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EXPLORING LINKAGES BETWEEN THE COMMON AGRICULTURAL POLICY AND FOOD SECURITY IN THE MEDITERRANEAN REGION

The Common Agricultural Policy (CAP) remains a central component of the internal policy of the European Union (EU). However, the CAP has long been criticised for its damaging effects on developing country agriculture. This paper attempts to explore the linkages between the CAP and food security in the Mediterranean region with a specific focus on southern and eastern Mediterranean countries. Even if EU's food security at short run is not threatened, the real food security challenge affects the poor and smallholders in developing countries including the Mediterranean ones. The CAP should respond to this challenge by promoting an open and stable trade regime for agricultural products. A major step would be the removal of its own agricultural tariffs and all subsidies that are not efficiently targeted at clearly defined public goods. This should be accompanied by additional support for enhancing agricultural productivity and food security in developing countries.

Introduction

Food and agricultural policy is under scrutiny. Questions are being asked about both past and present public policy and strategy. The motives for reassessment are various, including food insecurity, trade wars, health impact, ecological

concerns, population growth, citizens' rights (Stephens et al. 2000; Lang 1999; Dyson 1996). After decades in which policy was centrally concerned with raising productivity and production, the need for a more complex model for food and farming is becoming clear (Waltner-Toews and Lang 2000). In a context of global competition and economic crisis, the Euro-Mediterranean agricultural sector is facing increasingly complex competitive pressure arising not only from the World Trade Organisation (WTO) negotiations and from the recent enlargements of the European Union (EU), but also from the recent EU's participation in free trade areas (FTAs) (Scarpato and Simeone 2013).

According to Boysen and Matthews (2012), the *Common Agricultural Policy* (CAP) is a European policy whose *raison d'être* is to support European farmers. The CAP remains a central component of the EU's internal agricultural and social development policy. The policy's primary stakeholders (European farmers and related agricultural industries) have strong incentives to maintain its focus, budget and clarity of objectives as an internal EU policy instrument. The CAP accounts for a substantial proportion, 41% in 2009, of the EU budget. It is divided into two main categories: income support (Pillar I) and rural development (Pillar II).

The Commission, the Council and the European Parliament (EP) have reached a political agreement on the reform of the CAP. Most elements were agreed in trilogue on June 26 and the last remaining issues were finalised on September 24. Based on the Commission proposals from October 2011, the agreement relates to four basic European Parliament and Council regulations for the CAP on i) Direct Payments, ii) the Single Common Market Organisation (CMO), iii) Rural Development and, iv) a Horizontal Regulation for financing, managing and monitoring the CAP. The new rules can enter into force in 2014 or from January 2015 for most of the new Direct Payment arrangements. Separate "transition rules" will be applied in 2014. The new CAP can represent a good opportunity for the development of Mediterranean agriculture (Box 1).

Box 1. CAP reform and Mediterranean agriculture
According to De Castro and Di Mambro (2013) the CAP reform represents an opportunity for the countries of the Mediterranean side of Europe. The framework of the European support for agricultural sectors accentuates the characters of flexibility and modularity. This means that the new CAP is no longer a centralized and monolithic policy, but it will increase the "room for manoeuvre" for Member States in a support model aiming to adapt to the various European agricultures. The new CAP represents also a call to take responsibility. It will be up to the national and local governments to gear up to the best use of the new "toolbox" of the CAP, in the interests of Mediterranean agriculture.

The two main instruments of the CAP are farm income support (through the Single Farm Payment and the Single Area Payment) and market price support (through tariffs, export refunds and other subsidies). It is unclear whether these

instruments have a positive or a negative impact on short-term food security. They are generally credited for keeping land and labour in agricultural production (Zahrnt 2011). However, the CAP has long been criticised for its damaging effects on developing countries, and developing countries' agriculture in particular and, consequently, also their food security and sovereignty (e.g. Boysen and Matthews 2012).

The rules applied at the level of the European Union especially in terms of quality and safety standards influence the trade of agricultural products and commodities between the non-EU Mediterranean countries and the EU countries. With existing subsidies at the EU's level, including export subsidies, European producers have a competitive advantage with respect to Mediterranean countries that create a market distortion which is unfavourable to local producers especially smallholders that assure a high share of commodities production thus contributing to food security and poverty alleviation in non-EU Mediterranean countries.

That being said, agricultural systems both in Europe and in the Mediterranean region are facing major economic and social challenges. A central objective in both developed and less developed Mediterranean countries is to promote public goods by preserving agricultural potential. In addition, agricultural policy has the ethical commitment to ensure the world population's access to food through sustainable production processes and technologies and to improve food nutritional quality (Malorgio and Solaroli 2012).

Food security (Box 2) is built on four pillars (CFS 2012; UN-HLTF 2011): (i) Food availability: sufficient quantities of food available on a consistent basis; (ii) Food access: having sufficient resources to obtain appropriate foods for a nutritious diet; (iii) Food use: appropriate use based on knowledge of basic nutrition and care; and (iv) Stability in food availability, access and utilization.

Box 2. Food security

The concept of food security has been developed during the last thirty years reflecting the changes in official policy thinking (Clay 2002). Nowadays, new dimensions have been entering into the concept of food security including the ethical and human rights dimension of food security (FAO 2006). A widely-accepted definition of food security is that of the World Food Summit held in 1996 (FAO 1996).

According to FAO (2002), "*Food security is a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life*".

This definition implicitly includes the multidimensional nature of food security by considering more profoundly the four main dimensions (food availability, access, use and stability) required to be guaranteed in order to assure food security.

Food security remains, in both quantitative and qualitative terms, a fundamental human requirement. The cost of malnutrition is both direct and indirect. Overnutrition, like undernutrition, not only has an immediate deficit impact on public health systems but also an indirect impact on the gradual deterioration of human capital and the inevitable loss of productivity (Hassan-Wassef 2012).

Food consumption is variably affected by a whole range of factors including food availability, food accessibility and food choice, which in turn may be influenced by geography, demography, disposable income, socio-economic status, urbanization, trade liberalization, globalization, religion, culture, transnational food corporations and food industry marketing, and consumer attitude and behaviour. These drivers have produced several social, economic, health and environmental consequences on food consumption patterns such as increase in nutrition-related diseases, social inequalities, loss of biodiversity, climate change, fish stocks depletion, etc. (Kearney 2010).

