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“Global food security and food safety:
The role of universities”

are National Food Systems Delivering on the Sustainable Development Goals? Macro-level Analysis of Nigeria, Vietnam, Bangladesh and Ethiopia

ZUZANA SMEETS KRISTKOVA¹, THOM ACHTERBOSH², LINDSAY SHUTES³

¹ *Wageningen Economic Research, International Policy, The Netherlands*

² *Wageningen Economic Research, International Policy, The Netherlands*

³ *Wageningen Economic Research, International Policy,*

Abstract

Strong GDP growth and widespread poverty, high fertility rates suggesting an unfinished demographic revolution, coupled with urbanisation trends place tremendous pressures on natural resources and food systems that are dependent on them. Understanding the relation between food systems, food security and zero hunger is therefore highly relevant for policy makers and for researchers.

This paper contributes to the Foresight Project of the Food Systems for Healthier Diets which aims to analyse how the food system in key focus countries as Nigeria, Ethiopia, Vietnam and Bangladesh are expected to transform in the next decades, and to identify the leverage points for making sure that the transformation contributes to balanced consumer diets, i.e. diverse and with moderation of unhealthy components. The objective of this paper is to provide national-level projections of the demand for food, and to explore how various direct drivers in the food system (farm input and output prices, demand for on-farm and off-farm labour, consumer preferences, etc.) interact with the general drivers of the food system, and to evaluate ex-ante how these dynamics affect the SDG goals, in particular zero hunger.

The baseline projections and scenario analysis is performed using MAGNET model that is a multi-sector, multi-region Computable General Equilibrium model of the world economy which has been widely used to simulate the impacts of agricultural, trade, land and biofuel policies on the global economy, as well as for long-term projections. A newly developed MAGNET SDG Insights Module is employed to provide a range of supporting indicators to inform progress towards SDG2.

Keywords: Bangladesh, CGE model, Ethiopia, food systems, macro-level projections, Nigeria, SDG goals, Vietnam