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# **The Contribution of Agriculture to the Process of Economic Reforms in Syria**

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## **Introduction**

Under the patronage of H.E. Dr. Adel Safar, the Minister of Agriculture and Agrarian Reform, the National Agricultural Policy Center (NAPC) in collaboration with the Food and Agriculture Organization of the United Nations (FAO) The Project "Sustainable Capacity Consolidation of the NAPC" organized an International Agricultural Policy Workshop (IAPW) on "The Contribution of Agriculture to the Process of Economic Reforms in Syria" at the NAPC premises in Damascus, on 1-2 July 2008.

The IAPW targeted in depth look the strategies that the agricultural sector shall pursue to contribute positively to Syrian economic growth in the forthcoming years.

Syrian economic development policies, in general, and Syrian agricultural and rural development policies, in particular, are actually on the brink of the need for major strategic reforms. The focus of Syrian economic policy over the need to diversify and encourage investment calls therefore for structural fiscal reforms, which shall be sustained by a steady economic growth.

In facing the current shocks of global food prices hike that sizably affecting food security of the country and shortage of water, a key driven factor for the agricultural production declining in the country, the policy responses to be taken by the government should mainly focus on promoting the public services and improving the agricultural sector. By far, they should be considered the key solution to a steady economic growth ought to come.

The two-day Workshop was scheduled to discuss several related issues for Syrian agriculture. The first day was dedicated to discuss the reform agenda of Syrian economy and its relevance to agriculture through two sessions. The first comprised two keynote presentations focused on the orientations of the tenth five-year plan (10<sup>th</sup> FYP) and the strategic role of agriculture and the risk dimension of social sustainability of reformed Syrian agriculture. The second session involved several topics on burning issues of Syrian agricultural and rural development. They discussed the situation of food and agriculture, impacts of trade policies, organic agriculture, quality improvement of agricultural products, and impacts of agricultural reforms on poverty and inequality.

Several themes were involved in the second day to explore the management of sustainable agriculture development in Syria. They included sustainability of water resources, policies to combat drought, the WTO challenges and opportunities, Syrian agriculture in the partnership agreement with the European Union, food security and high international market prices, and finally FAO approaches and initiatives to support member countries.

A selected group of distinguished international and national experts lectured at the Workshop. They shared views through active debates raised by wide audience took place in the discussion sessions following the presentations aiming to reach the best formulas that help the process of Syrian agricultural development.

Attendance to the Workshop included policy makers and public officers from the MAAR main Departments, other Ministries and various public establishments, academics from universities, and representatives of embassies and nongovernmental national and international organizations (the Workshop program in annex 1; presentations abstracts in annex 2; and the list of participants in annex 3).

The IAPW proceedings is available at the NAPC website: [www.napcsyr.org](http://www.napcsyr.org)

## Opening Ceremony

The IAPW was opened with the welcoming statements of H.E. Mr. Achille Americo Ambassador of Italy, H.E. Dr. Abedullah Taher ben Yahia FAO Representative in Syria, and H.E. Dr. Adel Safar Minister of Agriculture and Agrarian Reform.

- *Mr. Achille Americo, Italian Ambassador to Syria*

The Italian Ambassador to Syria, H.E. Mr. Achille Americo, expressed his pleasure to participate in the IAPW stressing the importance and relevance of this forum and hoping it 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. 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 the NAPC initiative must continue to be an instrumental part of this process.

Turning the attention to the FAO Project GCP/SYR/006/ITA, Mr. Americo stated that it has been carefully followed by the Italian Embassy and the Italian Government 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 more than 9 years, and has been marked by the very good results achieved.

Furthermore, he fully acknowledged the progress made by the NAPC as a National Centre for agricultural policy analysis and its contribution to a better understanding of the changes in the agricultural sector of Syria.

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 also wished the Workshop to be a fruitful occasion to enhance further the common understanding of the basic issues related to the agricultural development process.

- *Dr. Abedullah Taher ben Yahia, FAO Representative in Syria*

H.E. Dr. Abedullah Taher ben Yahia, FAO Representative in Syria, started his speech expressing his honor to participate in the inauguration of the IAPW that held within the support of the FAO Project GCP/SYR/006/ITA in collaboration with the Ministry of Agriculture and Agrarian Reform represented by the NAPC.

