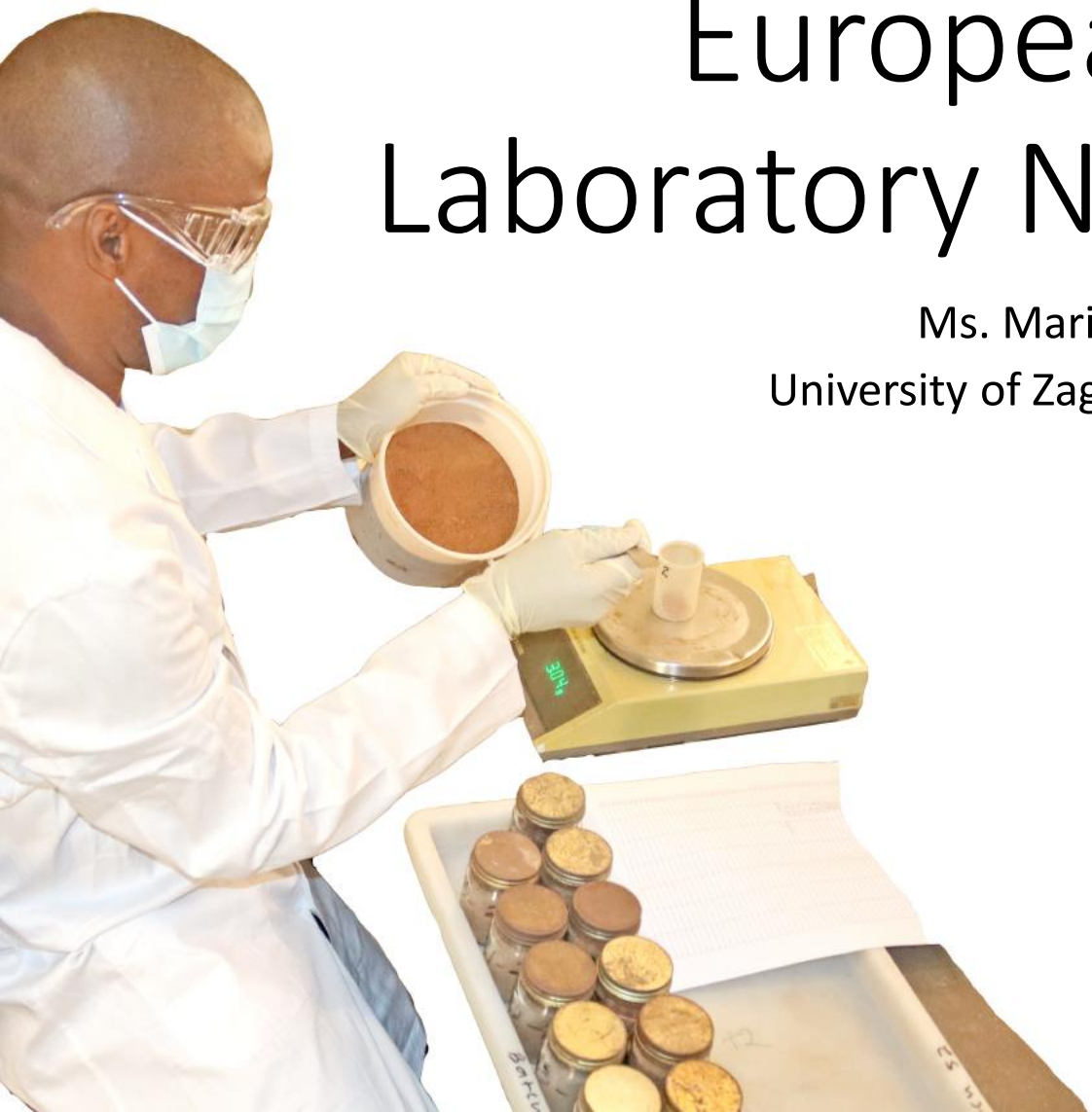


European and Eurasian Soil Laboratory Network (EUROSOLAN)

Ms. Marija Romić, EUROSOLAN Chair
University of Zagreb Faculty of Agriculture, CROATIA

mromic@agr.hr

7th Meeting of the
**Global Soil
Laboratory
Network**
(GLOSOLAN)



