

TOWARD ARAB FOOD SECURITY

A roadmap for a sustainable future without wasteful subsidies and mismanagement

By M. Anis Salem and Natasha Banks

As a whole, the Arab World doesn't produce enough food to feed its growing populace. One by one, each Arab country faces a different set of limitations, including natural resource endowment and production constraints, which impact the ability of nations to weather food-price shocks. Arab states are facing increasing demand for food and water due to population growth, urbanization, and the expansion of the middle class. Many governments are also grappling with instability following the 2011 upheavals and multiple crises in the last decade, which caused new challenges for governance, provoked more external intervention, and prompted widespread internal discontent.

The drivers, mechanisms, and impacts of food security need to be explored. Moreover, researchers must study the internal, regional, and global dynamics at play and provide some recommendations as to how Arab governments might deal with challenges that will influence food prices and resource endowment in the water-energy-food nexus, both in the short term and in a longer time frame.

The future security of Arab states will depend on navigating multiple regional conflicts and competitions, internal upheavals, and extremist movements that fuel regional instability. It will also depend on addressing new non-traditional security threats, particularly to the water-energy-food nexus. This will require, in turn, a new analysis of these threats, followed by the development of innovative strategies and approaches.

Political Stability and Food Security

The link between food and political stability, which plays out on three levels, has been a recurrent theme in analyzing the dynamics of change in the contemporary Arab World, particularly following the oil price increases of the 1970s. Internally, food has played a key role in the stability of governments. A set of policies has emerged over the years, including providing food subsidies, adopting programs to introduce micro-nutrients, and placating



farmers through policies that encourage higher outputs or certain crop selections through fixing crop prices and facilitating access to loans, seeds, and fertilizers. In many cases, governments have attempted large-scale agricultural and water fixes to increase and regulate possible food production. These projects have ranged from dams in many nations across the Middle East and North Africa (MENA) region to more localized projects such as the water distribution Toshka projects in Egypt. The region has also seen massive projects such as the Gezira irrigation scheme in Sudan and Saudi wheat-growing efforts.

△ People wait for food donated by an Iraqi government organization at the outskirts of Mosul, Nov. 20, 2016. *Reuters/Goran Tomasevic*

Rioting against reduced government food subsidies have long been a focal point of social unrest in the region, building a culture of subsidy sacrosanctity that has planted fear in the hearts of those in office. This was an important issue in International Monetary Fund (IMF) negotiations going back to, for example, the Egyptian and Jordanian IMF talks in the 1970s.

Regionally, the water, energy, and food nexus has been a factor in inter-Arab, Middle Eastern, and African geopolitics, with Arab nationalists calling for deeper regional economic integration and enhanced food security, joined by some intergovernmental efforts through the League of Arab States. For example, in the 1970s Sudan was labeled the “breadbasket of the Arab world,” and more

recently Saudi, Emirati, and Qatari agricultural projects have been established in Sudan. Nearby Egypt has profound concerns about Ethiopia's Renaissance Dam, while Cairo has supported the long-stalled Jonglei Canal project, set up in South Sudan to benefit South Sudan, Sudan, and Egypt.

We see that the politics behind water control have been paramount in geopolitical relations through much of the last century and this one as well. Jordan, Syria, and Lebanon have been affected by Israeli water projects—a source of tensions in the 1950s and 1960s—which eventually escalated into the 1967 war. Iraq, Syria, and Turkey have had water issues, and recently the United States intervened militarily to protect the Mosul Dam from an Islamic State in Iraq and Syria (ISIS) attack. Food supplies to Qatar have become an issue in the past three years during the Gulf country's conflict with Saudi Arabia, the United Arab Emirates (UAE), Bahrain, and Egypt.

Finally, the complexities of international politics add another dimension to food security in the Middle East. Witness the long history of U.S. food donations to countries in the region and the impact of political disagreements with recipients (such as Egypt) who in response, during the Cold War, sought the support of the Soviet Union. Other examples are the withholding of Western assistance to Egypt's High Dam, the Oil-for-Food Programme in Iraq, and the recurring deployment of food supplies in response to emergency situations in the region—in many cases through the United Nations World Food Programme.

2011 and Food Crises in the Region

Many argue, using historical data, that increases in food prices contributed to the 2011 region-wide upheavals. Earlier, in 2007 and the first half of 2008, a sharp rise in food and agricultural commodity prices triggered serious food security concerns. These increasing prices led to a rise in malnutrition and poverty, and not just in Arab countries.