As he assured, the establishment of the NAPC represents an example of fruitful cooperation between the Syrian government, represented by the MAAR, the Italian government, and the FAO in the field of agricultural development. He confidently assured that the Center owns effective human resources and self-capacities enabling it to operate independently in the formulation and analysis of agricultural policies; as well as to develop the public awareness and knowledge on the problems of agricultural development and the involved policy issues.

He recalled that the FAO Project began in 1998, and was implemented in three phases each for a period of three years with total budget amounted to more than nine million US \$ and a good financial share from the Syrian government.

In the first phase, the project was so concerned to create conditions necessary for the establishment of the Centre. The second phase, with the assistance of international expertise,

focused on strengthening the capacity of the Centre through training of national cadres capable of conducting policy analysis. In the third phase, greater attention was given to consolidate and maintain the Centre sustainability and independently after the completion of the project to provide advice and analysis of agricultural policy. In addition, more efforts were placed to continue raising the efficiency of the NAPC, develop active foundations for research and studies, and developing of institutional and administrative capacity of the Centre, in particular in the field of communications and information exchange through modern methods.

As an indicator of the success of the NAPC, he assured that the FAO notes the growing interest of international organizations the Center gets, and he announced that the Organization is proud to cooperate with the Centre as a national counterpart in the implementation of FAO programmes and missions in Syria and the region. Moreover, he stressed that the FAO after providing support to the Center in previous years, it is now relying on the support of the NAPC and looking for a considerable future cooperation.

On the other hand, he addressed that the challenges facing Syria in its endeavor to shift to a market economy with positive social dimensions require more than ever the services and contribution of the NAPC in collaboration with their international counterparts working in the field of development in Syria.

The FAO representative reiterated his confidence that the country will benefit from the Center services to address significant issues affecting the agricultural development and help to take appropriate decisions for the good of the agricultural sector and national food security. In addition, the Centre is capable to give advice to deal with the current relevant topics to achieve sustainable development of agricultural sector, such as rising global food prices, the drought and sustainable management of natural resources.

Furthermore, he assured the NAPC could be a reference to determine the parameters of the national programme for food security, and to contribute in exploring appropriate solutions to tackle the issue of food security at national and regional levels.

Dr. ben Yahia concluded his intervention putting emphasis on the importance of the qualitative meeting, which is coming from the participation of a number of international and national experts to provide technical working papers reflect recent agriculture issues. He also hoped to witness useful and constructive discussions result in appropriate and viable recommendations.

Finally, he thanked the Minister of Agriculture and Agrarian Reform for his continued support for the NAPC and cooperation with the Organization. He also expressed his appreciation to the Project and the NAPC technical staff for their great success in preparing for this important workshop.

▪ *Dr. Adel Safar, Minister of Agriculture and Agrarian Reform*

H.E. Dr. Adel Safar, the Minister of Agriculture and Agrarian Reform, welcomed the audience to the IAPW, noting the significance of diversity of topics to be presented at the Workshop. Many of the themes deal with important and vital issues of agriculture aiming to promote economic and social policy orientations of Syria; help to reach to greater openness to the international community; and keep abreast of developments at the regional and international levels to enhance the march of development and modernization led by Dr. Bashar al-Assad.

The Minister stressed that the Syrian agricultural sector has been particularly important to the Syrian Government due to its vital role in providing food, contribution to substantial increase in the gross national product, promoting trade, and absorbing the labor force. These trends focused on the adoption of modern methods to achieve the desired development. Thus, the necessary macroeconomic and agricultural policy adjustments were taken gradually to keep up with developments at all levels and avoiding the negative impacts on the national economy in general and on the living standards of citizens in particular.

Accordingly, these policies have witnessed many changes, in response to rapidly changing global economic climate, enabling Syria to accomplish important steps in ensuring food security with sufficient quantity of most strategic crops.

As he clarified, the Syrian Government is implementing several agricultural development projects in all regions, the latest one is in northeastern region. They all aim to attain the desired development through land reclamation and community development, strengthening the role of rural women, establishing income-generating projects, provide loans to secure supplies of agricultural work, and building productive assets. As well as, the Government continues of developing appropriate policies complying with the recent shift towards the social market economy in promoting comprehensive agricultural development.

