V.V. Dokuchaev Soil Science Institute

People's Friendship University of Russia

International Union of Soil Sciences

Global Soil Map 2017 Conference

Moscow, Russia, 3-6 July 2017

Agrotechnological Institute of the People's Friendship University of Russia, Moscow, ul. Miklukho-Maklaya str. 8/2

3 July (Monday)

10:00 - Training on GSM Approaches to Mapping Soil Properties at High Resolution for the World

4 July (Tuesday)

10:00 – 10:10 Welcome speech

Plenary session

10:10 – 10:30 **Dominique Arrouays**, GlobalSoilMap project history and achievements

10:30 – 10:50 **Alex McBratney**, Whither global digital soil mapping?

10:50 – 11:10 **Luca Montanarella,** TBC

11:10 – 11:30 **Johan Leenaars**, World soil information developing from global, continental and national initiatives

11:30 – 12:00 – General Discussion

12:00 – 12:20 **Jon Hempel**, **Zamir Libohova** Advances for GlobalSoilMap in the US

12:20 – 12:40 **Raphael Viscarra Rossel**, Advances in DSM: Australia's contribution to the GlobalSoilMap project

12:40 – 13:00 **Igor Savin,** Russian Perspectives in GlobalSoilMap Project

13:00 – 13:15 Questions

13:15 – 14:30 Lunch

Session 1: Advances of GlobalSoilMap project

14:30 – 14:45 **Laura Poggio**, Towards GlobalSoilMap products in Scotland

14:45 – 15:00 **Laszlo Pasztor**, DOSoReMI as the national implementation of GlobalSoilMap for the territory of Hungary

15:00 – 15:15 **Wei Shangguan**, Soil Grid China: a contribution to GlobalSoilMap

15:15 – 15:30 **Norman B. Bliss**, A GlobalSoilMap prototype for the Conterminous United States using legacy SSURGO and STATSGO2 data

15:30 – 15:45 **Carlos E. Arroyo-Cruz**, A machine learning approach for mapping soil properties in Mexico using legacy data, climate and terrain covariates at a coarse scale

15:45 – 16:00 **José Sergei Padarian**, The Chilean soil grid

16:00 – 16:30 Coffee break

Session 1: Advances of GlobalSoilMap project (continued)

16:30 – 16:45 **Jingyi Huang**, Value-adding the Soil and Landscape Grid of Australia using local soil survey and EM induction data

16:45 – 17:00 **Arseny Zhogolev**, A comparison of SoilGRIDs with disaggregated State Soil Map of Russia

17:00 – 17:15 **Pierre Roudier**, Developing a global soil data infrastructure - the Open Geospatial Consortium Soil Data Interoperability Experiment

17:15 – 17:30 **Nikolai Lozbenev**, The regional model of soil-landscape relationships of forest-steppes of Middle-Russian upland

17:30 – 18:00 Discussion

18:00 – Buffet dinner

5 July (Wednesday)

Session 2: The developments in Digital Soil Mapping theory and methods

9:00 – 9:15 **A-Xing Zhu**, Knowledge discovery from conventional soil maps: does it always work?

9:15-9:30 **José Alexandre Demattê**, Digital pedological mapping by geographically weighted regression and boolean logic: an integrated strategy between terrestrial and satellite spectral data

9:30 – 9:45 **Jingyi Huang**, Evaluating a Bayesian modelling approach (INLA-SPDE) for digital soil mapping

9:45 - 10:00 **Lei Zhang**, A Sample Differentiation and Fusion Strategy for Designing of Sampling

10:00 – 10:15 **Maria Konyushkova**, Digital mapping of solonetzic complex using space-borne imagery of different resolution

10:15 – 10:30 **Natalia Kirillova,** The principles of creating   a digital fine scale map of parent materials on the example of the territory in Moscow region

10:30 – 11:00 Coffee break

Session 2: The developments in Digital Soil Mapping theory and methods (continued)

11:00 – 11:15 **Vitaly Linnik**, Landscape-scale radiometric mapping and modelling soil erosion rates

11:15 – 11:30 **Songchao Chen**, Testing pedo-tranfer functions to predict soil bulk densities in a region of France

