

Collaboration between GLOSOLAN and INSII: addressing data quality in map production



Mr Marcos Angelini

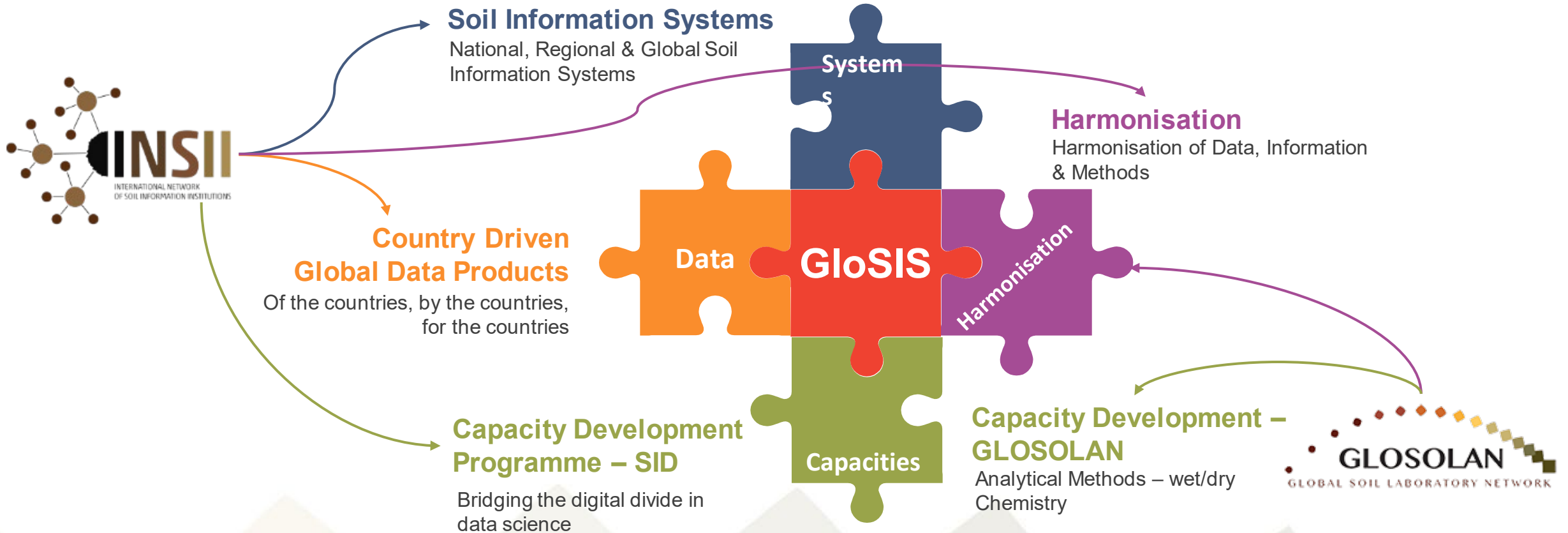
Mr Moritz Mainka

6th Meeting of the
**Global Soil
Laboratory
Network**
(GLOSOLAN)



