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

Assessing the Food Vulnerability of the Middle East and North Africa (MENA)

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Abstract

Despite all the joint efforts, the number of undernourished people has increased in the MENA since the early 1990s. The underlying factors that drive malnutrition are complex and include population growth, poverty, changing pattern of markets, conflict, political and economic challenges. Climate change will make these challenges even harder to address. MENA will be experienced more frequent and intense heat extremes and droughts. Therefore, it is imperative to ensure that MENA countries reduce their vulnerability to climate change. Using Notre Dame-Global Adaptation Index, this paper investigates the food vulnerability of MENA countries. Findings revealed different levels of food vulnerability, especially low (Bahrain, Malta and Qatar), moderate (Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libyan, Morocco, Tunisia and United Arab Emirate) and high (Algeria, Djibouti, Oman, Saudi Arabia, Syrian and Yemen), which are mainly distinguished by various degrees of exposure, sensitivity and adaptive capacity. Results indicated that food availability and fluctuations of food prices on international markets are major concerns to MENA countries. However, low and highly vulnerable countries are more dependent on importing grain to supply their food. It is expected that highly vulnerable countries remain increasingly dependent on international markets for food supply due to the rapid population growth and significant reduction of cereal yields. Also, it will be difficult to grow cereal crops in the moderate vulnerable countries due to limited availability of arable lands, unprecedented extension of droughts and scarcity of water supply. However, a combination of capacity to equip farm lands with irrigation and adoption of mechanisation have improved agricultural capacity of low vulnerable countries. Findings illustrates that food insecurity is worst in poor rural areas of highly vulnerable countries. These countries have the lowest capacity to deliver basic nutritional needs to the most sensitive groups of their societies. Ensuring food security in highly vulnerable countries will require the design of social safety nets, cash transfer, improvements in food storage and supply systems. Also, for moderate and low vulnerable countries increasing farm productivity and water efficiency, improving access to appropriate technologies, anticipating and reducing the drought impacts and reform of food and fuel subsidies are critical.

Keywords: Agricultural capacity, Climate change, food vulnerability, import dependency, MENA