



AGENDA PAPER

FAO Global Soil Partnership International Network of Soil Information Institutions (INSII)	Meeting Number: 7
	Location: Online
	Date: 9-11 November 2021
Agenda Item No	IV
Agenda Item	GSASmap - Global Salt Affected Soils Map

Background

- I. **GSASmap (Global Salt Affected Soils Map)** development started in 2019, the GSASmap v1.0 was launched during the Global Salt Affected Symposium (GSAS'21) on 20 October 2021.
 - A. The Global Map of Salt-Affected Soils (GSASmap) is a product containing contributions from over 118 countries with 257419 locations containing measured soil data. More than 350 national experts were involved in the harmonization of its input data and methods for mapping salt-affected soils and were trained in the state of the art methods for digital soil mapping. Every country then produced their maps following the agreed technical specifications . This participatory country-driven process offers more opportunities for future periodic updates, which is an important aspect that has been missing in previous global SAS information.
 - B. The map represents spatial distribution of SAS information at two depth intervals: 0-30 cm and 30-100 cm including EC, ESP, pH, and classes of salt-affected soils.
 - C. The GSASmap (v1.0) represents the spatial distribution of SAS with $EC_e > 2$ dS/m, $ESP > 15\%$ and $pH > 8.2$ at two depth intervals (0-30 cm and 30-100 cm). The GSASmap currently indicates that more than 424 million hectares of topsoil (0-30 cm) and 833 million hectares of subsoil (30-100 cm) are salt-affected:

85% of salt-affected topsoils are saline, 10% are sodic and 5% are saline-sodic

62% of salt-affected subsoils are saline, 24% are sodic and 14% are saline-sodic.
 - D. The GSASmap includes a set of eight layers:

1. EC in 0-30 cm;
 2. EC in 30-100 cm;
 3. ESP in 0-30 cm;
 4. ESP in 30-100 cm;
 5. pH in 0-30 cm;
 6. pH in 30-100 cm;
 7. types of salt-affected soils in 0-30 cm;
 8. types of salt-affected soils in 30-100 cm.
- E. Given that this is a country driven process, there are countries who did not prepare their maps because of lack of data, capacities or because they are not affected by SAS. There are two particular regions, EURASIA and Near East and North Africa (NENA) where SAS is an issue, however, they were not able to prepare their maps because of challenges related to data.
- F. The GSASmap v1.0 layers were made available on [GloSIS Global Platform \(Beta\)](#)

Key issues

- SAS Classification
- Missing countries (EURASIA and Near East and North Africa (NENA))

Required action

- NA

Resource implications

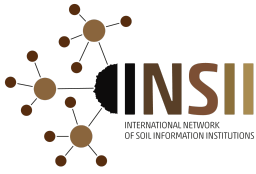
- NA

Preparation and consultation

- Mr Christian Omuto (GSP Secretariat)

Attachments

- [GSASmap Leaflet](#)
- [Country guidelines](#)
- [Lesson 1: Requirements for capacity building](#)
- [Lesson 2: Data preparation and software installation](#)
- [Lesson 3: Spatial modelling of soil properties](#)



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- **Lesson 4: Spatial modelling of salt-affected soils**
- **Technical manual**