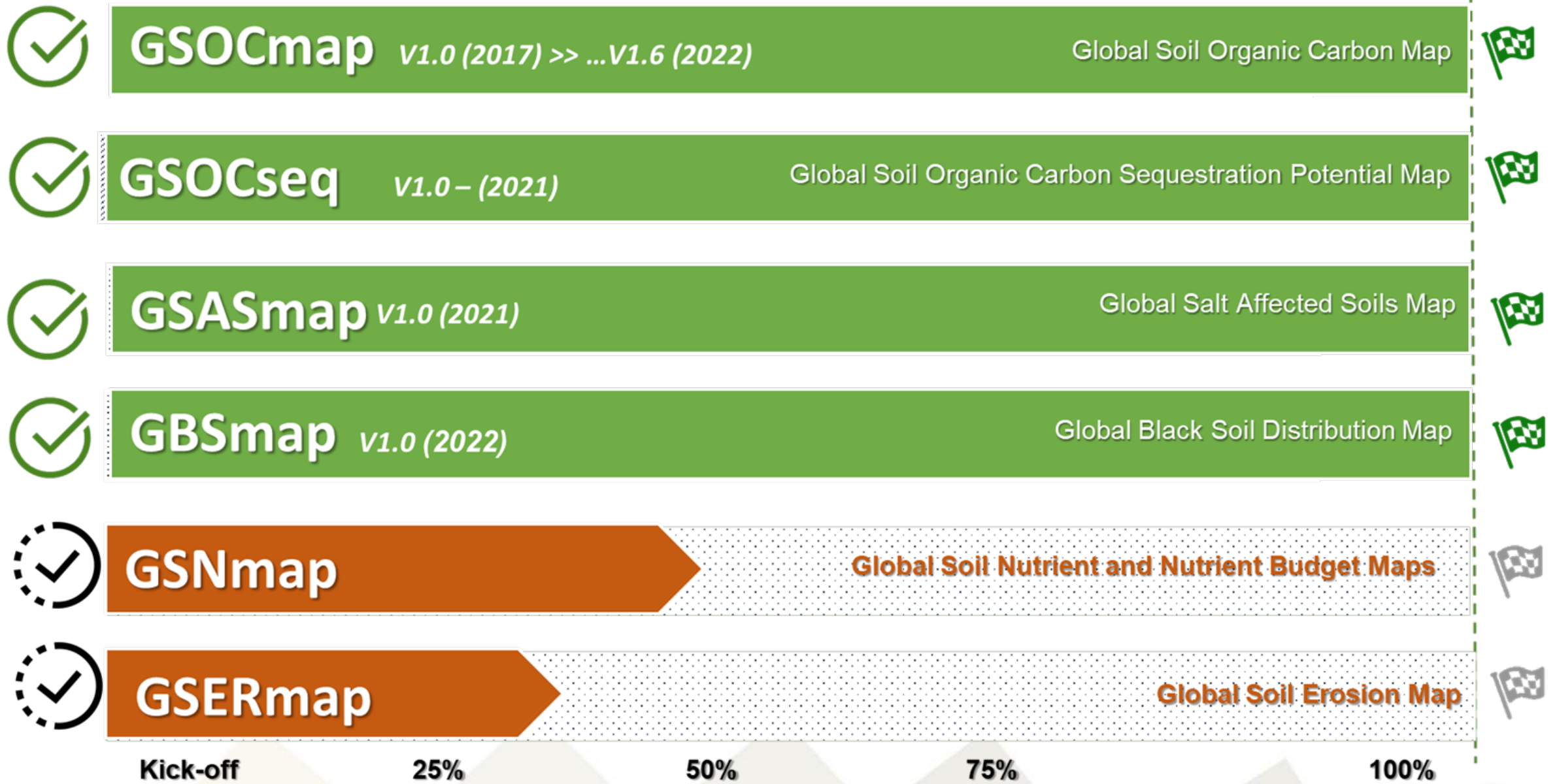
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GSPs Contribution to Data Driven Policy Making



