SAGRIS

Capacity building in Higher education

Enhancement of Postgraduate Studies on **S**ustainable **Agri**culture and Future Farming **S**ystems

Issue 2, February 2021

1st project year

On 14 January 2021 SAGRIS project has finished its first year of implementation. Caused by the world pandemic situation most activities were digitalized. Nevertheless, perfect networking and cooperation allowed the project consortium to achieve objectives set up for the for the first year.

Contents

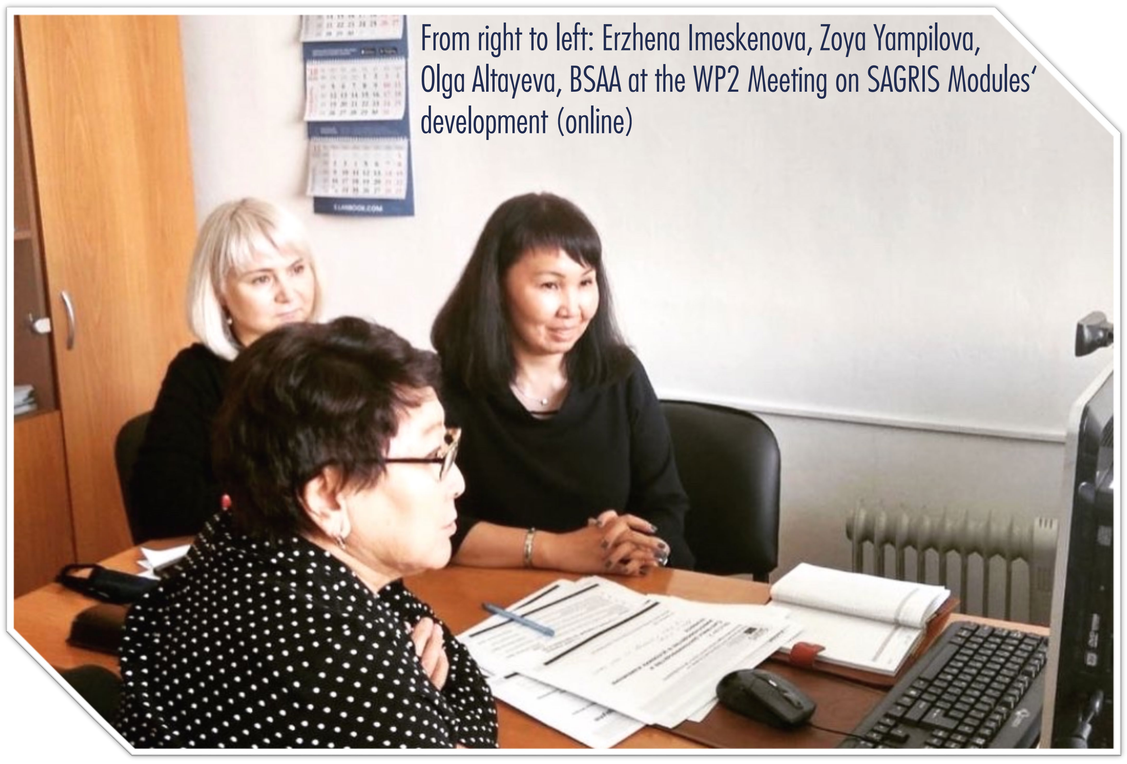
Project working structures

167 participants:

- ✓ Steering Committee
- ✓ 4 Module Working Groups
- ✓ Network Strategy Group
- ✓ Quality Management Group
- ✓ Quality Assurance Board

Project outcomes: 1st year of implementation

- 4 international research groups on SAGRIS modules' topics established and operational
- SAGRIS modules descriptions designed in line with European standards of quality for 3rd cycle education
- Situation analysis on doctoral studies in Russia and Kazakhstan finalized
- Glossary of terms and definitions used in the 3rd cycle education and their correlation in EU, Russia and Kazakhstan elaborated and aligned with the paper on situation analysis
- Questionnaire for doctoral students from Russia and Kazakhstan elaborated



From right to left: Erzhena Imeskenova, Zoya Yampilova, Olga Altayeva, BSAA at the WP2 Meeting on SAGRIS Modules' development (online)

