viability of the RSPs where possible, particularly concerning the implementation of regional activities. It is noteworthy to mention the efforts made by the chairs of the RSPs to strengthen communication and cooperation among all members in each region.
- The GSP Secretariat has organized two virtual meetings with the chairs of all RSPs in 2022 and 2023. They briefed each other on respective challenges, stressed the need for adequate support in overcoming them, and discussed proposals on how to promote interregional cooperation and adapt regional structures and governance to the new GSP Action Framework 2022–2030. It was agreed that meetings would be held at regular intervals, depending on the urgency of matters to be addressed.
- The GSP Secretariat launched a survey among the GSP national focal points to gauge their perception of the relevance of the RSPs and what their roles should be in achieving the targets set out in the GSP Action Framework.

Suggested actions by the GSP Plenary Assembly

The Plenary Assembly may wish to:

- welcome the progress made by the RSPs in the implementation of activities and advocacy for sustainable soil management (SSM);
- call on all GSP partners, both Food and Agriculture Organization of the United Nations (FAO) Members and non-state stakeholders, to be fully involved in RSP activities and establish strong supportive networks of experts in each region;
- welcome the results of the survey on the future of RSPs and encourage RSP chairs to consider the findings and seek to implement the suggested actions in coordination with the GSP Secretariat;
- invite the RSP chairs to take the lead in identifying regional priorities and activities that can be implemented in the context of the new GSP Action Framework and assist the mobilization of resources;
- reiterate the need to lend strong support to the RSPs through resource mobilization and facilitation of prominent regional activities, including those of the technical networks and soil information systems; and
- encourage resource partners to continue supporting the activities and functioning of the RSPs.

8.1 Survey on the status and future of Regional Soil Partnerships

1. In response to the request of the tenth GSP Plenary Assembly in 2022, the GSP Secretariat has launched a survey among the focal points to gauge their awareness of the relevance of the RSPs and their expected roles in achieving the objectives and targets set out in the GSP Action Framework 2022–2030.
2. The survey was sent by the GSP Secretariat to all GSP focal points via email. Seventy-eight responses were received from national and alternate focal points from the various GSP regions: Africa (15 countries), Asia (10 countries), Europe (12 countries), Latin America and the Caribbean (13 countries), North Africa and the Near East (5 countries), North America (2 countries) and the Pacific (1 country). In total, the survey received responses from 58 countries. It is important to note that some countries submitted more than one response.
3. The survey provided insights on how to develop regional activities on a voluntary basis on the ground and how to address region-specific challenges related to soils. Respondents also highlighted the importance of promoting technical and scientific exchanges, organizing awareness raising activities and campaigns, exchanging experiences at regional and interregional levels on the mobilization of financial resources, formulating regional projects, and promoting collaboration between FAO regional and country offices as well as regional and national soil-related activities.
4. The main conclusions drawn from the survey are detailed below:
 - i. Usefulness of the RSPs: according to the survey results, the usefulness of the RSPs was rated by the respondents, at 7.7 out of 10. This indicates that the RSPs are considered valuable mechanisms for promoting soils at the regional level and highlights the importance of continuing to support them to achieve the objectives of the GSP.
 - ii. Adequate use of the RSPs: 61.5 percent of respondents considered that the GSP is maximizing the benefits of its RSPs, while 38.5 percent expressed that the involvement of the RSPs and all member countries in GSP activities could be improved. To improve this situation, the need for better planning and allocation of sufficient resources at local, national, and regional levels was highlighted, along with closer cooperation among countries within a region.
 - iii. Role of the RSPs in the new GSP Action Framework: according to the responses to this question, the main role of the RSPs is to coordinate and promote SSM practices at the local, national, and regional levels and to advocate for greater attention to soil in the regions. The RSPs collaborate with the GSP Secretariat, FAO regional offices and members in their respective regions, and provide guidance and leadership in the development of activities in their countries.
 - iv. Governance of the RSPs: 86 percent of respondents considered that the RSPs should maintain their own governance, including chairs, vice-chairs, secretariat, and steering committee, where applicable. It was also highlighted that the RSPs should strengthen their cooperation with FAO Regional Conferences and FAO Regional Groups. This indicates strong support for the RSPs to maintain their own autonomy in decision-making and collaboration with relevant regional bodies.
 - v. Working groups and group chairs for the different areas of action at the regional level: 82 percent of respondents are in favour of setting up specific working groups led by working groups' chairs for the different action areas relevant to the region, replacing the previous

pillar structure. This suggests that there is support for a more specific and focused approach to address soil-related issues in the context of the RSPs.

