Technology Fact Sheet for Adaptation

Technology Fact Sheet: Establishment of special agricultural R & D centre [i]

Sector	Agriculture/ Technology development and knowledge management
Technology Name	Establishment of special agricultural R & D centre
Adaptation Benefits	
Background/ Notes, Short description of the technology option	The agriculture sector is vulnerable due to both the primary effects (variation in rainfall and temperature) and secondary effects (drought, flood, cyclone and storm surge, saline intrusion etc) of climate change. In addition, climate change related phenomena such as variation in temperature and rainfall may enhance spread of pest attacks or crop diseases that affect crop production. In the changing climatic context it is necessary to either modify or develop new agricultural (mainly crops) technologies and introduce them at the farmers level. The available technologies in crop agriculture are likely to address current climate variability. To address the long-term impacts and variability, technologies in crop agriculture have to be consistence with the predicted changes in climate system. Meantime, a number of policy and institutional initiatives have been taken on sustainable agriculture technologies and management in order to change from traditional to context specific or climate resilient practices. For instance, the International Rice Research Institute (IRRI), International Center for Agriculture in the Dry Land Areas (ICARDA), International Crop Research Institute for the Semi-Arid Tropics (ICRISAT), International Food Policy Research Institute (IFPRI), International Institute of Tropical Agriculture (IITA) etc. are putting efforts into facilitating increases in productivity and resilience in crop agriculture through technological innovation. Aside with the international effort, it is equally important to strengthen national effort on research and development of climate resilience crop varieties and farming system. This special research and development (R & D) center will develop adaptation technologies that

	are environmentally sustainable, culturally compatible, socially acceptable, economically feasible and technically viable.
Implementation assumptions, how this technology will be implemented and diffused across the subsector	Important considerations for the establishment of special agricultural research and development center: • Research on the development of context specific or climate resilient crop production technologies • Identification of technological needs for sustainable agricultural production in different stress conditions caused by climate change. • Establish a smooth institutional and coordination mechanisms of all the existing agricultural research institutions in country and abroad to consolidate all agricultural success stories on adaptation technologies in government, non-government and private initiatives. • Conduct agricultural and food security related policy research.
Impact Statements-How this option impacts the country development priority	
Country social development priorities	• Will expand agriculture based employment opportunity • Will reduce joblessness of small farm holders and agricultural labors. • Will contribute to country's goal of expanding farm based income and rural poverty eradication.
Country economic development priorities	• Research and development in agriculture will increase rice production and will contribute to country's goal of attaining food security • Will support addressing long-term impacts and variability, technologies in crop agriculture consistence with the predicted changes in climate system
Country environmental development priorities	• Development of appropriate adaptation technologies will optimize utilization of natural resource base • Will support conservation of local level biological resources.
Costs	
Capital costs	• Approx cost = Tk 3000.00 Lakh for Center establishment

	• Approx cost = Tk 2000.00 Lakh for tools and appliances Total: Taka 5000 lakh; (USD 6250000)
Operational and Maintenance costs	• Approx cost of field experimentation and demonstration = Tk 1000.00 lakh/ year • Development of dissemination packages and tools Tk 250 lakh • Approx cost of HR = Tk 250.00 lakh/ year Total: Taka 1500 lakh; (USD 187500)

[i] **This fact sheet has been extracted from TNA Report – Technology Needs Assessment and Technology Action Plans For Climate Change Adaptation– Bangladesh. You can access the complete report from the TNA project website http://tech-action.org/**