From right to left: Michal Lostak, Heinrich Schuele, Joerg Ortmeier, Anna Borsuk, Erzhena Imeskenova, Angelika Thomas at the 1st Steering Committee Meeting in Nuertingen-Geislingen University

Co-funded by the Erasmus+ Programme of the European Union

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Project coordination:
Hochschule für Wirtschaft und Umwelt Nürtingen-Geislingen | Nuertingen-Geislingen University
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SAGRIS modules

SAGRIS modules are 4 newly elaborated educational moduels for doctoral studies - two content related and two methodological focused modules. They have been determined priority for partner HEIs in Russia and in Kazakhstan within the overall topic of ‘Sustainable Agriculture and Future Farming Systems’.

SAGRIS modules are being elaborated in accordance with the ESG and comply with the principles of the Bologna process. After their piloting in years 2021/2022, the modules will be included at the partner institutions into different doctoral study programmes.

4 new modules with workload of 4 ECTS each, are based on specific learning outcomes and student-centered approaches. They aim at improving knowledge, competencies and qualifications of doctoral students in the field of interdisciplinary sciences, transdisciplinary approaches in conducting research on agriculture and introducing innovations.

Module 1: **SMART Agriculture and Digitalization**

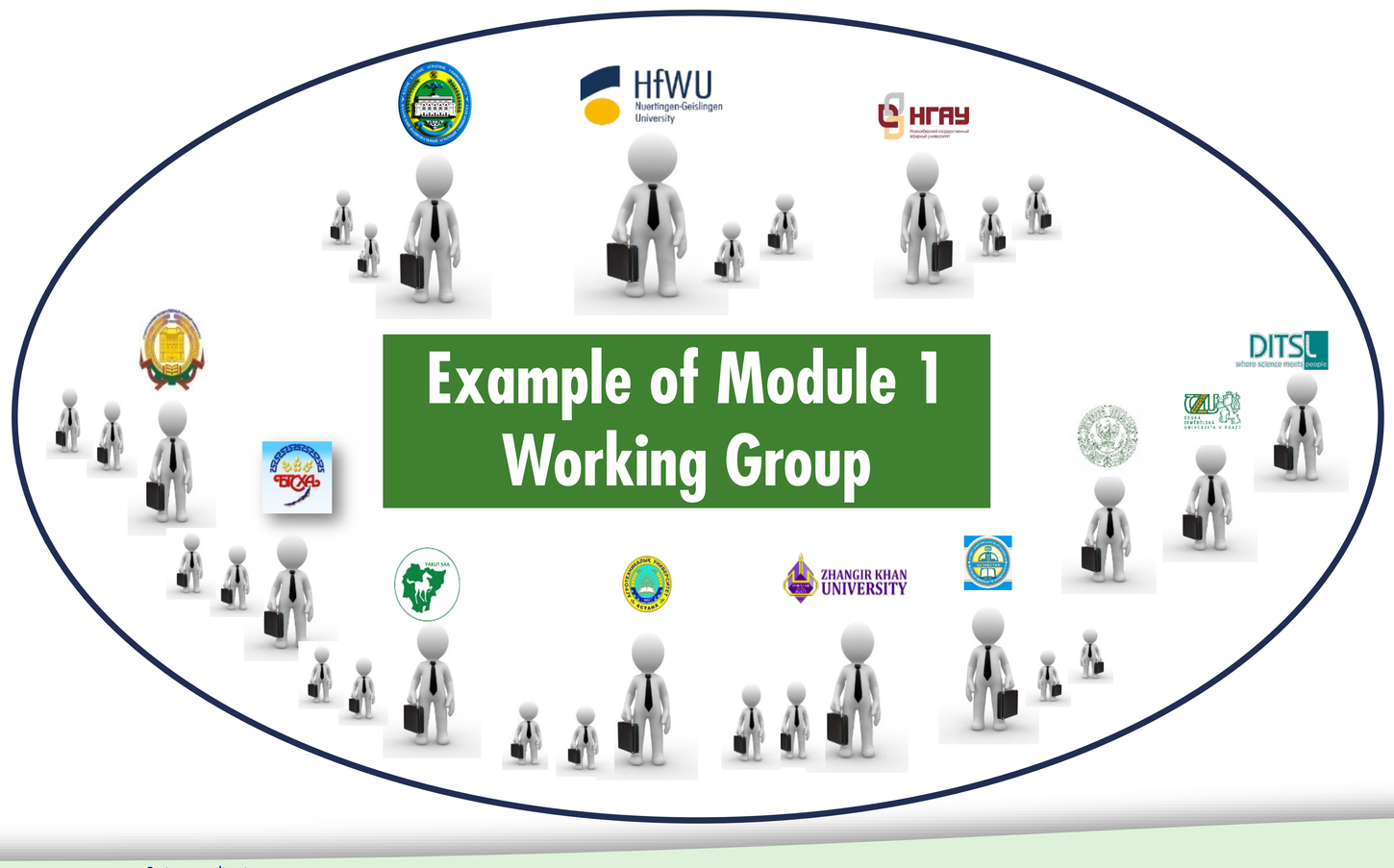
Module 2: **Crop and livestock systems under the climate change**

