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NAPC

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**The 4th National Agricultural Policy
Workshop
Of
The National Agricultural Policy Center
(NAPC)**

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Introduction

Under the patronage of the Minister of Agriculture and Agrarian Reform, the National Agricultural Policy Center (NAPC), supported by the FAO Project GCP/SYR/006/ITA, organized the 4th National Agricultural Policy Workshop at Cham Palace, Damascus, on the 8th of May 2007.

The Workshop discussed at national and international level, the results of major studies prepared by the NAPC, and by international experts in the field. Distinguished national and international experts gave these presentations. The Workshop program included four sessions; the first discussed the global perspectives for supply and demand for agricultural products. The second presented the results of the NAPC study on non-agricultural activities in rural areas (NARA) and their role in complementing the agricultural production and rural development. The third presentation focused on the recent trends and future challenges of the Syrian agricultural trade, with an outlook for Syrian agricultural systems in the context of the Mediterranean basin. The fourth presentation gave an analysis of the sheep meat comparative advantages and assessment of its supply and demand.

Attendees were hosted by the NAPC and offered a detailed insight into the work of the NAPC itself. The Workshop offered an opportunity for involving a wide audience in an active debate in the context of discussion sessions following each presentation that contributed to the formulation of recommendations fundamental to the future development of Syrian agricultural policies.

Attendance to the Workshop included policy makers and public officers from all main departments of the MAAR, other Ministries and various public establishments, Members of the Parliament, academics from various universities, stakeholders from the private sector, representatives of various professional and nongovernmental organizations, and representatives of international organizations and embassies (see the workshop program in annex 1 and the list of participants in annex 2).

The proceedings of the workshop are also available at the NAPC website: www.napcsyr.org

Opening Ceremony

The Workshop was opened with the welcoming statements of H.E. Mr. Francesco Cerulli, Ambassador of Italy, Mr. M Massoni, Director of the International Cooperation Project, Italian Ministry of Foreign Affairs, H.E. Ms. Salwa Moubarak Amber, FAO Representative in Syria, and H.E. Mr. Adel Safar, Minister of Agriculture and Agrarian Reform.

Mr. Francesco Cerulli, Italian Ambassador to Syria

The Italian Ambassador to Syria, H.E. Mr. Francesco Cerulli, expressed his pleasure to participate at the 4th National Agricultural Policy Workshop stressing the importance and relevance of this forum. In this regard, he commended the work of the National Agricultural Policy Centre (NAPC), for organizing the event and highlighted his satisfaction that this center was established and still operates in the framework of a project implemented by the FAO and funded by the Italian Government.

He hoped that the Forum would be a fruitful occasion to enhance positive dialogue on agricultural issues among all stakeholders and policy makers of the Syrian agricultural sector present at the Forum.

As he clarified, the need for supporting agricultural policy comes from the ongoing process of modernization of the entire Syrian economy and, particularly, of its agricultural sector.

In this respect, H.E. the Ambassador of Italy reminded the audience that the Syrian economy, characterized for many decades by central planning, has witnessed during latest years, an evolution in strategic thinking and in policy towards a greater reliance on market economy and an increased integration into the international economic system. As a matter of fact, the ongoing opening of Syria to foreign markets, pursued by the Syrian Government and stressed also in the 10th Five Year Plan, implies great changes also for Syrian agriculture: in terms of economical, political and infrastructural aspects.

He acknowledged that it is a big challenge for the country, but assured that with the support of friendly Countries, like Italy, Syria can meet this challenge in this respect. He added, that the NAPC initiative must continue to be an instrumental part of this process.

Turning the attention to the Project “Sustainable Capacity Consolidation of the NAPC” Mr. Cerulli stated that it has been carefully followed by the Italian Embassy and by the Italian Development Cooperation of the Ministry of Foreign Affairs since it started, and this is no less true of the 3rd phase of the Project which engenders a comprehensive and complex programme of agro-economic and policy analysis. This initiative has been active since almost 9 years, and has been marked by the very good results achieved.

Furthermore, he fully acknowledged the progress made by NAPC as the National Centre for agricultural policy analysis and its contribution to a better understanding of the changes in the agricultural sector of Syria. Also he addressed, the organization of the 4th NAPW was proof that the NAPC is increasingly independent and capable of producing autonomous research, study, programs and events.

The Ambassador pointed out that Italy and Syria are now negotiating the next cooperation programs and again the program includes some projects in the agricultural field. Then he expressed the Italian Government happiness to continue its cooperation with the Ministry of Agriculture.

The Ambassador of Italy concluded his intervention demonstrating his appreciation to the Syrian Authorities in general and the Syrian Ministry of Agriculture in particular, and

the FAO, for the help and cooperation shown in the implementation of all the development cooperation projects in the agricultural field.

He ended his address wishing all the participants to achieve the best results and to work fruitfully during the meeting.

Mr. M Massoni, Director of International Cooperation at the Italian Ministry of Foreign Affairs

Mr. M Massoni, Director of the International Cooperation Project, of the Italian Ministry of Foreign Affairs, following along the lines of Mr. Cerulli's speech reiterated the importance that the Italian Government attaches to cooperation with Syria and the FAO. He remarked that on his last visit to Syria that he was able to visit the NAPC's new premises, and was pleased to hear that they have now been completed and are in fully working order. He noted that such a dedication to the NAPC underlines the Syrian Government's commitment to its future sustainability after the Project termination.

Ms. Salwa Moubarak Amber, FAO Representative in Syria

H.E. Ms. Salwa Moubarak Amber, FAO Representative in Syria, expressed her honor to participate in the inauguration of the fourth National Agricultural Policy Workshop organized by NAPC with the support of the Third Phase of the Project GCP/SYR/006/ITA "Sustainable Capacity Consolidation of NAPC". The Project is funded by the Italian government and implemented by the Food and Agriculture Organization of the United Nations in collaboration with the Ministry of Agriculture and Agrarian Reform.

She remarked that the workshop constitutes a part of the FAO endeavor to enhance the human capacity in policy analysis, formulation, implementation, monitoring and assessment in the areas of food, agriculture and rural development. As she clarified, through the Project the FAO is focusing on creating the convenient conditions to enhance the NAPC's sustainable capacity to be able to carry out its future activities after the withdrawal of the technical support.

Ms Amber assured that the FAO is fully committed to supporting the modernization and development process in Syria by consolidating the capacity of the national technical institutions. To this effect, the FAO is offering its assistance to the NAPC in its endeavor to be an institution specialized in the analysis of agricultural policies. In this framework, FAO is improving the NAPC capacity to reach the optimal level enabling it to implement autonomously its assignments.

She recalled that, the establishment of a national cadre capable of conducting policy analysis is a long-term investment and expressed her gratitude to the Italian government for the attention it has been paying to the capacity enhancement of the NAPC, through funding the three phases of the project with a total amount of US\$9 million.

She praised the support offered by H.E. Mr. Adel Safar, the Minister of Agriculture and H.E. Mr. Francesco Cerulli, the Italian Ambassador that helped in overcoming all the obstacles and achieving the desired objectives.

She remarked that the organization by the NAPC of the fourth National Agricultural Policy Workshop after three similar events organized in the years 2000, 2002 and 2004, indicates that the Center is occupying an important role in awareness enhancement in the area of agricultural development in Syria.

Furthermore, she expressed her eagerness to see the studies presented and discussed in the workshop, for this was representative of the fruit of a close cooperation between the

FAO consultants and their national counterparts from NAPC. Such a cooperation, she highlighted was indicative of the effectiveness of the technical support provided by FAO. Moreover, these studies signify a promising indicator of the growing capacity and the accumulated experience of the NAPC, acquired from the technical support of the FAO, in the area of research and analysis.

Ms Amber illustrated that the purpose of the Workshop is to present the outcomes of four studies. In addition, she invited the participants to contribute in the discussion to enrich these studies with their comments that conform to the ongoing process of policy modification in the Country. Then she introduced briefly the four studies to be presented in the Workshop.

Ms Amber continued by highlighting that the NAPW as an excellent opportunity to enrich the four studies. In this regard, she wished the Workshop to be a fruitful occasion to enhance further the common understanding of the basic issues related to the agricultural development process.

Ms Amber concluded her intervention thanking H.E Dr. Adel Safar, Minister of Agriculture and Agrarian Reform for his steady efforts in pushing forward the agricultural development process, as well as H.E Mr. Cerulli for his continuous support to the FAO projects in Syria. In addition, she expressed her appreciation to the project management and the NAPC technical staff and the international consultants who offered their expertise to attain the achievements realized during the project implementation.

Mr. Adel Safar, Minister for Agriculture and Agrarian Reform

H.E. Mr. Adel Safar, the Minister of Agriculture and Agrarian Reform, welcomed the audience to the NAPW, noting the value of the subjects to be presented at the workshop by a group of national and international experts, and they meant to trigger the discussion with the MAAR officers.

He continued remarking that the fourth NAPW is a part of a successful series of workshops conducted by NAPC, which benefits from the available expertise to assist the Syrian Government to respond effectively to the new challenges that the country is facing in the field.

The Minister stressed that the Syrian agricultural sector has been receiving due attention from the Syrian Government due to its major role in food provision and its contribution to GDP, trade, and employment. Accordingly, modern technologies are being employed to attain the desired development and to focus on the production of crops portrayed by comparative advantages to raise its competitiveness in compliance with the natural and human resources.

Furthermore, the Minister highlighted that the Syrian macro and sectoral policies witnessed a set of modifications in response to the international economic changes. Accordingly, the government reduced trade administrative barriers; improved the investment environment; modified relevant regulations to cope with new global situation and face induced challenges; as well as enhanced the contribution of all sectors in the development process. This approach led to significant achievements in terms of food security and self-sufficiency of main strategic crops. Moreover, several development projects have been implemented all over Syria, with special attention given to the rural areas and Al Badia to achieve the objectives of land reclamation, local communities development, rural women empowerment, income generating investments enhancement and loan provision to secure the requirements of agricultural production and create production assets. In addition, the process of policy modification is going on in order to

comply with the recent shift towards the Social Market Economy and achieve its targets in terms of agricultural development.

The Minister also referred to the numerous trade agreements Syria has signed with Arab and foreign countries to foster economic and trade relations. It joined the Great Arab Free Trade Agreement, and it is exerting all possible efforts overcome impediments affecting the finalization of the Syrian European Association Agreement. Also it is following up the Syrian request to apply for WTO membership.

He expressed his hope that the Workshop would deepen the discussion on the issues raised to benefit from the different views of the participants and come out with helpful recommendations to serve in the execution of future orientations of the Syrian agriculture, whose main features have been drawn in the 10th five-year-plan. He also highlighted the importance of these presentations in furnishing the audience with an understanding of the long-term prospects for Syrian agriculture, and the concomitant policy reforms that should reflect these prospects.

The Minister concluded his intervention by thanking the Italian Government for its generous support to the development projects in Syria; as well as its valuable assistance in the establishment of the National Agricultural Policy Center, which is conducting significant work in the area of policy advice and options, economic studies, periodical reports, and thematic studies. Furthermore, he praised the activities carried out in the area of training and database that help in defining better agricultural policies.

He thanked the FAO for its efforts in supporting countries to improve their nutritional conditions and design the proper policies and strategies for a better future for humanity. Also, he thanked the participants for accepting the NAPC invitation, and he hoped that the workshop proffer conclusions and recommendations that will support the process of agricultural development; help in setting the features of the future sustainable development process; as well as improving the living standards of people working in the sector and the status of food security.

Finally he wished the NAPW participants success and the international experts involved a pleasant stay in Syria.

Introductory Session

Mr. Atieh El Hindi, NAPC Director, introduced an overview on the work of the center and its mission.

He highlighted that the National Agricultural Policy Center (NAPC) is a central Department of the Syrian Ministry of Agriculture and Agrarian Reform (MAAR). The NAPC specializes in applied economic and social analysis of agricultural policies and suggests policy directives and options. The NAPC was established in aim to participate in the ongoing process of modernization and development of the Syrian economy and, particularly, of its agricultural sector.

In addition, the Center is enhancing in a sustainable manner technical and institutional development by providing specific contribution to the elaboration of effective agricultural strategy and policies. These functions are being realized and fulfilled through the intensive training of NAPC staff with a view to helping in the capacity building in policy analysis supported by the provision of basic and comprehensive work facilities. In particular, a well-endowed library, references, and a reading hall provides an excellent vantage point for studying and research.

Mr. El Hindi noted that the NAPC is fulfilling its functions by responding to the ongoing process of modernization and development; providing qualified technical staff capable to act in the field of agricultural policy analysis and policy options.