- vi. Inclusion of regional partners in decision-making at the RSP level: respondents suggested that regional partners should be involved in decision-making on short- and long-term plans, whenever necessary and in a clear, scheduled, and structured consultation process. They should also be involved in discussions and selection of objectives and priorities, the definition of strategies and the allocation of resources.
- vii. Interactions between RSPs and GSP technical networks: 99 percent of respondents are in favour of fostering support and interactions between RSPs and global technical networks, to address priorities at regional level but with the benefit of global experiences and visions.
- viii. Specific actions that should be conducted by the RSPs: according to the responses, the main activity of the RSPs should be to promote scientific exchanges on SSM among countries (87 percent of the responses). It was also considered important for RSPs to promote technical exchanges within and outside the region on issues related to regional and global objectives and areas of action, to promote collaboration with FAO regional and national offices, and to encourage and support subregional partnerships on soils, all of which received 78 percent of the responses. RSPs are also considered to have a role in keeping all countries in the region informed about what countries are doing on soils and to organize regionally-coordinated activities and awareness-raising campaigns (72 percent). The RSPs should promote exchange of experiences on financial resource mobilization for soil and regionally coordinate soil information products (e.g., maps, indicators and assessments), as well as develop regional activities on a voluntary basis, based on regional consensus and in line with the initiatives and programmes of the GSP (70 percent). As a final priority, it was suggested that the RSPs should focus on formulating regional implementation plans and securing funding for their effective implementation.

8.2 African Soil Partnership

5. The sixth plenary meeting of the African Soil Partnership (AfSP) was held on 26 and 27 April 2022. The AfSP governance was renewed, and Anne Muriuki from Kenya was elected as the new AfSP Chair. In addition, three vice-chairs were elected to represent English-speaking, French-speaking and Portuguese-speaking countries. The aim is to improve communication between the countries of the region and to support the AfSP Chair in the fulfilment of her duties. Ramagkwale Klaas Mampholo of South Africa was elected Vice-Chair for the English-speaking countries of the AfSP. Mamoudou Traore of Burkina Faso was elected Vice-Chair for the French-speaking countries of the AfSP. Antonia Dos Santos Neto of Sao Tome and Principe was elected Vice-Chair for the Portuguese-speaking countries.
6. With the support of the regional Chair and vice-chairs, the new regional facilitator in the GSP Secretariat, Filippo Benedetti, held bilateral meetings with the GSP focal points of the following countries: Cameroon, the Democratic Republic of the Congo, Djibouti, Eswatini, Gabon, Ghana, Kenya, Mauritius, Mozambique, Niger, Nigeria, the Central African Republic, Rwanda, Sao Tome and Principe, Sierra Leone and Uganda. These meetings were held between December 2022 and January 2023 with the objective of gathering information on the main threats to soils in each country, existing relationships with FAO country offices and other institutions operating in the country, as well as getting a better overview on the ongoing soil projects in each country and potential financial resources and donors. Another round of bilateral meetings will be held in the second half of 2023.

7. On 19 April 2023, a webinar entitled Soils and the Global Environment Facility (GEF) was held in English for AfSP focal points to present the GEF funding opportunities that can be accessed through the development of soils projects in the region. The same webinar will also be repeated in French and Portuguese in the second half of 2023.
8. A webinar on sustainable soil and fertilizer management in Africa, with a case study from Uganda, was organized on 24 April 2023 under the South–South Cooperation project.
9. The African Union Commission (AUC) is organizing the Africa Fertilizer and Soil Health Summit (AFSH) to be held in July 2023 to be attended by heads of State. As part of the summit, a Soil Initiative for Africa (SIA) is being developed. FAO has been involved in the early consultative phases and the AfSP is invited to contribute to ensure that the continent's agronomic and economic development plans consider the restoration of Africa's soil health and fertility as a cornerstone.
10. An official World Soil Day (WSD) celebration was organized in [Djibouti](#) in 2022, while about 30 events were held by countries in the region and featured on the [WSD events map](#).