In 2009, the World Bank noted that despite energy and commodity prices falling, the relaxation of export bans, and the weakening of the global economy in the second half of 2008, many of the factors underlying food price volatility had not been affected and would likely continue.

While the 2007–2008 regional food crisis led to a high dependency on imported food, this trend has become more intense in the post-2011 context as it had been many years in the making. In terms of both production and consumption, the regional food industry has become increasingly stretched over the last decade. The insecurity is at the individual consumer level due to high rates of poverty, which in turn expose vulnerable groups to further privations and malnutrition. Weak food security plays out on a macro, or national, level when countries become more exposed to external pressures and

governments lose their ability to meet the demands of their citizens.

The region faces a unique set of challenges that contribute to deficits in both water and food. Sinking water tables, limited rainfall, and desertification all lead to a water deficit. Limited water resources, diminishing arable land, negative effects of climate change, and slowing global productivity growth rates for major cereals also constrain agricultural output. Poor public policy and “thin” international cereal markets (i.e. limited numbers of sellers and buyers, often paired with price volatility) can exacerbate these challenges as well.

Since Arab countries are the largest net importers of cereal in the world, there is a heavy reliance on imported calories in Middle Eastern nations, which exposes governments to severe swings in agricultural commodity prices. This vulnerability will likely be exacerbated in coming years due to high population growth, income growth (which leads to demand for more diverse diets), and increased urbanization driving higher food demand, together with political volatility.

While many countries in the region have experienced demographic transitions to lower population growth, the United Nations Development Programme reports that the momentum from earlier periods of rapid population growth “will remain a powerful force into the region’s future and ensure large population increments for many years”. In contrast to its present population of around 360 million (up from 128 million in 1970), the region’s projected population for 2050 is a daunting 600 million. Many of the lowest income MENA countries will experience the largest population growth in the next two decades, including Egypt, Syria, Yemen, and Iraq. This population increase can be expected to further strain supplies of power, food, and water.

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Pre-existing and continuing regional food insecurity is further exacerbated by the political instability experienced within several Arab countries over the last decade. Many Middle Eastern governments tend to be reactive to popular demands rather than taking on longer-term infrastructure development and economic reforms that are more likely to provide strategic stability. In an effort to counter public unrest and other consequences of rising food prices, many governments in the region have attempted to offer a range of subsidies, wage increases, and other benefits. These efforts have been met with mixed results and too often have led to macroeconomic imbalances.

Instability in Food Prices

Global and local food price patterns create vulnerability to food-price shocks

and often result in macro and micro side-effects. Globally, food prices rose above the general rate of inflation in the first half of the 2010s. This volatility meant more economic risks for producers and importers. Rising international prices and marked fluctuations often lead to upward pressure on national and household budgets in the region. These pressures are modulated by domestic consumption levels, subsidies, and inflation.

As an indicative example, the prices of cereal and sugar, two principal commodities, face high degrees of volatility, yet they account for more than half of caloric consumption per capita. The fact that more than half the sugar consumed in the Arab World is imported increases the risk of volatility.

Subsidies have become a typical first line reaction of many Arab governments seeking to combat food-related challenges, yet they are often ineffective and can have huge social and fiscal costs. The Food and Agriculture Organization of the United Nations (FAO) reports that in the 2018/19 fiscal year, the Egyptian government allocated \$4.8 billion for food and bread subsidy schemes, with half earmarked for bread subsidies alone. In contrast, these funds could have been directed toward strategic investments in agricultural infrastructure (modernizing the irrigation system), or health and education initiatives that would have addressed long-term challenges such as population growth and illiteracy. Blanket subsidy programs are mostly inefficient at helping the poorest individuals and families because they are bestowed on the entire population, regardless of need—too often encouraging waste, despite recent improvements in targeting lower income groups.

Gulf countries, while heavily reliant on food imports, have strong fiscal balances, meaning they are less exposed to price risk. However, export bans and other trade restrictions can lead to quantity risks. In times of inflated global food prices, some Gulf countries such as Kuwait and Saudi Arabia are able to use fiscal surpluses to build up reserve stocks and offer subsidies. However, this mitigation is only possible when oil prices are high. Increasing uncertainty around oil reserves, slackening demand for oil, and climate change are set to complicate matters for Gulf countries in the coming decades.