GLOSOLAN
GLOBAL SOIL LABORATORY NETWORK



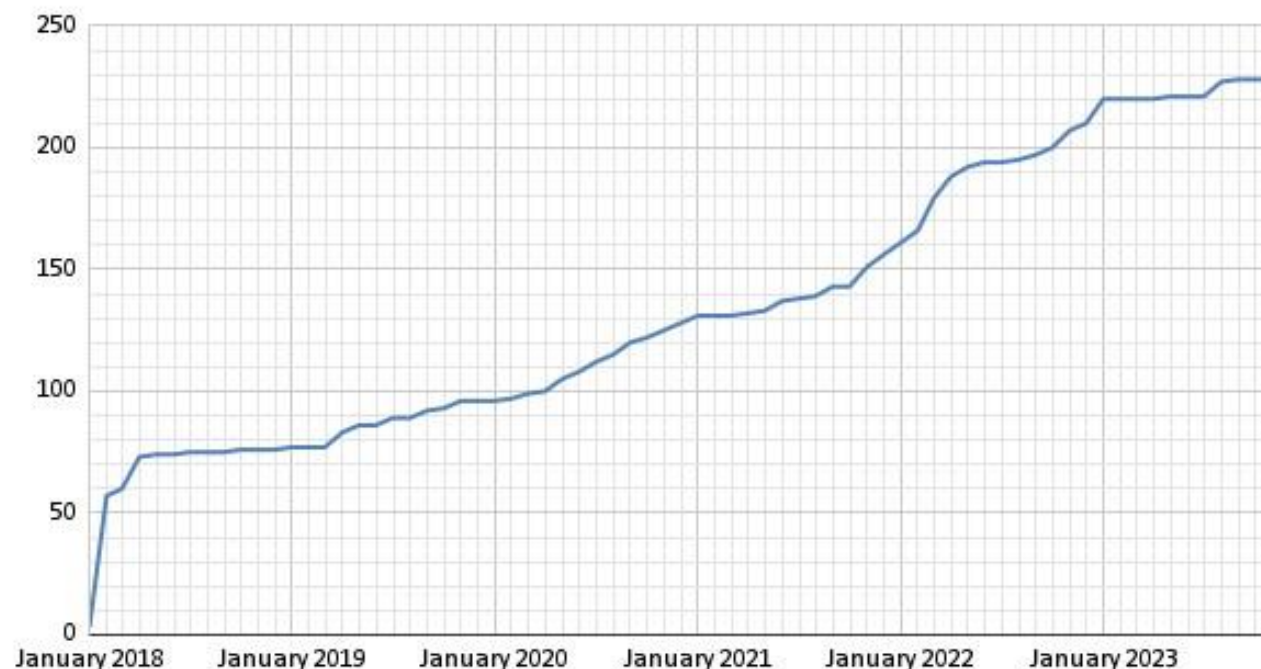
Current status of EUROSOLAN



- Currently: 228 registered laboratories
 - Europe: 168
 - Eurasia: 60

Albania, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Kazakhstan, Kosovo, Kyrgyzstan, Latvia, Luxemburg, Poland, Portugal, Republic of Moldova, Republic of North Macedonia, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Spain, Switzerland, The Netherlands, Turkey, Ukraine, United Kingdom, Uzbekistan

EUROSOLAN growth



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5th Meeting of the European and Eurasian Soil Laboratory Network (EUROSOLAN) 18-19 October 2023

Zoom platform

Confirmation of the governance

Chair: Dr. Marija Romic (Croatia)

Vice-Chair for Europe: Dr. Oguz Can Turgay (Turkey)

Vice-Chair for Eurasia: Dr. Elena V. Shamrikova (Russian Federation)

Steering Committee:

Ágnes Nagy (Hungary)

Christian Hartmann (France)

Špela Velikonja Bolta (Slovenia)

Aldis Butlers (Latvia)

Giorgi Ghambashidze (Georgia)

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EUROSOLAN participation in activities ongoing in the region

- EU4GEEN

WORKSHOP WP 1-13 – STATUS OF ENVIRONMENTAL LABORATORIES IN WESTERN BALKANS, 6-7 November 2023, Tirana Albania

EU4 Green Recovery: Support the Implementation of the Green Agenda for Western Balkans

Founded by EU, Austrian Development Cooperation & Environmental Agency Austria

Topics: Status of environmental laboratories in WB6

Preparation for trainings in organic and inorganic contaminants for air, soil, waste, and water samples

EUROSOLAN: Prof. Marija Romić, PhD, Croatia

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Open International Forum-Webinar on Soil Protection and Sustainable Land Use “Global Soil Conservation: international experience in soil fertility and health support”. 27 April 2023

As part of the webinar, an international competition of adaptive scientific works “To preserve soil health, protect soils from degradation and depletion” was held in 3 categories.



