Food Supply Crisis and the Role of Agriculture in the Middle East & North Africa (MENA) Region

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Contextual Background

Agricultural development and food supply represent a central issue and one of the biggest challenges facing the MENA region. Despite some notable progress and successes, agriculture has not played an effective role in lifting the population of this region out of poverty by providing a platform for diversified economic growth. The food gap for the region has been increasing and widening in recent years. Rising food and oil prices and the adverse climatic conditions in the last year (2007-2008) have further aggravated the food situation for the region.

The general picture painted for agriculture and food security in the region is characterized by non-, under-, and mal-utilization of material and natural resources, resulting in low resource productivities and inadequate crop yield levels aggravated by a widening technological gap. The increasing disproportion between per capita food production and consumption suggests a worsening of the food situation in the region when the business-as-usual approach persists. It could deteriorate further if the negative tendencies of the triple global crises on food (bio-fuel production and rising food prices), energy (rising oil prices) and the environment (natural and man-made calamities) become more pervasive.

The region relies heavily on food imports, and foreign exchange earnings constitute a major determinant of food security. Fluctuations in oil prices, the key source of export earnings, influence directly the economies of the exporting countries and indirectly those of the non-oil exporting countries, especially through flows of remittances from intraregional labour migration.

Drivers for Rising Food Prices

In 2007, there was a sharp increase in food prices calculated by the Food and Agriculture Organization of the United Nations (FAO) at 40%, compared with 9% the year before. And in the first months of 2008 prices again increased drastically. Nearly every agricultural commodity is part of this rising price trend. Wheat, maize and rice prices have more than doubled during the last couple of years, jumping to unprecedented levels. Dairy products, meat, poultry, and palm oil have also experienced price hikes.

Food price increases have resulted from a combination of new and ongoing forces. One emerging factor behind rising food prices is the drive for fuel production at the expense of food consumption brought about by rising energy prices. With oil prices at an all-time high of more than 140 dollars a barrel, agricultural production is increasingly used to produce bio-fuel. This trend has been supported by bio-fuel policies in some countries, particularly the US, aiming at subsidizing farmers to grow crops for energy. About 30% of US maize production (i.e. about 80 million tons) will be used for ethanol production in 2008 rather than for world food and food markets. In Brazil and other countries, sugar cane is massively used in ethanol production. In the European Union and the US, oilseed crops are widely used for the production of bio-diesel, with focus on rape seeds in the EU and soybeans in the US. The world production of ethanol reached more than 16 billion gallons in 2006, half of that from in the US, while world bio-diesel production reached 8 billion gallons in 2006. High energy prices contributed to a higher cost of production by raising the cost of mechanical cultivation, inputs like fertilizers and pesticides, and transportation of inputs and outputs, all of which made agricultural production more expensive.

Rapid economic growth in many developing countries, particularly in China and India, has pushed up consumers' purchasing power, generated rising demand for different kinds of food, and shifted food demand away from traditional staples and towards higher-value foods like meat and milk, which in turn has led to increased demand for grains used for animal feed.

Other factors have also played a role in the rise of food prices. They include poor weather and severe drought in Australia, one of the world's largest wheat producers. Speculative capital in future commodity markets has been another factor contributing to rises in energy and consequently in food prices.

Role of the Agricultural Sector in the MENA Region

The population of the MENA countries has been estimated at 311 million in 2006, amounting to 4.8% of the world's population. During the period from 1990 to 2006, the region's population grew at 2.4% annually, compared to 1.4% for the world population. The overall Gross Domestic Product (GDP) of the region amounted to 734 billion dollars in 2006, constituting 1.5% of the World GDP.

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Agriculture continues to dominate the economies of most of the MENA countries and is an important vehicle for economic growth. The sector continues to produce the bulk of food consumed in the region, accounting for about 40% of total employment and about 20% of total merchandise exports in many countries. Agricultural exports are the main source of raw materials for industry, and as much as two-thirds of manufacturing value added in most of the MENA countries is based on agricultural raw materials.