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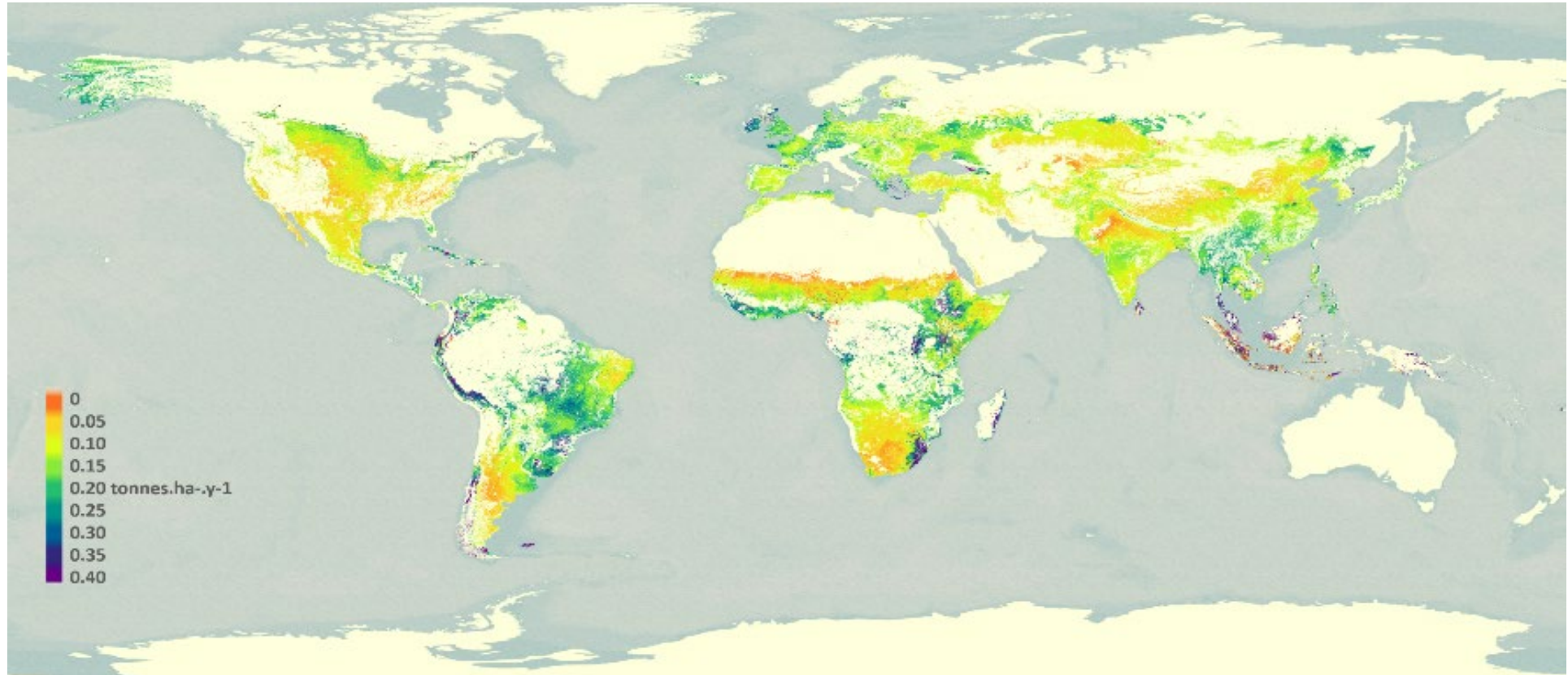
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GSOCseq v1.0 – (2021) >> v1.1 2022

Global Soil Organic Carbon Sequestration Potential Map



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Global Soil Nutrient and Nutrient Budget Maps | GSNmap

PHASE I

Mapping the current state of...

... *macronutrients* (N, P, K),

... *micronutrients*, and

... *associated soil properties* (CEC, pH, SOC, texture, BD)

- Resolution: 250 x 250 m
- Depth layers: 0 -30 cm, optional: 30 -60 & 60-100 cm

PHASE II

Mapping soil nutrient budgets

- of macronutrients (N, P, K)
- PHASE I maps are linked with data on biological fixation, fertiliser and manure input, crop removal, ...

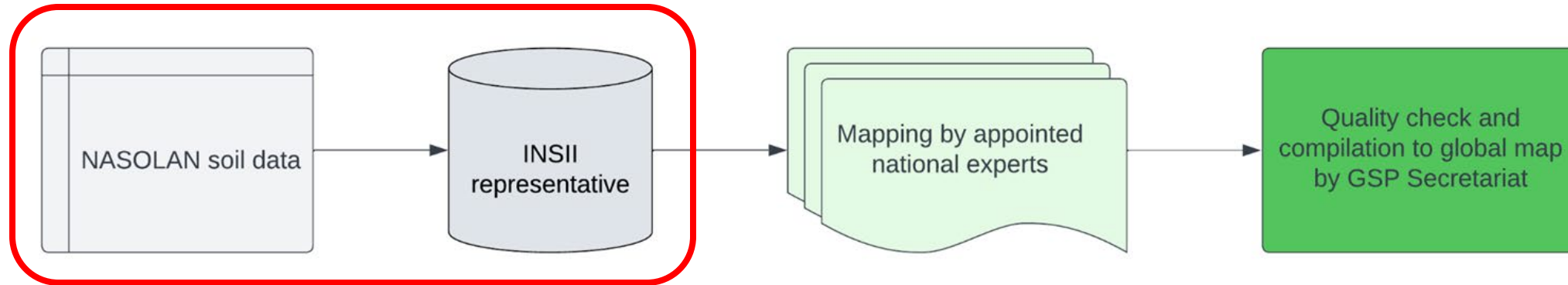
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Nutrient data