PHOSAGRO®

РГАУ-МСХА
им. К.А. Тимирязева

Open International
Forum-Webinar on soil protection
and sustainable land use

“Global soil conservation:
international experience in soil
fertility and health support”

April 27, 2023
13:00-16:00 CET

The poster features a circular image of three small green seedlings growing out of dark brown soil. Above the image are several logos, including PHOSAGRO, RAS (РГАУ-МСХА им. К.А. Тимирязева), and others.



Food and Agriculture
Organization of the
United Nations

GLOSOLAN
GLOBAL SOIL LABORATORY NETWORK

The Global Network of Soil Laboratories:
the initiator on unification of the
Standard Operating Procedures

Dr. Elena Shamrikova, Vice-Chair of the EUROSOLAN,
Institute of Biology Komi Science Center RAS, Russia
shamrikovaelena@yandex.ru

GLOBAL SOIL
PARTNERSHIP

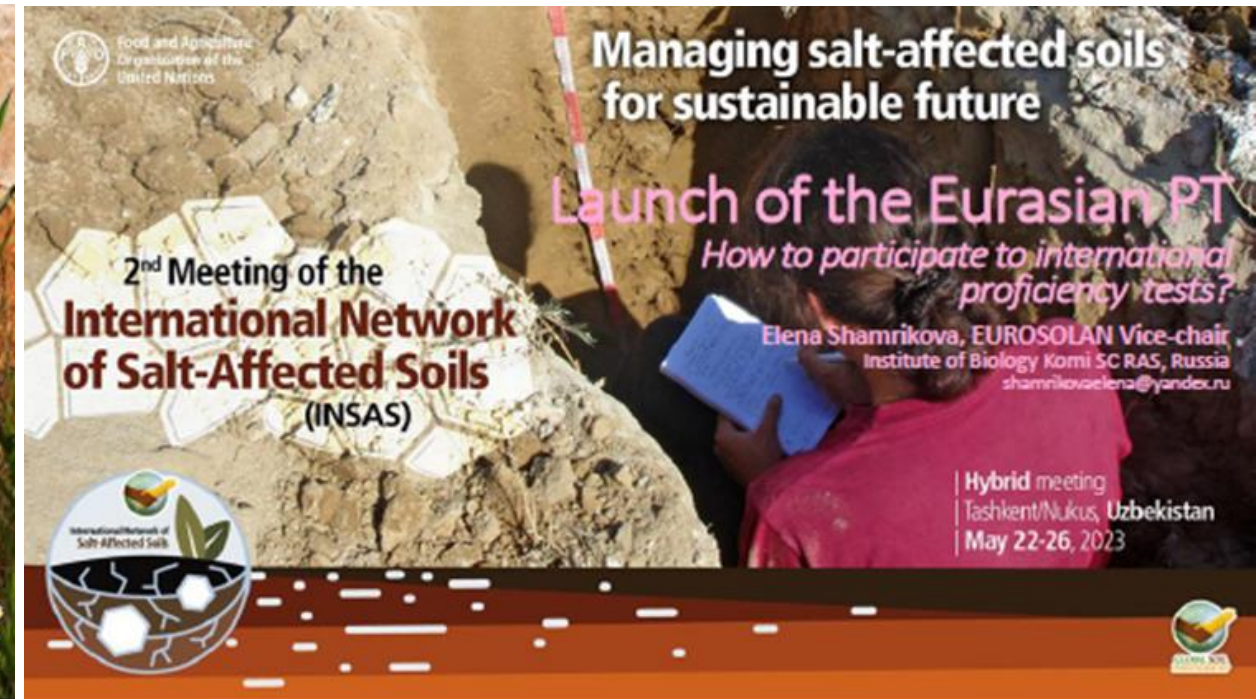
The slide features the FAO logo on the left and the GLOSOLAN logo on the right. Below the logos is a photograph of a person in a white lab coat using a pipette to transfer soil into a small white dish. The background is white with a pattern of light-colored diamonds.

The NatRefLab of RUSOLAN is the organizer and participant of the Forum-Webinar.

