



Food and Agriculture  
Organization of the  
United Nations

# 4<sup>th</sup> Meeting of the European and Eurasian Soil Laboratory Network (EUROSOLAN)

5-6 October 2022



# Stories on National Soil Laboratory Networks: RUSOLAN

**Elena Shamrikova**

Institute of Biology of Komi Science Center, RAS

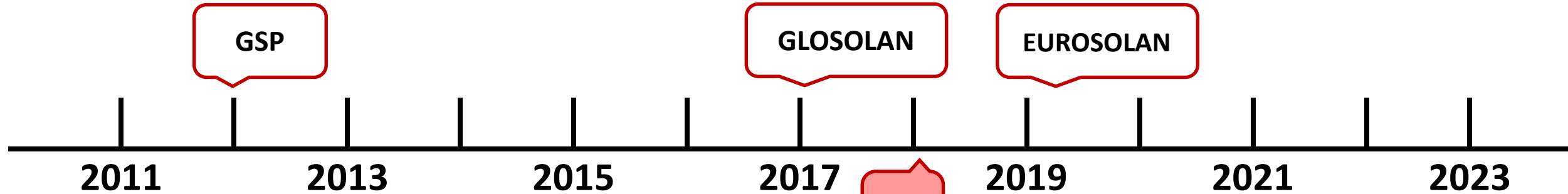
Vice-Chair of the EUROSOLAN for Eurasia

Chair of RUSOLAN

**EUROSOLAN**  
EUROPEAN AND EURASIAN SOIL LABORATORY NETWORK



# HISTORY REFERENCE




## GLOSOLAN Global Soil Laboratory Network

### CERTIFICATE OF REGISTRATION

This certificate is awarded to Ecoanalytical laboratory of the Institute of Biology of Komi Scientific Center of the Ural Branch of the Russian Academy of Sciences (Ecoanalytical laboratory, IB Komi SC UB RAS) - Russian Federation to acknowledge their official registration in the Global Soil Laboratory Network

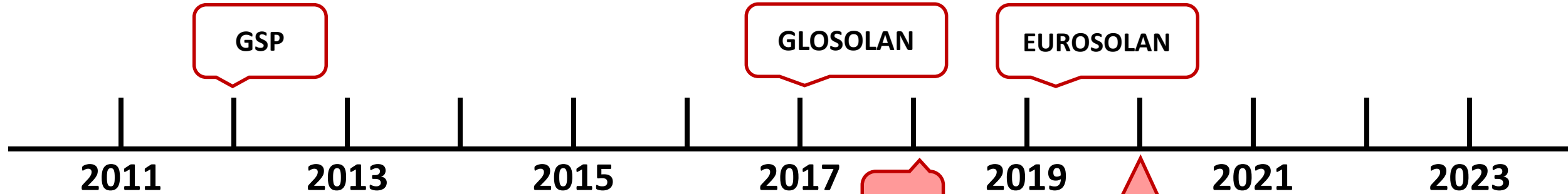
October 2019  
Food and Agriculture Organization  
Rome, Italy

  
Mr. Eduardo Mansur  
Director of the Land and Water Division,  
Food and Agriculture Organization

4<sup>th</sup> Meeting of the **European and Eurasian Soil Laboratory Network (EUROSOLAN)** | 5 - 6 October 2022



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


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# HISTORY REFERENCE

GSP

GLOSOLAN

EUROSOLAN



2011

2013

2015

2017

IB

2019

IB - NatRefLab

2021

2023



Global Soil

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October 2019  
Food and Agriculture Organization  
Rome, Italy



**13 laboratories:**

Barnaul, Bryansk, Moscow, Novosibirsk, Perm, Petozavodsk, Pushino, Rostov-on-Don, St. Petersburg, Syktyvkar

