

REVIEW OF PROSPECTIVE STUDIES FOR MEDITERRANEAN AGRICULTURE

IMPLICATIONS FOR AGRICULTURAL RESEARCH

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1- Introduction

The purpose of this note is to present a synthetic review of the prospective studies conducted for Mediterranean agriculture in recent years. This is designed to contribute to the elaboration by the Scientific and Strategic Advisory Board (SSAB) of an “integrated strategic research agenda”, the first objective and the first ‘Deliverable’ of the ARIMNET project, as foreseen in the project DOW document. More precisely, this note is a contribution to Task 1.2 of the first WP: “Synthesis of Foresight studies in Med Area”. Although the final research agenda is to be ‘integrated’ and to cover the whole Mediterranean region, this note is focussed on Southern and Eastern Mediterranean countries (SEMCs) because many foresight studies are restricted to this subset of countries. Obviously, the regional integration with trends and concerns in Northern Mediterranean countries (NMC) will have to be undertaken in a subsequent step but an effort is made here to at least speculate on commonalities and convergence with NMC issues as reflected in several exercises similar to this project such as the FACCE, and JPI Water projects.

The scope of this note is wide, taking agriculture in its broadest sense, including livestock production, rural development issues and the management of the natural resources used in agriculture, which means that often analyses can not be restricted to the agricultural sector alone. It is interesting to note that there are many commonalities and convergences among the various foresight studies reviewed here. This will facilitate the task of synthesizing, which is the main purpose of this note. But one major difficulty remains: how to derive the implications of these studies for the formulation of a research agenda expressed in precise enough terms to be operational.

Given these considerations, the outline of this note is straightforward. We will first review *the* foresight literature, including well known studies or projects such as MEDITERRA, PARME, MEDPRO, etc.). We will then present an assessment of the strategic stakes for the elaboration of a research agenda in light of the review just mentioned and of the literature review done for the recently completed SUSTAINMED project as reflected in a forthcoming book to be

published by Springer. Finally, the implications of this analysis for the formulation of a strategic research agenda for the whole Mediterranean region will be explored.

2- Main foresight studies reviewed

The relevant literature is abundant, as illustrated by the list of references in the appendix. Fortunately, these studies reflect a broad consensus on the major challenges to be faced by SEMCs in the forthcoming decades and also on the seriousness of these challenges. The main points of this consensus will be synthesized in the next section of this note. But first, a brief description of the main studies done in recent years will be given here.

- **Standing Committee on Agricultural Research (SCAR¹) – The 3rd SCAR foresight report – Sustainable food consumption and production in a resource-constrained world**

This third report of the SCAR presents the dominant trends in the agricultural and agri-food sector and identifies research priorities.

Consensual diagnostic: increasing global food demand, pressure on natural resources, environmental impacts, non-sustainable production and consumption models, the vulnerability of food systems, the loss of biodiversity, climate change accompanied by major uncertainty, major food security risks, an exacerbation of poverty, effects on international trade and risks of social and political destabilisation. In this context, public policies continue to take insufficient account of sustainability criteria.

For the experts of the SCAR, this diagnostic is inevitably a call for radical change with regard to both supply and demand requiring increased efficiency and resilience of the different food systems. There is an urgent need to implement transition towards sustainable food systems through a systemic approach which takes account of the complexity of the ecosystems, the different operators within the food chain, the role of public policies and the interaction between current issues and future challenges.

The main conditions to ensure a quick transition of the agricultural and food sectors towards a new model are:

- massive investment in research, education and innovation in the public and private sectors;
- support for technological and social innovations;
- promotion of new forms of governance and economic regulation among all the operators in the food chain.

The main research priorities

¹ The Standing Committee on Agricultural Research (SCAR) was established in 1974 by a Regulation of the Council of the EU. It is formed by representatives of member states and presided over by a representative of the Commission who together have a mandate to advise the Commission and the Member States on the coordination of agricultural research in Europe.

The SCAR committee was given in 2005 a renewed mandate by the Council to play a major role in the coordination of agricultural research efforts across the European Research Area. The “new” SCAR is made up of the 27 EU Member States, with representatives from Candidate and Associated Countries as observers. The SCAR members currently represent 37 countries.

- *Development and adoption of new technologies to encourage sustainable, resilient production systems capable of increasing output.* Priority must be given to production systems which incorporate traditional know-how and environmentally-friendly practices (organic agriculture, agro-ecology, etc.) while multidisciplinary approaches must be adopted.
- *Improved understanding of the socio-economic and cultural impacts of adopting new technologies and innovative production practices.* These aspects are just as important as the technical side.
- *Sustainable consumption and reduction of waste* throughout the food chain: transition towards new consumption behaviour, increased efficiency along the entire food chain (production, conservation during transport, consumption).
- **Mediterra 2008: “the future of agriculture and food in the Mediterranean”**

The analyses of the Ciheam highlight the strategic nature of agriculture in the Mediterranean and the major role played by this sector in driving regional Euro-Mediterranean cooperation forwards. In particular, the Mediterra 2008 report offers an insight into future prospects for agriculture, food and rural areas in the Mediterranean by 2020. The analyses presented in this work show the dynamics at work and the possible scenarios while recommending the action to be taken.

The report identifies five priority actions necessary to the construction of a more sustainable and united agricultural sector within the Mediterranean basin by 2020. These actions are described below:

1. Maintain the production capacity in a context of diminishing resources, climate change and environmental vulnerability

The durability of resources is a major issue and gives rise to significant constraints for agricultural development: the situation relating to the resources necessary to increased production already appears critical for 2020. Land resources are increasingly threatened by the effects of urbanisation (especially in the South) while equitable access to land, in particular for small-scale family farms, remains a pivotal issue and soil quality is deteriorating (loss of fertility, problem of soil salinity, etc.). The Mediterranean zone is particularly vulnerable to water stress. This problem primarily concerns the countries of the southern shore which account for only 10% of the water resources in the Mediterranean compared to 75% in the North (Latin Europe and the Balkans) and 13% in the Middle East (10% of which is located in Turkey).

With regard to natural resources, five priorities have been identified:

- improve integrated management of water resources and demand;
- promote small and medium-scale hydraulics, improve infrastructures and develop water-saving crops;
- ensure more rational management of energy and increased use of renewable energies;
- optimise land management policy in light of urban expansion as well as the development of tourism and transport;

- preserve biodiversity and develop crops adapted to climate change.

2. Ensure the quantitative and qualitative food security of the populations

The Mediterranean region currently presents globally satisfactory quantitative results with regard to food while demonstrating a deteriorating situation in terms of food quality and safety. This key question requires the implementation of an approach involving all the stakeholders in the food chain. A number of avenues for action are proposed with a view to encouraging a food system which incorporates ecological sustainability and health:

- develop global, concerted policies conducive to food security with the consumer at the heart of the mechanism;
- intensify production while retaining biological diversity;
- promote traditional Mediterranean products;
- adapt standards to the local contexts.

3. Develop the supply and marketing of agricultural products

The organisation of supply and the marketing of products represent major constraints on the development of a high-quality, competitive Mediterranean supply. A scenario is proposed whereby regional integration is strengthened with a view to creating a Mediterranean supply founded on the complementarity of products and markets. The main avenues for action are:

- develop common quality standards;
- strengthen the coordination mechanisms between the different stakeholders within the value chain;
- strengthen South-South and North-South corporate partnerships by creating networks of economic operators;
- support the fabric of SMEs through financial investment and human resources.

4. Define new development and governance strategies for rural areas

5. Strengthen and share research and training capacities in the agricultural and agri-food sector

- promote public-private partnerships to increase employability;
- construct a Euro-Mediterranean research forum based on the states' real needs;
- develop mechanisms for disseminating knowledge;
- promote science parks and competitiveness clusters.

- **PARME prospective: which research and which partnerships for the Mediterranean?**

The aim of the PARME prospective think tank (partnerships and research in the Mediterranean) coordinated by Agropolis International was to identify the fields of research and innovation requiring cooperation between the countries around the Mediterranean with a view to ensuring sustainable development within the region and to examine the operating methods which could be conducive to such cooperation. The prospective, transversal and multidisciplinary analysis of the major issues facing the region by 2030 allowed priority avenues for research to be identified in three broad domains:

- men, women, societies and their territories;
- natural resources;
- agriculture, food and health.

In each of these three domains, the following priority fields of research were identified:

- *In the domain of territories*, the main questions relate to the vulnerabilities and complementarities observed in urban and rural territories and their methods of governance, with a particular focus on coastal areas.
- *In the domain of natural resources*, the main issues concern the adaptive management of anthropo-ecosystems, the preservation of soil potential, an improvement in the knowledge concerning water resources and their uses as well as the desire for regional energy security minimising the environmental impact.
- *In the domain of agriculture, food and health*, the question of quantitative, nutritional and sanitary food security provided by sustainable production systems plays a central role. It relates to the individual fields of agricultural policies, production systems, marketing value chains and product processing. In the field of health, the main concerns relate to the spectacular development of non-transmissible diseases linked to lifestyle and diet and to the means of preventing them.

Partnership models are suggested which are conducive not only to scientific cooperation between the different teams in the countries around the Mediterranean basin but also to the technical or organisational dynamics of innovation involving the public authorities, companies, administrators and the civil society.

3- Strategic stakes revealed²

The development of agriculture and rural areas in Southern and Eastern Mediterranean countries faces very serious challenges. This is well understood, as illustrated by the following statement from the meeting of the CIHEAM Ministers of Agriculture held in Malta in September 2012 (CIHEAM, 2012): “Current food consumption and production patterns are not sustainable in the Mediterranean basin due to biodiversity loss, degradation of natural resources, pesticide contamination, climate change, high energy and water consumption, dietary patterns and changes in eating habits, and high dependency on imports, as well as poverty and vulnerability of many rural and urban Mediterranean communities, and particularly the erosion of the Mediterranean diet”.

All the ingredients of the historical challenges faced today by Southern and Eastern Mediterranean countries (SEMCs)ⁱ in the field of agriculture and rural development are mentioned in this five-line summary. Another formulation of the problems faced by SEMCs has been well summarized by Bessaoud, quoting in particular a CIHEAM-AFD set of studies (Bessaoud & Montaigne, 2009; Bessaoud, 2013), and listing the major problems to be faced: “crisis of peasant agricultures, poverty and fragility of rural societies, advanced degradation of natural resources, major inequalities in the access to resources: land, finances and material”. Let us now first come back to each one of these main challenges, trying to be specific on their nature and magnitude.

1. Import Dependency

Although import dependency may not be the most important challenge to be concerned with, we discuss it here first because it is indeed a major structural feature of many countries, but mainly because it is the starting point of most projection and foresight analyses of the regionⁱⁱ. The main concern expressed then is that of a region depending on outside suppliers for the provision of its basic foodstuff. Actually, the region depends heavily on imports for only a few commodities in addition to tropical products which cannot be produced locally: cereals, sugar, oils and oilseeds, as well as dairy products. It is for cereals that the total import bill for the whole region is the largest (more than US\$12 billion in recent years) in spite of Turkey often being a net cereal exporter. Given the importance of cereals in the diet of most people, particularly the poorest, this cereal import dependency is the source of a major concern with economic, social and political ramifications. The root cause of this concern is the awareness that the demand for cereals has been growing and will continue to do so - due mainly to demographic and economic growth - while there are serious constraints limiting the growth of domestic production.

As a result, IPEMED experts (Bourgeois et al., 2012) wrote at the very beginning of their report devoted to a proposal for a new Euro-Mediterranean agricultural and food policy: “In 2008, the agricultural and food import bill of the SEMCs reached the abyssal figure of 57 billion dollars, that is almost three times as much as in 2000... Food insecurity in the region

² Much of this section is drawn from the Sustainmed research project [Petit M. (edit.) *The challenges of sustainable agricultural development in Southern and Eastern Mediterranean countries*, Springer (to be published, 2014)]

unfortunately keeps growing and constitutes one of the factors of the unprecedented political crisis the SEMCs are going through.” A similar concern is expressed by Abis (2012), a keen observer of the geopolitical situation in the region, when he writes: “The dependency of the Mediterranean Arab countries on international markets is growing, as a consequence of a multidimensional regime of constraints (ecological, demographic, logistical) and of a stronger and stronger purchasing power of the population, having led to a major diversification of food demand. Between 1990 and 2010, the volume of agricultural imports of the four North African countries (Algeria, Egypt, Morocco and Tunisia) trebled, from 9 to 27 billion Euros. These sums represent a considerable share of public budgets” (Abis, 2012).

These citations reflect the fact that food import dependency has several important economic and political consequences. Firstly, there is a security dimension: with the Middle East and North African regions being the most food import dependent regions of the world, officials legitimately worry about their ability to secure supplies in times of crisis. Indeed, the experience of the 2008 crisis showed that governments of the region were willing to go to great lengths in order to ensure a reasonable degree of food supply security at the national level (Lerin et al., 2009). This leads immediately to the next dimension: the huge costs of that security, in terms of both balance of payments and public budgets. Finally, the fact that most governments of the region intervene massively on the markets for basic foodstuff illustrates the high political sensitivity of the food security issues resulting from that import dependency. Given the magnitude of this concern, one wonders whether or not something can be done about it. Two challenges are thus identified by this question: 1) Can domestic production be increased? 2) Can agricultural and food imports be better managed?

