

Project Research, innovation and technology transfer in the agri-food sector in the Western Balkans: Phase II

24 November 2020, Floor Geerling-Eiff

WORKSHOP ON AGRICULTURAL RESEARCH AND KNOWLEDGE TRANSFER IN THE WBC

Wageningen Economic Research, Regional Rural Development Standing Working Group in South Eastern Europe



Background

- The agri-food sector in the WBC is technologically behind EU member states
- Rural areas and businesses are technologically behind the urban communities
- There is a need to understand gaps and opportunities in the transfer of research, innovation and technology to and in the agri-food sector in the WBC
- Better understanding of gaps and opportunities in RITT will enable better managing of:
 - Agri-environmental impacts of the sector
 - Resource intensity and resource loss
 - The entire Life Cycle of sector components



This study, run thanks to **IPARD** funding, responds to the above challenges.

It will contribute to having a more targeted and added-value economic impact of agriculture and related policies on the agri-food sector in the WB region.

Bridge between Study's Phase 1 and 2

- First phase: the inventory of research, innovation and technology transfer capacities and recent agricultural policy developments in the context of the EU approximation process in the pre-accession countries (DG AGRI, JRC, SWG)
- Phase 1 is still on-going and results will be final end 2020
- Part of Phase 1 focused on research, innovation and technology transfer capacities in the WB region and serves as a background for the current study
 - The objective of Phase 1 has been to **assess** RITT capacities
 - Phase 2, i.e. the current project, aims at **enhancing** them



Project Objectives

The overall **aim** of this project is to enhance RITT in the agri-food sector in the WBC, to:

- facilitate RITT capacities related to green and clean technologies in relation to the EC's Green Agenda for the Western Balkans
- aim at enabling a gradual approximation of the agri-food sector in the WBC towards EU standards and increasing its competitiveness

The **objectives** are:

- to identify needs, capacities and gaps in RITT
- to contribute to its enhancement and exploring possibilities
- to facilitate the participation of the research entities and networks from the agri-food sector in the WB into Eur projects and networks
 - particularly within Horizon Europe or COST

