

NENA-IV/18/Report



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



Report of the Fourth Near East and North African Soil Partnership Workshop

Rome, Italy, 13 June 2018

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1. Opening of the workshop

The fourth workshop of the Near East and North African Soil Partnership (NENA) was held in Rome, Italy on 13 June 2018. The meeting was opened by Ms. Iman Sahib Salman (NENA Chair) and Mr. Eduardo Mansur (Director of the Land and Water Division at FAO).

During the opening, the importance to reactivate the NENA Soil Partnership, which was not meeting and/or actively operating since 2015, was stressed. In this regard, the main objectives of the meeting were recalled:

- To review regional and countries' priorities on soil against the regional implementation plan;
- To identify activities for immediate execution in the period 2018-2019; and
- To review the governance of the partnership (Chair, vice-Chair, Steering Committee and Chair for the five Pillars of Action of the GSP).

A note was raised on the need (1) to link regional activities to those promoted and launched by the Global Soil Partnership (GSP) and (2) to use an integrated approach to manage soil, land and water resources. To conclude, Mr. Mansur highlighted the need to mobilize financial resources and the possibility for the GSP/FAO and NENA partners to work on it together.

Ultimately, the workshop agenda was approved with no amendments.

2. NENA Soil Partnership's overview

Because of the presence of several new national focal points at the meeting, Ms. Caon (GSP coordinator for the NENA region) gave a presentation on the origin and status of the NENA Soil Partnership. The partnership was established in 2012 through the Amman Communiqué and further on consolidated through the preparation of regional-specific recommendations in 2014, and the compilation of the NENA Regional Implementation Plan in 2015. Still, in 2015, the Regional Assessment of Soil Changes in the Near East and North Africa was developed as part of the Status of the World's Soil Resources report. Soil erosion, soil salinization and sodification, soil organic carbon change and soil contamination were identified as main threats to soil in the region.

An overview of the activities implemented under each Pillar of Action in the region since 2015 was given:

- Under Pillar 1, countries are working on implementing the Voluntary Guidelines for Sustainable Soil Management (VGSSM) and completed the online survey launched by the GSP Secretariat on the implementation of the revised World Soil Charter. However, Ms. Caon stressed that only 6% of the total answers to the survey came from the NENA region and from representatives of the government especially. Ultimately, the region should be more active in responding to global calls.
- Under Pillar 2, countries are annually celebrating the World Soil Day and some of them were introduced to the Global Soil Doctors Programme already. Ms. Caon announced that the Global Soil Doctors Programme is currently being finalized and that its launch will take place at the World Soil Day celebrations 2018, were successful case studies related to its implementation will also be

presented. In this regard, Ms. Caon asked if any of the NENA countries attending the meeting would be interested in start implementing the programme already so to serve as successful case study for the programme. Ultimately, Morocco and Palestine volunteered to implement the programme in 2018.

- Under Pillar 3, Ms. Caon presented the Soil Atlas of Asia, which is a Pillar 3 activity in the regional implementation plan of the Asian Soil Partnership. The Soil Atlas of Asia will be prepared by contributing authors and members of the Editorial Board under the facilitation of the Global Soil Partnership (GSP-FAO) and the Joint Research Centre of the European Commission (JRC-EC). In this regard, the Soil Atlas of Asia will form part of a collection of Atlases initiated and produced by the JRC-EC, who will sponsor its development. The Atlas aims to (1) raise awareness amongst the general public, land managers/owners, policy makers, politicians, NGOs and other scientific communities of the importance of soil in Asia, (2) support policies and instruments for investment, agriculture, environmental issues, climate change, development and aid assistance, urban planning, and more, (3) provide educational material to schools and universities to support learning, and (4) provide a baseline for further soil assessments in the region.

The geographic scope of the Soil Atlas of Asia is presented in Figure 1. This involves countries in the Asian Soil Partnership, the Near East and North African Soil Partnership (Yemen, Oman, United Arab Emirates, Saudi Arabia, Jordan, Israel, Bahrain, Qatar, Kuwait, Iraq, Iran, Syria, Lebanon) and the Eurasian part of the European Soil Partnership (Armenia, Georgia, Azerbaijan, Turkmenistan, Uzbekistan, Kazakhstan, Tajikistan, Kyrgyzstan). This scope also reflects areas outside of the existing Soil Atlases (i.e. Europe –currently under revision, Northern Circumpolar and Africa).