The common wisdom on production is that natural resource constraints are so limiting that little can be done to increase domestic agricultural production. Yet, a look at past trends over several decades suggests that the past performance of agricultural growth in the region was not as dismal as commonly believed. According to the Agrimondeⁱⁱⁱ exercise, which examined scenarios for world agriculture until 2050, based on past performances between 1961 and 2003, total agricultural production - measured in Kilocalories (an energy equivalent) - in the Middle East and North Africa regions, where SEMCs have a very important weight, increased at a faster rate than the world average, less rapidly than in Asia and Latin America but faster than in the former Soviet Union and even in the OECD countries. Similarly, according to Belghazi (2013), the share of SEMCs (minus Palestine and Libya) in world agricultural production remained constant at 5.5% throughout the 1994-2007 period^{iv}. In the same vein, available evidence suggests that most of the production growth can be attributed to productivity growth. Thus, the average land productivity increased by a factor of about 3 in four decades, but at about 15,000 Kcal/day and per hectare, it remained well below that of Asia and Latin America (Paillard et al., 2010).

Another important feature of domestic agricultural production in the SEMCs is its extreme variability from year-to-year. The yields of cereals, the main product in these countries, depend very much on rainfall. This influence of the weather is so important that in some countries, notably Morocco, it has a significant macroeconomic implication, as it affects the overall economic growth performance of the country.

Of course, cereals are but only one among many categories of agricultural products, albeit a major one, and their relative importance, both in production and consumption, is declining. Many past debates have focussed on the appropriate level of diversification of agricultural production, particularly on how much SEMCs should give up on cereals and specialize in

fruits and vegetables, products for which they have a clear comparative advantage on international markets. Of course, such a choice would risk increasing the import dependency for cereals and, as further discussed below, it would have implications for the many poor semi-subsistence farmers located in dry remote areas, who are producers and sellers of cereals. Given all these considerations, it should be clear that accelerating the rate of growth of domestic production involves many challenges for public authorities in SEMCs and should have prime of place in a strategic research agenda for the region.

The second question raised above, whether or not agricultural and food imports could be better managed, has not received much attention by analysts and observers, as reflected by the small number of references on this topic in the literature. Yet, the question is important. As already indicated, governments of the region took far-reaching decisions in response to the 2008 crisis. Analyzing those decisions, their rationale and their impacts would be both interesting - to understand how governments behave - and useful for decision makers - to assess whether or not decisions of this type could be improved, in terms of public welfare, in future crisis situations. This is an interesting agenda for research, which however has not received much attention yet. Another dimension of the management of food imports has to do with infrastructure and logistics. For interesting reflections on this topic, showing its importance in particular, see Abis (2012) and MEDITERRA 2014.

2. Stubborn Rural Poverty

Poverty, particularly rural poverty, has been and remains a major issue in SEMCs. In this respect, Israel and Turkey face a set of specific problems, less acute than those faced by most Mediterranean Arab countries, even if they are at times politically important. Thus, the focus of this section will be mainly on the Arab countries. For them, the challenges associated with increasing agricultural production, which we just discussed, are compounded by those arising from the need to fight rural poverty, which makes the choice and pursuit of an appropriate agricultural and rural development strategy particularly difficult. Rural poverty situations vary much from one country to another. A few country cases will illustrate this diversity.

The greatest challenge is probably faced by Egypt where the population density is generally very high, even in rural areas, particularly in the Nile delta (more than 900 persons per square Km in 2007 in rural "Lower Egypt", not including the four urban governorates of Cairo, Alexandria, Suez and Port Said). Generally speaking, the poor are concentrated in rural areas and particularly those in Upper Egypt. Interestingly, the distribution of income, as measured by the GINI coefficient, is less unequal in rural areas; but social well-being indicators show that rural areas continue to lag behind, in terms of literacy and access to sanitation facilities, in particular, whereas they seem to have caught up in their access to safe drinking water while the real expenditures per capita (as measured by household expenditure surveys, i.e. a robust indicator) increased by 78% in rural areas between 1975 and 2009.

In Morocco, the same indicator, real average expenditures per capita, increased by 66% between 1990/91 and 2006/07, the year of the most recent household survey, the average rate of growth being slightly higher in rural areas, which however continue to lag behind urban areas. Indeed, in spite of real progress in the last 30 years, the UNDP human development indicator ranked Morocco the 130th country in the world in 2010, because of a high incidence of poverty in internal rural regions, poor literacy rates and poor performance of the public health system, as reflected for instance in high levels of infant mortality. Admittedly, the situation of the rural population has improved recently: for instance, the literacy rate for the 15-24 year age group improved from 58% to 79.5% between 1994 and 2009 – a significant

progress indeed – but it is only 72.1% for girls and young women, and still less in remote rural areas in spite of spectacular advances in the proportion of girls attending school.

Tunisia has had an impressive record of poverty reduction over the years, cutting the level of poverty (using the national poverty line) from 40% in 1960 to 2.8% in 2010, according to official figures. At the same time, the growth rate of population declined and life expectancy increased markedly while improvements were achieved in education programs, access to health care and basic infrastructure. The distribution of income also improved: the GINI coefficient for income per capita fell from 0.434 in 1985 to 0.408 in 2008 (UNDP, 2010). Thus, the poverty situation in Tunisia is generally less acute than in most other Arab countries. According to the UNDP Human Development Index, Tunisia was ranked 81st in the world in 2010, the value of the index for the country having increased from 0.436 in 1990 to 0.683 in 2010, whereas the average for Arab countries increased from 0.398 to 0.590 during the same period. In addition, poverty seems to be mainly concentrated in urban areas, which account now for about 75% of the poor population, as compared to about half in 1975. As a result, the rural poor accounted in 2007 for only 27% of the total poor population. Yet, as the shown by the dramatic events of Sidi Bouzid, where the 2011 revolution started, rural poverty remains a major problem. Sidi Bouzid is a town of some 50,000 inhabitants located in the interior of the country, in a region where the economy depends heavily on agriculture

In Turkey the situation is less dramatic. In 2009, about 25% of the total population lives in rural areas (defined as settlements with less than 20,000 inhabitants) and about 63% of the rural labor force is employed in agriculture. The main problems facing rural areas have been summarized as follows: a poorly educated and unskilled workforce; an ineffective institutional structure and a lack of efficient farmer organizations; a scattered pattern of settlement in some regions; an insufficient development and maintenance of physical, social and cultural infrastructure; a high rate of dependence on subsistence agriculture; inadequate diversification of agricultural and non-agricultural income-generating activities; a high rate of hidden unemployment and low income levels; increasing migration; and the ageing character of the rural population. In short, the situation in Turkey is less severe than in the other three countries but the nature of rural poverty problems is strikingly similar in all countries.

The challenge for public policies is how to face that complexity. Among poverty alleviation policies, prime place has been given to food policies in many countries, notably in Algeria, Egypt, Morocco and Tunisia. The dilemma faced by public authorities for decades has been striking. The budget share of food is very high among the poor. Thus, keeping the price of food as low as possible is an effective way to protect the poor. But in North Africa, many farmers are also poor and their welfare is negatively affected by low prices for the products they sell. Hence, in many countries of the region, public authorities have put in place a complex system of market interventions, setting a wedge between producer and consumer prices. Specific measures have varied through time and from country to country; they have generally included border interventions (e.g. import taxes and physical import controls, or, mostly in the past, public monopolies) and subsidies of various sorts. The difference between producer and consumer prices has mainly been born by the public budget. Admittedly, many of these public interventions have been relaxed during the process of domestic liberalization in the 1980s and 90s. But this liberalization has only been very partial and the cereal markets, in particular, remain heavily regulated. As a result, public budget costs have escalated and they will continue to do so in the future if the policy mix is not radically changed. One can seriously doubt that such levels of public expenditures can be sustainable in the long term.

This illustrates one of the thorniest interactions among policy challenges faced by countries in the region: What is the most appropriate market intervention, given the import dependency discussed above? And what is the best rural poverty alleviation policy, given the major role given to market interventions in this domain? The link between these two challenges is critical because agriculture remains the main source of income for many rural poor. This is true even in cases where many of them have no, or only limited, access to land and water. Access to these two key inputs for agricultural production has been a source of major problems in all the countries under study. This illustrates a close link between the challenges discussed above and those related to the management of the natural resources which agriculture and other rural activities depend on, the topic of the next section.

3. Deteriorating Natural Resources

Soil, water and biodiversity, the main natural resources of interest here, are under threat in many parts of the world. The pressures are particularly acute in the Southern and Eastern Mediterranean region for a variety of reasons. In addition, these pressures will only increase with global warming. Great challenges result for the countries of the region. We will first briefly review here the threats to each one of these resources.

Soil erosion seems to be rapidly increasing in many dry and remote regions because the poor rural population cannot afford the investments which would be necessary for prudent sustainable management of the resource. Short-term pressures resulting from poverty and demographic growth lead to over-consumption (cultivating marginal lands, overgrazing, excessive collection of fuel wood). Besides, uncertain land tenure, poor literacy, and limited access to credit constitute additional obstacles to long-term investments. In more well-endowed regions, particularly in the plains, soils are more fertile and often irrigated. Several types of degradation can however be observed: soil salinization in some places, pollution by excessive use, or inappropriate application, of pesticides and chemical fertilizers. But there, the greatest threat to agricultural soils is urbanization - particularly diffuse in coastal areas. In spite of the magnitude of these problems, sustainable management of soils does not have in public debates and concerns the urgency which it warrants. One reason may be the difficulty of finding appropriate indicators of land degradation, which could be broadly understood by non-specialists and that could communicate the seriousness of the degradation and could thus become effective to generate policy action. This is reflected in the limited number of synthetic publications on the subject. One notable exception is a report from the Plan Bleu based on an extensive review of the literature, but dating back to 2003.^v

This report makes it clear that soil degradation takes many forms and results from a multiplicity of causes. But, as just indicated, few meaningful quantitative indicators are available. For instance, the report quotes an estimate from FAO indicating that 15% of agricultural soils are under an erosion threat in the Mediterranean region. Is this very little or very serious? Several other experiences quoted in the report invoke both intellectual humility on the solidity of past diagnoses and a sense of urgency in spite of past mistakes and failures in efforts to conserve soils. First, the multiplication of catastrophic floods in cities around the Mediterranean basin, e.g. Nîmes (1988), Genoa (1993/94), Algiers (2001), point to the urgency of coping with huge increases in runoff water volumes following the construction of buildings and roads on large tracts of land. Secondly, the example of Israel (Gradus & Lipshitz, 1996) illustrates how much fertile agricultural soils can be, and have been, diverted to other uses, particularly in the early 1990s when the country absorbed more than 600,000 migrants from the former Soviet Union in a few years. Land use planning rules were not

strong enough, or not forcefully enough implemented, to prevent an anarchic development of construction and to protect agricultural areas. Finally, the relative failure of soil conservation efforts in Algeria over several decades has been well documented (Roose et al., 1998): “Over a total of 350,000 hectares treated by the DRS (‘Defense and Restauration of Soils’), 60% were found to be degraded, 20% had disappeared and it is not clear that erosion was ever a threat on the rest of the surface, where terraces were well maintained.” This disappointing impact is attributed to a complex set of interrelated causes: started during the colonial period, the projects were not always well designed, rarely well monitored and followed up, and did not involve the participation of the local populations. These criticisms illustrate the complexity of soil conservation problems, which involve the interaction of several natural and social processes. Taking these limitations into account, new methods of intervention, more inclusive and targeting together the management of soils, water and biodiversity, have been suggested and experimented in recent years. Not enough evidence is available yet to assess their effectiveness. But one thing is sure: the complexity which these methods attempt to tackle will continue to be a major source of challenges.

Water resources are well recognized as critical in the Mediterranean region, which is often presented as a world ‘hot spot’ in this domain (*United Nations Comprehensive Assessment of the Freshwater Resources of the World*). Much has been written on the water problems in the press, in official documents from governments and various international organizations and also in the scientific literature. A brief synthesis, focusing on fundamentals, will be sufficient for our purpose here. The starting point has to be the concept of water balance, in spite of its limitations briefly discussed below. The basic idea is simple: since water is critical to life, will there be enough water resources to cover water needs? And under what conditions? This indicator reveals for instance the magnitude of one of the water management challenges faced by SEMCs: in 2009, 108 million people in the region were in a situation of ‘water stress’ (less than 1,000 m³/hab/year available), 58% of whom had even less than 500m³/hab/year (a situation defined as “water scarcity”) (Blinda & Thivet, 2009). All projection works indicate that this situation can only worsen in the future. Looking first at water needs, it is clear that they will increase with demographic, urban, and economic growth. Besides, with irrigated agriculture being by far the largest user of water, much will depend on whether or not irrigated areas increase and by how much. Two additional considerations regarding water needs or water uses must be taken into account: How much can water wastes be reduced or eliminated? How much can water use efficiency be improved? Reducing wastes and improving water use efficiency are both obviously desirable because this would improve the water balance by reducing water consumption. But achieving either one is challenging because it implies significant changes in the collective behaviour of water users, including new investments, new institutional rules, and often a redistribution of benefits. This is difficult everywhere in the world.