The Impact of Price Shocks on Arab Economies

IMF data from 2008 indicates that on a macro level, in the lead up to the 2011 uprisings, inflation in Arab nations increased at more than twice the world inflation rate of previous years. Inflation can be accelerated by high energy and food prices, which in turn negatively impact trade balances. Again, the common response to these increased prices from Arab governments has been to counter with new subsidies; however, we have seen that such actions often add to the strain on already stretched fiscal balances.

In the past, a number of non-oil exporting or oil-poor countries, including Egypt, Jordan, Syria, and Yemen, have raised salaries in the public sector, implemented direct cash transfers to the poor, increased bread subsidies, and lifted tariffs on basic food commodities in efforts to combat food price shocks. However, without comparable increases in revenues, these measures are not sustainable. Meanwhile, oil-producing Arab countries, due to their dependence on one major source of revenue, are more likely to be impacted if declines in oil prices shrink trade surpluses, government revenues, foreign exchange earnings, and investment options. This has an almost immediate knock-on effect in the other non-oil producing Arab countries.

At the microeconomic level, the 2008 price shock made poverty both more widespread and more severe, and this trend has only increased in the decade since. The first Arab Multidimensional Poverty Report in 2017 found that across ten Arab countries, on average 13.4 percent of the population lives in poverty. In some countries, the poverty level is over 30 percent. The World Bank estimated in 2009 that a 30 percent food price increase would result in a twelve percentage point increase in poverty in Egypt. The high proportions of populations living close to the poverty line intersects with the high rates of population growth in the region, meaning that although the percentage of those defined as living below the poverty line is not changing, the absolute number of poor defined by this standard is rising.

These poorer segments of society are more concentrated in rural areas and urban slums, as well as in families in which the head of the household is not educated. These segments, as well as small-scale and marginal farmers, the rural landless, and the urban poor, are most likely to be negatively impacted by food prices. Price shocks can pull those living close to the poverty line under and drive them to demonstrate against their governments or take more extreme actions.

The poor are often the hardest hit by price shocks because they spend a higher portion of their income on food and hence are more vulnerable to price shocks. In Egypt, for example, the lowest 50 percent of the population spends more than half of their income on food—with 20 percent going to food staples such as wheat, cooking oil, and sugar. In Morocco, the poorest 50 percent of the population spends 60 percent of their earnings on food. When food prices increase (or subsidies are reduced), the impact on household spending can be significant and persistent even after prices re-stabilize. Spending on education and health is impacted early, which can reduce future productivity, not to mention quality of life.

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Food Prices' Impact on Health and Nutrition

The effect of food shortfalls and bad nutrition on local populations is massive. Low birth weights; maternal malnutrition; child undernutrition; anaemia; and micronutrient deficiencies of vitamin A, iodine, and iron all conflate to balloon child mortality rates. Researchers have also seen weakened learning, lower IQs, and higher teenage delinquency as a result of poor nutritional levels. This repositions the issue of food security to be central to human security, human rights, and the need to empower even the poorest people with knowledge that protects their families and improves their health.

The examination, then, of food security at the nutritional level is critical in many Arab countries. While an individual may get enough calories, he/she may also be food insecure if their diet does not provide the nutrition and vitamins required for a healthy lifestyle. Pregnant women, children, and those without education are most impacted by nutritional food insecurity.

Recommendations for a Secure Food Future

Access to food and water has moved to the center of non-traditional security threats facing Arab states and communities. This requires significant changes in priorities, strategies, and tools. In parallel, more attention must be given to the significant work undertaken in recent years to find how countries in the region can better address their food and water security challenges.

Implementing effective (or improving existing) safety nets that are flexible, scalable, and well-targeted would assist those individuals and households in greatest need or at greatest risk during price shock events. Safety net programs

Cash transfers not only enable governments to invest in human capital, but can also protect those most in need and improve standards of living.

can soften the impact of price shocks by ensuring that poor families can pay for healthcare or children's education as well as covering food costs. Many Arab countries already have cash-transfer programs that could be further reformed to fulfil this need. Cash transfers not only enable governments to invest in human capital, but can also protect those most in need and improve standards of living. These types of transfers are preferred over subsidies, as they

empower beneficiaries by allowing them to make purchasing decisions. Cash transfers also have lower administrative costs and do not distort commodity markets. They are useful when linked to commitments by parents to fully immunize their children and keep them in school.