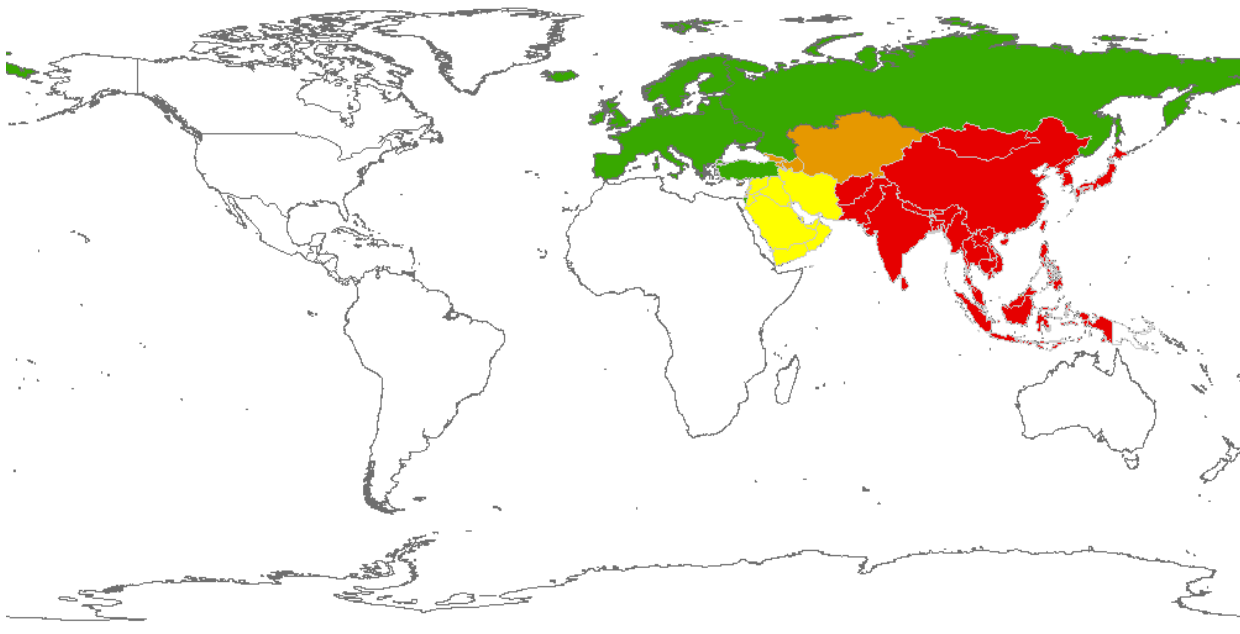


Figure 1. Regional Soil Partnerships involved in the production of the Soil Atlas of Asia. Red: Asia Soil Partnership; Orange: Eurasian part of European Soil Partnership (in Green); Yellow: Near East and North African Soil Partnership.

Because of financial constraints, only two representatives of the NENA region were selected to be members of the Editorial Board of the Atlas. These are Ms. Ismahane Elouafi from ICBA and Mr. Claudio Zucca from ICARDA. Up to date, contributing authors to the Atlas from NENA are: Talal Darwish (Lebanon), Mahmoud Alferihat (Jordan), Jawad Taleb Al –Bakri (Jordan), Ahmad S Muhaimmed (Iraq), Hussam Husein (Syria), Hamdan Salem (Oman), Imad Ghanma (Palestine), Mohammed Hezam (Yemen), Hussain Fahad Al Ajmi (Saudi Arabia), Shabbir Ahmad Shahid (United Arab Emirates) and Ilan Stavi (Israel). Ms. Caon concluded her presentation by encouraging focal points to spread the voice on the development of the Atlas and contribute to its writing.

The discussion on Pillar 3 was closed by participants in the meeting asking for the possibility to produce a NENA Soil Atlas. Ms. Caon will present this proposal to the JRC, who might be interested in sponsoring this activity.

- Under Pillar 4, the GSP organized several trainings to build the capacity of NENA countries on digital soil mapping. A first training was organized from 29 November to 7 December 2015 in Amman, Jordan, followed by a training in Rabat, Morocco (10-14 October 2016), in Wageningen, the Netherlands (6-23 June 2017) and in Tehran, Iran (20-24 January 2018). A closure note was made on the need for all NENA countries either to finalize or improve their national soil organic carbon maps so to contribute to the next version of the Global Soil Organic Carbon map (GSOCmap), which launch is scheduled on 5 December 2018. The main problems related to this exercise were compiled:
 - Digitalization of soil maps: it is an expensive and time consuming process.
 - Access to data: either databases are held by different institutes or there are not specific databases on soil at all.
 - Data sharing: governments are not willing to share data.
 - Harmonization of data and terminology: (1) procedures for data collection and analysis need to be standardized and harmonized, and (2) different institutions use the same name for different things.
 - Need for period trainings on digital soil mapping, which could link and contribute to the establishment of National Soil Information Systems.

The importance to join the International Network of Soil Information Institutions (INSII), the expert group in charge of developing the technical guidelines for the development of all Pillar 4 products, was also highlighted.

- Under Pillar 5, an overview of the laboratories already registered in the Global Soil Laboratory Network (GLOSOLAN) was presented. Ultimately, Bahrain, Iraq, Morocco, Palestine, Syria, Sudan, Tunisia and Yemen already nominated their national reference laboratories in the programme. All other countries were encouraged to make their nominees as soon as possible so for the GSP Secretariat to organize the launch of the Regional Soil Laboratory Network (RESOLAN) for the NENA region.

To conclude, Ms. Caon stressed the need to form regional working groups for the five Pillars of Action of the GSP. Each working group will be led by an English speaking Chair tasked to keep the communication and coordinate actions with the GSP Chair and the Chairs from other regions for his/her

same Pillar. At the moment, only Iraq, Lebanon, Morocco, Palestine, Syria and Yemen nominated their representatives in the working groups.

3. National profiles

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 NENA implementation plan as well as the main obstacles to the implementation of activities on soil. A summary of these presentations is herewith reported.

Country: **Algeria**

North Africa

Total agricultural area, 42 Million ha (18% of the total area). Used agricultural area, 8.45 Million ha (20% of UAA). Pasture and rangelands spread over 30 Million ha. The country has three main types of climate: Mediterranean in the coast and in the Northern Mountains, arid and semi-arid in the highlands, and Saharian (desertic) in the desert (South of Algeria).

Soil degradation threats:

- Water erosion affects 45% of the tellian northern areas due to overgrazing, forest fire and unsuitable farming practices
- Salinity and salinization affects nearly 1 Million ha
- Since 1962, uncontrolled urbanization has converted 150 000 ha of arable land including about 10 000 ha of irrigated lands

Main activities implemented in the period 2015 –2018:

- Reforestation: establishment of the Green Dam, which runs from the East to the West boarder of the country
- Review of land use policies:
 - o A law on soil preservation was established;
 - o Discussions on drought, desertification and sustainable development were launched. Ultimately, the deficiencies of the Algerian agricultural sector were identified in the "Agricultural Economic and Rural Renewal" document;
 - o Studies on the agricultural potential of Algeria, including the classification of the agricultural land were carried out. Up to date, almost 660 000 ha of agricultural land were mapped at 1/20 000 scale and integrated into a GIS;
 - o About 700 000 ha of poorly used or abandoned lands were re-converted into agricultural lands;
 - o A reforestation program to reach about 14 % of the total Agricultural land was initiated;
 - o A big subsidy program to encourage farmers to use saving water irrigation techniques was launched. Up to date, this interested about 1 600 000 ha.

