

Enhancing food security in the Arab region through selected trade-related policies

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ACRONYMS

AMIS	Agricultural Market Information System
AMU	Arab Maghreb Union
AoA	Uruguay Round Agreement on Agriculture
ASEAN	Association of Southeast Asian Nations
CARICOM	Caribbean Community and Common Market
CFF	IMF Compensatory Financing Facility
ESCWA	Economic and Social Commission for Western Asia
FAO	Food and Agriculture Organization of the United Nations
FAC	Food Assistance Convention
FDI	Foreign Direct Investment
FIFF	Food Import Financing Facility
GAFTA	Greater Arab Free Trade Area
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IMF	International Monetary Fund
LAS	League of Arab States
LDCs	Least Developed Countries
MDGs	Millennium Development Goals
MERCOSUR	Mercado Común del Sur (Latin America)
NARIs	National Agricultural Research Institutes
NFIDCs	Net Food Importing Developing Countries
ODA	Official Development Assistance
OECD	Organization for Economic Co-operation and Development
RNE	FAO Regional Office for Near East
SPs	Special Products
SSM	Special Safeguard Mechanism
SSNs	Social Safety Nets
UAE	United Arab Emirates
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNSD	United Nations Statistics Division
VAT	Value-Added Tax
WFP	World Food Programme
WTO	World Trade Organization

I INTRODUCTION

As discussed in assessment of the food security part of the Study, Arab countries are increasingly dependent on the world market to meet their food needs and the behaviour of that market, the trade-related policies that influence it, as well as the policies of the Arab countries themselves, play a crucial role in their efforts to attain food security.

The world market has been a reliable source of food supplies for import dependent countries for a long time and is likely to remain so in the future. However, shortages in world food markets, sharp increases in food prices and short-term price volatility such as those experienced during the 2007/08 food crisis happen and are of concern, especially for heavily import dependent countries, such as those in the Arab region. This Chapter first attempts to identify the various challenges and risks that the Arab region faces now and in the future emanating from the world market, including global trends that may affect the availability of global food supplies, factors that may affect the stability of supplies and prices, and factors that may affect access to those supplies including in the trade policy area. It then proposes possible trade-related policies to deal with these identified global challenges and how domestic, regional and international trade-related policies may enhance the contribution of trade to the region's food security.

II RISKS IN ACCESSING GLOBAL FOOD MARKETS

Countries in the Arab region that import a large share of their food needs from the world market, potentially face two types of risks:

- *Supply risk*, refers to situations whereby supplies may not be available at the world market for countries to import; and
- *Price risk*, refers to volatility in international food markets, whereby world market prices increase above levels that an importing country may not be able to afford¹.

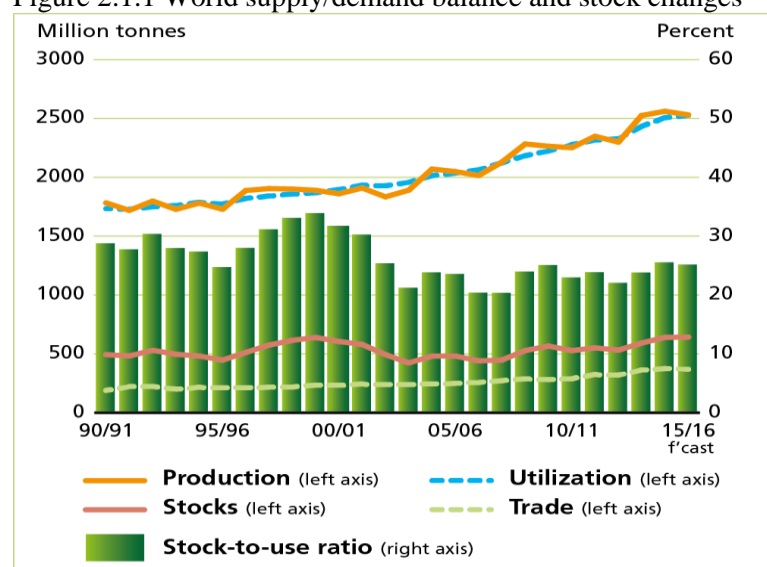
Supply risk. The physical availability of food commodities in world markets may be compromised by two types of factors: the first is long term related to a sustained inability of the world food system to grow enough food to meet growing global needs; and the second is short term due to simultaneous crop failures in several key exporting countries as a result of abnormal weather and other natural or man-made factors. To the extent that these risks materialize, the Arab region which ranks among the top importers for several basic foodstuffs, may face difficulties in securing all the supplies it needs and/or have to pay high prices for imports.

As regards the ability of the world food system to deliver enough food to meet growing global demand in the future, doubts have been raised following the 2007/08 food crisis. While world food commodity markets have since returned to normality (Figure 2.1.1), there remains a close balance between aggregate global supply and demand which could be easily disturbed by several short and longer term developments. World food markets continue to be underpinned by slowing-down in global productivity gains while there is a firm growth in demand for human consumption due to global demographic trends, increases in income and changing consumption habits, as well as new demands from outside the food system from the energy sector.

¹ Potentially, there can also be a third type of risk (counterparty performance risk), which refers to situations when, despite grains being available at an acceptable price, the party who contracts to deliver the grain defaults on the contract (Sadler and Magnan, 2011).

Critical drivers on the supply side include higher costs of production (often attributed to higher energy prices during the recent past²) but increasingly also due to resource pressures, in particular those related to water and land. As a consequence, crops are grown in increasingly marginal lands, where yields are lower and also more affected by calamities such as bad weather, pests and disease. These constraints would limit production increases and result in slower yield gains. Following the 2007/08 world food shortages there have been several commentaries by experts to the effect that global supplies of food and other agricultural commodities are likely to be tighter in the future on account of resource constraints³, higher energy prices⁴, and decreasing returns from existing productivity increasing technologies. However, overall, the debate is not conclusive on the capacity of global food system to produce enough to respond to growing demand. It has been pointed out that, aside from short-term disturbances, global production has kept pace with growing demand while food stocks held by the main producing and exporting countries have also balanced out short-term year-to-year variations in food production.

Figure 2.1.1 World supply/demand balance and stock changes



Source: FAO (AMIS)

On the demand side, growth in human consumption has been gradual and will continue to be so in the future. However, during recent years, large quantities of cereals and oilseeds have been siphoned-off the food markets and diverted away for biofuel production. This extra demand has changed drastically the traditional links between agriculture and the energy sector. Hitherto, these links were only on the production side with energy being an input to agriculture and food production (fertilizer and fuel for machinery, for example). Now the links are both on the input and the output side of agricultural production. It is now a well-accepted fact that biofuel production has been a major factor in the strengthening of food prices in recent years, although views vary as regards the relative importance of biofuel subsidies and high energy prices in the growth of the biofuel industry⁵.

² See Baffes and Dennis (2013), for example.

³ See in particular FAO (2006a) and FAO (2007).

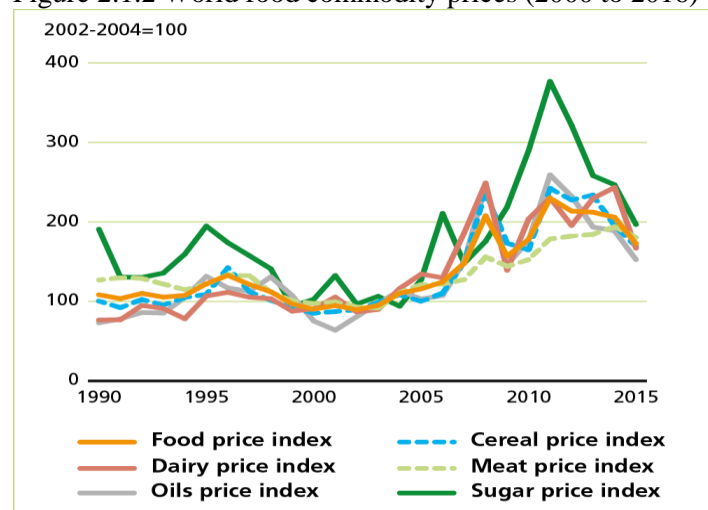
⁴ While oil prices have come down considerably from their peak witnessed in 2008, there is broad agreement that over the longer term, prices of fossil fuels would be higher than the average prices experienced in the past. This would lead to higher agricultural production costs than in the past (through pressure on the cost of machinery, fuel and other energy dependent inputs such as fertilizer). Beyond the farm gate, costs of inputs and long-distance food distribution would also be affected by higher transport and refrigeration costs.

⁵ Abbott, et. al. (2008); OECD/FAO (2008); Babcock (2011).

In addition, as discussed in the assessment part of the Study, concerns about the effects of climate change on global food production have been a major preoccupation of the international community in recent years. There is a vast literature on likely impacts of climate change on agriculture, livelihood and food security, as well as on mitigation and adaptation measures. There is now greater awareness about the state of global agricultural resources, the rate and manner at which they are used, how the global agro-ecological system is interconnected and where its weakest links are. At the global level, there seems to be a consensus that climate change will have a negative impact on crop productivity in low latitude tropical and sub-tropical regions but a modest positive impact on high latitude temperate regions. Countries of the Arab region are likely to be adversely affected by climate change⁶.

Price risk. The 2007/08 experience has also raised concerns about world market price volatility (Figure 2.1.2). While volatility is a basic characteristic of agricultural markets and adjustments from short-term events have been quick, the incident of such events in the recent past has generated new concerns, including the extent to which food prices are affected by the volatility characterizing the petroleum sector (World Bank, 2009), and differing perceptions and interpretations of this phenomenon (FAO, 2011; McCalla, 2009; Baffes and Dennis, 2013).