On the supply side, there is no simple solution either. Not much can be done about increasing rainfall. Besides, all the available model simulations of the impact of global warming indicate that total rainfall will decrease in most regions of the SEMCs. Rainfall patterns will become more erratic and less evenly distributed, which will make rainfall harvesting and storage more challenging. In some parts of the region groundwater resources are relatively abundant. But many of these are not renewable and some are already overexploited, as is being done on a large scale in Libya. Several countries rely also on so-called “non-conventional” resources, such as the treatment and reuse of waste water, reflecting the high degree of water stress in the region. Generally speaking, it is the poorest people, in rural areas and also in urban ones,

who suffer most from water scarcity. In several countries, the proportion of the rural population without access to drinking water is high by international standards.

What is the public policy agenda resulting from this difficult water situation? Interesting answers to this question can be derived from a comprehensive assessment of water resource availability and use in the region, conducted by the Plan Bleu in 2005 (Benoît et al., 2005). Two scenarios were considered: According to the first one, based on the extension of past trends, water use would increase significantly by 2025, several countries would increase their use of fossil, non-renewable resources and more than 80 million people would find themselves in a situation of ‘water scarcity’, compared to 63 million in 2005. The second scenario, based on reducing wastes by 50% and increasing water use efficiency in agriculture (to 80%) would radically change the water balance situation. In other words, public policies must target water demand. This does not mean that the supply side should be given up: increasing water storage capacity remains desirable but much more can be gained on the demand side.

But that, of course, is extremely challenging. Reducing waste and increasing water use efficiency would require major changes in behaviour by a variety of water users. Social constraints of various sorts must be overcome. But the most important obstacle to the necessary changes in behaviour is probably the social and political reluctance to resort to economic policy instruments. Water being scarce, the obvious economic tool to use is to raise the price of water paid by its users, be it for irrigation purposes or for domestic use. But the social, cultural, religious, ethical, and ultimately political obstacles to do so are overwhelming, particularly in this region. For instance, charging poor people, with a price reflecting costs, for urban water services, or farmers, for irrigation water, is socially and politically very difficult. In addition, the social and political obstacles to overcome, when deciding to build new dams, particularly ‘large dams,’ are also huge. As a result, the sustainable management of water resources has been, and will continue to be, extremely challenging. This challenge will be compounded in years to come by new uncertainties and complexities. Returning to the concept of water balance will help us to illustrate these uncertainties and complexities. Water balance assumes both a space and time scale, e.g. how much water is available and how much is consumed^{vi} in a given space (be it a country, a region, a watershed, etc.) during a given period (say one year, one season, etc.). But most water management decisions (e.g. building a dam, deciding what prices to charge for water uses, choosing a pattern of devolution of maintenance responsibilities to water users, etc.) involve combining several space and time scales. These combinations are always complex in real situations. As a result, to the uncertainties regarding how much water is available at a given place during a given time period, uncertainties which will increase with climate change, must be added the uncertainties associated with complex social processes involving many actors: Who is going to do what? Where? And when?

Biodiversity is also under threat in the region. The threat is serious because, in the words of the Critical Ecosystem Partnership Fund (CEPF), a prestigious coalition of actors at the world level: “The Mediterranean Basin Hotspot is one of the most extraordinary places on Earth and is remarkable for both its high level of biological diversity and its spectacular scenery. Approximately 13,000 of its 30,000 plant species are endemic, or unique, to the hotspot, and many more are being discovered every year” (CEPF, 2010). Similarly, Médail & Quézel (1997) pointed out that “about 10% of the known higher plant species were found in the Mediterranean region on a surface only equal to 1.6% of the world total land area.” There is a surprisingly wide and strong consensus on both the causes behind the threats and on what

should be done to protect and conserve biodiversity. Population growth and the strong pressures exerted by tourism, which is massive and still growing, particularly in coastal areas, are seen as the main culprits, straining the limited resources, particularly water, leading to overexploitation, and degradation, even destroying natural habitats. Here again, it is expected that climate change will exacerbate these negative pressures. Thus, the link with the degradation of other natural resources is strong. The same is true for the solutions which are proposed. Thus, the first two strategic directions of the CEPF are formulated as follows:

- To promote civil society involvement in integrated coastal zone management
- To establish the sustainable management of water catchments and the wise use of water resources

For the IUCN, protecting species and protecting ecological sites requires “the integrated management of the environment (ecosystemic approach)” as well as major “communication and training” efforts.^{vii} In other words, the challenges faced to conserve biodiversity are very similar to those resulting from the imperative obligation to sustainably manage soil and water.

4. Worrisome Demographic Trends

All the challenges identified above, regarding national food security in a situation of growing import dependency, stubborn rural poverty, and degradation of natural resources, are compounded by very worrisome demographic trends. Indeed, in spite of the demographic transition, in which several SEMCs are definitely engaged, total population continues to increase, many young people begin to enter the labour market, creating a huge gap between national labour demand and supply, and - most importantly for our purpose - the total rural population continues to increase in most of the region. We will briefly review these trends before drawing implications for agricultural and rural development policies.

All the demographic parameters of importance for agriculture and rural development were reviewed in *Mediterra 2008*, the tenth annual report of CIHEAM, devoted to a prospective exercise on food and agriculture in the region.^{viii} Although conducted several years ago, the analysis remains valid and relevant. The following paragraphs are directly drawn from that report. In 2005, the total population of the Mediterranean Basin reached 454 million, i.e. 7.0% of world population, well on track to a doubling in 50 years (1970-2020). But most of the recent growth took place on the Southern and Eastern shores of the Basin. And this trend is expected to continue in the foreseeable future. Between 1990 and 2020, the population is expected to increase by 14 million inhabitants in the North and by 130 million in the South and the East. Another mega-trend is urbanization. Between 1970 and 2005, total urban population doubled; between 1990 and 2020, urban population in the South and East is expected to increase from 108 to 214 million people, i.e. a rate of growth placing the Maghreb countries (i.e. North Africa) on top of all regions in the world on this score. Yet, rural population continues to increase, even if its share in total population declines. And this, of course, has major implications for agriculture: What are the employment perspectives? And, given the particular conditions of access to land and water resources, for what level of income?

Yet the demographic transition, primarily based on lower infant mortality and lower birth rates, is well engaged in several countries. For instance, in Egypt and Morocco, two countries where poverty remains a tremendous challenge, infant mortality rates are expected to decrease by two thirds between 1990 and 2020. Life expectancy is also increasing and is expected to reach 75 years in all SEMCs. Fertility rates have begun to decline, particularly in the Maghreb

countries where the number of children per woman is near 2.1, whereas it is still much higher in Egypt, Syria and Israel. Another striking feature of this demographic transition in SEMCs is that it is taking place very quickly, portending major shifts in the age composition of the population. Yet, because of the strong demographic growth in recent years, the population of the working age has increased very rapidly and job creation linked to economic growth has not kept pace with demographic growth. This trend will continue in the coming decades. Thus, it is estimated that the number of net entries into the labour market in the Arab Mediterranean countries between 1995 and 2025 will be between 80 and 85 million, i.e. a huge increase in the supply of labour.

As already indicated, these demographic trends and perspectives have major implications for agriculture and rural development. Contrary to what happened in Europe and other developed countries during the past century, the modernization of agriculture cannot be driven in SEMCs by a rapid decline in agricultural employment and a massive substitution of capital for labour, with the size of farms increasing. In this region, the number of hectares per agricultural worker, already very small, will continue to decrease, which will make any increase in the average productivity of labour very difficult and will dampen the possibility of improved agricultural income per person working in agriculture. Hence, it will be important to diversify the sources of income for rural households, thereby increasing the urgency of non-agricultural job creation in rural areas, a great challenge indeed, given what was just said about the huge increase in the total supply of labour in the whole economy.

5. Erosion of the Mediterranean Diet

The Mediterranean diet is famous worldwide, particularly since it was celebrated by Ancel Keys and his wife Margaret (Keys, 1975). It is often viewed as a model of excellent nutrition to be copied or emulated. Giving prime place to cereals, vegetables, olive oil and fermented milk, and supplemented by small quantities of meat and red wine, this century-old diet turns out to be respecting the most important recommendations of modern medicine, concerned with the excesses, in terms of calories and fat content, found responsible for the obesity epidemics with all their deleterious public health consequences: diabetes, heart disease, etc.^{ix} Indeed, this ideal diet corresponds more or less to the traditional food habits in many SEMCs. As such, it is both an asset for SEMCs and a source of opportunities^x. But the situation is not so rosy, as nostalgia would suggest from past patterns.

Food habits are changing in the Mediterranean region as elsewhere in the world. With rising income, people consume fewer cereals and more and more livestock products, which contributes to the deterioration of the nutritious quality of their diets. This change seems to be happening everywhere, including in the SEMCs. Palma and Padilla (2012) provide a thorough analysis of these changes, focusing on the Mediterranean diet and comparing Mediterranean countries with a set of other countries in the world, including notably the USA, Japan and New Zealand. They used first a Mediterranean Adequacy Index (MAI), which is based on “the ratio of Kcalories provided by so-called ‘Mediterranean’ food groups to those provided by ‘non-Mediterranean’ foods” in the average national yearly food consumption. The first category includes such products as olive oil, cereals, herbs and spices, fruit and vegetables, nuts, fish and wine, while meats, all other oils, sugar and alcoholic beverages other than wines are included in the second category. On this basis, they found notable differences among SEMCs: Lebanon has a very low MAI, while it is very high for Egypt, followed by Morocco and Algeria, Tunisia and Turkey having an average MAI. They also confirmed that, generally speaking, SEMCs are moving away from the typical Mediterranean diet.^{xi} They completed

their analysis with the use of another indicator, the Diet Quality Indicator (DQI), which is based on “scores attributed to levels of consumption of certain foods, in relation to ... WHO and USDA (healthy nutrition) recommendations”. On that basis, they found “a marked decline in food quality, especially in the Mediterranean.”

What are the implications of these worrisome trends for public policies? This question is not trivial because the fact that Egypt and Morocco score best on the MAI, while they are the two countries with the most serious rural poverty problems, suggests that this index is ambiguous. But there is no doubt however that a deterioration in the nutrition quality of the diet portends serious public health problems, associated in particular with the spread of obesity. This concern justifies enhanced attention to food safety measures and institutions (Malorgio, 2012), as well as a major education effort on healthy nutrition. In addition, the link with agricultural and rural development policies, illustrated by the motto of the Mediterranean Diet, ‘from landscape to the table’, adds another dimension to the complexity of the challenges identified above.

4- Implications for the elaboration of a research agenda

The stakes just described are serious. They call for new and sometimes radical public policies. Research, notably agricultural research, can make a significant contribution to the elaboration of these new policies as well as providing new technical solutions to some of the problems identified above. For this, a new strategic research agenda must be elaborated and agreed upon by the many stakeholders who need to be involved. These points will be addressed, at least partially, in the subsequent tasks of this Work Package 1, as well as in other Work Packages of the ARIMNET project. At this stage, we want to reflect here on the implications of the stakes identified above for the elaboration of the strategic research agenda, which is to be done by the SSAB. Two main questions will be addressed: First, how can the stakes identified above for the SEMCs be addressed in a research agenda which must be common for the whole Mediterranean region? This will lead us to the second question: what is the appropriate degree of generality for the formulation of the themes making up the research agenda?

To address the first question, reference must be made here to several attempts which have already been made in the European Union to elaborate strategic research agendas appropriate for that region in domains relevant for our purpose. Thus, “The Strategic Research Agenda of the Joint Programming Initiative on Agriculture, Food Security and Climate Change (FACCE – JPI) was released on December 5th 2012 and sets out the strategic priorities for trans-disciplinary and innovative European research on Agriculture, Food Security and Climate Change. It provides a framework for the alignment of existing programmes and joint research efforts to achieve the twin objectives of food security and combating climate change.” (Source: https://www.faccejpi.com/internet6_national_faccejpi/Strategic-Research-Agenda). Similarly, « the Joint Programming Initiative “Water Challenges for a Changing World” (the Water JPI), a Public-Public Partnership (P2P) initiative responding to the grand challenge of “Achieving Sustainable Water Systems for a Sustainable Economy in Europe and Abroad” (<http://www.waterjpi.eu/images/documents/Water%20JPI%20SRIA%200%205.pdf>) released a first version of a strategic research and innovation agenda (SRIA) on May 30, 2013. Obviously, the ARIMNET project must build on these past efforts and on-going initiatives. To what extent must those existing agendas, elaborated for the European Union, be modified to respond to the stakes identified above for the SEMCs?