Main obstacles to the implementation of activities on soil:

- Interventions on soil are slowed down by the absence of digital soil maps. Only 3% of the agricultural land in use is mapped and digitalized;
- Lack of developed extension services;
- Lack or weak coordination, synergy and harmony between the different stakeholders involved in fighting soil and land degradation;
- Lack of awareness among the rural communities about the consequences of soil degradation.
Main causes: illiteracy and poverty

Country: Iran

Near East

Total arable land area, 18.5 Million ha: fallow lands - 4 Million ha, rainfed lands - 6 Million ha, and irrigate lands – 8.5 Million ha. While 1.3 Million ha of irrigated lands do not have any limitations, 7.2 Million ha have different limitations such as salinity problems.

Priorities on soil:

- Following the “Soil Conservation Law” in the parliament (Activity No. 2.2.1);
- Preparation of SOC map of country (Activity No. 2.2.1);
- Increasing soil OC (as mentioned in 6th development program) (Activity No. 1.1.3 and 1.2.4 a and b);
- Increasing conservation agriculture (as mentioned in 6th development program) (Activity No.1.2.4.a and b);
- Mitigation of soil erosion through increasing integrated watershed management (Activity No. 1.2.4. a and b);
- Adaptation of best management practices in saline soils (Activity No. 1.1.3); and
- Identification of polluted soils (location, type and degree of pollution) (Activity No. 1.1.3).

Main activities implemented and/or under implementation in the period 2015 –2018:

- Preparation of the “ Salt Affected Soils Distribution Map” in 2015 (Activity No. 1.1.1);
- Preparation of Land Suitability for different crops in irrigated lands of country (Activity No. 1.1.3);
- Holding Important meetings with deputies of Ministry about SSM (Activity No. 2.3.1);
- Implementation of new drainage system and soil reclamation in around 550000 ha in south- west and in 28000 ha in Golestan province (Activity No. 1.2.4.a);
- Increasing the area under conservation agriculture (400000ha till now), specially with a successful experience in Koohin research station with Tehran university. (Activity No. 1.2.4.b);
- Starting a soil monitoring project in agricultural lands (from 2015) (Activity No. 1.3.2);
- Selection of pioneer farmers in SSM, and giving prize by the minister in the annual special ceremony (from 2016) (Activity No. 2.1.3);
- Preparation and defense “Soil Conservation Law”, that is in the agenda of the main council of parliament now. (Activity No. 2.2.1);
- Proposing some policies about SSM in 6th Development program of country (Activity No. 2.2.1);
- Publication of a chapter entitled “Soil, the foundation of life” the book of “Human and Environment” for high school students, from 2017. (Activity No. 2.4.1);
- Celebration of World Soil Day with other stakeholders, (Activity No. 2.4.2);

- Preparation of a research program as “Research Program on Sustainable Soil and Water Management”, 2015 (Activity No. 3.1);
- Collection and digitizing the national soil data (Activity No. 4.1.2-3); and
- preparation of National Soil Data Bank in SWRI (Activity No. 4.3.1-3).

Main obstacles to the implementation of activities on soil:

- Need to learn more in DSM;
- More work on public aspects about soils is necessary;
- Celebration of world soil day is very effective, it has to go into public culture;
- low experience in economic assessment of soil degradation; and
- Nothing has been done about harmonization of data between countries.

Country: **Iraq (Republic of)**

Near East

Total area used for agricultural production: 8 Million ha (67% of the cultivable land). Land potentially suitable for agricultural production however is not more than 27 percent of the total area of the country. The rest includes deserts with extremely low rainfall and rocky/steep mountains.

Because of the hot arid climate with subtropical influence, a large portion of the agricultural lands are under irrigation. Rain fed agriculture is practiced in the northern parts where the mountains, foothills, and Jazeera desert are located. Although the country mostly consists of desert, it has fertile alluvial plains near its two major rivers, Euphrates and Tigris. The north of the country is mostly composed of mountains. Iraq has a small coastline along the Persian Gulf next to which there used to be marshlands, now drained.

Soil degradation threats:

- Salinity; and
- Water scarcity (drought and shortage of irrigation water in summer); and

Main activities implemented in the period 2015 –2018:

- Completion of the World Soil Charter survey;
- Celebration of the World Soil Day;
- Contribution to the work of the Intergovernmental Technical Panel on Soil (ITPS) through their representative in there;
- Participation in the GSP organized trainings on digital SOC mapping and preparation of the SOC map of Iraq;
- Participation in the first GLOSOLAN survey and registration of Iraqi labs into the network;
- Implementation of a soil salinity management project in Central and Southern Iraq (2011-2013);
- Development of a strategy for water and land resources in Iraq and launch of a project on modern irrigation technologies; and
- Establishment of the Iraqi Agrometrology network for measuring various weather elements throughout the whole country;

Main obstacles to the implementation of activities on soil:

- Water scarcity and salinity leading to low productivity of the agricultural land and desertification;
- Deterioration of the infrastructure system in the agricultural sector and its supporting sides:
 - o Primitive means of transport especially in rural areas;
 - o Ineffectiveness of irrigation and drainage networks as a result of negligence and lack of maintenance that caused the growth of reeds, papyrus and occurred deposits;
 - o Serious weakness in the post-harvest technology; and
 - o Weakness in the rules of agro-industrial manufacturing.
- Security situation;
- Quantitative and qualitative deterioration of agricultural wealth:
 - o Decreasing number and production of livestock (cows, buffalo, sheep, goats and camels);
 - o Decline number of date palms (low productivity);
 - o Deterioration of fruit orchards; and
 - o Decreased number and extension of natural and artificial forests.
- Old agricultural legislation (instructions, system and law)