Figure 2.1.2 World food commodity prices (2000 to 2016)



Source: FAO (AMIS)

One interpretation views food price volatility as a natural phenomenon in agricultural markets, related to the low elasticity of demand and supply in the short term and the weather-related shocks affecting supply. This inherent source of volatility in agricultural markets is something to be expected and is seen as a temporal phenomenon, to be corrected by the forces of the market. This “normal” volatility may be exacerbated by other short-term events and policy reactions resulting in “excessive” volatility, such as that experienced since 2007/08. While “normal” volatility is an essential component for an efficient functioning of markets, this may not be the case for “excessive” volatility as the “efficiency of the price system begins to break down when price movements become increasingly uncertain and precipitous” (Prakash, 2011) and society lacks the means to respond effectively to avoid human suffering and widespread adjustment costs.

⁶ Climate change is also associated with greater variability in precipitation and temperatures, increasing the frequency and intensity of droughts and floods that will significantly magnify the impacts of climate shocks on agriculture. Developing country regions including the Arab region will be negatively affected by these developments.

The second interpretation of volatility finds explanations in geopolitical and overall macro-economic cycles, whereby during recent past the world has experienced a broad commodity boom and agricultural and food prices followed the same trend as other commodity sectors. For the agricultural sector this cyclical nature of commodity prices, is also seen as responsible for the ups and downs of public and private investments in the sector. For example, between the 1970s and the end of the century there has been a continuous decapitalization of agriculture in all regions, with the annual rate of growth in *agricultural capital stock* declining from 1.4% to 0.3% over this period (FAO, 2011). Growth in public expenditures on agricultural research followed this overall trend and much more pronounced in some regions. It has been argued convincingly that thirty years of complacency about agricultural research and development has extracted a high cost in terms of productivity and production growth (McCalla, 2009).

The third interpretation attributes price volatility in the recent past to a combination of permanent structural changes leading to disequilibrium between supply and demand: declining rates of productivity growth on the supply side and a rapidly expanding use of foodstuffs for biofuel production on the demand side (OECD/FAO, 2010). These interpretations of recent episodes of price volatility are not contradictory nor mutually exclusive.

While the recent experience of high and volatile prices tends to bias our perceptions of the frequency of such episodes compared to the past, statistical analyses of individual agricultural commodity prices suggests that, generally, there has not been an increasing tendency in price volatility over the past half century (Huchet-Bourdon, 2011). An analysis of volatility comparing individual decades within the 50-year period (1957 to 2010) revealed that price volatility in the recent period of 2006-10 was higher than in that in the 1990s, but, in general, not higher than that of the 1970s with the major exception of wheat and rice. Analysis of individual years within the 50-year period revealed also that world wheat prices displayed higher volatility in 2007 when compared to past years (both of the 1970s and 1990s)⁷.

Risk of depressed world prices. Volatility does not only concern the incident of price spikes, as experienced in recent years, but also the opposite phenomenon of price collapses⁸. While the concept of price volatility is clearly associated with both extreme events, short-term food security concerns are more often linked to episodes of high prices, when there is an immediate impact on peoples' ability to feed themselves. There is much greater visibility of the impact of high prices, often manifested in hardship for a large part of market-dependent households, especially in politically sensitive urban centres.

However, episodes of depressed world prices, especially when prolonged, are also detrimental to food security by slowly eroding and displacing otherwise viable domestic food production in areas where alternative livelihood opportunities do not exist. While depressed world prices have contributed in easing government burdens especially in meeting the food needs of rapidly growing urban populations in the 1970s, 1980s and 1990s, they have also resulted in longer-term import dependency for some countries, including countries of the Arab region, ultimately contributing to erode national food security⁹.

⁷ Other analyses arriving at similar results include Balcombe (2009), Sumner (2009) and Gilbert and Morgan (2010).

⁸ In fact we are able to discern episodes of high prices because we have had the experience of price troughs.

⁹ Long term subsidization of production and related protectionist policies pursued by governments in several countries, have been responsible for depressed food prices in global markets in the past. Import surges, as a result of such depressed world prices and unfair practices by exporters undermine otherwise competitive import-competing sectors and could pose a serious threat to the viability of domestic food production.

Policy-related risks. Aside from natural phenomena and other factors that influence the ups and downs of world food markets and whether there has been any significant change in the fundamentals, the 2007/08 food crisis was a turning point on perceptions about the behaviour of world food markets which was perhaps more important development than the cause of the volatility itself. A highly disturbing phenomenon during 2007/08 and in the years that followed, was a surge of hasty defensive policy reactions by governments of both exporting and importing countries which fall under the general rubric of export prohibitions and restrictions. Such policy measures, often had the result to exacerbate world market volatility.

Of 105 countries covered in an FAO review during the 2007-11 period, 33 countries (31% of the sample) resorted to some form of export restrictive measures (Sharma, 2011). One typical practice of many governments in the cases reviewed was to combine various defensive instruments, both sequentially and concurrently as they reacted to changes in food prices at home and in the world markets. These included, for example, Minimum Export Prices (MEPs) on Basmati rice by India; MEPs and ban on ordinary rice by India; MEPs on all rice varieties by Pakistan; export quotas by Ukraine on all cereals, ordinary and variable export tax, and quotas by Argentina; VAT rebate, tax and quotas by China; quotas and ban on wheat by India; tax, ban, quotas on rice by Egypt; tax, ban and quotas on wheat by Pakistan; tax and ban by Russia; and ban, MEPs and progressive tax on rice by Vietnam. Overall, what is of importance to highlight is that the policies and measures used varied in relation to subjective considerations of the countries imposing them without due contemplation on their possible adverse effects on other countries.

The lack of effective multilateral rules to avoid such unilateral policy actions by governments in the first place, and the subsequent failure to respond to demands by affected countries to put in place rules to discipline similar occurrences in the future, has impacted negatively on the world food market. There was an erosion of the hitherto confidence that food importing countries had on the world market, being seen as a dependable source of food supplies. As a result, some countries, including from the Arab region, turned to second-best options, among them often unrealistic calls for self-sufficiency.

III SELECTED TRADE-RELATED POLICIES TO ENHANCE FOOD SECURITY

Due to the increasing dependence of the food systems in Arab countries to world food markets, trade-related policies play a critical role in the region's efforts to attain food security. While the role of trade is widely appreciated and efforts in strengthening its contribution justified, agriculture remains a sensitive sector that provides social stability and a source of subsistence living of the rural poor in many Arab countries. Hence, the search of trade-related policies to support food security in the region should recognize also differences in the agricultural endowment and the role agriculture plays within Arab countries, the potential countries have to increase domestic production competitively and sustainably as well as their capacity to import food now and in the future.

In the identification of trade-related policies, a useful framework for categorizing such policies could be along two dimensions: what would be the policies for and who would take action. As regards the objective of the policies, one can consider policies that would aim at reducing the dependence on the world market for countries that have the capacity to do so and those that would allow countries to manage better such dependence, applicable to all countries.

As regards who should take action, a distinction could be between two broad categories of issues. First, those that relate to slowly evolving well-identified and largely domestic challenges with generally predictable outcomes. For these, policies and measures actionable nationally by the countries

themselves, and/or within established regional bodies, is the appropriate response. The second category relates to challenges exogenous in nature, such as possible difficulties in accessing the world market and related supply and price risks. Policy actions to address the latter are generally beyond the control of individual countries and would require the support and cooperation of third countries and the international community at large.

3.1 Selected measures and policies at the national level

Food security issues are a continuous preoccupation of the countries of the region and a variety of measures and policy initiatives are constantly being considered and implemented. The areas for action highlighted here emanate largely from the diagnosis of issues discussed in this paper, however, they are not meant to be a comprehensive list of national actions to improve food security neither have they been presented in any priority order.

3.1.1 Improving logistics to reduce cost of importing food

Given the continuing heavy dependence of Arab countries to imported food supplies, a greater integration of the countries of the region into global food markets and improved import logistics can lighten the import burden.

The Arab region scores poorly on World Bank's Logistics Performance Index: Iraq (ranked 145 out of 155 countries), Libya (137), Algeria (125), Jordan (102), and Lebanon (96). Specifically in the importation of wheat, average import supply chain costs in 2009 for ten Arab countries¹⁰ was US\$40 per MT which is up to four times that of the Netherlands, with the highest costs recorded by Egypt followed by Jordan, Yemen and Qatar (World Bank and FAO, 2012). Bottlenecks at the port and poor domestic transport were key problems.

Therefore, there is considerable scope to reduce the cost of imported food by investing in infrastructure to store and transport food, and generally improving the import chain management and logistics. While there are significant differences in performance of the supply chains throughout the region, with some countries experiencing bottlenecks at the port while others having inefficient inland transportation systems. Each country should identify the problematic segments of the import supply chain and target them specifically with the view of reducing delays and associated costs, often in the form of losses and deterioration of quality of supplies.

Several countries of the region, members of the WTO, have signed the new Trade Facilitation Agreement (TFA) which entered into force in February 2017. The TFA seeks to expedite the movement, release and clearance of goods across borders, by streamlining and standardizing clearance procedures and practices, reduced fees and formalities connected with the import/export of goods, faster clearance procedures and enhanced conditions for freedom of transit for goods¹¹. Reducing the time that food supplies spent on transit is of critical importance to food security both in terms of reducing the size of total supplies in the pipeline and responding quicker to

¹⁰ The ten Arab countries examined included Bahrain, Egypt, Jordan, Lebanon, Morocco, Oman, Qatar, Saudi Arabia, Tunisia and Yemen. The supply chain included unloading at port, transport to inland silo, storage at inland silo, transport to flour mill, and bulk storage at flour mill.