To answer this question, an examination of the FACCE agenda will be useful. That agenda is organized in five “core themes” (“Food security under climate change; Sustainable intensification of agriculture; Assessing trade-offs between food supply, biodiversity and ecosystem services; Adaptation to climate change; and Mitigation of climate change”) and eight major “research issues” (“ Scenarios of global change & adaptive strategies; Food systems and food security; Land use & sustainable management of biodiversity and natural resources; Crops: production, health and breeding; Livestock: production, health and breeding; GHG mitigation and C sequestration by agriculture; Bioenergy and biofuels; Forestry as related to agriculture and food security”). Obviously, as all these themes and issues, as formulated in these general terms, are relevant to the challenges faced by the SEMCs. But are they specific enough to guide the selection of research priorities? Admittedly the FACCE research agenda identified more specific research needs. For instance,

“Assessment of this core theme (‘adaptation to climate change’) through mapping highlighted the following research needs:

- Animal health. This should address the effects of climate change and the associated risks for animal health (including existing and emerging diseases).
Dealing with increased risks will be dependent on mankind’s efforts to adapt livestock systems, both in confined and pasture systems (the former also affected by climate change). Issues such as animal breeding for robustness, e.g. adaptation to heat and other extreme conditions, as well as breeding of fodder plants for better nutrient composition and higher production, also under abiotic stress conditions, should be taken into consideration. Changes in animal production may affect the release of greenhouse gases and therefore interact with mitigation efforts.”
- Crop research. Strengthening of the following aspects is crucial: development of strategies on climate change adaptation for different kinds of crop production systems, from a comprehensive point of view; integrated and sustainable use of modern agronomy; plant breeding for adaptation; fertilisation; water, plant and disease management in relation with technological facilities; study of soil; development and improvement of science-based and environmentally friendly risk assessment-prevention-management systems and measures for climate change-driven pests on plants such as Integrated Pest Management (IPM); adaptation measures for future climate change in different regions, focusing on crop production and yields in relation with food security and optimised mitigation strategies”.

Here again, the formulation is general enough to appear relevant to the situations in the SEMCs. But is this satisfactory? Indeed, this leads us to the second question mentioned above on the appropriate degree of specification of the research issues making up a strategic research agenda?

A comparison between the FACCE initiative just discussed and the PARME exercise mentioned in the first section of this note will be useful to consider this question. First, one should remember that PARME is the result of a prospective study for the Mediterranean region as a whole, encompassing all sectors, and aiming at identifying research themes that the experts who were consulted consider as “essential to tackle” in order to face up to the challenges identified in the critical review of past prospective studies. Thus, the idea of a strategic research agenda, which is central in the FACCE and similar initiatives, is not explicit in the PARME exercise but both attempted to identify research needs. Comparing the research

needs identified by these two exercises is not easy on several counts. Focussing on the section on adaptation to climate change of the FACCE study discussed above, it can be compared to the section entitled ‘Adaptation of agricultural production systems to global changes’ of the PARME study. The latter is slightly longer than the former and thus can be expected to be more detailed but, more strikingly, the structure of the two texts differ greatly, as illustrated by the titles of the subsection in the PARME study (“Conception of innovative crop and livestock systems based on the concepts of agro-ecology; water management in crop systems; taking advantage of Mediterranean biodiversity; Impact of global changes on the propagation of pathogens and their vectors; Innovation transfer). These formulations are quite different from those of the research needs mentioned above for the corresponding section of the FACCE study. Reconciling the two exercises will not be an easy task. It may not be absolutely necessary but, in any case, the SSAB will have to decide what degree of specification of the research needs is appropriate for the ARIMNET project.

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FOOTNOTES

- i This grouping of countries refers to countries belonging to the Mediterranean geographic area, characterized mainly by its climate and flora, located on the Southern and Eastern shores of the Mediterranean sea. It is made up of nine so-called Mediterranean Arab countries (MACs: Morocco, Algeria, Tunisia, Libya, Egypt, Palestine territories, Jordan, Lebanon and Syria), plus Israel and Turkey. Situations vary much among these countries, which limits the validity of any general statement; yet, there are common elements and they all face more or less similar challenges.
- ii Cheriet F. (2013). *Prospectives céréalières en Méditerranée : scénarios à l’horizon 2030*. *Economie rurale*, 01/05/2013, n. 335, p. 53-67.
Abis S. (2012). *Pour le futur de la Méditerranée : l’agriculture*. Paris (France): L’Harmattan. 150 p. (Bibliothèque de l’IREMMO).
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- iii Paillard S., Treyer S., Dorin B. (2010). *Agrimonde : scénarios et défis pour nourrir le monde en 2050*. Versailles (France): Editions Quae. 295 p. (Matière à décider).
- iv For the sake of comparison, this 5.5% figure should be compared to the share of world population in the SEMCs, which is about 4%.
- v De Franchis L., Ibanez F. (carto.), Benoit G. (dir.). (2003). *Les menaces sur les sols dans les pays méditerranéens : étude bibliographique*. Sophia Antipolis (France): Plan Bleu. 70 p. (Les Cahiers du Plan Bleu; n. 2). http://planbleu.org/sites/default/files/publications/cahiers2_sols_fr.pdf
It is worth noting that in our literature search, we did not find anything comparable that was published more recently.
- vi A further complication must be acknowledged here. The concept of consumption may not be fully adequate for water, since water use, be it by the human body or by domestic animals or by crops, does not really destroy the water, which is returned to the atmosphere or to the soils or to water streams after use. But it remains that managing the resource for subsequent use most often requires new human efforts and investments. As a result, reasoning in terms of consumption and of demand is appropriate in many instances.
- vii Cuttelod A., García N., Abdul Malak D., Temple H., Katariya V. (2008). *The Mediterranean: a biodiversity hotspot under threat*. Gland (Suisse): IUCN. 14 p.
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<http://www.ciheam.org/index.php/fr/publications/mediterr-le-rapport-officiel-du-ciheam/mediterr-2008>
- ix The significance of this recognition was illustrated by the fact that the Mediterranean diet was inscribed by UNESCO [on the “Representative List of the Intangible Cultural Heritage of Humanity”](#). Quoting UNESCO: “The Mediterranean diet constitutes a set of skills, knowledge, practices and traditions ranging from the landscape to the table, including the crops, harvesting, fishing, conservation, processing, preparation and, particularly, consumption of food. The Mediterranean diet is characterized by a nutritional model that has remained constant over time and space, consisting mainly of olive oil, cereals, fresh or dried fruit and vegetables, a moderate amount of fish, dairy and meat, and many condiments and spices, all accompanied by wine or infusions, always respecting the beliefs of each community.”
- x For a detailed analysis, see Mombiela F. (dir.), Abis S. (dir.), CIHEAM. (2012). *Mediterra 2012: the Mediterranean diet for sustainable regional development*. Paris (France): Presses de Sciences Po. 500 p. (Mediterra). <http://www.ciheam.org/index.php/en/publications/mediterr-2012>
- xi Note that this deterioration is also accelerated by the development of large retail stores which tend to be more interested in mass production of food.

APPENDICES

PARME, summary sheets of prospective studies

1. Agriculture and food

Dominant trends

An increasingly marked social dualism in agriculture

Agro-ecosystems in an increasing state of disrepair

An increasingly marked dependence on imports of agricultural products

Main controversies and uncertainties

These relate to:

- Nano-microelectronic, biotechnological and network technological progress in light of agricultural and food issues;
- The role of agro-fuels: which policy with regard to agro-fuels in relation to other energies in the global context and towards which use of these agro-fuels (increase or decline?);
- The acceptance of GMOs by the civil societies (production and consumption);
- The impact of new information and communication technologies: towards familiarity with networks and pooled knowledge or towards a population with less and less knowledge of these issues?

The place of agriculture on the international agenda

- What regulation on the agricultural markets and development of strategic food reserve stocks and what format for international cooperation?
- What impacts of the liberalisation of national markets and Euro-Mediterranean trade and what consequences for agriculture?
- What spatial dynamics between an urban coastal strip linked directly to globalisation and rural zones, in particular with regard to issues of survival agriculture?
- What place for agriculture in the NMCs and the SEMCs and what is the related social image?
- What developments in the value chains and the organisation of distribution circuits?
- What structural and economic changes, at what speed and to what extent?
- What policies for installing large-scale distribution in the SEMCs and impacts of free-trade agreements (what change concerning the supply practices and what impact on the agricultural value chains and the producers?)

Possible sticking points:

- Price volatility on the world markets
- Disintegration of the informal sector and the traditional craft sector
- A far-reaching water crisis
- A rapid exacerbation of the effects of climate change
- An acceleration in the loss of biodiversity causing disturbances to and a malfunction of the ecosystems
- Increased probability of health crises occurring
- Risks of SEMCs losing ground in relation to other zones around the world in terms of agricultural education and quality of research.

Bibliographie sur la situation et la prospective agricoles en Méditerranée et focus sur quelques pays de la région

Sommaire

- Publications du CIHEAM
- Prospective méditerranéenne
- Situation actuelle
- Changement climatique
- Emploi et genre
- Gaspillage alimentaire
- Focus sur quelques pays (Algérie, Maroc, Egypte, Chypre, Malte, Turquie)

PUBLICATIONS DU CIHEAM

Abis S. 2012. *Commerce agricole euro-méditerranéen : déséquilibre des échanges et différenciation des relations*. Paris: CIHEAM. 10 p. (Notes d'Alerte du CIHEAM; n. 81).

<http://www.ciheam.org/images/CIHEAM/PDFs/Observatoire/NAL/nal81.pdf>.

L'Union européenne (UE) a connu de très bons résultats en 2011 pour son commerce agricole, enregistrant un surplus de 7 milliards d'euros environ. Au niveau mondial, UE et Etats-Unis font désormais jeu égal en termes d'exportations agricoles, avec 105 milliards d'euros (soit 7% des exportations totales de l'UE), alors que le Brésil avec 59 milliards, la Chine avec 31 milliards et l'Argentine avec 30 milliards complètent le classement des 5 plus grandes puissances exportatrices agricoles de la planète. L'UE reste parallèlement le premier importateur mondial de denrées agricoles avec près de 98 milliards d'euros en 2011 (soit 6% des importations totales de l'UE), devant les Etats-Unis (74 milliards), la Chine (63 milliards), le Japon (48 milliards) et la Russie (27 milliards). Parmi les partenaires commerciaux de l'UE, les Etats-Unis avec 14%, la Russie avec 10% et la Chine/Hong-Kong avec 9% sont les trois destinations privilégiées des exportations agricoles. Quelles sont donc les dernières tendances pour le commerce agricole au niveau euro-méditerranéen au moment où les relations politiques dans cet espace se recomposent ?

Abis S., Tamlilti F. 2011. *Les dynamiques agricoles euro-méditerranéennes*. Paris: CIHEAM. 17 p. (Notes d'Analyse du CIHEAM; n. 63).

<http://www.ciheam.org/images/CIHEAM/PDFs/Observatoire/NAN/nan63.pdf>.

L'objectif de cette note est de livrer un état des lieux synthétique des relations agricoles entre l'Union européenne (UE) et les dix pays partenaires méditerranéens (PPM), en revenant dans un premier temps sur le contexte régional, puis en présentant la situation des accords de libre-échange et enfin en proposant quelques données générales sur le commerce agricole euro-méditerranéen.

Bessaoud O. 2012. *La souveraineté alimentaire méditerranéenne, une utopie ?* Paris: CIHEAM. 6 p. (Notes d'Alerte du CIHEAM; n. 87).

<http://www.ciheam.org/images/CIHEAM/PDFs/Observatoire/NAL/nal87.pdf>.

Jadis grenier à céréales de la Méditerranée, le Sud et l'Est du bassin sont en situation de dépendance chronique avec le risque d'instabilité que cela comporte dans un contexte de hausse des prix alimentaires. Dès lors, se pose la question des marges de manœuvres qui s'offrent aux PSEM,

notamment en matière de ressources, mais également en termes de politiques agricoles. Ces marges sont en fait très limitées et appellent la mise en place d'un nouveau cadre politique régional.

Brun M. 2012. *Les subventions alimentaires, enjeux et perspectives dans le monde arabe*. Paris: CIHEAM. 21 p. (Notes d'Analyse du CIHEAM; n. 67).
<http://www.ciheam.org/images/CIHEAM/PDFs/Observatoire/NAN/nan67.pdf>.

CIHEAM. 2014. *10ème Réunion des Ministres de l'Agriculture des Etats Membres du CIHEAM. La sécurité alimentaire durable en Méditerranée : quelle situation et quelles perspectives ?* Alger: Ministère de l'Agriculture et du Développement rural.
<http://www.ciheam.org/images/CIHEAM/PDFs/AlaUne/10rmc%20keynote.pdf>.

CIHEAM, Lacirignola C., Abis S., Blanc P. (eds). 2014. *Mediterra 2014 : Logistique et commerce agro-alimentaires. Un défi pour la Méditerranée*. Paris: Presses de Sciences Po. 556 p. (Mediterra; n. 14).
<http://www.ciheam.org/index.php/fr/publications/mediterrra-2014>.