Planning and implementing agricultural and strategic policy analysis and review. In this regard, the NAPC been conducting policy studies jointly carried out with experts of the FAO project GCP/SYR/006/ITA, national and international consultants, and NAPC staff. These studies comprised of variety of subjects such as Commodity Chain Studies, Water and Irrigation, Syrian Farming Systems, Comparative Advantages, Export Promotion to EU Markets, Agricultural Subsidies in Syria, Syrian Accession to the WTO, Trade Agreements, etc. In addition, these studies helped in carrying out the Syrian Agricultural Strategy (SAS) and a mid-term review to modify its programmes.

Highlighting some specific areas of NAPC activity, Mr. El-Hindi referred to the following points:

- The Center develops and maintains the Syrian Agriculture Database (SADB). It includes data from the national to the sub-governorate level covering the period from 1985 to 2005. All this data is accessible via a user-friendly and fully integrated computer interface.
- The NAPC is helping to build the capacity throughout the public sector by training 150 Government officers, from different Departments of the Ministry of agriculture from different governorates, whereas numbers of them formed the NAPC staff.
- Publishing periodical reports to enhance the understanding of policy matters: “The State of Food and Agriculture in Syria (SOFAS)” produced biennially and “The Syrian Agricultural Trade (SAT)” an annual report.
- Promoting a permanent policy forum to the enhance dialogue concerning ongoing agricultural issues among stakeholders and policy makers. NAPC has implemented 23 policy forums presented and attended by national and international experts.
- Promoting NAPC linkages with similar national and international' research institutions such as IAM-Bari, CIRAD, ICARDA, and University of Valencia; In addition to the General Commission for Agricultural Scientific Research (GCASR).

- Participation in the negotiation of the EU Association and Turkey Association.
- Organizing three National Agricultural Policy Workshops in 2000, 2002, 2004 and this is the fourth.
- The Center organized two Regional Workshops: the first was about “Institution Building for Agricultural Policies” in the Near East, and the second was in 2006 in the framework of the Near East and North Africa Network for Agricultural Policies (NENARNAP), which is currently chaired by Syria. It was on “Agriculture in the Near East and North Africa towards a Vision for 2050”.
- The NAPC produces yearly tenths of policy studies comprising commodity chain and briefs, in addition to a number of training reports in specific issues such as agricultural economics, resources, food security, and others.

Finally, Mr El Hindi underlined that in response to the Minister of Agriculture and Agrarian Reform (MAAR) addresses, a Committee headed by H.E. Nabi R Mohammad Deputy Minister of Agriculture was formed to revise the recommendations of NAPC studies in attempt to be considered and fully applied.

Session 1

Global Perspectives for Supply and Demand of Agricultural Products with a Near East Outlook, Mr. Hartwig de Haen (FAO)

Introduction

Mr. Isam El-Zaim, Director of the Arab Center for Strategic Studies and Chairman of the Syrian Economic Society, chaired the session on ‘Global Perspectives for Supply and Demand of Agricultural Products -with a Near East Outlook’. He introduced the speaker Mr. Hartwig de Haen, retired FAO Assistant Director-General, remarking on his esteemed expertise¹. He also introduced the discussant Mr. Majd Jamal, Director of the General Commission for Scientific Agricultural Research (GCASR) in Syria.

Mr. de Haen expressed his gratitude for being given the opportunity to speak at the National Agricultural Policy Workshop. Presenting graphs and figures, the lecturer conveyed detailed information covering three aspects of the global markets (demand, supply and trade), with a particular focus on developing countries. At the beginning, he gave the audience an overview of the current situation for several food groups, followed by an outlook towards 2015 based on the most recent edition of FAO's "Food Outlook". The last part of the presentation was devoted to the Near East and North Africa regions from a longer-term perspective towards 2030/2050.

The Current Market Situation

Mr de Haen addressed the most prominent feature of the food and feed markets of the recent 12 - 18 months, namely the shortfall of global supplies and the surge in the price of cereals. Between November 2005 and November 2006, the export price of hard wheat from the US went up by more than 30 %, reaching 220 US\$ per ton. The tightness of the cereal markets was due to two main factors: bad harvests in several main exporting countries, especially Australia, and the fast growing demand for bio-fuels caused by the rise in the price of crude oils.

For the current marketing year, FAO's latest forecast for world cereal production in 2007 points to a record output, almost 2 095 million tonnes (including rice in milled terms), 4.8 percent up from 2006.

The prospect of a strong recovery in global cereal production in 2007 is a positive development for the world cereal supply/demand balance in the new 2007/08 marketing year. The forecast improvement in supplies is much needed after a significant tightening of the global balance in 2006/07.

However, with carry-in cereal stocks forecast to be at their lowest level since the early 80s, even with the improvement in production expected, total supplies in the new season would still be barely adequate to meet the anticipated demand, which is projected to

¹ **Hartwig de Haen** has been Professor of Agricultural Economics at the University of Göttingen, Germany, from 1975 to 1990. From 1990 to 2005 he has been Assistant Director-General of the Food and Agriculture Organization of the United Nations (FAO) in Rome. Initially he was head of FAO's Agriculture Department (1990 – 1994) and from 1995 to his retirement at the end of 2005 he was head of the Economic and Social Department of FAO. His applied research comprised of agricultural policy and economic issues in Europe as well as in various countries of Asia, Near East and Africa. He has published books and articles in the fields of production economics, development economics, agricultural policy and environmental economics. Currently, he is a member of the Scientific Committee of the NAPC.

increase not only from the traditional food and feed sectors but also from the fast growing bio-fuels industry.

As a result, international prices for most cereals are likely to remain high in 2007/08. Markets are also expected to remain volatile, as total stocks held in major exporting countries will remain relatively low. These stocks are the principal buffer against any sudden drops in production or rise in demand.

The expert also gave an idea of cereal price developments in world markets based on changes observed in selected price indices from one year to the next (Slide 7).

The tightening of the global cereal balance in 2006/07 has pushed up prices of all cereals. In case of wheat, the price index during the first 8 months of the current marketing year (July 2006 to April 2007), has averaged 30% above the average for 2005/06. For maize, the price surge has been even more significant with the index rising by nearly 44%. Price index of rice also has increased by 12%. As a result, importing countries will be confronted with higher import bills.

Global Food Demand Towards 2015

As for the assessment of global food demand towards 2015, the lecturer clarified that in longer-term analysis of key trends, the demand side must be carefully examined first. The important agents of change on the demand side are population and income growth. He underlined that the outlook to 2015 was based on last year's (2006) joint publication of OECD and FAO, but a new outlook would soon be published by the two Organizations.

The major determinants of the global food demand for the next ten years are population growth and income growth. The demand for products that are sensitive to income growth will grow most rapidly.

Another aspect is the shift in consumer preferences towards greater diversification of diets as a result not only of income growth, but also due to globalization, better information, urbanization and related changes of lifestyles.

Recently, a new demand is competing with the demand for food and feed, namely bio-fuels, which are becoming a rapidly growing source of demand for agricultural raw materials.

Put all together, developing countries are the main source of growth in food demand, and Asia and Pacific Region is the major region among those.

Population Growth and Demography

The lecturer presented further details on global population growth assuring that it is slowing everywhere (slide 9). The expected average of global growth in the next ten years is only 1.1% per year against 1.25% of the past ten years. The population growth in developed countries will be half of its previous annual rate of growth (0.3% versus 0.6%). In developing regions, population growth can be expected to fall also, although less drastically, to 1.2%. However, the population of Africa is still expected to grow at around 2% per year. The same rate is expected for all Least Developed Countries. He pointed out that the higher growth in developing countries virtually assures that these countries will dominate the growth patterns for world food demand.

But two further aspects are important in this regard:

- Ageing: when fewer babies born means less children and a higher percentage of adults in the population. This has important implications for diets as the overall energy requirements and protein needs will increase. It also results in a higher percentage of

people in working age, higher productivity and incomes. This is the so-called “Population Dividend” which also characterized most developed countries in the past few decades.

- The other factor is urbanization. In just a few years, more people will live in urban settings than in rural ones. Not only do patterns of consumption differ considerably between urban and rural people. The nature and form of food supply and even the sources of food supply may be entirely different. While the developing world is considerably behind in the process of urbanization, the rate of change now is higher there.

Income growth prospects

Mr de Haen addressed that in spite of the many crises and fears, including the possibility of further increases in energy prices and impacts of climate change, the experts of the World Bank consider the prospects of income growth to be rather bright. The reasons are not just the population dividend, but perhaps more importantly the wider processes of globalization, technological change, information and financial integration. Of course, expectations of growth depend on many things. However, for the developing world, in particular many Asian countries such as China, India, Thailand, Vietnam and Malaysia, it seems safe to say that their income growth prospects will be a key driving factor for food demand.

Taking into consideration that food is a necessity good, income growth at lower incomes adds more to food demand than income growth at higher incomes. Unfortunately, as the graph shows in slide 10, the lowest income growth is expected for the regions with the deepest poverty, Africa and, more generally, the group of the LDCs.

Changes in Demand

From a combination of the two key factors; population and income, emerge several features of demand (Slide 11).

Firstly, in general, world food demand growth is slowing with the exception of milk and bovine meat, due to a declining population growth rate, and to increasing consumption “saturation”, not only in developed countries. Also a shift in consumption patterns is appearing, much of which is driven by income growth toward those foods which are preferred if income is available; including dairy products, meat and vegetable oils.

Changing preferences and relative prices also cause changes in consumption patterns. Meat and dairy products are also becoming less expensive. In the livestock sector there are dramatic changes to production technologies, processing and marketing. There is a trend toward large-scale agro-industries and large supermarket chains that supply the cities especially in Asia.

Slide 12 shows the changing shares of six commodity groups in total direct food consumption. The three lower shares are of wheat, rice, and coarse grains. The share of these cereals is projected to go down from 60% in 1995 to 50 % by 2015. The other three groups are rising in their consumption shares: meat, vegetable oils and dairy. This indicates a major move towards more diversified diets, which will be further characterized by more consumption of fruits and vegetables.

In summary, the majority of the growth will occur in developing countries, almost exclusively. Therefore the “weight” of developing countries in influencing markets will increase further, especially for meats, dairy and vegetable oils, (slide 13).

Rising Demand for Biofuels

The expert moved on to discuss the bio-fuel sector and the related rising demand and investment. As he mentioned, bio-fuels represent a significant and rising source of demand for agricultural raw materials. The agricultural products involved in producing biofuels are many, e.g. ethanol from cereals and sugar cane (c.f. Brazil) or from maize (e.g. in the USA where heavy investments have been made), bio-diesel from rape seed and bio-gas from bio-mass².

The lecturer noted that it is still too early to assess the full impact of this trend on agricultural markets, but he pointed out that the potential for substituting oil by these renewable energies is enormous, and by far not yet utilized.

The competitiveness at different crude oil price levels varies greatly from country to country. Brazil is competitive at oil threshold prices above 35 US\$ per barrel, hence even less than today's market price. In addition, Thailand, China and India have great potential and competitiveness. For the US and EU, the current expansion is mostly enabled through subsidies, whereas the threshold price of crude oil is above 50 US\$ and above 80 US\$ per barrel respectively. However, second generation technologies might reduce the costs rapidly.

The impact of fast growing demand for bio-fuel production on the markets for food and animal feed can be significant in terms of rising food prices. As a result, net buyers' of both energy and food will be most affected. If they are also poor, their food security will be challenged. As he indicated, people in Mexico have already protested against the increase in food prices due to prices increases of maize, which is going more and more into the production of ethanol in the USA:

For the Near East/North Africa region, the impact will vary: for those that are rich in oil and gas, the competition between fuel and food is irrelevant. For the countries without oil or gas, but highly dependent on imports of food and feed, they face rising import bills.

Supply Until 2015

The lecturer turned to discuss supply trends to 2015, assuring that FAO has a strong view that there remains ample potential to meet expected future demand.

According to earlier joint projections by OECD and FAO, real prices for all major food commodities would continue their longer-term declining trend, mainly as a result of two major factors.

The First productivity growth that is due to broad and continued technological progress on many fronts and biotech adoption, and their application to the production and marketing system.

The Second, increase in competition from low cost and low subsidy producing countries, especially countries with important agricultural assets, particularly in South America (e.g. Brazil) and in Asia. These countries have important agricultural assets allowing them now to emerge into international markets with more force.

More recently, new factors have come into play which could cause a slowdown of the price decline or even a rise for certain products. These factors include the growing demand for bio-fuels FAO has just drawn attention to another factor: the demand growth

² Biomass refers to living or recently dead biological material that is used in the bio-fuel industry normally as a source of methane.

resulting from the strong economic growth of China and India, which have a heavy weight in international comparison.

Mr de Haen then gave an overview of the state and projections of the most important agricultural food commodities.