8.3 Asian Soil Partnership

11. An extraordinary meeting of the Asian Soil Partnership (ASP) was held on 2 August 2022 to discuss the implementation of the GSP Action Framework 2022–2030 and its impact on the region. However, no final decision was made and the ASP agreed to wait for the 11th Plenary Assembly and the meetings between the chairs of the RSPs to agree on a common approach to the implementation of the GSP Action Framework. Regular ASP governance meetings were held every three months to discuss regional priorities and review progress in the implementation of the ASP work plan.
12. On 26 April 2023, the concept of soil health was discussed at a regional event organized by the Institut de Recherche pour le Développement (France) in Hanoi (Viet Nam) as part of its One Health South-East Asia (OHSEA) project. Based on the recognition that soil health is and should be part of the One Health approach, a side event on the establishment of an Asian soil health action framework was held on 27 April 2023. The framework builds on existing international, regional and national actions, tools, programmes, initiatives and projects on soil, including soil health indicators and index being developed by the GSP. Under the supervision and with the support of the FAO Regional Office for Asia and the Pacific, the system will help countries in need to include soil health into their national legislation, to avoid duplication of efforts and to make a better use of the available financial and human resources. The regular collection of harmonized data will improve national and regional databases for the implementation of field activities and large-scale projects, and for reporting on international goals and targets like those of the Sustainable Development Goals (SDGs) and the Paris Agreement.
13. The eighth ASP plenary meeting was held on 2 May 2023 to discuss regional priorities and needs, agree on the ASP governance for 2023–2025 and the ASP work plan 2023–2025. The later includes ASP support to the preparation of the regional chapter of the Status of the World's Soil Resources Report 2025. It was also aimed to discuss and agree on the implementation of activities included in the workplan of the Center of Excellence for Soil Research in Asia (CESRA). Additionally, the ASP agreed on the proposal to develop an Asian Soil Health Action Framework to guide countries in developing National Soil Health Action Frameworks. National Soil Health Action Frameworks will be at the core of the institutionalization of the soil health concept and of its inclusion in national policy strategies.

Thus, they aim to increase the political and financial support to the implementation of sustainable soil management in countries.

14. In August 2022, CESRA organized a face-to-face workshop on the establishment of CESRA's national research network for the development and implementation of research projects, including the presentation of ongoing CESRA projects with Novotel Bangkok Future Park Rangsit, in Pathum Thani province. The workshop was attended by 90 participants from government agencies, the private sector, and international organizations. By promoting knowledge transfer and discussions, the workshop succeeded in gathering ideas and proposals for the joint development of research and innovation projects that address the SDGs.
15. The first CESRA Forum was organized as a hybrid regional workshop on 19 and 20 September 2022. It was attended by 84 participants from nine countries and raised awareness of farmers' perception and knowledge of SSM. During the discussion, regional soil management issues were emphasized and the role of national and international organizations in CESRA, such as FAO, the Stockholm Environment Institute, Lancang-Mekong Cooperation, and Mekong Institute was clarified. It was agreed that international organizations can play an important role in publicizing and expanding the CESRA network, and for the development and implementation of joint soil research work. Three concept notes were presented during the workshop: (i) soil organic carbon management to mitigate climate change and enhance food security; (ii) soil and water management to combat soil erosion; and (iii) integration of sustainable land management and innovative technologies in areas affected by climate change. Project proposals are being discussed at the second CESRA Forum in May 2023 and at CESRA training workshops from April to September 2023.
16. CESRA developed an e-training course focused on soil health assessment for SSM, with emphasis on the use of simplified techniques for the analysis of soil properties at the field level, and on the practice of SSM. At present, the centre has already developed a module on simplified soil self-diagnostic techniques, but additional material on specific soil constraints to crop growth needs to be developed.
17. In the first half of 2023, CESRA's database on best practices for SSM was launched to disseminate regional experiences on the subject and promote the establishment of technical and scientific cooperation among countries in the Asian region. Initially, the database consisted of 12 best practices on salt-affected soil management from Thailand, but is now being enriched with best practices from other countries following the completion of a technical evaluation. The activity has been sponsored by FAO through a national Technical Cooperation Programme (TCP) project.
18. In line with the action plan agreed with its members, in 2023, CESRA is investing in the development of a soil information database, in the preparation and publication of additional training courses and related training materials, in the development of the Asian Soil Information System, in the promotion and implementation of the Global Soil Doctors Programme and in the writing of research projects.
19. The ASP is considering the identification of a highly competent soil testing laboratory in the region to act as a Centre of Excellence for Soil Laboratories (CESLab). CESLab will complement CESRA in soil data quality assurance, harmonization of methods, measurements and indicators for sustainable management and protection of soil resources, and training.
20. All countries in the region have contributed to the preparation of the Soil Atlas of Asia, an activity that began in March 2018 and completed in May 2023. The launch of the atlas was