Dans un contexte de mondialisation et d'une Méditerranée en plein bouleversement sociopolitique, le développement du commerce agricole méditerranéen est de plus en plus déterminé par les capacités des pays à se doter d'infrastructures modernes pour fluidifier les échanges, faciliter la circulation des marchandises et garantir une meilleure sécurité alimentaire. Articulé autour des évolutions économiques du commerce agricole méditerranéen (flux avec l'Europe, les États-Unis, le Brésil, l'Asie, l'Afrique subsaharienne), des défis logistiques qui se posent pour l'échange des produits stratégiques (céréales, fruits et légumes, viandes, huile d'olive, poissons, etc.) et de l'état des infrastructures qui conditionnent le commerce (ports, corridors, platesformes multimodales, chaîne du froid, etc.), *Mediterra 2014* traite également des questions liées à la durabilité, à l'équilibre territorial et à la stratégie des acteurs des politiques publiques (importance croissante du cadre normatif, lutte contre le gaspillage alimentaire ou encore rôle des collectivités locales). Recueil d'expertises mutualisées et outil d'aide à la décision *Mediterra* fait intervenir plus de 70 experts internationaux avec l'objectif de fournir aux décideurs politiques, aux professionnels et aux chercheurs les clés de lecture et les indicateurs stratégiques essentiels sur la région méditerranéenne.

CIHEAM. 2013. *Réforme de la PAC et enjeux méditerranéens*. Paris: CIHEAM. 72 p. (Watch letter; n. 27). <http://www.ciheam.org/images/CIHEAM/PDFs/Publications/LV/WL27.pdf>.

CIHEAM. 2013. *Rural development in the Mediterranean countries*. Paris: CIHEAM. 40 p. (Watch letter; n. 24). <http://www.ciheam.org/images/CIHEAM/PDFs/Publications/LV/wl24.pdf>.

CIHEAM. 2012. *Actes de la 9ème réunion des ministres de l'agriculture, de l'alimentation et de la pêche des pays membres du CIHEAM. Proceeding of the 9th meeting of the ministers of agriculture, food and fisheries of CIHEAM's member countries*. La Valette (Malte): CIHEAM-IAMB.
<http://www.ciheam.org/images/CIHEAM/PDFs/Cooperation/9rmc-actes.pdf>.
Thème fondamental à l'ordre du jour : effet du changement climatique sur la sécurité et la sûreté alimentaires dans la région méditerranéenne et mesure à prendre

CIHEAM, Mombiela F., Abis S. (eds). 2012. *Mediterra 2012 : la diète méditerranéenne pour un développement régional durable*. Paris: Presses de Sciences Po. 526 p. (Mediterra; n. 13).
<http://www.ciheam.org/index.php/fr/publications/mediterrra-2012>.
L'édition 2012 de *Mediterra* fonde sa réflexion sur le potentiel mobilisateur de la diète méditerranéenne en proposant un itinéraire multidimensionnel qui fait appel à l'histoire, à la sociodémographie, à la santé, à l'écologie, à l'entreprise, à la géoéconomie et à l'initiative citoyenne. Aspirés par les dynamiques de l'urbanisation et de la mondialisation des échanges agricoles, les

consommateurs du pourtour méditerranéen ont progressivement modifié leurs pratiques alimentaires. Socle identitaire et richesse de cet espace, la diète méditerranéenne y est pourtant de moins en moins observée. Les tensions sur les ressources naturelles et l'émergence de nouveaux acteurs privés catalysent la complexité des enjeux liés aux régimes alimentaires. Alors qu'elle fait l'objet de nombreux débats et recherches sur le plan socioculturel et scientifique, la diète méditerranéenne mérite d'être reconsidérée sur le terrain politique à l'heure où l'on constate de nouveau la dimension stratégique de l'agriculture et le rôle central de l'alimentation pour la stabilité et le développement des sociétés. Reconnue pour ses vertus sanitaires, inscrite au patrimoine culturel immatériel de l'humanité, la diète méditerranéenne interroge désormais les champs de la responsabilité environnementale et de l'action politique en faveur d'une plus grande coopération régionale.

CIHEAM. 2012. *Cereal Issues in the Mediterranean*. Paris: CIHEAM. 46 p. (Watch letter; n. 23).
<http://www.ciheam.org/images/CIHEAM/PDFs/Publications/LV/lv23.pdf>.

CIHEAM, Hervieu B., Thibault H.-L., Abis S. (eds). 2009. *Mediterra 2009 : repenser le développement rural en Méditerranée*. Paris: Presses de Sciences Po. 387 p. (Mediterra; n. 11).
<http://www.ciheam.org/index.php/fr/publications/mediterrra-le-rapport-officiel-du-ciheam/mediterrra-2009>.

Mediterra 2009, intitulé « Repenser le développement rural en Méditerranée », est le fruit d'une coopération entre le CIHEAM et le Plan Bleu. Comme de nombreuses régions du monde, la Méditerranée prend progressivement conscience que son avenir passe aussi par le développement de ses agricultures et de ses territoires ruraux. Changement climatique, gestion responsable des ressources hydriques, dynamiques foncières, diversification économique, tels sont les défis pour la durabilité et la compétitivité des agricultures méditerranéennes. Le onzième rapport annuel du CIHEAM fait ici le bilan des mises en œuvre agricoles et rurales de la Stratégie Méditerranéenne de Développement Durable (SMDD) et apporte un regard neuf sur les politiques déployées en milieu rural. Recueil d'expertises mutualisées et outil d'aide à la décision, Mediterra 2009 a pour objectif de fournir aux acteurs, aux professionnels et aux chercheurs du monde euroméditerranéen les clés de lecture et les indicateurs stratégiques essentiels sur le développement agricole et rural.

CIHEAM, Hervieu B. (eds). 2008. *Mediterra 2008 : les futurs agricoles et alimentaires en Méditerranée*. Paris: Presses de Sciences Po. 368 p. (Mediterra; n. 10).
<http://www.ciheam.org/index.php/fr/publications/mediterrra-le-rapport-officiel-du-ciheam/mediterrra-2008>.

Dans un contexte marqué par le retour de la question agricole au cœur de l'actualité internationale, Mediterra 2008 propose un dossier prospectif sur les futurs agricoles et alimentaires en Méditerranée, et s'invite dans le débat sur les politiques de coopération au sein du Bassin méditerranéen. Mediterra 2008 souligne le rôle stratégique et la dimension multisectorielle de l'agriculture en Méditerranée, à travers un diagnostic des dynamiques à l'œuvre et l'identification de chantiers prioritaires dans la région, pour y construire l'avenir. Fort de ces analyses pluridisciplinaires, l'ouvrage propose quatre scénarios globaux à l'horizon 2020. Il offre ainsi une base de discussion et d'aide à la décision, et plaide pour l'émergence d'une solidarité agricole et environnementale à l'échelle euro-méditerranéenne

Petit M. 2013. *Après le « printemps arabe » : pour de nouvelles politiques alimentaires, agricoles et rurales en Afrique du Nord*. Paris: CIHEAM. 6 p. (Notes d'Alerte du CIHEAM; n. 91).
<http://www.ciheam.org/images/CIHEAM/PDFs/Observatoire/NAL/nal91.pdf>.

L'actualité quotidienne nous rappelle en permanence que la situation économique, sociale et politique en Egypte et dans les pays du Maghreb demeure très fragile. L'avenir est lourd d'incertitudes. Les événements du « printemps arabe » et leurs suites, qui se déroulent actuellement,

ont de multiples dimensions et soulèvent de nombreuses questions. Pour ceux qui s'intéressent à l'agriculture, dans toutes ses dimensions, il ne fait pas de doute que ces événements ont confirmé l'existence de graves problèmes, notamment en matière de pauvreté rurale, que l'on avait tendance à oublier ou à ignorer au cours des années récentes. Ce ne sera plus possible à l'avenir.

Petit M., El Hadad-Gauthier F. 2013. *La nouvelle PAC a-t-elle oublié la Méditerranée ?* In: CIHEAM (ed.) *European Common Agricultural Policy (CAP) Reform and the Mediterranean Challenges*. Paris: CIHEAM. p. 58-62. (Lettre de Veille du CIHEAM; n. 27).

<http://www.ciheam.org/images/CIHEAM/PDFs/Publications/LV/WL27.pdf>.

Depuis de nombreuses années, la libéralisation des échanges a été mise au cœur des discussions et des négociations visant à une plus grande intégration de l'espace euro-méditerranéen. Ce fut le cas notamment en 1995 lors du lancement du processus dit de Barcelone. L'objectif très ambitieux de créer une zone de « prospérité partagée » devait être réalisé grâce à la création d'une zone de libre-échange euroméditerranéenne (ZLEEM) en 2010. On en est encore loin en cette fin 2013. Il est vrai que nul ne songea alors à souligner que des obstacles politiques considérables, notamment une frontière interdisant tout échange légal entre l'Algérie et le Maroc, devraient être surmontés pour réussir une telle démarche !

PROSPECTIVE MEDITERRANEENNE

Abis S. 2012. *L'espace méditerranéen dans la réflexion sur la géostratégie des questions agricoles*. La dimension stratégique de l'agriculture Colloque. Paris. 2011/11/07. http://www.fondation-res-publica.org/La-dimension-strategique-de-l-agriculture_r89.html.

Abis S. 2012. *Pour le futur de la Méditerranée : l'agriculture*. Paris: L'Harmattan. 150 p. (Bibliothèque de l'IREMMO; n. 4). <http://www.harmatheque.com/ebook/9782336002217>.

Au moment où se renforce la dimension stratégique des questions agricoles et alimentaires dans le monde, n'est-il pas urgent de réexaminer les relations internationales à l'aune des besoins les plus élémentaires ? Tout comme d'autres matières premières, les produits alimentaires sont fondamentaux à l'équilibre et à la stabilité des Nations. Cette réalité va-t-elle s'imposer dans l'agenda de la coopération entre l'Europe et les pays méditerranéens ? Que veut faire la France face à de telles perspectives ? Ce livre propose de suivre un itinéraire particulier pour explorer la complexité des enjeux géopolitiques en Méditerranée. C'est l'une des principales routes où se joue le futur : la sécurité alimentaire des populations et le développement de l'agriculture.

Abis S., Blanc P. 2012. Agriculture et géopolitique au XXI^e siècle : rivalités, stratégies, pouvoirs. In: Abis S. (dir.), Blanc P. (dir.) (eds). *Agriculture et alimentation. Des champs géopolitiques de confrontation au XXI^e siècle*. Paris: Club Déméter. p. 7-51. (Cahier Demeter; n. 13).

Abis S., Blanc P., Lerin F., Mezouaghi M. (eds). 2009. *Perspectives des politiques agricoles en Afrique du Nord*. Paris: CIHEAM. 238 p. (Options Méditerranéennes : Série B. Etudes et Recherches; n. 64). http://ressources.ciheam.org/util/search/detail_numero.php?mot=567&langue=fr.

Adler A., Dollé V., Lambert C., Bru M. (animateur), Masbou O. (animateur). 2011. *Conférence d'ouverture : quel avenir pour l'union pour la Méditerranée? [Table ronde]*. MEDFEL 2011. Perpignan (France). 2011/05/04-06. Vidéo de la table ronde du mercredi 4 mai 2011. <http://www.medfel.com/fr/presentation/conferences-animations/58>.

Depuis sa création, l'Union pour la Méditerranée rencontre des difficultés. Si l'agriculture ne fait pas partie des six priorités de l'UPM, elle en constitue un des éléments les plus concrets, notamment du point de vue des relations commerciales. Cette conférence nous permettra de faire un point

d'actualité sur la construction politique de l'euro-méditerranée ; de souligner l'importance des accords de libre-échange entre l'UE et les pays de la rive sud (Maroc, Turquie, etc,...). Ces questions seront mises en regard de la préparation de la Pac 2013 et du maintien ou non d'une OCM Fruits & Légumes.

Alexandratos N., Bruinsma J. 2012. *World agriculture towards 2030/2050: the 2012 revision*. Rome: FAO. 154 p. (ESA Working paper; n. 12-03).
http://www.fao.org/fileadmin/templates/esa/Global_perspectives/world_ag_2030_50_2012_rev.pdf.

Belghazi S. 2013. *Scénarios pour le secteur agricole dans le Sud et l'Est de la Méditerranée*. (MEDPRO Report No. 4). http://www.medpro-foresight.eu/fr/system/files/MEDPRO%20Rep%20No%204%20WP5%20Belghazi_0.pdf.

Ce rapport fournit des scénarios prospectifs pour le secteur agricole de 11 pays du Sud et de l'Est de la Méditerranée: Algérie, Egypte, Israël, Jordanie, Liban, Libye, Maroc, Palestine, Syrie, Tunisie, Turquie. Dans un premier temps, le rapport évalue les tendances dans la performance du secteur agricole de ces pays en se focalisant sur la production, la consommation et les tendances commerciales, les incitations, la protection commerciale, les relations avec l'UE, et enfin, les dynamiques de productivité et leurs déterminants. Dans un deuxième temps, le rapport élabore quatre scénarios prospectifs pour les principales chaînes de valeur du secteur agricole des pays du Sud et de l'Est de la Méditerranée : produits animaliers, fruits et légumes, sucre, huiles comestibles, céréales, poisson et autres produits de la mer. Les quatre scénarios sont: « business as usual » ; Union UE-Med ; Alliance UE-Med et menaces.

