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## Reducing Dietary Related Risks associated with Non-Communicable Diseases in Bangladesh (RDRNCD) – an exploratory research

### RESEARCH BRIEF

Center for Natural Resource Studies (CNRS)'s "Reducing Dietary Related Risks associated with Non-Communicable Diseases in Bangladesh (RDRNCD)" research initiative will work to improve dietary habits by enhancing the consumption of less processed and more diverse food, increasing the consumer demand for nutritious vegetables and fruits and scaling up indigenous vegetables to reduce dietary related risks associated with non-communicable diseases in Bangladesh.

Bangladesh, with a population exceeding 160 million, is undergoing a rapid demographic and epidemiological transition. More than 51% are dying due to non-communicable diseases (NCDs) and other chronic health conditions, and the trend of NCDs (primarily cardiovascular diseases, diabetes, chronic obstructive pulmonary diseases, obesity and cancers) is rising. Two recent changes in the food intake of the population are noticeable i) the share of processed food is already more than 70% among urban consumers while it is as high as 59% among rural consumers (Reardon et al. 2014); ii) the fast and junk food consumption rate is increasingly alarming. The risk factor survey for NCDs (MHFW, 2010) has identified "low vegetable and fruit intake" as one of the major risk factors for NCDs in Bangladesh.

**Research Intervention Area: 16 Upazillas of 8 Districts** (Khulna, Sathkhira, Moulvibazar, Sylhet, Sunamgonj, Sherpur, Jamalpur and Pabna).

**Goal:** Contributing to reduction of NCD risks among the population of Bangladesh

#### Objectives:

***1. Improve understanding of the casual association between food system and dietary change and NCD trends through cross sectional and case control studies amongst various strata of Bangladeshi population.***

One of the primary objective of this research will be to determine any association between dietary patterns and NCDs by age groups, sex, socioeconomic class, place of residence (urban, peri-urban and rural) and ethnicity.

***2. Improve understanding of the determinants of demand for fruit and vegetables and identify options for farmer-market-consumer adaptations that promote and support dietary shifts toward increased vegetable consumptions (using indigenous vegetables as models)***

The research will promote safe vegetable production technologies with the technical support of BARI and following the Good Agricultural Practices Manual (Bangladesh GAP) of BARC. Considering the knowledge and data gaps regarding nutritional values of indigenous vegetable species in Bangladesh, an **analysis of the macro and micro-nutrient contents** of 14 varieties of 14 indigenous vegetable species will be carried out at the University of Manitoba and will be disseminated through the partnerships with the DAE, BADC and other private sectors.



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### ***3. Evaluate interventions aimed at improving consumer knowledge of diet related risks of NCDs, the benefits of balanced diets and increased consumption of fruits and vegetables.***

An in-depth **consumer preference study** on “healthy and nutritious diet including indigenous vegetables” will be conducted at the household level in urban, peri-urban and rural areas. Based on the results of the consumer preference study, a **communication strategy plan** will be developed. A series of knowledge and behavior change communication (BCC) products will be designed AND targeting to reach a total of **128,000** people.

### ***4. Facilitate discussion and coordination between relevant government sectors on food systems change that supports healthy diets.***

Systematic policy analyses of food, health, and agriculture will be undertaken to identify relevant stakeholders and policy gaps and to formulate concrete action plans to establish a national **advocacy platform** to assist in bringing about policy change or amendments to the existing policies to promote the necessity of a balanced and improved diet and change in dietary culture by increasing the intake of less processed, more diverse food including nutrients-rich vegetable species – which, in turn, will contribute to reducing dietary-related risks associated with NCDs.

#### **Partners:**

The research will be led by Center for Natural Resource Studies (CNRS) in association with Institute of Nutrition and food science, Department of Sociology and Department of Public Administration of University of Dhaka; Bangladesh Agriculture Research Institute (BARI); University of Manitoba, Canada and Channel-I.

**Funding Agency:** International Development Research Centre (IDRC), Canada

**Relevant major sectors:** Health, Food, and Agriculture.

#### **Outcomes:**

1. Improved understanding on the risk factors related to NCDs and the role of emerging food system changes including dietary habits in affecting the trend in NCDs are known.
2. Improved capacity of farmer-producers to the scope of scaling up innovations in responding to the emerging demand for safer and improved vegetable varieties.
3. A model on addressing the “consumer-producer demand gap” is functioning appropriately that are enhancing demand for healthy and nutritious diet including indigenous vegetables.
4. Space is created in NCD related national policies and programs by a firm commitment in adopting national balanced diet approach to assist in reducing NCDs in Bangladesh.

#### **Contact**

**Dr. Md. Rezaul Karim, MBBS, Ph.D., Team Leader, RDRNCD, CNRS, House 13 (4<sup>th</sup>-6<sup>th</sup> floor), Road 17, Block D, Banani, Dhaka 1213, Bangladesh, email: [info@cnrs.org.bd](mailto:info@cnrs.org.bd), [rezaul@cnrs.org.bd](mailto:rezaul@cnrs.org.bd), 8802 9820127-8, [www.cnrs.org.bd](http://www.cnrs.org.bd)**