11:30 – 11:45 **Qin Cheng-Zhi**, Combining spatial distance information into Soil Land Inference Model (SoLIM) to derive soil property map

11:45 – 12:00 **Vahidreza Jalali**, Soil organic matter spatial variation assessment based on the geostatistical models

12:00 – 12:15 **Guillermo Federico Olmedo**, Advances in Digital Soil Mapping and Soil Information System in Argentina

12:15 – 12:45 Discussion

12:45 – 14:15 Lunch

14:15 – 16:30 Poster Session

16:00 – 16:30 Coffee break

16:30 – 19:00 Technical meeting of GSM Consortium and WG

6 July (Thursday)

Session 3. Sources of data for digital soil mapping (legacy data, remote sensing, field data)

9:00-9:15 **Luboš Borůvka**, Combining and harmonizing soil data from different sources: problems and approaches

9:15-9:30 **Joulia Meshalkina**, The impact of legacy map and field texture determination in digital soil mapping at farm level (a case study)

9:30-9:45 **Nandrianina Ramifehiarivo**, High resolution land-use classification toward more accurate digital soil mapping of malagasy soils

9:45-10:00 **Ivana Sestak**, Visible and near infrared spectroscopy in assessment of Stagnosols properties

10:00 – 10:15 **Dimitri Stathakis**, Soil sealing detection based on globally available night-time imagery

10:15 – 10:30 **Olga Alexandra Rosero Vlasova**, Retrieval of organic matter information using proximal soil sensing (VIS-NIR-SWIR) in a Campos Amazonicos National Park savanna enclave, Brazil

10:30 – 11:00 Coffee break

Session 3. Sources of data for digital soil mapping (continued)

11:00 – 11:15 **Irina Mikheeva**, Information assessment of soil properties by using soil legacy data

11:15-11:30 **Igor Florinsky**, A web-system of virtual morphometric globes as a data source for predictive soil mapping

11:30-11:45 **Levent Basayigit**, Digital Mapping of Histosols Using LANDSAT 7 ETM+ in Isparta Turkey

12:45-12:00 **Elena Prudnikova**, The possibilities of soil line concept application for the detection of soil properties

12:00 – 12:15 **Olga Chernova**, Using multi-scale old and modern maps combined with current soil monitoring data for online mapping the soil organic carbon stocks

12:15 – 12:45 Discussion

12:45 – 14:15 Lunch

Session 4: Regional/National case studies

14:15-14:30 **Sergey Shoba**, Development of a national network of soil information centers

14:30-14:45 **Yiyi Sulaeman,** Digital soil mapping as a key element in supporting Indonesian government's food sovereignty policy

14:45-15:00 **Francis Silatsa**, Digital soil mapping using national soil data for the North region of Cameroon

15:00-15:15 **Helena Pinheiro**, Assessment of sample designs and covariates to use in DSM of tropical hillslope areas in Brazil

15:15 – 15:30 **Surendra Singh**

15:30 – 15:45 **Pavel Krasilnikov,** Pedodiversity and spatial variation in digital soil mapping

15:45-16:00 **Vincent Oluwatomisin Aduramigba-Modupe**, Digital Soil Mapping Perspectives in Nigeria

16:00 – 16:30 Coffee break

Session 4: Regional/National case studies (continued)

16:30-16:45 **Yash Dang**, A framework to map costs of soil constraints to the Australian grains industry

16:45-17:00 **Carlos E. Arroyo-Cruz**, The contribution of DSM products to the modelling of the spatial distribution of Arabica coffee in Mexico based on legacy data

17:00-17:15 **Ertuğrul Aksoy**, Soil survey and mapping works and its past, present-day applications and future in Turkey

17:15-17:45 Discussion

17:45 – 18:15 **Overall conclusion**

7 July (Friday)

10:00 - 13:00 – excursion to the Williams Soil Museum (optional)

Poster session (5 July, 14:15 – 16:30):

Alyabina Irina	Calculation of normative yield of grain crops based on ISSGDB data
Amer Abdelmonem Mohamed	Soil water movement as related to water filled pores in agricultural soils of Nile Delta
Asadi Hossein	Application of space series analysis to compare the effect of tillage direction on soil properties in adjacent fields
Bakharev Andrei	Application of machine learning methods for the soil structure groups mapping
Benka Pavel	Conversion Legend of Soil Map of Vojvodina (Serbia) to WRB Classification