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Presenting EUROSOLAN activities in the region



Elena Shamrikova contributions in the Euroasian region

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Improvement of Seed and Agro-Chemical Laboratory and Certification Services under the Agrarian Services Agency, Azerbaijan (UTF/AZE/021/AZE), supported by FAO

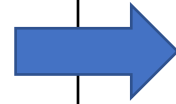
Objectives

- the establishment of the national soil information system of Azerbaijan (AzSIS) for making soil information and datasets accessible for all stakeholders,
- to ensure the adequate inclusion of sustainable soil management principles and practices by agricultural extension services
- to allow farmers to adjust their activities and farming decisions to soil conditions,
- **building the capacity of 11 regional soil laboratories affiliated to the Agrarian Services Agency (ASA) in soil analysis**

Improvement of Seed and Agro-Chemical Laboratory and Certification Services under the Agrarian Services Agency, Azerbaijan (UTF/AZE/021/AZE), supported by FAO

Working areas of the project

- Regulations and circulars for the establishment and governance of laboratories.
- Improvement of physical laboratory conditions.
- Improvement of the devices and equipment available.
- Improvement of the laboratory staff quality.



Strengthening the capacities of the central and regional laboratory



Establishment of the National Soil Laboratory Network of Azerbaijan in near future.



Improvement of Seed and Agro-Chemical Laboratory and Certification Services under the Agrarian Services Agency, Azerbaijan (UTF/AZE/021/AZE), supported by FAO

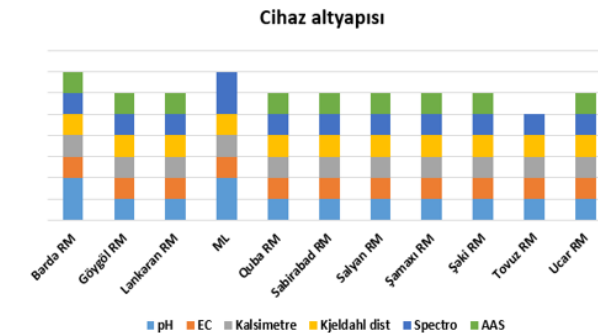
Works ongoing ..

- Procurements of modern tools (ICP-OES, XRD Spectroscopy etc).
- Assessments on current management practices and staff skills of soil laboratories over questionnaires.
- Trainings for the managers of soil laboratories (*lab management, internal and external quality assurance, lab networking, structures of GLOSOLAN/RESOLAN/NASOLAN etc*).

are being implemented by a FAO international consultant on soil laboratories



Lab facilities (basic tools and equipments)



Package-1
 - textur
 - pH
 - EC
 - Lime
 - strcutre
 - SOM
 - Avail P

Package-2
 - Total N
 - Heavy metals
 - CEC
 -
 -

EVALUATION (D5) :

- Instruments-devices and equipments should be classified, procured and deployed according to analysis scopes

(ML lab should purchase AAS or ICP)

Short run

Improvement of Seed and Agro-Chemical Laboratory and Certification Services under the Agrarian Services Agency, Azerbaijan (UTF/AZE/021/AZE), supported by FAO

A well-organized laboratory management

- Laboratory manager
- Laboratory responsible
- Quality control responsible
- Sample registration staff (secretary)
- Analysis staff
- Farmer relationship (advising staff)
- ...

Trainings

- Laboratory management
- Laboratory safety
- Analytical chemistry
- Proficiency tests
- Internal test
- Equipment training
- GLOSOLAN-EUROSOLAN-NASOLAN

Communications among, ASA, laboratories and farmers

- Capacity development meetings
- Risk evaluation
- Innovative approaches (adoption of new analysis and technologies)
- Organizing farmer's day event (selection of role model or leader farmers)



Expected outcomes from project activities;

- Increasing awareness on GLOSOLAN and its subdivisions and activities..
- Establishment of national soil laboratory network of Azerbaijan (NASOLAN) and its connection to GLOSOLAN

GLOSOLAN trainings on salt-affected soil analysis brings international experts to Tashkent from the 22 to 26 May 2023

Mr. Giorgi Ghambashidze, EUROSOLAN Steering Committee



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International Summer School: Smart and innovative agriculture - effective technologies and practices, 12-23 June 2023, the "Agrarian" Faculty of the South Kazakhstan university named after M. Auezov



with the participation of scientists from Kazakhstan, Turkey, Russia, Uzbekistan and Kyrgyzstan



GLOSOLAN as a catalyst for promoting harmonized standards for sustainable land use and agriculture worldwide

Dr Elena Shamrikova
GLOSOLAN Steering Committee,
Vice-Chair for Eurasia,
Institute of Biology Komi Scientific Center Ural Branch RAS
shamrikovaelena@yandex.ru



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Members of the Belgian and Luxemburgish Soil Laboratory Network (BESOLAN) organized webinar

Soil organic carbon monitoring in the Brussels-Capital, Flanders and Walloon Region (Belgium) and Luxembourg