Module 3: **Advanced methods of scientific working**

Module 4: **Transdisciplinary research methods for sustainable agriculture**

Module Working Groups

Each Module working group is comprised from Russian and Kazakh academics and researchers whose aim is to design the module content and educational materials in line with European standards.



Module working group includes the teachers from all partner-universities whereas two Universities: one from Russia and one from Kazakhstan perform the leading roles in coordination and supervising the module elaboration. These two Universities will hold the innovative block-seminars for doctoral students.

The expertise and feedback for modules is provided by European professors.

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Module 1. SMART Agriculture and Digitalization

The module describes the technical background of Smart Farming Systems and digital technologies used in agricultural production. When studying this module, doctoral students will explore the potential of Smart Farming methods in order to increase resource-efficiency of agricultural production and sustainability of farming systems. Furthermore, they will be able to evaluate, assess and discuss the resource efficiency of different agricultural production systems.
Professional, methodological and practical content is revealed in the following topics:

1. **Concepts of sustainable agriculture and approaches for resource-efficient agricultural production**
2. **Digital technologies and techniques applied for Precision Agriculture and Smart Farming systems**
3. **ICT-based Farm Management Information Systems**
4. **Precision agriculture (crop farming and livestock breeding)**
5. **Agricultural Automation and Robotics**

Module Working Group „SMART Agriculture and Digitalisation“, NSAU, Russia

Module 1 Working Group

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KUANYSH ZHOLAMANOV
CAND.AGRI.SCI,
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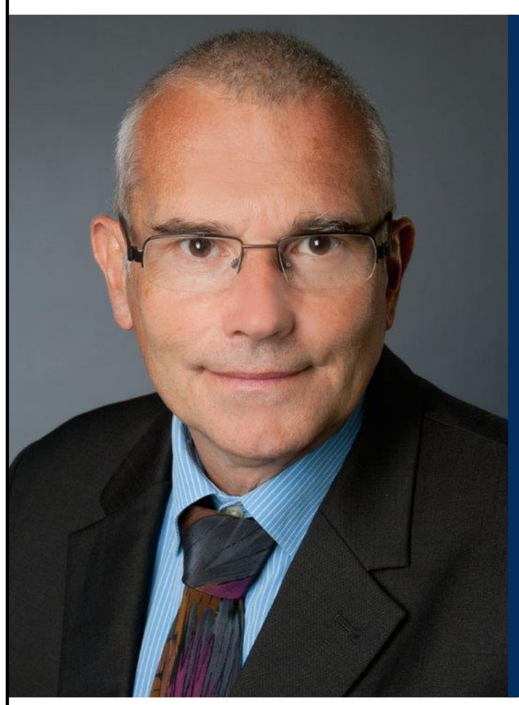

