

# PROPOSED EDUCATION-RESEARCH-EXTENSION COORDINATION FOR BANGLADESH AGRICULTURE

## A Policy Brief

Agricultural research and extension services in Bangladesh achieved momentum during the green revolution campaign started in the early 1970s, with strong support and guidance from Bangabandhu Sheikh Mujibur Rahman who envisioned the expedient development of Bangladesh as a nation free from hunger and poverty. Since then, with the help of new research-extension knowledge and paradigms the agriculture sector has played a crucial role in national economic development and alleviation of hunger and poverty in the country. Today, growing demands for food and other necessities require the agriculture sector to deliver further by substantial production boosts through intensification and strengthening of agricultural education, research and extension by the universities, National Agricultural Research System (NARS) institutions, Extension departments, NGOs and private organizations. A formal, well organized institutional mechanism for coordinating the Education-Research-Extension (ERE) functions is essential to meet the diverse needs of farmers in crop, fisheries and livestock sub-sector as well as emerging agro-entrepreneurs to improve productivity, enhance farm incomes and foster agribusiness in Bangladesh.

Bangladesh Agricultural Research Council (BARC) has been created to coordinate research and allocate resources to NARS and Universities. It has also mandate to accelerate extension of farm technology. For this Technology Transfer and Monitoring Unit (TTMU) has been established, however, it is constrained with adequate staff.



Different countries have developed ERE coordination mechanisms in keeping with their needs and aspirations. In India the Indian Council of Agricultural Research (ICAR) provides research and extension supports to State Agricultural Universities (SAUs) and coordinates agricultural education, research and extension. At zonal level Agricultural Technology Application Research Institute (ATARI) oversee the performance of KVKs (Krishi Vigyan Kendra). At present there are more than 600 KVKs. Technology refinement, validation and dissemination for all sub-sector of agriculture are looked after in this mechanism. Agricultural Technology Management Agency (ATMA) works at district level with the support of government of India. ATMA is expected to support state extension system. There is a successful model in USA where land grant universities provide research led extension service through cooperative extension service.

In Bangladesh, agricultural universities are provided with research funding from different sources like BARC, Krishi Gobeshona Foundation (KGF), University Grants Commission (UGC) etc. This supports universities for development of knowledge and technology which are useful for addressing production constraints. The service needs to be utilized to the fullest extent by extension system.

Bangladesh has experiences of developing research and extension coordination through project support since 1996 involving crops, livestock and fisheries. However, the nodal platforms until upazila level did not sustain. Several attempts of such kind are still ongoing with a threat of sustainability and agricultural universities are not included with formal technology dissemination system in the coordination mechanism.

A model for formalizing agricultural Education-Research-Extension (ERE) coordination is proposed here. In developing this model envisaging active participation of the universities having knowledge, expertise and technologies, past and present experiences and lessons regarding agricultural ERE linkage systems in Bangladesh and experiences of neighboring India and some other countries have been reviewed.

### Proposed Model for Education-Research-Extension Coordination

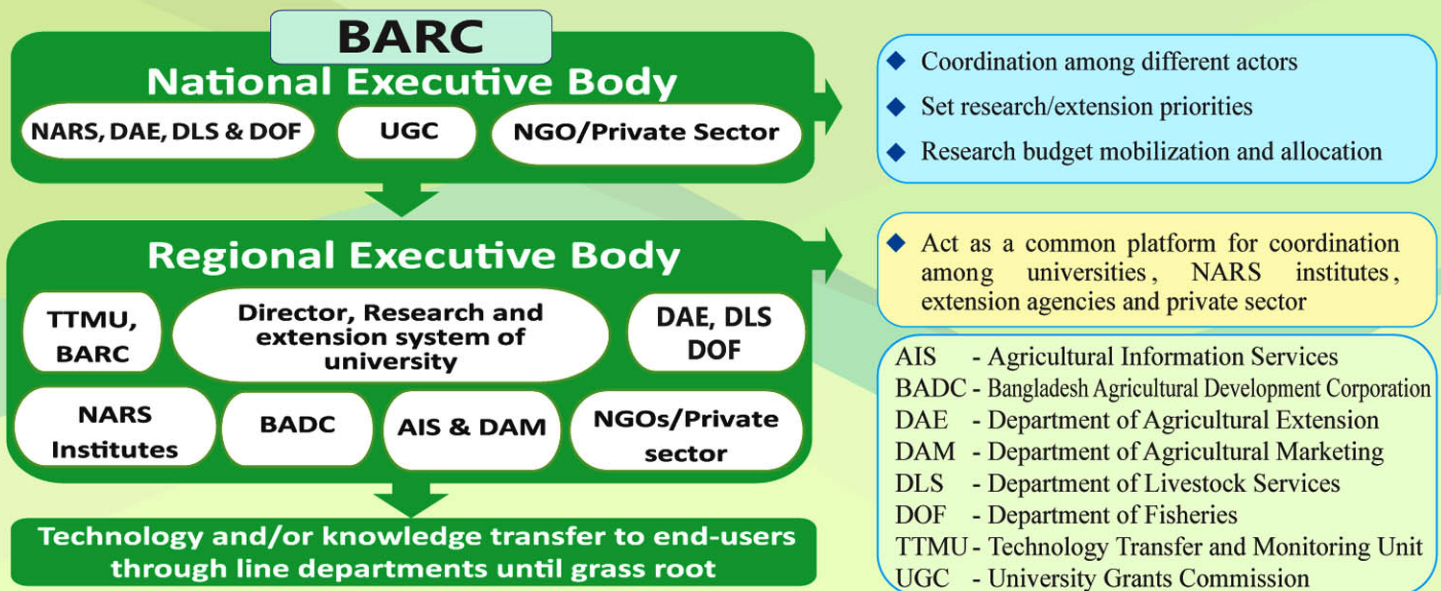
The proposed model seeks to pool the knowledge, skills and technologies at the disposal of the research centers, i.e., the universities and NARS institutions into one platform and utilize these through the extension services, and to ensure realistic and reasonable returns from the huge investments the country makes in the universities as well as in the NARS institutes.