Furthermore, the Minister highlighted that Syria has worked to complete several agreements with sisterly and friendly countries to strengthen economic and trade cooperative relations. Whereas Syria joined the Greater Arab Free Trade Area, and it is placing intensive efforts for the signing of the Syrian European partnership agreement and resolve any difficulties encountered. Moreover, it follows up the formal request made by to join the WTO.

The Minister expressed his hope that the Workshop would deepen the discussion on the issues raised to benefit from the different views to help implement the future trends of Syrian agriculture as stipulated in the Tenth Five-Year Plan. Hence, it would serve in the formulation of long-term future scenarios enabling Syrian agriculture to respond to rapid changes in global economic developments.

He also called the crisis imposed by the recent upward increase of food prices and their causes, especially the use of various foodstuffs to process biofuels, exacerbate the negative impacts of global warming, and the significant rise of oil prices. The analysts and policy makers therefore should study carefully these issues and their impact on the long-term agricultural development plans.

The Minister concluded his address by thanking the Italian Government for its financial and moral support for developmental projects in Syria and the valuable assistance of the establishment of the National Agricultural Policy Centre, as well as promoting its sustainability. He also thanked the FAO for its efforts in supporting countries to improve their nutritional conditions and assist in the formulation of policies and strategies to achieve better future for humanity.

In conclusion, he wished the Workshop to achieve its goal, through the constructive and purposeful dialogue with a view to attain positive results to contribute to strengthening the Syrian orientations of scientific and practical policy.

## **The First Day**

### Syrian Economy and its Reform Agenda – the Relevance of Agriculture

#### **Session 1:**

- 1. Orientations of the 10<sup>th</sup> Five-year Plan (2006-2010) and the Strategic Role of Agriculture** (*A. El-Hindi, NAPC*)
- 2. Social Sustainability of Reformed Syrian Agriculture: the Risk Dimension** (*Carlo Cafiero, University of Naples - Federico II, Italy*)

The Discussion session chaired by H. de Haen, International Member of the NAPC Scientific Committee

#### **Session 2:**

- 3. The State of Food and Agriculture in Syria** (*S. Grad, NAPC*)
- 4. The Impact of Syrian Trade Policies on Agricultural Trade Performance** (*B. Hamwi, NAPC*)
- 5. Organic Agriculture in Syria: Option or Necessity?** (*F. M. Santucci, University of Perugia, Italy*)
- 6. Quality Improvement of Value Chain Products: a Multi-sectoral Approach; the Experience of MAI Bari on Olive Oil Production in Syria** (*A. Dragotta, MAI Bari*)
- 7. Agriculture and Economic Reforms in Syria: Impacts on Poverty and Inequality** (*B. Rocchi and D. Romano, University of Florence, Italy*)

Mr. Orfan Alloush, Advisor to the Minister of Agriculture and Agrarian Reforms chaired the discussion session.



## **Orientations of the 10<sup>th</sup> Five-year Plan (2006-2010) and the Strategic Role of Agriculture**

*Mr. Atieh El-Hindi, NAPC Director*

Mr. Atieh El-Hindi, the Director of the NAPC, introduced the methodology used in planning the Syrian economy. Starting from the sixties (1961), it was centrally planned with mid-term planning through a 5-year-plan, and as short-term planning through the annual plan. The first 5-year-plan was from 1961-1965, and the latest one is the 10<sup>th</sup> 5-year-plan, from 2006-2010.

Since 2000, the various institutions started to design their own long-term strategy for the coming 10 years, but no consolidated strategy has been designed for all economic sectors.

### **Changes that took place in the 5-year plans**

In response to some changes the lecturer addressed, since the 6<sup>th</sup> 5-year-plan (1986-1990), the 5 year-plan mechanism and orientations were modified to adopt the indicative planning approach in which only the general objectives and policies were designed, while the relevant details were left to various institutions from all sectors, with flexibility to initiate relevant modifications in response to emerging needs, aiming to enhance their contribution to the comprehensive development process, as well as to encourage economic plurality.

Thereby, planning based on the participatory approach was increasingly adopted, and the private sector was given an increasing role in the areas of production and marketing.

