ASP-IV/18/Report

Food and Agriculture Organization of the United Nations

Report of the Fourth

Asian Soil Partnership Workshop

Beijing, China, 25-26 May 2018

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FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Rome, 2018

Contents

1. Opening of the workshop

The fourth workshop of the Asian Soil Partnership (ASP) was held in Beijing, China from 25 to 26th of May 2018. The workshop was jointly organized by the Beijing Municipal Agriculture Bureau, the Beijing Soil Fertilizer Extension Service Station, and the Food and Agriculture Organization of the United Nations (FAO). The meeting was opened by Mr. Zhao Yongzhi (Director of Beijing Soil Fertilizer Extension Service Station), Mr. Rapibhat Chandarasrivongs (functional chair of the ASP), and Mr. Eduardo Mansur (Director of the Land and Water Division at FAO).

During the opening, the work done by member countries since the endorsement of the Asian Soil Partnership (ASP) implementation plan in December 2016 was recalled:

- The development of national soil organic carbon maps, which contributed to the global soil organic carbon map;
- The participation of national laboratories in the South-East Asia Laboratory Network (SEALNET), towards the harmonization of regional soil laboratory analysis;
- The participation of countries in writing the first ever Soil Atlas of Asia, a project financed by the Joint Research Centre of the European Commission;
- The development of the Soil Doctors Global programme, which attracted the interest of many countries in the region;
- The implementation of the Voluntary Guidelines for Sustainable Soil Management, which is a strongly country-driven activity.

The work done by Thailand as ASP Chair was as well acknowledged in the framework of reminding participants on the objectives of their fourth meeting:

1. To review the activities performed by the ASP from December 2016 (endorsement of the ASP implementation plan) to May 2018;
2. To decide on activities for immediate execution for the period 2018-2019; and
3. To elect the ASP Chair and the regional Chairs for Pillars 1, 2, 3 and 5 for the period 2018-2020 (3 years mandate)

The workshop agenda was approved with a note on discussing the establishment of the World Soil Day Award under any other business.

2. GSP Developments of regional interest

In order to facilitate the identification of those activities to implement in 2018-2019, Ms. Caon (GSP Secretary) gave an introductory presentation on the GSP activities of regional interest.

Under Pillar 1, Ms. Caon reminded participants on the importance to implement the revised World Soil Charter and the Voluntary Guidelines for Sustainable Soil Management as well as making use of other GSP documents like the global implementation plan for Pillar 1 and the Code of Conduct on Sustainable Fertilizer Management, which will be presented to the 6th GSP Plenary Assembly for endorsement on 11 June 2018. Foreseen GSP activities for this Pillar also include the preparation of technical manuals on regional soil organic carbon management, soil salinity management, soil restoration, soil contamination and associated training activities. In this context, countries were invited to participate in the writing of

these manuals when needed and in the International Network of Black Soils (INBS) when applicable. A final note was made on the "*Economic effects of sustainable soil management*" document, which is currently being finalized by the ITPS and it will be soon made available for countries to use.

Under Pillar 2, Ms. Caon reminded countries on the topic of the World Soil Day 2018, "*Be the solution to soil pollution*", and on the Glinka World Soil Prize, which participants are all invited to compete for. Following the suggestion of Thailand, the possibility to launch a World Soil Day Award to recognize efforts in celebrating the World Soil Day was noted. Participants were reminded on the writing of the Soil Atlas of Asia, which is an inter-regional work involving the ASP, the Eurasian Soil Partnership and the Near East and North Africa Soil Partnership. Foreseen GSP activities on Pillar 2 also include the development of awareness raising and educational material in the form of posters, books and manuals, and the implementation of the Global Soil Doctors programme. Ultimately, global activities will focus on implementing decisions in the outcome document of the Global Symposium on Soil Pollution (GSOP18). Therefore, efforts will be put in raising awareness on soil pollution threat to human health and the environment, and in implementing existing guidelines and regulations to prevent and minimize soil pollution.

Under Pillar 3, Ms. Caon reminded participants that the global implementation plan for Pillar 3 will be presented for endorsement to the 6th GSP Plenary Assembly on 11 June 2018. As a consequence, the GSP Secretariat will invest in implementing the plan. Ms. Caon also reminded participants on the decision made at the Third ASP meeting to establish a Center of Excellence for Soil Research in Asia (CESRA). Thereafter, she suggested the ASP to work towards the launch of CESRA.

Under Pillar 4, Ms. Caon acknowledged the work done by ASP countries in producing their national soil organic carbon (SOC) maps and ultimately in contributing to the global soil organic carbon map (GSOCmap). Ms. Caon reminded participants that the GSP is now working on improving the GSOCmap by assisting countries in improving their national maps and by further building capacity on digital soil mapping. A remark was made on the process by which this map was prepared and by the need for ASP countries to join and/or be more active in GSP-established international networks like the International Network of Soil Information Institutions (INSII), which was the one responsible for producing the guidelines on which the GSOCmap was developed. Ms. Caon also mentioned the establishment of the Global Soil Information System (GLOSIS), including SoilSTAT, as one of the core GSP activities to implement in 2018-2019. In this context, the possibility to establish the Asian Soil Information System (ASIS) under CESRA was noted. In conclusion, global activities on Pillar 4 will link to the decisions in the outcome document of the Global Symposium on Soil Pollution (GSOP18). Thereafter, the GSP Secretariat will invest in capacity building (from soil pollution assessment to site remediation) and in implementing a global assessment of the status of soil pollution using a country-driven process according to the UNEA3 declaration.

Under Pillar 5, the establishment of the Global Soil Laboratory Network (GLOSOLAN) and the Regional Soil Laboratory Network (RESOLAN) for Asia, SEALNET, was recalled. Ms. Caon invited countries to support these networks, which could eventually be linked to CESRA to feed ASIS.

3. ASP work from December 2016 to May 2018

In order to base the selection of activities to implement in 2018-2019 on countries' needs and priorities, national focal points attending the meeting were asked to present the progresses made by their country on the implementation of the ASP implementation plan. A summary of these presentations is herewith reported.