announced at the 2022 World Soil Day celebrations in Rome, Italy, and Jeonju, Republic of Korea, with the publication of a [brochure](#) advancing the key facts and main findings of the atlas. Following the approval of the Atlas at the sixth editorial board meeting held on 20–23 February 2023, the Soil Atlas of Asia will be officially launched at the eleventh GSP Plenary Assembly at FAO headquarters on 12 July 2023. This will be followed by national and regional launch events.

8.4 Near East and North Africa Soil Partnership

21. An extraordinary Near East and North Africa (NENA) Soil Partnership meeting was held on 3 August 2022 to discuss the implementation of the GSP Action Framework 2022–2030 and its impact on the region.
22. The regional TCP project (TCP/RAB/3802) on *Capacity development for sustainable management of soil resources in the NENA region to achieve the Sustainable Development Goals*, initiated in October 2020, ended in April 2023 with the publication of 11 [factsheets](#) on national projects findings, ten national soil laboratory assessment reports (not available online but provided directly to the ministries of agriculture and other relevant ministries of beneficiary countries), one [regional assessment of soil laboratories' capacities and needs](#) and one regional action plan.
23. The eighth meeting of the NENA Soil Partnership was held in person in Muscat, Oman on 7–8 March 2023. The meeting was part of the event *Towards healthy soils in the Near East and North Africa region* that aimed to: a) present the status of soils in the NENA region to raise awareness on the importance of soils in the NENA region, with a focus on identifying regional priorities and needs and regional actions to take; b) discuss the findings of the regional TCP/RAB/3802 project; c) endorse the Muscat Declaration on SSM in the NENA region; d) improve partnerships and cooperation between countries and regional stakeholders; and e) explore financial resource mobilization opportunities in support of SSM. The meeting succeeded in achieving all its objectives and details can be found in the report.
24. Countries in the Near East have also contributed to the Soil Atlas of Asia (see para 16).

8.5 European Soil Partnership

25. The tenth Plenary Meeting of the European Soil Partnership (ESP) was held virtually on 3–4 May 2023. This meeting addressed the role of ESP in the context of European activities, research programmes, and regulations and how to adapt to the new GSP Action Framework 2022–2030 and other global actions relevant to soil management and governance, such as the agreements stemming from the three Rio conventions. At the meeting, the work agenda of the ESP for the period 2023–2024 was discussed and defined.
26. The ESP Chair, the European members of the Intergovernmental Technical Panel on Soils (ITPS), and the Joint Research Centre of the European Commission (JRC) are leading the preparation of the European chapter of the second edition of the Status of the World's Soil Resources report, to be published in 2025.
27. The EU Soil Strategy 2030 was published in November 2021. It foresees the development of a legislative proposal to map and restore unhealthy soils, based on a set of soil indicators. The strategy and its implementation are embedded in the [EU Green Deal](#), which involves a series of policies and indicators encompassing the Zero Pollution Action Plan, the European Climate Law, Farm2Fork Strategy and the Common Agricultural Policy. This strategy involves the

foundation of the Coalition of Action 4 Soil Health (CA4SH) as the network of networks on soil in Europe; with the GSP and the ESP being considered as important partners.