Bessaoud O. 2011. Les politiques publiques de modernisation agricole au Maghreb, enjeux et défis pour le futur. In: Dahou T., Elloumi M., Molle F. et al. (eds). *Pouvoirs, sociétés et nature au sud de la Méditerranée*. Paris: Khartala. p. 83-108.

Bourgeois L., Cheriet F., Rastoin J.-L., Movahedi N., Boualam F. (collab.). 2012. *Pour une politique agricole et agroalimentaire euro-méditerranéenne*. Paris: IPEMED. 86 p. (Construire la Méditerranée). Les tendances prévisibles pour les 11 pays du Sud et de l'Est de la Méditerranée (Psem) font état d'une lourde insécurité alimentaire, avec des déficits qui pourraient aller jusqu'à 50 milliards de dollars en 2030, mettant gravement en péril la santé publique et la cohésion sociale. Le rapport Ninagrimed présente un bilan des échanges agricoles et agroalimentaires méditerranéens et des investissements directs étrangers dans ces pays. Il analyse ensuite les fondamentaux de l'alimentation et de l'agriculture dans les Psem et leurs enjeux à moyen terme.

Chabane M. 2011. L'agriculture de conservation : voie de sécurité alimentaire pour les pays du Maghreb ? In: Bouzerzour H., Irekti H., Vadon B. (eds). *4èmes rencontres méditerranéennes du semis direct*. Zaragoza (Espagne): CIHEAM-IAMZ. p. 189-208. (Options Méditerranéennes : Série A. Séminaires Méditerranéens; n. 96).

Cheriet F., Mohavedi N., Rastoin F. 2011. *Les dynamiques des ressources agricoles en Méditerranée : état des lieux, recommandations et perspectives*. Paris: IPEMED. 81 p. (Construire la Méditerranée). BM-I13-CHE-2011.

Cette étude brosse, à partir d'une base de données ad hoc, un tableau sur le potentiel agricole des pays du Sud et de l'Est de la Méditerranée (Psem) et esquisse quelques perspectives d'évolution. Le diagnostic posé montre que les pressions sur les ressources naturelles vont s'accroître si des efforts importants ne sont pas faits à travers l'intégration des facteurs technologiques, organisationnels et sociaux dans les agricultures de ces pays. Il ressort aussi que les Psem accusent des retards, à divers degrés, quant à l'intégration des critères du développement durable dans leurs politiques publiques

agricoles. L'enjeu crucial des ressources naturelles se cristallisera autour de la gestion optimale et raisonnée des ressources hydriques et foncières.

Commission européenne. 2011. *EuroMed 2030. Long term challenges for the Mediterranean area : report of an expert group*. Luxembourg: Office des Publications Officielles des Communautés Européennes. 144 p. ftp://ftp.cordis.europa.eu/pub/fp7/ssh/docs/euromed2030-long-term-challenges_en.pdf.

Coudel E., Devautour H., Soulard C., Faure G., Hubert B. (eds). 2012. *Apprendre à innover dans un monde incertain. Concevoir les futurs de l'agriculture et de l'alimentation*. Versailles: Editions Quae. 233 p. (Synthèses). L'agriculture est aujourd'hui interpellée par la société, qui exige bien plus qu'une simple production alimentaire : aliments de qualité, services environnementaux, insertion de populations marginalisées, revitalisation des territoires ruraux, habitabilité des milieux urbains, développement de productions énergétiques... Cette ouverture des futurs agricoles incite les acteurs ruraux à expérimenter de nouveaux systèmes de production et valorisation, faisant ainsi preuve de créativité et d'obstination pour exister face aux modèles de développement dominants. Parallèlement, ces modèles dominants fondés sur la production de masse à moindre coût continuent à s'étendre, avec les promesses d'un futur basé sur les technologies vertes. Au-delà de l'analyse des options techniques, cet ouvrage s'intéresse aux innovations sociales et institutionnelles.

De Castro P., Adinolfi F., Capitanio F., Di Pasquale J. 2012. The future of European agricultural policy. Some reflections in the light of the proposals put forward by the EU Commission. *New Medit*, 01/06/2012, vol. 11, n. 2, p. 4-11.

Dollé V. 2011. Sécurité alimentaire et agriculture en Méditerranée. Scénario d'une crise et perspectives en 2030. Food security and agriculture in the Mediterranean. Crisis scenario and prospects for 2030. In: Jolly C. (ed.) *Demain, la Méditerranée. Scénarios et projections à 2030. Tomorrow the Mediterranean. Scenarios and projections for 2030*. Paris: IPeMed. p. 127-164 ;119-153. (Construire la Méditerranée).

http://www.ipemed.coop/adminipemed/media/fich_article/1323357980_Med2030_fr.pdf.

Dans la région méditerranéenne et dans le monde, la sécurité alimentaire est menacée par l'instabilité des prix. Un diagnostic prospectif pour la Méditerranée en 2030 permet de souligner des points communs marquants autour de la Méditerranée. Tout d'abord on observe dans les pays du pourtour méditerranéen une croissance démographique forte et marquée par une urbanisation du littoral qui pénalise le secteur productif agricole. De plus, les sociétés méditerranéennes, qui restent agricoles, sont caractérisées par un emploi rural d'une grande fragilité au sud. Par ailleurs, le poids économique et social du secteur décroît en dépit du fait que la question agricole reste centrale en Méditerranée. Enfin, la démographie et le changement climatique accentuent les pressions sur les ressources disponibles : produire plus sur moins de terre, avec des ressources en eau de plus en plus rares, une inadéquation offre-demande qui conduit à des tensions puis des pénuries et une sécurité alimentaire de plus en plus dépendante pour la majorité des pays méditerranéens.

European Commission – Standing Committee on Agricultural Research (SCAR). 2011. *The 3rd SCAR foresight exercise. Sustainable food consumption and production in a resource-constrained world*. Luxembourg: Office for Official Publications of the European Communities. 150 p. http://ec.europa.eu/research/agriculture/scar/pdf/scar_feg3_final_report_01_02_2011.pdf. The 1st SCAR Foresight Exercise (FEG1) identified four scenarios pointing to declines in fossil fuel, land, water, biodiversity, energy availability and ecological services, and increasing world population, demand for food and feed and growing climate change impacts. The 2nd SCAR Foresight Exercise (FEG2) put more emphasis on the socio-economic driving forces and on the different paradigms underpinning our knowledge and innovation system. The purpose of the 3rd Foresight Exercise

(FEG3) is to update the state of some critical driving forces and to focus on the transition towards an agricultural and food system in a resource-constrained world, given the likely critical importance of those driving forces. Its aim is to provide building blocks for longer-term perspectives to prepare a smooth transition towards a world with resource constraints and environmental limits and to guide agricultural research in the EU and its Member States.

European Commission - Directorate-General for Research. 2009. *2nd SCAR foresight exercise. New challenges for agricultural research: climate change, food security, rural development, agricultural knowledge systems.* Luxembourg: Office for Official Publications of the European Communities. 130 p. http://ec.europa.eu/research/agriculture/scar/pdf/scar_2nd_foresight_exercise_en.pdf.

In the framework of a wide Foresight process, launched by the Standing Committee on Agricultural Research (SCAR) and aiming to identify possible scenarios for European agriculture in a 20-year perspective, DG RTD/E of the European Commission established a high-level Consultancy Expert Group (CEG) that analysed and synthesised foresight information in order to provide research policy orientations, tacking stock of the report from the first Foresight Expert Group (FEG) published in February 2007. This second exercise resulted in a report that has been based on a scanning of foresight studies and reviews of challenges to European agriculture in a global context as well as an analysis of priority research areas. The CEG report should feed into the SCAR Foresight Monitoring and Signalling Mechanism, which aims at providing, at regular intervals, early signals and warnings about emerging and new problems that we may face in the years to come, and to suggest ways of tackling them. This approach was strongly encouraged by the Commission's Communication "Towards a coherent strategy for a European Agricultural Research Agenda".

FAO. 2012. *Investir dans l'agriculture pour un avenir meilleur.* Rome: FAO.

<http://www.fao.org/docrep/017/i3028f/i3028f.pdf>.

Pour éliminer durablement la faim, il faudra intensifier nettement les investissements agricoles, mais aussi améliorer leur efficacité. Ce sont les agriculteurs eux-mêmes qui investissent le plus dans l'agriculture des pays en développement et il faudra donc leur réserver un rôle central dans toute stratégie d'intensification des investissements dans le secteur agricole; par ailleurs, pour amener ces agriculteurs à investir davantage dans l'agriculture, il faudra créer un climat favorable aux investissements, sous la forme de stimulants économiques et d'un environnement porteur.

FEMISE. 2013. *Mobiliser le capital humain sur l'innovation en Méditerranée.* 284 p.

<http://www.femise.org/2013/11/publications/mobiliser-le-capital-humain-sur-linnovation-en-mediterranee/>.

FEMISE. 2012. *Rapport MED2012 sur la croissance verte en Méditerranée : mise en oeuvre de politiques susceptibles d'accroître la productivité des actifs naturels.*

<http://www.femise.org/2013/02/publications/rapport-med2012-sur-la-croissance-verte-en-mediterranee/>.

Frayssignes J., Pellissier J.-P. (eds). 2012. *Éléments d'une stratégie pour une agriculture méditerranéenne : synthèse finale du projet.* Bruxelles (Belgique): FEDER. 19 p. (Novagrimed).

Document réalisé à partir des contributions des Régions Provence-Alpes-Côte d'Azur (France), Murcie (Espagne), Pouilles et Sardaigne (Italie), Thessalie (Grèce). Projet Novagrimed : Innovations Agricoles en Territoires Méditerranéens. PDF dans catalogue.

Frayssignes J., Pellissier J.-P. (eds). 2012. *Méditerranée et formes de gouvernance : quels enjeux pour l'agriculture ? Rapport de synthèse.* Bruxelles (Belgique): FEDER. 10 p. (Novagrimed). Action "Gouvernance Action". Composante 3 : La région acteur de la compétitivité de l'agriculture méditerranéenne. Document réalisé à partir des contributions des Régions Provence-Alpes-Côte

d'Azur (France), Murcie (Espagne), Sardaigne (Italie), Thessalie (Grèce). Projet Novagrimed : Innovations Agricoles en Territoires Méditerranéens.
http://alister-avocats.placedelacom.net/novagrimed/actions/Gouvernance_Action/Synthese_GOUVACTION_FR.pdf.

Galal A., Reiffers J.-L. (eds). 2014. *Rapport FEMISE 2013 sur le partenariat euro-méditerranéen : vers une nouvelle dynamique pour le équilibres économiques et sociaux*. Marseille: Institut de la Méditerranée. 298 p. (Rapport FEMISE).

Gana A. (coord.), Abdel Hakim T. (coord.). 2013. *Agricultures du Maghreb/Machrek à l'épreuve de la crise alimentaire et des révolutions arabes : première partie. Maghreb Machrek*, n. 215, p. 11-140. <http://www.cairn.info/revue-maghreb-machrek-2013-1.htm>.

Government Office for Science (London). 2012. *Future of food and farming: Challenges and choices for global sustainability. Final project report*. 211 p.
<https://www.gov.uk/government/publications/future-of-food-and-farming>.

Hubert B. (ed.) 2011. *Quelles recherches et quels partenariats pour la Méditerranée ? Atelier de Réflexion Prospective PARME [Partenariats et Recherche en Méditerranée] : rapport final*. Montpellier: Agropolis International. 194 p. <http://www.agropolis.fr/pdf/ARP-PARME-rapport%20final-27juillet2011.pdf>.

L'objectif de l'atelier de réflexion prospective (ARP) PARME (Partenariats et Recherche en Méditerranée), commandité par l'ANR (Agence Nationale de la Recherche) et coordonné par Agropolis International, consistait à identifier les domaines de recherche et d'innovation qui nécessitent une coopération entre les pays du pourtour méditerranéen pour un développement durable de la région et à réfléchir aux modes opératoires susceptibles de favoriser cette coopération. L'étude s'est déroulée en quatre phases : (i) une synthèse de 80 études prospectives intéressant la Méditerranée, réalisées ces dix dernières années ; (ii) l'élaboration d'un cadre de réflexion prospective commun portant sur les grands enjeux identifiés dans la phase précédente et la mise en place de groupes de travail thématiques sur ces principaux enjeux ; (iii) l'identification d'axes de recherche prioritaires pour répondre aux grandes questions de chaque thématique ; (iv) une analyse transversale des propositions de façon à mettre en avant une formulation favorisant leur intégration d'un point de vue systémique, ayant conduit à la rédaction du rapport final. Ainsi, outre l'analyse prospective des grands enjeux de la région à l'horizon 2030, l'ARP-PARME a abouti à des propositions argumentées de thèmes de recherche prioritaires à mettre en oeuvre dès aujourd'hui pour affronter les défis de demain, dans cinq grands domaines : les hommes et les sociétés ; les territoires ; les ressources naturelles (les milieux, l'eau et l'énergie) ; l'agriculture ; l'alimentation et la santé. Les problématiques ont été raisonnées dans une vision intégratrice et transversale, en privilégiant un point de vue sur les populations et leurs territoires.