Country: **Jordan**

Near East

Total agricultural lands: 510 000 ha (5.7% of the total area). Range lands: 8 070 000 ha (91% of the total area). Agro-zones in Jordan:

- Jordan Valley (JVA): the soil has different properties and it is sensitive to degradation and salinity. Main threats: salinity, contamination and soil quality deterioration
- Highlands:
 - o Rainfed areas face problems of soil erosion by water, urbanization, fragmentation of landholding and pollution. These areas need reclamation and attention to manage them sustainably for agricultural purposes;
 - o Irrigated areas face the problem of deterioration of the quality of water used for irrigation and depletion of groundwater by over-pumping. Soil conservation measures are required to protect soil production capacity
- Steppe and Badiah are used as rangelands and are facing problems of desertification, salinization, recession of plant cover, land cover deterioration and soil erosion. Possible management solutions are: integration of water harvesting, developing suitable soils to increase the rangeland production and enhance land cover, and use of dry sludge

Main activities implemented in the period 2015 –2018:

- Training workshops on the application WOCAT LADA tools for documenting land management practices for scaling up SLM (collaboration with FAOJO, IUCN and ICARD);
- SLM Network meetings to share the information with other potential organizations in NENA region;

- Regional SLM Steering Committee meeting and review of SLM technologies during 3-6 December 2017 in Amman, Jordan;
- Training workshops on digital soil mapping to support the development of the national soil information systems (Amman and Morocco 2016-2017);
- Training on SOC (Adopting Soil Carbon Accounting Model) in Amman, Jordan (December 2017);
- Development of the SOC map of Jordan, including data collection and preparation for its update in 2018

Priorities on soil:

- Conservation of soil and agrobiodiversity, awareness, extension of sustainable land management. This can be achieved by liaison with stakeholder groups such as farming organisations, by training and development of research partnerships with NGO's, by education using media sources.
- Continue developing capacities with partner agencies on related issues such as SOC, DSM, SLM, and soil data management.
- Promote cross departmental and cross sectoral national contribution and resources mobilization for better sustainable land management and food security.
- Implementation and adoption of suitable land use policies to protect land resources, direct urbanization towards land with low agricultural value. Better governance can reduce fragmentation, pollution, degradation, salinization and erosion.
- Management of land resources in rainfed and irrigated areas mitigating the impacts of soil degradation by using modern technology methods of irrigation and water harvesting.

Main obstacles to the implementation of activities on soil:

- More than 91% of the country is dominated by arid climate;
- Climate change (variation/decrease in yearly rainfall);
- Mapping of the critical characteristics in terms of erosion, pollution and degradation etc. has not commenced;
- Improving land reclamation, water use efficiency and water productivity;
- Increase demand for fresh water domestically is seriously affecting agriculture activities by limiting expansion of agricultural lands;
- Land use allocation and water allocation for agriculture use are supervised by different sectors/department - water resources are managed by Ministry of Water Irrigation;
- Land use allocation currently is not under the mandate of the Ministry of Agriculture;
- Lack of financial support for soil survey and data collection; and
- Skills shortage - lack of technicians and experts in soil survey and land management.

Country: **Morocco**

North Africa

Total agricultural land: 9 Million ha (12% of the total area). Morocco reached its limit in expanding agriculture horizontally. The soil available to produce extra food is shrinking because of urbanization and the use of agricultural lands for other purposes.

Soil degradation threats:

- Decrease in soil nutrient content leading to the large use of fertilizers;
- Soil erosion (> 3 000 ton/km²/year); and
- SOC loss is between 15 to 30% under agricultural system by decade (mainly in irrigated soils);

Main activities implemented in the period 2015 –2018:

- The VGSSM were shared with decision makers;
- Launch of the AAA Initiative (the achievement of SSM is its main pillar);
- Soil was included in the agenda of the COP22 in Marrakech (GSP side event);
- The importance of practicing SSM was highlighted in relation to climate change adaptation activities (AAA initiative/COP22 Marrakech) and activities to combat desertification and mitigate drought effects;
- Practice of conservation agriculture to increase SOC content. 45% of total arable land in Morocco is highly suitable for adoption of conservation agriculture, which could benefit nearly 10 million people;
- Participation in the Global Symposium on Soil Organic Carbon 2017 (GSOC17) with the paper “challenges of soil organic carbon sequestration in drylands”;
- Participation in the Global Symposium on Soil Pollution (GSOP18) with the paper “Phytoremediation of contaminated soils in mining area - case study: abandoned mine in Morocco”;
- In 2016-2018, organization of training workshops on:
 - o DSM and production of digital soil maps;
 - o Predicting soil attributes using soil-landscape models;
 - o Practical application to predict soil attribute using data from the region (e.g. SOC content, pH, P, K, etc.)
- Launch of a national research program on soil and water management (sustainable intensification) in 2017-2021;
- Set up a large field trial for soil test interpretation;
- Collection and digitalization of all available soil surveys with necessary GIS handling. Scale 1:50 000. 23 regions completed this exercise (more than 7 Million ha covered, more than 30 000 composite soil samples were taken and analyzed). Complementary soil surveys were done on 2 Million ha;
- Soil fertility maps were produced;
- The SOC map of Morocco was produced; and
- Participation in GLOSOLAN.

Main obstacles to the implementation of activities on soil:

- Arable lands are scattered areas;
- Despite the use of DSM there is the need to collect legacy data;
- Low implication of some NENA partners (mainly for P4); and
- Need for funds to implement the POW at the national and regional level.

Country: **Oman**

Near East

Total agricultural land: 2.22 Million ha. Only the 2.52% of the land is highly to moderately suitable to agriculture. Otherwise, 4.55% is marginally suitable and 92.9% is not suitable to agriculture. Mountains (15%), sand and deserts (80%), and plains (5%). Rainfall: 100mm. Water resources count of ground and surface water, treated wastewater and desalinated water. Agricultural production (% of cultivated area): perennial crops (39%), date palms (28%), vegetables (20%), fruit crops (8%) and field crops (5%).

