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Agricultural Knowledge and Innovation System

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Bayerisches Staatsministerium für
Ernährung, Landwirtschaft und Forsten



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Roadmap for the establishment/strengthening AKIS in the Republic of Srpska

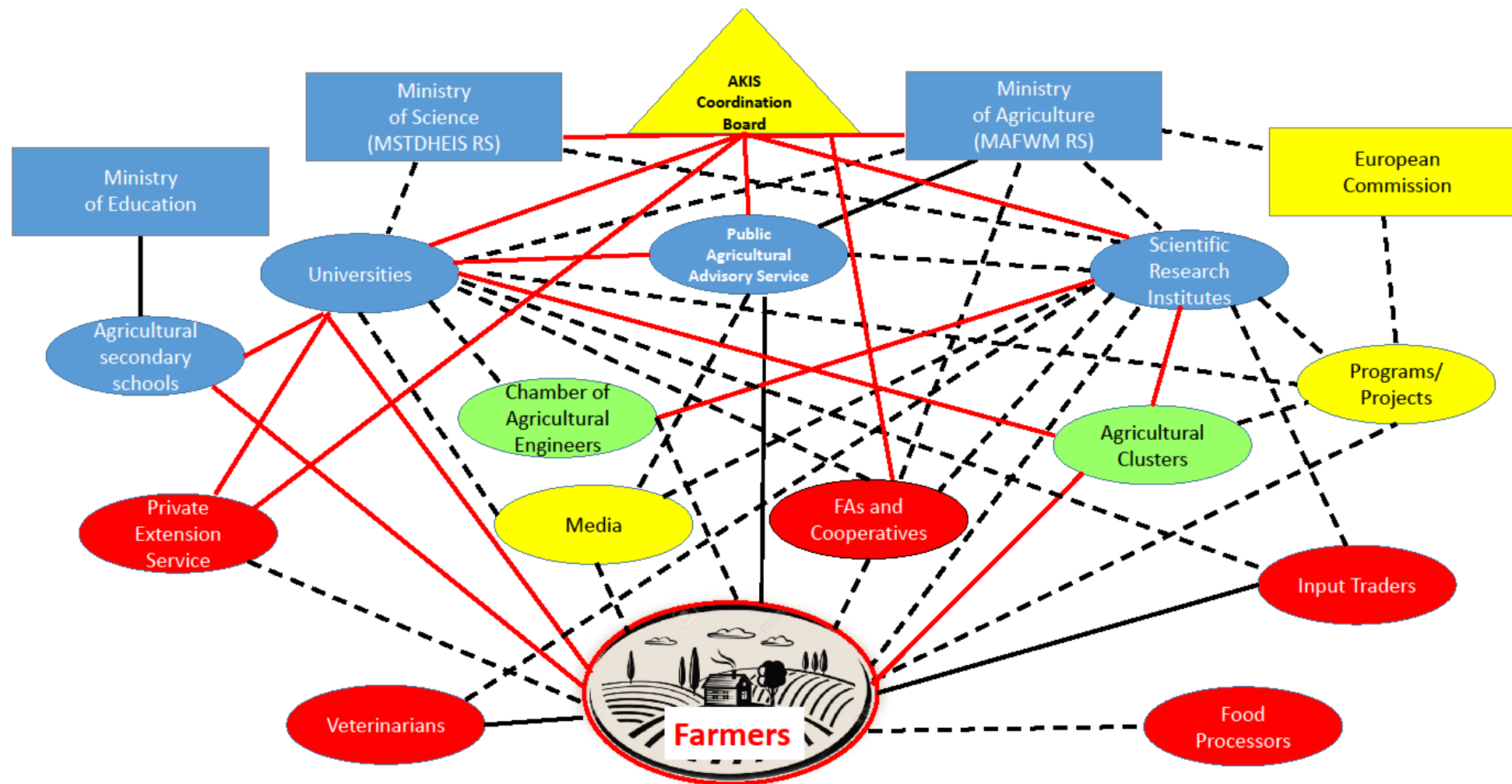


- based on a previous assessment on scientific research capacities in the Republic of Srpska;
- based on the SWOT analysis;
- based on a REWG study tour to Germany;
- based on personal knowledge and experience;

The work is at a stage where the contribution of AKIS working group and international experts is expected and welcomed.