Cereals

Cereal production has been steadily increasing since 1995. It is now at 2 billion tons per year, including rice. Most of it is coarse grains (1 billion tons), followed by wheat. The production of oilseeds has been growing very rapidly as well and this is likely to continue. By 2015, the sum of these crops will have grown from today 2.3 billion tons to 2.7 billion tons. Developing countries will increase production at a faster rate than developed countries. Today, 52 % of all cereals are produced in developing countries. At the end of the next 10 years, the share may be 56%.

Meat and Livestock

Turning to the livestock and meat sector, according to OECD's and FAO's projections global meat production also is expected to grow quickly to meet strong demand mostly in developing countries, in particular poultry will continue its long term rise in market share. An important fact is that for growing poultry meat supply, feed requirements grow in tandem. Meat production grows most rapidly in the developing countries, above all in Asia. By the end of the next 10 years, the production share of developing countries will rise to above 60%. The growth is mainly driven by the livestock revolution, mostly in Asia, where large scale livestock industries have been established, often near the cities and connected to super market chains.

Price Indices

As just indicated, while the real international commodity price indices have been following a declining trend, since the mid 1970s, projections for the next ten years are uncertain (Slide 23). Possibly, a slower rate of decline in real international prices of many commodities may be due to a number of important factors, which were mentioned before increasing demand for commodities for bio-fuel; and the strong growth in some major countries. Some farmer representatives and even scientists are already expecting a 'golden age for agriculture', but according to the lecturer this appears premature. .

It is also noted that in the past, high supplies from developed countries and depressed world market prices were partly the result of heavy subsidies. In recent years, the share of price distorting subsidies in total support to agriculture in OECD countries was on the decline. This could gradually reduce the pressure on world market prices.

Global Agricultural Trade

The lecture moved to discuss the situation of agricultural trade in the world towards 2015 and beyond. He pointed out that agricultural trade will grow further, especially in developing countries, despite continuing trade barriers and restrictions. However, agricultural trade is growing more slowly than is the global trade in all goods and services; yet, its growth still exceeds the growth in production and consumption.

Agricultural Trade in Developing Countries

A strong emerging competition from developing countries as agricultural exporters is expected.

Already today, the share of developing countries in world exports is high (80 – 90%) for trade in oil meals and vegetable oils. The share is expected to grow even higher, mainly

as a result of dynamic growth in Brazil and Argentina. In cereals, the share is only 35%, and is expected to decline. On the other hand the developing countries' share in the trade of meats and even dairy products is expected to rise considerably. It is now at 40 % for meats and 12% for dairy products.

The lecturer traced the evolution of agricultural trade in the developing countries in the last forty years (slide 27). In spite of the growing export potential of some developing countries like Brazil, Argentina, Thailand, Vietnam, Malaysia etc, the group of all developing countries taken together has been showing an increasingly negative agricultural trade balance. The balance is fluctuating, but since the early 1990s it has been mostly negative. The deficit is even much clearer if we exclude Brazil that has become a major global exporter since the early seventies. If we exclude Brazil, the rest of the developing countries have had an agricultural trade deficit of more than 20 billion US\$ in recent years.

Although LDCs export cotton, coffee, tea, sugar, etc. the foreign exchange gained through such exports is often insufficient to pay for the growing imports of basic food stuffs; in particular cereals, meat and milk. Developing countries as a group import clearly more basic food commodities than they export, this trend is expected to continue. They will be increasingly net exporters of vegetable oils stemming largely from strong exports of oil meals and vegetable oils, mainly palm oil and soybean oil from Brazil and Argentina. The biggest imports are in coarse grains and wheat. The trends for developed countries have the opposite direction. As a group, the developed countries have an increasing surplus in food.

Net basic food imports by least developing countries continue to expand and will grow by over 6% annually. The cause of such a level of imports is the growth in the demand largely due to high population growth, compared with domestic supply capabilities. It was pointed however that increasing food import bills by some of these poorest countries may increase their vulnerability to market variations, and hence to their food security. Unless they succeed in raising the competitiveness of their own agriculture on domestic food markets or increase exports of non-agricultural goods and services, the result may be increasing debts or dependence on aid.

Trade Barriers and Subsidies

Mr. de Haen addressed that prospects for trade in agricultural commodities depend very much on subsidies and non-tariff barriers that various countries apply as a measure to protect their domestic agricultural sector. Such protection has been typical of the agricultural policies of many developed countries for some years, but it also true that a number of developing countries protect their agriculture in a similar way. The measures used are a mix of domestic support, limitations of market access for imports and export subsidies. The problem of many of these policies is that many of them tend to stimulate production and generate surpluses, which reduce the chances of countries to compete. However, the composition of the support has changed since the beginning of the 1990s. The share of market price support has been reduced and gradually been replaced by other payments which are less linked to production. Such reforms include for example, reduced intervention prices in the EU for cereals, dairy and beef, and reformed rice markets. In the EU, support is being gradually replaced by a single farm payment directly paid to producers and de-linked from current production. Such changes in policy have had the effect of reducing incentives to produce, and allowing products from low cost producers to be imported. On the other hand, as both domestic policy and trade policies are reformed, new trade barriers in the form of food standards are increasing. The

number of, or changes in, standards notified to the WTO Sanitary and Phytosanitary (SPS) committee has increased annually since 1995.

Near East and North Africa – Perspective 2030/2050

With reference to the Near East/North Africa perspective in a longer-term towards 2030/2050, the lecturer addressed the following major issues, referring to FAO's very long-term projection to the years 2030 and 2050:

- Population growth is still relatively high, but falling.
- The region can expect a strong income growth, although there are large differences between countries.
- The prevalence of poverty is low in most countries of the region, but very high in some that are subject to political instability or have been facing poverty since quite some time.

With regard to food consumption levels:

- The calorie levels in many countries of the region are close to those in industrial countries (3000 kcal) suggesting an over consumption.
- As already mentioned, consumption patterns are shifting towards greater intake of meat, dairy, vegetable oils.
- Production growth is slowing down in the region; the main constraint being water availability.
- The countries of the region are heavily dependent on imports a situation which is rapidly worsening, e.g. cereals, meat, dairy.

The lecturer also highlighted the prospects of food consumption per person towards 2050 for the Near East/North Africa indicating that with an average of 3000 kcal per capita/day the food intake is very high. Nevertheless, further increases are likely. This will be good for the poor and hungry, but can also aggravate the problems of overnourishment.

Due to the typical diets and high incomes, the average consumption of food cereals lies at around 200 kg per person and year, higher than industrial countries. This level is expected to decline. On the other hand, the level of meat consumption is only 20 kg/person/year, much lower than in industrial countries and expected to rise rapidly.

As it is shown in slide 44, past agricultural trade in Near East/North Africa Region has been dynamic, in both exports and imports. However, imports mainly of cereals, dairy and meat are growing faster than exports. The value of agricultural imports partly increased.

The share of agricultural products in the total trade of the region is declining; hence financing agricultural trade is less of a problem today in the region.

As for cereals: The region has seen a massive increase in net imports. In 1999-2001 the total net imports had a value of \$US 50 million – the same amount as the imports of all other developing countries, this due to lack of water and availability of foreign currency. FAO expects this trend to continue, although less rapidly than in the other countries.

Mr. de Haen concluded his presentation reviewing the general supply and demand picture for food in the Near East/North Africa, and updating the audience on the world hunger situation.

First he summed up the major prospects for Near East/North Africa stressing that a further growth of demand would be attained in these sub-regions due to income and population growth. Supply constraints will severely increase, mainly with regard to water resources. However, some good prospects for exports of special products are foreseen both within and outside the region, especially to Europe (e.g. fruits and vegetables). However, there will be a further heavy dependence on imports of basic food and feed, especially cereals, dairy, meat and oilseeds.

Although the prevalence of hunger and poverty is low, there is a risk of rising poverty and food insecurity in some countries. From this, he concluded that policies will have to address the supply constraints and the rising import deficits, suggesting that three major action areas might need to be taken into account:

- The first urgent action is to use water sustainably.
- The second is to promote exports to pay partially for agricultural imports. A country like Syria, which is not oil-rich, this is necessary strategy, which Syria is already following successfully. This includes the promotion of specific agricultural exports where countries can develop a comparative advantage. Promotion of agricultural exports can be done by various means; by enhancing the agricultural research; by taking full advantage of all bilateral, regional and multilateral trade agreements to expand exports; and by quality assurance for future access to the EU and other growing markets, which depends primarily on meeting quality standards.
- The third is seeking for sustainable agricultural and rural development. This is necessary for the eradication of food insecurity, malnutrition and rural poverty.

Sustainable rural development means also to focus on high value crops that yield high returns per unit of water use, as well as diversification into high value crops and processed products, whereas the demand for these products is growing at faster rate than of others.

Concerning the future world trade, the lecturer focused on several key points in summarizing FAO projections over the next ten years as the following:

In the Global Context

- Global demand growth will slow and per capita consumption continues to increase with more growth in higher valued products.
- The supply potential may be adequate to meet demand growth, but much depends on the rising demands for bio-fuels, which could change the situation more drastically. This will also be crucial for the future prices. Will they continue their long-term decline in real terms? Or will they rise? A rise would be good for the exporters, but bad for poor countries and households which need to purchase both food and fuel.
- Trade continues to grow, with new suppliers entering the global markets, both in Asia and in Latin America.
- The developing countries as a group, and least developed countries in particular, are facing a deterioration of their agricultural balance of trade, especially in foods.
- Markets are liberalizing, but new trade concerns are mounting.

Finally, Mr de Haen concluded his presentation drawing on his experience in working with the NAPC. He acknowledged the rapid progress that NAPC has achieved in its qualified and relevant research. He expressed the hope that the NAPC would continue

progress in making the centre a competent voice for policy advice and sound research. in Syria.

Discussion

After the presentation, the Chairman introduced the discussant Dr. Majd Jamal, Director of the General Commission for Scientific Agricultural Research (GCASR) in Syria, highlighting his expertise and his academic background and invited him to discuss and comment on the issues addressed during the presentation.

Dr Jamal made an intervention clarifying a few issues and commenting on others that Mr de Haen presented.

- Mainly he focused on the forecasted climatic and environmental changes in the world. He informed the audience that these perspectives would greatly impact the agricultural production all over the world and lead to yield variation and instability.
- Consequently, the global food supply and stock will decline, and therefore it won't be enough to meet the mounting demand of increased population, though the global population growth is relatively slowing everywhere.
- The expected growth and strong demand will surge the international prices of food. Whereas the current world price of wheat has already increased by 20% compared to last year. As he explained, several driving factors are in the forefront:

- The great demand of China and India for wheat regarding their high population growth.

- The shift in consumer preferences towards greater diversification of diet, generating a larger demand for meat, dairy and wheat. This has affected Japan, which is increasingly relying on food imports (only attained 40% self sufficiency).

He addressed the need to carefully consider the emerging impact of the increased world demand for meat, and the expected growth in this sector in developing countries. Primarily, a parallel growth in the feed requirements will affect the whole agricultural sector.

- Another driving factor is the growing demand for bio-fuels, which are becoming a rapidly growing source of demand for agricultural raw materials. Regarding the increase in crude oil prices, most of the world largest countries (as India) are going to rely heavily on bio-fuels as a source of energy. Therefore, maize and oilseeds prices are increasingly going up. For which a strong shift from cereals plantation towards oilseeds is expected.

- Unplanned economic growth is widening social disparities that increasingly broaden the poverty gap in the Middle East, which already includes several pockets of poverty. The main result of such poverty is emigration from southern to northern countries. In this respect the Near East/North Africa regions would be considered as sources of poverty and migration.
- Adoption of genetically modified crops is increasingly resulting in many problems. For example the genetically modified cotton strain produced to resist worms has already produced resistance in later insect generations, which in turn have caused a great need to use stronger pesticides. But the appearing paradox behind this issue, that the same company who produce the modified strain of cotton also produce the needed pesticides and chemicals to control the insect. Namely, these companies only aim to gaining much profit and concern for their trading objectives.

- Unlike the situation in southern America, the expected growth of productivity in most of the developing world seems unrealistic, especially due to the increased fragmentation of agricultural holdings, natural resource scarcity, and lack of technical progress. Therefore, there is little chance for such small-scale farmers to compete under the global conditions.

In this regard, Mr Jamal excluded Syria and Iran of the LDCs, owing to the fact that they both have attained self sufficiency in agro-food production. As he assured, the major constraints that LDCs suffer are from shortage of water resources. Accordingly he addressed to the need to control and rationalize the use of water, particularly for irrigation that is the greatest water consumer rated to 80% of the aggregate resources.