The issue of access to and availability of food on a global basis has been making headway on the political and media agenda since the start of the twenty-first century. What now gives cause for concern is the increase in food prices levels and volatility. Since the mid-1990s we are observing sharp peaks in farm commodity prices (e.g. 2007/2008 and 2010/2011). The most recent forecasts indicate a sizeable rise in prices for the coming years. Most academics agree that the long era of abundant food, available at low prices, is over and has given way to an era of new scarcity. Food availability is fundamentally dependent on food production, but this can be local or distant. If distant, local food availability also depends on trade systems, and on packaging, transport and storage (Ingram 2011).

In tackling the issue of security in the food supply the analysis of population dynamics has given way to examination of distribution dynamics. The problem, as posed in recent years, is not scarcity but the inequitable distribution of food resources, which has ended up penalizing vast populous areas in the world (De Castro et al. 2012). Such a problem has recently been aggravated, leading the number of undernourished people worldwide to exceed one billion. Though inter-related with the broader issue of natural resource depletion, food scarcity assumes connotations of greater or equal urgency compared with numerous delicate problems, such as market instability and price volatility, conveyed more loudly by public opinion. The international markets for agricultural commodities are the stage on which the new scarcity is shown in all its clarity.

One of the main drivers of food market instability is the headlong growth in food consumption, associated with population growth but, especially, with the higher purchasing power among increasingly broad ranges of the population in emerging countries. As early as the mid-1990s, major increases were being witnessed in the demand for some strategic agricultural commodities, such as wheat. The current period of structural food scarcity manifested itself in a progressive widening of the scissors between food availability and demand against a trend of price rises.

Government reactions to price booms have aimed to stabilize domestic supply as rapidly as possible by adopting protective measures (such as bans on exports or incentives for imports), to alleviate the impact of increases upon its citizens. Yet these initiatives have had the sole result of exporting instability, taking it from national to international markets (Tangermann 2011), amplifying price oscillations and triggering a vicious circle which made the markets even more precarious. The scenario is further complicated by the state of reserves of strategic agricultural products. Today, the level of food reserves is much lower than in the past. This actually made the agricultural supply even more inelastic than it is naturally, further restricting the capacity to respond to price increases.

Recent events around the globe in general and in the Middle East and North Africa (MENA) region in particular (cf. the Arab Spring) have put more attention and pressure onto food security. Therefore, it appears necessary to engage even more in strengthening and furthering research and political actions in sustainable food consumption and production in the Mediterranean region (Hassan-Wassef 2012).

In such a complex, evolving, and risky context, the analysis of interconnections between food security and agricultural policies is to be conducted for deepening the understanding of structure of current risk management strategies.

The EU has committed itself to greater policy coherence for development in its non-aid policies, including agricultural policy. To evaluate its success in moving towards policies that are more coherent with its development cooperation objectives, estimates of how the CAP currently affects food security in developing countries are needed.

The work aims at exploring linkages and relations between the CAP and food security in the Mediterranean region with a specific focus on southern and eastern Mediterranean countries (SEMCs).

Material and methods

The paper is mainly based on a secondary data review. Sources of secondary data include: International Food Policy Research Institute (IFPRI), FAO – FAOSTAT, International Centre for Trade and Sustainable Development (ICTSD), European Commission, Overseas Development Institute (ODI), European Centre for International Political Economy (ECIPE), International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM), Barcelona Centre for International Affairs (CIDOB), European Institute of the Mediterranean (IEMED), The Economist, World Bank, etc.

The trends of different direct and proxy indicators of food security were analysed: Global Food Security Index (GFSI); Global Hunger Index (GHI); cereals import dependency ratio (CIDR).

The Global Food Security Index (GFSI), developed by the Economist Intelligence Unit, considers the core food issues of affordability, availability, quality and safety across a set of 105 countries (The Economist 2012).

The Global Hunger Index (GHI) is a multidimensional statistical tool developed by IFPRI to describe the state of countries' hunger situation. The GHI

measures progress and failures in the global fight against hunger. It is updated once a year since 2006 (IFPRI and Welthungerhilfe 2006).

The paper analyses trade of agro-food products between the EU and non--EU Mediterranean countries. Moreover, there was a special focus on agricultural situation and agro-food trade in three southern Mediterranean countries (SMCs): Egypt, Morocco and Tunisia. The paper provides also an overview on types of trade agreements existing between the EU and developing countries and their expected and potential impacts on poverty in general and food security in particular.

The analysis of imports dependency in non-EU Mediterranean countries focuses on cereals as most of the Mediterranean countries are net cereal importers and also given the importance of cereals, especially wheat, for the food security status of the population in these countries. The cereals imports dependency ratio (CIDR) allows knowing how much of the available domestic cereal supply has been imported and how much comes from the country's own production (FAO 2001). Data source is the Food security indicators (FAO 2013) based on elaboration of original LABORSTA data.

As far as non-EU Mediterranean countries are concerned, the geographical coverage of this study is similar to that of the Mediterranean Strategy for Sustainable Development including 3 Balkan countries (Albania, Bosnia and Herzegovina, and Montenegro) and 9 Southern and Eastern Mediterranean countries (Algeria, Egypt, Lebanon, Libya, Morocco, Palestinian territories, Syria, Tunisia and Turkey).

Result and discussion

Linkages between the CAP and food security in developing countries

The CAP has long been criticised for its damaging effects on developing countries' agriculture and food security (Boysen and Matthews 2012). In fact, when world prices increase, mechanisms such as EU quotas (e.g. milk) reduce the production of EU farmers and further increase prices. When prices are decreasing, CAP mechanisms such as export subsidies increase EU farmers' production and further accelerate such price decreases. CAP instruments thus stabilise EU farmers' income but accentuate price volatility at world level (Cantore 2012). Even if EU food security is not threatened, it is still possible to argue that the EU should massively invest in agricultural production as it has a moral responsibility to help feed the world. However, the current subsidy and tariff levels result in massive direct costs and indirect impacts, via trade, on food security in developing countries (Zahrnt 2011).

By fostering competitiveness and exports of the European agribusiness, the EU ignores the main challenge for food insecure countries today: the reduction of their import dependency. In fact, since the 1980s, the majority of developing countries switched from net exporters to net importers of food. Nowadays, two thirds of them suffer from food trade deficits and growing expenses for purchases of cereals, dairy products and vegetable oils on the world market. In order to

reduce their vulnerability against price spikes and recurrent food crises, these countries urgently need a policy shift that fosters domestic agricultural production and limits import dependency. Given Europe's international responsibility in the fight against hunger, the EU should make every effort to support such a shift. But, unfortunately, the CAP in its present form heads in the opposite direction. It deepens import dependency in the South to secure export markets for the European food industry (Fritz 2012).

