

Final Progress Report
Sustainability Science Program, Harvard University
Term: September 1, 2011 – August 31, 2012
Submitted: July 2012

Name: Nazia Mintz-Habib

Your field(s):
Development Studies

Your degree program, institution and graduation date:
PhD, Land Economy, University of Cambridge, 2011

Faculty host(s) at Harvard name and department:
Prof. William Clark, and Prof. Calestous Juma

Description of SSP-related research activity:

Title: The Political Economy of Smallholder Agriculture and Genetically Modified Food Crops: Perspectives on Bangladesh

Abstract: This paper studies the political economics of agrobiotechnology adoption in Bangladesh with respect to foreign donor relationships in the agricultural sector. Although civil societies and governments in other Asian countries are reluctant to consume agrobiotechnologically produced food crops, Bangladesh committed to adopt agrobiotechnology ten years ago. So far, the country has made little progress. The question is why? Historically, the foreign and national stakeholders share a common vision to address poverty and hunger in the country through agricultural innovation and commercialization. This created a neo-Gramscian opportunity for latent hegemonic influence by the donor community, where the national policy space is open for intervention to attract foreign direct investments or aid. The paper argues that GM crop adoption is materialized through an accumulation of strategies by various actors that are secured through material, institutional, and discursive power. The case study finds that the foreign donors exercise differential policy interventions to address food security based on their own national preferences. As a result, while the European donor led supports promotes a precautionary environment and excludes genetically modified crops from mentioning in the national food policy, the US government provides agricultural research grants directly to scientists and the national research centers to improve national agrobiotechnological capacity. Thus, Bangladesh is caught in the crossroad of two forces. Ultimately, the paper concludes that it is lack of domestic expertise in agrobiotechnology that prevents Bangladesh from making tangible progress, instead choosing non-action over GM crop adoption. The research finding is policy relevant for crafting appropriate foreign relations and to change policy environment within which developing countries will have more control over the latent hegemony influence.

Identification of the problem you address:

The food security and development policy problems faced by some developing countries, particularly in south Asian countries and elsewhere, imply that these countries need to evaluate trade-offs, for example, between the choices of using biotechnologies that may address food insecurity and policy authorities who implement the rules and sets the environment for technological uptake. There is very little information about how GM crops affect specific parts of the governmental institutions, and agricultural value chain, how the components of the existing agricultural incentives interact with agrobiotechnology, or how biotechnology-related information is delivered to producers, especially smallholder farmers, who have unique needs for information access, and final consumers of an agricultural crop in developing countries. This project will propose alternatives to study and resolve this knowledge gap. Bangladesh is a fascinating cases study country for this project, where agriculture is dominant sector with a history of market failures, and institutional inability to implement regulations and transfer new technology efficiently.

Key question asked about the problem:

To what extent can developing countries integrate agrobiotechnology crops into their existing agricultural systems to reduce food insecurity and poverty?

The methods by which you answered that question:

structured survey questions; unstructured interviews; macroeconomic data review; case study

Principle literature upon which the research drew:

international relationships studies; heterodoxy political economics; agricultural innovation; institutional analysis

Empirical data acquisition description:**Primary and secondary data sources are used for the research.**

For primary data, I use interview and survey methods from fieldwork. For secondary data collection, media survey, literature review and organizational report assessments were conducted.

Geographical region studied:

South Asia - Bangladesh

Recommendations that might be relevant for your problem:

1. The National Biosafety policy should be headed by the Ministry of Agriculture and not by the Ministry of Environment. The Ministry of Environment is a weaker ministry with inadequate human resources and infrastructures to implement biosafety protocols nation-wide. The Ministry also lacks in having a binding working relationships with the Ministry of Agriculture, which is the responsible authority for all aspects of agricultural sector improvement, food security and food policy. Although biodiversity protection is important for Bangladesh, the national political environment prioritized food security and the objective is headed by the head of state along with the agriculture ministry. Having biosafety framework headed by Ministry of Environment which is chartered to protect biodiversity while adopting agrobiotechnology creates dichotomous politics. As a result, despite a decade long history of agrobiotechnology in Bangladesh, there are no biosafety policy in the country and the progress in technology expansion is slow.
2. To avoid any negative spillover effects, the biosafety framework needs to integrate the existing seed and pesticide market improvement strategy undertaken by the Ministry of Agriculture. In Bangladesh, the pesticide and vegetable seed sectors are privatized. In absence of adequate extension support, farmers seek pest control and seed related information from pesticide distributors. The National Biosafety Policy framework does not pay any attention to the extension service and knowledge flow on seeds and pesticides to the farmers.
3. Donor support should not come with a condition for the government to open its policy space. In Bangladesh, USAID is strongly in favor of agrobiotechnology and is a provider of major research grants and biosafety protocol institutionalization. The major contradiction of the US government's aid is that the US does not even have a biosafety policy of its own, nor is it a signatory of the Cartagena Protocol, but provides advisory services to develop a national regulatory framework for GM technology adoption.

A description of the final product(s) you have/are aiming to produce:

Peer-reviewed journal article, The Political Economy of Smallholder Agriculture and Genetically Modified Food Crops: Perspectives on Bangladesh.

Citations for reports, papers, publications and presentations that built on your fellowship research:

SSP paper, The Political Economy of Smallholder Agriculture and Genetically Modified Food Crops: Perspectives on Bangladesh.

The SSP fellowship year has been a very productive one. Aside from working on the agrobiotechnology project, I had the chance to turn some of my PhD thesis chapters into journal articles. My submissions and the stage of publication are as follows:

Book

“Hunger for food, thirst for fuel: Biofuels, agricultural exports and the struggle of smallholder farmers” Manuscript under consideration for Cambridge University Press.

Edited Book

“Agriculture changes and dynamics: Pathways to sustainability” Edited volume with Mohamed Behnassi and Shabbir A. Shahid, Springer (In press 2013).

Book Chapter

“Water for life and livelihoods: A case study on Bangladesh's shrimp industry water usage” in Water rights and water wrongs: Institutional design for innovative climate change adaptation, Earthscan Publishers (In press).

Journal Articles

The Political Economy of Smallholder Agriculture and Genetically Modified Food Crops: A literature review, Food Policy (In review).

Sustaining Agriculture While Greening the Economy with Biofuels: Evidence from Tanzania and Malaysia, Energy Policy (In review).

Mintz-Habib, Nazia. 2012. [Biofuels Experience in Malaysia: A political economic analysis](#), Energy Policy 38(8): 3985-3997.

Conference Presentations

“Agrobiotechnology and Climate Change: Gaps between Global to Local Policies” *International Conference on Climate Change Sustainability and Public Leadership*, Feb 07-09, 2012 Indian Council of Agriculture Research (ICAR) at the National Agricultural Science Centre (NASC), New Delhi, India.

“The Political Economy of Green Development: Sustaining Agriculture While Greening the Economy”, *Ecological Economics and Rio+20: Challenges and Contributions for a Green Economy (ISEE)*, June 17-19, 2012, Rio, Brazil.

“The Political Economy of Green Development: Sustaining Agriculture While Greening the Economy”, *The American Political Science Academy (APSA)*, Aug 30-Sep, 2012, New Orleans, US.

UNDP Publication

Mintz-Habib, N. and England, R. “Supporting Transformational Change” UNDP, New York, 2011.

Principal collaborators outside Harvard:

Heap, B; and Nolan, P: Development Studies Department, University of Cambridge, UK
Kabir, W, Bangladesh Agricultural Research Council
Tanveer, M, Bangladesh Development Studies Center

Awards or grants that you have received this year for the current or coming year:

Claydon Prize for outstanding PhD thesis (2012) (Jan 2012)

Sir Isaac Newton Fellowship and Commonwealth Malaysia Education Trust Grant (2012-2014) ~USD \$140,000 (Dec 2011)

Templeton Foundation Grant (Co-PI): USD\$200,000 (Jan 2013)

If you are moving to a new position, please list your contact information there:

Senior Lecturer, Development Studies Department, University of Malaysia