- Support is being changed, particularly in the EU. Such changes in policy have had the effect of reducing incentives to produce in the developed countries, and allowing low cost countries producers to compete strongly in the world market and take chance to be the main exporters.
- About the current situation in Near East region, he addressed that the civil conflicts, wars and augmented poverty; as well as the consequent cessation of agricultural production in Iraq and Afghanistan that is negatively affecting the whole region.
- Finally, he mentioned epidemics and disease (bird flu, yellow rust) as factors affect the agricultural production in the world.

Session 2:

Non-Agricultural Activities in Rural Areas (NARA) and their impact on agriculture, Mr. Firas Haydar (NAPC) and Mr. Mohammed Moussaoui (FAO)

Introduction

Mr. Erfan Alloush, Advisor to the Minister for Agriculture and Agrarian Reform chaired the session on “Non-Agricultural Activities in Rural Areas (NARA) and its impact on agriculture”. He introduced the speakers Mr. Firas Haydar, Chief Rural Development Division at NAPC, and Dr Mohamed Moussaoui, FAO Consultant supervising the NARA Study; As well as the discussant Mr. Hassan Katana, Director of Planning and Statistics, MAAR.

Mr. Haydar highlighted that the National Agricultural Policy Center (NAPC) carried out a pilot study to apply a methodological scientific framework to the analysis of the impact of NARA on the rural household’s (RHH) strategies and their livelihood. The study responds to the current comprehensive development strategy trends in Syria and at a future date could be applied to the whole country.

The study results might help decision-makers to draw up more effectively appropriate policies relevant to rural areas.

The study was carried out by the rural Development Division of the NAPC in cooperation with the concerned authorities in selected *nahias* and villages³ such as extension units, municipalities, and different economic agents.

Study objectives

The study aimed to contribute to the assessment of the relevance of non-agricultural rural activities (NARA) and their characteristics for agricultural and rural development. In addition, it sought to assess the relevance of NARA for agricultural and rural development and their contribution to policy relevant issues (such as the rural household income, the resilience of rural households to exogenous and endogenous shocks, and the reduction of migration flows).

The study refers to two differentiated selected pilot areas in relation to geographical and demographical characteristics, natural resources, and cropping patterns. The selected pilot areas in all consisted of four villages, two from the *nahia* (sub-governorate level) of Talbisseh in governorate of Homs and two from *nahia* of Hemmin in the governorate of Tartous.

NARA definition

Referring to Hoggblade, Hazell & Reardon, 2002, the speaker explained that Rural Non-Farm Economy (RNFE) includes all rural economic activity outside of agriculture. It includes self-employment, wage employment, formal, informal, legal or illegal, full-time, and episodic non-farm production. Non-Farm Activity (NFA) may take place at home, in factories or by itinerant traders. The scale of these activities can be either small or large and of widely varying technological sophistication.

³ Two representative villages in each region had been chosen after definition the district according to the indicators mentioned above in methodology of the study , so Al Ghanto and Al Makrameh villages which follow Talbisseh district – Al Rasstan area Homs governorate had been chosen, and Habbabeh and Joret Al jwamiss which follow Hemmin district – Darkish area Tartous governorate

Study methodology

A territorial 'Assets-Based Approach' (ABA) was employed to analyze the potential of rural household's assets and its impact on household's income generation and strategies; as well as to assess the "pentagon capital" of sustainable livelihood (i.e. physical, natural, financial, social, and human capital) of each RHH to determine livelihood strategies, income sources and well-being.

The RHH's resource endowment, within a given context, determines a combination of opportunities for engagement in different livelihood strategies (behaviors). This in turn affects the RHH well-being and contributes to the improvement of their living standard and resilience to economic crises. Adding to that, diversification of non-farm activities contributes to alleviate poverty and reduce rural migration, (slide 5).

Based on the ABA, the economic and social context in which the RHH operate and the non-farm economic activities with their characteristics and correlations to other activities in the studied areas (*nahias*, villages) were described by investigating a randomly selected sample of 100 households in the chosen areas.

A comparison of different types of farm and non-farm activities and their contribution to annual RHH's total income in the two selected areas was carried out in the study, (slide 6).

Table 1: Pilot Study Areas and Primary Activities

Governorate and Nahia	Homs - Talbisseh		Tartous - Hemmin	
Village	Ganto	Mkarramieh	Hbabeh	Jourat Al-Jawamis
Agricultural activities	50%	30%	20%	40%
Main agricultural Activities	Strategic crops, vegetables, cumin, aniseed, potatoes, etc		Olives, citrus, and livestock	
Non-agricultural Activities	50%		60%	
Main Non-agricultural Activities	Commercial, governmental, tourism, services, construction, and manufacturing			

- Talbisseh (Homs): In Ganto village, the share of farm activities' income is high and accounts for 50%, whereas in Mkarramieh village is 30%. The major crops in this area are the strategic crops, vegetables, cumin, aniseed, potatoes, etc. The non-farm activities income contributes to a high share 50% in both of them. The farm activities carried out in Homs, in particular for crops plantations, requires regular intensive labor force.

- Hemmin (Tartous): in Hababeh village, the farm activities income contributes to a low share (20%) of annual RHH total income, whereas in Jourat Al-Jawamis village is higher (40%). The main farm activities carried out in this area are animal breeding, citrus and olive plantation (these only require intensive labor in the fruit gathering period). In both villages the non-farm activities contribution is on average 60% of the total income.

Non-farm activities in the sample areas include commercial, governmental employment, tourism, services, construction work, and manufacturing. As the study showed, women play a key role in farm activities such as harvesting and olive gathering.

As an example of farm activities in Tartous, the speaker presented the commodity chain of olive oil. Two types of olive mills are used in this process, the Centrifuge Mills (1 worker/tonne/day) and Conventional Hydraulic Mills (10 workers/tonne/day). Usually farmers keep 15% of their total production of olives for their own use and squeeze the rest 85% in local mills. The olive mills take 7% of the olive oil as remuneration. Then the produced oil is sold to traders and intermediaries for export.

As noted, in rural areas many small-intermediate rural centers are developed to serve rural community by providing the essential services in response to their requirements.

The Guanto village in Homs is a small-intermediate rural center due to characterized by a higher population density and close location to a city center and the existence of some agricultural industries (e.g. sugar and dairy plants). In addition, in this village many shops for agricultural machinery maintenance services exist; as well as businesses in cereals and construction materials and shipping services.

HH descriptive analysis

Mr Mohamed Moussaoui continued the presentation giving an overview of the descriptive analysis applied in the NARA study. He clarified that the HHs classification used by the study depended on their social specifications, assets possession, and income composition and resources. Income decomposition also applied in the study to identify correctly its resources. Then findings of the study were carefully examined to furnish policy-makers with information capable of assisting the overall process of rural development in Syria.

The field survey covered a 100 household sample (50 in Talbisseh and 50 in Hemmin). The household sample has been classified into two groups, poor and non-poor depending on household wealth index. This index was calculated according to the estimated value of the household physical assets (e.g. house, machineries and vehicles), agricultural production factor: land, trees, well, tractor, livestock ...etc) on the bases of local current market prices of these assets. Then the corresponding individual wealth index was compared to the poverty line measured in the UNDP Syria's study entitled "Poverty in Syria 1996-2004"⁴ (slide 9).

Table 2: Poor and Non-Poor in Selected Pilot Areas

Area	Total HH	Poor	Non-Poor
Homs	50	13	37
Tartous	50	20	30

HH descriptive analysis results

The speaker addressed the correlation between activities carried by HHs and the asset capital of these HHs. He highlighted that the availability of assets indicates the possibility of carrying out profitable non-farm activities.

Several findings were derived from the descriptive analysis:

- Types of RHH assets:

HH assets include five types of capital, namely: natural (e.g. land, water, well, trees), human (education, family size, skills, and age), physical either productive or not

⁴ UNDP Syria, *Poverty in Syria 1996 – 2004: Diagnosis and Pro-Poor Policy Considerations*, Heba El Laithy and Khalid Abu-Ismaïl, June 2005

(house, equipment, livestock, etc.), financial (savings, credit, remittances), and social assets (household participation in different organizations), (slide 10).

Table 3: Assets Disaggregated by HH Type

Assets		Homs: area (1)		Tartous: area (2)	
		Poor	Non-poor	Poor	Non-poor
Natural assets	Land	++	+++	+	++
	Water	++	++	-	+
	forest	-	-	+	++
Human assets	Family size	++	++	+	+
	Educ. Level	+	++	+++	+++
Physical assets	Non-productive assets	+	+	+	+
	Productive assets	++	+++	+	++
Financial Assets		+	++	++	+++
Social assets		+++	+++	++	++

(+) means availability of assets (-) means non-availability of assets

- HH activities

The RHH sample demonstrates that HH diversify their income by adopting a range of activities in rural areas mainly to avoid unemployment and/or because of their low income. The study analyzed income resources to clarify the importance of each ones and their contribution to total RHH income, as well as to estimate the RHH' income distribution inequality. In this respect, the following emerged:

- Agricultural activities (both on-farm and off-farm); the results indicate that in Homs (Tlbisseh) field crops with high returns clearly dominate the cropping pattern, while perennial trees (olive trees) and livestock with low returns have a high participation in Tartous (Hemmin).

- Non- agricultural activities both waged employment (e.g. commercial, construction, and governmental employment) and self-employment (trade, services).

The field survey results show the importance of the non-agricultural activities sector as a significant income and job opportunities source in rural areas, especially for poor households. The contribution of this source accounts for 50-60% of the total RHH annual income. Therefore seeking non-farm opportunities out of farming seems to be the main alternative activity in their livelihood strategies. This situation results in the recognition that poor individuals are the main component in non-agricultural labor sector. Therefore, policymakers must pay due attention to the importance of promoting rural non-farm employment opportunities as mean to reduce rural poverty.

- HH Income diversification

People diversify their income resources as a means of reducing their risk exposure and vulnerability. Obviously, diversifying the RHH activities effectively ensures different sources of income. Income sources include farm income, off-farm income (waged agricultural income), non-farm income (non-agricultural income sources, such as non-farm wages and self-employment), and unearned income (transfer and endowment).

Livelihood and income diversification are important for both poor and non-poor household, but with different motivations. Poor households tend to diversify their

income to survive, while better-off households usually diversify to accumulate more income, or for potential risk reduction.

It is noticeable that waged non-agricultural income contributes on average to 42 - 56% of total HH income in Homs and Tartous respectively. This category of income greatly contributes to overall income inequality.

The same situation is likely for unearned income from transfers and endowments that makes it a less important source. As observed, agricultural activity is inequality decreasing in terms of income distribution among RHH in both areas, which could be explicable based on equality of the average land size and the similarity of cropping pattern.

Analytical results

The analytical study includes analytical description of the most important strategies of HHs by using Cluster Analysis and SPSS technique. In addition, estimation of income distribution inequality based on Gini coefficient decomposition also was carried out in the study.

- **Key Livelihood Strategies**

Based on the Clustering technique, two main livelihood strategies were observable, slide (14). The first strategy (Cluster 1) corresponds to HHs engaged in construction and services sub-sector. HHs of this category are characterized by lower education levels and skills. The second strategy (Cluster 2) includes HHs who participate in mixed livelihood strategies covering crop, perennials (trees) and livestock production, and commerce combined with governmental employment.

The participation of HH from Cluster 1 accounts for 21.4%, whereas the percentage of HH participation in the Cluster 2 accounts for 78.6%.

Table 4: Livelihood Strategy Clusters

Livelihood Cluster Groups	Main Livelihood Strategy	Number of HH in Cluster	% of HH
Cluster 1	Construction and services	21	21.4
Cluster 2	Crop and livestock producer and commerce, and trees combined with governmental employment	77	78.6

NB: two HH were excluded because of missing or out of range group codes

Table 5: Salient Household Groups and Sub-groups Characteristics

Item	Total Sample	Cluster 1	Cluster 2
Number of HH	100	21	77
Average family size		7	7
Average number of children		3	2
Average land size (dunum*)		8.2	11.4
Land fertility		medium	good
Education level (the head of the household)		low	good
Education level		low	medium
Importance of agricultural income		Low (20% of total income)	Medium (48% of total income)
Importance of non-agricultural income		High (71% of total income)	Medium (50% of total income)
Per capita income SP**/ day		94	71
% of poor Households		30%	29%
* 1 dunum= 0.1 ha; 1 US\$ = ± SP 52			

The table in slide 15 shows that farm income plays an important role in household per capita annual income for the non-poor (48% of the per capita income), but less important for the first group (20% of the per capita income). This makes the poor to have great dependency on non-farm income (71%). Therefore seeking non-agricultural opportunities out of farming seems to be the main alternative activity of their livelihood strategies. In both clusters, the share of the poor HH contribution totaled almost 30%.