### **General objectives of the 5-year plans**

Despite variation in preparation mechanisms of the various 5-year plans, all of them had common objectives compatible with the political, economic, and social orientations of the country. The speaker summarized these objectives as follows:

- Enhancing the contribution of the agricultural sector in the GDP;
- Improving living conditions and ensuring the supply of affordable food commodities;
- Reducing the living standard gap between rural and urban areas;
- Increasing self-sufficiency in terms of main staples and adoption of the comparative advantage approach coupled with competitive value;
- Enhancing integration between the agricultural sector and other economic sectors; and
- Ensuring the supply of raw materials for local industries and export surpluses

### **Actions taken before the design of the 10th 5-year-plan**

Mr. El-Hindi pointed to main actions taken by the MAAR, noting a paper that was produced on "Agricultural Policies and Development Proposals", and was indorsed by the Cabinet in 2003. The document included all the related issues to agricultural policies as well as the required long-term executive programs.

In addition, an analysis of the current status of agriculture and irrigation was conducted for the period 1992-2003. In this analysis, a comparison was made between the planned objectives and actual implementation with respect to resources, production, and procedures. The analysis also revealed the weaknesses, strengths, and the challenges met by the agricultural sector indicating the following:

- *Main strengths:*
  - Attaining growth in irrigated area by means of public irrigation schemes and the increased investment in irrigation based on underground water, in addition to the increase of rain-fed cultivation of new reclaimed areas;

- Realization of self-sufficiency in terms of strategic crops (wheat, legumes, cotton, vegetables, fruit, olives and olive oil) and attaining more surplus, mostly for export;
- Increase the contribution of raw and processed agricultural products to the trade balance by 16-22%;
- Development of rural infrastructure; and
- Improvement of agricultural services (research, extension, training, health and veterinarian care)
- *Main weaknesses:*
  - Decreasing fertility in some areas;
  - Shortage of underground water accompanied with low conversion to modern irrigation systems;
  - Deterioration of natural grazing areas in Al Badia;
  - Continuity of agricultural holding fragmentation;
  - Incompatibility of applied rules and regulations with the agricultural development process; and
  - Mismatching between marketing, processing, export activities and production growth
- *Challenges facing the agricultural sector*

As the speaker noted, the agriculture and irrigation sector is facing internal and external problems affecting its performance and the development process. They include limited natural resources, a rapid growth rate accompanied with the lack of agro-labor opportunities, land fragmentation, limited financial resources, and a multiplicity of authorities responsible for the sector; in addition to high competition of the main producing countries regarding the agricultural subsidies they applied and other macroeconomic policy problems.

### **General objectives of the 10th five-year plan**

Mr. El-Hindi highlighted the general objectives of the 10th five-year plan as follows:

- Develop agricultural production and increase the economic growth rate in order to improve rural development, improve producer incomes, alleviate poverty and achieve food security;
- Improve natural resource use (land, water, forest, steppes) and enhance their sustainability;
- Improve production means and adopt modern technology to reduce cost of production and enhance human resource skills;
- Improve the credit systems for the development of agricultural production and attract Arab and foreign investments;
- Secure good quality and affordable agricultural inputs;
- Adopt pricing policies that increase production and improve quality and competitiveness; and
- Adopt structural changes capable of meeting the demands of modernization and development benefiting from the experiences and support of external agencies, as well as tending towards agricultural and rural development to enhance the producers' living standards and reducing poverty.

### **Investments**

Aiming to achieve the above-mentioned objectives, the government allocated 82475 billion Syrian pounds for the agriculture sector and 91128 billion SP for modern irrigation.

### **Future orientations**

At last, Mr. El-Hindi highlighted that the 10<sup>th</sup> 5-year-plan for social and economic development is the first plan to be designed under the social market economy. Therefore, it has been agreed upon to review its implementation in the last year with the aim of drawing lessons and making relevant modifications. Moreover, the general indicators of this plan have been included in the design of the 2025 strategy draft that was started recently.



## **Social Sustainability of Reformed Syrian Agriculture: the Risk Dimension**

*Dr. Carlo Cafiero, University of Naples - Federico II, Italy*

Dr. Carlo Cafiero started his lecture recalling that we are living in a changing environment emerging many crises; therefore, it is crucial for each country to find a way to build a secured future with reduced risks.