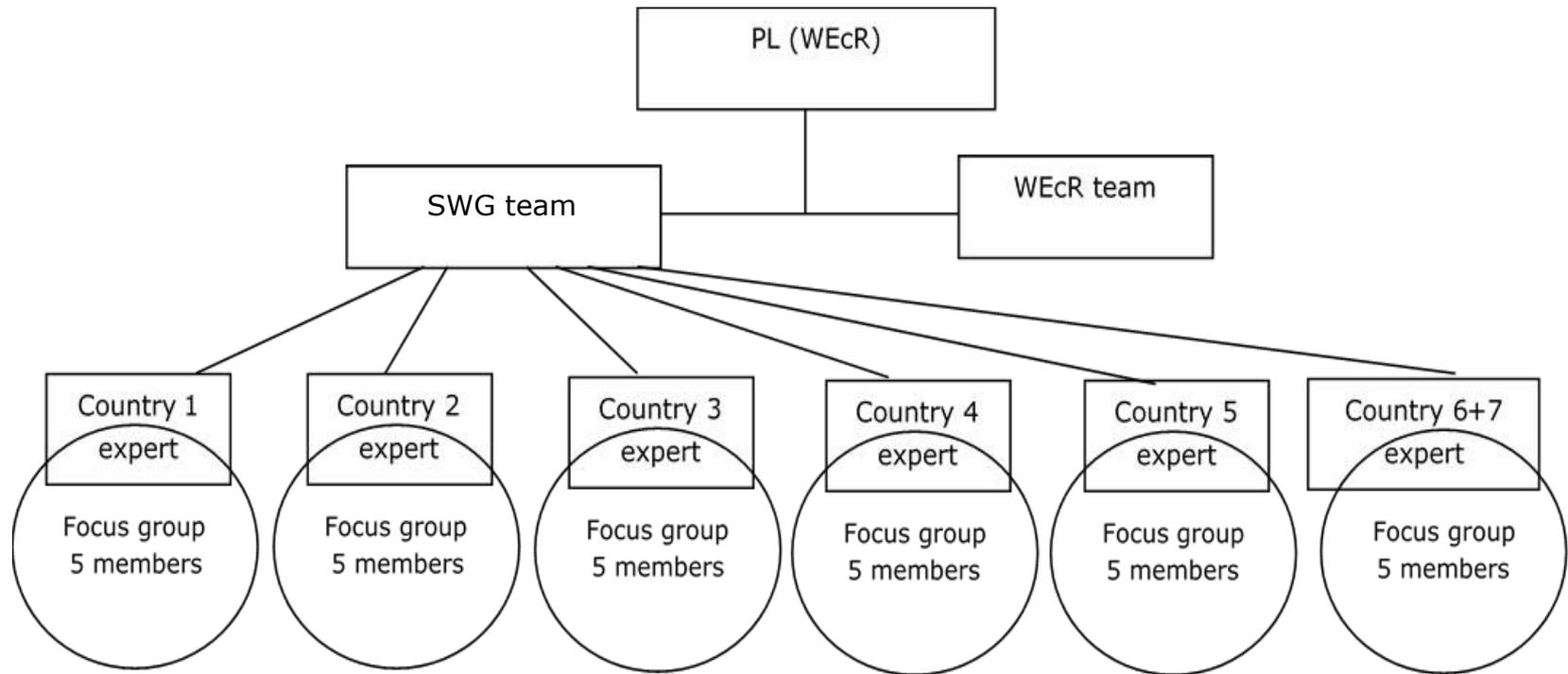


Project Consortium

- WEER: Floor Geerling-Eiff (overall project leader and research), Wim Zaalmink (research) and Ewa Tabeau (review and advice)
- SWG: Dori Pavloska-Gjorgjieska (WB coordinator) and Boban Ilic (review and advice)
- Supporting senior researcher: professor Charalambos Kasimis
- Seven country experts:
 1. Edvin Zhlima (Agriculture University of Tirana, Albania)
 2. Sabahudin Bajramovic (Agriculture and Food Sciences, Sarajevo, Bosnia and Herzegovina)
 3. Zeljko Vasko (University of Banja Luka, Bosnia and Herzegovina)
 4. Mirsad Spahic (Advisor at the Ministry of Agriculture and Rural Development, Montenegro)
 5. Mihone Kerroli (International Business College Mitrovica, Kosovo)
 6. Ankica Kondic Spika and Ana Marjanovic Jeromela (Novi Sad, Serbia)
 7. Dragan Gjoshevski (AAEM, North Macedonia)



Project Organisational Structure



Project Details

- Duration: 15 months (28 July 2020 – 1 November 2021)
- Main deliverable - A final report including:
 - country specific analyses of RITT in the agri-food sector in the WBCs
 - a comparative cross-country analysis of RITT in the WBCs
- Regional focus: Albania, Bosnia and Herzegovina (BiH), North Macedonia, Kosovo, Montenegro, Serbia and comparisons with Turkey could be made
- Consortium:
 - Wageningen Economic Research (WEcR)
 - Regional Rural Development Standing Working Group in South Eastern Europe (SWG)
- Contractor: DG AGRI (**IPARD**) via the Engage program
- Budget: 180.000 euro



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Theoretical Foundation: Agricultural Knowledge and Innovation Systems (AKIS)

AKIS is a useful concept to describe:

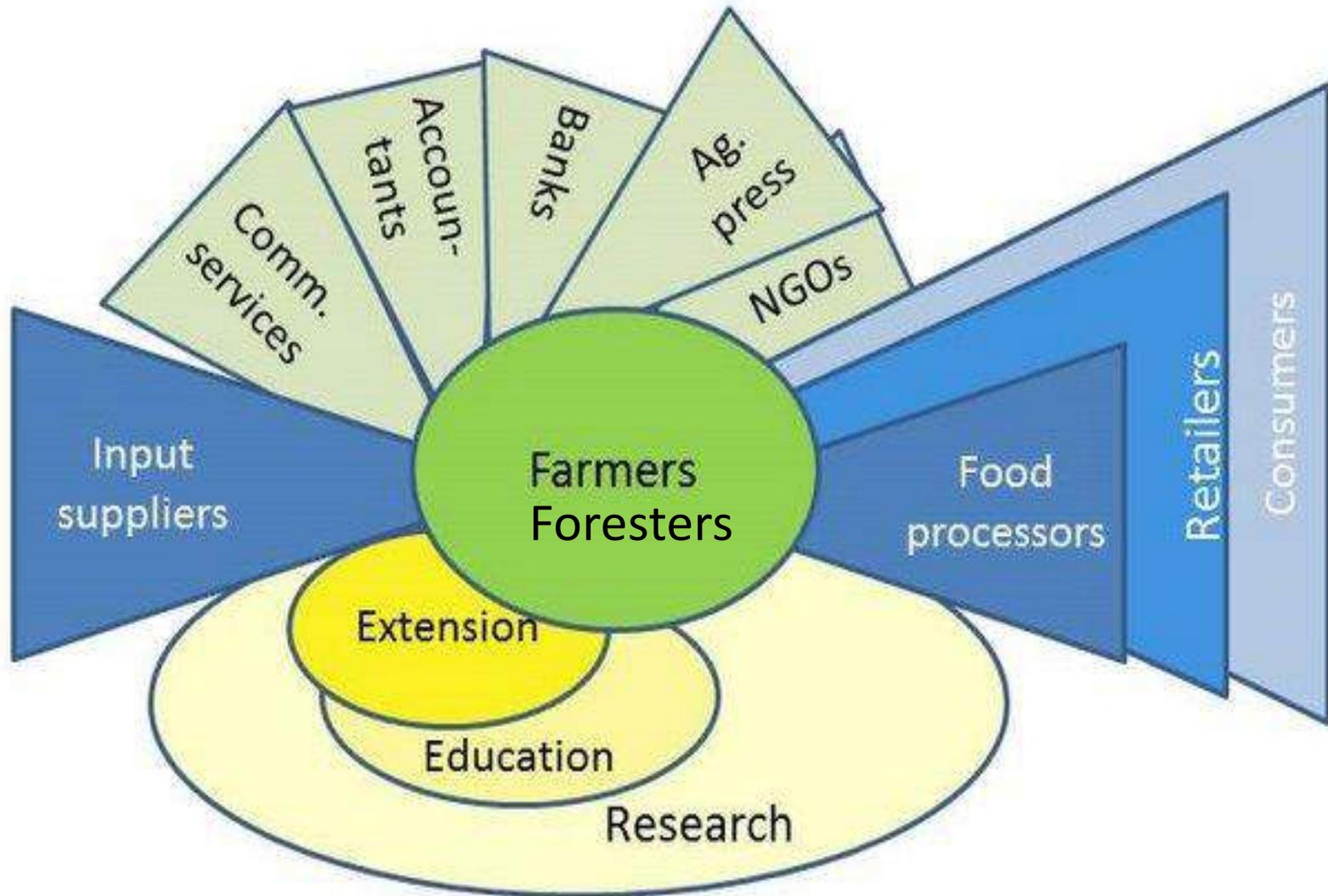
- a **system of innovation**, with emphasis on all actors and organisations involved,
- the **links and interactions** between them,
- the **institutional infrastructure** with its incentives and budget mechanisms.

It is about the combined organisation and knowledge flows between actors, organisations and institutions who use and produce knowledge for agriculture and interrelated fields (SWG SCAR AKIS, 2012, 2016, 2019)

Source: PP slides European Commission DG AGRI (2018, 2019)