Map of AKIS in the Republic of Srpska



Objective 1

Objective	Milestones	Deliverables	Resources needed	Timeline
1. Establishing the AKIS coordination structure	Decision on the appointment of AKIS CB members	Coordination Board formed	Political and legal support	Short-term
	Lists of agreed research priorities	Minutes of meetings	Meeting room and support of professional associates	Short-term
	Draft, proposal and final text of the strategy/action plan	Adopted strategy/AP document	Expert support and funding	Mid-term
	Regular annual evaluation reports	Evaluation reports	Expert support and funding	Short-term

Why establishes AKIS coordination structure?

Strengths	Weakness
<ul style="list-style-type: none">✓ high importance of the agricultural sector for the overall economy;✓ a large number of population depend on agriculture;	<ul style="list-style-type: none">✓ <u>non-understanding of AKIS</u>;✓ unfavorable climate for innovation (invention, diffusion and application);
Opportunities	Treats
<ul style="list-style-type: none">✓ <u>better connection between all AKIS stakeholders</u>;✓ proven benefits of networking and coordination;	<ul style="list-style-type: none">✓ institutional bureaucracy and technocracy;✓ fragmentation of decision making and financing;

Objective 2

Objective	Milestones	Deliverables	Resources needed	Timeline
2. Increase support for scientific research and development from the RoS budget and other national sources	0,5% of GDP allocated for R&D	Higher allocation for R&D	Money	Mid-term
	1% of Agrarian budget allocated for support to applied scientific research	Higher allocation for applied scientific research in biotechnical scientific field	Money	Mid-term
	50% of donor projects supporting R&D	Higher allocation for application innovations and new technologies in agricultural sector	Money	Mid-term

Why increase support for SR&D from the RoS budget and other national sources?

Strengths	Weakness
<ul style="list-style-type: none"> ✓ the existence of scientific research institutions and a certain level of applied research; ✓ formalized legal framework for scientific research and innovation; 	<ul style="list-style-type: none"> ✓ <u>low level of budget funding for research and innovation transfer;</u> ✓ insufficient and inadequate technical equipment in certain segments of research; ✓ a modest number of researchers; ✓ insufficient motivation and personal capacity building of some researchers;
Opportunities	Treats
<ul style="list-style-type: none"> ✓ better allocation of existing funds for scientific research; ✓ presence of various donors and funds in BiH (UNDP, USAID, SIDA, SDC, JICA, etc.); 	<ul style="list-style-type: none"> ✓ low level of state economic development; ✓ stagnation and reduction of allocations for scientific research; ✓ frequent crises caused by political, climate, health and other factors; ✓ further financial destruction of scientific institutions due to the economic crisis, pandemic, etc.;

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Objective 3



Objective	Milestones	Deliverables	Resources needed	Timeline
3. Internationalization of science and external fundraising	20% more involvements in ERA	Membership in international scientific consortia and networks	Partnerships	Mid-term
	Increased number of projects	Bilateral projects with a scientific background	Partnership	Mid-term



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Why internationalization of science and external fundraising?

Strengths	Weakness
<ul style="list-style-type: none"> ✓ <u>existing personal and institutional links between scientists and scientific institutions;</u> 	<ul style="list-style-type: none"> ✓ insufficient regional and international institutional cooperation; ✓ poor mobility of researchers, teachers and students, and low level of exchange of new knowledge and experiences; ✓ poor access to new knowledge (databases of scientific journals, etc.);
Opportunities	Treats
<ul style="list-style-type: none"> ✓ <u>leveraging the experience of the international scientific community;</u> ✓ <u>pre-accession and other EU funds (HORIZON; ERASMUS+, COSME, Innovation Fund etc.);</u> ✓ networking of researchers (e.g., through the COST program); ✓ better cooperation of researchers from BiH and the EU and other developed countries; ✓ youth education abroad; 	<ul style="list-style-type: none"> ✓ lack of interest in cooperating with small and less developed countries; ✓ brain drain;

Objective 4

Objective	Milestones	Deliverables	Resources needed	Timeline
4. Making scientific research more beneficial and applied oriented	30% of projects based on business sector initiatives	Research projects of mutual interest	Cooperation arrangements	Mid-term
	20% of national funds for scientific research allocated to mutual projects	Program of scientific cooperation between the scientific community and the business sector		Mid-term

Why make scientific research more beneficial and applied oriented?