Trade has an important role to play in improving food and nutrition security as lowering trade barriers reduce domestic food prices and afford consumers a greater variety of food products (WHO and FAO 2003). However, some critics argue that trade liberalization may reduce a country's food security by impacting domestic agriculture (WHO 2012). Policies of trade liberalization over the past two decades have facilitated the "nutrition transition" (Kearney 2010). In high-income countries, food production subsidies and related interventions act as a disincentive to efficient global food production, raise consumer prices in protected countries, and are ultimately harmful to global food security (Foresight 2011a).

Agricultural trade liberalization has complex ramifications for low-income countries, depending on whether they are currently net food producers or food consumers, and on the state of their agricultural, economic and physical infrastructure. Where a country has access to world markets and favourable factors of production it may be an immediate beneficiary of further multilateral liberalization. Where these conditions do not exist or where the country has been a historical beneficiary of 'preferential trade agreements', the effect is more uncertain. As prices in global markets are generally lower, the urban poor usually benefit. However, an uncontrolled and rapid influx of imports may also suppress investment in local food production. Indeed, the poorest countries that have failed to establish a productive agricultural sector may find it very hard to catch up with other low-income countries that have capitalized on cheap labour and their natural capital and can now export low-cost food. Export subsidies leading to the dumping of food surpluses by high-income countries is a further problem (Foresight 2011).

All trade agreements are aimed to speed up trade liberalization. This liberalization should, in the long run, increase productivity and thus reduce poverty. A result of trade liberalization is the improvement of agricultural inputs and equipment and the strengthening of international competition. As a result, the domestic agricultural sector will become more efficient and, therefore, competitive. This in turn enforces small-scale farmers to improve their performance or to give up. Nevertheless, it might be remarked critically that such a selection process brings the agricultural sector, or the smallholder's subsector, ahead but not necessarily all the involved smallholders, as they might be driven out of the market (Winters 2005).

Different kinds of trade agreements regulate trade of agro-food products between the EU and developing countries (Box 3). It can be noticed that the stated

utmost objective of all types of trade agreements is, also, to achieve food security in these countries either directly (by improving food availability, food access and/or food utilisation) or indirectly by fostering socio-economic development and poverty reduction.

It would be worthwhile to think about improving agriculture performance in developing countries without forcing some of smallholders to leave their farms. As the poorest households, especially rural ones, may be less able than richest ones to protect themselves against adverse effects or to take advantage of positive opportunities created by policy reform, the relevant governments will have to play an important role for complementary policies to accompany trade reforms (Winters 2005). Governments should be aware that for most developing countries both – Doha and EU – agricultural trade liberalisation are likely to affect income distribution between urban and rural areas (Winters 2005). Moreover, the largest poverty reduction impact of agricultural trade liberalisation, in both absolute and relative terms, is in countries with agricultural export potential to the markets that liberalize most; that is, East Asia and Europe (Hertel and Winters 2006).

Box 3. Trade agreements established by the EU with developing countries

The EU's *Generalised System of Preferences* (GSP) is a trade arrangement through which the EU provides preferential access to the EU market to 176 developing countries and territories, in the form of reduced tariffs for their goods when entering the EU market. There is no expectation or requirement that this access be reciprocated. GSP covers separate preference regimes: the standard GSP and the special incentive arrangement for sustainable development and good governance (known as GSP+). Preferential tariff rates when exporting to the EU market enable developing countries to generate additional export revenue to support them in developing jobs and reducing poverty.

Everything But Arms (EBA) is an EU initiative to open borders without restrictions to exports originating in the Least Developed Countries (LDCs). EBA provides Duty-Free and Quota-Free access for products from the LDCs. This trade agreement was set up based on the insight that increased trade with developing countries enhances their export earnings, promotes their industrialization and encourages the diversification of their economies.

Economic Partnership Agreements (EPAs) between the EU and African, Caribbean and Pacific (ACP) group of countries are aimed at promoting trade between the two groupings and - through trade development - sustainable growth and poverty reduction. The EPAs intend to integrate ACP countries into the world economy and share in the opportunities offered by globalization. EPAs go beyond conventional free-trade agreements, focusing on ACP development, taking account of their socio-economic circumstances. Since first January 2008 EPAs opened up EU markets fully.

There is some evidence that the EU‘s GSP preferences can be effective in increasing LDC exports and welfare. Furthermore, there are some significant trade and output effects for a sub-set of agricultural commodities and regions (e.g. sugar products, oils and fats in North African EBA beneficiaries) (Gasiorek et al. 2010).

Trade aspects need to be considered in the context of improving diet, nutrition and the prevention of chronic diseases. Equitable trade has an important role to play in achieving food and nutrition security (WHO and FAO 2003). Trade policies need to be modified to ensure also socially and environmentally responsible use and trade of land (and water), thereby ensuring that communities that are dependent on local natural resources can retain access to land and other natural resources in order to sustain their livelihoods (GLOBAL 2000 et al. 2013).

Food security in southern and eastern Mediterranean countries: a critical analysis

In September 2000, 189 nations approved the "United Nations Millennium Declaration" (UNMD), which calls for halving by 2015 the number of people who live on less than one dollar a day. The Millennium Development Goals (MDGs) pointed out by the UNMD include eight priorities. Eradicating extreme poverty and hunger is the first millennium development goal to be achieved. Poverty affects food affordability thus overall food security. That's shown in a particular way by the multifaceted relations between food prices and poverty (De Hoyos and Medvedev 2009; Bussolo et al. 2009).

What emerge applying the upgraded $1.25-a-day poverty line, which is used to measure progress toward the first MDG, is that official poverty rates in most south Mediterranean countries are lower than in many other low- and middle-income countries (LMICs). Extreme poverty affects less than 3% of the population. But going depth in the analysis of non-income MDG indicators the situation change and the difference between South Mediterranean countries and other LMICs appears less pronounced (Breisinger et al. 2012; World Bank 2012).

Poverty and food security are strongly linked. Food and nutrition security in SMCs today is not so much a problem of calories, but of lacking vitamins and other micronutrients (CIDOB 2012). In most Mediterranean countries, food security seems assured for now in quantitative terms, as less than 5% of the population is in a chronic malnourished state (in terms of energy intake), although this apparent security relies on imports. According to FAO's criteria, based mainly on a serving's calorie content, Mediterranean countries are not in critical condition nowadays. Indeed, less than 5% of the population in these countries is below 2400 kcal/day/person (Rastoin and Cheriet 2010). However, the countries in the eastern and southern Mediterranean are only just overcoming food insecurity or still have pockets where the food situation is precarious (Padilla et al. 2005). The main issue of food and nutrition security in SEMCs is undoubtedly a public health issue. The drift in the food consumption pattern caused by the globalization of agro-industrial products causes a slow emergence of true pandemic potentially very costly in human, social and economic terms (Rastoin and Cheriet 2010).