¹¹ Recently, the sixteenth session of the Committee on Transport of ESCWA considered trade and transport facilitation in the Arab region, inter alia, by amending the Agreement on International Railways, the Agreement on International Roads and the Memorandum of Understanding on Maritime Transport Cooperation in the Arab Mashreq (ESCWA, 2015b).

market needs as well as to emergencies. Such measures also work in the other direction by facilitating exported products and making them more competitive in world markets.

3.1.2 Providing targeted support to farmers to increase production

Governments in Arab countries that have the agricultural resource potential can promote increases in food production by investing in productive agricultural infrastructure in rural communities and by providing targeted support to their farmers. Multilateral trade commitments are hardly constraining choices of the countries of the region (whether members of the WTO or in the process of accession) to provide general support to agriculture, or direct support to farmers through border measures and/or direct budgetary transfers¹². However, countries differ considerably as regards agricultural resource endowments and/or the financial resources they have at their disposal. A few of them, notably the oil-rich countries of the GCC have ample resources to afford a high degree of support to farming and they have done so in recent years (e.g. Saudi Arabia), however with dire consequences for scarce natural resources, especially water.

On the other hand, countries that are more endowed in agricultural resources, have limited capacity to exploit fully this capacity because of severe budgetary constraints, especially the LDCs of the region, to invest in strategic agricultural infrastructure and/or support farmers directly. In view of these limitations, a judicious use of scarce budgetary resources is of pivotal importance, through a careful design of support measures that aim at profitable farming in the first place and are sustainable in the long term.

It would appear that for the countries of the region the issue on providing support to farmers is not so much its WTO legality but the choice of crops to support, with the view of increasing the region's self-reliance, in the context of environmental concerns and the scarcity of land and water resources. While it is well appreciated that irrigation plays a critical role in promoting economic and social development of the countries of the region, the performance of agricultural water in terms of efficiency and productivity is well below potential and does not reflect the reality that water is a resource in dire scarcity. In particular, addressing the acute and growing water scarcity in the region requires a move towards 'soft' policies which focus on water demand, water management and water use efficiency instead of 'hard' water policies which have focused on constantly trying to increase water supplies via dams, reservoirs, wells and aqueducts. There is need for specific policies to discourage wasteful use of water resources, including "market-smart" water policies where water is used where it gives the highest pay-off, by targeting crops for which countries of the region have a comparative advantage, either in domestic or export markets. The concept of "virtual water" would need to be the guiding principle in this regard, whereby emphasis is placed on the production of those crops that require the least water (in relation to the value of the output) and importing crops whose production requires too much water. In that way, considerable savings in national water resources can be gained through trade.

In general in the selective support to farmers (where justified) consideration should be given to targeted input subsidies to increase productivity¹³. In countries with a large part of the population spending most of their income on food, an input subsidy is preferable, as it provides an incentive to farmers (by reducing production costs) without raising the price paid by consumers (which could be the case of an

¹² Existing 'domestic support' provisions of the WTO Agreement on Agriculture offer considerable flexibility to support farmers. These include the *de minimis* clause, Article 6.2 on input subsidies for resource poor farmers and generally available investment subsidies, several provisions under the 'Green Box', including for the acquisition of food security stocks, as well as under the 'Amber Box' for those countries that have established an Aggregate Measurement of Support (AMS) when they acceded to the WTO.

¹³ For example, delivered through targeted vouchers and matching grants, which can jump-start agricultural input markets. Such subsidies can stimulate demand in private markets and can underwrite selected start-up costs of private distributors that are entering input markets (World Bank, 2007a).

output price support). In deciding which commodities to be supported, emphasis should be placed on those where countries of the region have a comparative advantage, either in domestic or export markets. However, such subsidies (as all subsidies) must be used with caution in view of their high opportunity cost, the difficulties in sustaining them financially and the imperative of being reversible when no longer needed or when there is a clear failure in the implementation of a support policy.

3.1.3 Rationalizing land acquisitions

With the view of minimizing the risks emanating from their dependence on the world market, several well-off countries of the region have been investing in land-abundant poorer countries by buying or leasing land so as to have a secure access to food produced on such land. The largest land acquisitions have been by GCC countries (Saudi Arabia and UAE in particular) in Sudan. The investing countries are motivated by fear of price volatility and unavailability of basic foodstuffs in the world market, in the face of limited prospects for increasing their domestic production. They also see such investments as a way of bridging the asymmetries in resource endowments between them (being rich in mineral resources but poor in agricultural resources) and other countries that have the reverse resource endowment profile. The recipient country also sees a benefit to the extent that gets an infusion of capital into its agricultural sector that could lead to lasting economic development.

The “outsourcing” of food production to poor, generally food-insecure countries, has been an important but controversial development. While it is often presented as a win-win undertaking, concerns have been expressed about appropriateness and sustainability of projects under land acquisitions. In Sudan, for example, these investments would typically create large-scale, mechanized, capital-intensive projects that may not match national priorities, and could potentially lead to depletion of water resources and the displacement of poor households. Other potential problems include rising land prices, alienation of communities in and around the project areas, and conflicts over resources. In practice, the real concerns are not so much about the desirability of such investments but how the investment flow could be regulated to maximize both economic and social benefits while minimizing risks. There are potentially mutual benefits from such transactions for as long as certain principles are adhered to, inter alia as regards to tenure rights, compensation, employment creation, distribution of harvests and other benefits¹⁴ (Hallam, 2011). Careful planning by recipient and investing countries is needed for land acquisition projects to be successful and fair to both parties.

For the host countries the impact and acceptability of land acquisitions would depend on how they are structured and whether the process of their negotiation is inclusive enough, involving all potential stakeholders and an outcome of a broad public debate. In this regard, host country governments should ensure that the value of foreign investments is shared by related local enterprises, including small farmers, processors and service providers. In particular, receiving countries need to evaluate not only overall economic costs and benefits but also potential risks associated with resource use and impacts on livelihoods of local communities, as well as include capacity and infrastructure development into these projects (Tanyeri-Abur and Elamin, 2011; Zurayk et al, 2011). Enforceable regulations should, at a minimum, prevent negative social, environmental and economic impacts on local populations (Cotula et al, 2011).

¹⁴ FAO, IFAD, the World Bank and UNCTAD are developing a minimum set of *Principles for responsible agricultural investment that respects rights, livelihoods and resources* to address these and other issues, based on detailed research on the nature, extent and impacts of foreign investment and best practices in law and policy (FAO et al, 2010).

As regards the investing countries themselves, land acquisitions may also pose a number of risks and uncertainties. Land-based investments in countries with weak governance and poor rural infrastructure do little to manage price or supply risk (Bailey and Willoughby, 2013). Opting to invest in third-party countries instead of using the world market as a source of food supplies, the investor takes on all of the weather risk of the host country, as opposed to the generally lower pooled risk embedded in the world market made up of many suppliers. Beyond weather risk, political uncertainties in the host country may also be a major concern, especially in countries like Sudan which have experienced frequent conflicts. Capital locked up in land purchases and long-term leases cannot easily be freed up to buy food from other suppliers when there is bad weather or political disruptions in the host country (World Bank et al, 2009). Notwithstanding the uncertainties associated with the world market, it offers more flexibility than third-party investments, especially for those countries with ample financial resources.

3.1.4 Overhauling food subsidies with focus on targeting, conditionality and fiscal sustainability

By and large, social safety net (SSN) food assistance programmes in the countries of the region have relied on universal subsidies or ration cards which have claimed the lion's share of SSN budgets. While these untargeted subsidies have been generally effective in conferring some benefits to the poor, that has been achieved at high cost because of large leakages to the non-poor. In addition, there has been a multitude of small and highly fragmented targeted SSNs that have a small impact on poverty, due to being poorly planned and funded, having low coverage and suffering also from high leakages (World Bank, 2012a).

Refocusing on targeting vulnerable groups would require a rebalancing priorities of SSN interventions. This would require shifting resources from universal subsidies to targeted interventions. At the same time the fragmentation of the latter need to be addressed by consolidating fragmented and poorly run interventions into few comprehensive targeted programmes.

In enhancing the impact of SSN programmes priority should be given to interventions that in addition to providing assistance to the poor and vulnerable they also build human capital. For example, prenatal and early childhood programmes are widely regarded as among the most effective as are school-feeding programmes which typically have multiple objectives, including school enrolment and educational attainment, especially by girls (FAO, 2013a). In general, channelling assistance through women rather than men is a better bet in improving nutrition and the lifelong development of children¹⁵.

As regards the form of the transfer, in-kind food distribution systems entail heavy administrative overhead and substantial wastes due to storage losses, corruption, waste, and leakage of food to nonhuman uses. In addition, in-kind transfers or access to subsidized supplies can distort domestic markets and can cause disincentive effects to domestic production. At the same time, because the subsidized commodities are few they lead to monotonous diets, often based on energy-rich foods with inadequate micronutrient content. In comparison, vouchers or cash transfers do not distort commodity markets, typically have lower administrative costs, are amenable to payment systems that limit fraud and diversion of benefits, and allow beneficiaries sovereignty over what they choose to eat¹⁶. In addition, conditional cash transfers is an attractive option that could foster human capital development and help break the cycle of poverty¹⁷. For example, transfers could be made conditional on a child attending

¹⁵ Also, the urban bias of many social safety net programmes in the region needs to be corrected. One way of overcoming this is to use rural public works schemes with food, inputs or cash for work. In addition to addressing immediate food security needs, this also helps to build vital infrastructure for the development of rural economies.

¹⁶ However, attention is needed to avoid possible negative gender implications from cash transfers, given that the male head of household normally receives such cash, whereas the burden of feeding the family is usually on women who give much greater priority to food purchases and nutrition of the family than men do (FAO, 2006c).