He outlined his presentation as structured into three parts. The first part introduces an overview of the economic and social cost of risk exposure; the implications of economic policy on risk exposure and then of this on economic behavior; and risk related institutions, in addition to the role of public policies for risk management.

The second part focuses on risk management principles and methods of risk analysis, in addition to “security funds” as an effective instrument to promote, assist and induce solidarity useful in tackling potential risk. Dr. Cafiero noted the consultation he provided as a professor in the University of Naples to the European Legation to establish the needed security funds.

The third part provides lessons and warnings from other countries’ experiences and the Syrian practice in risk management, and revises relevant risks for Syrian Agriculture.

### **PART ONE**

#### **The cost of risk exposure**

The expert clarified that the two major costs of risk exposure are the economic and social costs. The first one can be realized as resource misallocation, i.e. the case of water in Syria. Farmers mostly prefer planting the strategic crops (wheat, cotton, sugar beat, and tobacco), even though they are high consumers of water, because of the supported prices they enjoy enabling them to get significant and secured returns. The farmers therefore are not willing to lose this vital source of income. This also draws another cost by losing opportunities and delaying innovation and adoption of new varieties.

The social cost appears as stress due to the insecurity the people would feel, especially because no social security nets or insurance would support them against potential risks. In addition, the inequalities are exacerbated by risk exposure, whereas the rich are better equipped to face risk and only the poor will suffer much. The inequality therefore would be reflected as political tensions forming a considerable additional social cost in many countries.

#### **Impact of economic policy on risk exposure**

As the expert assured, economic policies would either increase or decrease risk exposure. Some policies would support efficiency vs. equity, or growth vs. quality of life. A recent example of a clear trade-off is that the opening of the Syrian market to trade in order to exploit comparative advantages has increased food imports, and consequently increased the exposure to world price shocks.

Therefore, one could ask, is the trade-off inevitable? The speaker assured it is not necessarily, because there would be other choices of efficiency-aimed policies that reduce the impact of risk exposure. As an example of good policy, the speaker mentioned the promotion of investments in infrastructures and services that lead to improve the social status and then support and foster economic development. As an example of bad policy, the speaker noted labor flexibility that allows changing one’s work and transitioning to another.

#### **Implications of risk exposure on economic behavior**

The speaker focused on three common economic behaviors mostly taken as reactions to risk exposure.

- Risk avoidance: altering the probability of events through delocalization, foregoing adoption of innovation, and applying Dercon’s risk “skewing” activities.

- Risk management: altering the impact of the event through taking earlier precautionary procedures to reduce the negative outcomes of potential risk. This includes diversification of income resources both in-farm and off-farm; establishing self-insurance through precautionary savings; following commercial insurance; and hedging the risk in the international financial markets (through contracts).
- Risk coping: by adapting the ex-post behavior, that depends mostly on credit (with usury) or the avoidance of investment

The first two types of economic adjustments are costly, while the third one is less costly.

### **Risk related institutions**

The expert addressed the availability of institutions addressing risks. These institutions could be classified as:

- Social cooperatives (mutual and private)
- Commercial insurance (private)
- Derivative contracts (market based)
- Banking and credit (public and private)
- Social solidarity funds (public)

Dr. Cafiero then summarized the role of public policy, assuring that economic prosperity can be associated with social protection and by considering social security not as a cost, but as a resource. Therefore, the state must promote social solidarity; provide public goods, especially information; prevent rent-seeking activities by promoting true competition; create a legal environment for risk-sharing activities; invest in public research and education; and seek equitable distribution of wealth, provided that the government should let the economy free to adjust.

## **PART TWO**

### **Principles of risk management**

Giving due attention to risk management, the expert talked about the principles and methods used to reduce risk. The fundamental principle he addressed is solidarity in the form of risk pooling.

As he clarified, because of the decreasing marginal utility of wealth, by dividing one big loss into many small losses, the total impact would be reduced by transferring the burden of the risk from the shoulders of one or few to those of many; from one year to many years (as savings); from one person to many persons (as insurance); and from one group to many groups (as redistribution).

Usually, spontaneous solidarity manifests itself **ex-post**, after the event occurs. While with risk management, we aim at creating the condition for solidarity to be expressed **ex-ante**, before the event occurs.