Country: **Bangladesh** (ppt)[CL(1]

	Main activities implemented in the period Dec. 2016 – May 2018	**Priorities in 2018-2019**
Pillar 1	- Conservation of degradation of hilly soils (structural approach) - Use of balanced doses of fertilizers for crop production (policy approach) - Adoptability of suitable crops for saline soil and salinity management (agronomic approach)	- Continuation of research activities on soil conservation in hilly areas, adoptability of suitable crops for saline soil and salinity management, acidic soil management etc. - Updating fertilizer recommendation guide 2018 - Capacity build up for Land Degradation Network target programme LADA, WOCAT - Updating data on Online Fertilizer Recommendation System (OFRS)
Pillar 2	- World Soil Day celebration on December 2016 and December 2017 - Farmers training on balance doses of fertilizers uses, soil conservation, saline and acid soils management etc. - Awareness through MSTL (Mobile Soil Testing Laboratory) - Workshops, seminars, fairs etc. on soil management - Demonstrations on soil management - National Agricultural Policy (NAP), 2013 of Bangladesh already in place - National Agricultural Extension Policy (NAEP) of Bangladesh already in place	- World Soil Day 2018 will be celebrated. - Continuation of awareness activities through MSTL, workshops, seminars, fairs etc. - Formulation of National Agricultural Policy (NAP) 2018 of Bangladesh. - Formulation of National Agricultural Extension Policy (NAEP) 2018 of Bangladesh. - Information on management of disaster related problems with dissemination
Pillar 3	- Release of stress tolerant crop varieties and adoptability research in saline areas - Conservation practices under different cropping system in hilly areas including SALT - Conservation agriculture practices at farmers' level - Impact of brick fields on soil and crop production	- Use of soil test result based balanced fertilizer recommendation (OFRS) - Continue crop adoptability research in saline areas - Continue conservation practices under different cropping system in hilly areas

	- Nutrient management for diversified cropping in Bangladesh (NUMAN)	
Pillar 4	- Updating information of Upazila Nirdeshika - Analyzing soil, water, plant and fertilizer samples with interpretation - Updating Land/Soil degradation information - Participated as editorial member to prepare Soil Atlas of Asia - Preparation of crop suitability maps for different crops - Progress in preparation of National Fertilizer Recommendation Guide,2018	- Updating information of Upazila Nirdeshika through semi-detail soil survey - Analyzing soil, water, plant and fertilizer samples and quantity - Updating Land/Soil degradation information - Crop and land zoning
Pillar 5	- Attended at training program on Soil Organic Carbon Maps preparation at Thailand - Participation in the 1st Laboratory Managers Meeting held in Bogor, Indonesia for harmonization of analytical methodologies (SEALNET) - Soil data harmonization at regional, national and international levels	- Correlation and classification of Bangladesh soils - World Reference Based Classification (WRBC) will be adopted in Bangladesh

Country: **China** (oral reporting)

Soil use is very intensive in China, where there is the tendency to practice monocropping and overuse fertilizers. Under these conditions, two-thirds of China's agricultural land is already degraded. Linking to the importance of promoting the sustainable use of fertilizers and practice crop rotation, Mr. Jin Ke informed the partnership that China has developed comprehensive guidelines on how to sample the soil and apply fertilizers. Additionally, the law on crop rotation got stricter and farmers are receiving subsidies to practice conservation agriculture. Overall, China is getting good results on soil conservation and is ready to share their experience with other countries also through the initiation of South-South cooperation projects.

Mr. Ke concluded by recalling that China initiated the International Network on Black Soils, established the Soil Protection Ministry and endorsed soil fertilizer's regulations for selling fertilizers. However, they should increase efforts to celebrate the World Soil Day.

Country: **Indonesia** (ppt)

	Main activities implemented in the period Dec. 2016 – May 2018	**Priorities in 2018-2019**

Pillar 1	- Developing SIMANTAP as crop yield monitoring using RS (www.simantap.litbang.pertanian.go.id) - Establishing Agricultural Minister Regulation No 47/2016 as national guidelines on fertilizer application - Developing TANAM as agro-advisory service (android)	- Develop soil spectra based fertilizer recommendation system - Write manuals and guidelines to addres specific soil treats, advice on SSNM and restore dedraded land - Compilation of a database with the existing indigenous soil water conservation techniques
Pillar 2	- Formulating policy brief for agricultural minister - Promoting conservation agriculture to law makers thru field visit - Celebrating world soil day since 2016	- Develop soil legal frameworks to strengthen soil governance - Organize training program for school teachers - Celebrate World Soil Day 2018 and 2019
Pillar 3	NA	- Promote multi-stakeholders discussions aimed at sharing knowledge - Develop and compile a database with all R&D initiatives and outputs on soil and land - Adapt and translate the scientific message to inform all stakeholders and the larger public
Pillar 4	- Developing SISULTAN, land resource information system (www.sisultan.litbang.pertanian.go.id) - Mapping Indonesian soil organic carbon - Semi detailed soil mapping for 386 regencies in 2017	- Develop soilSTAT - Sending soil scientist to the University of Sydney for proximinal soil sensing training - Develop Soil Atlas of Asia
Pillar 5	- Hosting SEALNET workshop - Launching national standard on semidetail Soil Survey and mapping at scale 1:50.000 and land suitability evaluation and mapping - Publishing land suitability map for 13 crops for each regency 386 regecies	- Develop sensor technology to monitor nutrients in soil - Finalize and launch national standard for peatland mapping at scale of 1:50.000 - Workshop of ISO Guide 34 and ISO Guide 35

Country: **Japan** (ppt)

	Main activities implemented in the period Dec. 2016 – May 2018	**Priorities in 2018-2019**
Pillar 1	No specific commitment for Pillar 1	- Utilization of soil information for promoting 'Tuchi-Dukuri' and Environmental Conservation Agriculture Subsidy
Pillar 2	No specific commitment for Pillar 2	
Pillar 3	- Expanding research network among national and local research institutes.	- Advancing national research network

	- National SOCmap preparation. - Heavy metal and other hazardous materials contamination researches.	
Pillar 4	- Developing national soil inventory	- Correlation table and map of WRB2014
Pillar 5	- Preparing National SCOmap - Reviewing laboratory standard (SEALNET)	- Upgrading mobile application of soil inventory

Country: **Lao PDR** (ppt)

	Main activities implemented in the period Dec. 2016 – May 2018	**Priorities in 2018-2019**
Pillar 1	- Application of soil erosion control techniques in highlands - Use of biochar - organic fertilizer production in farmer groups	NA
Pillar 2	- Celebration of the World Soil Day - Organization of the second Lao initiative on conservation agriculture and agroecology meeting (LICA) - Organization of the Lao Uplands Conference	NA
Pillar 3	NA	NA
Pillar 4	NA	NA
Pillar 5	- Join SEALNET	NA

Country: **Mongolia** (ppt)

	Main activities implemented in the period Dec. 2016 – May 2018	**Priorities in 2018-2019**
Pillar 1	- Green Development Policy (GDP) of Mongolia - National action program on climate change - Approved the Law on Conservation of Soil and Pasture on 02.12.2016 - Renewed and approved the Law on Agriculture on 29.01.2016	- Development of a Green Development Policy in the implementation of SSM - To create National program for Sustainable soil management in Mongolia - Development of capacity building strategy for SSM promotion - Extend irrigated agriculture through the use f drought resistant crops and water saving, soil protection technologies