- Gini coefficient based decomposition of pooled overall incomes of the total sample

It indicates that the annual income of poor HH totals 146.48 thousand SP on average, while the one of the better-off HH totals 211.27 thousand SP.

Table 6: Gini Coefficient

Item	Label	HH Type	Overall annual income (Y)	Source Income (yi)			
				Ag. Income	SE income	WE income	UN income
Average per capita annual household income	μ	Poor	146.48	32.59	11.91	95.67	6.3
(1000 SP)		Non-Poor	211.27	75.31	35.79	96.31	3.63
Source of income share	wi	Poor		0.22	0.08	0.65	0.04
		Non-Poor		0.36	0.17	0.46	0.02
Gini Coefficient of income source	G	Poor	0.33	0.562	0.909	0.486	0.891
		Non-Poor	0.34	0.483	0.791	0.562	0.96
Correlation Ratio ⁵ btw yi and Y)	Ri	Poor		0.215	0.537	0.765	0.489
		Non-Poor		0.585	0.544	0.638	0.379
Relative Concentration Coefficient	gi	Poor		0.368	1.488	1.133	1.328
		Non-Poor		0.821	1.25	1.042	1.056
Factor Inequality weight	wi * gi	Poor		0.082	0.121	0.74	0.057
		Non-Poor		0.293	0.212	0.475	0.018

HH: household; Ag. : agricultural; SE: self employment; WE: waged employment, UNE: unearned income
 wi*.gi : where $w_i = \mu_i / \mu$ and $g_i = R_i * G_i / G$, with $R_i = \text{cov}(y_i, r) / \text{cov}(y_i, r_i)$, r and r_i being total income and source income ranks respectively.

In fact, non-agricultural rural activities have a range of effects on income distribution among RHHs. NARA sources of income tend to increase income distribution inequality, while agricultural rural activities sources of income tend to reduce income distribution inequality. Namely, poor and non-poor RHH do not benefit equally from NARA (push & pull dynamics).

Non-agricultural rural activities effect RHH income generation, therefore income from these sources is larger than that from agricultural rural activities. Waged employment constitutes the major portion of NARA sources of income (government, commerce, construction). Whereas on-farm originated income represents most of agricultural income.

Conclusions and recommendations

The major findings of the NARA policy study over the selected pilot areas can be summarized as follows:

- Non-agricultural rural activities are heterogeneous (various types, sectors, sizes);

⁵ Two main elements, namely relative concentration coefficients (g_i) and the factor inequality weights ($w_i g_i$), were employed to assess: a) to what extent an income source increase or a decrease overall income inequality and b) individual income source contribution to overall income inequality.

- NARAs Linkages (backward and forward) to agriculture are significant;
- NARAs play an effective role in employment creation in rural areas;
- NARAs have a crucial role in the emergence of small and intermediate urban centers (in rural areas).

Non-agricultural rural activities highly influence rural households (RHH) livelihood strategies. The different livelihood strategies are resulted from differences in resource endowment portfolios and access to income diversification opportunities (cluster analysis).

On the base of the study, the speaker presented recommendations to promote the non-farm activities in rural areas identifying major issues to be addressed in policymaking.

- Provide financial support to start small non-agricultural enterprises (manufacturing in Homs & Tourism in Tartous);
- Enhance the productive assets of RHH and promote their productivity (e.g. land: quantity and quality) by encouraging group work, to avoid land fragmentation, and sustainable resources management;
- Improve rural infrastructure (transportation & communication);
- Development of appropriate marketing tools and strategies (sorting, packaging, transportation, market information);
- Promote education (Talbisseh) develop skills and professional qualifications (technical education & training).

He addressed also to the validity of the study in the scope it could have if implemented over the whole country, providing useful outcomes for policy makers attentive to poverty levels concerns and to the enhancement of rural development and livelihood strategies.

Discussion

Mr. Hassan Katana, Director of Planning and Statistics Department of MAAR, opened the discussion on the presentation by underlining the importance of the study in the analysis of rural activities. He posed a query addressing the selection of the villages included in the study, wondering whether they are representative of the villages in the country. He stressed that there should be certain basis for the selection, and a general framework defining the objectives of the study. As he commented, positive factors of selection might be seen as negative aspects from other point of view, particularly those related to income levels. He concluded that it was perhaps better to conduct the study and apply the proposed strategies on certain already involved in the process of agricultural development projects. He also pointed out that any extension of the study should take care not to overlap with areas already studied by ministry and addressed directly (c.f. the Five-Year Tenth Plan and the Agricultural Strategy).

The Chairman of the session, Mr Alloush, suggested that a further step in the study should be to extend it to selected different areas with various activities representative of the whole country, so as to draw recommendations more specific to Syria as a whole. Furthermore, he highlighted that the agricultural development strategy should concern income improvements and the establishment of social safety nets, as well as diminishing the role of intermediaries by shortening the marketing chain of agricultural commodities to be sold directly from the producers to consumers. Moreover, he pointed to an

important issue that the presentation did not address sufficiently, namely the role of the non-governmental organizations, e.g. Ferdos and the UNDP (c.f. Jabal al-Hoss rural development project), in contributing to the ongoing development process in the country. In this regard, he addressed to Decree No (17) that permitted the banking fund organizations to work under the supervision of the Finance and Credit Board. Furthermore, he stressed on the need to issue legal and financial framework to regulate the non-farm activities.

On the above aspects, NARA study representatives clarified that the study should be seen only as experimental and as an initial step in the endeavor to assess and monitor the non-farm activities impact on agriculture and rural livelihood. In fact, the selection of the villages for the study does not pretend to lead for results representative for the whole country. In this regard, it was pointed out that they were chosen with the help of the Agricultural Departments and Extension Units in the involved governorates. Actually, the study aimed to select two villages differentiated in agricultural patterns, demographic, and geographic aspects; as well as in the types of non-agricultural activities carried out, so to facilitate comparisons. They also clarified that the households sample was randomly selected as a representative sample using a 'Rapid Rural Appraisal' approach.

Furthermore, the speakers indicated that they considered the non-governmental organization role in rural development, and that this was more fully addressed in the full study itself. They highlighted that their focus had been on the efforts of the "Agency for Combating Unemployment", which contributed to enhance the rural development. This agency was highlighted in view of its contributions to fund small projects for poor families and its 100% success rate in improving their livelihoods. They also assured that the poverty gap in Syria would be recovered by slightly increasing the RHH income, in reference to the UNDP study "Poverty in Syria", which identified the poverty line and poverty gap in Syria.

Another set of questions and comments from the participants called for further clarification about the relation between the non-farm activities and the social inequality mentioned in the presentation. Along the same lines, clarification was requested with regard to the minimum level of agricultural income that a farmer must generate in order that he continues engaging in agricultural activities.

In response the speakers remarked that the HH sample size was small therefore it might not be possible to draw such specific conclusions of this type. They did however stress the importance of including the study results in relevant policies for rural development, and advocated the case for extending the study throughout the country.

Session 3:

Syrian Agricultural Trade Recent Trends and Future Prospects,

Mr. Isam Ismail (NAPC)

Syrian Agricultural Systems; In the Context of the Mediterranean Basin,

Mr. Rachid Doukkali (FAO Consultant)

Introduction

Dr. Yahia Bakkour, Director of the Arab Regional Center for Advisory Studies and Agricultural Development, chaired the session, which consisted of two presentations. The first on “Syrian Agricultural Trade; Recent Trends and Future Prospects” presented by Mr. Isam Ismail, Chief of Trade and Trade Policies Division at NAPC. The second on “Syrian Agricultural Systems; In the Context of the Mediterranean Basin” presented by Dr. Rachid Doukkali, FAO Consultant.

Mr Ismail started his presentation shedding light on the agricultural sector as one of the main sectors in the Syrian economy. With regard to the multi-functionality of the agricultural sector, it plays a key role in the provision of food, inputs and raw materials for industries, and job opportunities. Importantly, it generates on average 25 % of total employment.

The agricultural sector plays a paramount role in the national income through its contribution to the Gross Domestic Product (GDP). The Syrian Agricultural trade contributes approximately to 27 % of total GDP and to 22% of aggregate exports. Considering this importance, the presentation highlights the latest developments in Syrian agricultural trade flows and policies domestically and globally.

Mr Ismail referred to the section on “Agricultural and Food Trade” included on the NAPC-run Syrian Agricultural Database (SADB) that presents on an electronic interface secondary data of the Central Bureau of Statistics and of the General Department of Customs. The presentation takes as a reference period 2000 to 2005.

Syrian general trade

The lecturer gave an overview of the Syrian trade in the period 2000-2005. He underlined the significant growth that has been witnessed in total Syrian trade in response to economic liberalization occurring in the country.

Records of the 2005 indicate that annual progress achieved in the volume of Syrian trade was 16.2%, for a value of 18.5 billion US\$. Whereas the annual share of export growth totaled 12.5% with value of 8.5 billion US\$, and the import share accounted for 20% with a value of nearly 10 billion US\$. However, the trade balance in 2004 -2005 was negative. Standardized trade balance was between -13% and 7.6% in that period.

The main exports' destinations in 2005 were to EU with percentage of 44.5% (EU25), Saudi Arabia 4%, USA 3.3%, Turkey 3.2%, and Iraq 3.1%. At the same time, the major imports suppliers were EU25 12.3%, Ukraine 7.6%, China 5.9%, and Saudi Arabia 3.2%.

In terms of products and partners, the total exports are more concentrated than imports.

The Central Bureau of Statistics 2005 records indicate the share of major export sectors as the following: 43% for mining and quarrying including petroleum, 21.2% for manufacturing including machineries and about 14% for agriculture, hunting, fishing,

and forestry. As for the import sectors, the recorded percentages were about 90% for manufacturing (including machinery), 8% for agriculture, hunting, fishing, and forestry.

The share of exports by groups of countries mainly includes EU25 (44.5%) and Arab countries (16.2%). While the share of imports by country groups: rest of Asia (14.1%), a sharp decline, then Arab countries, EU, and other European countries recorded about 12.5% each.

Syrian agricultural trade 2000-2005

During the period 2000-2005 both exports and imports witnessed an increasing growth. The annual growth of exports was 7.2% and of imports was 11.6%, which resulted in annual growth of agricultural trade volume by 9.6%. However, the largest deficit of agricultural trade (negative trade balance) had recorded in 2005 with 328.2 billion US\$ (slide 5).

Agricultural exports

Agricultural exports faced a high level of value fluctuation between 786 and 1333 million US\$, accounting for anything between 13% and 20% of total exports, in this period. The agricultural exports peaked in 2002 with 1333 million US\$ due to the high share of cumin exports, in terms of percentage share of the total they peaked in 2004 with 20% of the total exports.

The assessment indicates that raw products have larger share than processed products, as well as food and animal products against non-food products. Namely, food and animal products with raw products dominate the agricultural export sector. However, a gradual change in this combination occurred, facilitated by the implementation of the GAFTA⁶.

Mr Ismail noted that exports of raw products are generally not as profitable as that of processed products, although in this case we must consider the occurrence of a high tariff to be accounted for.

Agricultural exports by tariff chapters 2005

The speaker examined the Syrian agricultural exports referring to custom tariff chapters of 2005. It mainly comprises cotton and its products with share of 24% though a negative annual growth in value accounted for a decline by 2% during 2000-2005. After cotton and related products it follows live animals and vegetables that experienced a decline in the relative share. However, there was high growth in water, beverages, spirits and vinegar.

Mr Ismail stressed on the fact that currently one unit of imports is buying only one unit of exports, while before 2000 it was able to buy two units of exports.

Main agricultural exports

The speaker shed light on the major Syrian agricultural exports during the period 2000-2005. The highest annual growth rate was recorded for mineral and aerated water (174%) then olive oil 82% (accounting for 60 thousand tons), fresh legumes 26% and lentils 25%.

The most important exports recorded in 2005 were in livestock, accounting for a share of 16.1% of agricultural exports and cotton (not carded or combed), accounting for 14.6%.

⁶ Great Arab Free Trade Area

With reference to cotton the speaker noted a sharp decline in share and slight decline in value (3.8%) in comparison to 2000 data. Cotton was followed by olive oil, wheat, mineral and aerated water, tomatoes, and cumin seeds.

Wheat exports declined compared to the high growth registered in 2002-2004, however they recovered somewhat in 2005. This was due to climatic effects. In addition, there were significant declines in fruits exports in general and in grapes and citrus in particular.

Tomatoes exports slightly recovered after 2004 recession; although it is remaining still far below 2000 levels (slide 10).