Food security is affected by food availability so agricultural production. Although SEMCs have made considerable efforts to improve their agricultural conditions, they continue to struggle with a poor endowment of cultivable land and water. In spite of the building of dams, grain yields remain low in

Morocco, Tunisia and Algeria. Yields are higher under irrigation. Agriculture is still the main source of livelihood of a substantial part of the poor in the region. Though the share of agriculture in total employment is declining, agricultural employment still accounts for over 30% of the total labour force in Egypt and almost 30% in Morocco. About 70% of the poor in SEMCs live in rural areas. Agricultural production has increased in the region due to the efforts to enlarge the irrigated agricultural area. Nevertheless, it is variable due to harsh weather conditions. Food consumption continues to grow in a context of demographic change and urbanization. However, demography in the region is quite varied, with populations in the Maghreb countries growing a little over 1% annually, and significantly higher growth, about 2% annually, in Egypt.

There is an increasing consensus on the need to pay greater attention to the agricultural sector to enhance food security and development in SEMCs. Countries in the region have applied a range of programs that continue to include market interventions such as the management of food reserves, export restrictions, changing tariffs, taxes on fuel use and cash programs to keep food prices relatively low. Beyond short-term policies, strategic options can be considered in order to achieve food security and alleviate rural poverty. A policy brief prepared by García Álvarez-Coque (2012) calls for a policy agenda with a regional perspective, very different from the fragmented approaches that have dominated the history of Euro-Mediterranean policies. In SMCs, policies to protect Mediterranean products and to promote traditional products are not well implemented, nor do they devote significant attention to the nutritional aspects of diet. Trade policy in these countries is geared to improve quality standards for products intended for the export market in order to ensure greater market access (Malorgio and Solaroli 2012).

The agricultural situation is not the same for all countries in the Mediterranean Southern shore. Let us consider three cases: Egypt, Morocco and Tunisia (Box 4).

Box 4. Agricultural situation in Egypt, Morocco, and Tunisia

In *Egypt*, over the period 2007-2011, the agricultural exports decreased from 2887 million US$ in 2010 to 2774 million US$ in 2011, associated with a decrease in its share in total exports from 11% to 9%, respectively. It seems that the onset of 25th of January 2011 revolution had negative impact on agricultural exports. The coverage of exports earnings to the imports bill (either total or agricultural) also decreased over the period 2011-2012. About 91% of the farm holdings in Egypt are of less than 2 ha which hinders agricultural development (Soliman and Bassiony 2012).

Box 4. (cont.)
Morocco has relied on agriculture for its economic development but its performance has been below expectations. Morocco's agriculture has clear advantages in land and labour, a long producing season, relative proximity to EU markets, and trading relationships with European countries, especially France. A dynamic exporting cluster is combined with a traditional agriculture (Ministère de l'Agriculture et de la Pêche Maritime 2011; García Álvarez-Coque 2012; Akesbi 2012). Morocco's agricultural potential is restricted by severe dry conditions in many regions, over-exploitation of water resources, inadequate irrigation techniques, weak farm structures, complexity of the land tenure system, illiteracy, unequal land property, weak institutional capacity, insufficient extension, research and marketing services, weak farming structures and high dependency on few export commodities and export destinations (Channing and Tyner 2003; Azzouzi and Abidar 2005; García Álvarez-Coque 2012). Since 2008, Morocco is implementing the Green Morocco Plan (GMP) as a major tool to reduce poverty and to improve agriculture competitiveness (African Development Bank 2012).
In *Tunisia*, significant deep reforms have already been undertaken in the agricultural sector. Among the reasons which are frequently advanced by public authorities to justify their intervention in agriculture, some are economic in nature aiming at enhancing growth and development in the sector such as the support to investment in irrigation infrastructure. Other reasons have to do with strategic considerations to bring about social stability, such as the search of food security by maintaining low consumer prices of basic food commodities and providing support to farm income. Therefore, the intervention of the public administration is still heavy in Tunisia.

The results of a study conducted by IFPRI in 2012, point out how poverty and income inequality in the SEMCs' context are likely higher than official numbers have long suggested[1]. The main result of the study is a classification of SEMCs into five food insecurity risk groups (Figure 1). This approach goes beyond the traditional micro aspects put at the basis of the Global Hunger Index (GHI), calculated each year by IFPRI. Combining the number of times that total exports cover food imports with the food production per capita, the GHI, and Gross National Income per capita, Breisinger and other authors have proposed a food security countries classification in which all the South Mediterranean countries considered are included in the category of countries facing a food security challenge (Breisinger et al. 2012).

[1] In the study a new indicator of food insecurity risk is developed, merging a macro-level and a micro-level measure of food insecurity. The first one is defined as the share of food imports divided by total exports plus net remittance inflows [Food imports/(total exports + net remittance inflows)], while the prevalence of children under nutrition is used for representing the micro-level measure of food insecurity.

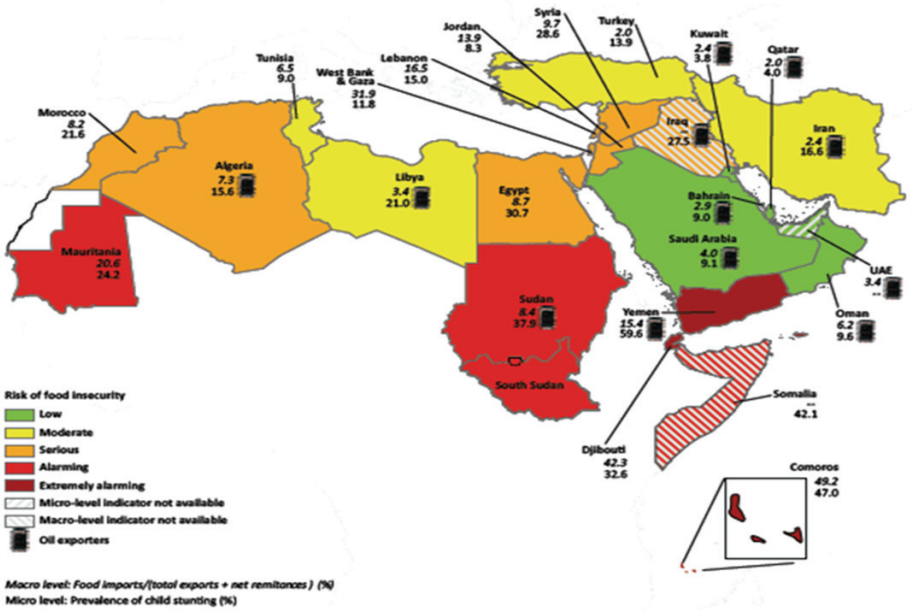

Figure 1. The risk of food insecurity in SEMCs
Source: Breisinger et al. (2012).