¹⁷ The conditions generally cover required health and education practices, such as immunizing young children and sending them to school. For such conditions to work, health and education services must be available, especially in rural areas. Also, since conditional aid stimulates demand for such services, their availability has to be enhanced/upgraded even where they exist.

school¹⁸. Brazil's Bolsa Familia and Mexico's Progres/Oportunidades are examples of successful large-scale conditional cash-transfer programmes (World Bank et al, 2009).

Improvements can also be made in the delivery mechanism used to distribute benefits by making effective use of modern technologies such as smart cards, mobile payments, and over-the-counter payments in bank branches which facilitate also rapid response during crises. For example, Egypt is piloting an electronic "smart" card for its ration system that will eventually include cash transfers and other benefits such as health insurance. The smart card can be used to track and distribute benefits through banks. However, smart-card implementation may be more difficult to deploy in rural areas, where limited education and access to infrastructure may reduce usage rates (World Bank et al, 2009).

All in all, an overriding imperative in reforming food subsidy policies in the countries of the Arab region is fiscal sustainability. Considering future food security challenges in view of demographic trends and uncertainties emanating from the world market, the Arab countries can hardly afford poor performance and inefficiencies of existing SSNs. SSN policy has to become more cost effective in the face of scarce imported resources, better targeted to the poor and more flexible to respond to changing needs especially in periods of crisis.

3.1.5 Considering disincentive policies to reduce malnutrition and waste

Incentive measures to encourage the consumption of certain foods in the Arab region and elsewhere in the world have commonly taken the form of generalized and/or targeted subsidies, with main focus on energy-rich staple foods. Much less common have been subsidies or other incentive measures to encourage the consumption of a more diverse basket of foods including desirable food items such as fruits and vegetables. Also uncommon is the use of policies to discourage the consumption of less nutritious convenience or trendy foods. Lack of balance between incentive and disincentive measures has been partly responsible for increasing the prevalence of overweight and obesity, as well as the large food waste at the consumption stage of the supply chain in some countries of the region.

Disincentive measures generally take the form of taxes to discourage the consumption of foods and beverages that are deemed less nutritious or known to be contributing to overweight and obesity. The impact of taxing consumption depends on the price elasticity of the product being taxed. Given that poor consumers are more responsive to price changes and spend more (in proportion) on food than do affluent consumers, the poor will be hit more heavily by a tax, to the extent that the taxed item is in their consumption basket. Taxes may also have unintended cross-price effects, because a price change for one item can affect also the demand for substitute products, not necessarily leading to better nutritional choices. These and other factors pose challenges to the practical use of nutrition-specific taxes to improve dietary choices and nutritional outcomes. However, experience in several OECD countries has shown that undesirable effects can be avoided by well-designed taxes in combination with subsidies on healthy foods and effective education campaigns financed by tax revenues (OECD, 2012).

Beyond direct interventions in the form of incentives and disincentives policies, there is the need to strengthen nutrition education. Consumers ultimately determine what they eat but government nutrition information campaigns can help consumers make healthier dietary choices. The ultimate goal of such campaigns is a change in behaviour so that individuals choose more nutritious diets and healthier lifestyles. Such programmes may include, inter alia, elements of nutrition training, public information campaigns and regulation of advertising and labelling. Nutrition education in schools is particularly

¹⁸ The World Food Program (WFP) in Yemen has introduced school-feeding programs targeting girls' schools, which had a significant impact in enticing parents in several rural communities to send their daughters to school (IRIN, 2005).

effective especially when combined with school-feeding programmes aimed at improving diversity and nutritional quality of diets. Nutrition education at schools could also be instrumental in establishing good lifelong eating and exercise habits.

3.1.6 Managing supply and price risks and role of food stocks

For the Arab region which imports a large share of its food consumption, risks associated with this dependency on the world market are a major preoccupation. While there is very little that importing countries can do unilaterally to minimize the occurrence of supply and price volatility in the world market¹⁹, they can employ various risk management instruments to reduce somewhat their exposure to shocks²⁰ as well as to manage better their impact when such events take place. The main instruments include financial hedging products such as forward contracts and options that transfer the risk to someone else at some cost²¹. Opting for such instruments is based on the premise that relying on them can do so better than depending on the spot market and importing as needs arise. In theory, they can do better, however, the cost of these instruments increases considerably with the degree of certainty desired.

The market uncertainties over recent years have shifted again the attention of several importing countries to stockholding activities. Although not always explicitly stated, stockholding operations are generally of two types: (a) those aiming at price stabilization, and (b) those aiming at safeguarding food security. Irrespective of their aims, because running such operations involves buying and selling in the market, a stockholding policy is usually part and parcel of a country's trade policy, especially in cases of heavily importing countries.

In the case of 'price stabilization stocks' (often referred to also as 'buffer stocks'), the public intervention is to buy commodities at harvest when prices are low (thus supporting prices to producers) and release stocks into the market during the lean season when prices are high (thus keeping prices for the consumers in check). In general, the mechanism involved is a price-band, whereby action is triggered based on a floor and ceiling price levels. A narrow price-band and one that bears little relationship with import and export parity levels is difficult to be maintained and invariably renders the policy costly and ineffective.

Public intervention that aims at safeguarding food security is often referred to as 'food security stocks' (or 'emergency stocks'). The aim of such stocks is normally to target vulnerable segments of the population under social safety net programmes (i.e. direct distribution outside the market) or to release food supplies into the domestic market during years of national shortages either because of domestic production shortfalls or import difficulties. The benefit from the first option are largely directed to identified target groups of the population, while under the second option the benefits are generally shared by all consumers as the impact of the policy is to reduce the price prevailing in the domestic market.

Short-term food security is the main objective of food security stocks and not to influence price behaviour, although the latter is inevitably affected to some degree depending on the magnitude of intervention. Holding stocks is an expensive and often complex operation, tying up capital and also being prone to physical deterioration and losses. Thus the management of food security stocks under a transparent and accountable structure according to unambiguous rules, based on clear objectives, is of critical importance for containing costs. For this, it is necessary to gauge carefully the size of food

¹⁹ However, certain sources of risk in the world market can be addressed multilaterally (i.e. through the WTO) by altering the policies and behaviour of major exporting and importing countries (see section on international measures).

²⁰ A comprehensive review of all possible risk management instruments, including their advantages and drawbacks is found in Sadler and Magnan (2011).

²¹ One other potential approach for an importing country to reduce the availability risk is bilateral agreements with major grain producers, to receive preferential access to supplies in the event of a world shortage.

security stocks in relation to the stated food security objectives, taking into account factors such as needs of the target population, historical variability of domestic production, import dependency, delays in securing imports and dependability of suppliers, as well as realistic options for resorting to financial hedging instruments discussed above.

3.1.7 Assessing the potential of national wheat stocks in cushioning world market shocks

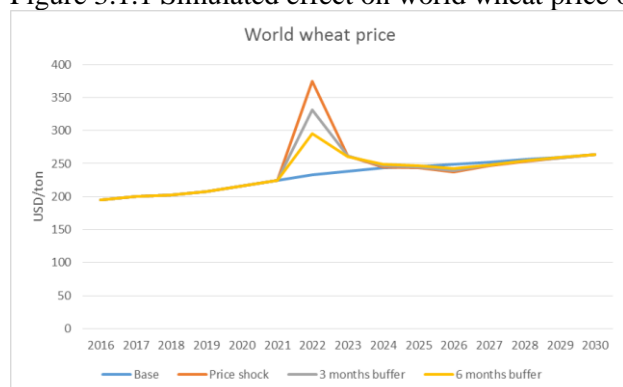
Food security stocks in the Arab region, at the national level and/or sub-regionally, has been a frequently raised option in recent years and indeed some countries have already implemented sizable food security stocks (e.g. Saudi Arabia which has a wheat reserve to cover some 8 months of national needs and it has been aiming to increase that to 12-month coverage).

Wheat is the main staple food in most countries of the Arab region, providing between 21% and 43% of total calories to humans directly and is also widely used as animal feed, depending on the sub-region. Because of natural and economic resource constraints, domestic supply covers only around 60% of domestic demand. Under the baseline assumptions, this gap is expected to remain by 2030. Therefore any significant shock in the world price of wheat will have a direct impact on domestic markets and subsequently affect short-term national food security.

To illustrate these close linkages between world and domestic wheat markets, the Aglink-Cosimo model has been employed. The objective of experimentation carried out was first to analyze how domestic wheat markets are impacted by world market shocks and second to assess the effectiveness of a national food security policy of maintaining wheat stocks and releasing these stocks into the domestic market at the time of a global market shortfall. Thus, Aglink-Cosimo simulations were run under an assumed shock in the world market of wheat, whereby for a random year in the projection period to 2030 (2022 has been chosen which is in the middle between 2015 and 2030), a wheat world price shock is generated by decreasing the production in main wheat exporting countries for that year. Three scenarios were run subject to this shock in the market: (a) stock levels for the Arab countries (as well as all the other countries in the model) are the same as in the “Baseline” scenario (see Chapter V of the Assessment Paper); for the other two scenarios, a response to such an external shock is simulated whereby the Arab countries are assumed holding food security stocks to mitigate the world market shock. Thus, scenario (b) assumes that each country in the region maintains a level of food security stocks equivalent to 3 months of its wheat consumption which are released into its domestic market during the year of the shock; and, alternatively, scenario (c) assumes a level of food security stocks of 6 months of wheat consumption. For all scenarios, on the basis of the simulated output of the model, the deviations of prices, production, consumption and trade from the “Baseline” outcome (presented in Chapter V of the Assessment Paper) are calculated for the Arab countries and the world market.