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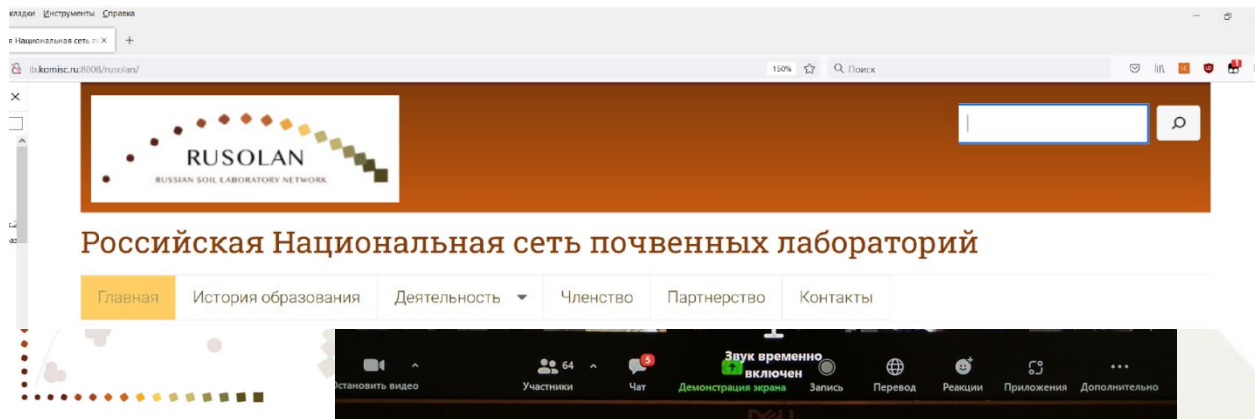
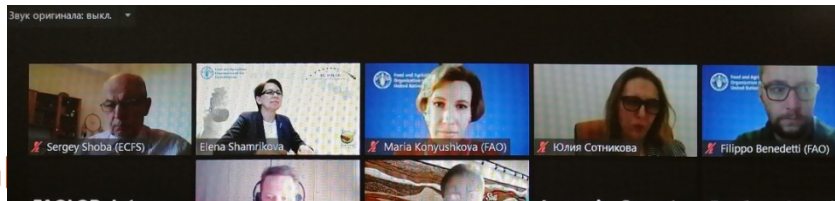
IB

2019

IB - NatRefLab

2021

2023



Today the National Network is actively functioning.

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# OBSTACLES / SOLUTIONS

## **1. Difficulties in involving laboratories in GLOSOLAN:**

- lack of information about GLOSOLAN;
- insufficient motivation;
- large geographic extent of the work of laboratories on a territory of the country;
- lack of accreditation in many laboratories;
- fear of PT;
- language barrier.

### *What helped to overcome?*

- status, image, persistence of the team;
- dissemination of information about the GSP and GLOSOLAN (articles, reports on different platforms).

# OBSTACLES / SOLUTIONS

## 2. Shortage of financial resources (partially solved)

*What helped to overcome?*

- internal resources;
- sponsor (PhosAgro).

## 3. Lack of human resources (partially solved)

*What helped to overcome?*

- motivation;
- enthusiasm.

# SUPPORT



Institute of Biology  
Komi Science Center  
Ural branch  
Russian Academy of Sciences



Dokuchaev  
Soil Science Society



Administration of the Institute of Biology;

PhosAgro Company;

Dokuchaev Soil Science Society;

Lucrezia Caon, Nopmanee Suvannang, Filippo Benedetti,

Maria Konyushkova, Alexander Antonov, Pavel Krasilnikov, Artemy Galutsky

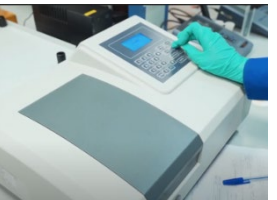
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# Is it useful to be a member of a Global / Regional / National network?

- International cooperation in the field of chemical analysis of soils;
- Development of new methods;
- Development of a new promising research niche – harmonization of soil research methods used in different regions;



# NEW METHODS / RESEARCH PAPERS

Food and Agriculture Organization of the United Nations

Продовольственная и сельскохозяйственная организация Объединенных Наций

МЕТОДИКА ИЗМЕРЕНИЙ ОРГАНИЧЕСКОГО ВЕЩЕСТВА ПОЧВ СПЕКТРОФОТОМЕТРИЧЕСКИМ МЕТОДОМ (метод Тюрина)

Standard operating procedure for soil organic carbon  
Tyurin spectrophotometric method

УТВЕРЖДАЮ  
Директор  
ФИЦ Коми ИЦ УрО РАН, и.б.  
С. В. Дроздов  
Методика измерений № 88-17641-001-2020

Методика измерений 88-17641-001-2020 (ФР.1.31.2020.38218)

ПОЧВЫ, ГРУНТЫ, ПОЧВОБРАЗУЮЩИЕ ПОРОДЫ, ДОЗНЫЕ ОТЛОЖЕНИЯ

МЕТОДИКА ИЗМЕРЕНИЙ МАССОВОЙ ДОЛИ УГЛЕРОДА ОРГАНИЧЕСКОГО СОДЕРЖАНИЯ И ОРГАНИЧЕСКОГО ВЕЩЕСТВА ФОТОМЕТРИЧЕСКИМ МЕТОДОМ (метод Тюрина и Уильям-Бенна)

Аттестован  
Центром «СЕРТИМЕТ»  
АНУ УрО РАН

Настоящая методика внесена в реестр методик измерений УрО РАН  
№ 88-17641-001-2020

Contents lists available at ScienceDirect

Geoderma

journal homepage: [www.elsevier.com/locate/geoderma](http://www.elsevier.com/locate/geoderma)