The scores for some selected North Africa and Middle East countries, in comparison with the six countries at the bottom of the world list in 2010, show that the situation of SMCs is relatively good and widely differs from the situation of those Sub-Saharan African countries that suffer the most from food insecurity. All SMCs are classed, in 2010, in the category of countries with low hunger levels, with the exception of Morocco and Syria, which appear with moderate hunger levels. The best scores among the SMCs correspond to Tunisia, and the worst to Morocco[2].

Although SEMCs do not appear as a priority on the global map of hunger, they remain as hotspots of unrest. It would be excessive to describe as bread riots the Arab revolutions but social unrest have surely something to do with food prices and dependence. Budgetary social transfers have been usual in the region but largely ineffective and expensive. Subsidies frequently fail to stabilize food prices and do not seem sustainable (Abis 2012). Defining a coherent agricultural development strategy remains necessary in order to promote food security without resorting to a blind subsidization of food consumption. Universal subsidies could be replaced by targeted food subsidy programs that make food more available to selected households located in poor areas, school food programs, food-for-work programs, and focused cash transfer programs. The agricultural sector

[2] This is to a large extent explained by the fact that the prevalence of underweight children under five years of age has increased in Morocco between the periods 1988-92 and 2003-08 to reach 9.9%.

would also benefit from regulatory reforms to reduce constraints on the land market, the capital requirements for starting business and the access to credit. Priority has to be given to building capacities to provide farmers with adequate information and training.

The *Global Food Security Index* (GFSI) – considering the core issues of affordability, availability, quality and safety – shows that food security is still a challenge in SEMCs (Table 1). That is shown by the low values of the different components of the score as well as the bad ranking of SEMCs.

Table 1

Global Food Security Index (GFSI) in some SEMCs (2012). Best score is 100

Countries	Overall score	Affordability	Availability	Quality and safety	GFSI Rank/105
Algeria	40.1	38.2	39.1	47.6	72
Egypt	50.4	38.1	59.8	55.3	52
Morocco	49.1	49.5	47.5	52.6	57
Syria	40.9	33.6	44.9	47.9	70
Tunisia	52.2	52.0	48.6	63.0	49
Turkey	62.2	55.6	66.6	66.2	33

Source: The Economist (2012).

A factor that is becoming more and more crucial in measuring the multiple dimension of the concept of food security is the exposure to food import. The South Mediterranean region is one of the most food import-dependent areas in the world, with net food imports accounting for 25-50% of national consumption. This result is a consequence of a very rapidly demographic growth in the last few decades combined with the change in consumption patterns linked to the increasing average income. A direct consequence of this development has been the rising external food trade deficits, that if in general should not mean self-sufficiency deficit[3], in the cases of some SMCs rises some concerns, related to the high ratio of food imports over total exports. In particular, in those countries characterized by a high dependence on export earnings from oil, the exposure to food security risks is directly related with the oil price fluctuations. The quota of total exports used to pay for imports is in SMCs higher than the world average. The food dependence is more pronounced for Palestinian Territories, Lebanon and Egypt than in the other countries of the region (Figure 2).

Food dependency in SEMCs has a lot to do with the agricultural constraints especially low yields in rainfed areas. In addition, lack of transport infrastructure makes it difficult for any surplus to be sold in cities. Trade reforms have also in-

[3] Food trade deficits may be an acceptable way of guaranteeing the availability of food supplies but only under the condition that deficit-prone countries are able to generate enough foreign currency to pay for their imports.

creased the pressure on traditional production systems. The region is exposed to the increasing world market volatility. The dependency problem is paradoxically aggravated by the emergence of the middle classes, prone to change their diets and consumption patterns. This has been a consequence of economic growth and, at the same time, a reflection of the failure of agriculture to meet the food needs of the population. The direct consumption of cereals has been declining and is being replaced by an indirect consumption of products of animal origin.

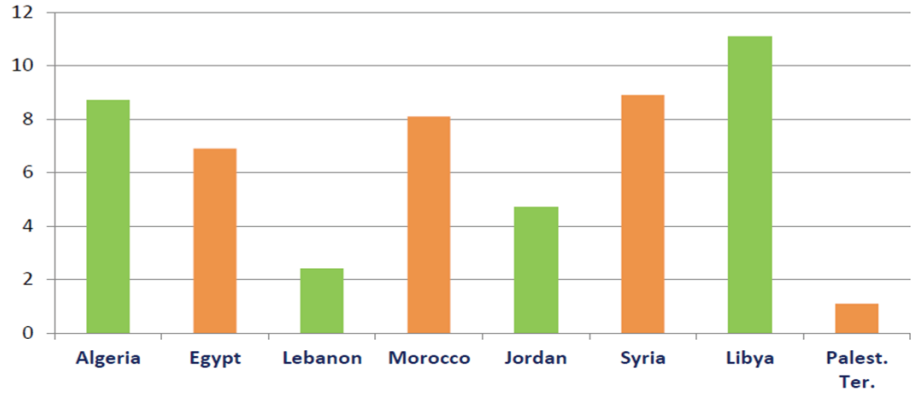

Figure 2. Total export/food import in selected SEMCs (2012).
Source: Breisinger et al. (2012).

Nevertheless, cereals consumption is still relevant in all Mediterranean countries especially in southern and eastern Mediterranean ones. In fact, according to FAOSTAT data in some Mediterranean countries as high as 50%, and even more, of the dietary energy comes from cereals, especially wheat: 64% in Egypt, 62% in Morocco, 56% in Algeria, 49% in Turkey, 49% in Tunisia, 48% in Palestine, 43% in Libya, 42% in Albania, 34% in Lebanon, and 30% in Bosnia and Herzegovina.

Cereals imports dependency ratios give an idea about the level of exposure to global food price changes, which is strongly linked to food affordability and accessibility. Cereals imports dependency ratios (CIDRs) are high in SEMCs (Table 2). The average cereals imports dependency ratio in the Mediterranean countries was 61% in the period 2007-09; that is much higher than the world average in the same period (15.7%). In the period 1990-92/2007-09 the ratio ranged between 4.0% recorded in Turkey (2004-06) and 99.1% recorded in the Palestinian territories (1994-96). CIDRs are particularly high in North Africa (49.9%), with respect to a developing countries' average of 15.5% in the period 2007-2009.