Jolly C. (ed.) 2011. *Demain, la Méditerranée. Scénarios et projections à 2030. Tomorrow the Mediterranean. Scenarios and projections for 2030*. Paris: IPeMed. 164 p. (Construire la Méditerranée).
http://www.ipemed.coop/adminipemed/media/fich_article/1323357980_Med2030_fr.pdf.

La Méditerranée est soumise à des grandes incertitudes sur son avenir. Pourtant, un riche tissu des relations économiques, institutionnelles et humaines continue de se développer, nous invitant à nous interroger sur son avenir. Face aux complémentarités évidentes et aux défis auxquels les pays individuellement ne peuvent pas répondre, plusieurs scénarios peuvent être dessinés. C'est ce que le consortium Méditerranée 2030 a réalisé dans cet ouvrage. Une insertion disparate des pays dans l'économie mondiale, ou un scénario davantage assombri par la crise de 2008, amenant une

convergence par le bas et une marginalisation des pays méditerranéens sont vraisemblables et défavorables à une intégration régionale. Mais un autre destin est possible. Sous réserve d'une action politique volontariste et partagée par tous, une convergence méditerranéenne peut-être envisagée, basée sur la valorisation des complémentarités, une plus grande redistribution des richesses et un renforcement de la compétitivité dans un système régionalement intégré, jouissant des quatre libertés mises en place par l'UE. Pour y parvenir, neuf recommandations pour un écosystème méditerranéen ont été déclinées.

Le Grusse P. 2009. *Contraintes et perspectives de développement pour l'agriculture méditerranéenne [Diaporama]*. Symposium International AGDUMED 2009 (Agriculture Durable en Région Méditerranéenne) : Gestion Intégrée des Ressources en Eau et en Sol et Durabilité des Systèmes de Cultures en Zone Méditerranéenne. Rabat. 2009/05/14-16.

http://www.vulgarisation.net/agdumed2009/presentations/LeGrusse_agriculture_mediterranenne.pdf.

Ortiz-Miranda D., Moragues-Faus A., Arnalte Alegre E. (eds). 2013. *Agriculture in Mediterranean Europe: between old and new paradigms*. Bingley (Royaume Uni): Emerald. 315 p. (Research in Rural Sociology and Development; n. 19).

http://www.clubdemeter.com/pdf/cahier/13/agriculture_et_geopolitique_au_xxie_siecle_rivalites_strategies_pouvoirs.pdf.

Mediterranean agriculture is by and large envisaged as a landscape of small farms of high nature value producing worldwide recognisable quality food products that make up the basis of the famous Mediterranean diet and shape Southern European cultures. However, the dynamics developing in the Mediterranean countryside are further complex and diverse; comprising differentiated agricultural systems which have been scarcely analysed in an integrated fashion. This volume illustrates and deepens the understanding of current agrarian dynamics developing in Mediterranean countries in the light of recent theoretical contributions. The book compiles and analyses a set of Mediterranean case studies that show the range of transformations shaping contemporary agriculture in Southern Europe, which allow considering the usefulness of recent theoretical frameworks in explaining the array of dynamics underway; contributing to the refinement of contemporary conceptualizations.

Pretty J., et al. 2010. The top 100 questions of importance to the future of global agriculture. *International Journal of Agricultural Sustainability*, vol. 8, n. 4, p. 219-236.

<http://www.tandfonline.com/doi/abs/10.3763/ijas.2010.0534>.

In this paper, we seek to improve dialogue and understanding between agricultural research and policy by identifying the 100 most important questions for global agriculture. These have been compiled using a horizon-scanning approach with leading experts and representatives of major agricultural organizations worldwide. The aim is to use sound scientific evidence to inform decision making and guide policy makers in the future direction of agricultural research priorities and policy support. If addressed, we anticipate that these questions will have a significant impact on global agricultural practices worldwide, while improving the synergy between agricultural policy, practice and research. This research forms part of the UK Government's Foresight Global Food and Farming Futures project.

Rastoin J.-L., Meddeb R., Abis S., Roux B. 2013. La sécurité alimentaire dans les pays du sud de la Méditerranée : enjeux et perspectives. *Comptes rendus de l'Académie d'agriculture de France*, 01/06/2013, vol. 99, n. 2, p. 91-104. Séance du 27 février 2013.

http://www.academie-agriculture.fr/detail-seance_321.html.

SITUATION ACTUELLE

Abis S. 2012. Logistique et sécurité alimentaire en Méditerranée. In: Fondation de Malte (ed.). *Food security in the Mediterranean*. p. 110-129.

Abis S., Conesa P., Gaymard H., Hochart R., Tillous-Borde P., Chevènement J.-P. 2012. *La dimension stratégique de l'agriculture*. Paris: Fondation Res Publica.
http://www.fondation-res-publica.org/La-dimension-strategique-de-l-agriculture_r89.html.

Abis S. 2011. L'Afrique du Nord face à la dépendance céréalière. *Agroligne*, n. 80, p. 5-19.

Aspe C. (coord.). 2012. *De l'eau agricole à l'eau environnementale : résistance et adaptation aux nouveaux enjeux de partage de l'eau en Méditerranée*. Versailles : Editions Quae. 380 p. (Update Sciences et Technologies).

Bessaoud O. 2012. *La durabilité des agricultures maghrébines ou l'indispensable révision des politiques agricoles et rurales : le cas de « Sidi Bouzid »*. Développement Durable des Territoires et Zones Arides ou Semi-Arides dans le Bassin Méditerranéen. Khenchela (Algérie). 2011/12/06-07. Thème 1 : Enjeux institutionnels : points sur les programmes nationaux et euro-méditerranéens - rôle des pouvoirs publics dans le développement et la régulation des projets - les questions de développement local en relation avec les aspects du développement durable. PDF dans catalogue.

Campagne P. (ed.), Pecqueur B. (ed.), CIHEAM-IAMM (Montpellier F. 2012. *Processus d'émergence des territoires ruraux dans les pays méditerranéens : analyse comparée entre 10 pays du Nord, du Sud et de l'Est Méditerranéens*. Montpellier: CIHEAM-IAMM. 252 p. (Options Méditerranéennes : Série B. Etudes et Recherches; n. 69).

CIHEAM (Paris F. 2011. *Financement du développement agricole et rural en Méditerranée. Financing agricultural and rural development in the Mediterranean*. Paris: CIHEAM. 22 p. (Lettre de Veille du CIHEAM; n. 17). <http://www.ciheam.org/index.php/fr/publications/lettres-de-veille>.

Dollé V. 2012. *ENPARD, une nouvelle politique de voisinage de coopération entre l'Europe et la méditerranée pour le développement agricole et rural*. Rabat: Diaporama : 28 diapositives.

Dollé V. 2012. Insécurité alimentaire en Méditerranée, volatilité des prix agricoles, des enjeux partagés en Méditerranée, une opportunité pour des actions concertées ? In: Fondation de Malte (La Valette M. (ed.) *Food security in the Mediterranean*. p. 86-101.

FAO. 2014. *Faire face à la raréfaction de l'eau au Proche-Orient et en Afrique du Nord*. <http://www.fao.org/docrep/019/as215f/as215f.pdf>.

FAO. *La sécurité alimentaire et la nutrition dans la région Proche-Orient-Afrique du Nord*. <http://www.fao.org/docrep/019/as214f/as214f.pdf>.

FAO. 2014. *Situation de l'alimentation et de l'agriculture dans la région Proche-Orient et Afrique du Nord*. <http://www.fao.org/docrep/meeting/030/mj390f.pdf>.

Conformément à la recommandation de la Conférence régionale pour le Proche-Orient (trente et unième session), on trouve dans le présent document un ensemble d'actions majeures aux niveaux national, régional et international qui constituent les éléments essentiels d'une stratégie régionale en matière de sécurité alimentaire pour le Proche-Orient et l'Afrique du Nord. Les premières constatations concernant les efforts déployés pour traiter la question de la sécurité alimentaire et de la nutrition dans la région sont le manque de coordination des aspects plurisectoriels de la sécurité

alimentaire et de la nutrition et le peu d'intérêt accordé au renforcement de la résilience à long terme, qui permettrait de pallier les difficultés auxquelles sont exposés les pays de la région. Les actions proposées devront être mises en oeuvre de manière coordonnée pour mettre en place des institutions vouées à la sécurité alimentaire et la nutrition, des marchés et des systèmes de production efficaces et résilients.

Frayssignes J. (coord.), Pellissier J.-P. (coord.). 2012. *Agriculture méditerranéenne et réforme de la Politique Agricole Commune : quelle articulation ? Rapport de synthèse*. Bruxelles (Belgique): FEDER. 31 p. (Novagrimed). Action "Gouvernance Capitalisation". Composante 3 : La région acteur de la compétitivité de l'agriculture méditerranéenne. Document réalisé à partir des contributions des Régions Provence-Alpes-Côte d'Azur (France), Murcie (Espagne), Pouilles et Sardaigne (Italie), Thessalie (Grèce). Projet Novagrimed : Innovations Agricoles en Territoires Méditerranéens. PDF dans catalogue.

IEMed (Barcelone E. 2010. *Euromed survey 2010: the euro-mediterranean partnership / union for the mediterranean and its economic and financial dimension*. Girona (Espagne): IEMed. 422 p. (Euromed Survey; n. 2). <http://www.iemed.org/publicacions-en/historic-de-publicacions/enquesta-euromed/euromed-survey-2010/presentacio>.

This is the second yearly survey of actors and experts on Euro-Mediterranean relations that the IEMed has been entrusted to conduct by the European commission for the period 2009-2012. It has focused on the economic and financial dimension of the Euro-Mediterranean relations. It has had the participation of a total of 598 experts, policy-makers and members from civil society from the 43 countries that make up the union for the Mediterranean, 38% more than last year with a balanced representation of Eu countries and Mediterranean partner countries. This report presents the results of the survey, conducted between November and December 2010, and is structured in two parts: a descriptive analysis of the results and a more detailed description of the different thematic blocks of the Survey. It is completed with ten qualitative articles which endeavour to analyse and interpret the results. For the preparation of this second qualitative section, we have had the collaboration of experts who have produced these analytical documents taking into consideration the uprisings in the Arab world.

IPEMED. 2013. *Co-développement des filières agricoles et agroalimentaires intégrées en Méditerranée [page web]*. <http://www.ipemed.coop/fr/nos-projets-r16/agriculture-et-agroalimentaire-c139/>.

Entre rive nord et rive sud, il n'existe pas de réel partenariat agricole. Des coopérations productives naissantes ont bien été constituées entre les deux rives mais elles restent très insuffisantes au regard du potentiel. Sur le plan commercial, la dépendance extérieure des pays de la rive sud pour l'alimentation se situe à un niveau très élevé, impliquant de forts déficits commerciaux et une réelle insécurité alimentaire. Une part significative de ces importations provient d'autres régions du monde (les céréales notamment), aux dépens des productions de la rive nord de la Méditerranée. Par ailleurs, l'espace rural sud méditerranéen fait face à des risques graves de déstabilisation, notamment de stress hydrique. Sur la rive sud, l'emploi agricole représente encore le tiers de l'emploi total, et fait vivre, dans le monde rural, une part encore plus importante de la population. Or la perspective de libéralisation des échanges agricoles dans le cadre de la zone de libre échange, se traduira par une déprise agricole d'ampleur, compte tenu du différentiel considérable de productivité entre les deux rives. Cette libéralisation doit être accompagnée de mesures de renforcement des activités dans cet espace rural, afin de prévenir un exode que ni les villes du Sud ni les migrations internationales ne peuvent soutenir. C'est l'objet des réflexions en cours au sein d'IPEMED.

Löfgren H. (ed.). 2008. *Food, agriculture, and economic policy in the Middle East and North Africa*. Bingley (Royaume Uni): Emerald. 337 p. (Research in Middle East Economics; n. 5).

This volume brings together a set of studies analyzing different aspects of food and agriculture in the Middle East and North Africa (MENA). This sector is of crucial importance to the MENA economies, especially in terms of employment. Agriculture is particularly important for the poor, both on the consumption side - a large part of their budget is allocated to food - and as a source of incomes as most of the poor live in rural areas where agriculture dominates. Agriculture production in MENA is severely constrained by water scarcity and low, irregular rainfall. Sustainability is a major concern in many parts of the region as the quality of land and water resources is deterioration and scarcity becomes more severe due to growing competition from other parts of the economy. The fact that the region relies on imports for a large share of its food consumption is a major concern for policymakers who view this as a threat to national food security and a source of political vulnerability. The studies included in this volume range from regional overview to micro studies. The chapters with a country focus cover issues that are recurrent in many MENA countries, giving them a broader relevance. The analyses cover policy issues in a wide range of areas - water, drought management, agriculture technology, producer and consumer subsidies, domestic food distribution, and foreign trade - and discusses how coordinated policies in these and other areas can contribute to more rapid, sustainable growth and poverty reduction.