Pillar 2	- World soil day celebration on 2015 – 2017 in Mongolia - Mongolian soil protection day celebrated (first Saturday of May for every year) on 04.05. 2018. Under this event to *organized the open discussion of Soil protection of pasture and arable land on 03.05.2018* - To celebrated Capital city's soil protection day on 27 May 2018 and will to celebrate for every year.	- To organize the workshop focused on challenges and priorities for sustainable soil management. - To educate citizen and community participation in training the role of soil to mitigate the climate change and global warming. - Publish books, guidelines, handouts and other materials about climate change mitigation and adaptation
Pillar 3	- Create first SOC stock map on 2017 - Conducted the soil organic carbon conversion and climate change studies on 2015-2017 - Implementation activities of first phase of Green development policy on 2014-2021. - Academic communities and research institutions were among the key partners in the development of Sustainable soil management program in Mongolia	- To ensure that the international assessments of soil resources on the best available data - Preparation of project proposal in identifying indicators and increasing the economic cost of land degradation and climate change - To establish the soil research center in Mongolia
Pillar 4	- Participated GSOC map training in Bangkok , Thailand | 24 - 29 Apr 2017 - Participated GSOC map training in ISRIC, Wageningen, the Netherlands | 6 - 23 Jun 2017 - Collected national SOM data - Created SOC stock map of Mongolia on 09.30, 2017. - Conducted of the national soil analysis on wheat growing areas and provided into farmers Soil fertility and Fertilizer Guide book	- Develop the National soil sustainable management for Wheat Areas in c*entral agricultural regions of Mongolia* - Promote efficient, effective and rational use of land resources in p*asture and crop land* - Reduce environmental degradation while intensifying reclamation activities and environmental protection in *21 provinces, 3 city's*
Pillar 5	- Participated in the 1st Laboratory Managers Meeting held in Bogor, Indonesia on November 2017 with the following output - Participated to RESOLAN/ SEALNET Proficiency Program - Received ring test SEALNET 2018 on 26.04.2018. - began testing and introducing new soil testing methods for available P and SOC - Organized first workshop on "Harmonisation of soil analysis methodologies in Mongolia" on 10-11. 2018	- Communication and experience exchange with laboratory networks CLOSOLAN/SEALNET - The focus on laboratory quality will have to include the development of QA protocols and conducting ring tests - The use of harmonized analytical methods, an internal quality control program within each laboratory in Mongolia - Implementation an external QC program with inter laboratory comparisons coordinated by the monitoring program organizers SEALNET - Consultation & Capacity Building of soil laboratory staffs

Country: **Myanmar** (ppt)

	Main activities implemented in the period Dec. 2016 – May 2018	**Priorities in 2018-2019**
Pillar 1	- We are trying to develop soil fertility map and we had collected more than 400 samples from 11 regions across the country and analyzed. - Production guidelines for rice-rice cropping and rice-pulses cropping for the Bago and Ayeyarwaddy Regions were issued - Soil fertility and fertilizer management strategy for Myanmar was issued in March 2018 which was developed collaboratively with MOALI, IFDC, USAID and ACIAR	- Soil analysis data across the country will be used for soil fertility map. - It is needed financial and technical assistant for GIS Mapping with existing thousands of analytical data. - It is still needed to get the training on the GIS Mapping and IT Technology to the staff of Soil Science Research Section.
Pillar 2	- Workshop on fertilizer recommendation in Myanmar was jointly organised by DAR and Wageningen University and Research including SoilCares Co. Ltd. From Netherland was held in DAR on 7-8 Febryary, 2017. - Myanmar Soil Fertility and Fertilizer Management Conferences was jointly organized by DAR, IFDC, USAID, ACIAR and held in DAR on 18-19 October 2017 and proceedings was published - On 7-8 May 2018, more than 2300 farmers who grow maize and sugarcane in northern part of Shan states met to discuss about soil fertility and fertilizer management strategy to get sustainable management organized by local parliament, - Land Use Policy Strategy was issued in 2016 and fetilizer law was amended in 2015. - Support the nutrient uptake data for the development of ASEAN Guidelines on Soil and Nutrient Management.	- Adoption of SSM system for Myanmar - Fertilizer Research Program in line with sustainability and soil health - Control of fertilizer quality along with the QC/QA of SPAL - Fine-tune on soil analysis –based fertilizer recommendation
Pillar 3	- Launching Regional Research Center to have better collaboration with farmers, extension workers, students from Universities and researchers is going to be started in 2018. Pilot project was established in Zaloke Regional Research Center, Sagaing Region in this year and further development in 4 research stations will be done.	- Activities with Zaloke RRC_ training related to soil fertility and fertilizer management to the staff of DAR and DOA in Sagaing Region and training to the farmers

	- Staff from Soil Lab of Horticultural Crops and Perennial Crops Department under DOA (Department of Agriculture_Extension) attended on-job training in Soil Science Research Section for 3 months in 2017 October to December. - Applying of ISO management certificate 9001:2015	
Pillar 4	- SOC Map created by GSP through ASP in 2017. http://54.229.242.119/apps/GSOCmap.html	- Harmonize soil testing methods among the laboratories - Searching heavy metal analysis method - Validation of lab-test for heavy metal analysis - Improvement of laboratory Infrastructure
Pillar 5	- Participation in the 1st Laboratory manager meeting of SEALNET held on 20 – 24 Nov, 2017 held in Bogor, Indonesia through ASP program. - Participation in the ring test soil analysis for QC/QA.	- Standard Operation Procedures will be developed

Country: **Nepal** (ppt)

	Main activities implemented in the period Dec. 2016 – May 2018	**Priorities in 2018-2019**
Pillar 1	- SSM issues identified through working group meeting (major issues – soil acidity, arsenic toxicity, organic carbon depletion, potassium depletion, soil erosion) - Advocacy – Revision fertilizer controlling order, agro-advisory services started, national standards and directives on promoting organic fertilizer developed - Monitoring – Soil testing kit, mobile soil testing van (soil management directorate)	- Promote SSM practices through effective monitoring and joint projects - Continuation advocacy - Capacity development to strengthen SSM approaches
Pillar 2	- Awareness raising – youth societies, graduate and post-graduate students competitive programs by Nepalese society of soil science - Science and policy interface dialogues – interaction program, workshops during global soil week celebration. - Soil education – soil syllabus from grade 9 to post graduate well developed and revised	- More soil events and youth campaigning - Advocacy and policy support to key political stakeholder emphasized - Strengthening soil education (formal and informal)
Pillar 3	- Soil working group meeting, national agricultural technical working group meeting were conducted	- Mega-project on soil is at planning stage