The Middle East and North Africa (MENA) region is the most food import-dependent region in the world, and net food imports are projected to rise even further in the future. With less than 5% of world population, the region accounts for more of 12% of cereal global trade (Rastoin and Cheriet 2010). North Africa's share in total world imports of cereals is around 16-17% whereas

its share of total population is only 2% (Petit 2009). This high reliance on imported food can be attributed to both demand- and supply-side factors. Demand-side factors include rising population and changing consumption patterns due to higher income, whereas supply-side factors include limited natural resources such as land and water (Breisinger et al. 2010). Not surprisingly – given their population – Algeria, Egypt and Turkey have the largest consumption (a total of more than 110 million tons for those three countries) but whereas Turkey is practically self-sufficient, Algeria imports more than 80% of its domestic consumption, while Egypt is in an intermediate situation since domestic production contributes about 40% of domestic needs (Petit 2009).

Table 2

Cereals imports dependency ratios in selected SEMCs

Regions/countries	1990-92	1992-94	1994-96	1996-98	1999-01	2001-03	2004-06	2007-09
Albania	35.2	45.5	35.1	42.1	45.7	49.2	51.1	45.4
Algeria	62.4	76.1	68.5	3.7	9.7	71.5	66.4	70.7
BiH	-	-	24.1	26.0	33.6	33.0	36.0	37.1
Egypt	37.9	37.0	37.9	36.9	35.6	35.0	32.8	35.5
Lebanon	89.4	90.9	89.7	90.3	88.2	87.9	85.3	88.5
Libya	89.9	91.9	91.4	90.5	91.3	90.2	91.5	91.8
Montenegro	-	-	-	-	-	-	-	94.7
Morocco	27.2	35.6	27.8	32.2	59.5	44.0	36.8	53.6
PT	-	-	99.1	95.8	96.1	92.1	93.9	96.1
Syria	30.3	16.5	10.2	12.5	21.7	16.8	33.1	49.1
Tunisia	35.0	44.5	58.8	49.6	66.9	70.8	56.9	60.2
Turkey	5.3	4.5	7.7	10.7	7.6	8.5	4.0	13.8
World	14.6	14.3	14.2	13.8	15.2	15.7	15.3	15.7
DC	13.2	13.5	13.9	13.7	15.2	15.5	15.4	15.5
North Africa	43.2	47.7	44.9	43.6	52.8	48.8	44.7	49.9

BiH: Bosnia and Herzegovina; PT: Palestinian Territories; DC: Developing countries.
Source: FAO (2011).

What is more alarming is the fact that cereals imports dependency ratios are increasing in the majority of SEMCs. The only exceptions are the Palestinian Territories, Egypt and Lebanon, where the ratios slightly decreased in the same period. Nevertheless, these results should be taken with caution as the cereals import dependency ratios remain high to very high in these three countries (35.5% in Egypt, 88.5% in Lebanon, and 96.1% in the Palestinian Territories in the triennium 2007-09). Increases were higher than 20% in Tunisia and Morocco. Therefore, cereals, especially wheat, prices increase can have dramatic impacts on southern and eastern Mediterranean consumers as cereals per capita consumption is significant (Figure 3).

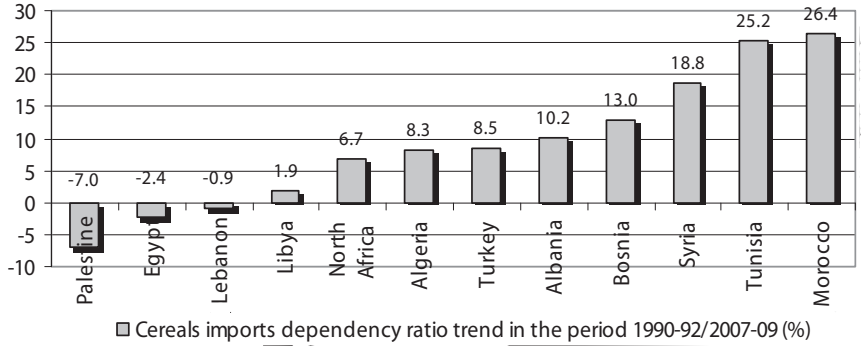

Figure 3. Cereals imports dependency ratios trend in SEMCs, period 1990-92/2007-09. Trend in Bosnia refers to the period 1994-96/2007-09

Source: Authors' elaboration based on FAOSTAT data.

CAP and food security in SEMCs: focus on Egypt, Morocco and Tunisia

Agricultural negotiations are presented as an open question in the Mediterranean area. When the Euro-Mediterranean partnership was launched in Barcelona in 1995, agriculture was afforded special treatment. The creation of a free trade area between the EU and SMCs envisaged its implementation through the progressive elimination of commercial barriers (Scarpato and Simeone 2013).

Agricultural trade liberalization policies may help reduce food prices to consumers but might hurt producers' welfare. This is exemplified by the differentiated impacts of the Euro-Mediterranean Free Trade Area on the different SEMCs and even single sectors within the same countries (Ahmad et al. 2007) (Box 5).

Trade of agro-food products between the EU and the Mediterranean area is quite fluctuating. However, in general the EU's exports are higher than its agro-food imports so it has a positive food trade balance. This is particularly true in the case of cereals (Figure 4).

EU exports to Mediterranean Partner Countries (MPCs) are much more diversified than the reverse trade flow from MPCs to the EU. Petit (2009) reported that admittedly cereals, dairy product and sugar represent 44% of EU exports but the three leading categories in MPCs' exports to the EU, namely fruits, vegetables and preparations based on these two fresh products, represent 54% of MPCs' exports, oils and fats as well as fish and seafood representing 10% each. Furthermore, the great differences among products in these two trade flows illustrate a great degree of complementarity between the two trading blocks, trade being thus the result of specialization. But it also reflects a low degree of economic integration across the two sides of the Mediterranean region.

The fragmentation of trade flows between EU and MPCs affects the cereal supply/use balance in each one of the MPCs. The extreme diversity of situations for a very important category of products (Petit 2009).

Box 5. Sustainability Impact Assessment of the Euro-Mediterranean Free Trade Area (Ahmad et al. 2007)

A sustainability impact assessment (SIA) study undertaken to assess the economic, social and environmental impacts of the evolving Euro-Mediterranean Free Trade Area (EMFTA) indicated that the EMFTA can help to deliver large economic benefits to both the EU and Mediterranean Partner Countries (MPCs), but only if carried out as part of a comprehensive development strategy in each of the partner countries, in combination with measures to achieve fuller economic integration across the region as a whole. In the absence of such strategic measures, the economic benefits of the EMFTA are small, and may be accompanied by significant adverse social and environmental effects.