Moreno-Pérez O.M., Arnalte-Alegre E., Ortiz-Miranda D. 2011. Breaking down the growth of family farms: A case study of an intensive Mediterranean agriculture. *Agricultural Systems*, vol. 104, n. 6, p. 500-511. <http://www.sciencedirect.com/science/article/pii/S0308521X1100045X>.

Agricultural statistics performed in Europe show the persistence and strength of the processes of concentration, capitalization and intensification of farms in the last years. Remarkably, these patterns of change appear to be compatible with the persistence of family farms. One of the elements enabling family farms to advance along these pathways of growth has been the transformation of their organizational forms. Thus, the spread of partnership arrangements involving several related families have been registered in several OECD countries. This paper pursues a twofold objective: On the one hand, to analyze the farm structural dynamics at the micro-level in a study area specialized in an intensive agricultural system such as horticulture. This purpose makes it necessary to develop an analytical scheme in order to capture the diversity of individual farms' trajectories and to reduce it to a limited number of categories of structural change. On the other hand, we aim to shed light on the relationship between some family characteristics and the farm structural dynamics, paying particular attention to the existence of multifamily partnerships. The primary data for this research was provided by a survey of 135 farmers. A combination of Multiple Correspondence Analysis and a K-means clustering was performed to obtain a farm typology upon the base of both farms' 'static' characteristics and their patterns of structural evolution. The results show that multifamily partnerships are widespread in the study zone, and have made it possible for farms to embark on more aggressive growth pathways.

Rastoin J.L., Dubreuil C. 2009. *Un pacte agroalimentaire et rural pour l'intégration régionale Euro-Méditerranéenne*. (Les notes IPEMED; n. 4).

http://www.ipemed.coop/adminipemed/media/fich_article/1321268080_LesNotesIPEMED_4_PacteAgricole.pdf

<http://www.ipemed.coop/fr/publications-r17/les-notes-ipemed-c48/un-pacte-agroalimentaire-et-rural-pour-lintegration-regionale-euro-mediterraneeenne-a181.html>.

Requier-Desjardins M., Bessaoud O. 2011. *L'impossible écologisation des politiques publiques agricoles au Maghreb*. Avignon (France):

La notion d'écologisation des politiques publiques peut se comprendre à la fois par de nouveaux contenus des politiques agricole et de développement rural, qui accordent une part plus grande aux

questions environnementales et écologiques, mais aussi comme une nouvelle façon de construire et de mettre en œuvre ces politiques. Des processus s'appuyant sur la mobilisation horizontale des acteurs (concertation), sur l'attribution de marges décisionnelles plus importantes au niveau décentralisé, sur la mise en place de mécanismes de coordination verticaux entre institutions ; des processus in fine concomitants à l'adoption de normes environnementales régionales (Union Européenne), et mondiales (AME) issues du Sommet de Rio.

CHANGEMENT CLIMATIQUE

Bessaoud O. 2008. *Changement climatique et agriculture au Maghreb*. Marseille: Diaporama de 18 diapositives.

Après une brève présentation du contexte de l'agriculture au Maghreb et de l'évolution de son climat, l'auteur expose les risques et impacts d'un changement climatique sur l'agriculture, les mesures d'adaptation déjà affichées par les différents pays du Maghreb, ainsi que leurs limites.

Bosello F., Eboli F. 2013. *Impacts économiques du changement climatique dans le Sud de la Méditerranée* (MEDPRO TR No 25 WP4a). http://www.medpro-foresight.eu/fr/system/files/MEDPRO%20TR%20No%2025%20WP4a%20Bosello_0.pdf.

Ce rapport analyse les impacts économiques potentiels du changement climatique dans 11 pays du Sud et de l'Est de la Méditerranée au travers de ses effets sur les écosystèmes côtiers et l'agriculture. Les impacts sont quantifiés par le biais d'évaluations bottom-up à l'horizon 2050 sur les conséquences de la détérioration des écosystèmes côtiers et des zones protégées pour les activités touristique ainsi que des rendements agricoles des plus grandes familles de cultures. Ces données sont ensuite intégrées dans un modèle d'équilibre général calculable afin de quantifier leur impact sur le PIB, la production sectorielle et les prix.

FEMISE. 2012. *Le coût économique du changement climatique dans les pays MENA : une évaluation quantitative micro-spatiale et une revue des politiques d'adaptation*. (Etude FEMISE FEM34-03). <http://www.femise.org/2012/06/recherches/fem34-03-rex/> ; <http://www.femise.org/PDF/ci2010/FEM34-03.pdf>.

Navarra A., Tubiana L. 2013. *Regional assessment of climate change in the Mediterranean : Volume 2: Agriculture, Forests and Ecosystem Services and People*. Dordrecht: Springer Netherlands. Monograph Wageningen UR Library.

Nefzi A., Bouzidi F. 2007. *Evaluation de l'impact économique du changement climatique sur l'agriculture au Maghreb*. 13 p. <http://www.ps2d.net/media/Nefzi-Bouzidi.pdf>.

Cette étude évalue la vulnérabilité de l'agriculture maghrébine aux changements climatiques en utilisant une analyse Ricardienne de la valeur ajoutée agricole. Nous exploitons une base de données relative aux cinq pays du Maghreb (Algérie, Libye, Mauritanie, Maroc et Tunisie) qui couvre la période 1974-2005. L'étude de la variation de la valeur ajoutée relativement aux projections d'un scénario modéré à l'horizon 2005 montrent une diminution accentuée de celle-ci dans tous le Maghreb

OCDE, FAO. 2012. *Building resilience for adaptation to climate change in the agriculture sector* FAO-OCDE. <http://www.fao.org/docrep/017/i3084e/i3084e.pdf>.

Proceedings of a Joint FAO/ OECD Workshop As climate change brings new uncertainties, risks and changes to already existing risks, one of the most efficient ways for agriculture to adapt is by increasing its resilience. A joint FAO/OECD workshop was held in April 2012 to address these issues in different agro-ecological and socio-economic contexts, and to illustrate how building resilience is

critical to adapting to climate change. The various sessions of the workshop questioned the notion of resilience, confronting concepts, specific risk management strategies, case studies and national policies, from different perspectives - biophysical, economic, or social and institutional - and at various scales, from farm and household to national and global. This publication brings together and summarizes the papers presented at the workshop.

Padgham J. 2009. *Agricultural Development under a Changing Climate*. Washington, DC: World Bank. 198 p. http://www.dsi.gov.tr/docs/iklim-degisikligi/agricultural-development-under_a_changing_climate_wb.pdf?sfvrsn=2.

Pintus F. 2009. *L'agriculture méditerranéenne en recherche d'adaptation climatique*. 4 p. (Les Notes du Plan Bleu N° 12 - Juillet 2009). http://planbleu.org/sites/default/files/publications/4p_rural_12_2009_0.pdf.

Quéfélec S. 2011. Les effets du changement climatique sur les pays méditerranéens [Texte imprimé] / Stephane Quéfélec ; sous la direction de Patricia Augier. Thèse de doctorat: University Aix Marseille 2. <http://www.sudoc.fr/174820844>.

Les résultats mettent en évidence que même les économies des pays riches du bassin méditerranéen sont sensibles aux tendances climatiques, au moins sur la période 1950-2000, bien qu'ils le soient beaucoup moins que les pays en développement de la rive Sud et Est. Par ailleurs, nous confirmons que l'agriculture est un canal de diffusion majeur des effets du changement climatique dans l'économie, en particulier dans les pays en développement. La question de l'eau apparaît centrale dans le traitement de l'adaptation au changement climatique. Ainsi, dans le chapitre 5, nous analysons l'état de la ressource en eau, les modes de gouvernance actuels et les options d'adaptation qui s'offrent aux pays arides. Nous présentons un exercice de simulation des demandes futures par secteur dans les pays d'Afrique du Nord, ce qui nous permet d'obtenir des ordres de grandeur sur les bénéfices à attendre des différentes options de politique qui pourront être suivies par les pouvoirs publics. Nous montrons que la gestion de la demande en eau est un des leviers déterminants de l'adaptation au changement climatique dans les pays méditerranéens et que sa mise en œuvre repose avant tout sur des réformes de gouvernance.

Sicard N. 2012. *Les stratégies socio-économiques d'adaptation à la sécheresse en agriculture en Méditerranée*. Limoges (France): Office International de l'Eau. 17 p. (Les Synthèses Techniques). Cette synthèse s'intéresse aux stratégies socio-économiques d'adaptation à la sécheresse en agriculture en Méditerranée. Après une réflexion globale sur le type de stratégies d'adaptation, les principales stratégies rencontrées sont exposées et leur limites abordées.

World Bank. 2011. *Climate-Smart Agriculture: Increased Productivity and Food Security, Enhanced Resilience and Reduced Carbon Emissions for Sustainable Development*. Washington, DC.: World Bank.

EMPLOI ET GENRE

The impact of agricultural modernization on the employment of women [voir aussi] Employment opportunities in rural areas. **2013.** In: Boserup E., et al. (eds). *Woman's role in economic development*. Routledge. p. 68-71, 182-184.

Colloque : Évolution du marché international du travail, impacts des exclusions paysannes. Programme. 2012. Paris: <http://www.afd.fr/webdav/shared/RECHERCHE/pdf/colloque-Marche-international-du-travail.pdf>.

Plusieurs centaines de millions de personnes sont aujourd'hui exclues du marché de l'emploi au niveau mondial. Les projections sur l'évolution du marché du travail à l'échelle mondiale mettent en évidence qu'il faudrait créer 3,3 milliards d'emplois formels ou informels à l'horizon 2050 pour permettre à l'ensemble des actifs d'être inclus dans l'économie. Or, la destruction prévisible d'emplois dans l'agriculture constitue l'un des flux majeurs entrant sur le marché du travail. Aussi, si la création d'emplois dans les secteurs nouveaux doit constituer une priorité, il apparaît également indispensable de limiter la perte d'emplois agricoles à l'échelle mondiale.

Abdelali-Martini M. 2011. *Empowering women in the rural labor force with a focus on agricultural employment in the Middle East and North Africa (MENA)*. UN Women. In cooperation with FAO, IFAD and WFP Expert Group Meeting Enabling rural women's economic empowerment: institutions, opportunities and participation.
<http://www.un.org/womenwatch/daw/csw/csw56/egm/Martini-EP-9-EGM-RW-Sep-2011.pdf>.

Banque Mondiale. 2013. *Emplois. Rapport sur le développement dans le monde 2013. Jobs. World Development Report 2013*. Washington (États-Unis): Banque Mondiale. 401 p. (Rapport sur le Développement dans le Monde).
http://wdronline.worldbank.org/worldbank/a/c.html/world_development_report_2013/abstract/WB.978-0-8213-9575-2.

Baraldi F., Castellini A., Pirazzoli C. 2007. The labour factor in agriculture: an analysis between three EU partners. *New Medit*, 2007/06, vol. 6, n. 2, p. 44-51.

Berthomieu C. 2013. *De deux décennies de "libéralisation dévoyée" vers "un développement démocratiquement organisé". Etude des cas de l'Egypte, du Maroc et de la Tunisie*. FEMISE.
<http://www.femise.org/PDF/ci2011/FEM35-12.pdf>; <http://www.femise.org/etudes-femise-par-date/>.

Partie 1. Les effets sur l'emploi de la libéralisation des échanges extérieurs en Egypte, au Maroc et en Tunisie : les enseignements de trois études monographiques. Partie 2. Performances macroéconomiques et dynamique de l'emploi en Egypte, au Maroc et en Tunisie : investigations économétriques. Synthèse des résultats et propositions de politique économique.

Bouzidi Z., El Nour S., Moumen W. 2010. *Invisible actors: conditions of women work in agriculture*.
http://www.popcouncil.org/uploads/pdfs/events/2010MENAWkshop_13.pdf.

Dollé V. 2012. Repenser le développement rural pour créer emplois et revenus en Méditerranée. In: Coustillière J.-F. (dir.) (ed.) *Le 5+5 face aux défis du réveil arabe*. p. 141-144.

FAO. 2014. *Promoting economic diversification and decent rural employment towards greater resilience to food price volatility*. Rome: FAO. Economic and Social Development Department. Social Protection Division. 32 p. <http://www.fao.org/docrep/019/i3574e/i3574e.pdf>.
The poor are particularly vulnerable to the negative effects of high and volatile food prices. Available evidence, while not conclusive, indicates that both urban and rural poor, including poor farmers, are particularly exposed because they are typically net buyers of food (Ivanic and Martin, 2008). Food accounts for as much as three-quarters of the expenditures of poor households in some countries.

FAO. 2014. *Réduire l'écart entre hommes et femmes dans l'agriculture et le secteur rural au Proche-Orient et en Afrique du Nord*.
<http://www.fao.org/docrep/meeting/030/mj484f.pdf>.

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