Agricultural exports by country group

The Arab countries continue to be the central destination for Syrian agricultural exports with share of 55 to 68%, they increased in importance in the last few years, followed by EU countries (slide 11 shows shares of main importer countries recorded from 2000 to 2005).

Main partners in agricultural trade volume and exports

According to 2005 data, group EU 25 was the main partner in terms of agricultural trade volume (exports + imports) with share of 15.3% followed by Saudi Arabia, which was an important destination (this has changed in the last two years, Saudi Arabia now exporting significantly to Syria), then Egypt, USA and Turkey (slide 12).

In terms of agricultural exports by country during 2000-2005, Saudi Arabia was the main individual partner (20% of exports). Relatively, it should be noted a decline in the share of Lebanon and Jordan, while Iraq represents a significant addition to the list since 2002.

Agricultural exports indicators

To analyze the agricultural exports and its responsiveness to international markets, three indicators are used, as the speaker addressed:

1. Trade Map

The trade map comparing global demand and Syrian export growth (Syrian response to international demand) taking into account that the average growth rate of international trade was 5%.

Mr Ismail detailed the Syrian Trade Map of 2000-2004, in which exported products are divided into four groups (slide 15):

- Champions - Winners in Growing Markets: determining a positive growth for Syrian exports higher than the average trade growth for international demand. The exports portfolio of Syria included sheep, cumin seeds, wheat, olive oil, apples, dry onion and cow milk butter.
- Underachievers - Losers in Growing Markets: indicating a negative growth for Syrian exports and higher than average trade growth for international demand. The Syrian exports portfolio included tomatoes, citrus, pears, cherries, apricots, peaches, watermelons, potatoes, cotton lint, pistachio and garlic.
- Achievers in Adversity - Winners in Declining Markets: determining a positive growth for Syrian exports and lower than average trade growth for international demand) Lentils, cotton linters, chickpeas, and wool

- Declining Sectors - Losers in Declining Markets: include a negative growth for Syrian exports and lower than average trade growth for international demand. The list of exports comprised of anis and cotton not carded or combed.

2. Relative Unit Value (RUV)

It evaluates the unit value of a particular product of a specific country relative to the average world value. Unit values are used as proxies for prices since the latter are not always easily available for individual products or even for some industries. The reference value or average RUV is 1.

Mr Ismail noted, the price of Syrian sheep exports to Saudi Arabia is double of the world prices of other kinds of sheep.

3. Export Concentration and Market Diversification

This indicator is used to analyze the market concentration on destinations and product levels. The share of top five export destinations is 62.9% and for top ten is 81.9%, and the share of top five exported products is 50.8% and for top ten is 63.9%. Then by looking at the share of top five and top 10 partners for every product, the market diversification analysis could be done. This would be an important indicator for evaluating the risk that Syria faces in terms of both concentration and destination. A significant feature is noted for cumin, which is distributed to 53 countries in the world as the most market scattered commodity.

Agricultural imports

The speaker turned to discuss the Syrian agricultural imports. As he stressed, 2005 records indicate a significant growth of agricultural imports value reaching US\$ 1.4 billion and 14.4% of the total import value. The highest share (21.3%) was recorded in 2003 (slide 18). This share declined after that year due to the significant growth in the global economy in general.

In 2000-2005, the Syrian agricultural imports were characterized by a high dominance of food and animal items, accounting for 80% of agricultural imports; dominance of raw items against processed items; as well as a gradual increase clearly observed in imports of non-food items and raw items to serve as inputs for many industries.

Agricultural imports by tariff chapters

The main agricultural imports, listed in slide 20, show that most of the tariff chapters recorded a positive annual growth rate during 2000-2005. The mostly imported products were under cereals with a share of 27.8% indicating a significant growth compared to previous years. Sugar and sugar confectionery also maintained a leading position in agricultural imports, followed by tea and coffee.

Main agricultural imports

A positive growth rate was registered for most of the main imported products (slide 22). They included the basic products (sugar, rice, tea, oils and coffee); products that recorded higher consumption with better income; and inputs of agro-food industries, particularly for oil industries.

The highest growth was recorded for pastries (47.6%), soybeans (30.1%), oils from various seeds, palm oils in particular (18.9%), and raw and refined sugar (15.7%). For the first time since 2000, maize imports led agricultural imports with share 12.5% of total

agro-imports, followed by sugar with share 11.9%, and then barley, rice, oils cake, and oils from various seeds.

Although oils imports grew, imports of some oil-types (e.g. soy, sunflowers and maize) declined due to increased local production, which recovered thanks to increased oil seeds imports.

Agricultural imports by country group

Agricultural imports showed a wider distribution between groups than exports (slide 23). The European countries were the main source for Syrian agricultural imports. As noticed, the Arab countries raised their importance at the expense of Asian countries (i.e. Egyptian rice instead of Asian). Meanwhile, Southern and Northern American countries relatively kept a stable share. The speaker noted that a decline in the share of sugar imports is expected due to the increase of the establishment of the local refining sugar factories.

Agricultural imports by individual partners

The main source of Syrian agricultural imports was EU25, despite a relative decline. USA and Argentina increased in importance as sources for cereals, mate and oil cake. Egypt performed well especially after the agreement established to exchange Syrian wheat with Egyptian rice instead of Thai rice. Hence, Egypt became the first source of rice import. Imports from Turkey and Lebanon slowed, but the most noticeable downfall was recorded for Jordan often one of the most important suppliers (slide 25).

After the entrance of Iraq in the list of main suppliers especially in 2003 and 2004, its role declined in 2005. Iraq was mostly re-exporting to Syria imported products such as barely.

Agricultural imports indicators

Using import concentration and market diversification as an indicator to analyze market concentration on suppliers and product levels, the share of top five suppliers was 49.4% and for top ten 67.9%; and the share of top five imported products was 43.2% and for top ten 60.7%. These figures represent a reduced concentration of imports than exports at both levels (top-ten and top-five. This indicator then serve to analyze the market diversification by looking at the share of top five and top ten partners for each product (slide 26).

Syrian trade policies

Mr Ismail listed the most influential economic policies on trade. They included the Social Market Economy that adopts trade liberalization gradually, and financial and monetary policies. The latter includes policies concerning foreign currencies. Particularly notable is the banking system reform which provides licenses to private banks and so eases the transfer processes, tax system, exchange rate that greatly influence the trade, investment, and stock and financial market.

He clarified that the exchange rate that was applied in the nineties was of 11 SP for one US dollar to enhance imports generated a significant impact by declining the value of Syrian exports as it aimed at promoting investment and the finance flow to the country.

General trade policies

The speaker revised the evolution of the general trade policies applied in the country. Since 1990's, gradual reform for foreign trade policies has been occurring and several trade agreements were signed such as GAFTA, the Free Trade Area with Turkey, etc. These in return require adopting several structural trade procedures such as rules of origin for some imported commodities.

Export policies

Furthermore, several trade policies concerning export were applied:

- Keeping foreign currencies generated by export;
- Establishment of The Supreme Council for Export, which supervising the work of The National Commission for Exports Development;
- Removing the compulsory exports control system on textiles exports.

Import policies

In this regard, multiple import policies were adopted. They include:

- Adoption of new custom tariff (Harmonised System) and modification of applied custom tariff. However, law tariffs on inputs and raw materials for industries and basic food are not yet in force.
- Trade barriers removal, in particular the negative lists or ban lists;
- Rules of origin;
- Allowing private sector to import food products that are not domestically available;
- Facilitation of custom procedures;
- Promotion of import financing through private and public banks;
- Cancellation of prior import license system for primary products that could be imported through a system of industrial allocations;
- Abolishment of the commission fees that were collected by the Foreign Trade Establishment on importing primary materials.

Agricultural trade policies

The speaker addressed the most important agricultural trade policies during the reference period.

Export policies

- Elimination of the fees applied to the conversion of hard currency earnings (Syrian Pounds), generated by the export of fruit and vegetables;
- Exemption the exports of olive oil, coming from the six largest companies, from the systematic controlling provision on exports by the External Trade Center;
- Issuing sheep export policies.

Import policies

- More liberalization for import of food products, agro-food industries inputs, and basic needs;
- Responsiveness to local market and allowing import of olive oil;
- Adoption of Sanitary and Phytosanitary standards;

Challenges & recommendations for Syrian agricultural trade

Mr Ismail concluded by highlighting the challenges faced by the Syrian agricultural trade and addressing to some related recommendations.

As he clarified, accession to the WTO, joining free trade areas, Euro-Mediterranean Association Agreement (EAA) and GAFTA are the most prominent challenges Syrian agricultural trade is currently facing.

The recommendations he suggested involve:

- The need to issue legislative framework for economic development appropriate to Syrian economic environment in concern to trade, competition, and corporation laws;
- Orientation towards value-added products for exports to e.g. Brazil, Japan, etc of processed products such as the olive oil;
- Promotion of more investments in agricultural and food sectors, to meet the increased domestic demand generated from changes in consumption habits and increased income;
- Enhancement and development of exports of products that have comparative advantage and high quality such as sheep, cumin, apricot paste, vegetables and fruits;
- Looking for new markets with greater potential earning for Syrian olive oil, e.g. Japanese, American and Canadian markets;
- Regarding the growing need for a commission responsible for export development, the establishment of such commission would help to enhance Syrian agricultural trade.

Syrian Agricultural Systems; In the Context of the Mediterranean Basin

As a complementary intervention to the presentation given by Mr Isam Ismail, Mr Rachid Doukkali presented a comparison between agricultural system of Syria and the other countries of the Mediterranean Basin.

As he pointed out, Syria ought to see these countries as its competitors owing to the fact that they have similar climatic conditions and resources; particularly in terms of land and water. In Syria the land distribution is 0.3 hectares per person, and water share is 1200 m³ per person. Regarding the increased demand of agricultural production, he stressed that Syria should give further attention to the growing problem of water scarcity and implement the proper related policies mainly for water rationalization.

Referring to rainfall index and percentage of irrigated cropping land, the speaker addressed that the rainfall in Syria is less than the required average; with a rainfall index of around 400 mm/year. In addition, most of the plantation land is marginal with low quality and low productivity. The farming land totals 30% of the overall land in Syria, which is considered the highest rate in Northern Africa and the Middle East excluding

Turkey. Most of the Syrian resources are employed in agriculture production, mainly for irrigated plantation, leading to highly increase the cost of agricultural investment.

In European countries of the Mediterranean basin, the agricultural sector shares a small percentage of their total economic income. On the contrary, the Middle East and North African (MENA) countries of the Mediterranean basin rely heavily on agriculture, though they lack resources. As for Syria, agricultural activities are a major income source and provide income for 20-25% of economically active population. In addition, the share of agriculture in total added value accounts for more than 25% of the gross domestic income (slide 4).

To have a clear vision about trade status of the Mediterranean countries, the expert gave some insights about the average growth of agriculture trade balance in the region during the last four decades (1965–2004). Mediterranean countries from the MENA tend to rely on external markets to fulfill their needs and requirements. Syria has improved its agriculture trade balance but yet is still dependent on foreign markets (slide 8). As he remarked, the MENA Mediterranean countries registered import growth rates higher than the exports rates during (1961-2003) and this is the opposite of the situation in France, Spain, and Italy.

Mr Doukkali turned to the discussion of agriculture income. As he mentioned, Syria and the MENA Mediterranean countries depend highly on workers for agricultural activities and little on modern technology. There is a heavy dependence on agricultural labor, therefore investments in agriculture generate low incomes leading to a decline in labor wage and income. As he suggested, declining the use of labor and increasing the use of modern technology and machinery should be taken into consideration to improve agricultural income, as well as to contribute to the alleviation of poverty.

As for literacy rates of adult population (slide 13), Syria has a good investment in human resources, Syrian adult literacy levels averaged 82.89 % in the period (2000-2004). However, this investment was not accompanied by a mirrored improvement in income.

To sum up, the speaker addressed that the growth of Total Factor of Productivity (TFP) in Syria declined during (1962-2002). Noticeably, a clear increase in agricultural labor was reported in that period, and growing exploitation of natural resources, but paralleled with regression of the total productivity of each unit of the total productive factors e.g. land, investment, per capita, water, etc (slide 17).

He addressed that regression is relative in comparison to the attained development in technologies in other Mediterranean basin' countries. Basically, the regression resulted from lack of resources, technology, or of adopting new technologies. However, Syria has witnessed an increased contribution of efficiency change to TFP growth in (1992-2002), (slide 18).

Discussion

The session Chairman Dr. Yahia Bakkour, Director of the Arab Region Center for Advisory Studies and Agricultural Development, thanked the two speakers and made an intervention clarifying issues and giving some conclusive notes pertaining the Syrian economy.