In Dr. Cafiero's opinion, economists are wrong when they say "utility cannot be interpersonally compared", since the "utility" that can be gained from one hundred additional Syrian pounds is ALWAYS worth more for a poor person than for a rich one. What is needed is to determine incentives to motivate (rich) people to accept the risk of a loss in exchange for an expected return. However, even that solidarity must be promoted through incentives in which the benefits always exceed the costs.

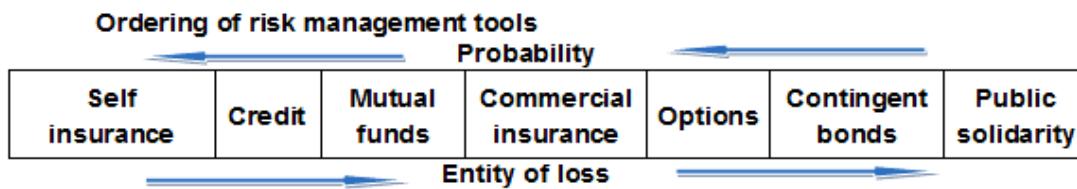
Once the *political* objective of providing solidarity is agreed upon, material resources ought not to be wasted, when it can be avoided. In this regards, economic analysis can provide very useful insights also in terms of efficiency. The objective of economic analysis of risk management mechanisms, therefore, should be that of providing prescriptions on how to obtain an adequate level of risk protection at the lowest possible cost to the whole society.

In addition, index insurance seems to open new perspectives for the role of government in information brokerage and certification. Moreover, innovations in finance (bonds, options,

swaps, etc.) cause the institutional settings to rapidly change, and this also opens up new roles and functions for public intervention. As for example, options for addressing the drought matter in Syria could receive investment in the international finance markets through bonds to reduce risk impacts by transferring the risk to investors through those tools.

As he explained, there are several procedures to reduce risk, while the tragic outcomes of it, however, may not be constricted. Social consolidation therefore can't help and other instruments are needed. In this situation, the most significant one is a "security fund", which is a set of instruments compatible with the type of risk including financial reserves and contingent contracts that would make the needed resources available in the event of an accident, a crisis, or a catastrophe.

The graph below is an example of a security fund which includes seven risk management tools applied in two dimensions (left and right) showing two probabilities of increasing or decreasing the loss.



### **PART THREE**

#### **Experiences and lessons**

Dr. Cafiero underlined facts drawn from other countries experiences. For example, the public involvement in subsidized insurance can be expensive and, when carefully considered, ineffective. In addition, provision of excessive risk protection (i.e., national solidarity funds) can be counterproductive and have immoral consequences. Due to that, farmers are left doing nothing, and people may act irrationally to get the funds.

Professor Cafiero stressed again that financial support should be used to greatly expand the scope for economic risk spreading into the global economy. He also addressed that the most valuable resources to be provided to the farm sector are a trustable social and political environment and sustained pace of research and innovation.

About the role that should be hold by governments, he said it is to do with what markets can never do, especially in the field of security and knowledge. Markets can never be efficient mechanisms of security and information generation and spreading, whereas the two are undepletable immaterial goods and should not be 'traded' as depletable goods.

On the other hand, competitive markets should be allowed to do what they do best: arbitrating and it should be avoided that governments directly run markets or that they crowd-out private agents.

#### **The Syrian experience**

Turning the attention to the Syrian experience, Dr. Cafiero confirmed the challenges and opportunities for Syrian agriculture opening to the global market. The "burning issues" of Syria are water and rural poverty. The later can be solved by improving farm incomes and rural living conditions and this is essential to revert the rural/urban migration.

While, the medium term issues are facing Syria include its competitiveness in foreign markets, where risk appears to be a crucial element. In addition, lack of credit has been one of the major hindrances to the process of innovation and diversification of Syrian agriculture.

He pointed to the forthcoming study of Mr. A. Saddidin (NAPC Staff) that demonstrates how releasing existing credit constraints would already generate sizeable positive effects on all the burning and medium term issues.

## **Relevant risks for Syrian Agriculture**

The lecturer determined three types of risks affecting Syrian agriculture:

**Natural risks:** Mainly the related to rain distribution that, in his opinion, should not be considered as risk anymore since it is predictable. However, if it is still considered a “risk” it is because there have been problems adjusting. The long-term response therefore should be adaptation and innovation research on drought resistant species and investment in irrigation. However, removing the causes that have prevented adaptation, as he assured, will induce a genuine shock, at least for the time needed to re-adjust.