	- More than 100 land degradation hotspot identified and seven of them are prioritized in each provinces - Research work – Soil science division, NARC (12 projects are running)	- Many collaborative projects will be developed along with universities and allied stakeholders
Pillar 4	- Updating national soil database – NLUP (1:10,000 scale) - Nepal SOC map prepared - 20 soil scientist trained to the basic use of GIS (at SSD, NARC) - 1 national expert trained on digital soil mapping (at Thailand)	- Continuation of updating soil database (soil classification, SOC map) - Initiation of developing national soil information system (NSoIS) - Capacity enhancement for geo-spatial data analysis continued and expanded
Pillar 5	- Soil management directorate – national soil reference laboratory in SEALNET - National SOP for routine analysis developed. - Participated in the SEALNET meeting held at Bogor, Indonesia - Attended kick-off meeting of the editorial board of Asia soil Atlas at The Phillippines	- Ring test result is about to complete - QA/QC of national laboratory assured in accordance with external and internal controlling mechanisms - National protocol on quality control of soil testing, fertilizer and manure quality standard will be developed

Country: **Philippines** (ppt)

	Main activities implemented in the period Dec. 2016 – May 2018	**Priorities in 2018-2019**
Pillar 1	- Identification, documentation and packaging of appropriate SSM practice - Identification of priority areas for soil fertility and development of guidelines and tools for decision making support for fertilizer application at the field level - Barriers preventing Sustainable Soil Management (SSM) application are assessed and policy and technical solutions are recommended through the "Sustainable Land Management Adoption and Implementation Constraints" initiated by the economy and Environment Program for Southeast Asia (EEPSEA) and the Economics of Land Degradation Initiative. Policies related to land use were done through the Philippine National Action Plan to Combat Desertification, Land Degradation and Drought 2015-2025	- Development of a National Monitoring System in the implementation of SSM: *This can be anchored on the LDN Target Programs and Projects that requires a dedicated National Monitoring System to assess the achievement of the LDN targets (in support to SDG Target 15.3) until 2030* - Development of a capacity building strategy SSM promotion: *It is proposed that at capacity building capacity strategy at the regional level be pursued through existing Regional Network particularly the Asia Soil Conservation Network for the Humid Tropics (ASOCON). A possible entry point to Soil Management Center that could be linked to WOCAT.*

Pillar 2	- The awareness of key political stakeholders on soil functions and soil-related ecosystem services increased - Society sensitized on the role of soils for life on Earth - Scientific and technical cooperation promoted and strengthened	- Policy development supported: *organize advocacy events for decision makers and support staff particularly in the legislative branch of the governmentl; promote and advocate for the implementation of the Revised World Soil Charter and the Voluntary Guidelines for Sustainable Soil Management* - Education on soil promoted: *"Soil for youth" programme to be run during the summer holidays; Essay competition/ soil photo contests and other interactive events on soils*
Pillar 3	- Encourage inter and trans disciplinary research and development - Identify global, regional and local emerging priorities - Promote active collaboration between universities, research institutions, extension services, end-user communities and donor agencies**.**	- Provide evidence in the Return of Investment (ROI) in Soil R&D - Encourage inter and trans disciplinary research and development
Pillar 4	- Conduct of the National Soil Sampling and Testing (NSST) on rice growing areas of the Philippines and translate them into Soil Fertility and Fertilizer Guide Maps. *Phase I (2016): 47 Provinces* *Phase II (2017): 35 Provinces* - Updating of the Network of Protected Areas for Agriculture and Agro-Industrial Development (NPAAAD) embedded under SAFDZ (*2018 Target: 21 provinces)* - Land Resources Evaluation and Suitability Assessment of Strategic Production Areas for Cacao and Coffee *(2016-2018: 29 Provinces)*	- NSST for Corn Areas: *10 provinces* - Soil Characterization of Sugarcane Mill Districts of the Philippines: *20 Sugarcane Mill Districts* - Conduct of semi-detailed soil classification and sustainability assessment of Surigao Del Norte province: *20 municipalities, 1 City* - Continuation of the Land Resources Evaluation and Suitability Assessment of Strategic Prod'n areas of Major Commodities (cacao, coffee, rubber, abaca and cassava): *57 provinces*
Pillar 5	- Participated in ASPAC/SEALNET Proficiency Program - Participated in the 1st Laboratory Managers Meeting held in Bogor, Indonesia on November 2017 - Enhanced Capacities of BSWM as the National Reference Laboratory for the FAO-ASP - Funding the implementation of P.D. 1435 which mandates the leadership role of BSWM to supervise, regulate and control the	- Start Implementation of Tier 2 Programs - Implementation of RA 10657 (Chemistry Law) - Establishment of Laboratory Facilities and Expansion of Services at BSWM Research Centers in Bulacan and Bukidnon - Additional parameters accredited in micronutrients and bases and inclusion of biological test in soil and water. - Draft of IRR and guidelines for implementation of PD 1435

	establishment and operation of soils laboratories in the Philippines	Expectations 2019: ▪ Establishment of Laboratory Facilities and Expansion of Services at BSWM Research Center in Tanay ▪ IRR developed for PD 1435 ▪ All RSL lab capacitated and stakeholders consulted ▪ Expansion of Services to include Heavy Metal Analysis in soil, water and fertilizer. 2020 expectations: ▪ All soil & water parameters accredited to ISO/IEC 17025:2005 ▪ BSWM Research Centers and RSLs ▪ capacitated for ISO/IEC 17025:2005 ▪ Transition for the adoption of ISO/IEC:17025:2017

Country: **Republic of Korea** (ppt)

	Main activities implemented in the period Dec. 2016 – May 2018	**Priorities in 2018-2019**
Pillar 1	- Development of tools for fertilizer application at the field level: ▪ *Addition of Fertilizer Recommended crops ('16) 121 → ('17) 133 crops* ▪ *Establishment of water-soluble nutrient range for nutritional diagnosis of crops: 10 crops including cucumber*	- Soil monitoring for nutrients changes under agricultural lands
Pillar 2	- Increased awareness of key political stakeholders on soil functions and soil-related ecosystem services: ▪ *A long-term environmental improvement program in which governments, local governments and farmers work together to improve the environment, such as soil, water, air, landscape, and ecology.* ▪ *Supporting policy for sustainable agriculture by estimating soil function and ecosystem service*	- Supporting Policy Program for environmental protection ▪ *Making the implementation process on the environmental conservation and the indicator selection for Sustainable Soil Management. E.g. Mitigating nutrient balance, optimum application of fertilizer and pertiside, eroson reduction etc.* - *Education: Soil contest, "Soil survey" for students, "Soil diagnosis" for experts and farmer*

