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Energy, Environment and Resources Summary

Global Food Insecurity and Implications for Saudi Arabia

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INTRODUCTION

On 29 April 2013, the Chatham House Energy, Environment and Resources department convened a meeting on 'Global Food Insecurity and Implications for Saudi Arabia.'

The aims of the meeting were threefold: 1) to identify some of the challenges and opportunities in key food-exporting countries and the implications for international food security; 2) to assess Saudi Arabia's food security position; and 3) to discuss possible policy options and tools to enhance food security in Saudi Arabia.

The discussion was wide-ranging and constructive. In general, there was good consensus. Where there were differences of opinion, these are reflected in the text.

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GLOBAL DRIVERS OF FOOD SECURITY RISK FOR SAUDI ARABIA

By conventional definitions, Saudi Arabia is a food-secure country, with a strong fiscal balance and large oil reserves, which support the import of food commodities to feed the population. This robust financial position allows Saudi Arabia to finance generous subsidy programmes, thereby supporting access to food at the household level. However, there are a number of risks that the country should consider when formulating food security policy.

High and volatile international food prices

International food prices are currently high and volatile, with significant spikes in cereal and edible oil markets during 2008, 2011 and 2012. Although there have been comparable times of volatility in the past (most notably during the 1970s), the structural trend shows increasingly high and volatile food prices, with indices around twice the level of the past two decades.

These trends affect Gulf Cooperation Council (GCC) countries due to their high food import dependency. Imports as a percentage of consumption is very high in the region, with Saudi Arabia importing \$20-billion worth of food in 2010. It is expected that import dependency will remain high in the region, particularly for strategic commodities such as cereals – in which GCC countries have little comparative advantage to produce domestically.

High and volatile prices have an important impact on the Saudi economy by contributing to domestic inflation, whereby rises in international prices transmit partially to local prices, although subsequent decreases do not result in comparable downward price pressure within Saudi Arabia. Food price inflation has resulted in generalized inflation in the economy over the past eight to 10 years and diminished savings for households.

High prices have resulted in profit pressures for Saudi food companies, which have struggled to fully pass on price rises due to government price controls. Some participants noted that food companies may be reluctant to transmit falls in food prices due to constraints on their ability to pass on rises, and that this might explain the 'downward stickiness' of Saudi food prices. In response to margin pressures, businesses have lobbied for government support and participated in state-facilitated overseas investment programmes designed to reduce dependence on imports. However in the medium term, continued pressures are expected to lead to consolidation.

The outlook points to further price volatility, with global stock-to-use ratios expected to remain low. Furthermore, as much as 50 per cent of global stocks are not liquid or available to international markets as they are held by India and China for domestic use – thereby decreasing the availability of stocks to international markets even further.

Climate change

Climate change is likely to worsen the tightening balance between global supply and demand, with scientific research showing that warming temperatures will act as a drag on global yields.

Climate change will also lead to increased frequency and severity of extreme weather events such as drought and floods, which can affect important food production centres outside of the Middle East, potentially resulting in very pronounced international price spikes. Climate change will therefore increase the food security risks faced by highly import-dependent countries. While high per capita incomes and strong oil revenues mean that GCC countries are well

positioned to absorb such shocks, poor food-importing countries are more vulnerable. This includes many neighbouring countries in the wider Middle East and North Africa region. Participants noted recent events in North Africa, where high wheat prices precipitated by the 2010 Russian heat wave and a subsequent export ban were identified as a contributing factor to the initial protests that led to the Arab Spring.

Biofuel policies

Biofuel mandates in the United States and EU were identified as a primary driver of high and volatile food prices. It was noted that the US ethanol mandate's impact on global maize markets is roughly equivalent to the 2012 drought on a continual basis.

Biofuels might be an even more important driver of food prices in the future in the event that US farm and biofuel lobbies succeed in raising the blending wall for ethanol from the current E10 to E15 and beyond.

Bilateral trade relationships and counterparty risk

Changing import-partner relationships create risk for Saudi Arabia. Black Sea and South Asian exporters, in particular Ukraine, Russia, India and Pakistan now represent key trade partners for the country in commodities such as barley, wheat and rice. These countries are potentially less reliable than other major exporters due to the risk of export bans or climate-induced supply shocks.

Geographical choke points surrounding Saudi Arabia and other GCC countries create additional vulnerability. Capacity constraints in the Turkish straits or the Suez Canal could negatively affect food imports from the Black Sea region, North America and Europe. Furthermore, a closure to the Straits of Hormuz by Iran would cut off supplies of commodities such as rice from India and Pakistan and wheat from Australia. This threat points to the need for Saudi Arabia to maintain adequate port capacity on both the Red Sea and Persian Gulf coasts.