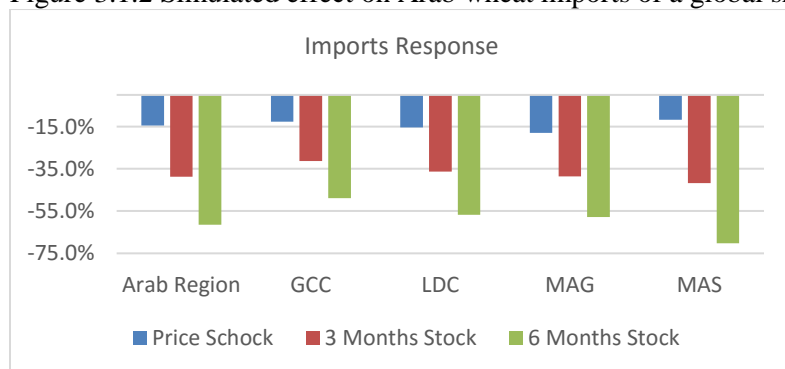
The impact of the simulated shortfall in 2022 in the main wheat exporting countries (scenario a), is a reduction in global wheat exports by 8.5%, causing a **world price spike** of around 60% in that year, from USD 232/MT in the baseline to USD 374/MT in the shock scenario (Figure 3.1.1).

Figure 3.1.1 Simulated effect on world wheat price of a global shock in 2022



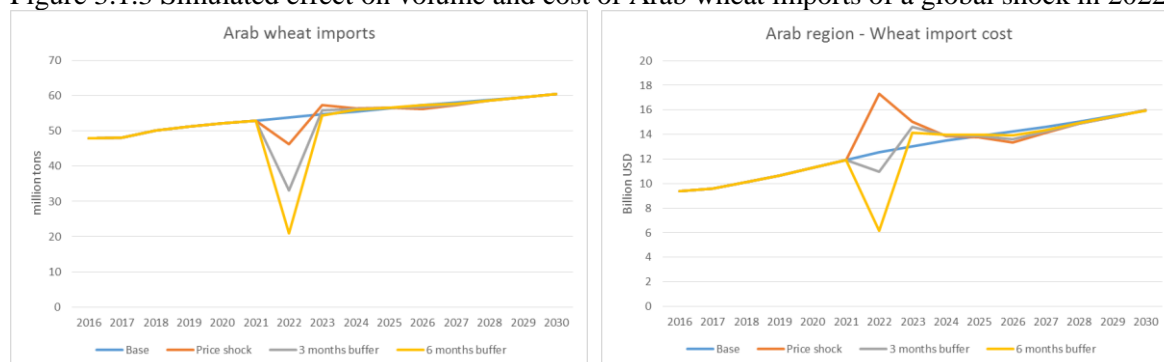
The impact on wheat imports of the Arab countries from the shock in the world market would depend on how much they need to buy and how much that quantity may be affected by the higher world market price. The more food security stocks the Arab countries hold when the shock occurs, the less quantity they would need to import. Under scenario (a) the simulated outcome of the shock for **wheat imports into the region** is a reduction between 11% and 18%, varying by sub-region (Figure 3.1.2), moderated somewhat by modest production increases in each sub-region in the order of 10%, which however are relatively small in absolute terms. The simulated imported quantities are reduced considerably under scenarios (b) and (c) when each country releases into the market the wheat stocks it holds, amounting to 3 months and 6 months of domestic consumption, respectively.

Figure 3.1.2 Simulated effect on Arab wheat imports of a global shock in 2022



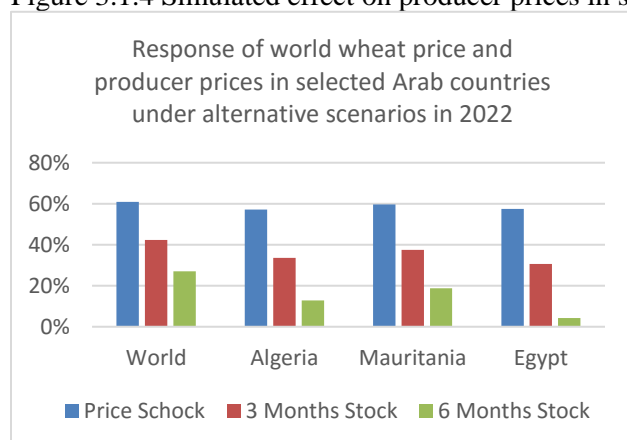
As a policy of domestic food security stocks reduces the region's import demand on the world market, it also curbs the increase in world price during the shock. Thus, the world price rises to USD 331/MT for scenario (b) and at USD 295/MT for scenario (c), compared to USD 374/MT under scenario (a) when no food security stocks are held (Figure 3.1.1). It follows, that under a policy of food security stocks, the Arab region not only would need to import less from the world market but it would also pay less for these imports compared to a situation of no food security stocks policy (Figure 3.1.3). However, stockholding is not without cost and there are important trade-offs involved between a policy of holding food security stocks or not holding such stocks (see below).

Figure 3.1.3 Simulated effect on volume and cost of Arab wheat imports of a global shock in 2022



Turning to the impact of the shock on **domestic wheat prices**, producer prices in the Arab countries (based on the assumption of almost full price transmission to the region) are simulated to increase also by the same percentage as the world market price, i.e. by 56-60% under scenario (a) of no food security stocks (Figure 3.1.4). Consumer prices are less affected in percentage terms since marketing/processing margins are not affected by the shock. Within the region, increases in consumer prices range from 10-21%, with price increases lowest in GCC countries, and highest in LDCs and the Mashreq countries. In general, the impact depends on local market conditions, where marketing margins/costs vary considerably given the different income-related cost profiles of the countries in the region.

Figure 3.1.4 Simulated effect on producer prices in selected Arab countries of a global shock in 2022



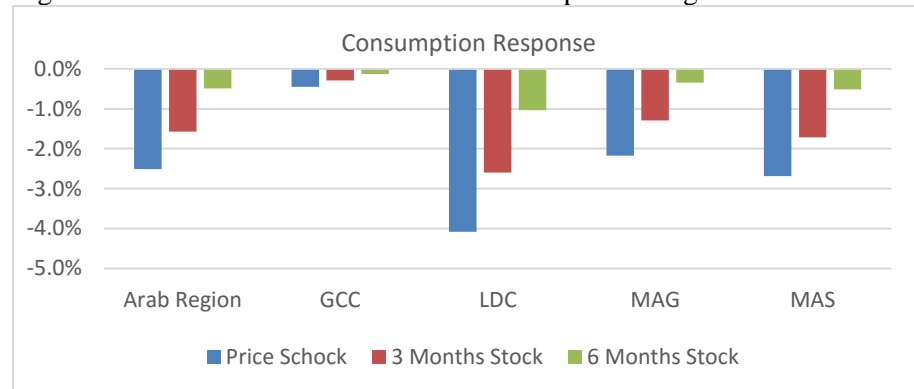
Under the alternative scenarios (b) and (c) of the Arab countries holding food security stocks, the release of these stocks into their domestic markets has an effect on dampening domestic price increases. In the case of food security stocks equivalent to 3-months of consumption in each Arab country, the increase in consumer prices in the sub-regions is contained to 7-14% (compared to 10-21% w/o stocks). Under the scenario of food security stocks of 6 months of consumption, the price increase in domestic markets of the Arab countries is further reduced.

The increase in consumer prices is most pronounced in countries with high imports, lower levels of development and/or lower domestic supply response, as in the case of countries in the LDCs and Mashreq, compared to those in the GCC sub-region. The extent of the price mitigation impact of food security stocks is proportionate to their size relative to imports. Thus, the magnitude of the increase varies across countries between 27-38% in the 3-months food security stock level scenario and 4-21%

for the 6-months level scenario. This price dampening effect from stock release stems from the substitution of high-priced imports for domestic stocks.

The impact of a world market shock on **domestic wheat consumption** for the Arab region averages around 2.5% below the baseline in the year of the external shock (2022) under scenario (a) when countries hold no food security stocks (Figure 3.1.5). By sub-region, the LDCs would experience the greatest reduction, at 4%, given higher price impacts, and higher price elasticities in the demand for wheat. For the Maghreb and Mashreq countries, the decrease would be about 2%, while the impact on the wealthy GCCs is negligible.

Figure 3.1.5 Simulated effect of wheat consumption of a global shock in 2022



As it would have been expected, when countries carry food security stocks, the consumption impact of the external shock is reduced considerably. For the Arab region as a whole, the reduction in consumption is reduced by about 1.5% under scenario (b) (compared to 2.5% under scenario a), while the mitigation in consumption reduction is even greater (reduction in wheat consumption of only about 0.5%) under scenario (c) with food security stocks equivalent to 6 months of wheat consumption. However, even in this case the impact for the LDCs of the region remains relatively significant, suffering some 1% reduction in consumption, even though they are holding 6 months of food security wheat stocks.

All in all, while this simulation exercise demonstrated that the use of food security stocks to defend against an external shock could be effective in containing domestic price increases and drops in consumption, putting in place such a policy raises a number of issues, both institutional and financial. In the first place, the maintaining physical stocks in a country necessitates precise trigger rules for their accumulation and their release into the market. In countries with a substantial domestic production base, a policy of food security stocks may adversely affect the incentive structure for domestic food production when triggering accumulation and release of food security stocks is frequent, over-reactive and arbitrary, influenced by political choices and without strict adherence to established objective rules for intervention. In the simulation experiment discussed above, this important aspect of the difficulties of putting in place a policy of food security stocks and implementing it in practice, has been conveniently ignored.