The potential economic benefits of fuller regional integration can in principle help partner countries adapt to globalisation and deliver significant gains to businesses and to all sections of society, without jeopardising the natural environment. In terms of direct effects on consumer welfare the economic impacts in MPCs are generally positive and larger than in the EU, although a small short term negative effect is possible in some countries. For agriculture gain averages about 0.5% of GDP with a small additional impact from south-south liberalization.

Some social impacts in MPCs are beneficial in the short term as well as the long term and others may be significantly adverse unless effective mitigating action is taken. In the absence of appropriate preventive and mitigating measures, the potential negative social impacts of greatest concern are: a significant short term rise in unemployment; a fall in wage rates associated with increased unemployment; a significant loss in government revenues in some countries; greater vulnerability of poor households to fluctuations in world market prices for basic foods; and adverse effects on the status, living standards and health of rural women, associated with accelerated conversion from traditional to commercial agriculture.

The fragmentation of trade also affects MPCs' exports of fruits and vegetables giving the main fruits and vegetables exported by each MPC and the share of that product in the country's agricultural exports. Another cause of fragmentation is linked to the bilateral nature of the trade arrangements between MPCs and the EU, which takes a large share of their exports. For the European Union, the politically sensitive sector is that of fruits and vegetables. This is reflected in the level of protection and, more importantly, in the diversity and complexity of the protection instruments used (e.g. seasonal quotas and tariffs, threshold prices, and a host of preferential arrangements, often country by country, related to individual instruments, etc.) (Chevassus-Lozza et al. 2005).

Although the agricultural Euro-Mediterranean trade agreements have established progressive liberalization, the presence of numerous technical barriers imposed by EU on SMCs represents a strong limitation to the liberalization process. The process of Euro-Mediterranean integration in agriculture has been very complex. The main reason is that agriculture, especially the fruit and vegetables sector, has been, and still is, one of the main sources of conflict in the re-

lations between the EU and the SMCs (Scarpato and Simeone 2013). The trade regulations of the fruits and vegetables sector, with particular reference to the entry price scheme, are aimed to prevent low-priced imports and to stabilize the EU internal market. As pointed by Cioffi et al. (2011) and Santeramo and Cioffi (2012), the entry price system barely helps to stabilize the EU's internal market, therefore its removal might be desirable. Moreover, the entry price removal would boost rural employment in SEMCs (especially in Morocco) by offering them easier access to the EU market.

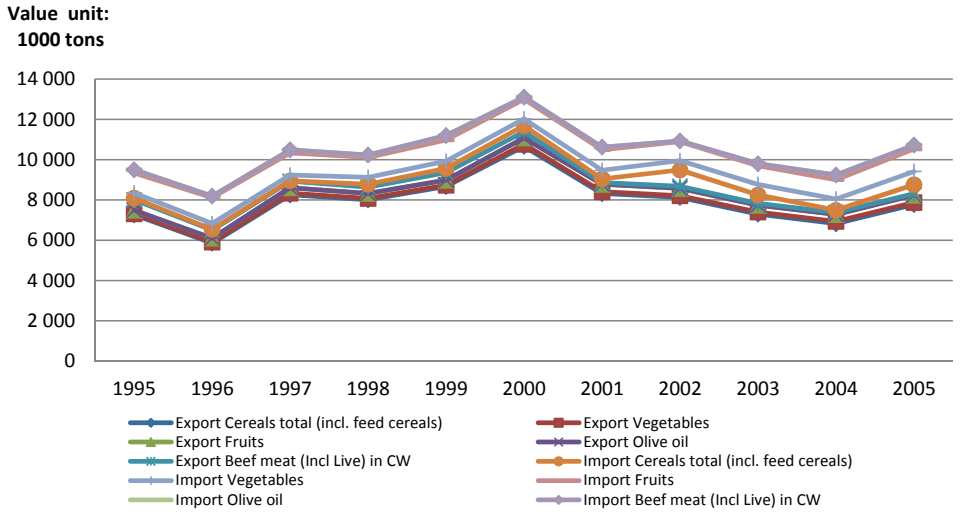

Figure 4. EU15-Mediterranean area trade in values and quantities

Source: Our elaboration from European Commission – Directorate-General for Agriculture and Rural Development agricultural trade statistics (2012).

Egypt, Morocco and Tunisia have evolved from a preferential trade status towards an Association status, with advanced status for Morocco and Tunisia. All of them enjoy duty free access to the EU market for industrial products and preferential market access for agricultural products.

During last decades *Morocco* has gradually opened up its domestic agriculture to international markets, either through unilateral trade liberalization, or through bilateral or multilateral free trade agreements. Conflicts regarding agricultural Euro-Mediterranean trade agreements related to fruits and vegetables are very clear in the case of Morocco. An emblematic case is represented by the bilateral agreement between Morocco and the European Union in the vegetables sector (Cioffi et al. 2011). The EU stance towards Morocco has been affected by the debate on the cost of the trade agreements on particular groups, in particular, fruit and vegetable growers. This debate reappeared during the last agricultural negotiations with Morocco. The extended EU-Moroccan Free Trade Agreement faced strong opposition in the European Parliament, though the final vote was

favourable in February 2012. This can be understood as a clear step towards further trade integration. However, trying to offer something to the opponents, in an accompanying resolution, the Parliament called on the Commission to monitor strict application of border measures, such as the tariff quotas applied on tomato imports, and the controls on the entry price system. The resolution also requested an assessment of the impact on European farming (Cioffi et al. 2011).

The case of *Tunisia* clearly shows the dilemma faced by SMCs when dealing with trade liberalisation and the peculiarity, as well as the high socio-economic sensitiveness, of the agricultural sector (Box 6).

Box 6. Agro-food trade liberalisation in Tunisia

Tunisia has over the years committed itself to a series of international agreements aiming at the gradual liberalization of agricultural products trade. This commitment to the process of integration into the global economy has two main components. On one hand, there is the willingness to further strengthen the Euro-Mediterranean trade partnership given the major place that the European market occupies in the overall external trade of Tunisia. On the other hand, there is the general context of the world market globalization, in line with the WTO guidelines, for the sake of reducing economic inefficiencies thus promoting growth.