In addition, key producers such as Russia and Kazakhstan may orientate their export trade towards Asia to take advantage of growing import markets in China, rather than to GCC countries, which will create a different set of trade challenges for countries in the region. Therefore, Saudi Arabia should develop a diversified import profile both geographically and temporally –

rather than being reliant on a small number of exporters that produce at just one or two points in the year.

ASSESSING FOOD SECURITY - INTERNAL CHALLENGES

Saudi Arabia is a food-secure country.

Currently, Saudi Arabia spends only four per cent of its foreign currency on food imports, meaning that it can import its food requirements from international sources. It was noted that even in times of high food prices such as 2008, Saudi Arabia had not faced difficulties in securing food imports. This secure position is expected to continue as long as the country maintains strong exports and that food is available on international markets.

At the household level, Saudi Arabia is also generally food-secure due to relatively high per capita incomes – about \$2,000 a month¹ – and high social spending. However, specific pockets of poverty may exist where incomes and household food security are considerably less. Some participants noted the areas of Jizan, Najran and Al-Madinah as having higher rates of poverty and lower household food security relative to other parts of the country. Others questioned this, noting that official government statistics do not support this claim.

Participants noted that food insecurity is also likely to be higher among poor immigrant workers and illegal immigrants – although there is a lack of reliable data on the numbers of unregistered workers or their socio-economic status in Saudi Arabia.

Environmental constraints

Serious environmental constraints, in particular water scarcity, undermine the ability of Saudi Arabia to produce food domestically. To address these challenges, the Saudi government has phased out subsidies for and procurement of domestically produced wheat and barley in the country. While these policy changes have led to a reduction in wheat acreage, participants noted that farmers have replaced this crop with alfalfa – a more water-intensive crop.

¹ World Bank data, using GNI per capita adjusted for purchasing power parity

Government policy to promote universal access to water, low pricing tariffs and the prioritization of fresh water for agriculture rather than household use has resulted in inefficient water use. Agricultural water demands in Saudi Arabia represented 83–90 per cent of total water demand in the country from 1990 to 2009, with some participants noting that two thirds or four fifths of Saudi Arabia's non-renewable groundwater resources may have been depleted as a result of agricultural use.

To mitigate these challenges, it was suggested that Saudi Arabia should introduce measures to optimize water use, such as pricing schemes or allocation and trading of user rights. Such measures could also reduce the amount of energy used for intensive desalination of water for domestic consumption. The introduction of farm water meters and policies to regulate irrigation practices would further support efficient water use.

Overexploitation of fisheries provides a further environmental challenge. Due to their relatively small size, high endemism and limited oceanographic circulation, both the Red Sea and the Gulf are particularly vulnerable to toxic pollution, eutrophication, habitat degradation and loss of species, all of which undermines the particularly useful role that local fish stocks could play in meeting food security in the GCC region.

Socio-economic trends

Population growth will increase total food consumption in Saudi Arabia - with the population set to rise from 28 million to 32 million by the end of 2016. It was also noted that demographic changes are resulting in an increasingly young population, which may create future unemployment issues – something that the government is attempting to address through its Saudization policy and unemployment support programmes.

Emerging fiscal pressures

Although Saudi Arabia has a strong fiscal position, this is coming under increasing strain from a growing population, rising social spending, including on food subsidies, and high levels of domestic energy consumption. In this context, the need to ensure productive employment becomes clear. Participants noted the importance of oil revenues in supporting Saudi Arabia's fast expanding social spending and also considered potential threats to this source of income, including unsustainable domestic energy consumption, global carbon pricing and increasing production of shale oil and gas.

POLICY OPTIONS FOR SAUDI ARABIA

Domestic agricultural production

There was consensus that investment in domestic agricultural production is economically and environmentally inefficient in Saudi Arabia, except for some limited production in non-strategic high-value foods. While participants welcomed the decision to stop subsidizing wheat production, concerns remained about the level of ongoing support to other agricultural industries in which Saudi Arabia lacks a comparative advantage, such as meat and dairy production.

Investment in agricultural production overseas

Although data on investments in farmland overseas by Saudi Arabia is poor and contested, press reports suggest that investment from Saudi Arabia has flowed into farm operations in Sudan, Pakistan and the Philippines. The King Abdullah Initiative on Agricultural Investments Overseas partly incentivizes these purchases, which subsidizes private-sector investment by Saudi companies on agricultural operations in foreign markets.

