

## Global Practices in Agriculture Knowledge and Innovation System: Lessons for Uzbekistan's AKIS

### Key Messages

- Coordination and facilitation of multiple and diverse AKIS stakeholders is vital for increased efficiency and better agriculture performance.
- The decision to decentralize the administration and management of AKIS to local structures needs to be realistic.
- Public financing in AKIS for enhanced capacities of the sub-systems ensures inclusive service delivery and increased agriculture productivity.
- Participation of all groups of clients in AKIS decision-makings and implementation, through participatory tools, ensures responsive and relevant goods, services, and policy.
- Continuous professional development of AKIS stakeholders' personnel is key to responding to evolving mandates and complex challenges, including food security during the Covid-19 crisis.

A nation's Agriculture Knowledge and Innovation System or AKIS is vital in increasing agricultural and rural productivity, market orientation, and modernization and ultimately resilience. Thereby, an effective AKIS improves livelihoods of rural people.<sup>1</sup>

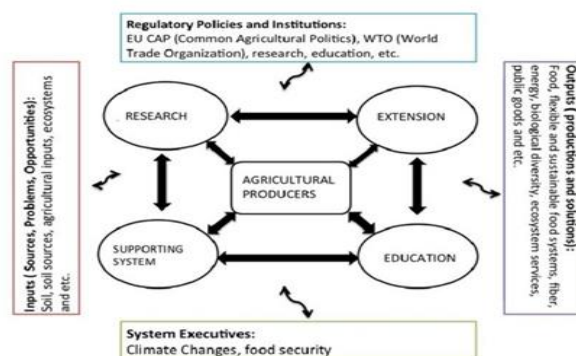
Half of Uzbekistan's population is rural. Agriculture contributes 28% of the Gross Domestic Product (GDP) and 27% of the rural employment (2019).<sup>2</sup> The country's 2020-2030 agri-food development Strategy,

recognizes the role of effective knowledge and innovation system for increased productivity and rural well-being. Development of an effective and modern AKIS by 2021, is one of the priorities in the Strategy.<sup>3</sup>

This Policy Brief explores global practices in AKIS, with the aim of contributing to lessons for Uzbekistan's AKIS development.

#### Box 1: What is AKIS?

It is the broad system in which agriculture producers, research, education, information, farm advisory services and all other support systems, like farmer organization and finance, input and output institutions and regulatory policy, operate complementarily.<sup>1</sup>



Source: Rivera et al. 2005.

<sup>1</sup> See how the term AKIS evolved and its principles in Rivera, W. 2001. Agricultural and Rural Extension Worldwide. Options for Institutional Reform in the Developing Countries; FAO. 2005. Agricultural Knowledge and Information Systems for Rural Development (AKIS/RD). Strategic Vision and Guiding Principles; and Rivera, et al, 2005. Enhancing Coordination among AKIS/RD Actors: An Analytical and Comparative Review of Country Studies on Agricultural Knowledge and Information Systems for Rural Development (AKIS/RD), FAO.

<sup>2</sup> State Statistics Committee online report, 2019.

<sup>3</sup> The Strategy for the Development of Agri-food Sector in Uzbekistan (2020-2030). Decree of the President—7865, Oct. 2019.

## Global Practices in AKIS & Best Fit for Uzbekistan

Various AKIS practices have been tried and tested all over the world. Good practices are those that ensure the extensive and effective introduction and use of agricultural innovations. Such practices develop all agriculture producers' knowledge, skills and ultimately their livelihoods. Further, good practices are those that successfully fit into local institutional contexts.<sup>4</sup> Below are five AKIS practices that offer 'best-fit' options for a modern AKIS in Uzbekistan.

### I. Coordination and Institutionalization

Uzbekistan's AKIS is structurally diverse, involving several stakeholders including public institutions (Ministry of Agriculture (MoA), Ministry of Water Resource (MoWR), Research Institutions, Universities, regional and district authorities etc.); civil society groups; private entities (input suppliers for seeds & fertilizer), donors (bilaterals like EU, USAID, AFD, GIZ etc. and multilaterals like WB, ADB, EBRD, IFAD etc.), financial institutions (commercial banks and micro finance institutions); agri-food producers (large and small farms) and agriculture cooperatives and associations.<sup>5</sup> Such a pluralistic context is more effective and efficient if well-coordinated and managed.

#### Box 2: Why Coordination?

Practices from pluralistic system like in India stress the importance of multi-stakeholder coordination through working-groups for policy coherence and increased productivity in the sector<sup>6</sup>.