Significant reforms have already been performed particularly in the agricultural sector, consisting of partially removing border protection, to reducing subsidies on inputs to more generally relying on market forces in determining the value of goods. These reforms remain, however, incomplete and government intervention in a number of markets and farm structures remains important.

Agricultural trade in Tunisia is marked by a high degree of rigidity due mainly to the existence of several public companies involved at all levels of the import and the marketing of agricultural produce (*e.g.* the Office of Cereals, the Office of Oil). However, since 1994, exports of olive oil are open to private traders. Besides, there is a preferential trade agreement with the EU to export up to 56000 metric tons of Tunisian olive as of the month of March free of duties.

The state also sets the margins of retail sales, negotiates with wholesalers to keep their prices low, makes imports when prices are raising (vegetables), pays bonuses for quality cereals and sets ceiling prices for processed foods. This suggests that the intervention of the public administration is still heavy in Tunisia, in spite of the public rhetoric about government disengagement.

The gradual general opening up of Tunisia to the world market has resulted in the implementation of the structural adjustment program and the signing of regional and bilateral trade agreements, including with the European Union, relating to reductions in border barriers. In the agricultural sector, this trend has been slowed down in view of some fears about full liberalization of agricultural trade and their social consequences. The degree of agricultural protection remains high and is characterized by a system of tariff quotas, adoption of a mix of quotas and tariffs, where tariffs increase when imports exceed a pre-specified amount, and high tariffs in other cases.

The EU is the world's biggest market for imports of agricultural products from *Egypt*. More than 80% of these products benefit from duty-free and quota-free access to the EU market. The main agricultural products exported by Egypt to the EU are fresh table grapes, potatoes, sweet oranges, beans, onions and strawberries. To join the sustainable development and rural development with agro-food exports development, some agricultural subsectors should be identified to be the core of such a program. Tomato, orange and dairy industries are promising. However, regional marketing companies with vertical integrated stages should be established. It is preferable to have joint venture with EU's investors to overcome the non-tariff barriers of standards and quality that block expansion of these products to EU. Moreover, integration rather than competition between SEMCs (Morocco, Tunisia, Egypt and Turkey) in exporting oranges and vegetables to EU would strengthen their terms of trade, either quantity-wise or price-wise (Soliman 2002).

In the South of the Mediterranean the scope of further intra-regional liberalization exists, following a gradual approach. SEMCs and Turkey could base their trade relationship on comprehensive agreements covering a full range of regulatory areas of mutual interest, following the approach of Association Agreements. As far as agriculture is concerned, the Deauville Partnership launched in 2011 an agenda that covers different priorities: improving market access for agricultural products, encouraging investment, upgrading standards, promoting agricultural research and extension, and delivering efficient and sustainable irrigation services. Partnerships should also help establish strong links among farmers and value chains.

None of the association agreements between the EU and SMCs refers to restrictions on agricultural subsidies in the EU, beyond what is required by the multilateral framework of the WTO. For the SEMCs, giving direct aid to producers is beyond their reach. The 45 billion Euros in decoupled direct payments in the EU are considered as "green box", not limited by the WTO. Nevertheless, this CAP payment system represents a clear example of the asymmetry of agricultural policies in the North and South of the Mediterranean basin. Consolidating the Euro-Mediterranean common market requires eliminating ad-hoc import measures that make trade less predictable.

The need to strengthen agricultural cooperation between the EU and SMCs is urgent. However, trade liberalization alone is not sufficient to alleviate the urgent need for new jobs for the rural youth in SEMCs, which lacks infrastructure, education and sanitation. Therefore, it is necessary to support more effective partnerships. Trade liberalization with SEMCs must be accompanied by increased development aid.

Conclusions

Mediterranean developing countries which are threatened by climate change and population growth could make a bad situation worse. However, SEMCs can be a breadbasket with investment in infrastructure, increased irrigation, input use, improved technology and removal of trade barriers between countries. Recent international socio-economic and structural changes show a trend towards greater convergence and complementarities between the EU and SMCs in the definition of agricultural policies, despite socio-economic and structural differences. The CAP's initiatives should be seized by SEMCs for promoting structural changes in agriculture (land policy reform, productivity improvement, technological and social innovation promotion, sustainable soil and water resources management) and for achieving food security.

Nevertheless, the EU, by fostering agricultural competitiveness and exports through the CAP, increases food dependency of food insecure countries including many eastern and southern Mediterranean ones. These countries suffer from food trade deficits and growing expenses for purchases of food especially cereals. They urgently need a policy shift that fosters domestic agricultural production and limits import dependency. Therefore, the EU should make every effort to support such a shift. Unfortunately, the CAP seems heading in the opposite direction thus deepening import dependency and aggravating the problem of food insecurity in the South to secure export markets for the European agro-food industry.

The CAP should respond to food security challenge through the promotion of an equitable food trade regime by removing all market-distorting agricultural tariffs and subsidies and, additionally, supporting sustainable agricultural intensification in developing countries.

There is also a need to evaluate the external multifaceted impact dimension of CAP on global food market and food and nutrition security in developing countries in general and SEMCs in particular. Monitoring the consequences of agricultural liberalisation agreements between the EU and SEMCs and designing and implementing appropriate contingency strategies will be essential. Family farmers destabilisation, food dependency aggravation, rural areas crisis and heightened pressure on natural resources are often mentioned as the potential risks of the Euro-Mediterranean agricultural trade liberalisation. As a matter of fact, and as shown by the presented paper, available data on the Euro-Mediterranean agricultural liberalisation and the CAP impacts on food security in non-EU countries are quite fragmented, partial and incomprehensive.

SMCs are experiencing profound changes that will have a strong impact on rural economies. It is difficult to dissociate the ongoing reform of the EU's CAP from socio-economic development, especially of rural areas, throughout the Mediterranean region. Managing food insecurity in the Mediterranean region will become a geostrategic issue for the EU in the years to come.

However, the assumption that Euro-Mediterranean free trade alone would lead to a strategy which would boost the socio-economic development ex-

pected in the SEMCs is increasingly challenged. Issues on food security in the Mediterranean call for integrated Euro-Mediterranean cooperation to foster dynamics to meet food, rural, territorial, social and environmental challenges. Promoting a long-term regional food security vision is vital. The EU can no longer ignore certain critical agricultural and rural realities in SMCs thus underestimating the geopolitical threats that could stem from food insecurity. Quantitative and qualitative food security in SEMCs must be sustained as the principal thrust of Euro-Mediterranean cooperation initiatives promoted by regional organisations such as the Union for the Mediterranean, CIHEAM, etc. in collaboration with the European Commission and EU's Member States.

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