Soil degradation threats:

- Secondary soil salinity;
- Soil erosion;
- Low soil productivity (low fertility, low organic matter);
- Desertification; and
- Urbanization, change of land use and land fragmentation.

Main activities implemented in the period 2015 –2018:

- Launch of a project on the management of salt affected lands in Oman to improve land productivity (WOCAT-LADA);
- Organization of a training workshop for students under the name of “Soil: vibrant pulses of life”;
- Organization of a training workshop for students under the name of “Healthy soil for a healthy life”;
- Organization of a forum under the name of “Soil cosmos as a foundation of food security”;
- Celebration of the World Soil Day; and
- Implementation of a project on the use of isotopes and nuclear techniques in integrated water soil and nutrients management to optimize crop productivity.

Main obstacles to the implementation of activities on soil:

- The government of Oman has 5-years strategies (current one: 2016-2020);
- Limited number of soil researchers;
- Limited financial resources available; and
- Need for technical support from FAO.
-

Country: **Palestine**

Near East

Palestine has five ecological zones (Jordan Valley, Eastern Slopes, Central highlands, semi coastal and coastal) distributed in the Gaza Strip and the West Bank. The weather is Mediterranean, characterized by long, hot, dry summers and short, cool, rainy winters. The country is experiencing problem of water scarcity for both agricultural and human consumption.

National soil maps developed using the WRB are available.

Soil degradation threats:

- Soil erosion, mainly in the eastern slopes;
- Salinization mainly in Jordan valley and some intensive irrigated land;
- Loss of biodiversity in rangelands due to the separation wall;
- Soil contamination by pesticides and fertilizers;
- Urbanization and extension of buildup areas in the plains; and
- Decline of Soil Fertility and organic matter due to intensive agriculture.

Main obstacles to the implementation of activities on soil:

- Access to land;
- Absence of a planned comprehensive soil survey and a land sustainable management plan to protect land resources;
- Lack of an adequate number of qualified soil specialized staff;
- Currently, none of the Palestinian universities offer degrees in soils; and
- Absence of digital mapping of reclamation projects implemented or supervised by the land reclamation department and soil studies.

Country: **Saudi Arabia (Kingdom of)**

Near East

Saudi Arabia is an arid country with more than 50% of its surface area covered by sand dunes. The average temperature is 45°C and the average rainfall is below 400ml. Under this conditions, the vegetation is scarce and the evaporation is high so that the country is affected by soil salinization and erosion problems.

Soil degradation threats:

- Soil erosion;
- Soil dryness and hardness;
- Soil salinization;
- Soil pollution; and
- Natural radioactive contamination.

Main obstacles to the implementation of activities on soil:

- Absence of a complete database on soil;
- The Soil Atlas of the country is not updated;
- Currently, there is not a central lab for soil analysis (it is under construction);
- The reports of the studies done or funded by the Ministry are not published;
- There are only five research centers in the country; and
- There are five experimental fields in the country but these are inactive.

Recommendations:

- Built a soil data base center;
- Go strongly forward in the cooperation with advanced centers and organizations;
- Launch a survey to collect data to study the soil at the moment; and

- Build the capacity of staff in the available research centers.

Country: **Sudan**

North Africa

There are four types of land use in Sudan: irrigated land (9% of the agricultural land, 11% GDP), rainfed agriculture, grazing and forestry.

Main activities implemented in the period 2015 –2018:

- Celebration of the World Soil Day;
- Awareness raising activities (radio broadcasting, graduates club for the public, newspapers, ARC Diary and calendar for the year 2018, etc.);
- The VGSSM were introduced to stakeholders on soil by FAO-RNE
- Training on SLM (WOCAT-LADA);
- Sudan SLM network was established in 2016;
- Promotion of targeted research on SSM best practices – Soba;
- Legacy data were collected
- The national soil information system, SUSIS, was developed;
- Capacity development on DSM;
- Web portal development;
- Soil maps were scanned, digitalized and georeferenced.
- Methods for soil description, analysis and classification were harmonized;
- The WOCAT-LADA methodology was adopted; and
- Development of the soil and SOC map of Sudan.

Main obstacles to the implementation of activities on soil:

- Improve the operational capacity of SUSIS;
- Fulfil human capacity and data gaps in SUSIS (also capacity building); and
- Fuel crisis and rain.

Country: **Syria**

Near East

The dominant soil type in Syria is Aridisols, followed by Inceptisols and Entisols. A large part of the country is dedicated to growing crops, cotton, fruit trees, olive trees and pasture.

Soil degradation threats:

- Soil erosion;
- Forest burning;
- Dust storms;
- Salinity;
- Desertification;

- Soil nutrient management (because of the war there is a lack of fertilizers, which price is high);
- Soil pollution by heavy metals, petroleum, OMWW, sewage, etc.;

In order to combat these threats, the country set water harvesting, the practice of SSM and soil conservation as priorities.

Main activities implemented in the period 2015 –2018:

- Soil fertility and fertilization management (mineral, organic and bio-fertilizers);
- Soil salinity management;
- Gypsums soil management (collaboration with ACSAD);
- Use of fertilizers alternatives (because of the crises) such as zeolite, manure, hydrogel, amino and humic acids, burning residue, sludge, bio fertilizers, bio gas manure and compost;
- Study on soil contamination with heavy metals (collaboration with ACSAD);
- Practice of conservation agriculture (collaboration with ACSAD and ICARDA);
- Management, protection and sustainable use of groundwater and soil Resources;
- Drought monitoring by using RS in Syria;
- Study of coastal area land degradation using RS and GIS techniques;
- Ecological assessment and restoration for burnt forest divisions;
- Adaptation to climate change in WANA marginal environments (collaboration with ICBA);
- Sustainable development for natural resources (soil and water) by using GIS and RS; and
- Effect of organic pollutants (petroleum- OMWW) in the biological properties and fertility of soil.