HEINRICH SCHUELE,
PROFESSOR,DR.,
DEAN OF AGRICULTURAL ECONOMICS STUDIES

Module leads (from left to right)
Dr. Vitaly Tikhonovskiy, Novosibirk State Agrarian University, Russia
Dr. Kuanysh Zholamanov, Kazakh National Agricultural Research University, Kazakhstan
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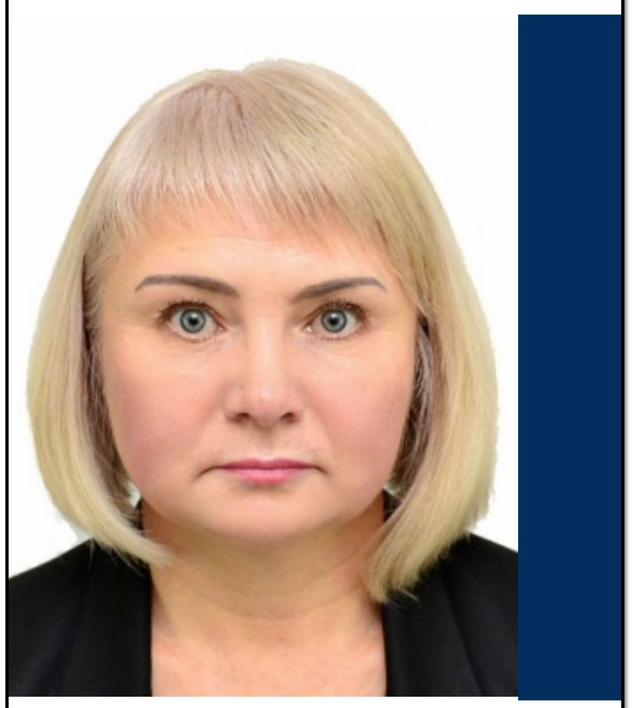
Module 2. Crop and livestock systems under Climate Change

The module highlights the impacts and implications of climate change on food security: assessing economic risks related to agriculture operating under climate change. It gives professional competence in forecasting and determining the impact of climate change on production activity, productivity and sustainability of crop and livestock production systems and teaches to adapt evidence based (research-rooted) ecologically safe crop and livestock production systems to the adverse effects of climate change. Professional, methodological and practical content is revealed in the following topics:

1. **Climate change impact on agricultural production systems**
2. **Climate change effects on food security**
3. **Sustainable resources management (water, ecosystems, land management)**
4. **Environmentally friendly crop production (healthy agricultural products)**
5. **Sustainable livestock systems and animal welfare**

Module Working Group „Crop and livestock systems under Climate Change“, BSAA, Russia

Module 2 Working Group



OLGA ALTAEVA,
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Dr. Indira Aitzhanova (A.Baytursynov Kostanay Regional Unversity, Kazakhstan)
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Module 3. Advanced methods of scientific working

This module offers doctoral students an overview of how to design, plan and conduct advanced scientific research projects from inception to completion: including proposal writing, data collection, analysis and sharing results through publications and presentations. By promoting rigorous scientific practice, they are more likely to create relevant research that has traction in broader sustainability debates.

The following subtopics are to be explored:

1. **Research data management**
2. **Scientific publishing, incl. methods of literature research**
3. **Advanced statistical methods**
4. **Advanced statistical methods**
5. **Writing grant proposal**
6. **Project and time management**