Pillar 3	- Collaboration between universities, research institutions, extension services, end-user communities and donor agencies: ▪ *Development of water-saving irrigation technology for agricultural crops (Climatic change: water balance estimation, drought warning system)* ▪ *Development of soil nutrient management and estimation of carbon stocks (Estabilishing database as national scales)* - *Utilizing of orgnic resource and estimation of ecosystem service for agricultural value (1. Organic fertilizer: composting technology; 2. Set up for ecosystem service: providing, regulating, surpporting, culture)*	- Estimation for water balance and soil erosion ▪ *Integrated cultivation site, information service related to drought* ▪ *Risk assessment of soil erosion by cover crops and rainfall intensity* - Nutrient balance management ▪ *Evaluation in nutrient efficiency with crops* ▪ *Selection of best soil management for nutrient balance by modeling* - Soil information production by digital soil mapping ▪ *Updating soil maps of carbon stock, soil fertility and quality*
Pillar 4	- Estimation of carbon stock digital soil mapping using legacy data	- Standardization of database under soil profile for apply digital soil mapping (*soil contents: soil texture, bulk density, pH, N, P, K, Ca, Mg, etc.)* - Mapping soil quality and water balance as national scale - Development of carbon stock coefficient for calculating carbon stock under IPPC guideline Tier 2 levels)
Pillar 5	- Participation to GSP INSII meeting/ SEALNET Proficiency Program ▪ Sharing soil infromation to FAO-GSP by standization of legacy data (e.g. soil texture, bulk density, SOC of 390 soil series) ▪ Participating the NAS for the SEALNET program - Estabilishing database of legacy data ▪ soil survey: 390 of soil series ▪ soil test analysis(1980-present): pH, SOC, Av.P, Ex.cation.	- **Set up the methods of soil analysis for SEALNET Proficiency Program** - **Setting database related to environmental factors for digital soil mapping** ▪ DEM: elevation, Slope, wetness Index, topographic openness, hill shading ▪ NDVI: Landsat 8 band ▪ parent materials: rock types

Country: **Sri Lanka** (ppt)

	Main activities implemented in the period Dec. 2016 – May 2018	**Priorities in 2018-2019**
Pillar 1	- Developed Guidelines for Location Specific Fertilizer Recommendation based on regional level fertility status	- Continuing GN division level paddy soil testing program for of development of Site Specific Fertilizer Recommendation.

	evaluation to optimize chemical fertilizer use in paddy cultivation ▪ *Agrarian Service Division (559) level fertilizer (NPK) recommendations were developed and promotion program through extension service established* - Programs for Sustainable Land Management to combat land degradation & Climate Change impacts ▪ Developed Soil Conservation Manual and published in local languages to promote sustainable land management practices ▪ Most of the key institutions promote SLM use this manual as the guide	▪ Soil testing program targets to cover whole country over 15000 Grama Niladari (GN) Divisions ▪ Sampling scheme has been prepared considering agro-ecology and the paddy extent in each GN divisions ▪ Laboratory Analytical capacity of regional research stations has been strengthened - Continuing the Programs for Sustainable Land Management to combat land degradation ▪ Started developed Soil Conservation Handbook to promote sustainable land management practices
Pillar 2	- Policy development supported ▪ *Initiated Revising Soil Conservation Act* ▪ *Island wide special agriculture promotion campaign for promote water saving production of OFC and rice* - Increased awareness of key political stakeholders on soil functions and soil-related ecosystem services: ▪ *Established "Soil Conservation Demonstration Site" and equipped with field established SLM models* ▪ *Opened "Soil Conservation Knowledge Centre" targeting all types of stake holders* - Sensitized the society on the role of soils for life on Earth ▪ *World Soil Day Celebration* ▪ *Global Water Day Celebration*	- Policy development supported ▪ *Proposed establishment of legal unit for strengthen legal actions of Soil Conservation Act* ▪ *Promote collaboration of institutions for spatial data and information sharing through common spatial data infrastructure/policy* ▪ *Enhance use of e-Agriculture services for rapid information dissemination and collection* ▪ *Strengthen agriculture insurance system in Sri Lanka by rapid information sharing and institutional linkages*
Pillar 3	- Collaboration between universities, research institutions, extension services, end-user communities and donor agencies ▪ *Research collaboration with universities / postgraduate student research* ▪ *Collaborative programs includes National Spatial Data Infrastructure (NSDI), Land Degradation Neutrality (LDN) program, National e-agriculture Program* - Identification of global, regional and local emerging priorities:	- Encourage inter and trans disciplinary research and development ▪ *Promote interdisciplinary and collaborative research and development for optimize land sustainable land use* ▪ *Planned Land degradation assessment LADA-QM for Badulla and Ratnapura Districts in collaboration with all field level institutions*

	▪ *Hosting FAO Country Project on Combating Land Degradation* ▪ *Climate change identified as a major issue on food security and livelihood* - Encouraged inter and trans disciplinary research and development ▪ *Ensuring food security through developing climate smart crop varieties and cultivation techniques in Sri Lanka*	
Pillar 4	- Development of Digital SOC map of Sri Lanka ▪ *SOC point data were collected for 322 from published articles, soil facts sheets and research data stored in databases at research stations* ▪ *Regression Kinging method was used in R-software* ▪ *DEM, Slope, Monthly rainfall, monthly average Temperature and Average NDVI at 30m resolution* - Web-Portal for regional crop suitability ▪ *Spatial information system for GN level Crop suitability in Uva province developed*	- Update SOC digital map with recent field measurements and additional co-variables such as land-use, irrigation method, distance to water, distance to forested lands, etc. ▪ *SOC point data mostly from on-going island wide soil fertility survey will be used for this task* - Planned to develop Spatial Information System for Agriculture. ▪ *Agriculture based information browsing and integration information system has been planned to develop under NSDI*
Pillar 5	- Participation to ASPAC/ SEALNET Proficiency Program - Enhanced Capacities of the National Reference Laboratory for the FAO-ASP and 20 laboratories were developed - Participation in the 1st Laboratory Managers Meeting held in Bogor, Indonesia on October 2017 with the following output	- Start expansion of laboratory services of Major Research Centers - Island-wide Consultation & Capacity Building of SLM and CC adaptation

Country: **Thailand** (ppt)

	Main activities implemented in the period Dec. 2016 – May 2018	**Priorities in 2018-2019**
Pillar 1	- Identification best management practices and dissemination of the practices through demonstration and learning centres. - Development guidelines, maps, web services and mobile applications to provide knowledge of sustainable soil and land management.	- Promotion of knowledge sharing of best practices at national and international levels. - Development of baseline data including indicators for land degradation