Main obstacles to the implementation of activities on soil:

- Capacity building;
- Lack of modern soil analyzers;
- Need for fertilizers alternatives;
- Financial resource availability;
- Drought early warning in Syria;
- Need to support agricultural research; and
- Need to specialize in fighting soil degradation.

Country: **Tunisia**

North Africa

Total agricultural area: 100 000 km². More than 67% of the land experiences semi-arid and arid climate. About 60% of the country has Lithosols and Regosols. Based on the results of the LADA project, a significant change in land use occurred between 2007 and 2012.

Main activities implemented in the period 2015 –2018:

- Implementation of the DS-SLM project (GEF-FAO) focusing on composting at farm scale, use sandy amendments, agroforestry and no tillage;
- Launch of the program “Organic soil management” (PAD-II) in seven regions (100 users);
- Celebration of the World Soil Day;

- Several technical cooperation agreements exist at the national and international level (FAO, GIZ, IRD, etc.) to improve land use;
- Digitalization of existing soil maps;
- Collection of soil data;
- Harmonization and review of soil classification and soil profile description; and
- Harmonization of soil lab methods: a manual of procedures for 14 sub-national labs is under discussion.

Main obstacles to the implementation of activities on soil:

- Need for capacity building; and
- Availability of financial resources.

Excused countries were Bahrain, Egypt, Kuwait, Lebanon, Libya, Qatar and United Arab Emirates.

4. 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 was presented to the 6th GSP Plenary Assembly and ultimately endorsed with remarks 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”*, on the Glinka World Soil Prize as well as on the lately launched World Soil Day Award, which participants are all invited to compete for. Participants were reminded to contribute to the writing of the Soil Atlas of Asia, which is an inter-regional work. 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 was endorsed by the 6th GSP Plenary Assembly on 11 June 2018. As a consequence, the GSP Secretariat will invest in implementing the plan.

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 finalizing or 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 NENA 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 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 need to establish the Regional Soil Laboratory Network (RESOLAN) for the NENA region, was recalled. Ms. Caon invited countries to join these networks.

5. Review of the NENA's Regional Implementation Plan and identification of priority areas of work for the period 2018-2019

Building on the activities in the NENA's Regional Implementation Plan and the priorities highlighted by each country (see Chapter 3), activities for immediate execution in 2018-2019 were identified either at the national or regional level, see 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	<ul style="list-style-type: none"> • VGSSM to be brought to the attention of policy makers. • Bring NENA and GSP activities to the attention of Ministries • Organize workshops for policy makers 	<ul style="list-style-type: none"> • Creation of a working group¹ to develop a document for policy makers resuming regional findings (and data) on soil, which should be linked to migration, food and water security, etc. Before publishing, the document should be reviewed by policy makers or advisors to policy makers • Join the International Network of Black Soils (INBS) by contacting Mr. Yuxin Tong (Yuxin.tong@fao.org)
Pillar 2	<ul style="list-style-type: none"> • Translate awareness raising and education material in local languages (Activity 2.3.1). For the translation of GSP/FAO material, please contact gsp-secretariat@fao.org • Lobby with the Ministry of Education to include soil science in the school curricula • Increase societal awareness on soil through media, radio, press, etc.² 	<ul style="list-style-type: none"> • Implementation of the Global Soil Doctors Programme³. For more information please contact Ms. Lucrezia Caon (Lucrezia.caon@fao.org) • Create a NENA Facebook page: countries to submit material for posts, e.g. campaign pics, briefs on national initiatives on soil, etc.
Pillar 3	<ul style="list-style-type: none"> • Transfer research knowledge at the national level 	<ul style="list-style-type: none"> • Create a database to review currently available technology

¹ The working group will be led by Mr. Mahmoud Hasan Alfraihat (national focal point for Jordan) and composed by the NENA Chairs for the 5 Pillars of Action, FAO, ICARDA, and other regional soil experts showing interest in this activity

² Link this activity to the celebration of the World Soil Day. Thereafter, formulate messages to pass to the new generations by having soil experts to work with educators. Attention could also be paid to the identification of the ecological footprint for soil and land, for which Iran can assist (they already have experience in identified the ecological footprint for water and energy).

³ In 2018, the GSP Secretariat is looking for countries to implement the Programme and serve as successful case studies. NENA countries showing immediate interest in implementing the Programme in 2018 were Morocco and Palestine.

		<p>and human resources (Activity 3.1.1)⁴</p> <ul style="list-style-type: none"> Establish exchange programmes and compile case studies
Pillar 4	<ul style="list-style-type: none"> Improve/finalize your national Soil Organic Carbon maps Set the basis for the establishment of your National Soil Information System Identify major degradation processes per each country and identify national indicators of soil degradation (link to Activity 4.2) 	<ul style="list-style-type: none"> Contribute to the writing of the Soil Atlas of Asia⁵. For more information please contact Ms. Lucrezia Caon (Lucrezia.caon@fao.org) Join the International Network of Soil Information Institutions (INSII) by contacting Mr. Yusuf Yigini (Yusuf.Yigini@fao.org) Join the working group that will develop the guidelines for establishing National Soil Information Systems
Pillar 5		<ul style="list-style-type: none"> Join the Global Soil Laboratory Network (GLOSOLAN). For more information please contact Ms. Lucrezia Caon (Lucrezia.caon@fao.org) (if possible) Launch of RESOLAN-NENA Harmonize guidelines on soil description (Activity 5.1)⁶

6. Resource mobilization

Following the decision made on the activities for immediate execution in 2018-2019, the possibility to write joint project proposals to finance regional and country-specific activities was discussed. In this regard, Mr. Oweis Theib expressed the willingness of ICARDA to cooperate with the GSP and with NENA countries on this. The need to link soil to other topics like water, nutrients, food security and climate change, and to identify leading countries on specific topics like soil salinity and wind erosion was highlighted. Soil salinity and the socio-economic components of and that impact soil degradation were identified as hot topics for the writing of a joint proposal.