Zoom platform, 20th June 2023



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RUSOLAN has launched a website for the Russian network of soil laboratories in the national language

<https://ib.komisc.ru/rusolan/>



Российская Национальная сеть почвенных лабораторий

[ГЛАВНАЯ](#) [ИСТОРИЯ](#) [НОВОСТИ](#) [УЧАСТНИКИ](#) [ДОСТИЖЕНИЯ](#) [КОНТАКТЫ](#) [Q](#)



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The First Proficiency Testing (Soil PT) in the Euroasian region



PT participants*

- Armenia (1)
- Georgia (1)
- Kazakhstan (2)
- Moldova (1)
- Belarus (1)
- Russia (15 RUSOLAN's labs)
- Senegal (1)
- Turkmenistan (1)
- Uzbekistan (3)

Before the launch of the PT, a training webinar was held for participants.

26 September 2023 10.30 – 12.00 (Moscow time)		
Link to the event: https://trueconf.ru/c/34d62ba65a7bfc68ceda05d2be8ceae9		
Moderator: Elena Shamrikova		
10.30 – 10.35	Greeting: Institute of Biology, Komi Scientific Center, Ural Branch of the RAS	Ph.D. Ivan Chadin, Director
10.35 – 10.50	Experience of the Institute of Biology in Harmonization of Methods for Measuring of Soil Organic Carbon	Dr. Elena Shamrikova, Chairman of RUSOLAN
10.50 – 11.05	Why does a testing laboratory need to participate in Proficiency Tests?	Svetlana Kostrova, Head of the Ecoanalytical Laboratory
11.05 – 11.30	Methodological features of measurements of Soil Organic Carbon in soils in accordance with the Walkley-Black method and a modification of the Tyurin method	Ph.D. Elena Lapteva, Head of the Department of Soil Science, Evgenia Tumanova, Lead Engineer
11.05 – 11.30	Method for measuring Soil Organic Carbon by Loss on Ignition method	N.N. Bondarenko, Engineer of the 1 category, Ph.D. Elena Lapteva, Head of the Department of Soil Science, Elena Kyzurova, Lead Engineer
11.30 – 11.55	Round of questions and answers	Dr. Elena Shamrikova, Chairman of RUSOLAN
11.55 – 12.00	Closing the webinar	

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Scientific publications


Work continues on the search for transfer coefficients for equalizing SOC, obtained by different methods in different regions of the planet.

Catena 228 (2023) 107151

Contents lists available at [ScienceDirect](#)

 **Catena**

journal homepage: www.elsevier.com/locate/catena



Which method to choose for measurement of organic and inorganic carbon content in carbonate-rich soils? Advantages and disadvantages of dry and wet chemistry

E.V. Shamrikova^{*}, E.V. Vanchikova, E.I. Lu-Lyan-Min, O.S. Kubik, E.V. Zhangurov


Institute of Biology Komi SC Urd RAS, Kommunisticheskay 29, Syktyvkar, Russian Federation

ARTICLE INFO

Keywords:
Organic carbon
Carbonates

ABSTRACT

The pedosphere is an essential reservoir of carbon represented by organic (SOC) and inorganic (SIC) form. Various methods are used worldwide to measure SOC and SIC. The trend towards globalization of data on soil carbon has led to the need for the accumulated information harmonized. Global soil databases are crucial for inventory of



According to (Peralta et al., 2022), under the Global Soil Partnership initiative of the Food and Agriculture Organization of the United Nations (FAO), the availability of non-harmonized data is one of the reasons for the low accuracy of the global SOC map. This is especially true for regions such as Eurasia where data are sparse. Harmonization of soil research methods is the main strategy of the Global Soil Laboratories Network GLOSOLAN (<https://www.fao.org/global-soil-partnership/glosolan/>).

4. Conclusion

In the age of global changes in the environment, monitoring the content of various forms of carbon is of utmost importance. While the

In-person training and workshops in 2024

- Internship organized by NatRefLab of RUSOLAN to host colleagues from the Kazakh Research Institute of Soil Science and Agrochemistry named after U.U. Uspanova in April-May 2024 on methods for analyzing soil organic carbon
- Training on GLOSOLAN SOPs are planned in Georgia in 2024 (proposal will be prepared to get partial funding from National Science Foundation of Georgia)
- 11th International Soil Congress “CHALLENGE SOIL THREATS SAVE YOUR FUTURE HORIZON” September 23-25th, 2024, Cappadocia-TURKEY





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Thank you for your attention!

EUROSOLAN team