28. Several research projects have recently analysed the capacity at country and European Union level to monitor the state of soils (including the Joint European Soil Program (EJP) for agricultural soils and the HoliSoils project for forest soils focusing on carbon monitoring). The European Union has launched a European soil monitoring system, the European Soil Observatory (EUSO), located at the JRC. Regarding the establishment of a soil data infrastructure in Europe, the EJP Soils project and the European Environment Agency (EEA) are addressing how to ensure that participating countries comply with the INSPIRE Directive to enable the exchange of environmental geospatial data, as well as with the requirements set out in the GSP's Global Soil Information System (GLOSIS). With the view of developing concrete and innovative solutions to protect soils, one of the five missions for Horizon Europe (the European Union research and innovation programme) is focused on A Soil Deal for Europe. The programme foresees the establishment of 100 living laboratories and lighthouses to lead the transition towards healthy soils by 2030. Several mission targets closely connect with the objectives of the GSP: namely, to promote soil ecosystem services, to detect degraded soils and to promote SSM. In specific support of such actions, the ESP promotes the collaboration of partners in research projects to meet the knowledge needs and gaps on SSM and soil degradation monitoring and prevention.
29. The subregional [Alpine Soil Partnership](#) (AlpSP) has [translated the Voluntary Guidelines for Sustainable Soil Management](#) into [German](#) and [Slovenian](#), thus facilitating the dissemination of this important policy document among stakeholders in the subregion. In addition, experts from the AlpSP are leading the preparation of a manual for the sustainable management of mountain soils, to be published in 2023.
30. The subregional [Eurasian Soil Partnership](#) (EASP) held an extraordinary online meeting in December 2022 to review the subregion's progress in the implementation of the work plan 2019-2023 and the need for renewed governance, as no meeting had been held since 2019. It was agreed to hold an in-person meeting in 2023 to address the region's challenges, functioning and governance. The EASP organized its sixth plenary session on 23 and 24 May in Tashkent, Uzbekistan. At this meeting, the various regional and national developments in SSM were presented, the role of focal points was discussed and the need to strengthen or establish national soil partnerships to ensure better cooperation between the different institutes and ministries was discussed. Special attention was given to the different regional and national projects funded by the Global Environment Facility (GEF) and the inclusion of GSP tools and initiatives within them, as well as the new funding opportunities in the framework of the GEF-8. Finally, a new work plan was adopted in line with the GSP Action Framework for the period 2023–2026 and the new governance was defined. It was agreed that the EASP Secretariat would continue to be managed by the Eurasian Centre for Food Security.
31. The Ukrainian focal point requested the GSP secretariat to exclude Ukraine and all its experts from the activities of the subregion and to be considered only as members of the ESP. This change has been reflected on the website and implemented in the different ongoing activities in the region.
32. The subregional [Pyrenean Soil Partnership](#) (ASPIr, by its acronym in Spanish), established in May 2021, initiated its activities in three main areas: awareness-raising, the collection of soil information, and soil erosion. Two ASPIr plenary meetings were held in July and December 2022 to prepare a project proposal entitled *SOLPYR - Soils from the Pyrenees. Knowledge for*

a better protection to be submitted to an [Interreg call for proposals](#). The proposal has been jointly developed by the Association Française de l'Étude des Sols (AFAS) and the Sociedad Española de la Ciencia del Suelo (SECS). The ASPir will participate and present its activities at the [XXXIII Spanish National Soil Meeting](#) organized by the SECS and to be held in Pamplona, Navarra, from 12 to 15 September 2023.

33. The subregional [Western Balkans Soil Partnership](#) (WBSP) was established in December 2022 in response to the Green Agenda for the Western Balkans Action plan. The WBSP is governed by the WBSP steering committee (WBSP SC). The WBSP SC has a mandate to develop and decide on the organizational structure and statutes of the WBSP, the work programme thereof, as well as to harmonize WBSP activities with the activities of the European Soil Partnership, and of other similar organizations. The WBSP will also have an advisory board with five members with a function to advise WBSP SC on issues related to governance and other strategic activities. The partnership is created to preserve, protect and restore soils in the Western Balkan region. The WBSP has organized five interim meetings to define the objectives, priorities and work plan of the subregional partnership.

