

Modernizing food production

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THE prime minister on September 26 delivered a very significant speech at the meeting "Partnering for Food Security" jointly organized by the UN Secretary General Ban Ki-Moon and US Secretary of State Hillary Clinton. Her presentation was both timely and highly relevant in the context of Bangladesh's acute need for food security. There was a major emphasis in the PM's speech on food governance and more equitable trade relations favorable to the developing world and particularly the least-developed countries (LDC). I will confine my comments to research-oriented development activities necessary for implementing her proposals for achieving food security.

The PM called on the international community to agree on and implement sustainable agricultural policies, transfer of technology, and equitable and fair trade rules for food and agricultural products with special and preferential treatment for LDCs. She said that it was unlikely that there would be further breakthrough on high-yielding crop varieties developed decades earlier without new research. She also mentioned that agricultural production, and thus food security, in Bangladesh is severely affected by shortage of energy, progressively decreasing arable land and erratic patterns of floods, droughts and cyclones as a result of climate change.

The PM also pointed out that lack of food security also impacts adversely on health equity. Thus, there is a need for not only high-yielding food crops but also the production of new varieties resistant to salinity, drought, and water submergence which requires extensive research. The PM remarked that paucity of funds had brought food and agricultural research to a standstill.

The PM hoped that in the climate change outcome conference to be held in Copenhagen in December there would be a concrete resolution to make available adequate and easily accessible funding for adaptation and affordable eco-friendly technology transfer to LDCs, which are critical for ensuring food security.

"Indeed, if only the developed countries now fulfill their ODA (overseas development assistance) commitment of 0.7 percent of their gross national income to developing countries, and 0.2 percent to the LDCs, by 2010, as affirmed in the Brussels Program of Action, much of the problems, including those challenging food security, would be resolved," she said. It was reassuring that she pointed out that the mitigation programs to be adopted must address the specific needs of relevant countries for which national ownership of the development agenda must be ensured.

The PM has correctly pointed out that our development agenda must be need-driven and not donor-driven. However, are we properly equipped and able to implement such a development agenda? Much of the global economic downturn and climate change related environmental degradation is a direct consequence of reckless and exploitative policies of

developed countries. So it is only fair that they make a very small contribution to right some of the previous wrongs done to LDCs such as Bangladesh. But financial handouts for short term corrective measures and importation of technology and foreign expertise without out indigenous capacity building will not lead either to economic independence or to sustainable development. This can only be achieved through scientific and technological (S&T) proficiency underpinned by excellence in education.

Since Bangladesh is an LDC and a country lagging in S&T proficiency, any financial support received for achieving food security and poverty alleviation, and for countering the adverse effects of climate change, must primarily be used to build the S&T capacity required to meet these challenges from within.

The PM has correctly identified our development priorities as food security, health equity, energy sufficiency and reversal of the adverse effects of climate change. The incumbent government in its election manifesto promised to transform Bangladesh into a middle income and S&T proficient state by the 50th anniversary of independence (Vision 2021). This is supposed to be achieved through a Digital Bangladesh where the primary objective seems to be the development of world-class ICT. There is no doubt that ICT is very important for transforming Bangladesh into a modern and efficient country. But ICT alone is not capable of meeting any of the above development objectives; all modern technologies, and most particularly biotechnology, need to be developed simultaneously.

Considering the state of our economic and S&T standing, it is very important that we change the culture of higher education and research, focus primarily on national development priorities and build partnerships between academia, research institutions, government and industry to achieve these objectives (see Ahmed A Azad, "We are what we study," September 2009 issue of FORUM).

Biotechnology is the key to the development of new high-yielding food crops and new varieties resistant to drought, flood and salinity. It is also the technology that will provide affordable drugs and vaccines, and eco-friendly biogas, biofertilisers and biopesticides. In spite of its potential for meeting national development objectives, particularly food security, biotechnology is a largely neglected discipline in Bangladesh. The government has established a National Institute of Biotechnology (NIB) at great cost but it remains an empty shell without any defined focus or priorities. The government has published a National Biotechnology Policy that is too broad in scope to be effective but has not specified how research and development activities involving biotechnology are to be funded.

The biotechnology community of Bangladesh has produced a position paper that suggests how the government's biotechnology policy could be implemented, and also prepared a set of specific recommendations about how the largely non-functional NIB could be restructured and financed so that it could become an internationally competitive "centre of excellence." The position paper and the specific recommendations were submitted formally to the government in April 2007, but the biotechnology community is still waiting for a response. Since the PM and the government seem to be genuinely

concerned about food security and other priority development objectives where biotechnology is likely to play a crucial role, they could perhaps carefully assess and act on the recommendations submitted to the caretaker government more than two-and-a-half years back.

Much of the funding required for a fully functional, productive and internationally competitive NIB, other similar national institutes for ICT, energy and climate change, and also specialist research centres at universities that focus on national development priorities such as food security, could be funded from the sources mentioned in the PM's speech. There are also many other international sources of funding that could be accessed for major equipment and specialist expertise. Development and technology transfer activities could be carried out in collaboration with industry partners. It is also worth noting that in his address at University of Cairo in June 2009 President Obama offered to collaborate with the Islamic world in establishing regional "centres of excellence" among other initiatives in higher education.

The PM has made clear her intentions on food security and other national priorities, and her government is committed to implementing the necessary measures. But good intentions alone will not make it happen even if funding is available from development partners. Success in achieving food security and other development objectives will be dependent on multidisciplinary research and adequate number of trained personnel in the required disciplines. This is not available in any one academic unit or research centre within Bangladesh. Thus, coordination and collaboration are required between different academic research centres and public research institutes that have complementary expertise and facilities.

There are logistical problems as these academic units and research institutions fall under the jurisdiction of different ministries and government departments. Partnerships will also need to be established with relevant industries with the active support of the Ministry of Industry.

Thus, for successful outcomes, the first requirement is coordination of research-oriented development activities between relevant ministries such as education, S&T, agriculture, food, industry, health, energy and environment. As a first step, the government could consider the formation of a parliamentary committee for food, health, energy and environmental security that could oversee the activities of a new department of advanced studies, research applications and technology transfer. This department could provide administrative support to the NIB and other national institutes for ICT, energy and climate change, and university research centers involved in research on food security and other areas of national priority. These measures would ensure focus and coordination in areas of national priority, collaboration and cooperation between research groups and with industry partners, and proper utilization of available funds and resources. These are the minimum requisites for implementing the PM's proposals for achieving food security and other research-dependent development priorities.