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Food security in a climate of change: turning challenges into opportunities

A few years ago, one could think that the problem of food security was close to be solved seeing that the situation has significantly improved over the last fifty years. The planet had three billion inhabitants in 1960, six billion in 2000, and at the same time, food production has multiplied by 2.4. But strong tensions remain, as shown by the food riots that occurred in 2008 in more than thirty countries (Senegal, Haiti, Egypt, Philippines ...), after the sharp rise in the price of cereals. In addition, the issue has become more complex. Not only has the quantity problem not disappeared, as evidenced by the price raise, but it was accompanied by the problem of quality: the mortality and morbidity linked to food, in a context of a deficit like surpluses, exceeds those related to infectious diseases, which calls into question nutritional diets. Finally, the problem of quality is coupled with that of access to resources, marked by large disparities.

Highly dependent on foreign imports, the UAE is stepping up its effort and puts forward multiple initiatives to ensure food security. The country hopes to make its weakness in agriculture, an asset of influence on the world. Like most of its Gulf neighbours, the country is 90% dependent on foreign imports for its food needs. Lucid about its structural dependence, the UAE quickly became aware of the importance of the food factor and the threat it poses on its internal stability. The "UAE's Vision 2030", which sets out the ambitions and goals of the Emirates for the next two decades, puts food security at the centre of the country's strategy. This ambitious goal aims to satisfy 60 to 70% of the food needs of a population of about 10 million (including 1 million Emirati) from local production by relying on the development of sustainable agriculture or the proliferation of desalination plants powered by solar energy to meet water needs.

The Gulf countries generally and the UAE more specifically have long understood that oil, which had become its strength, had also become a weakness. That is why it has implemented diverse policies that allows a significant reduction in the share of hydrocarbons in their GDP (already representing 30% in the United Arab Emirates). Until the 1990s, one could have possibly doubted the stability, or survival, of these economies dependent on the manna provided by a basement so richly endowed. Since then, it has embarked on a vast diversification enterprise based on its comparative advantage and in particular its abundant and cheap energy, very important liquidities and their geographical position, the crossroads between Europe, Africa and Europe and Asia.

Today, the UAE has invested in new sectors with high added value such as petrochemicals, controlling upstream and downstream oil and gas, aeronautics, telecommunications, tourism- sometimes even becoming a world leader in the mentioned sectors.

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Land-grabbing

To secure their food supply, the UAE is buying or renting more and more land in poor countries, but where land is abundant. This approach is often presented as a strategy where everyone wins. The investing country acquires land and obtains a guarantee of access to the food produced there while benefiting from high returns on investments. At the same time, the recipient country is pocketing an injection of capital into its agricultural sector, generating economic development. For the operation to be truly beneficial to all, it is imperative, however, that the investing country protects the citizens of the recipient country from nationalization or expropriation, ill treatment of the labour force and the loss of their own resources. Nowadays, the UAE is one of the world's largest buyers of land in third countries. The UAE and the KSA combined have more than 2.8 million hectares between them, mainly in Indonesia, Pakistan and Sudan.

It is important to note that investors must carefully distinguish sustainable development objectives from their food security objectives. Countries usually seek to match their abundance of capital with the abundance of land and labour of the host countries. From a development perspective, this is a perfectly sensible step for both the investor and the host country. However, high yields have high inherent risks, which is a major disadvantage when the goal is food security. Large-scale agricultural logging has suffered serious failures in Sudan, where, despite the country's agricultural potential, the World Food Program is currently feeding 5.6 million people.

Setting up agricultural activities in third countries may allow the UAE to protect itself from market risks, but this entails a cost. The use of the world market to obtain large quantities of food can be a source of many hazards, as recent food price shocks have shown. Be that as it may, by choosing to invest in third countries instead of using the market, the UAE takes all the meteorological risks of the host country rather than choosing a country in which to source. Political risks inherent to the host country can also pose serious problems, especially in countries like Sudan, where conflicts are common. The market offers greater flexibility than third party investments. Capital tied up by land acquisitions and long-term rentals cannot be readily available for the purchase of food from other suppliers when there is weather challenges or political disruption in the host country.

To add up, there are different other strategies the UAE can employ.