8.6 Latin America and the Caribbean Soil Partnership

34. The Latin American and the Caribbean Soil Partnership (ASLAC, by its acronym in Spanish) held its [tenth regional assembly](#) in hybrid format on 19–22 June 2023 in Mexico, thanks to the support of a regional TCP project of the FAO Regional Office for Latin America and the Caribbean (TCP/RLA/3910/C1 – *Posicionamiento político de la agenda de restauración y gestión de los suelos en ALC y adopción de estrategias, herramientas y buenas prácticas alineadas con el manejo sostenible del suelo*). As a result of this regional meeting, an action plan is expected to be adopted in line with the GSP's framework for action and the expectations of its members, guidelines were drawn up for positioning soils in the international and regional arenas, and possible sources of funding for the development of regional activities were identified.
35. ASLAC was particularly active in the celebration of World Soil Day 2022, with some 121 events held across the region and high outreach. The Institute of Geology of the Autonomous University of Mexico (IGI-UNAM) was the winner of the King Bhumibol Award with the project *Suelox* for its commitment to raising awareness of the importance of healthy soils (See global report on World Soil Day in GSPPA: XI/2023/10).
36. The regional TCP [Actions for climate management of agricultural ecosystems with emphasis on water and soil](#) (TCP/RLA/3805) developed a database with more than 300 sustainable soil and water management practices implemented in the region. The 44 pilot areas established in eight countries of the region (Argentina, Colombia, Costa Rica, Ecuador, Nicaragua, Paraguay, Uruguay and Venezuela) provided valuable inputs for the finalization of the *Protocol for the assessment of sustainable soil management* (see GSPPA: XI/2023/6), including the measurement of SSM indicators. The results of the project were presented at the tenth regional assembly on 20 June 2023, in Mexico.
37. A community of practice (CoP) on soils has been established in the region thanks to the close collaboration of ASLAC with the FAO Regional Office for Latin America and the Caribbean, the support of the Argentinean Association of Direct Sowing Producers (Aapresid), and Catholic Relief Services (CRS). This collaboration led to strengthening soil activities in the region. The community of practice was launched in December 2021 and has more than 650 members from over 30 countries, with the aim of promoting SSM. The CoP has developed the

following activities: a) organization of a webinar on *Biofertilizers and other available technologies to address the Fertilizer Crisis in the Latin America and Caribbean Region* held in June 2022; b) publication of a policy brief: *Alternatives for sustainable management of soil fertilization and plant nutrition*; c) organization of a cycle of dialogues on climate and resilient management of agricultural ecosystems (July to September 2022); and d) organization of a webinar on 19 April 2023 to exchange experiences of the Global Soil Doctors Programme in the region. Between 2022 and 2023, more than 30 experiences of CoP members linked to land management have been collected and are being included in a collaborative map that is under construction.

38. With the support of the FAO Regional Office for Latin America and the Caribbean, two consultancies were conducted in late 2022 focusing on the development of technical elements for the structure of the SSM practices database and the preparation of draft terms of reference, conditions and regulations for the use of the database. This database was completed with information from five countries, namely Argentina, Brazil, Chile, Ecuador and Mexico. The consultancy also reviewed the technical requirements for updating and maintaining the Latin America and Caribbean Soil Information System (SISLAC). Digital soil mapping activities continue to be strengthened, with good participation of the region in GSP activities for the preparation of global maps of salt-affected soils, soil organic carbon, soil organic carbon sequestration potential and soil nutrients (see global report in GSPPA: XI/2023/9). A regional mapping group has been consolidated, which collaborates and participates in all the actions committed to in the work plan.
39. The Latin American Soil Laboratory Network (LATSOLAN) is the laboratory network with the largest number of participants (224 registered laboratories). In the interlaboratory comparison exercise held in 2021 and 2022 (see GSPPA: XI/2023/9), LATSOLAN showed an acceptable performance for nitrogen, phosphorus, and carbon essays. However, these data need to be further analysed to identify specific issues to improve the performance of laboratories in the region. There are plans for LATSOLAN to organize a face-to-face meeting to resume interaction among its members: however, the issue of poor effective communication between focal points and national reference laboratories remains unresolved.
40. The SOILCARE project, which has a component for updating soil profile information, creating a Caribbean Soil Information System (CARSIS) and strengthening analytical capacity through the Caribbean Soil Laboratory Network (CARSOLAN) is being implemented in the English-speaking countries of the Caribbean subregion. The project also includes several SSM practices that would serve as pilots with opportunities for scaling up (See GSPPA: XI/2023/6).

8.7 North American Soil Partnership

41. The North American Soil Partnership (NSP), made up of scientists from both Canada and the United States of America, has actively contributed to the International Network on Black Soils (INBS), completing mapping of North America and drafting chapters for the GSP's black soils publication.
42. Within the United States of America, the United States Department of Agriculture (USDA) and partner research agencies, especially the USDA's Natural Resources Conservation Service (NRCS), Agricultural Research Service (ARS) and the National Institute of Food and Agriculture (NIFA), as well as the National Science Foundation support activities and collaborations, closely aligned with those of Pillar 3 of the GSP.

