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Eurasian Center for Food Security

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In the January issue we present key outcomes realized by the Eurasian Center for Food Security in 2019.

We also discuss a seminar held in Tashkent on the creation and implementation of a university course on sustainable land management in Central Asia, and the underlying reasons for the urgency of such a course.

This issue concludes with the first Event Calendar of 2020!

ECFS Applied Research and Projects: 2019 Outcomes

By Roman Romashkin

The activities of the Eurasian Center for Food Security (ECFS) are interdisciplinary and aimed at strengthening food security and creating sustainable food systems in the Eurasian region. In 2019, ECFS intensified its project work in the region. This article presents the main outcomes of ECFS work over the past year.

To improve the effectiveness of Uzbekistan's negotiation process for joining the World Trade Organization (WTO), ECFS provided expert assistance on issues of state support for agriculture. The Kyrgyz Republic's first field experiments on how to grow sweet potatoes were successfully conducted. Farming sweet potatoes will boost the in-

come of small farmers and diversify their food products for both trade and consumption. It will also contribute to the diversification of production and export growth, as well as increase the efficiency and stability of the national agri-food system. The soil information system project begun in 2016 in collaboration with the MSU Faculty of Soil Science continues. This system was introduced and implemented in the Kyrgyz Republic and Uzbekistan.

Organization of data centers operating the soil information system in the context of their subsequent integration into the unified digital platforms of the Eurasian region will ensure sustainable management of soil resources.

The basis for taking joint action to strengthen food security in the Aral Sea region lies in the development and implementation of innovative soil protection technologies, climate smart practices that address the conditions of soil salinity, and methods of digital soil mapping of ground and satellite information. These methods are all available, but joint action would help scale them out and use them to their full potential.

Based on the system of integrated assessment of food security developed by ECFS, a single database for monitoring food security indicators in the countries of the Eurasian region was formed.

The results of applied research and project work in the region were presented during the [Annual Eurasian Food Security Conference](#) organized by ECFS together with the World Bank, the Food and Agriculture Organization (FAO) of the United Nations, the International Food Policy Research Institute (IFPRI), and the International Center for Agricultural Research in the Dry Areas (ICARDA). In addition, the results of the research activities formed the basis of ECFS proposals aimed at ensuring the sustainable development of agriculture in the G20 countries and those in the Asia-Pacific Economic Cooperation (APEC), the Association of Southeast Asian Nations (ASEAN), Africa, the Eurasian Economic Union (EEU), and the Commonwealth of Independent States (CIS).

The interdisciplinary and multinational approach used by ECFS helps to strengthen the interaction of researchers from different countries; it also contributes to the development of analytical and applied research competencies on food security and nutrition in the Eurasian region.

ECFS, together with the World Bank, held events to present the following ongoing or completed projects:

- Country studies on the organic production and market regulation in the countries of the EEU. The presentation is available [here](#) (Day 2, Session 1 Organic Production Development and Market Regulation in the Eurasian Economic Union); the full text of the study will be available later on the ECFS website.
- Research assessing the competitiveness of Russian agri-food exports in the Chinese market. The presentation is available [here](#) (Day 2, Session 3 Agricultural Development and Food Security in Eurasia); the full text of the study will be available later on the ECFS website.

- A discussion of the project on the formation and use of the system of integrated assessment of food security and nutrition in the countries of the Eurasian region.
- The fourth round of case studies on food and nutrition security to explore policy options regarding the use of the following sustainable agriculture practices in the Eurasian region: organic agriculture, climate-smart agriculture, biological agriculture, and ecosystem-based agriculture.

In collaboration with FAO, ECFS:

- Continued its research on school nutrition, as well as research on the physical growth of school students and the connection of that growth to school nutrition in Armenia and the Kyrgyz Republic.
- Conducted training programs and courses for public servants on strengthening national food security and improving nutrition in Armenia and Tajikistan.

In collaboration with IFPRI, ECFS:

- Conducted a study on food security and agricultural trade development in Central Asia. The results of the study are reflected in the 2019 [Global Food Policy Report](#).
- Prepared a memorandum of understanding and a calendar plan for joint research with ECFS and IFPRI for 2020–2024. Joint activities are aimed at developing empirically based agricultural policy measures to increase productivity in the agricultural sector, promote regional integration, and expand trade in agri-food products.

An Agreement on cooperation between ECFS and the Ministry of Agriculture, Food Industry and Land Reclamation of the Kyrgyz Republic was signed. The document enables their cooperation on ensuring food security, ensuring adequate nutrition, improving the efficiency of agricultural markets, and creating sustainable agri-food systems in the Kyrgyz Republic.

ECFS is looking forward to new projects and fruitful collaborations in 2020. Please follow the ECFS website to take advantage of ECFS research opportunities, courses, and events.

First Steps toward Creating a University Course on Sustainable Land Management in Central Asia

By Evgeniy Tsvetnov and Anna Kontoboytseva



Photo credit: ECFS

Participants of a seminar on developing university courses on SLM in Central Asia

Sustainable land management (SLM, also called *sustainable land use*) is a fundamental concept in modern environmental management. At the World Summit on Sustainable Development in Johannesburg, South Africa, in 2002, SLM was defined as “the use of land resources, including soil, water, animals and plants, to produce goods necessary to meet changing human needs, while simultaneously ensuring the long-term production potential of these resources and the maintenance of their environmental functions.”