Module Working Group „Advanced methods of scientific working“, SSAU, Russia

Module 3. Working Group

YULIA BEZGINA,
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ASSOC.PROFESSOR,
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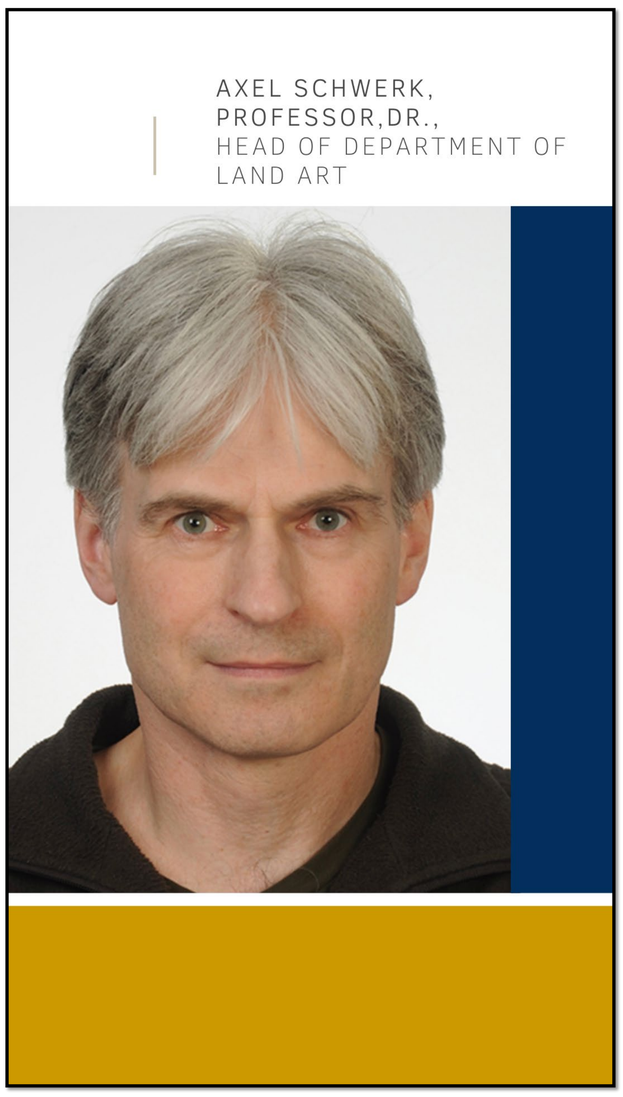

AXEL SCHWERK,
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Module leads (from left to right):
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Dr. Nadezhda Meleshenko (S. Seifullin Kazakh Agrotechnological University, Kazakhstan)
Prof. Dr. Axel Schwerk (Warsaw University of Life Sciences, Poland)

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Module 4. Transdisciplinary research methods for sustainable agriculture

This module offers doctoral students to learn how innovations to complex problems in agriculture and food systems can be developed together with societal stakeholders using a transdisciplinary research approach. The module focuses on social sciences methodologies and system approaches, particularly with regard to understanding human actions and behavior and the importance of underlying knowledge for system functioning and change.
The following aspects are covered:

1. **Introduction into sustainability in agriculture and food systems**
2. **System approaches: conceptual and theoretical foundations of socio-ecological system and human activities**
3. **Participatory and qualitative methods of transdisciplinary research**

Module Working Group „Transdisciplinary research methods for sustainable agriculture“, WKATU, Kazakhstan

Module 4. Working Group

MARIANNA TERYUTINA,
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Prof. Dr. Brigitte Kaufmann (German Institute of Agriculture in Tropics and Subtropics, Germany)

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SAGRIS on Erasmus Days 2020

SAGRIS project joined Erasmus Days 2020 with an online-presentation of the project. Around 110 participants from partner and non-partner universities of Russia (Moscow, Novosibirsk, Stavropol, Ulan-Ude, Omsk, Tomsk, Irkutsk, Izhevsk, Kazan, Krasnodar etc.) and Kazakhstan (Nur-Sultan, Almaty, Kostanay, Oral, etc.) participated the dissemination event. Experts and researchers from Russian Academy of Sciences, National Centre for Professional Accreditation (Russia), Independent Agency for Accreditation and Rating and National Agrarian Scientific and Educational Centre (Kazakhstan) as well as partners from German, Polish and Czech Universities joined as well. Numerous questions and lively discussions during the event demonstrated high interest of the audience. Participants from partner and non-partner universities got interested in attending project block-seminars and studying the modernized educational programmes, including new SAGRIS modules.

Organizers and hosts of the SAGRIS presentation
Erasmus Days 2020
From left to right: Evgenii Rudoy, Rector;
Liubov Shmidt, Head of international Affairs
NSAU, Russia

Project team participates at SAGRIS presentation,
Erasmus Days 2020
From left to rigt :Gulzhamal Irgalieva, Irina Bogdashkina
WKATU, Kazakhstan

International community at Erasmus Days 2020
Online-presentation of SAGRIS project

Project team participates at SAGRIS presentation, Erasmus Days 2020
Arsalan Mankhanov BSAA, Russia

Want to learn how you can benefit?...

Interested to cooperate with us?...

Got a question?...

Contact us to find out more!

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SAGRIS partners and contacts

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