⁴ Iran already worked with UNESCO on this. By expanding the scope of this activity to the review of the financial resources available, this activity links to Pillar 2.

⁵ Suggestion to write the Soil Atlas of Near East and North Africa after the completion of that for Asia. The Atlas will use the information in the Soil Atlases of Africa and Asia as a baseline to discuss regional specificities. The GSP Secretariat will bring this proposal to the attention of the Joint Research Center (JRC), who is leading the writing of the Atlas series.

⁶ Make use of the data collected in 2013

7. Review of the governance of the partnership

Ms. Iman Sahib Salman, national focal point for **Iraq**, was confirmed Chair of the NENA Soil Partnership. In order to ensure a regional balance, two vice-Chairs were nominated:

- **Mr. Mahmoud Hasan Alfraihat**, national focal point for **Jordan**, for the Near East; and
- **Mr. Rachid Moussadek and/or Mr. Mohamed Badraoui**, national focal point for **Morocco**, for North Africa.

Ultimately, the regional Chairs for the five Pillars of Action of the GSP were appointed:

- For Pillar 1:
Mr. Hassen Chourabi from **Tunisia**
 Directeur Général de l'Aménagement et la Conservation des Terres Agricoles
Co-Chair Mme Rafla Attia from **Tunisia**
 Dierctrice des Ressources en sols
- For Pillar 2:
Mr. Muhammad Manhal Alzoubi from **Syria**
 Director of Natural Resources Research Administration
- For Pillar 3:
Mr. Bahram Taheri from **Iran**
 Advisor of the Deputy Minister for Land and Water Ministry of Jihad-e-agriculture (MOJA)
- For Pillar 4:
Mr. Rachid Moussadek from **Morocco**
 Head of Environmental & Natural Resources Department
 Institut National de la Recherche Agronomique
- For Pillar 5:
Mr. Imad Ghanma from **Palestine**
 Director of Soil and land classification department

The Terms of Reference for all the above mentioned positions, which mandate run from 2018 to 2020, is available in Annex 3.

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

8. Time and venue of the next NENA meeting

Because of the need to report on NENA regional progresses to the GSP Plenary Assembly, the need to organize the next NENA meeting no later than April 2019 was emphasized. Considering the start and ending date of the Ramadan and other national holidays, the decision to organize the meeting either before 21 March or after the second week of April was made. Possible venues for the meeting are Oman and Morocco, which are now discussing this possibility internally.

Annex 1: Agenda

13 June 2018	
08:30 – 08:45	<p>Welcome and Opening Remarks</p> <p>Mr. Eduardo Mansur, Director Land and Water Division, FAO</p> <p>Ms. Iman Sahib Salman, NENA Chair</p>
08:45– 09:00	<p>Item 1. Approval of the Agenda and Regional overview: where are we standing at?</p> <p>Ms. Lucrezia Caon, GSP Secretariat</p>
09:00 – 10:30	<p>Item 2. Countries’ presentations (in alphabetical order)</p> <p>National focal points (10 minutes presentation each)</p> <ul style="list-style-type: none"> - Mr. Medjahed Saddek, Algeria - Mr. Kambiz Bazargan (acting focal point), Iran - Ms. Iman Sahib Salman Al-Hammood, Iraq - Mr. Mahmoud Hasan Almahmoud Alfraihat, Jordan - Rachid Moussadek, Morocco (TBC) - Mr. Hamdan Salim Said Al-Wahaibi, Oman
10:30 – 11:00	Coffee/tea break
11:00 – 12:00	<p>Item 2. Countries’ presentations – continuation (in alphabetical order)</p> <p>National focal points (10 minutes presentations each)</p> <ul style="list-style-type: none"> - Mr. Imad K.N. Ghanameh Lotfiya, Palestine - Mr. Hussain Fahad H. Al Ajmi , Kingdom of Saudi Arabia - Mr. Abdelmagid Ali Elmobarak Elhag (alternate focal point), Sudan - Mr. Muhammad Manhal Alhusin Alzoubi, Syria - Mme. Leila Ben Dhiab Ep Ben Daya, Tunisia
12:00 – 12:30	<p>Item 3. GSP developments of regional interest</p> <p>Ms. Lucrezia Caon, GSP Secretariat</p>
12:30 – 13:30	Lunch break

13:30 – 14:30	<p>Item 4. Review of the NENA Regional Implementation Plan and identification of regional priorities</p> <p>Facilitator: Ms. Lucrezia Caon, GSP Secretariat</p>
14:30 – 15:00	<p>Item 5. Work Plan for the period 2018-2019, including resource mobilization</p> <p>Ms. Lucrezia Caon, GSP Secretariat</p>
15:00 – 15:30	Coffee/tea break
15:30 – 16:00	<p>Item 6. Governance of the partnership</p> <ul style="list-style-type: none"> - Election of the NENA Soil Partnership’s vice-Chair - Working groups for the five Pillars of Action of the GSP: Chairs and members - Review of the mandate for the positions of Chair, vice-Chair, Chair of the five Pillars of Action <p>Facilitator: Ms. Lucrezia Caon, GSP Secretariat</p>
16:00 – 16:15	Time and venue of the next NENA meeting
16:15- 16:30	Any other business
16:30 – 17:00	Closure of the meeting and Group picture