Chen Songchao	Estimating soil properties prediction intervals from a soil map database
Chernousenko Galina	Analysis of the Distribution and Properties of Salt-affected Soils of Tuva on the Basis of the Created Digital Soil Map on a Scale of 1 : 500 000
Demattê José Alexandre	Textural ratio between soil horizons by hyperspectral diagnostic: building indexes
Elnahry Alaa Eldin Hassan	Identification of South Sinai, Egypt soil map using remote sensing techniques
Fadl Mohamed Eladham	Identification of South Egypt digital soil map using remote sensing techniques
Gabdullin Bakhytnur	Soil salinity assessment in Southern Kazakhstan using remote sensing data
Gasanova Zarema	Moving cell and the soil cover salinization dynamic on an example of the North Daghestan
Golovanov Dmitry	Spatial-Temporary Mapping of Soil Salinity and Gypsum Content. Southern Uzbekistan as Example.
Golozubov Oleg	Soil data conceptual and object models
Guevara Mario	Building capacities for digital soil mapping across Mexico
Karbout Nissaf	Correction of water irrigation frequency in oasis system of south Tunisia by using invers modelling Hydrus 1D
Kolesnikova Varvara	Data harmonization and soil information exchange
Koroleva Polina	Construction of soil map using the coefficients of Landsat resolution elements multi-temporal soil lines
Maltsova Polina	On the issue of digital landscape-geochemical mapping. As example the Mongolian part of the Selenga river basin

Marx Simone	Mapping topsoil organic carbon content and stocks in Grand-Duchy of Luxembourg
Mathlouthi Majid	Modeling of water erosion in the catchment area of Melah Dam (northern Tunisia) using a geospatial approach
Mikhailov Iosif	Digital Soil Map of the Arctic zone Russian Federation
Moonjun Ruamporn	Perspective of digital soil mapping for modernizing Thai soil survey : a case in Thailand
Mudrykh Natalya	The spatial and statistical analysis of soil fertility - the basis of precision farming
Nelson Makibwe	Improving soil fertility on African soil
Ontikov Petr	Estimation of the resilience of spruce forest in the Moscow region, depending on the soil conditions in the GIS environment
Oustan Shanin	Zoning SAR and chloride concentration in soils affected by wastewater of Kaveh Soda factory using cokriging method
Puzachenko Mikhail	Using Hyperion hyperspectral data to display the properties of forest soils of the southern taiga
Revina Yanina	Actualisation of the soil map of Crimean southern coast's western part
Richer de Forges Anne	Space-time related issues in French soil legacy data
Roy Durlave	Effiicacies of seventeen organically made northern fertilisers on sustainable crops production in acidic soil of food security under climate change: Bangladesh context
Rukhovich Aleksei	Applying the elastic map method to analyze three-dimensional distribution of the soil line coefficients

Ryzhova Irina	Uncertainty of regional assessments of organic carbon pools in taiga soils
Safarova Aysulu	Land degradation assessment of Astrakhan Region by remote sensing data
Samofalova Iraida	Geo-modeling of soil cover in inaccessible areas (Perm Region, the Middle Urals)
Samsonova Vera	Soil cover changes diagnosis using legacy soil maps
Schepaschenko Dmitry	Mapping arable and abandoned arable land for the former Soviet Union
Shahbazi Farzin	Can mathematical modelling be used to estimating soil plasticity index instead of some common models?
Shangguan Wei	Mapping the Global Depth to Bedrock
Shilov Pavel	Digital mapping of soil drainage in the southern part of Valdai Hills
Suleimanov Ruslan	The study of soils and geomorphological peculiar properties of the irrigated area with using of GIS technology
Tegbaru Bellete	Digital soil fertility mapping to unlock the fertilizer advisory service in Ethiopia
Uddin Jashim	Soil Mapping in Bangladesh: A Way Forward to Precision Farming
Uliumdzhiev Uliumdzhi	The pattern of soil salinity in a solonetzic complex (Yusta, Kalmykia)
Vintila Ruxandra	Evaluation of the first maps for Romania converging towards GSM specifications