A multi-stakeholders AKIS coordination or linkage platform ensures an increase in geographic and client coverage. It recognizes the potential contribution of the diverse actors in reaching-out farm clients, prevents duplication of efforts, ensures synergy among the co-existing actors, guarantees financial

sustainability and policy coherence.<sup>6</sup> Institutionalizing the coordination platform clarifies roles, responsibilities, resource allocation, and installs a common vision among the stakeholders. The coordination platform is influential if institutionalized, managed, moderated, and facilitated at a higher-level state management structure (e.g. in the MoA).<sup>7</sup>

### II. Decentralize AKIS governance cautiously

Truly decentralized AKIS administration and management provides local people with influence over the local context. Yet, global evidence of the impact of decentralization of AKIS is not conclusive, indicating that it needs to be dealt carefully.

While decentralization is potentially important, in some cases, it increased cost of services, while doing little to improve local disparities and it led to greater inequalities in allocation of government resources.<sup>8,9</sup>

Decentralized AKIS is effective when the implementing structures have decision-making autonomy, transparent and accountable systems, and adequate physical, financial, and technical capacity<sup>10</sup>.

#### Box 3: Why careful decentralization?

A review of AKIS decentralization experiences in Trinidad, revealed that it did not serve the farmers better. The lessons emphasized the importance of clarity, and simplicity of the decentralized structure and procedures as well as being realistic about local capacity. It also advises the value of getting commitments from the decentralized structure.<sup>9</sup>

### III. Public financing for increased sector performance

Despite Uzbekistan's huge public expenditures in the agriculture sector (estimated annual budget of USD 836 million), expenses had limited impact on farm productivity, incomes, sustainability, and competitiveness of the sector.<sup>11</sup> Historically, public

<sup>4</sup> Davis, K., et al. 2018. What Works in Rural Advisory Services? Global Good Practice Notes. GFRAS.

<sup>5</sup> Autor's assessment of the agriculture information system in 2020, as part of a CPRO- EU assignment & Horvat, H. 2019. Farm advisory services in Uzbekistan, Unpublished presentation revealed that Uzbekistan's AKIS is historically diverse and fragmented.

<sup>6</sup> Sulaiman, R.V. and Vamsidhar Reddy, T.S. 2015. *Policy incoherence in smallholder dairying in Bihar*. ILRI Discussion Paper 33. Nairobi, Kenya: International Livestock Research Institute (ILRI).

<sup>7</sup> Rivera, W. and Alex, G. 2004. The Continuing Role of Government in Pluralistic Extension Systems. *Journal of International Agricultural and Extension Education*, 11 (3).

<sup>8</sup> The World Bank, 2000. Decentralizing Agricultural Extension: Lessons and Good Practice

<sup>9</sup> Seepersad, J. and Douglas, V. 2002. Case Study of the Decentralization of the Extension Services in Trinidad. WB.

<sup>10</sup> Davis et al. 2018 cited above

<sup>11</sup> Uzbekistan's agri-food development strategy for 2020-2030, based on 2018 budget.

expenditure has been mainly directed to irrigation (63%) and subsidies (12%) to produce cotton and wheat, rather than transformation of the whole sector.<sup>12</sup> Needs of many small-*Dehqan* farms' in horticulture and livestock production were rarely addressed by the public finance.<sup>13</sup>

### **Box 3: Why public financing?**

Public financing in AKIS is both economically and socially important in nations like Ethiopia, as most farming communities are resource poor, illiterate, have little access to other information sources and where private service providers are scarce.<sup>14</sup>

Public expenditure that focuses on broader sub-systems and capacity for agriculture performance and transformation (like agricultural research; farm advisory and information services; education; farmers cooperatives and market infrastructure) promotes service delivery and productivity for smallholder farms.<sup>14</sup> The FAO highlights that public sector extension services in many instances provides high rates of return and is, therefore, a profitable public investment.<sup>15</sup>

## **IV. Participatory AKIS is more effective**

Historically, Uzbekistan's agricultural production and management decisions have little feedback and involvement of the client- agriculture producers. Small farmers are seldom heard at policymaking level, given the limited influence of farmer organizations.<sup>16, 17</sup>

Engaging all producer groups in agricultural decision-making, in research and delivery of farm advisory services ensures increased agricultural productivity, as it ensures relevant and responsive services to local conditions and clients' needs. An assessment of participatory AKIS approaches in Ethiopia reveals they are cost-effective, facilitate rapid mobilization and

changes among community members, meet actual user needs and empower farmers to perform roles of the public service providers (in trainings, demonstration, organization, and facilitation).<sup>18</sup>

### **Box 4: What is Participatory AKIS?**

Participatory approaches seek wider and meaningful participation of user groups in the process of investigating and seeking improvements in local situations, needs and opportunities. Thus, clients (farmers) are consulted by service providers and researchers about their problems, goals, and preferences. In participatory AKIS, clients are asked about their agricultural practices, local knowledge, and for their perceptions of a new technology or policy under design.<sup>20</sup>