- Data often analysed in laboratories

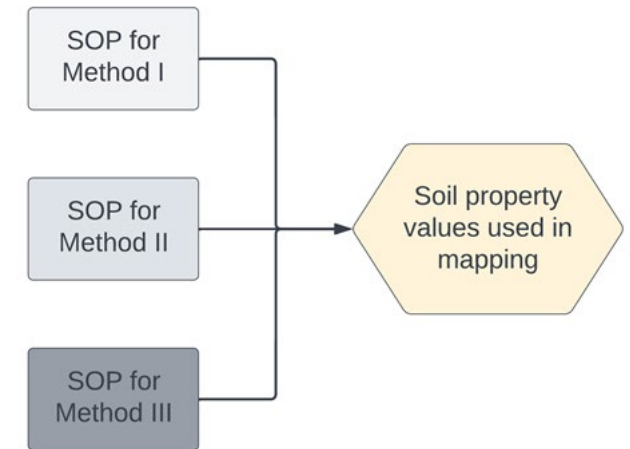
1. Data sharing



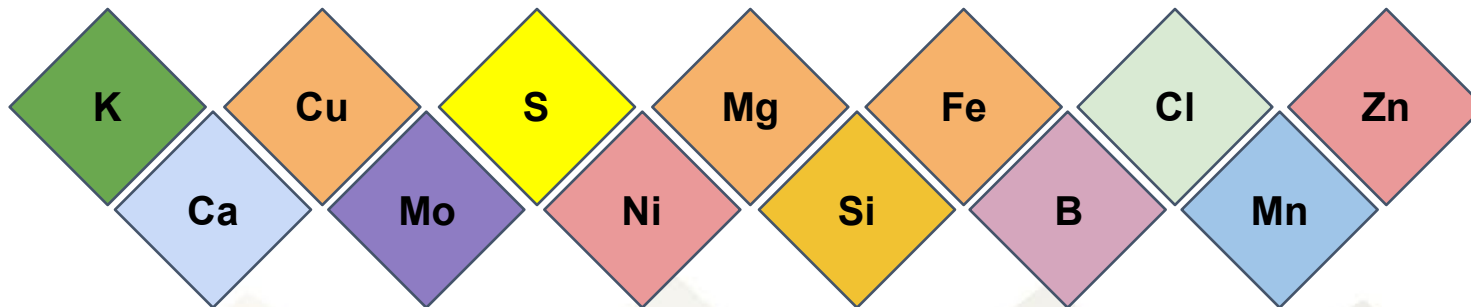
- Maximise soil data availability on national level to increase quality of national maps, i.e. nutrient data for the GSNmap
- [GSP soil data policy](#) as instrument to manage data sharing and data protection
 - Raw data is not shared with the GSP (only the final map)
 - Laboratories decide on degree of data protection

2. Definition of SOP conversion factors

- Soil data composed by different measurement methods
- Harmonisation of methods has the potential to increase map quality
 - Conversion factors between SOPs are needed

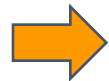


New SOPs needed for:



3. Development of pedo-transfer functions

- Pedo-transfer functions (PTF) are a key element of digital soil mapping (DSM) as they enable mappers to fill gaps in data
- Geographically more representative PTF are needed to be incorporated in the mapping process



Support in generating an overview of existing PTFs for different environmental settings from GLOSOLAN

Collaboration: INSII - GLOSOLAN

1. Promote **exchange of data** on national level between INSII institution and NASOLAN to produce GSP data products
2. Develop SOPs and **conversion factors**
3. Advise GSP in **use of PTF for mapping** and develop new PTF



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Thank you for your
attention!



Collaboration between INSII and GLOSOLAN

1. Data sharing/exchange with national INSII members
2. SOP conversion equations/protocol to harmonise SOPs
3. PTF definition