Annex 2: List of Participants

Full name	Country	Institution
Mr. Medjahed Saddek	Algeria	National Institute of Irrigation and Drainage
Mr. Kambiz Bazargan	Iran	Soil and Water Research Institute (SWRI)
Mr. Bahram Taheri	Iran	Land and Water Ministry of Jihad-e-agriculture (MOJA)
Ms. Iman Sahib Salman	Iraq	Directorate of planning and following –up
Mr. Mahmoud Hasan Alfraihat	Jordan	Ministry of Agriculture Land and Irrigation Department
Mr. Rachid Moussadek	Morocco	Institut National de la Recherche Agronomique (INRA)
Mr. Hamdan Salem Al-Wahaibi	Oman	Directorate General of Agriculture & Livestock Ministry of Agriculture and Fisheries
Mr. Imad Ghanma	Palestine	Soil and land classification department
Mr. Hussain Fahad Al Ajmi	Saudi Arabia (Kingdom of)	Ministry of Environment, Water and Agriculture
Mr. Abdelmagid Ali Elmobarak	Sudan	Land and Water Research Centre, Agricultural Research Corporation
Mr. Muhammad Manhal Alzoubi	Syria	General Commission for Scientific Agriculture Research (GCSAR)
Ms. Leila Ben Daya	Tunisia	DG/ACTA
Extra participants		
Mr. Oweis Theib	Jordan	International Center for Agricultural Research in the Dry Areas (ICARDA)
GSP Secretariat		
Mr. Eduardo Mansur	FAO	Director of the Land and Water Division
Mr. Ronald Vargas	GSP/FAO	GSP Secretary
Ms. Lucrezia Caon	GSP/FAO	Regional Coordinator for the Near East and North Africa at the GSP
Mr. Kostiantyn Viatkin	GSP/FAO	Consultant
Ms. Zineb Bazza	GSP/FAO	Consultant
Ms. Yoshie Yageta	GSP/FAO	Intern
Mr. Rainer Baritz	EEA	GSP Chair for Pillar 5

Annex 3: Terms of Reference



TERMS OF REFERENCE

Positions of Chair, vice-Chair, Secretariat, working groups and their related Chairs for the five GSP Pillars of Action in the Regional Soil Partnerships (RSPs)

CHAIR

Note: The Chair could belong to one of the most representative regional institutions with interest in soils in the same geographical area.

The Chair of the Regional Soil Partnership has the following tasks:

- Facilitate the functioning of the RSP;
- Maintain the communication with the member of the RSP and the GSP Secretariat;
- Encourage the execution of the Regional Implementation Plan (RIP);
- Participate in the GSP Plenary Assembly and present the report of their RSP;
- Represent the Regional Soil Partnership in official meetings, conferences and other national, regional and global events as requested by the GSP Secretariat or as invited by other bodies; and
- Support the organization and chair the RSP workshops.

The mandate for this position is two to three years depending on the decision of member countries in the RSP.

VICE-CHAIR

Note: The vice-Chair could belong to one of the most representative regional institutions with interest in soils in the same geographical area.

The vice-Chair of the Regional Soil Partnership has the following tasks:

- Assist the Chair in complying with his/her functions and duties as needed; and
- Take the role of Chair in case of unavailability of the elected Chair by a forced cause.

The mandate for this position is two to three years depending on the decision of member countries in the RSP.

SECRETARIAT

Note: the Secretariat of the RSP should be a governmental entity or institution – either national or international with the task of providing a modicum of secretariat support services to the regional soil partnership. Partners participating in the RSP may agree on an eventual rotation formula for such functions, with well-defined timeframes. The chosen partner would need to designate an official who could devote sufficient time to deal with RSP matters in coordination with the GSP Secretariat.

The Secretariat of the Regional Soil Partnership has the following tasks:

- Lead the execution of the RIP;
- Facilitate the organization of the RSP workshops;
- Maintain the communication with partners and the GSP Secretariat;
- Broaden the participation of potential GSP Partners in the RSP;
- Monitor the outcomes and effectiveness of the activities in the implementation plans;
- Prepare progress reports to the general organs of the GSP;
- Prepare financial reports and annual work plans; and
- Engage with the ITPS on knowledge management, as appropriate.

WORKING GROUPS FOR THE FIVE GSP PILLARS

Note: Working groups related to the five GSP Pillars, may be set up to contribute to the intensive process of developing detailed implementation plans for the regions.

The working groups of the Regional Soil Partnership have the following tasks:

- Develop the regional implementation plans, expanding on the Plans of Action under the five Pillars of the GSP, and involving other regional partners and coordinators;
- Technology transfer, especially in terms of sharing information on successful sustainable soil management measures where countries face similar soil conditions and issues;
- Provide technical support to the implementation of the activities at country and regional level;
- Provide technical support to the development and implementation of activities at the global level;
- Assist national focal points in reporting on the implementation of national, regional and global activities related to their Pillar;
- Assist the Chair of their working group in meeting regional and global target, and reporting about them to the GSP working group for their Pillar; and
- Support and be part of global working groups as requested by the GSP Secretariat.

Members of the working groups are identified by the national focal points based on their competence and experience in the topic of each Pillar. They remain in charge until replacement by their national focal point.

REGIONAL CHAIRS FOR THE FIVE GSP PILLARS

Note: Regional Chairs for the five GSP Pillars should belong to a country member in the Regional Soil Partnership.

The Regional Chairs for each of the five GSP Pillars have the following tasks:

- Actively represent the RSP in the global working groups for the five Pillars;
- Engage with global Chair for their Pillar and with those from other regions;
- Maintain an active communication with the Chair, Secretariat and working groups of the RSP regarding global activities with a regional impact;
- Lead the implementation of Pillar's related activities in the region by coordinating the work of his/her regional working group and by communicating with other GSP relevant working groups;
- Assess the status of execution of activities in the regional implementation plan and advice on activities to implement next; and
- Assist the regional Chair to report on the execution of Pillar's activities to the GSP Plenary Assembly and other official meetings.

Regional Chairs for the five GSP Pillars are either selected by national focal points during their regional meeting, or elected by online voting. In case of online voting, the CV of volunteering candidates for the position are collected and made available to national focal points and members of the working groups, who are asked to express their preference. The mandate for this position is three years.