Consensus based agreement has to make among three ministries-MOA, MOFL and MOE (education) to establish a common platform of ERE. While BARC will play bridging role among line departments and universities and will be responsible to provide technical and financial supports. All actors will cooperate in technology management system as decided by top management.



## KRISHI GOBESHONA FOUNDATION (KGF)

A non-profit foundation for sustainable support in agricultural research and development



### National Executive Body (NEB)

In the ERE mechanism, the national executive body will be the central framework with the authority and responsibility to formulate policies and plans, set research priorities and extension domains and provide implementation guidelines to field level actors through the regional executive body for ERE linkages and coordination in agriculture. The NEB will be composed of Executive Chairman of BARC, Director, TTMU of BARC (proposed to be upgraded to Member Director), Directors General of NARS institutes, DAE, DLS and DOF, a high-level representative of UGC, development partners, relevant NGOs and private organizations. TTMU of BARC will coordinate the affairs of the NEB including the planning and execution processes, fund mobilization and distribution, guidance for the regional executive body. While BARC along with other sources are providing research grants to universities, these need to be enhanced through TTMU.

### Regional Executive Body (REB)

REB will have the structure and authority to oversee ERE coordination at the regional level in light of the guidelines and directives provided by the national executive body. REB will ensure the participation of research systems (RS) of regionally located agricultural universities, regional stations of NARS institutes, regional offices of DAE, DLS, DOF, NGOs and private enterprises in regional level. TTMU of BARC will coordinate the functions of the regional executive body.

Prime job will be to strengthen BARC with adequate financial and institutional capacity and upgrade TTMU to be supported by technical staff and leadership capacity.

### Conclusion

Agricultural Education, Research and Extension deliver best in terms of boosting agricultural production when they could function in a coordinated and complementary way. The existing ERE linkages in Bangladesh need to be strengthened though the agricultural research and extension systems functioning mostly under separate administrative and management units. There is a compelling need for strengthening the ERE linkages by bringing the actors under a rational and functional coordination mechanism. It is imperative that policy makers and education, research and extension leaders develop formal structures to strengthen ERE coordination and add impetus to agriculture in Bangladesh.

Performing its routine jobs, line departments will continue one additional responsibility to serve as actors of linkage mechanism to exchange or share responsibility of technology feedback, refinement, validation and dissemination.

The agricultural universities are the centers of agricultural education, are makers of the professionals who ultimately man the NARS institutions and extension agencies. Universities also generate knowledge and technologies. The faculty members and their students are involved in national agricultural research projects entailing huge investments from national/domestic resources and international assistance, yet, the universities have so far remained rather alienated from the national research-extension continuum. It is high time the universities are brought under the umbrella of an ERE linkage-coordination system to tap their potential, add value to returns from the investments and ensure their accountability. The NARS institutes, extension agencies, NGOs and private enterprises are also recipients of research grants. This will justify investments and contribute collectively and persistently to the national drive to boost agricultural production, enhance food security and improve rural livelihoods in the complex production environment.

Reviewing the existing institutional arrangements related to agricultural education, research and extension in Bangladesh and considering the need for strengthening the ERE linkage-coordination for agricultural development, a model is proposed. With the mandates of BARC Acts 1996 and 2012, BARC is authorized to coordinate agricultural research related to crops, livestock and fisheries. It is proposed that BARC through its TTMU take the lead role in coordinating research and technology transfer across all disciplines of agriculture. The TTMU of BARC may be supported with strong scientific manpower with managerial skills and adequate funding to coordinate education, research and extension similar to KVK in India. Involvement of UGC in BARC policy making bodies (GB and EC) should be considered in empowering the universities to have a role in ERE linkage and the administration and management of the system.

As a pilot test of the model, a regional university (say, Patuakhali University of Science and Technology or Bangladesh Agricultural University, Mymensingh) may house the REB partnering with regional research stations and government extension agencies, NGO and private sectors. After REB the technology flow may go to the district/upazilla and union level through line agencies.

The top of the relevant Ministries may further review and refine the idea given above to make it more effective and functional.