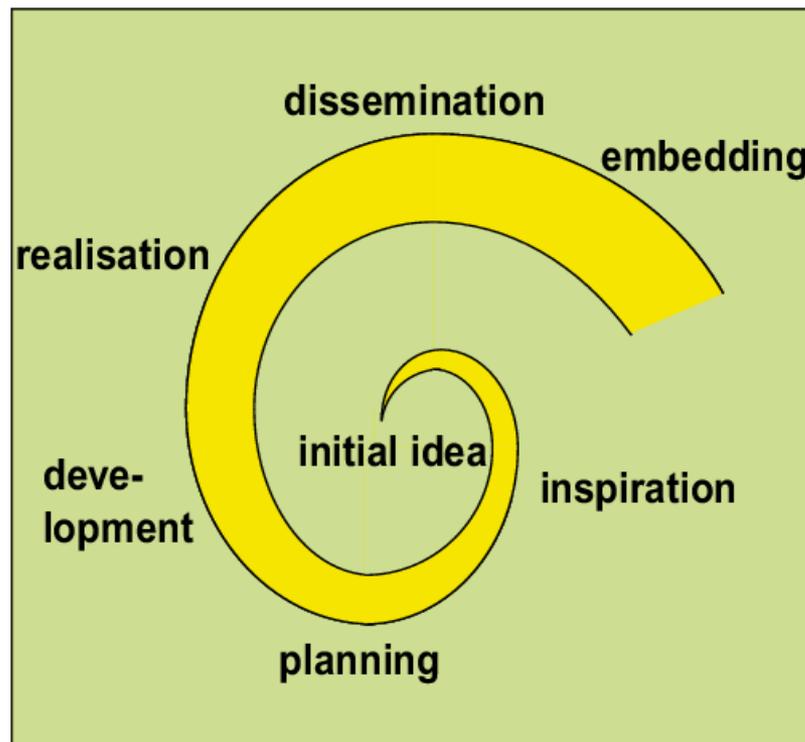
Theoretical Foundation: AKIS visualized



Theoretical Foundation: Spiral of Innovation

The **spiral of innovation** will identify the role of the different AKIS entities in the different phases of RITT regarding:

- Invention - formation of new ideas
- Innovation - conversion of new ideas into practical applications
- Diffusion - the spread of new applications across potential users



Project Tasks

The project follows a 3 step approach:



Step 1: Problem Analysis

- Task 1: Development of the Methodology
- Task 2: Providing an assessment of the needs, capacities and gaps of different layers of the R&I system

Step 2: Designing RITT Strategies

- Task 3: Case studies, proposing improvements and facilitation

Step 3: Recommendations for Action

- Task 4+5: Derivation of policy recommendations (4) and Reporting (5)

Method 1: (30) Interviews WB AKIS actors

The AKIS actors (6x5 interviewees) and their organisations represent at least one of the functions in RITT, in one or more of the WBC:

1. agri-food research institutions
2. advisory and extension services
3. agricultural education and vocational training institutions
4. the private sector: agri-food businesses/Chambers of Agriculture/Commerce
5. (public) managing authorities/ministries of agriculture/economic affairs, rural development and/or science and education



Method 1: Questionnaire

Research, advice and education	Fundamental in the transfer process are the learning processes related to developing and utilising new knowledge, a technology or set of practices. The development of new knowledge can occur through formal research (e.g. at universities and governmental and non-governmental research centres), the private sector (e.g. agri-business) or at individual level (e.g. farmers).
Knowledge diffusion through networks	The exchange of information through networks, where research and development (R&D) meets government and markets. Policy decisions should be guided by the latest technological research and R&D agendas should be adapted to changing environmental, market and social conditions.
Development of an AKIS vision	Refers to the creation of a vision for the AKIS and mobilisation of incentive structures to promote that vision. Incentive structures may change in response to factor prices and regulatory pressures (e.g. product prices, taxes and subsidies), expectations in market growth potential, new knowledge, expression of interest by customers, cultural changes and external events, etc.
Entrepreneurial activities/ experiments	Turn the potential of new knowledge, networks and markets into concrete actions to develop and capitalise business opportunities.
Market formation	Is about creating demand for the outputs of the development process. New technologies or practices often have difficulty competing with the status quo (regime), so a market must be created via institutional change. Market creation can occur through changes in regulation and taxes and/or investment in infrastructure, complementary to the innovation.
Creation of legitimacy	It is necessary to overcome resistance to a new technology or set of practices from the existing production, trade and consumption systems. It must be considered appropriate and desirable by incumbent actors for resources to be mobilised rather than blocked.
Resource mobilisation	Is closely linked to the creation of legitimacy and concerns financing investment in innovation in the form of access to credit, seed funding, venture capital, investment in human and social capital and the development of complementary products, services, infrastructure, etc.

Method 2: (8) Case studies

Outline analysis of (the 8) case studies:

- General description of case study, including the governance arrangement between the different entities involved
- Approach and characteristics of RITT, including the actors/entities involved, the mechanism of collaboration and interaction between them, the role of the public sector and the role of the private sector in the collaboration
- Strengths, Weaknesses, Opportunities, Threats (SWOT), including:
 - main constraints encountered during the diffusion process
 - opportunities encountered during the diffusion process
- Lessons learned on RITT:
 - which solutions have been used to overcome identified gaps and issues in the collaboration?
 - who are the main beneficiaries (users) and what is the adoption potential?

