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## **FOOD SECURITY IN KAZAKHSTAN: THE CASE OF THE NEW CLIMATE ECONOMY CENTER AT KAZAKH AGROTECHNICAL UNIVERSITY**

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### **Abstract**

Food security remains an important issue on Kazakh policy and scholarly agenda. Over the last few decades, however, food security has been increasingly challenged by climate change across the globe. Thus, it is quite surprising to observe a lack of systematic analytical and research attention to issues of food security and sustainable agriculture through the prism of climate change across the Central Asian region.

This paper seeks to fill this gap by suggesting the need to reorient the scholarly attention to food security by focusing on climate change, particularly through the lenses of the climate economy. In doing so, it analyzes the case of the R. Chung New Climate Economy Research Center for Central Asia currently being established at S. Seifullin Kazakh Agrotechnical University (KATU) in Nur-Sultan, Kazakhstan. The new center, named after the 2007 Nobel laureate Professor Rae Kwon Chung for his contribution to the study of climate change, aims at analyzing agrarian sustainability through the prism of climate economy and identifying the investment scheme required to harness the agricultural sector as the driver of new climate economy both in Kazakhstan and the region.

### **Introduction**

Food security has become a prominent issue on the global policy agenda. This topic is relevant due to the unfolding era of the world economy shaped by the digital revolution. While Kazakhstan appears to remain relatively better off compared to other developing nations [1], the issue has increasingly gained the attention of international organizations, local political leaders, policy experts, and scholars.

Yet, one specifically growing concern is extreme fluctuations of global temperature due to climate change (e.g. as in [2]). The summer of 2022 witnessed large-scale droughts across EU nations and China. Thus, it is rather surprising to observe a lack of systematic scholarly attention to food security issues through the prism of climate change in Kazakhstan. Specifically, a quick Google Scholar search for relevant literature suggests there have only been a few research articles published (e.g. [3], [4], [5], [6]), mostly over the past two years or so. What follows below is a brief analysis of policy and academic research on food security in Kazakhstan and the Central Asian region.

An analysis of policy and academic research

This overview incorporates both policy and academic research on food security in Kazakhstan.

First, the policy and legal framework includes the Law "On the National Security of the Republic of Kazakhstan" dated January 6, 2012 [7], which stresses the need for food security to ensure national security at the legislative level. Second, In the Address of the President of Kazakhstan Nazarbayev N.A. to the people of Kazakhstan titled "Strategy "Kazakhstan-2050": The new political course of the established state" dated 14 December 2012, the threat to global food security was identified as one of the ten global challenges of the 21st century for Kazakhstan [8]. As the strategy "Kazakhstan-2050" points out, this challenge holds enormous opportunities. Third, as part of the State program for the development of the agriculture industry in the Republic of Kazakhstan for 2017 – 2021, one of the most important tasks is to ensure national food security [9]. Agriculture is a vital sector of the economy, which sustains food security and ensures the national security of the country (ibid). Finally, the National project for the development of the agriculture industry of the Republic of Kazakhstan for 2021-2025 seeks to boost labor productivity, provide 500,000 jobs (including 100,000 full-time and 400,000 seasonal jobs), attract KZT 4.5 trillion investments, double the exports of processed agricultural products bringing its share to 70%, engage 350,000 farmers and households in ecosystems, and to create 70,000 family farms across the country [8].

Furthermore, specific scholarly works help better explain food security dynamics in Kazakhstan. First, it is noted that the first 15 years of post-Soviet development in Central Asia was seen as a period with “socio-economic shocks that increased food insecurity” ([10],

p. 452) which spurred the adoption of food policy reforms. Another work [11] stresses the need to push comprehensive food policy reforms away from raw material-based toward high- value agriculture areas and focus on agricultural diversification through cluster development. Furthermore, the authors [11] note the need to develop Kazakhstan’s own food production base. Finally, [12], while noting overall recent improvement in Kazakhstan’s food security, emphasize a number of remaining issues, such as individual decisions to buy land plots to grow their own food or “stocking up on food” (p. 194). These factors are due to rising food prices and declined purchasing power. The authors conclude that improving food security should require more innovations in food production, food availability to the disadvantaged and vulnerable groups.

Specifically regarding the existing research on food security and climate change in Kazakhstan, first, it is explicitly suggested that ongoing research on the impact of climate change on food production in Kazakhstan largely remains limited [3]. Next, both [4] and [6] point to the importance of taking action aimed at reducing drought risks due to climate change. Finally, the need is emphasized to analyze “the effect of climate change on cereal trade in Central Asia” ([5], Abstract).

The case of the R. Chung New Climate Economy Research Center for Central Asia As the above section suggests, food security generally remains on political and policy agendas in Kazakhstan. Furthermore, the existing academic research [12] notes recent improvements in Kazakhstan’s food security, while attention should be given to minimizing the drought risks caused by climate change [4], [6] and exploring the links

between climate change and food security in Kazakhstan [3].

Based on the above, and in an effort to fill these research gaps, KATU currently is in the process of establishing the Rae Kwon Chung New Climate Economy Research Center for Central Asia in Nur-Sultan, Kazakhstan. The new center, named after the 2007 Nobel laureate Professor Rae Kwon Chung for his undeniable contribution to the study of climate change (as in e.g. [13]), aims at analyzing agrarian sustainability through the prism of climate economy and identifying the investment scheme required to harness the agricultural sector as the driver of new climate economy both in Kazakhstan and the region. Specifically, [13] suggest that, contrary to the traditional economic theory, the link between economic growth and environmental protection can be positive.

Some of the major planned activities of the Center include the following:

- development of New climate economy policy programs for the Central Asian countries
- Initiation, implementation and dissemination of research findings on the New Climate Economy (NCE)
- attracting grant funding, including from international and foreign organizations
- development of new teaching materials and manuals based on ongoing research projects within the educational programs of the KATU Faculty of Economics
- invitation and organization of guest lecturers on NCE issues
- conducting seminars, conferences and other events related to NCE issues
- preparation of a ready-made online semester (trimester) course on climate economy on the Nobel Fest platform with Professor Rae Kwon Chung.
- interaction with international institutions, government agencies, analytical centers and commercial organizations on the NCE, green growth and food security issues.

### Conclusion

Overall, food security has seen noticeable improvements in Kazakhstan, both vis-à-vis other developing nations and as compared to earlier periods of post-Soviet development in Kazakhstan [10]. More specifically, as the legal framework and policy analysis suggests, food security remains one of the most vital issues on the governance agenda [8]. Furthermore, the COVID-19 pandemic, the unfolding Ukrainian crisis, the current drought across EU states and China, as well as other global and regional factors are likely to put more pressure on food security trends.

To alleviate this, scholars call for food policy reforms (e.g. [10], [11]). Specifically, [11] advocates for comprehensive food policy reforms toward high-value agriculture and focusing on cluster-driven diversification, while Kazakhstan needs to develop its own food production base.

Furthermore, the existing research on food security and climate change in Kazakhstan suggests the need to analyze the impact of climate change on food production [3].

Thus, the KATU's decision to open a New Climate Economy Research Center for Central Asia is timely. The Kazakh agricultural sector bears great potential to develop various food products, stimulate new digital technologies, diversify export markets,

expand organic production, and transform agricultural science into a driver to boost the industry competitiveness [11]. Future research should focus on ways to introduce innovative agriculture techniques, focus on comparative case analyses in Central Asia and Eurasia, and conduct an evaluation of existing policy frameworks in terms of effects on agricultural development in the country.

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