- Whether or not there was a trade balance, the Syrian government always insists on self sufficiency and self reliance essentially to supply the needed food
- He justified the decline of Syrian exports due to lack of marketing studies that serve to identify the appropriate international markets for Syrian production. In this

regard, he acknowledged the role of the NAPC in the country as a promoter and coordinator of the needed research to identify the marketing channels of Syrian tradable goods particularly of those having comparative advantages.

- As he noted, the developed countries in the world always seek their benefits in any international agreement regardless of other countries interests. As for example the aluminum production in UAE, for which it has a comparative advantage, but it was excluded from the WTO agreement to avoid its potential competition.
- He addressed the need to make the comparison in the study between countries or group of countries.

Mr Bakkour invited the discussant Mr Mohammed Zeineddin, Director of Agricultural Economy and Investment Department of MAAR, to note over the two presentations.

Mr Zeineddin presented on several key points included in the presentations.

- He assured that free trade process begun in Syria long time ago, but it was not applied as it should be. Recently, Syria has started seriously to engage the private sector in this process based on multiparty /pluralism economy.
- He agreed that the trade balance was negative, but he did not agree with the figures mentioned, as it seems inflated, therefore, he called for these figures to be revised carefully.
- In addition, he agreed that the majority of Syrian exports consisted of raw materials, but recently the situation has slightly changed to include some processed products.
- He indicated that the figures of the NAPC are conflicted with the figures of the Central Bureau of Statistics.
 - The NAPC director Mr El-Hindi made an intervention clarifying that the figures mentioned in the presentation are sourced from Central Statistical Bureau. The perception of difference only arises from their presentation and extrapolation.
- Mr Zeineddin pointed out that the local production of sugar (from sugar beet), which totaled between 1.2 to 1.4 million tons, covers less than 20% of overall population needs. Therefore, instead of the local production of sugar beet the new sugar factories should rely completely on the imported sugar.
- The private banks in Syria are still new, so there is no clear vision about their role at the moment.
- As he assumed, the mentioned number of land acquisition (3 hectare per person) disregarded Al Badia area.
- He remarked that the water scarcity problem is going to be reduced thanks to relevant studies carried out by the MAAR over conducting modern irrigation projects.

Water related issues were also addressed by the audience during the discussion. It was noted that the share of water for each person is 650-700 m³ and that overall Syrian water resources amount to only 16 billion m³. Concerning the possible impacts of exporting the value added agricultural products, which are basically water consuming crops. It was mentioned that in light of the scarcity of our water resources, that there were potential consequences of orienting towards enhance export of these products that would be considered as exporting our limited water resources.

Another set of comments from the audience focused the attention on reducing farm sizes, namely farming land fragmentation. Given the population increase, this increased problem should be treated with some care, especially in terms of its ability to limit the economies of scale and therefore in turn production volumes.

Session 4:

Comparative Advantages of Syrian Sheep Meat and its Supply and Demand, Mr. Samir Grad (NAPC)

Opening Remarks

Dr Nabi Rasheed Mohammed, Deputy Minister for Agriculture and Agrarian Reform, chaired the session on “Comparative Advantages of Syria Sheep Meat and its Supply and Demand”. A presentation with this title was given by Mr. Samir Grad, Chief of the Agro-Food Division at the NAPC. Supporting comments were provided by Mr. Carlo Cafiero, Professor of Agricultural Economics at the University of Naples, Italy and NAPC Thematic Advisor. The discussant was Mr. M Khamza, Director of the Agricultural Marketing Department of the MAAR.

Mr. Carlo Cafiero began expressing pleasure in being a consultant supervising the AFD's studies and research for the past five years.

He introduced the study addressing to its validity and exemplification of the good work the NAPC in agricultural policy. He also praised the study remarking that it is the result of the AFD's teamwork.

As he clarified, the study aims to contribute to rural development and food sector enhancement. He assured that the starting point of the study is to distinguish and define the Syrian resources and the environmental conditions in order to determine constraints that hamper the food and agricultural sector in Syria.

He stressed upon information availability as a significant source for any study, thus he called for make it obtainable indicating that the study will be enriched when the census results of 2004 are issued.

Introduction

The presentation illustrated the economic and social importance of the sheep meat sector from various perspectives at the national and international levels. It presented some insights on the supply and demand aspects as well as the comparative advantages and other related issues of this commodity. Furthermore, the presentation assessed the recent quantitative evolution of this commodity from 2001 to 2005. It introduced also the plan of the government to improve the production of sheep meat, in the light of the Syrian Agricultural Strategy. Finally, the presentation posited valid policy recommendations that deal with the requirements for improving effectively the efficiency of Syrian sheep meat sector.

Economic and social importance of the Syrian sheep sector

Syria is famous for a local strain of sheep called Awassi, which is mostly concentrated in Al-Badia (Syrian Steppe). The Awassi has evolved as a nomadic sheep breed through centuries of natural and selective breeding to become the highest milk producing breed in the Middle East. It has also high quality meat and wool.

As the speaker clarified, according to 2005 statistics in Syria sheep meat was the primary source of red meat and the second source of milk after cattle. Its substantial contribution accounted for 74% of the total red meat production and 44% of all Syrian meat consumed. Also sheep milk accounts for 32.5% of total milk production in Syria.

Sheep meat shares amounted to 77% of total value of red meat, 65% of the value of total meat, and 10% of agricultural production value. The value of sheep meat and milk contributed to 14.4% of the value of aggregate agricultural production in 2005.

Syrian sheep sector plays a central role also as of its important contribution to the provision of employment opportunities and as a significant source of income especially in Al-Badia, the Syrian Steppe, where the sheep business concentrates.

Syrian sheep meat enjoys a comparative advantage and is preferred internationally for its quality, especially in the Arab countries. As an export-oriented commodity, the sheep sector therefore forms an important source of foreign currency.

Sheep meat exports witnessed a substantial improvement in the quantity exported and the value share in total agricultural exports in the period 2001-2005. Exports increased from 5 thousand tons in 2001 to 68 thousand tons in 2005. In total agricultural exports, the share increased from 4.2% in 2001 to 16.1% in 2005.

The Syrian sheep sector: evolution in recent years

The speaker noted that the number of sheep heads increased at an annual rate of 12.3% in the period 2001-2005, from 12.4 million heads in 2001 to 19.7 million heads in 2005. Sheep meat production increased at an annual rate of 1.6 %, from 169 thousand tons in 2001 to 180 thousand tons in 2005. The Syrian share in world production of sheep totaled 1.4% in 2005. In addition, its export increased from 5 thousand tons in 2001 to 68 thousand tons in 2005.

Consequently, wool production increased at an annual rate of 11.6%, from 14 thousand tons to 22 thousand tons in the reference period.

Noticeably, there was a significant increase in the number of sheep heads and washed wool and a slight increase in sheep meat. This indicates that the sheep sector relies mainly on sheep breeding and milk production.

Internationally, in spite of its small contribution to sheep meat production, Syrian sheep ranked first in world export of live sheep meat (25.7% of the world total) in 2004; as well as first in sheep exports (67.3% of total sheep exports) in the Arab region. In the next year 2005, Syria ranked second (19.7 million heads) among Arab countries after Sudan (48.7 million heads) regarding flock size.

Importantly, the speaker focused on the government's plans to improve sheep meat concerning the Syrian Agricultural Strategy. He noted that the Syrian government promotes the private and public investments related to sheep raising and fattening. Therefore, the government follows up on a series of target areas identified by the Syrian Agricultural Strategy to improve production strategies and attain surpluses for export:

- Organize and protect Al-Badia.
- Provide services and establish infrastructure to improve such services.
- Improve the management of Al-Badia resources, production and breeding systems (intensive breeding).
- Supply fodder and improve the sources of fodder.
- Improve and protect the natural pastures through farmers' cooperatives.
- Develop sheep breeding centers to improve the national breed.
- Improve the management of pastures, sheep and water.

- Use substitute energy sources to protect pastures and plant cover (oil and gas).
- Improve the services related to animal production especially mobile veterinary services.
- Assist in product marketing.

Analytical framework

Mr. Grad clarified the analytical methodology used to analyze sheep meat sector and its commodity chain, as it is comprised of two policy tools: comparative advantages and supply and demand.

Comparative advantage of Syrian sheep meat

The concept of “Comparative Advantage” refers to the domestic potential to produce a commodity at a cost, which is lower than the international price. That is to say, specializing in producing commodities in which there are comparative advantages allows for an efficient use of domestic factors (land, labor, and capital).

The comparative advantages were estimated by using the commodity chain analysis approach in which the agents of this commodity chain are; breeders of the cooperatives and private sectors, intermediaries, fatteners, and traders (local market and exporters).

The tool used to analyze the comparative advantages is the “Policy Analysis Matrix (PAM)” (Monke and Pearson, 1989). PAM is used also to measure the social profitability of a production system, as well as to assess the impact of government interventions on a sector through the applied policies and highlight market distortions. The PAM focuses on the difference between “private” and “social” prices of production⁷.

The speaker explained the PAM structure and its absolute measures. It consists of 4 columns and 3 rows. The columns include the absolute indicators, which are the revenues, costs (tradable inputs and domestic factor) and profit. The rows indicate the evaluation of the aforementioned measures at private and social prices and the difference between the private and social values.

He followed by presenting the PAM for sheep meat and the related derived indicators as reported below.

The PAM of sheep meat exported to the regional market in 2006 (SP/kg)

Item	Revenues	Cost		Profit
		Tradable inputs	Domestic factors	
At “private” prices	259 (A)	56 (B)	132 (C)	71 (D)
At “social” prices	264 (E)	57 (F)	117 (G)	90 (H)
Divergence	-5 (I)	-1 (J)	15 (K)	-19 (L)

According to the sheep meat PAM, the private profit is positive meaning that sheep meat is competitive inside the country because the cost is less than the revenue. The positive social profit indicates that sheep meat has comparative advantage. The overall negative

⁷ For definition of terms see glossary at the end of the presentation

divergence points out to a transfer from the sheep meat commodity system to the rest of the economy.

The absolute measures of the PAM can be used to derive relative indicators to be used in the comparison among different commodity systems. These indicators⁸ are considered important to evaluate the efficiency of the commodity system from various economic points of view especially market distortions (taxes and subsidies). Such indicators are mentioned in the table below highlighting the domestic resource cost ratio and the social cost-benefit ratio as measures of comparative advantage.

The PAM indicators⁹ of the sheep meat exported to the regional market in 2006 (SP/kg)

1. Financial profitability (FP)	$D=A-B-C$	71
2. Financial cost-benefit ratio (FCB)	$(C+B)/A$	0.73
3. Social profitability (SP)	$H=E-F-G$	90
4. Domestic resource cost (DRC) ¹⁰	$G/(E-F)$	0.566
5. Social cost-benefit ratio (SCB) ¹¹	$(F+G)/E$	0.659
6. Transfers (L)	$L=I+J+K$	-19
7. Nominal protection coefficient (NPC) with by-product	A/E	0.980
8. Nominal protection coefficient (NPC*) for the main product only	A^*/E^*	0.970
9. Effective protection coefficient (EPC)	$(A-B)/(E-F)$	0.978
10. Profitability coefficient (PC)	D/H	0.786
11. Producer subsidy ratio (PSR)	L/E	-0.072
12. Equivalent producer subsidy (EPS)	L/A	-0.74

Analysis of the Supply of Sheep Meat

To analyze the supply changes of the product in response to policies, as the speaker pointed out, two approaches are used: the first is called “Structural Analysis” and relies on representative farm systems. The second is called “Econometric Analysis” which by means of a “Profit Function Approach” estimates the input supply and demand and a “Reduced Form Approach” (presented here), which means that the independent variables are not all taken into account.

The structural model is basically built on a combination of principles:

- Based on a geographical representation of the agricultural production of administrative districts and agro-ecological zones;
- Distinguishes farming systems according to farm size, cultivation mode (irrigated or rain-fed), sources of irrigation, and irrigation techniques;
- Allows analyzing the policy effects on cropping patterns (supply response), water and Labor use;

Mr. Grad briefed the audience on the Reduced Form Approach (Nerlove “adaptive expectation” model), which is implemented to assess the aggregate supply response of Syrian sheep meat, and the equation used.

Reduced Form Approach

Direct Econometric Estimation of Aggregate Supply (Nerlove “adaptive expectation” model):

$$q_t = a_0 + a_1 q_{t-1} + a_2 p_{t-1} + a_3 PF_{t-1} + a_4 DN_t + a_5 DP_t + u_t$$

❖ Where:

- q_t : aggregate supply of sheep meat.
- $a_0, a_1, a_2, a_3, a_4, a_5$: parameters to be estimated.
- Explanatory variables:
 - q_{t-1} : Lagged (past) production of sheep meat.
 - p_{t-1} : Lagged (past) wholesale deflated price of sheep meat.
 - PF_{t-1} : Lagged (past) deflated price of fodder concentrate.
 - DN_t : Difference in the total number of sheep heads.
 - DP_t : Difference in the wholesale deflated price of sheep meat.

because the decision of the farmers is based on past observations such as quantities and prices. The other variables, however, were included as per the state adjustment model.