The agricultural sector is generally viewed as the driving force for the development of the MENA region, especially in non-oil producing countries. The sector is critical to overall growth, food security, and poverty reduction in the region. The Agricultural Gross Domestic Product (AGDP) amounted to 88 billion dollars in 2006, representing 12% of the overall GDP. The rural population amounted to 132 million in 2006, accounting for 42.5% of the total population in the region.

Agricultural production is important for food security because it is a source of income for the majority of the rural poor. It is particularly critical in those countries with highly variable domestic production limited tradability of food staples and foreign exchange constraints in meeting their food needs through imports. These countries are exposed to international risks, and for them, increasing and stabilizing domestic production is essential for food security.

Agriculture is a source of livelihoods for an estimated 70% of rural people. It provides jobs for a large number of smallholders and landless workers and acts as a foundation for viable rural communities. More than 80% are engaged in smallholder agriculture. Accordingly, high priority should be accorded in the region for utilizing agriculture as a tool for poverty reduction.

Food Situation in the Region

The MENA region is generally characterized by food shortage in most of the food commodities. Production of wheat and rice meet only 25 and 52% of the total consumption, respectively. The group of cereals shows the lowest Self-Sufficiency Ratio (SSR) in the total region food basket, with wheat occupying the least SSR. The second group of the food basket reflects higher SSRs ranging from 73 to 98% and including pulses, sugar, milk, and vegetable oils. The third group, including fish, vegetables, fruits, and meat, shows SSR surpassing 100%.

In many countries, average per capita caloric intake is below minimal nutrition standards. Several countries are currently experiencing severe food shortages, and the food shortage problem is expected to increase during the next decade. Food production has declined or sustained during the last two decades, while the population size has increased. The demand for food imports has markedly increased, thereby seriously aggravating the shortage of foreign exchange in the majority of the MENA countries, particularly the non-oil producing countries.

Agricultural Resources and Socioeconomic Constraints

The MENA region is endowed limited arable lands estimated at 53 million hectares in the year 2005, with per capita arable land of only 0.17 hectares, compared to 0.22 hectares at the world level.

Renewable fresh water resource flows amount to 228 billion cubic metres of water annually in the MENA region, representing 0.5% of total fresh water flows in the world. Per capita renewable internal fresh water resources amount to 757 cubic metres in the MENA region, representing only 11% of the world level. Access to water and irrigation is a major determinant of land productivity and the stability of yields. Irrigated land productivity is more than double that of rain-fed land. In the region, only 20% of the area in production is under irrigation. With climate change leading to rising uncertainties in rain-fed agriculture and reduced glacial runoff, investment in water storage will be increasingly critical. Agriculture uses 89% of MENA's scarce water, compared to 70% at the world level, at a time of concern about water's availability for cities and industry.

Several socioeconomic and technological constraints confront agricultural development and food security programmes, particularly in the major agricultural producing countries. Demographic pressures and declining farm sizes are some of the major constraints reflecting the continuous and deepening imbalance between population and agricultural resource base. The average farm size is already quite small. Continued population growth, declining farm size, and growing landlessness put huge pressures on the agricultural and rural sector in the Arab region.

Water security is the second major constraint in the Arab area, the driest in the world. Fresh water supplies are already fully used, 80% of which are currently used in agriculture, and escalating demands for industrial, urban, and environmental uses will reduce the water available to agriculture. Water scarcity is particularly acute and projected to worsen with climate change and rising demand in the Arab region. Some rural areas in the non-exporting countries are lagging areas that have stagnated with high levels of poverty. The causes are varied: poor agricultural potential, low investment in roads and irrigation, and social marginalization. The political pressure of farmers to reduce the urban-rural income gaps through protection and subsidies is increasing. Because of the large number of poor people, protecting food prices to raise farm incomes may have high costs for poor consumers, including most small farmers, who are net food buyers.