There was a consensus that sovereign investments in land to secure food supply are high-risk and potentially low-yield; while investment in established agricultural projects in countries with strong governance would be lower risk. Particular risks include the potential for a host government to renege on commitments in times of high prices, water scarcity and associated regulatory issues, and social and conflict risks where local communities are adversely affected.

Participants largely agreed that rather than investments in land overseas, it would be cheaper and involve less risk to purchase food on international markets, and to reduce counter-party risk through market-based instruments such as call options.

Finally, the difficulties or failures of investment in agricultural production overseas should not act as a disincentive to invest in global agriculture more generally. Saudi Arabia could play a highly constructive role through investment in global public goods such as crop research and development or infrastructure improvements in places such as sub-Saharan Africa. In particular, Saudi investment in bio-saline agricultural research was noted as one particularly useful intervention, which could lead to the opportunity to

grow barley in brackish water – using genetic modification to improve salt-tolerance genes.

Trade and import policies

There was general agreement that trade policies represented the most effective method for Saudi Arabia to meet its food security needs, although there remained major inefficiencies in trade infrastructure. For example, benchmarking suggests that Saudi Arabia can significantly reduce import costs and ship turnaround times in comparison to other importing countries such as the Netherlands and South Korea.

Infrastructure in Saudi and between GCC countries remains poor, increasing transportation times and food costs for consumers. In particular, a land bridge project that aimed to link Jeddah to Riyadh by railroad and to upgrade facilities between Dammam and Riyadh has stalled. Addressing such internal infrastructure weaknesses would ameliorate the country's food security by improving the viability of Red Sea ports as import hubs and reducing transportation time and cost. A deep-water multi-purpose agri-bulk commodity terminal on the Red Sea could service the Western provinces of the country but also act as a hub for other Red Sea ports in Saudi Arabia and neighbouring countries such as Sudan for bulk imports.

Supply-side risks could be reduced by broadening the import portfolio of the country. One way to achieve this aim would be to revise Saudi Arabia's tight import quality standards, thereby allowing a greater choice of trade partners for strategic commodities such as wheat.

Strategic reserves and storage

In 2010, Saudi Arabia announced plans to increase its strategic reserves of wheat from six months to 12 months of consumption by 2016 (around three million MT) – with Saudi logistics and stocking in wheat operated by the parastatal Grain Silos and Flour Mills Organization. While participants agreed that the storage policy represented a sensible option to improve food security in event of a supply disruption, a number of problems identifiable from the historical record of public stockholding were discussed, including:

- The high costs of stockholding,
- Crowding out of private sector stockholding,

- A tendency to cave to political demands to release and buy at inappropriate times,
- A woeful record of price management, and
- The difficulty of rotating large stock levels and the risk of spoilage

Given these drawbacks, it was argued that a 12-month strategic reserve may be larger than is needed to insure against the risk of supply disruptions. The location of Saudi Arabia's stocks also result in inefficiency. Of 2.5 million MT of current silo capacity in Saudi Arabia, 90 per cent is located in the hinterland of the country (near to previous production centres in the north of the country). Even with plans to expand silos near to the ports of Jeddah and Jizan, 80 per cent of silo capacity will remain in the interior of the country. The location of these stocks results in significant transport costs as trucks travel hundreds of mile from port to fill silos. It was recommended that investing in silo capacity nearer to port or to consumption centres would reduce the costs inherent in this policy.

It was suggested that there is greater potential for privatization of the stockholding operations. Subsidizing the private sector to hold stocks might be one way to achieve this aim, by de-politicizing decision-making on stock purchase and sales and providing security that minimum stock levels could be maintained. Furthermore, obsolete silo locations might be integrated into the strategic reserve system by adopting an efficient rotation strategy or using Saudi Arabia's spare capacity as part of a regional strategic stock regime with neighbouring countries. Yemen was noted as one country that could significantly benefit from this policy.

Consumption support and pricing policies

To ensure access to food at low prices, the Saudi government uses price caps and a subsidy regime for food producers and retailers to provide consumption support for the population. In particular, the government implements price controls on staple goods such as milk, while providing direct support to food producers and retailers as a means of compensation to the private sector for depressed profit margins.

Participants agreed that such subsidies are largely inefficient and transferred price risk from the Saudi retail sector and consumers to the government and taxpayers, contribute to obesity and waste and are not well targeted towards

vulnerable groups. Subsidies have created further challenges around entitlements and consumer expectations in the country.

To tackle some of these issues, participants emphasized the need for co-implementation of price reform with real income transfers to help the most vulnerable sections of society. A communication campaign directed through the education system and local news channels was posited as one way to raise awareness around the issue of food waste and the potential benefits for pricing reform – laying the groundwork for changes that would be of great benefit to the Saudi economy.