



# Research, innovation and technology transfer in the agri-food sector in the Western Balkan countries/territories: Phase II

**KOSOVO CASE**  
**MIHONE KEROLLI MUSTAFA**

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# Introduction

- The agriculture sector is the sector of great importance in the Kosovo overall economy.
- Currently, it contributes with 13.5% to gross domestic product.
- Kosovo has put in place elements of a legislative framework in research.
- The main challenges remain the implementation, allocation of financial resources and adequate capacities and knowledge in research and innovation.



# Current research areas and capacities in Kosovo

## Legal basis:

- National Research Programme 2017-2021
- Education Strategic Plan 2017-2021
- Law on Scientific Research Activities 04/L-135
- Law (No. 06/L-049) on Scientific Innovation and Transfer of Knowledge and Technology
- Law (No.04/L-037) on Higher Education in the Republic of Kosovo
- Law (No. 2004/ 19) on Academy of Science and Arts of Kosovo



# Farm advice, research and education

- The advisory system in its present form is functional, but it should be strengthened both financially and technically.
- The advisory services remains connected with research institutions and individual researchers from institutes and faculties in the field of agriculture.
- National funding remains very small with less than 0.1 % of the country's budget, This is far below Kosovo's needs to finance research strategy priorities.
- In addition, some donor funding has been provide, but their support was not sufficient enough to reach the impact on the research system as to increase research capacities at the institutional levels.
- One good example of the project recently awarded by EC is " Enhancing Research Culture in Kosovo – ResearchCult ". This structural project is a direct contribution to national priorities set in the Erasmus + documents for Kosovo, as well as to national strategies for higher education and research.



# Role of education and training in enhancing RITT

- Universities and other research institutions in Kosovo, still possess a lack of institutional actions and mechanisms to support constant activity in scientific research.
- It is in considerable need to undertake certain actions in coordination with national authorities, such as the Ministry of Education, Science and Technology, on a strategic approach, such this project focuses, on certain measures that would enhance the research quality and quantity in the education sector in Kosovo.
- One joint effort of the higher education institutions, entrepreneurs, Kosovo Chamber of Commerce and policymakers was supported by EC through the “Creating Theory to Practice Centres for Innovation and Employment/CTPCIE” project.



# Knowledge diffusion through networks

- Kosovo is working closely with donors like EU, USAID, GIZ, Swiss and other donors to promote RITT.
- The collaborations are at project implementation level with counterparts at the Western Balkan region and throughout Europe. Such cooperation is diverse in terms of scope and expertise generation.
- The Centre for Innovation Support and Technology Transfer (CITT) part of the Department for Technology and Science within the Ministry of Education Science Technology (MEST) is serving as the main source of information and the linkages between science, technology, and industry actors to accelerate the process of technology transfer, technology development, and innovation in Kosovo.

# AKIS structure

- AKIS model is somehow employed in Kosovo as well – the extent and structure of the interactions are however vague and sometimes conflicting with the role of parties. In particular, the role of Education and Research is yet to be incorporated into the system.
- In Kosovo, the system works more effectively in the dairy services, where the collaboration between farmers, food processors, and retailers, as well as other actors such as dairy associations and other state actors (subsidies, quality assurance, etc), is more organic than in other agricultural sectors. Dairy and wine sectors are the most organized sectors in Kosovo agriculture, for this purpose they are the loudest and the government is hearing more, so respectively they are benefiting the most from the public money either through DP or rural grants.
- The target groups are farmers, agro-processors, and other business partners involved in the agriculture sector, sectoral associations, government institutions (Ministry of Agriculture, Forestry and Rural Development, Ministry of Economic Development, Ministry of Innovation and Technology), research institutes, and universities across Kosovo.

# Market formations

- Several innovative companies in Kosovo have responded to the new market trends.
- The innovation, as well as the research, is at a very initial stage in Kosovo.
- Market forecasts suggest that digital and new technology will help the agri-food sector to correspond to the changes and market trends. Foreign investors such as Tetra Tech and USAID have invested in high-tech and labour-intensive production.
- Producers benefited with the improvement of agricultural production technologies, and 39 firms received assistance to invest in improved technologies.
- Capacity building training was delivered and more than 575 new jobs were created by the USAID program. Farmers raised high-tech fruit, vegetables and flowers plantations but also invested in the hi-tech for conservation, *plant* protection and post-harvest. The beneficiary firms transformed the current *greenhouses* into *high-technology* using vertical farming systems.



# Focus group findings

## Opportunities to improve cooperation and interaction

- Kosovo continues to face the problem with the lack of procedure to implement the RITT financial instruments in the sector and to bring to collaboration research and academic institutions, private sector and governmental agencies. The T2P model is new and should be further promoted.
- Due to the weak synergy, more stimulation and the interaction between national and regional AKIS as well as with other WBCs is need it.
- The research should be enriched with the application of an interdisciplinary approach and use of the capacities from ICT, natural sciences, etc.
- Kosovo still has very low number in application in Horizon 2020 and other programs. The increase of network and more Joint Programming Initiatives should be developed.
- The application of smart specialisation between WBC can create a new research market with the harmonisation of hard- and soft infrastructures in AKIS.



# Solutions to overcome gaps and issues in the collaboration:

- Enhance AKIS institutional capacity
- Development of decentralized decision-making
- Integrate agricultural producers into AKIS decision-making processes
- Promote local-level training and invest in agricultural market development
- Provide a linkage in agricultural knowledge support systems
- Enhance the innovation-based collaborations and ICT.
- Promote partnership and exchange ideas towards common solutions (value chains, environment, society etc) and enhance interactive innovation
- Promote the use of knowledge and innovation for agriculture and interrelated fields and strength the link between research and practice.
- Strengthening the farm advisory services in AKIS in Kosovo.



# Opportunities to improve green and clean technology

- Creating innovation incubators for proofing, development, improvement and implementation of innovative technologies for various elements of green infrastructure etc.
- Use of existing academic and research facilities and improving them for proficiency testing of innovative technologies and new concepts for the agri-food sector.
- Fostering further research on innovative technologies and concepts for better understanding their positive impact and limitations, with a focus on e-agriculture and environmental protection.
- Implementation of this knowledge in education in form of lectures on the above-mentioned topics not only for students but also for groups with other background levels, like farmers, businesses, practitioners in the food sector, etc.
- Dissemination of this knowledge at every activity (workshop, conference, festival, etc.) in the frame of the scientific community and farmers as well.
- Another example proposed is the use of drones for Inspections due to a faster, cheaper and more environmentally friendly approach than current ones,



# Conclusions

For enhancement of RITT in Kosovo, the following is summarised :

- Prioritizing RITT in agri-food-segment, both financially and collaboratively among all relevant actors (industry, research & academia, and government).
- Enhance public-private cooperation.
- Foster systemic intervention for enabling a well functional operation and improve RITT structure by appointing and functionalizing the decision-making bodies (National Research Council, and the National Innovation Council).
- The government to define and launch and implement the RITT financial instruments in the sector to bring to joint collaboration research and academic institutions, private sector and governmental agencies.
- Differentiated innovation and practice policies for agricultural must be designed to fit the sector needs and transformation.



Thank You!