**Market risks:** The related risk of input prices and procurement indicate a key role of the price mechanism as a scarcity-signaling device; Also, output price and collocation due to trade policies, promotion, and international cooperation. Here again, the removal of policies that have prevented adaptation will induce a genuine shock.

**Political and social risks:** This type is mostly fuelled by external factors (the role of sovereign national institutions) and exacerbated by internal factors. They are also due to uncertainty on the future value of investments, and unreliable enforcement of basic rights (property, entrepreneurship, etc.)

### **Conclusions: what is ahead?**

By using the metaphor of the government being like a wise parent who wants to see his children grow healthy and safe and to flourish, the speaker identified three phases in the process of economic development determining the distinct role of government in each:

- Infancy, in which the predominant role of the state is to provide direct protection;
- Adolescence, in which the state should provide education; and
- Adulthood, in which the government should guarantee freedom to choose and to react

As for Syrian agriculture, it is at the verge of leaving infancy and moving towards adulthood. Therefore, it is time to help Syrian farmers to release fully their potential.

Eventually, Dr. Cafiero presented his personal recommendations list:

- First, promote the creation of rural community groups and farmers associations (rural mutual funds). They would take care of the first “layer” of risk.
- Second, create and maintain an agricultural security fund (not agricultural subsidy fund) in order to provide protection to farmers, in case of the “tail risks” such as drought and market risk, and to consumers in case of strategic stocks. The exposure of such a fund to risk might be hedged on the global financial market.
- Third, provide subsidized credit in a selective way to promote adoption of water-saving crops and production of new crops for expanded international markets (organic, quality food, pharmaceutical plants, etc.)

### **Summary of Discussion**

The main points of the discussion can be summarized as follows:

- The bad reputation of the international financial markets is due to the related scandals. However, the financial bonds are still not widely used, and the information monopoly cannot be controlled by these instruments from people authorized to access to such significant information.
- As for the drought in Syria, it is a recurrent crisis. It is true that yearly rainfall is not predictable, but there are several precautions and procedures, which should be taken to alter the negative impacts of this problem. The key solution here is dividing the dangers of the drought throughout the world by the issuance of financial bonds for confronting drought, to be distributed in international investment banks, including Islamic banks, as was done in the case of California earthquakes in the USA.

- Syria is considered as an exporting country for food. The most important strategy taken by the Syrian government is to maintain strategic stocks, which is having an increasingly key role in securing the country's food needs, and it is the most important issue of the security funds.

# **The State of Food and Agriculture in Syria**

*Mr. Samir Grad, NAPC*

As a start for the presentation, Mr. Samir Grad, Head of the Agro-Food Division (AFD) of the NAPC, briefly introduced the third edition of the biennial report “The State of Food and Agriculture in Syria 2007”. The NAPC periodically publishes the SOFAS providing policy makers, researchers and stakeholders’ comprehensive information of relevance to agricultural development issues, and offers an updated review of agricultural plans and policies. In addition, it presents some results of the recent NAPC “Supply and Demand” study carried out by the AFD.

By means of descriptive statistical indicators, the SOFAS report analyzes the development of the agricultural sector over 1997-2006, with special focus on the period 2000-2006 to quantify the impact of different policies. In addition, the report measures the short, medium, and long-term effects of certain economic factors such as prices and income of the period 1982-2005.

The methodology used in this edition to analyze agricultural performance relied on national, Arab region, and international benchmarks. The national standards are the orientations of the Syrian Agricultural Development Strategy (SADS) and the tenth Five-Year Plan (FYP) for the period 2006-2010.

Eight chapters are implied in this edition covering the following topics: geography, climate and resources; agriculture in the national economy; agricultural inputs and supporting services; agricultural production; selected commodity chains; value chain of agricultural production; agro-food industry; and national food security.

The expert summarized the overall outcomes derived from the analysis for each chapter, as follows:

## **Chapter 1: Geographic location and climatic condition**

In general, Syrian agricultural production witnessed an overall positive development trend from 2000-2006. On the contrary, natural resources such as land and water are becoming increasingly scarce. From this situation has emerged the serious need to adopt policies, legislation and regulations governing and ensuring the sustainability of natural and agricultural resources.