	- Establishment baseline data of soil and land degradation in sub-district level and monitoring of soil status in arable lands	
Pillar 2	- Raising awareness of soil functions and ecosystem services by regular meetings, campaigns, conferences, and media, etc. - Advancement in explanation and policy supported on soil resources to fit the legal frameworks to strengthening soil governance. - Strengthening of extension services to provide sustainable management knowledge.	- Establishment of Youth Volunteer Soil Doctor to motivate people to make commitment on land management. - Development model of training in 4 levels for Volunteer Soil Doctor
Pillar 3	- Collaboration among organizations to assess the economic costs and benefit of implemented projects and develop database of soil resources. - Organizing trainings, workshops and conferences to promote on soil research and development.	- Establishment of the Center of Excellence for Soil Research in Asia (CESRA) - Assessment of the economic impacts of land degradation and costs of rehabilitation
Pillar 4	- Development of national soil information expert system, adding in collection, storate, manipulation and dissemination of soil information. - Organizing trainings and workshops on Soil Organic Carbon and related topics to promote soil data sharing and management capacity. - Contribution in soil survey to collaborate with Myanmar, Cambodia and Laos in producing soil maps through Ayeyawady-Chao Phraya-Mekong Economic Cooperation Strategy (ACMECS)	- Development of soil map in WRB system. - Contribution of knowledge and support to facilitate alliances producing soil maps
Pillar 5	- Dissemination of knowledge and expertise in soil resources information for land management to junior LDD staffs. - Enhancement of administrative and technical capacity of laboratories following ISO 17025 (SEALNET). - Organizing workshop of predictive mapping method for soil map production e.g. Organic Carbon.	- Development technology to monitor and assess soil nutrient and joint-project on laboratory standard. - Push and enhancement Asian-China joint-project for harmonization the method to mitigate desertification

Excused countries were Bhutan, Cambodia, India, Malaysia, Pakistan, Timor Leste and Vietnam.

4. Countries' monitoring table and identification of priority areas of work for the period 2018-2019

The ASP Chairs for the five pillars of action of the GSP presented the results of the monitoring activity undertook by the GSP Secretariat over the year to assess the implementation of activities in the ASP implementation plan. The outcomes of the analysis were summarized in posters[VI(2] and used to identify the activities for immediate execution in 2018-2019 reported in Table 1.

Table 1. Activities for immediate execution in 2018-2019

Pillar	To implement at the national level	To implement at the regional/global level
Pillar 1 (proposed activities for implementation in the ASP RIP: 1.1.5, 1.2.2 and 1.4.3)	• Compile a database with all existing indigenous soil water conservation techniques in the region (link to CESRA) • Development of tools for decision making on fertilizer application at the field level • Assess the regional baseline values of the set indicators from which to start measurement and for future monitoring on soil quality (meetings at the high diplomatic level are required)	• CESRA (link to Activity 1.1.5)
Pillar 2	• Soil doctors (extension - CGIR) • Formal and informal education on soil • Develop policy and raise awareness raising to policy makers (VGSSM)	• CESRA (technical and scientific cooperation, extension on regional findings)
Pillar 3 (proposed activities for implementation in the ASP RIP: 3.1.1 and 3.2.1 and 3.3.1 or 3.3.2	• Stocktaking and gap analysis of evidence for soil research in each country • Developing databases to identify regional and local emerging priorities (link to CESRA)	• CESRA (networking institutes and experts in the region to launch target R&D) • Propose a workshop for stakeholders on soil (proposal to have it for soil experts as a start...hosting country: Thailand
Pillar 4	• Fine-tuning National SOCmap • Get countries more involved in INSII (at least one representative per country)	• Initiating the design of Asian Soil Information System (ASIS): link to GLOSIS and CESRA • SoilSTAT
Pillar 5	• Get the Pillar 5 working group to be more active • Collaborate more with Pillar 4	• Continue on SEALNET (link to GLOSOLAN)

5. Status of the establishment of the Center of Excellence for Soil Research in Asia (CESRA)

Mr. Pitayakon Limtong (national focal point for Thailand) reported on the establishment of the Center of Excellence for Soil Research in Asia (CESRA). Following the decision of third ASP meeting (December 2016) to establish CESRA in Thailand, a zero-order concept note was wrote, the building to host CESRA was identified and some budget to grant the basic functioning of the center (also some administrative and technical staff) was committed. CESRA will start soft depending on budget, priorities and partners, and will focus on achieving the following objectives:

1. Overall support the GSP and the ASP to **implement activities on the five Pillars of Action of the GSP**. This will ultimately lead to the faster implementation of GSP/ASP activities;
2. Establish the **Asian Soil Information System (ASIS)** under the Global Soil Information System (GLOSIS). CESRA will promote capacity building activities, work on the harmonization of soil data and information, and ultimately facilitate the exchange of soil data and information. Through its work, CESRA will ensure that all countries move in the same direction at the same time on data collection and analysis;
3. Research on regional needs and priorities to fulfil regional gaps and promote technical and scientific cooperation. In this regard, CESRA will launch exchange programmes.

To comply with these tasks, the Department of Soil Information and Training, and the Department of Soil Research and Development will be established making use of existing bodies at the Land Development and Department (LDD) of the Ministry of National Development of Thailand. The Directors of these Departments will report to the Director of CESRA, who was chosen to be the Director of LDD. Ultimately, activities will be coordinated with the Directors of the National Soil Research Centers (NSRCs) members in CESRA. NSRCs will be either identified or established in each country, and will implement CESRA's activities at the national level.

CESRA's work plan will be discussed and agreed upon by the CESRA's Steering Committee, which will be composed by:

- CESRA's Director;
- ASP Chairs for the five Pillars of Action of the GSP; and
- Three internationally recognized soil experts.

At last, the ASP Chair will serve as Chair of the Steering Committee, which was proposed to meet as part of the ASP annual meetings.

An external advisory board will be established to advice both CESRA's Director and the Steering Committee. The board will be composed by the GSP Secretariat, International Organizations and ITPS members for Asia. The structural organization of the Center is reported in Figure 1.