Method 2: Selection of 8 cases

WBC:

- To be identified during the interviews
- E.g.: Weed Control in Organic Crop Production – Novi Sad Institute, Serbia

EU, cases can be derived from e.g.:

1. European Innovation Partnerships (EIP-AGRI): Operational Groups
2. The COST Action Programme
3. H2020 Innovation Actions
4. H2020 Thematic Networks



Method 3: (6) Focus Group Meetings

Participants: 6 x AKIS teams; outline agenda (2,5 – 3 hours):

Presentations:

- interview results and conclusions, based on the AKIS' 7 key functions framework
- 4 EU and 4 WBC cases of success factors and barriers in RITT – lessons learned

Discussion on:

- Opportunities to improve cooperation and interaction between different entities of the agri-food research, development and knowledge-based system in the WBC
- The most relevant domain/fields of technology and innovation potential in the agri-food sector where the respective WBC has comparative advantage
- Opportunities to improve green and clean technology and innovation transfer in the agri-food sector
- Closing session on policy recommendations to enhance RITT in the WBC

Method 4: (1) Cross country meeting

Participants: AKIS groups, EC/JRC, case representatives, relevant EU networks s.a. EIP AGRI, SCAR AKIS, ENRD, Dutch Borderless Network; **outline agenda** (2,5 – 3 hours):

- Setting the scene on RITT in the WBCs - policy background, IPARD, WBC Green Agenda
- Project introduction and interim results
- Overall presentation on lessons learned from the 8 analysed cases

Discussion on:

- Needs, capacities, gaps and solutions to enhance RITT in the agri-food sector in WBC:
 - via the AKIS approach, opportunities for cooperation WBC and EU, relevant innovation domains/fields WBC, requirements for creating and maintaining strong interregional AKIS networks, policy recommendations and required interventions
- Closing session: to explore possibilities and facilitating participation of research entities and networks WBC into European projects and networks (H2020, COST, etc.)

First reflections from the project team

- The relationship between farmers, society and the natural world is changing due to diminishing resources, demographic growth and pressure on the environment, changing societal expectations, new technologies and increasing impacts of climate change
- Farmers need new knowledge, new skills and innovative ideas to develop and manage smarter and more sustainable production systems
- In the meanwhile, a substantial amount of knowledge available in the agricultural sector stays fragmented and insufficiently applied in practice
 - while the sector has considerable and under-used innovation capacity
- AKIS is used as a structural and methodological approach to describe the whole knowledge exchange system
- Bringing together multiple innovation actors to build bridges between research and practice

First reflections from the project team

- The present-day AKIS in the Western Balkan countries/territories, are considered insufficiently equipped to meet the agri-food challenges
- The AKIS structure can vary a lot per territory or sector and is considered as an interactive and systems approach
- The AKIS concept is used as a theoretical archetype of an interactive approach to support and enhance the agri-food innovativeness
 - as tool that can be used for a comparative analysis of the actual reality with the archetype, rather than an already existing system as such
- One example to be investigated could be the formation of Operational Groups (EIP-AGRI) fostering bottom-up innovation for targeted solutions in practice
- The OG approach makes good use of different types of knowledge (tacit, practical, scientific, technical, organisational, etc.) in an interactive way

First reflections from the project team

- The project will go beyond a possible linear/mechanistic transfer of ideas, methods and structures to the complex reality of the WBC
- Beyond *the linear innovation model* of acceleration from lab to practice, the *interactive innovation model* brings together specific actors to collaborate in multi-actor settings finding solutions or developing opportunities
- There is a need to structure knowledge exchange and foster innovation processes in each WB State, taking into consideration their particular structural characteristics
- The creation of flexible innovation ecosystems will have to be incentivised in each WB State in new combinations of knowledge, actors, technology and related investments





Thank you for your attention!

Sources of pictures

Slide 2: [Slide 2: https://training.safestates.org/ivp-toolkit/](https://training.safestates.org/ivp-toolkit/)

Slide 3: <http://reisbloggers.nl/europa/de-7-mooiste-bruggen-van-europa/>

Slide 4: <https://dailynonsense.nl/rondreis-door-noord-albanie2/>

Slide 5: <https://www.samenloopvoorhoopboz.nl/team-22-gaan/>

Slide 7: <https://www.bol.com/nl/p/bugs-best-friends-vergrootglas-18-cm-mooie-stevige-goede-kwaliteit>

Slide 12: <https://spraakherkenning.nl/>

Slide 15: <https://www.himss.org/resources/journey-writing-health-information-exchange-case-study>

Slide 20: <https://reflectionsbyken.wordpress.com/>

Slide 21: <https://www.consultingmix.it/en/open-innovation-whats-your-innovation-strategy/>

Slide 22: <https://publications.parliament.uk/pa/ld201719/ldselect/ldintrel/53/5304.htm>