Feeding Malaysia's Growing Population with Climate Smart Agriculture

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Growing food to feed the population becomes a challenge due to erratic weather and climatic patterns. Temperature increase and changes in rainfall pattern hasten the spread of pests and diseases which ultimately affect crop yields. The intensity of climate change which causes an impact on our agricultural system requires revolutionary approaches via efficient production system to cater to the growing food demand. One such initiative that has emerged and is actively advanced by the Food and Agriculture Organization (FAO), the World Bank and the Consultative Group on International Agricultural Research is the concept termed as 'Climate Smart Agriculture' (CSA). It is all about how agricultural systems can be developed and implemented to simultaneously improve food security and rural livelihood, facilitate climate change adaptation and provide mitigation benefits including planning of land, agriculture, fisheries and water use at multiple scales, i.e., local, watershed and regional. Institutional mechanisms are necessary to implement CSA which includes multi-stakeholder planning process, supportive governance systems, harmonized financial mechanisms and, monitoring and evaluation systems that can account for a variety of impacts at a landscape scale. The three pillars of CSA revolve around productivity, adaptation and mitigation with the aim of reducing negative impact on the environment.

Malaysia needs to actively pursue the CSA agenda since environmental protection for the agricultural sector, at present, is not our top priority in terms of budgetary allocation. Between 2011 and 2013, an average of RM2.296 billion was spent on protecting the environment and it is disheartening to learn that the amount spent over the three years decreased from RM2.3 billion in 2011 to RM2.2 billion in 2013. Out of the RM2.2 billion spent in 2013, the agricultural sector recorded the lowest expense on protecting the environment with only RM75.3 million (0.33%). The bulk of expenses spent on the agricultural sector was allocated for environmental monitoring and the least was spent on protecting and conserving wildlife and habitat.

In 2012, Malaysia's Ministry of Natural Resources and Environment reported that Malaysia harbors approximately 178,386 species in its varied ecosystem. With such a small value we placed on protecting and conserving our flora and fauna, we could be heading towards loss of species that could potentially be developed into useful functional products. Due to rapid losses in biodiversity, Malaysia's vision is to transform the country into a world center of excellence in conservation, research and utilization of tropical biological diversity by the year 2020.

Policy intervention is indeed necessary to induce positive changes in the agricultural system. To reduce negative externalities affecting the environment (i.e., pollution and waste) it is crucial for the government to enforce strict regulations and enforcement through a reward and punishment mechanism, however, caution must be practiced since our agricultural system is dichotomous in nature, with large plantations cultivating export-oriented crops while smallholders cultivate food crops. Effective and efficient protocols, guidelines, rules and regulations must be formulated to tackle stakeholders who continuously cause harm to the environment and the consequences of such actions must be explicit, fair and transparent.

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