Strengths	Weakness
<ul style="list-style-type: none"> ✓ <u>experience with programs connecting the farmers and business sector with the scientific community</u> (e.g., Sinergia programme); ✓ the need and desire of some stakeholders for change (as a motive for the introduction of new technologies and innovations); ✓ the presence of proven experts in some scientific fields; 	<ul style="list-style-type: none"> ✓ dominance of fragmented small-scale agricultural production unsuitable to introduce innovations and new technologies; ✓ <u>low level of cooperation of the scientific community with the business sector</u>; ✓ lack of interdisciplinary research; ✓ lack of practice-oriented learning in education; ✓ unsatisfactory level and quality of scientific productivity;
Opportunities	Treats
<ul style="list-style-type: none"> ✓ launching centres of excellence; 	<ul style="list-style-type: none"> ✓ more pronounced climate change; ✓ challenges of the open market and insufficient competitiveness of domestic producers; ✓ demanding standards for the export of agricultural and food products to the market of developed countries; ✓ depopulation of rural areas and its devastating impact on agricultural development;

Objective 5



Objective	Milestones	Deliverables	Resources needed	Timeline
5. Strengthening the capacities of Agricultural Extension Service and improving dissemination of scientific community knowledge	Increase of AES budget by 10% per year	Renewed technical equipment and increased and rejuvenated human capacities	Money	Long-term
	Two new deals a year	Cooperation agreements	Partnership and willingness to cooperate	Long-term
	All advisors participate in training programs Licensed 100% advisors	Annual Advisor Training Programs Advisors Licensing Program	Money Partnership Organizational solutions	Mid-term
	50% of researchers connected with advisors	Advisory Research Twinning Program	Partnership Cooperation arrangements	Mid-term
	50% of scientific results are digitized and fee of charge available	Free accessed digital platforms and databases	IT equipment Human resources	Long-term

Why strengthen the capacities of Agricultural Extension Service and improve dissemination of scientific community knowledge?



Strengths	Weakness
<ul style="list-style-type: none"> ✓ <u>existence of a public advisory service</u> (present on the entire territory of RoS); 	<ul style="list-style-type: none"> ✓ <u>insufficient transfer of scientific research results into practice</u>; ✓ lack of systematic training and certification of advisors; ✓ weak connection between AKIS stakeholders;
Opportunities	Treats
<ul style="list-style-type: none"> ✓ increasing the awareness among all actors in agricultural production about the need to apply modern scientific achievements (modern technologies, new products, the fight against climate change, etc.); 	<ul style="list-style-type: none"> ✓ insufficiently IT illiterate rural population;



Objective 6

Objective	Milestones	Deliverables	Resources needed	Timeline
6. Encouraging the transfer of new technologies and innovations from the scientific environment to the business sector	New subsidy measures introduced	Updated Agricultural Incentive Program	Money Political will	Mid-term
	30% of the agricultural budget to support new investments	Updated Agricultural Incentive Program	Money Political will	Mid-term
	Increased number of projects	SMEs' project participation	Technical assistance	Long-term
	Strengthened the role of education in the transfer of new technologies and innovations to agriculture	Updated curricula in secondary schools and universities	Human capacities	Lon-term
	Increased own investments of business sector in R&D by 10%	Agreements on the implementation of joint research	Money Cooperation arrangements	Mid-term

Why encourage the transfer of new technologies and innovations from the scientific environment to the business sector?

Strengths	Weakness
<ul style="list-style-type: none"> ✓ increasing the number of successful private companies interested in RITT; ✓ the presence of large trading companies for equipment and inputs for agriculture (which provide certain advisory services to customers). ✓ the existence of all levels of education for agricultural occupations; 	<ul style="list-style-type: none"> ✓ <u>lack of financial resources to finance the application of new technologies (weak investment power of farmers);</u> ✓ low level of investment in the agriculture sector;
Opportunities	Treats
<ul style="list-style-type: none"> ✓ <u>increasing subsidies for agriculture (especially those for modernization of production capacities);</u> ✓ education and employment of educated staff specializing in certain types of agricultural production; 	<ul style="list-style-type: none"> ✓ opportunisms in reforming the system of incentives; ✓ credit system insensitive to innovation;