The other critical consideration beyond the need for a solid institutional and logistic set-up to implement a food security stock policy, are the costs involved of holding stocks. There are costs for building quality storage facilities, opportunity costs of the capital being tied up in stocks, costs for the necessary periodic renewal of stocks to maintain quality, losses due to pests and humidity, etc. Full accounting of all costs involved is likely to reveal a very expensive undertaking as is the case in countries in the Arab region and elsewhere that carry substantial food security stocks. In effect, the costs of a food security policy based on holding stocks and intervening in the domestic market are high because there are

important unavoidable externalities from such a policy. By maintaining food security stocks and releasing them indiscriminately in their domestic markets, the Arab countries, rich or poor, would not only subsidize their entire population regardless of need, but the rest of the world by partially buffering the global price increase in the event of a shock in the market.

While in the final analysis, the choice of putting in place a stocking policy is usually made on the basis of wider considerations than purely monetary costs and benefits, due attention needs to be given to alternative policies which may be much more sustainable and effective from the perspective of strengthening food security. In this context, a country could consider compensating only vulnerable parts of the population with cash subsidies during periods of world price spikes. Some countries already use limited programs to provide support to poor consumers, i.e. direct cash transfers in Yemen, subsidized wheat flour for bakeries in Egypt. Such programs may have to be significantly improved and expanded by refining also eligibility criteria and market conditions under which additional assistance would be provided, so that there is predictability about their budgetary implications and their fiscal sustainability in the long term.

3.2 Selected policy options at the regional level

Food security with all its dimensions stands at the heart of several other pressing regional issues, including management of shared and scarce water resources, the exploitation of untapped agricultural development potential, adaptation to climate change and, last but not least, the resolution of national and regional conflicts. As the countries of the region share many common threats and challenges, many of these problems require regional action to reinforce the national actions referred to above.

3.2.1 Exploiting regional cooperation to enhance intra-regional trade

The Arab region trades significantly less than would be expected on the basis of its economic, cultural, and geographical characteristics. This applies to both non-oil exports and imports which are significantly lower as a share of GDP compared to all other developing regions of the world, with the exception of sub-Saharan Africa (Bhattacharya and Wolde, 2010). Analysis of actual intra-regional and overall trade using a gravity model²² show that, overall, such trade flows are lower than what would be predicted (Al-Atrash and Yousef, 2000)²³, although more recent ESCWA gravity analysis has found that the region is already trading close to its potential (ESCWA, 2015).

For most countries of the region, intra-regional trade accounts for less than 10% of total trade and less than 5% for the Maghreb countries (World Bank, 2010a; 2010b and 2010c). Overall for the region as a whole, intra-regional trade could be 10-15% higher than recorded by official statistics (Al-Atrash and Yousef, 2000). One of the reasons suggested that may explain the relatively low intra-regional trade is the region's economic geography, with North Africa increasingly orienting itself towards Europe, the Levant towards Turkey, and the Gulf towards East Asia. Irrespective of the reasons, for a region with high unemployment rates and a labour force that grows by 3.4% annually, the forgone opportunity for

²² The gravity model of international trade, first used by Tinbergen (1962), along the lines of Newton's law of universal gravitation, where trade flows between two countries are directly related to their economic size (mass being replaced by GDP) and inversely related to the distance between them.

²³ Within sub-regional groupings, the Mashreq countries trade considerably more with the outside world than predicted by the gravity model, as well as exhibit a higher level of intra-group trade. On the other hand, Maghreb and GCC countries trade substantially less than predicted with the outside world, and the same applies for intra-Maghreb and intra-GCC trade.

job creation is large. It has been estimated that limited regional integration costs some 1-2% in terms of forgone GDP growth.

The region has made some inroads towards regional integration, which dates back to the creation of the Arab League in 1945, albeit at different degrees in each of the sub-groups. These included the removal of intra-regional tariffs under the Greater Arab Free Trade Area (GAFTA), the adoption of low common tariffs by the GCC countries and the dormant Arab Maghreb Union (AMU). At the same time there have been improvements in infrastructure, especially roads and telecommunications between countries reducing the cost of doing business. However, much remains to be done, especially in reforming non-tariff measures (NTMs), which have replaced traditional tariff protection. NTMs and divergence in regulatory frameworks (especially sanitary, phytosanitary and technical regulations, conformity assessment requirements, rules of origin, testing, and certification), increase compliance costs (ESCWA, 2015) and discourage trade. There is also a need to strengthen the institutional framework to improve regional policy coordination, and to provide regional financing instruments²⁴.

Greater integration in the trade area could also facilitate better collaboration between the countries of the region in promoting policies in international fora on issues of crucial importance to the region especially on food security. One obvious such opportunity is in the multilateral negotiations under the WTO where the region taking a unanimous common position would be much more effective in promoting issues of importance to food security, such as, for example, multilateral commitments and mechanisms to counter the threats of world price volatility (see next section).

3.2.2 Considering regional food reserves and an Arab food security fund

Beyond what was discussed in the previous section on national action to alleviate the effects of food shortages and world price volatility, food reserves at the regional or sub-regional level may also be considered. Regional food reserves are based on the concept of pooling resources into a common reserve, to be drawn upon based on pre-agreed rules. The constitution of such regional reserves typically entails the earmarking of a certain percentage of each country's national reserve into the regional food reserve. The benefits of pooling resources at a regional level are obvious, including economies of scale, greater price stability, enhanced regional cooperation and integration, facilitating movement of supplies across borders, and enhancing regional market information and monitoring of available food supplies. However, at times governments are reluctant to commit to such reserves, because of costs, a perceived loss of sovereignty over national food reserves, distrust of neighbours, legal obstacles, and a lack of commitment to honour the rules of the reserve during times of national food stress.

Another idea of regional nature includes the proposal for the creation of an Arab Food Security Fund (LAS, 2009). This idea is not new as it has been proposed in the past by various international and UN agencies and by the League of Arab States, however, without concrete follow up. The envisaged Fund could be designed exclusively for the purpose of providing relief during food shortages or emergencies, ensuring a rapid response to humanitarian exigencies. The level of proposed funding has been set to a minimum of US \$3 billion, which amounts to only 0.2% of total GDP of GCCs²⁵ and these countries alone could provide the resources needed for setting up the Arab Food Security Fund.

3.2.3 Improving market information and coordination

²⁴ Experience from other regions (ASEAN, MERCOSUR and CARICOM) demonstrates that regional integration matters fundamentally for competitiveness, growth and income convergence. It can substantially raise regional trade and create a large market that allows efficient specialization and economies of scale in industrial activities that would otherwise be constrained. At the same time effective integration would attract additional Foreign Direct Investment (FDI) into regional production chains, as well as coordinate much needed technical and financial assistance across the region (UNDP, 2011).

²⁵ It may be noted that this level of funding is well below the commitment of Arab donors to provide 0.7% of their GDP as ODA.

Recent episodes of price volatility revealed an important lacuna in the capacity of governments and international assistance partners in assessing the situation on the ground and respond with appropriate measure and in a timely fashion. **Market information on basic foodstuffs** at regional level (especially stock levels) was inadequate and slow, hindering informed responses. In addition to this creating uncertainty and panic behaviour by consumers and others in the supply chain, governments are unable to gauge imports, especially during periods of crises, with potentially adverse fiscal and food security consequences. Therefore, an important first step in improving the information base to better respond to price volatility would be to develop the means of obtaining more reliable estimates of stock levels, including farmer-held stocks at regional or sub-regional levels.

For the region to be prepared against the threats of import surges in periods of depressed world prices and for timely scheduling of cereal imports in situations of increasing prices, an **effective trade surveillance system** at the regional level could provide timely market information and give an early warning of impending problems. In addition, such a system could build analytical capacity to consider possible response options and assess credibly possible regional and country-specific impacts. Also helpful would be a regional mechanism for technical consultations on possible national and regional policy responses and remedial actions in cases of external threats to food security, as well as for advocating a strong political will to act regionally and not nationally.

Such a regional system could be a complement to the AMIS (Agricultural Market Information System) coordinating structure at the FAO as a response to G20 initiative (FAO, 2011e). AMIS' primary objective is to gather timely and reliable market data of basic foodstuffs on a global scale, analyze and disseminate this information, and provide timely alerts to the international community when abnormal price developments are foreseen. The second branch of AMIS is a *Rapid Response Forum* for the promotion of international policy coordination and the mobilization of political support to achieve agreement on appropriate policy responses and actions in times of crisis. Both of these functions of AMIS are of crucial importance to the food security of the region and the existing participation of two countries of the region in AMIS (Saudi Arabia and Egypt) could be strengthened further²⁶.

3.2.4 Cooperating in conflict resolution

As discussed in the assessment part of the Study, the region suffers from serious and protracted conflict situations impacting negatively on all aspects of human welfare including on food security. As conflicts extent beyond national borders, regional proactive measures in addressing the origins of conflicts is imperative. Breaking the vicious cycle of conflict and food insecurity would require regional investments with a focus on rural poverty and development, thus creating employment opportunities at the local level. Infrastructure projects that target specifically rural communities are likely to pay a high food security and peace dividend. Areas for such investments exist in regionally funded supranational development programmes that finance agricultural modernization projects and trade integration (ESCWA, 2010).

Improving regional food security promises considerable political and economic returns for the region at large, considering that food security is such a fundamental public good without which human, social and economic development is simply not possible. Putting emphasis on attaining food security in the region could also become a potent platform for overcoming political difficulties that hindered regional cooperation in conflict resolution thus far.

²⁶ Saudi Arabia participates as a member of the G20 group of countries and Egypt as a major food trading country.

3.3 Selected policy options at the international level

The international community has a role to play in support of the region's efforts to improve food security sustainably. Actions by the international community should aim basically at reducing the incidence of volatility in the world market, on which the region so much depends, and alleviating its adverse effects when it is unavoidable. These include, inter alia, providing technical support and material assistance to improve resilience, and improvements in the international policy environment, especially in the trade area.