There is considerable evidence that slower growth in agriculture relates to the macro and sectoral policy biases against it. Furthermore, pro-rich policies have been seen recently in the region. Several countries have taxed agriculture relative to other sectors. Interventions induced a 30% decline in the relative price of agricultural products with respect to a non-agricultural price index. This policy bias was largest in the agriculture-based countries of the MENA region, with overvalued exchange rates, high tariff protection in industry, and taxes on agricultural exports all contributing to the bias. It was estimated that a 10 percentage point reduction in total taxation to the sector would increase overall annual growth by 0.43 percentage points. Since the mid-nineties, most MENA countries have substantially improved their macroeconomic policy and reduced their biases against agriculture.

Impact of Rising Food Prices on the MENA Region

Given that the majority of the MENA countries are net importers of food commodities, they become the ones most seriously affected by rising prices. The dramatic increases in the food bills place a heavy burden on public budgets, thereby deepening deficits in balances of payments. Large importers will also be at risk when seeking their needs from the world markets, given the declining trend in world food stocks, which have reached their lowest level in the last three decades.

At the household level, surging and volatile food prices hit those who can afford it the least –the poor and food insecure, who constitute the larger part of the population. The few poor households that are net sellers of food will benefit from higher prices, but households that are net buyers of food –which represent the large majority of the region's poor– will suffer. Larger sections of near poor people will be pushed below the poverty line and their accessibility to food will be decreased. The nutrition of the poor is also at risk when they are not shielded from the price increases. Facing higher food prices, poor people will have to adjust their food consumption and shift to even less-balanced diets, with harmful effects on health in the short and long run.

MENA countries have responded to the soaring food prices following different approaches, depending on each country's specifics. However, the MENA region is generally characterized by subsidies dominating the policy response, high share of staples in consumption, high dependence on imported food, relatively high (for income levels) malnutrition rates, fragile social equilibrium –recent growth is widely perceived to be pro-rich–, and absences of targeted safety nets.

Proposed Food Supply Policies

Food production is central to food security in the MENA countries. The overall goal for countries in the region is to secure sustained agricultural growth, reduce poverty, and improve food security. This goal is reflected in the sustainable agricultural development strategy for Arab countries that was agreed upon at the Arab Economic Summit in Kuwait in January 2009. Specific structural features of the MENA countries must be considered in designing the agenda to achieve the overall growth, poverty reduction, and food security goals. However, the diversity across the MENA countries and across countries is huge in terms of size, agricultural potential, transport links, reliance on natural resources, and state capacity.

In view of the high dependence of the people, especially the marginalized groups of the population, on agricultural resources, improving agricultural productivity will enhance food security by making food available in the hopes that this shall improve the livelihoods of the impoverished strata of the population, which remains to be an important objective of agriculture in the next two decades.

Specifically, the region requires:

- Increase in the production (availability) of and access to food required by the population, especially the poor sections of the population.
- Improvement of employment and income-earning opportunities to enhance access for all, especially the poor, to basic foods.
- Reduction in vulnerability to economic and environmental changes, and provision of economic "cushions" and security during external market-shocks and natural calamities in the event of rising food prices and droughts and floods.

These objectives are inseparable: mitigating poverty is critical to environmental protection, and protecting the environment is crucial for addressing poverty through sustainable agricultural production.

Long-term solutions for the food supply problem should include: 1) a multi-sector approach to development; 2) the active participation of rural agriculturalists; 3) land tenure policies that place limits on land acquisition; 4) improved price structures on the world market for export crops; 5) environmentally sensitive agricultural programmes; and 6) international cooperation among MENA countries to improve their bargaining position in international matters.

A priority action for partnerships in the field of food supply in the MENA countries includes Arab investment support to productive activity in existing Arab agricultural schemes, in smallholder agriculture, and in new large-scale agricultural schemes to produce strategic food crops. Another action includes the establishment of food reserves complemented by composite flours as long-term measures of food security. Other actions suggested involve infrastructure and trade and Research and Development (R&D). The broad-based economic development requires prior growth and productivity gains in agriculture. Rising agricultural productivity is a significant source of economic growth that generates employment, export earnings, and additional incomes.

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