While some countries are shifting focus away from subsidies, studies indicate that better-targeted food subsidies or proxy-means testing—a way of measuring household welfare using indicators that are correlated with income—can positively impact poverty headcounts, depth, and severity. According to

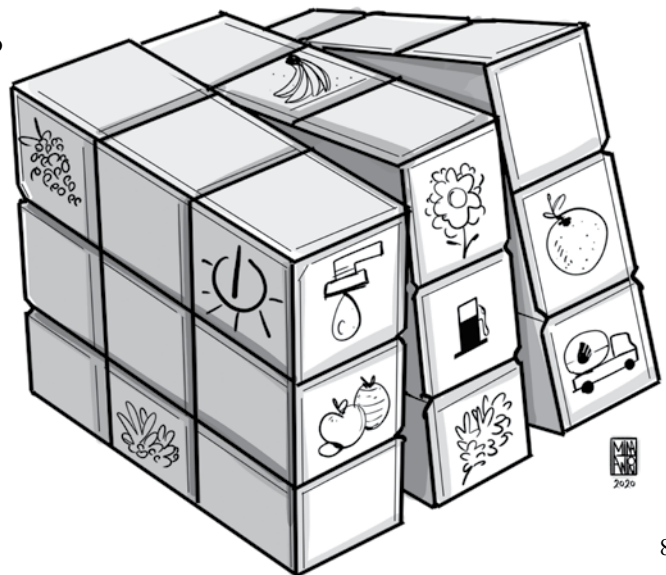
a recent FAO report, livelihood support such as key food production input subsidies (pesticides, diesel, and fertilizers) can also play a role in meeting the Arab region's food security challenges in the coming decades.

In order to reduce the region's malnutrition and obesity problems, governments must invest in educating populations about health and nutrition. More than a third of the daily calories consumed in Arab countries come from wheat, which underpins the region's heavy dependence on imported cereals. Global trends indicate that diets diversify and caloric intake increases as incomes rise. Education programs need to provide information on staple food nutrition—such as showing the benefits of whole wheat flour over white flour—and work to shift populaces to healthier diets and lifestyles. Interventions aimed at improving health and nutrition will be enhanced by more effective family planning services.

Improved agricultural practices and resource management are vital as well to building a more sustainable food secure future for the region and improving rural livelihoods. As most Arab countries do not have the capacity to expand arable land or irrigation, efforts must be concentrated toward supporting system-wide productivity and reducing waste in the supply chain. The effects of higher productivity can include increased purchasing power for the rural poor. Moreover, as foreign exchange earnings grow larger, this will inversely reduce dependence on food and other imports.


Research and development, extension services, and investments in crops suited to the regional environment and climate—those resistant to drought, salinity, and sodicity (the measure of sodium in the soil)—are all recommended by students of food security. These measures will become relevant if agricultural productivity is to stay stable—or rise in some locations—alongside the predicted growth in demand for non-agricultural water usage.

Better water management is also critical. Investment in water-saving irrigation technologies by farmers and switching from low-value, water-thirsty crops (such as wheat) to higher-value crops such as vegetables and fruit is a viable option for the region. Refined approaches to water harvesting, reuse, and conservation will also become increasingly important.



Active investment in infrastructure to produce, store, and transport food can help reduce exposure to price shocks on imported goods. A more collaborative approach to investment in infrastructure, land, and technology has been recommended by the FAO for governments in the region to meet their food and water security challenges. Supporting research and development in countries with the potential to increase agricultural exports to Arab countries is another measure to improve food security in the region. For those food-importing countries with access to inexpensive petroleum, investment in transportation and storage can lead to better arbitrage prices for both food and fuel.

Having reliable food in stock as well as for sale on the market can stabilize domestic prices. Stockpiling can also provide emergency aid in times of crisis. The World Bank asserts that good public management of stocks and involvement of the private sector (which holds most food stocks throughout the world) must be emphasized in the coming years. Coordination of physical stocks across the region has the potential to mutually benefit governments and may help to reduce the pressure on thin global food markets. Stockpiling avoids the high costs associated with perishable materials and the requirement to rotate stock. It also ensures that cereals are available to importers at a price that has been “locked in” in advance, which enables better budget planning.

Despite potential increases in domestic production, none of the Arab countries are likely to achieve food self-sufficiency, and they will likely remain net importers of cereals. Continued reliance on imports exposes governments to thin markets and high price risks. Adoption of appropriate trade policies can reduce risks associated with overreliance on domestic production. Governments across the region should work together to diversify trade partners, expand intra-regional trade, and promote global trade agreements to meet the shared food security challenges across the MENA region. 



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