3.3.1 Strengthening food assistance programmes

International food aid has been a valuable resource for helping food deficit countries to meet their food needs. Over time there have been important improvements in the food aid system in terms of assessing more precisely the specific needs of recipient countries and responding to them with more flexibility (in-kind or cash resources) in addition to providing complementary resources to increase the efficiency of food aid. However, as the levels of surplus stocks in donor countries virtually disappeared in recent times, the levels of food aid have declined considerably and funds spent on food aid are more carefully scrutinized in terms of their opportunity cost for other types of assistance.

Several countries of the region (Egypt among them) have been substantial recipients of food aid in the past ('programme' food aid), which was used to provide subsidized food to the population at large. Being untargeted, this use of food aid has often been criticized as responsible for distorting domestic markets crowding out private sector, contributing to overconsumption and waste, while having limited impact in addressing the needs of vulnerable groups. With dwindling volumes of food aid, its role as a general assistance to countries in bridging their import gap is rather limited. However, food aid remains a critical resource in periods of natural and man-made disasters and, given that it has now become a scarce resource, its use should be reserved essentially for meeting such needs, in addition to well-targeted nutrition intervention projects through the WFP. Such strictly humanitarian uses of food aid have proven to be most effective and generally free from dependency and disincentive effects associated with programme food aid.

The implication of this is that food aid should be demand-driven and de-linked further from domestic policy considerations in the donor countries²⁷. Its annual level should be more in line with the quantities necessary for emergencies and nutrition intervention programmes, which by their nature are variable from year to year. This requires more flexibility in donor food aid budgets, presently expressed in monetary terms which may make them inadequate in years of high prices and/or high emergency needs, and excessive in years of low prices and/or low emergency needs. At the minimum there should be flexibility in inter-year shifting (carry forward and calling forward) of food aid budgets to better respond to variable needs and avoid possibilities where untargeted food aid is provided, just because it happened to be available.

Considering the growing incidence of emergency situations including in the Arab region, a broadening of the food aid donor base beyond traditional contributors would also allow the system to better respond to increasing needs²⁸. Some countries of the Arab region that have the means to do so (especially in the form of cash resources which allow maximum flexibility in their use) could become much more involved in food assistance initiatives and in supporting established international institutional arrangements, such

²⁷ The on-going Doha Round negotiations include also strengthened disciplines on food aid whereby the priority in its use is for multilaterally assessed emergency situations and well-identified nutritional intervention projects. While food aid for non-emergency situations (programme food aid) would not be banned, its use would be substantially curtailed.

²⁸ See Konandreas (2010) for additional recommendations aiming at strengthening food assistance. Some of these have been taken up in the last re-negotiation of the Food Aid Convention which has become the Food Assistance Convention as of 1 January 2013.

as the Food Assistance Convention (FAC) and the WFP, affording the food assistance system a response capacity commensurate with the growing needs.

3.3.2 Implementing the Marrakesh Decision and food financing facilities

One other form of assistance was envisaged in the Marrakesh Decision²⁹ of the Uruguay Round agreement in 1994, specifically for the Net Food Importing Developing Countries (NFIDCs) and the Least Developing Countries (LDCs). These countries “may be eligible to draw on the resources of international financial institutions under existing facilities, or such facilities as may be established, in the context of adjustment programs” to address financing difficulties in importing food.

Existing facilities under the international financing institutions, in particular the IMF Compensatory Financing Facility (CFF), which encompasses a cereal import bill component³⁰, has been of little value in connection with the Marrakesh Decision, partly due to alleged difficulties in the terms of financing and other conditionalities considered stringent by potentially eligible countries. The main reason for this, on the part of the IMF, is that the CFF is not a separate facility but part of an overall compensatory financing mechanism linking drawings not to cereal import bills alone but to overall balance of payment (BoP) difficulties³¹.

Several countries LDCs and NFIDCs have been of the view that the spirit of the Marrakesh Decision was for a much more accessible instrument with more objective criteria and limited conditionalities for its use³². Consequently, based on some background work by FAO and UNCTAD they put forward a proposal for the creation of a *Food Import Financing Facility (FIFF)* from which LDCs and NFIDCs would borrow short-term loans in the event of soaring food import bills (FAO, 2003). The FIFF was supposed to be a market-based instrument to provide credit guarantees to importing agents/traders of LDCs and NFIDCs to meet the cost of excess food import bills. Although this was seen favourably by many countries, there was no concrete interest for its practical implementation, partly because it was assumed that revamped existing instruments of the IMF could provide the needed assistance. However, the rationale for a functional multilateral instrument along the lines of the FIFF remains valid and Arab countries should continue to support it the WTO, the IMF or other relevant fora.

3.3.3 Strengthening multilateral trade reforms and transparency in world markets

Greater trade liberalization, including in agricultural products, has been the trend in the last two to three decades and the process is continuing under the auspices of the WTO. While there is currently uncertainty about the pace and substance of multilateral trade negotiations, the issues that have bedevilled the WTO membership for nearly two decades would not go away and will eventually have to be addressed under the Doha Round or what may supersede it.

²⁹ *Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on Least-Developed and Net Food-Importing Developing Countries.*

³⁰ The cereal import bill component of the CFF was added in 1981, following relevant research during the 1970s on the need for international mechanisms to help countries facing difficulties due to fluctuating food import bills (Reutlinger, 1978; Konandreas, et al, 1978)

³¹ Nonetheless, there have been some improvements in IMF’s arrangements to better help countries experiencing BoP difficulties including through the *Exogenous Shocks Facility (ESF)* for countries facing difficulties in financing imports as a result of external shocks. The effectiveness of these new facilities has not been assessed. The World Bank also has several instruments for helping countries facing emergencies but these are not as closely linked to the difficulties related to excess food import bills.

³² It may be noted that some countries of the region (led by Egypt) have been particularly vocal at the WTO on the need for the international community to fully implement the Marrakesh Decision.

A priori, greater liberalization at the border and reduced domestic support by major subsidizing countries would be expected to strengthen world food prices, which for net-food importers amounts to a worsening terms of trade³³. While there is some basis for concern about this eventuality (and hence the Marrakesh Decision discussed above), assessments need to take into account the efficiency gains associated with reducing distortions in domestic agricultural markets which are generally larger than the terms-of-trade losses. Also, the net effect of liberalization on domestic food prices will depend partly on each country's trade patterns, the original level of protection, and how liberalization would be sequenced.

Tariffs play an important role in poor developing countries for domestic market stability and for offering a minimum protection to domestic producers in years of low world prices which are unable to do by budgetary transfers as richer countries do. It follows that, a priori, there is rationale for the new instruments on border protection envisaged under the Doha Round: Special Products (SPs) which will be exonerated from tariff cuts, and the Special Safeguard Mechanism (SSM) which will allow countries to increase tariffs above bound levels for selected products. However, from the perspective of the Arab region, their scope and usefulness would also need to be seen in a broader regional context, given existing regional integration agreements (e.g. GAFTA) aiming at harmonization of external tariffs. Working out a common regional position would be desirable in this area, also for facilitating intra-regional trade.

An issue of particular concern for the countries of the Arab region is the incidence of export prohibitions and restrictions. Such measures have proven to be a very common policy response by many countries, including several major exporters, facing domestic supply imbalances following the 2007/08 period of high and volatile food prices. The potential effects of export restrictions on third countries, especially net food-importing countries, can be serious. While the rise in domestic prices may be contained somewhat in the countries imposing export restrictions, the burden is carried by other countries as world prices rise further, turning a surmountable situation into a potentially full-blown crisis.

Unlike the binding WTO rules and disciplines applicable to importing countries, disciplines on export prohibitions and restrictions are rather weak and have proven generally ineffective³⁴. The asymmetry in the WTO disciplines applying to imports and exports has been pointed out during the Doha Round negotiations on agriculture. Several proposals have been put forward for stronger rules along two possible approaches: the first calls for clarifications of terms in the existing WTO rules, such as the undefined terms of “critical shortage”, “temporary”, “foodstuffs”, etc.; the second calls for new binding commitments on export prohibitions similar to those used in the tariffication process of import barriers (Sharma, 2011).

A measure that deserves immediate agreement is what has been proposed by the World Summit on Food Security in Rome in November 2009, where all FAO member states recommended the removal of “food export restrictions or extraordinary taxes for food purchased for non-commercial humanitarian purposes, and to consult and notify in advance before imposing any such new restrictions” (FAO, 2009). This proposal was also included in the set of issues put forward under the G20 initiative as regards purchases by the WFP and deserves early resolution, irrespective of the pace of the Doha negotiations.

³³ A simple analysis finds that the terms-of-trade losses associated with a 15% increase in world agricultural prices for eight non-oil-exporting countries of the region would be US\$922 million, or 0.4% of regional gross domestic product (Minot, et al, 2009).

³⁴ Under GATT Article XI “export prohibitions or restrictions temporarily applied to prevent or relieve critical shortages of foodstuffs or other products essential to the exporting contracting party” are permitted, and Article 12 of the Uruguay Round AoA effectively perpetuates the status quo.

IV CONCLUDING REMARKS

The world's increasing population has never been better fed than today, yet the perennial challenge of achieving food security for all remains. An unacceptably high proportion of the population of the poorest countries in the Arab region remain chronically undernourished and many more live under a continuous threat of food insecurity, while others in the same region and same countries suffer from the opposite problem of overnourishment and malnutrition leading to obesity and health-related problems.

Trading food domestically and internationally has bridged the gap between those that produce too little and those that produce too much but this balance remains fragile. The greater separation of food production from food consumption, so prevalent in the Arab region, has added another dimension in the quest of attaining food security for all, necessitating judicious and coordinated actions at different levels. An array of policies, nationally, regionally and internationally are necessary to enhance the contribution of trade to food security and minimize potential undesirable effects.