Results of the Sheep Meat Aggregate Supply Estimation

Mr. Grad introduced the results generated by the application of the aforementioned regression equation on Syrian sheep meat. The table below shows that the magnitudes and signs of the regression coefficients coincide with the expected results. The aggregate sheep meat supply is positively correlated with the past sheep meat production, past wholesale price of sheep meat and the difference in the number of sheep heads between two successive years. The increase in these variables leads to a boost of the aggregate sheep meat supply. However, it is negatively correlated with the past fodder concentrate price and the difference in the wholesale price of sheep meat between two successive years.

As for the interpretation of the regression coefficients: if the past sheep meat production increases by one unit, for example, the aggregate sheep meat supply increases by 0.29 unit.

Item	Regression Coefficient	T ¹² Statistics	P-Value ¹³
Constant	87.9715	5.91	0.0000
Lagged sheep meat production (qt-1)	0.2932	2.49	0.0249
Lagged sheep meat wholesale price (pt-1)	0.0006	4.59	0.0004
Lagged fodder concentrate price (PFt-1)	-0.0052	-2.56	0.0219
Difference in sheep herd (DNt)	0.0072	3.36	0.0043
Difference in sheep meat wholesale price (DPt)	-0.0011	-2.75	0.0148

Adjusted R-Square: 0.89
 Short-run price elasticity: 0.29
 Long-run price elasticity: 0.29

Analysis of the demand of sheep meat

The speaker moved on to discuss the sheep meat demand, which is also analyzed, on the base of two approaches; the “Single Equation Approach” and the “System of Demand Equations” (demand systems approach). Both approaches have different advantages and disadvantages.

The “Single Equation Approach” serves to estimate directly the inverse demand, this approach depends on the regression equation used to estimate the sheep meat demand. This equation indicates the relationship between the retail price of sheep meat, the per capita consumption of sheep meat, the deflated per capita expenditure and the time trend.

Mr. Grad illustrated that the inverse demand equation was adopted to strengthen the goodness of fit criteria and to eliminate the problems of multicollinearity and serial correlation. The trend line was used to account for changes in tastes and other socioeconomic factors. The deflated measures were used to avoid money illusion. The regression coefficients have the same interpretation as the supply model.

Single Equation Approach	
– Direct Estimation of Inverse Demand – Econometric Estimation	
$P_t = b_0 + b_1 X_{1t} + b_2 X_{2t} + b_3 T + u_t$	
Where:	
❖	P_t – Estimated retail price of sheep meat
❖	b_0, b_1, b_2, b_3 – Regression coefficients
❖	X_{1t} – Per capita consumption of sheep meat
❖	X_{2t} – Per capita expenditure (deflated)
❖	T – Time trend
❖	u_t - Disturbance term

Demand estimation results of sheep meat

The table below presents the results of applying the aforementioned demand equation. The magnitudes and the signs of the regression coefficients coincide with the expected results. There is an inverse relationship between the retail price of sheep meat and the per capita consumption of sheep meat (an increase in the retail price of sheep meat leads to a decrease of the per capita consumption of sheep meat). In addition, there is a positive relationship between the retail price of sheep meat and the per capita expenditure of sheep meat (an increase of the expenditure per capita leads to a boost of the retail price of sheep meat).

Item	Regression Coefficient	T Statistics	P Value
Constant	709,789.59	5.81	0.0000
Per capita consumption of sheep meat (X1t)	-54,124.51	-5.81	0.0000
Per capita expenditure (X2t)	6.57	8.16	0.0000
Time trend (T)	-4,927.45	-5.35	0.0001

The second approach mentioned above, the “System of Demand Equations” is developed as “Linear Expenditure System (LES)”. This methodology relies on maximizing the

utility of the individual consumer (subject to the budget constraints) equating the first derivative of the objective function to zero and solving the resulting demand equations simultaneously. The LES is characterized by:

- Minimum subsistence or "committed" quantities, below which consumption cannot fall;
- Non-existence of inferior goods (goods are either substitute or complementary).
- a Linear Engel function assumption that indicates a linear relationship between consumption and income levels.

Linear Expenditure System (LES)

Demand Systems Estimation

❖ General principle: Maximizing utility s.t. a budget constraint

❖ The utility function: $u = \sum b_i \ln(q_i - c_i)$

Where:

> u = utility, b_i = parameter ($0 < b_i < 1$), $\sum b_i = 1$, $q_i - c_i > 0$, c_i = minimum subsistence or "committed" quantities below which consumption cannot fall

> The demand functions derived from maximization of the aforementioned utility function under a budget constraint constitute the LES:

$$P_i q_i = c_i p_i + b_i (y - \sum c_j p_j)$$

❖ $i = 1, \dots, n$

❖ $b_i > 0$, doesn't allow for inferior goods

❖ It assumes linear Engel functions

❖ p_i : Price, q_i : Quantity consumed per capita, y : Total per capita expenditure

LES is usually applied for the following food groups that comprise almost entirely of raw food commodities: sheep meat, cereals and legumes, all fruits, milk, and others (other meat, eggs, vegetable oil and fats).

The speaker outlined some observations and potential future research areas that arose from the implementation of the policy tools:

- Exploration of the weaknesses in the chain organization and coordination to improve the performance of the commodity system and its efficiency;
- Determination of the equilibrium price to assess its impact on the agents of the supply chain under various scenarios of production and consumption changes;
- Performance of sensitivity analysis;
- Assessment of the own-price, cross-price, income and nutrition elasticity;
- Future inferences;

Finally, Mr. Grad summed up several policy recommendations derived from studying the commodity chain of sheep meat and implementing the policy analysis tools. They are comprised of the following:

- Build a specialized market information system of all agents to improve the performance of the marketing chain.
- Enhance the vertical and horizontal organization of the sheep meat chain to improve the standard implementation and to achieve critical mass (this could be achieved by

the enhancement of the farmers' cooperative unions to form a production marketing system, to improve competitiveness and to increase the product efficiency through achieving the critical mass).

- Promote processing and product diversification to expand the consumption patterns and to increase the value added.
- Improve the fodder supply and veterinary services to decrease the costs, to increase the benefit to producers and to improve the income of sheep producers.
- Organize the export of sheep to comply with the allowed weights for export and to stabilize the domestic market.
- Introduce a policy for risk management for the agricultural sector, including livestock (especially sheep), to help maintain the sustainability of the sheep sector (barley price, drought).
- Coordinate export activities among the various custom departments of Damascus, Aleppo and Homs by holding size.
- Limit sheep exports to first class custom departments, which have sufficient feeding lots to conduct the required services before export.
- Comply with the agreement between Syria and Saudi Arabia that requires holding the sheep for 15 days before export to give them the needed vaccines.

Discussion

Underlying some notes, the discussant Mr. M Khazma, Director of Agricultural Marketing Department at MAAR, assured that the percentage of yearly exported Syrian sheep accounted for 60-65% of the total production in the last four years, which is equal to about 2.5 million heads of sheep. However, according to MAAR Statistics (Annual agricultural Statistical Abstract, 2005), the share of sheep meat export of total sheep meat production increased from 9% in 2000 to 44% in 2002 and then decreased to 38% in 2005. Therefore, it is necessary to make predictions about supply, domestic demand and export potential of sheep meat. This, however, requires incorporating other measures in addition to the model, subject the presentation, such as international prices and import demand, which are the focus of the Trade Policy Division. The suggested model can be used for domestic demand predictions, which can be the subject of other presentations. The suggested model is also not complete and needs to be adjusted in relation to other food categories, which are the subject of our current investigations. Therefore, the purpose of the presentation is to raise debate about the estimation method and to enhance the Marketing Department to acquire data about the interregional trade.

He called also for further clarification about promotion processing and product diversification to expand the consumption patterns and to increase the value added. Sheep meat and sheep fat were used in canned meat to improve taste. However, they need special care and treatment. Therefore, it is necessary to enhance this orientation in addition to sheep parts products especially for foreign demand.

Finally, he questioned the recommendation about the restriction of sheep exports to first class custom departments. In this regard, he focused the attention towards export difficulties emerging from such procedure. For example, export transactions delay the process and so heighten the potential harm and complexities for sheep during the exportation process. Accordingly, the focus here is not to restrict the export to one

department, but to improve the quality of all custom departments so that the export quality of Syrian sheep meat is boosted to a higher level.

Glossary of Terms

Private price: It represents the market price (actual price).

Social price: It is the price, which prevails without any distortions caused by policy interventions of the Government or market failures. This price relies on the import prices of tradable goods and the opportunity cost of domestic resources.

Parity price: It is price that equals to the international or border price at the parity point adjusted for domestic transportation, processing and marketing costs. It can be estimated as import parity price CIF (Cost, Insurance and Freight) and export parity price FOB (Free on board).

Revenues: They are estimated for the main product and by-product through multiplying the quantity by the price. Tradable goods (final goods and intermediate goods (inputs)): They are goods that are traded internationally. Domestic factors: They are items that are not traded internationally such as labor, capital and land

Domestic Resource Cost Ratio (DRC) is an indicator of the comparative advantage of the system. If $DRC < 1$, the system has comparative advantage, meaning that we use less value of domestic factors (labor, capital...) than the added value generated. If $DRC > 1$ the system has no comparative advantage, SP is negative. This indicator amounted to 0.56 for sheep meat pointing out to a strong comparative advantage.

Social Cost-Benefit Ratio (SCB) is another indicator for measuring the comparative advantage of the system. It takes into account the full cost of production instead of the Domestic factors only. It is a more appropriate ratio to rank the relative position of different systems when they have different cost structures (i.e. tradable and non-tradable), because the DRC is biased in favor of the system that has a high share of tradable items. This indicator amounted to 0.659 pointing out also to a strong comparative advantage because its value is substantially less than one.

P-Value points out to the smallest level of significance at which the regression coefficients are statistically significant. The smaller the P-Values are, the higher the significance of the regression coefficients.

e T-Statistics at the 5% level of significance (they have to be compared with the critical values) indicate that all regression coefficients are statistically significant at this level. The significance level can be identified from the P-Values.

Annex 1

4th National Agricultural Policy Workshop Program

09:30 Opening Ceremony

H.E. The Ambassador of Italy in Syria

H.E. The Representative of FAO in Syria

H.E. The Minister of Agriculture and Agrarian Reform

10:00 Coffee Break

10:30 Introduction to the Workshop

The NAPC and the future challenges of Syrian Agricultural Development

Mr. Atieh El Hindi, NAPC Director, MAAR

10:50 Global Perspectives for Supply and Demand for Agricultural Products

Mr. Hartwig de Haen, FAO Consultant

Discussant: Mr. Majd Jamal, Director of the General Commission for Scientific Agricultural Research

Chairperson: Mr. Isam El-Zaim, Director of the Arab Center for Strategic Studies

Chairman of the Syrian Economic Society

11:30 Discussion

11:50 Non-agricultural Activities in Rural Areas

Mr. Firas Haydar, Chief Rural Development Division, NAPC, MAAR

Mr. Mohamed Moussaoui, FAO Consultant

Discussant: Mr. Hassan Katana, Director of Planning & Statistics, MAAR

Chairperson: Mr. Erfan Alloush, Advisor to the Minister for Agriculture & Agrarian Reform

12:30 Discussion

12:50 Coffee break

13:05 Syrian Agricultural Trade: Recent Trends and Future Challenges

Mr. Isam Ismail, Chief Trade and Trade Policies Division, NAPC, MAAR

Mr. Rachid Doukkali, FAO Consultant

Discussant: Mr. Mohammed Zeineddin, Director of Agricultural Economy & Investment, MAAR

Chairperson: Mr. Yahia Bakkour, Director of the Arab Region Center for Advisory Studies & Agricultural Development

13:45 Discussion

14:05 Comparative Advantages of Sheep Meat and its Supply and Demand Analysis

Mr. Carlo Cafiero, FAO Consultant

Mr. Samir Jrad, Chief Agro-food Division, NAP, MAAR

Discussant: Mr. Mohammed Khazma, Director of Agricultural Marketing, MAAR

Chairperson: Mr. Nabi Rasheed Mohammed, Deputy Minister of Agriculture & Agrarian Reform

14:45 Discussion

15:05 Conclusion

Mr. Nabi Rasheed Mohammed, Deputy Minister of Agriculture and Agrarian Reform.

Annex 2

List of Participants

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