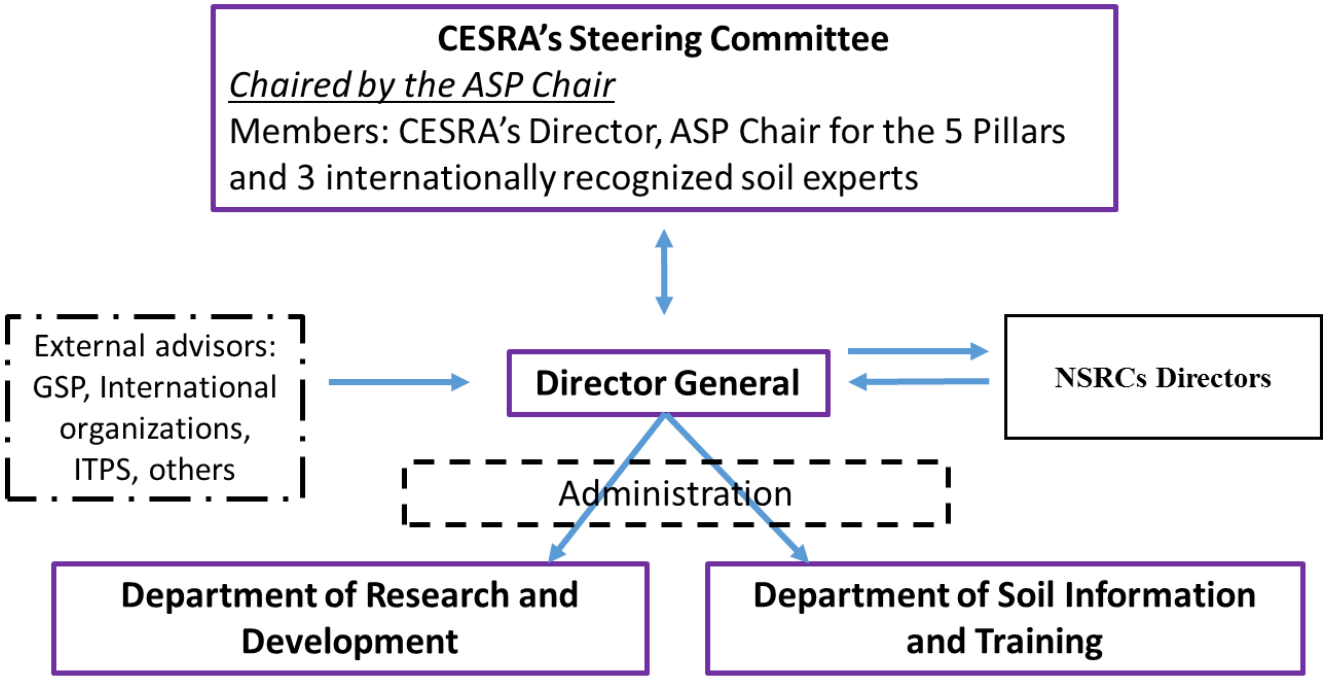

Figure 1. CESRA's structural organization

Under the financial point of view, Thailand will commit some financial resources to guarantee the basic functioning of the Center and its launch (facilities, and minimum administrative and technical staff). Thereafter, Thailand will try to commit a larger part of its national budget to execute CESRA's activities. Member countries in CESRA are also invited to in-kind contribute to the functioning of the center by seconding staff or staff's time. In this regard, soil experts are welcome to work in Thailand or work part-time on CESRA in their country (offline work).

The herewith presented proposal, which already includes countries remarks raised at the meeting, was approved by ASP member countries. The revised concept note of CESRA's functioning and establishment will be submitted to member countries as soon as possible after the closure of the Fourth ASP meeting. Following the online endorsement of the concept note, Thailand will start with the physical establishment of the center and CESRA's constitutional documents will be produced. These include:

- CESRA's Rules and Regulations
- CESRA's Steering Committee Rules and Procedures
- CESRA's Data Policy agreement

The overarching goal is to officially launch CESRA on the World Soil Day celebrations on 5 December 2018.

6. Work Plan 2018-2019 including resource mobilization

In order to facilitate the execution of ASP activities, information on the start/ending date of the financial year as well as the time needed by each government to review and approve budget requests were asked to each country. Information were collected in a database and will be used by the GSP and ASP Secretariats to plan regional meetings and workshops.

7. Election of the ASP Chair, co-Chair, ASP Secretariat and the ASP Chairs for the five Pillars of Action of the GSP

Thailand was reconfirmed as Chair of the Asian Soil Partnership for the period May 2018 – May 2021. Because of the increasing work load of the partnership, a decision was made to identify a technical advisor to the ASP Chair, who will help him complying with its task and work.

Because of its inactivity, the decision to abolish the ASP Steering Committee was made.

The GSP Secretariat presented the candidates to the position of Chair for the five Pillars of Action of the GSP, which are:

- *For Pillar 1*:
  - Mr. Jalal Uddin Md. Shoaib (**Bangladesh**)
  - Mr. Fusuo Zhang (**China**)
  - Mr. Dhermesh Verma (**India**) - serving Chair from 2015 to 2018
  - Mr. Waqar Ahmad (**Pakistan**)

- *For Pillar 2*:
  - Mr. Brajendra (**India**)
  - Mr. Milkha Aulakh (**India**) - serving Chair from 2015 to 2018
  - Mr. Munir Hussain Zia (**Pakistan**)

Nepal and Indonesia expressed their will to nominate a candidate for the position as well.

- *For Pillar 3*:
  - Mr. Imamul Huq (**Bangladesh**)
  - Mr. Kazuyuki Yagi (**Japan**) - serving Chair from 2015 to 2018
  - Mr. Shree Prasad Vista (**Nepal**)
  - Mr. Mohammad Jamal Khan (**Pakistan**)

- *For Pillar 4*: no election will take place for this Pillar because of the recent nominee of Mr. Toshiaki Okhura from Japan as ASP Chair

- *For Pillar 5*:
  - Mr. Md. Moqbul Hossain (**Bangladesh**)
  - Mr. Waqar Ahmad (**Pakistan**)
  - Mr. Audthasit Wongmaneeroj (**Thailand**) - serving Chair from 2015 to 2018

The election of the Chairs for the five Pillars will take place through online voting. The GSP Secretariat will launch the vote and announce the new Chairs for the period 2018-2021 by the beginning of July 2018.

8. Time and venue of the next ASP meeting

Participants in the meeting acknowledged the added value of organizing ASP annual meetings as part of international symposiums like the International Symposium on Soil Health and Sustainable Development, and asked for the possibility to organize the Fifth ASP workshop this same way. However, the need to

organize the regional workshops no later than April was emphasized due to the need for the ASP Secretariat and Chair to report to the GSP Plenary Assembly in June.

In conclusion, Mr. Brajendra (ITPS India) and Mr. Dhermesh Verma (ASP Chair for Pillar 1) proposed to organize the Fifth ASP workshop in India in March 2019. However, this proposal will have to be discussed with the national focal point for India, Mr. Chaudhari.

9. Any other business

As agreed during the revision of the meeting's agenda, Thailand presented their proposal for establishing the World Soil Day Award. Following the establishment of the World Soil Day (WSD) and the International Year of Soil, which was strongly supported by the government of Thailand, the World Soil Day Award will be established in honor of his Majesty the former King Bhumibol Adulyadej. The award will be given annually on the date of his birthday, the 5th of December (World Soil Day). The award aims to support and encourage all levels of stakeholders to engage in the practice of SSM to ensure healthy and fertile soils for achievement of food security and nutrition.

Individuals, communities, organizations and countries implementing outstanding WSD campaigns on the WSD topic are eligible to win the award. The prize will be given in Bangkok, Thailand, and it will consist in a World Soil Day medal and a cash prize of 15 000 USD. All documents related to the establishment of the World Soil Day Award can be developed with the support of the GSP Secretariat, who is currently assigning the Glinka World Soil Prize.