SLM is usually considered to be the main effective method used to restore land and to prevent and mitigate its degradation, but it can also be used as part of an integrated climate change adaptation strategy.

Today, the problem of soil degradation is extremely acute. According to experts, about 33 percent of the world’s soils are moderately or severely degraded, which leads to multi-billion-dollar crop losses, reducing the level of food security in both developing and developed countries. Developing countries, which are traditionally most dependent on their own agricultural products, are the most affected by soil degradation. Awareness of this problem by the world community has led to the fact that, at present, the restoration of degraded land ecosystems is one of the priorities of the Sustainable Development

Goals developed by the United Nations (UN). However, public response to the implementation of these programs is insufficient; creating a fundamentally new mechanism to compensate for losses resulting from land degradation is needed. It is necessary to develop and improve the scientific basis of SLM, as well as ways to apply it in practice.

On December 19–20, 2019, a seminar on developing university courses on SLM in Central Asia was held in Tashkent (Uzbekistan). The seminar was organized by the ICARDA Regional Office for Central Asia and the Caucasus (ICARDA CAC), ECFS, and IFPRI. The seminar was attended by 11 university teachers from the Kyrgyz National Agrarian University, the Tajik Agrarian University named after Shirinsho Shoutemur, and Tashkent State Agrarian University.

The seminar focused on various aspects of introducing the SLM course into higher education. It should be noted that, despite the necessity and urgency of studying this discipline, SLM is not currently taught in Central Asian universities. Individual distance courses (for example, those presented on the FAO and Coursera online learning platforms) often do not contain economic modules and lack specific examples of application in CIS countries-

they provide general knowledge rather than applied knowledge and techniques.

As part of a joint project between ICARDA and ECFS in 2019, training modules were developed for each component integrated into SLM: natural resources, agricultural production, and economic and policy measures. These modules will form the basis of the SLM course for Central Asian countries.

During the seminar it was shown that SLM can be taught as a separate module within the framework of basic courses of specialized universities - as an independent course or a special course that integrates knowledge in the fields of agronomy, soil science, ecology, economy, and management in the context of SLM, as well as a separate specialization (for example, the Sustainable Land Management course at the University of Wageningen in the Netherlands).



Elena Belova presentation

The seminar was introduced by Olga Andreeva, an expert in SLM, senior researcher at the Institute of Geography of the Russian Academy of Sciences, and Russia's national coordinator in the international program of the Global Mechanism and the United Nations Convention to Combat Desertification. The introduction described the basic concepts of SLM, reviewed international documents and initiatives that define SLM (such as the Land Degradation Neutrality Target Setting Programme), and presented technologies and practices of SLM, including tools of a global network on Sustainable Land Management (WOCAT).

In the area of sustainable soil management (SSM), Anna Kontoboytseva, ECFS research officer, reported on state assessment tools, indicators of degradation, and issues of soil cover monitoring in Central Asia in the context of climate change, international programs, and initiatives in the field of SSM.

Aziz Nurbekov, an expert from the FAO Subregional Office for Central Asia, presented the current state of and prospects for the development of conservational agriculture in the region.

The regional coordinator of ICARDA CAC, Ram Sharma, highlighted the basics of sustainable intensification of crop production, including crop diversification, the use of hybrids, and forms and features of their cultivation in Central Asia in the context of climate change.

ICARDA CAC expert in sustainable water management, Akmal Akramkhanov, highlighted the issues of water-saving technologies for irrigation and water quality control in connection with the ubiquity of salinization processes.

The economic and SLM policy measures presented by ECFS experts were new modules for the audience. Senior researcher Evgeniy Tsvetnov lectured on the economic basis for SLM, covering such topics as greening the economy in the context of SLM, approaches to the assessment of the environment and its value, and economic assessment of land degradation.



Evgeniy Tsvetnov presentation

Senior research officer Elena Belova reviewed state policy and measures of state regulation on SLM, as well as recommendations for the development of national action plans. It was proposed to introduce the case study methodology into the educational process to consider specific SLM practices.

The seminar resulted in a discussion of further steps, including publishing the developed training materials and implementing the SLM course for university teaching in Central Asia. In 2020, ICARDA CAC and ECFS plan to publish a guide to SLM practices in the Eurasian region for addressing the climate change challenge.

Event Calendar 2020

Date	City. Country	Event
January 27–31	Moscow, Russia	Training for University Professors in the use of the Case Study Methodology in Food and Nutrition Policy teaching programmes (hosted by ECFS)
March 5–6	Halle (Saale), Germany	Workshop “Political economy of agricultural policies and land relations”
March 10-20	Rome, Italy	Global Symposium on Soil Biodiversity
March 24–26	Krasnodar, Russia	International Scientific Ecological Conference "Agricultural Landscapes, Their Sustainability and Features of Development" (in Russian only)
May (TBD)	Moscow, Russia	International Conference on Agriculture, Food Security and Nutrition in Eurasia Featuring IFPRI's 2019 <i>Global Food Policy Report</i> (website is not available yet)
May 5-7	Tashkent, Uzbekistan	FAO Regional Conference for Europe (ERC 32)
May 26-27	Moscow, Russia	Second Global Forum on Food Security and Nutrition
June 16–19	Montpellier, France	4th International Conference on Global Food Security
June 24–26	Halle (Saale), Germany	IAMO Forum 2020 Digital Transformation – Towards Sustainable Food Value Chains in Eurasia