The countries of the Arab region have a high stake in being pro-active in their conduct of food security and trade-related policies, in the first instance at national level with measures aiming at achieving more with less and at strengthening their capacity to fend off threats from the world market. At the same time, Arab countries have a lot to gain by promoting regional and international initiatives that would render their increasing dependence on the trade option much more secure, predictable and sustainable in the long term.

The possible pro-active and defensive policies discussed above, actionable at different levels (national, regional and international), comprise a 'toolbox' for policy options, without however pinpointing which policies are appropriate to individual countries. Clearly, the policy mix that is appropriate for each country would greatly depend on its food security profile, including agricultural resource endowment and potential for increasing food production, degree of dependence on the world market and capacity to import, nature of food insecurity of vulnerable groups within the country, as well as a host of other factors characterizing its unique food security profile. Prescribing specific policies and measures to individual countries necessitates detailed country-specific considerations including issues of political economy, well beyond the scope of this Study.

REFERENCES

- Abbott, P.C., C. Hurt and W. E. Tyner, 2008. 'What's Driving Farm Prices?' *Farm Foundation Issue Report*, Oak Brook, Illinois.
- Bailey, R. and R. Willoughby, 2013. *Edible Oil: Food Security in the Gulf*, Chatman House briefing paper, EER BP 2013/03
- Balcombe K. (2009), The nature and determinants of volatility in agricultural prices: an empirical study from 1962-2008. A report to the Food and Agriculture Organization of the United Nations.
- Babcock, B., 2011. 'The impact of US biofuel policies on agricultural prices: options for addressing volatility', ICTSD, Geneva.
- Bhattacharya R. and H. Wolde, 2010. Constraints on Trade in the MENA Region, IMF Working Paper WP/10/31, IMF, Washington, DC
- Cotula L., S. Vermeulen, P. Mathieu and C. Toulmin, 2011. 'Agricultural investment and international land deals: evidence from a multi-country study in Africa' Food Sec. 3 (Suppl 1): S99–S113, Springer Science+Business Media B.V. & International Society for Plant Pathology.
- FAO, 2003. 'Financing Normal Levels of Commercial Imports of Basic Foodstuffs in the context of the Marrakesh Decision', Commodities and Trade Division, FAO, Rome.
([www.fao.org/trade/docs/Food_Financing_\(DRAFT1\)2.htm](http://www.fao.org/trade/docs/Food_Financing_(DRAFT1)2.htm))
- FAO, 2006b. *World agriculture: towards 2030/2050*, FAO, Rome.
- FAO, 2006c. 'Food Security and Wheat Policy in Egypt.' *Roles of Agriculture Project: Policy Brief*, no 2 (October). FAO, Rome.
- FAO, 2007a. 'Environment and agriculture', *FAO Committee on Agriculture, 20th Session*, Rome, 25-28 April, FAO, Rome.
- FAO, 2008. 'Soaring Food Prices: Facts, Perspectives, Impacts and Actions Required', *High-Level Conference on World Food Security: The Challenges of Climate Change and Bioenergy*, Document HLC/08/Inf/1, Rome, 3-5 June.
- FAO, 2009. *Declaration of the World Summit on Food Security*, Rome, 16-18 November.
- FAO, 2011a. 'Price volatility and food security', *Report by the High Level Panel of Experts (HLPE) on Food Security and Nutrition of the Committee on World Food Security*, FAO, Rome.
- 1996 World Food Summit
- FAO, IFAD, World Bank and UNCTAD, 2010. *Principles for responsible agricultural investment that respects rights, livelihoods and resources*, A discussion note.
- Gilbert C.L. and C.W. Morgan, 2010. 'Has food price volatility risen?' Workshop on methods to analyse price volatility. Seville. Spain. January 2010.
- Hallam, D., 2011. 'International Investment in Developing Country Agriculture: Issues and Challenges', Food Sec. 3 (Suppl 1): S91–S98, Springer Science+Business Media B.V. & International Society for Plant Pathology.
- Huchet-Bourdon, M., 2011. 'Agricultural Commodity Price Volatility: An Overview', *OECD Food, Agriculture and Fisheries Working Papers*, No. 52, OECD Publishing.
(dx.doi.org/10.1787/5kg0t00nrthc-en)
- IMF, 2004. *Review of the Compensatory Financing Facility*, IMF Policy Development and Review Department, IMF, Washington, DC. (www.imf.org/external/np/pdr/ccff/eng/2004/021804.htm)
- IRIN, 2005. 'YEMEN: Food incentives for girl education', Integrated Regional Information Networks.
(www.irinnews.org/report.aspx?reportid=25459).
- Konandreas, P., B. Huddleston and V. Ramangkura, 1978. *Food Security: an Insurance Approach*, Research Report No. 4, IFPRI, Washington, DC.
(www.ifpri.org/sites/default/files/pubs/pubs/abstract/04/rr04.pdf)
- Konandreas, P., 2010. 'Promoting agricultural inputs under the Food Aid Convention to increase food production in emergency-prone developing countries', FAO, Rome.
(www.fao.org/fileadmin/templates/tc/tce/pdf/Promoting_agricultural_inputs_under_the_FAC_P_Konandreas.pdf)

- Konandreas, P., 2012. 'Trade policy responses to food price volatility in poor net food-importing countries', Issue Paper No. 42, International Centre for Trade and Sustainable Development, Geneva, Switzerland. (<https://www.ictsd.org/downloads/2012/06/trade-policy-responses-to-food-price-volatility-in-poor-net-food-importing-countries.pdf>)
- Minot, N., M. Chemingui, M. Thomas, R. Dewina, and D. Orden, 2009. *Trade Liberalization and Poverty in the Middle East and North Africa*, Research Monograph, IFPRI, Washington, DC.
- McCalla, A.F., 2009. 'World Food Prices: Causes and Consequences', *Canadian Journal of Agricultural Economics*, Vol. 79 (1).
- OECD-FAO, 2008. *OECD-FAO Agricultural Outlook 2008-2017*, Paris and Rome.
- OECD-FAO, 2013. *OECD-FAO Agricultural Outlook 2013-2022*, Paris and Rome.
- OECD, 2010. 'Obesity and the economics of prevention: fit not fat', OECD, Paris.
- OECD, 2011. *Managing Risk in Agriculture: Policy Assessment and Design*, OECD Publishing. (<https://dx.doi.org/10.1787/9789264116146-en>)
- OECD, 2012. Obesity Update 2012, OECD, Paris.
- Prakash, A. (ed.), 2011. *Safeguarding Food Security in Volatile Global Markets*, FAO, Rome.
- Reutlinger, S., 1978. 'Food insecurity: magnitude and remedies', *World Development*, Vol 6(b), Washington, DC.
- Sadler, M. and N. Magnan, 2011. 'Grain Import Dependency in the Middle East and North Africa Region: Risk Management Options', *Food Sec. 3 (Suppl 1):S77–S89*, Springer Science+Business Media B.V. & International Society for Plant Pathology.
- Schmidhuber, J., 2007. 'Biofuels: an emerging threat to Europe's food security? Impact of an increased biomass use on agricultural markets, prices and food security: A longer-term perspective', *Notre Europe, Policy Paper 27*.
- Sharma, R., 2011. 'Food Export Restrictions: Review of the 2007-2010 Experience and Considerations for Disciplining Restrictive Measures', *FAO Commodity and Trade Policy Research Working Paper No. 32*, FAO, Rome.
- Sharma, R. and P. Konandreas, 2008. 'WTO provisions in the context of responding to soaring food prices', *FAO Commodity and Trade Policy Research Working Paper No. 25*, FAO, Rome.
- Sumner D.A., 2009. 'Recent commodity price movements in historical perspective'. *American Journal of Agricultural Economics*. 91 (5). p. 1250-1256.
- Tanyeri-Abur, A. and N. Elamin, 2011. 'International Investments in Arab Agriculture: an Overview of Trends and Implications for Policy', *Food Sec. 3 (Suppl 1): S115–S127*, Springer Science+Business Media B.V. & International Society for Plant Pathology.
- Tinbergen, 1962. *Shaping the World Economy: Suggestions for an International Economic Policy*, The Twentieth Century Fund, New York.
- Countries. New York: United Nations Development Programme.
- UNDP, 2011. *Arab Development Challenges Report 2011: Towards the Developmental State in the Arab Region*, Cairo, Egypt.
- World Bank, 2007a. *World Development Report 2008: Agriculture for Development*, World Bank, Washington, DC.
- World Bank, 2009. *Global Economic Prospects: Commodities at the Crossroads*, Washington, DC.
- World Bank, 2010b. *Economic Integration in the Mashreq*, World Bank, Washington, DC.
- World Bank, 2010c. *Economic Integration in the Maghreb*, World Bank, Washington, DC.
- World Bank, 2010d. *Economic Integration in the GCC*, World Bank, Washington, DC.
- World Bank, 2010e. 'Egypt's Food Subsidies: Benefit Incidence and Leakages', World Bank, Washington, DC.
- World Bank, 2012a. *Inclusion and Resilience: The Way Forward for Social Safety Nets in the Middle East and North Africa*, MENA DEVELOPMENT REPORT, Washington, DC.
- World Bank, FAO and IFAD, 2009. 'Improving Food Security in Arab Countries', Washington, DC.

- World Bank and FAO, 2012. *The Grain Chain: Food Security and Managing Wheat Imports in Arab Countries*, World Bank, Washington, DC.
- Zurayk, R., J. Chaaban and A. Sabra, 2001. 'Ensuring that potential Gulf farmland investments in developing countries are pro-poor and sustainable', Food Sec. 3 (Suppl 1):S129–S137, Springer Science+Business Media B.V. & International Society for Plant Pathology.