Ultimately, this proposal will be presented at the 6th GSP Plenary Assembly on 11-12 June 2018.

10. Closure of the meeting

In conclusion, feedback on the meeting and suggestions for improvement were collected:

- Allocate more time for the countries to report and to the Chair of the Pillars to discuss;
- When possible, organize a symposium in parallel to the ASP Meeting.
- Review the composition of the working group in order to have a better reporting of the activities (in case they are not active, experts should be replaced).
- In order to facilitate the implementation of ASP activities at the national level (political and financial support), national focal points should reaffirm their role at the Ministry of Environment/Agriculture
- Link the "ASEAN guidelines on soil and nutrient management" to the "Code of Conduct for the Use and Management of Fertilizers"
- Give the possibility to soil experts in the ASP working groups to join the next ASP meeting by video conference.

Annex 1: Agenda

25 May 2018 Venue: ***China National Convention Center***	
13:30– 14:00	**Welcome and Opening Remarks** Mr. Zhao Yongzhi, Director of Beijing Soil Fertilizer Extension Service Station Mr. Rabiphat Chandrasrivongs, ASP acting Chair Mr. Eduardo Mansur, Director Land and Water Division, FAO
14:00 – 14:10	**Approval of the Agenda**
14:10 – 14:30	**Item 1. GSP Developments of regional interest** Ms. Lucrezia Caon, GSP Secretariat
14:30 – 15:00	**Item 2. ASP work from December 2016 to May 2018** National focal points (in alphabetical order) - Mr. Md. Taiabur Rahman, Bangladesh - *Ms. Karma Dema Dorji, Bhutan (excused)* - *Mr. Koy Ra, Cambodia (excused)* - Ms. Xu Jingying, China - Mr. Yiyi Sulaeman, Indonesia - *Mr. S. K. Chaudhari, India (excused)*
15:00 – 15:30	**Coffee/tea break**
15:30 – 17:00	**Item 2. ASP work from December 2016 to May 2018 (continuation)** National focal points (in alphabetical order) - Ms. Masae Asano, Japan - Mr. Nivong Sipaseuth, Lao PDR - *Mr. Khazana Ibrahim, Malaysia (excused)* - Ms. Enkhtuya Bazamadnaa, Mongolia - Ms. Su Su Win, Myanmar - Mr. Roshan Babu Ojha, Nepal - *Mr. Waqar Ahmad, Pakistan (excused)* - Ms. Angel Enriquez, Philippines

	- Mr. Changhoon Lee, Republic of Korea - Mr. Ajantha de Silva, Sri Lanka - Mr. Pitayakon Limthong, Thailand - *Mr. Juiberto dos Santos, Timor Leste (excused)* - *Mr. Tran Minh Tien, Vietnam (excused)*
17:00 – 18:30	**Item 3. Countries' monitoring table and identification of priority areas of work for the period 2018-2019** ASP Chairs for the five Pillars of action and GSP Secretariat - Mr. Dhermesh Verma, ASP Chair for Pillar 1 - Ms. Lucrezia Caon on behalf of Mr. Milkha Aulakh, ASP Chair for Pillar 2 - Mr. Kazuyuki Yagi, ASP Chair for Pillar 3 - Mr. Toshiaki Okhura, ASP Chair for Pillar 4 - Mr. Audthasit Wongmaneeroj, ASP Chair for Pillar 5
18:30	**End of day one**
26 May 2018 Venue: ***North Star Yuanchenxin International Hotel***	
13:30 – 14:15	**Item 4. Status on the establishment of the Center of Excellence for Soil Research in Asia (CESRA)** Mr. Pitayakon Limtong, National focal point for Thailand
14:15 -15:00	**Item 5. Work Plan 2018-2020 including resource mobilization** ASP Secretariat and GSP Secretariat
15:00 – 15:30	**Coffee/tea break**
15:30 - 16:00	**Item 6. Election of the ASP Chair, co-Chair, ASP Secretariat and the ASP Chairs for the five Pillars of Action of the GSP** Mr. Ronald Vargas, GSP Secretariat
16:00 – 16:30	**Time and venue of the next ASP meeting**
16:30 – 17:00	**Any other business** - **World Soil Day Award**
17:00 – 17:15	**Closure of the meeting and group picture**

Annex 2: List of Participants

Full name	Country	Institution
Mr. Rapibhat Chandarasrivongs	Thailand	ASP acting Chair
Mr. Dhermesh Verma	India	ASP Chair for Pillar 1
Mr. Kazuyuki Yagi	Japan	ASP Chair for Pillar 3
Mr. Toshiaki Okhura	Japan	ASP Chair for Pillar 4
Mr. Audthasit Wongmaneeroj	Thailand	ASP Chair for Pillar 5
Mr. Md. Taiabur Rahman	Bangladesh	National Focal Point
Mr. Jin Ke	China	ITPS 2018-2021
Mr. Yiyi Sulaeman	Indonesia	Acting National Focal Point
Ms. Masae Asano	Japan	Acting National Focal Point
Mr. Nivong Sipaseuth	Lao PDR	National Focal Point
Ms. Enkhtuya Bazamadnaa	Mongolia	National Focal Point
Ms. Su Su Win	Myanmar	National Focal Point
Mr. Roshan Babu Ojha	Nepal	National Focal Point
Ms. Angel Enriquez	Philippines	National Focal Point
Mr. Changhoon Lee	Rep. of Korea	National Focal Point
Mr. Ajantha de Silva	Sri Lanka	National Focal Point
Mr. Pitayakon Limthong	Thailand	National Focal Point
Extra participants		
Mr. Dominciano D.Ramos Jr.	Philippines	Bureau of Soils and Water Management
Mr. Brajendra Parmar	India	ITPS 2015-2018
ASP Secretariat		
Mr. Sathaporn Jaiarree	Thailand	Land Development Department
Ms. Kreeyaporn Devahastin	Thailand	Land Development Department
Mr. Adisorn Chanprapalert	Thailand	Land Development Department
Mr. Sitarrine Thongpussawal	Thailand	Land Development Department
Ms. Prapa Taranet	Thailand	Land Development Department
Mr. A-nurom Pimparain	Thailand	Land Development Department
Mr. Sunsanee Arunyawat	Thailand	Land Development Department
Mr. Wanraya Suthumchai	Thailand	Land Development Department
Mr. Apichat Boonkasem	Thailand	Land Development Department
Ms. Chanida Charunworrapan	Thailand	Land Development Department
GSP Secretariat		
Mr. Eduardo Mansur	FAO	Director of the Land and Water Division
Ms. Lucrezia Caon	GSP/FAO	Regional Coordinator for Asia at the GSP
Mr. Yuxin Tong	GSP/FAO	International Network on Black Soils