It can invest in infrastructure used abroad for the production, storage and transport of food. These can be permanent infrastructures: ports, silos and roads; mobile infrastructure: boats, trucks and inputs (ex fertilizer); or intellectual infrastructure: seed variety patents and other technologies. The purchase of land is not essential if the country can provide and control the infrastructure and technology needed to produce, transport and store food. The beneficiary remains in a position to increase the productivity of his land and manpower and can potentially benefit from the system without indisposing the local population by selling land, while the investor limits his capital investment and is not

subject to the political risks associated with land purchases. The UAE would benefit from such a strategy because it would create synergies by producing oil while controlling the primary production factors derived from oil. If these assets are properly diversified, they also minimize the weather and political risks mentioned in the previous paragraph. Customs warehouses could be built in the Emirates, and physical warehouses associated with international commodity markets would be established within the region. This would reduce reluctance to purchase hedges related to physical stocks of wheat in distant futures markets and stimulate commodity trade.

Countries can in the long term invest in agricultural R & D of foreign countries.

Investment in agricultural R & D allow for high rates of return. In the UAE, especially in areas where land and water are extremely scarce, productivity may be too low to restrict investment in research to the region. Investments in agriculture abroad could increase food security by increasing the productivity of current or potential trading partners. In addition, if IP regimes are strong enough, investor countries could take ownership of technologies that increase productivity, which would actually allow them to cash out the right to use technology against part of the production.

There is no single ideal method for reducing exposure to market volatility; different tools can be used individually, or in combination, to minimize risks.

Improving supply chains can reduce costs and improve distribution. Investment in land and infrastructure abroad can reduce the amount of grain that the UAE must import at world prices. The use of financial risk hedging instruments on world prices can help stabilize the price of grain that they still need to import.

Although the countries of the region have made progress in terms of food and nutrition, their actions are not yet at the height of the problem: the options and solutions adopted to improve food security and malnutrition will only be sustainable if they go beyond national borders and if they enhance long-term resilience to internal and external shocks.

According to the International Land Coalition, which brings together various NGOs and government agencies, this strong global demand "far from being a short-term phenomenon, will probably continue in the long term, even if the considerable increase observed between 2005 and 2008 should stabilize."

Another solution the UAE could adopt is strengthening regional cooperation.

It is essential to establish cooperation and joint operations to support efforts at the national level. That would lead to greater integration of food trade could help facilitate cooperation between countries. The constitution of regional stocks of food security, based on the pooling of resources in a common pool would have several advantages in terms of economies of scale, price stability and cross-border movement of goods. And it may be useful to strengthen commodity information systems at the regional level to help consumers and governments make informed choices, especially in times of crisis. Strengthening cooperation between countries could also be crucial for resolving food insecurity (the main factor of food insecurity in the region in 2012-2013).

Strengthening long-term resilience is also key.

It is imperative to understand the many facets of resilience to sustainably improve food security and nutrition in the MENA region. Building resilience requires predicting the likelihood of crises and their location, promoting preventive measures and mitigating damage where appropriate. Hence, to help build resilience to improve food security and nutrition, the following measures are crucial. Like strengthen smallholders' access to technologies, hence improving their access to social protection by giving them access to education and financial services because smallholder farmers are among the most vulnerable and food-insecure population groups in the region. Also by promoting agricultural investments that can play a strategic role in the economies of many countries in the region. By stimulating agricultural research to improve the productivity of sector. Facilitating the creation of multispectral partnerships among various stakeholders is also a factor. Finally, by recognizing the importance of social protection schemes to guarantee universal access to food and to mitigate the effects of price volatility.

Conclusively, it is important to note that it is not enough to improve food availability and access to food to address the double burden of malnutrition in the region: **public policies** need to diversify the food supply and adapt it to nutritional deficiencies, and consumers need to be sensitized to the options available to them to adopt dietary patterns; a healthier lifestyle. This could be done by raising awareness through campaigns and various social media platform; but also through highlighting the actual State the country and the world is in at the very moment and why it affects us all.

Resources:

- <http://www.ipsnews.net/2014/07/land-grabbing-a-new-political-strategy-for-arab-countries/>
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