43. Canada's Agricultural Climate Solutions (ACS) programme includes the establishment of a Canada-wide network of regional collaborations within North America, led by farmers and including scientists and other stakeholders. These collaboration hubs, also known as "living labs" will continue to develop and share farming practices that best store carbon, reduce greenhouse gas emissions (GHG), and mitigate climate change. Since the [agroecosystem living labs concept](#) was endorsed by G20 Ministers of Agriculture in 2018, efforts continue to advance this approach regionally and globally through discussions between representatives of Agriculture and Agri-Food Canada (AAFC)'s living labs, the USDA/LTAR network, on how to build a stronger network of networks on living labs through the Living Soils for the Americas, and other initiatives. The AAFC and France's National Research institute for Agriculture, Food and the Environment (INRAE) are co-hosting the first International Forum on Agroecosystem Living Labs, from 2 to 6 October 2023 in Montreal, Canada, to mark five years since the agroecosystem living lab concept was first presented by Canada to the Ministers of Agriculture of the G20 in 2018.
44. Government agencies from the United States of America released an announcement regarding the USDA's ARS Agency on Soil Biology and Soil Health Research Team on WSD 2022 via social media including on Twitter, Facebook and the USDA website. AAFC and other Canadian organizations, including the Canadian Society of Soil Science (CSSS) and Soil Conservation Council of Canada (SCCC) also promoted WSD on a variety of platforms (Twitter, Facebook, press releases, newsletters).
45. The Secretariat for the [Global Soil Biodiversity Initiative](#) (GSBI), based at Colorado State University (United States of America), is a partner of the GEOBON Soil Observation Network ([SoilBON](#)) and the Food Web research team. Additionally, the Convention on Biological Diversity (CBD) is engaged through a GSBI Secretariat and Scientific Advisory Committee position statement on the importance of the inclusion of soil biodiversity science in the conference of the parties (COP). The GSBI and SoilBON are supporting the establishment of the Global Soil Biodiversity Observatory (GLOSOB) of the GSP, launched at COP15 of CBD in December 2022.
46. The [USDA long-term Agroecosystem Network](#) continues conducting research in different production zones to scientifically evaluate the benefits of both conventional and aspirational production systems over long periods of investigation. Included in these, efforts are focused on evaluating short- and long-term changes in soil health and the associated ecosystem services in these conventional and aspirational production systems.
47. Both countries are supporting targeted research on soil, particularly focused on GHG emissions from agriculture, soil biodiversity and the quantification of soil health through the USDA Sustainable Agriculture Research and Education (SARE) and the AAFC.
48. During 2022 and 2023, the Kellogg Soil Survey Laboratory (KSSL) actively participated in Global Soil Laboratory Network (GLOSOLAN). The KSSL provided soil spectroscopy training to FAO-GSP GLOSOLAN personnel in service of the GLOSOLAN soil spectroscopy initiative.
49. The KSSL participated in a GLOSOLAN-mediated soil sample exchange and analysis project with the Soil and Water Research Institute (SWRI) of the Islamic Republic of Iran to compare methods for measuring soil inorganic and organic carbon, towards identification of the most optimal standards for measuring both soil properties. Partial results of this study were presented at the Nebraska Society of Professional Soil Scientists–Society for Range Management joint

symposium: Healthy Soil, Healthy Range, held in April 2023. The NRCS Soil and Plant Science Division (SPSD) and KSSL collaboration with SWRI is a positive example of interregional cooperation, as well as an outstanding example of progressive, organized science. Additional presentations and papers are to follow.

50. In late 2022, the Senate of Canada initiated formal hearings on the status of soil health in Canada. These hearings are being held by the Senate Standing Committee on Agriculture and Forestry, and they have included testimony from soil scientists from many universities, government and industry agencies.