Participatory approaches/ tools from Africa, South East Asia and Latin America include: 'Farmer Research-Extension groups', 'farmer to farmer extension' and deployment of 'community knowledge workers'; participatory rural appraisal, farmer participatory research, participatory technology development, participatory action research, participatory learning and action research, gender and stakeholder analysis. In all these diverse AKIS participatory methods, the service provider or researcher is no longer the only expert who has all the information and solutions. Rather, all producer groups including women and youth, individually and collectively, are given space and are recognized as major resources to solve local problems.<sup>19, 20</sup>

## **V. Professional Development of AKIS personnel is key for advancement**

Existing public institutions in the Uzbekistan agriculture sector are characterized by few modern technical expertise, limited up-to-date technical knowledge, limited soft or functional skills in communication, management and facilitation and

<sup>12</sup> Uzbekistan Agri-food development strategy Cited above.

<sup>13</sup> Zorya, S., Babaev, S. and Abdulhamid, A. 2019. Uzbekistan: Agriculture Public Expenditure Review, WB.

<sup>14</sup> Gebremedhin, B., Jaleta M. and Hoekstra, D. 2009. Smallholders, Institutional Services and Commercial Transformation in Ethiopia. *Agricultural Economics*, 40:773-787.

<sup>15</sup> FAO. 1997. Improving Agriculture Extension: A referral manual.

<sup>16</sup> Kazbekov, J.; Qureshi, A. S. 2011. Agricultural extension in Central Asia: Existing strategies and future needs. International Water Management Institute. 45p. (IWMI Working Paper 145).

<sup>17</sup> Uzbek Agri-food development strategy Cited above.

<sup>18</sup> Spielman, D. 2008. *Encouraging Economic Growth in Ethiopia*: IFPRI.

<sup>19</sup> Davis, K. et al. 2018. Cited above.

<sup>20</sup> See detailed participatory tools in Gonsalves, J., et al. (eds). 2005. *Participatory Research and Development for Sustainable Agriculture and Natural Resource Management: A Sourcebook. Volume 1: Understanding Participatory Research and Development*. IPC.

limited use of English (widely used foreign language) to acquire international knowledge.<sup>21</sup>

#### **Box 5: Why Continuous Professionalism?**

Professional development builds the essential technical and functional capacity of service providers, to meaningfully contribute to the evolving and modern roles in the sector and help farmers face challenges on multiple fronts.<sup>22</sup>

Globally, the mandate of AKIS institutions has been expanding and evolving to address and contribute to the diverse and complex national and global goals and commitments like the Sustainable Development Goals (SDGs) in the rural areas. For instance, AKIS is expected to contribute to gender equality in agriculture, inclusion of young people in rural development, poverty reduction and nutrition security, food safety, family reproductive health, and recently, mitigating the impact of the Covid-19 crisis.

To keep updated, AKIS service providers need diverse skills that go beyond the basic technical knowledge and skills in agriculture production, including skills in value-chain and business development, post-harvest management, communication, group facilitation, leadership management, IT and language skills, and many other topics.

Continuous professional development through repeated short term and on- the- job trainings can be arranged to update the knowledge and skills of the existing staff for the evolving mandate. Trainings are powerful if followed by expert mentorship and coaching as well as study visits to successful domestic/global experiences in AKIS. Practical experiments and demonstrations during a farming cycle also complement the effectiveness of theoretical trainings. Required competencies in AKIS can also be developed through long-term education at various qualification levels.<sup>22</sup>

Tapping into existing domestic and international expertise and synergies for assistance in professional development is prudent. Some technical collaborations that can be further developed are between AKIS implementing stakeholders and domestic teaching and research institutions (like the Uzbekistan agrarian and Irrigation university, the Westminster International

University in Tashkent, and etc.); with foreign agricultural universities and center of excellence in AKIS (like the Wageningen University in the Netherlands, Leibniz Institute of Agricultural Development in Transition Economies (IAMO) in Germany, International Food Policy Research Institute (IFPRI), and the Food and Agriculture Organization (FAO).

## **Conclusion**

Effective operationalization of the AKIS increases the transfer of information, knowledge, and technology to all demanding agricultural producers. Consequently, clients' productivity, commercialization and wellbeing will increase. This policy brief highlighted five essential aspects and global practices as lessons for an effective AKIS in Uzbekistan. It is, however, up to each AKIS manager to decide what works best in their own context, taking account of the nature of the challenge, the clients' demands, and the resources available.

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<sup>21</sup> The recent assessment report by Horvat, H. 2019. Cited above.

<sup>22</sup> David, M. and Samuel, H.S. 2014. The Role of Agriculture Extension in the 21 Century: Reflections from Africa. *International Journal of Agricultural Extension*, 2(1).