ELSEVIER

GEODERMA

## Transferability between soil organic matter measurement methods for database harmonization

E.V. Shamrikova<sup>a</sup>, B.M. Kondratenok<sup>a</sup>, E.A. Tumanova<sup>a</sup>, E.V. Vanchikova<sup>a</sup>, E.M. Lapteva<sup>a</sup>, T. V. Zonova<sup>a</sup>, E.I. Lu-Lyan-Min<sup>a</sup>, A.P. Davydova<sup>a</sup>, Z. Libohova<sup>b,\*</sup>, N. Suvannang<sup>c</sup>

<sup>a</sup> Institute of Biology Komi SC UrD RAS, Kommunisticheskay 28, Syktyvkar, Russian Federation  
<sup>b</sup> USDA-ARS Dale Bumpers Small Farms Research Center, 6883 S. Hwy 23, Booneville, AR 72927, United States

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Russian Text © The Author(s), 2022, published in Pochvovedenie, 2022, No. 7, pp. 787–794.

## APPROACHES AND METHODS FOR STUDYING SOIL ORGANIC MATTER

### Problems and Limitations of the Dichromatometric Method for Measuring Soil Organic Matter Content: A Review

E. V. Shamrikova<sup>a,\*</sup>, E. V. Vanchikova<sup>a</sup>, B. M. Kondratenok<sup>a</sup>, E. M. Lapteva<sup>a</sup>, and S. N. Kostrova<sup>a</sup>

<sup>a</sup> Institute of Biology, Komi Science Centre, Ural Branch, Russian Academy of Sciences, Syktyvkar, 167982 Russia

\*e-mail: [shamrik@ib.komisc.ru](mailto:shamrik@ib.komisc.ru)

Received December 25, 2021; revised January 18, 2022; accepted January 26, 2022

Н<sup>Р</sup> Научная Россия

НОВОСТИ СТАТЬИ ЛЕКЦИИ ИНТЕРВЬЮ

**ГАРМОНИЗАЦИЯ МЕТОДОВ ИССЛЕДОВАНИЯ ПОЧВ: ПУТЬ К УПОРЯДОЧИВАНИЮ**

07.05.2021 13:00 1832 Добавить в закладки

Ученые Института биологии ФИЦ Коми ИЦ УрО РАН (г. Сыктывкар) представили свой опыт гармонизации подходов анализа почв. Специалисты поделились результатами выполненной в рамках работы в Глосолан авторской разработки методики измерений содержания почвенного органического вещества. Это вклад в интеграцию сведений, накопленных почвоведомы мира за исторический период. Унификация методов измерений полезна в



# CONFERENCES / VIDEO RESOURCES



- Rome, Italy (2020)
- Moscow, Russia (2021, 2022)
- Petrozavodsk, Russia (2021)
- Tashkent, Uzbekistan (2022)
- Ashghabat, Turkmenistan (2022)
- Pushchino, Syktyvkar, Russia (2022)

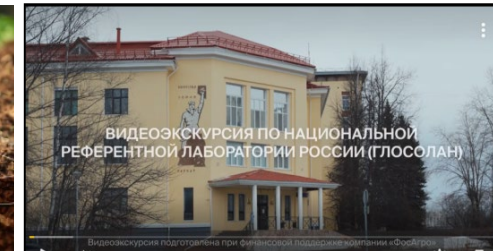
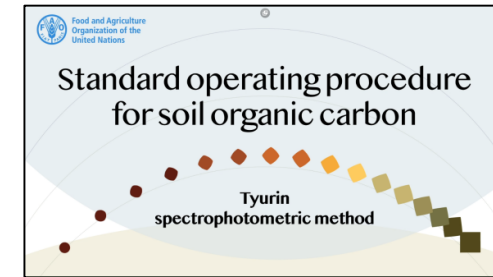
## EUROSOLAN as a part of the Global Soil Laboratory Network

Dr. Elena Shamrikova, Vice-Chair of the Eurosolan for Eurasia, Curator of the National Reference Laboratory of Russia, Institute of Biology Komi Science Center RAS, Russia



Food and Agriculture Organization of the United Nations

The Global Network of Soil Laboratories (GLOSOLAN) is an international mechanism for the promotion of technologies and knowledge in the field of sustainable land use and agriculture

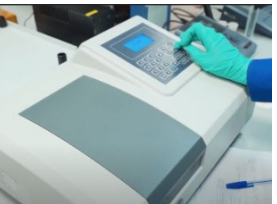


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# Is it useful to be a member of a Global / Regional / National network?

- PT (global, regional, national);
- Use of international SOPs;
- Exchange of experience;
- Professional development;
- Using best practices in soil spectroscopy.





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A decorative graphic consisting of a series of squares and dots in shades of brown, orange, and grey, arranged in a curved, descending pattern from the top left towards the right.

**EUROSOLAN**  
EUROPEAN AND EURASIAN SOIL LABORATORY NETWORK

Thanks for your attention!