8.8 Pacific Soil Partnership

51. The sixth plenary meeting of the Pacific Soil Partnership (PSP) will be held virtually in the second half of 2023 to: a) update the national focal points on GSP activities of regional interest; b) inform each other on national activities on soil; and c) prioritize activities for implementation in the region in 2023-2024.
52. A call was launched to identify Pacific countries with an interest in implementing the Global Soil Doctors Programme. Australia expressed its interest in supporting the programme implementation in the Pacific islands of Fiji and Tonga. Once a promoter is identified in each country, selected experts will be trained on the use of the programme material to train farmers to become Soil Doctors.
53. Around 80 soil laboratories from nine countries in the region have joined GLOSOLAN and the Pacific Soil Laboratory Network (ASPAC) since its establishment in 2019. Four soil laboratories from the Pacific countries took part in the global proficiency test organized by GLOSOLAN in 2022, to assess the quality of the laboratories' analytical performance, especially in determining carbon content in soils.
54. Australia is implementing the Australia's National Soil Strategy to inform land management and improve soil conditions, agricultural productivity, and environmental outcomes. In this regard, the country is allocating AUD 54.4 million over two years to support farmers and land managers to access low-cost soil sampling and certified testing in exchange for sharing their data. This new programme will increase the frequency and quality of soil testing by farmers and land managers and provide access to this data through a secure national platform: the Australian National Soil Information System (ANSIS). The quality, quantity and distribution of information across Australia is under review by the Department of Agriculture, Water and the Environment (DAWE). Private and public entities will be paid to provide access to existing soil data to be incorporated onto the ANSIS.
55. The Soil Science Challenge Grants Program and the National Soil Package will provide support (1) to researchers to address fundamental gaps in soil science and improve understanding of how to better manage Australia's soil resources, (2) to develop a new accreditation in soil science, and (3) for projects that promote and support the adoption of best practice in sustainable land management. A new National Land Management Classification System has been established.
56. The Australian Government is also developing a five-year National Soil Action Plan to set out how programs and policies will be delivered by all Australian ministries and governmental institutions dealing with soils. The Department of Industry, Science, Energy and Resources and the Commonwealth Scientific and Industrial Research Organisation (CSIRO) are undertaking the re-sampling of a national wide set of soil carbon sites to assess change since

the original sampling in 2011, and to provide baseline and research data for the calibration and implementation of new soil carbon measurement and sequestration projects.

57. The Pacific Soils Portal has been open to the public for over two years, delivering the best available legacy soils data and knowledge for Fiji, Kiribati, Tonga and Tuvalu. Usage levels have been increasing to about 100 users per month potentially including a significant fraction of academic/student and expatriate users from the Pacific. Although modest by international standards, over 1 200 users undertaking nearly 3 000 sessions averaging eight minutes in duration suggests a high level of engagement. Recent developments include adding another 84 legacy soil profile data points for Fiji: 75 from Nadi Forest soil reports and nine from the Seaqaqa Research Station of the Department of Scientific and Industrial Research (DSIR) soil report. At the same time the soil reports were improved to better organize the data and improve readability. A Phase II proposal has been submitted to the Australian Centre for International Agricultural Research (ACIAR) via CSIRO to load Vanuatu soils data to the portal, introduce raster digital soil mapping products and add more contemporary proximally sensed soil profile data. Discussions have also been held with the New Zealand Ministry of Foreign Affairs and Trade (MFAT) regarding the expansion of geographic coverage to include the Cook Islands and Niue for which legacy data is available and, which would require minimal harmonization to add to the Pacific Soils Portal.
58. A very large soil mapping programme is underway and carried out by Manaaki Whenua Landcare Research (MWLR), New Zealand, with 23 regional surveys. S-map now covers 37.1 percent of New Zealand, including 67.7 percent of “multiple use land”. Technical advice was also provided to the World Soil Data Centre regarding the development of GLOSI and contributions were made to various soil ontology initiatives. Data Privacy and indigenous data sovereignty – soil data ownership, soil data privacy and Māori data sovereignty continue to be of national interest and the resulting policies may affect what soil data can be released for use nationally and internationally. There has been a major refresh of the [MWLR Soil Portal](#) and work continues on the new version of New Zealand Soil Description Handbook and improved farm scale soil mapping protocols. MWLR is part of the international ring test of soil spectroscopy ([Soil.Spectroscopy 4 Global Good](#)), both NIR and MIR, led by the Woodwell Climate Research Centre. This initiative is aligned with the GSP’s activities and the GLOSOLAN spectroscopy working group.
59. In Tonga, with CSIRO and the Pacific Community (SPC), 12 soil management training events were conducted including the use of the Palintest kit and had over 200 participants. These were the foundations for starting farmer field schools and the GSP’s Soil Doctor Programme. Staff are now engaged in analysis of the ash from the volcanic eruption and the subsequent tsunami – in Tonga. The CSIRO-led ACIAR Pacific Soils Project has been working in Fiji, Kiribati, Samoa, Tonga and Tuvalu, and implementing training associated with the Soil Doctor Programme.