## **Chapter 2: Agriculture in the national economy**

The macroeconomic and agricultural policies taken in the context of reforming the Syrian economy and trade liberalization have contributed to ameliorating the agricultural sector performance. Positively, the agricultural sector’s contribution to the national economy has increased in a variety of ways: gross output and GDP, providing job opportunities and improving income, providing food needs and fostering food security; and improving an enabling environment for investment in agricultural and agro-industrial fields.

In determining the major barriers constraining agricultural sector performance, this chapter identifies the following:

- Scarcity of cultivable land and land fragmentation, which is largely responsible for the difficulties in adopting modern agricultural techniques;
- Adverse climatic conditions, weather instability, and drought resulting in increased shortage of water resources;
- The related constraints of infrastructure, marketing standards, and administrative capacity; and
- Competition among economic activities on the labor force

### **Chapter 3: Agricultural inputs and supporting services**

The lecturer clarified that the Syrian government maintains the provision of agricultural inputs in sufficient quantities and appropriate qualities, as well as ensures the rationalization of input usage and accessibility especially for improved seeds and fertilizers. In addition, it subsidizes inputs, introduces modern techniques, and promotes agricultural support services.

### **Chapters 4 and 5: Agricultural production and selected commodity chains**

In light of SADS, the 10th FYP, policies, and international benchmarks, chapter four revises and analyzes the development and impact of area, yield and other measures on agricultural production during the period 2000-2006.

As observed, significant achievements had been made in the agricultural production arena as a result of increasing the annually cultivated area by 0.8% and the related yield of irrigated crops by 3-5% annually, while that of the rain-fed trees increased by 2.1% per year. In addition, the yield of the rain-fed crops increased by more than 1% during 2001-2005. These rates should be modified to reach 2% for irrigated and rain-fed crops, 1% for cotton, and 2% for wheat from 2006-2010. In addition, the area devoted to legumes and fodder crops increased in the agricultural rotation.

On the other hand, red and white meat production increased by 5% per year and milk by 4% per year from 2001-2005. These rates have been modified for the period 2006-2010 to become 2.4% for red meat, 4.3% for white meat, and 5% for milk.

### **Chapter 6: Value chain of agricultural production (VCH)**

This chapter analyzes the value chain of agricultural production. As explained by the expert it is comprised of agricultural prices, value related to agricultural production and inputs, agricultural value added, and indicators of agricultural performance. In addition, the analysis quantifies the impacts of the underlying factors of the value of agricultural production and its inputs, and assesses as well the price development and income elasticities of selected food groups.

### **Chapter 7: Agro-Food industry**

A comparison was introduced in this chapter between the public and private sectors in the agro-food industry. The public sector agro-food industry is negatively characterized by old processing lines, high production costs, and low profitability; substantial lack of advertising and marketing activities; inflexibility in the decision-making process due to some legislation and laws; movement of educated labor to the private sector; weak competitiveness and a reduction of market share.

At the same time, the private sector of the agro-food industry is mainly characterized by an active diversification strategy relating to size, form and attractiveness; active advertising and marketing policies; and high flexibility in meeting market demands.

With this respect, the report suggests considerable steps of importance to the government to encourage private investment in the agro-food industry including the establishment of an adequate database, conducting studies and improving relevant legislation and institutions. In addition, in the context of trade liberalization, government measures should be focused on conforming to quality standards of GAFTA and the EU.

### **Chapter 8: Food Security**

This chapter confirmed that substantial progress has been made during the 1996-2005 period in the efforts to achieve national food security. Mainly it was attained through increased availability of food for consumption, stability of food supply and improved accessibility to food. However, some constraints still affect the balance between the vegetal and animal sources to get the required nutrients needed.

In addition, self-sufficiency has been achieved in a variety of Syrian food products. In parallel, due effort is taking place in the country to enhance self-reliance of other important commodities, in particular the imported ones, aiming to improve the trade balance for imports and exports and hence Syrian economic efficiency.

Excluding animal resources, a substantial improvement in nutrient intake of calories and protein is recorded in the country. As a result, noticeable improvements in measures underlying the national food security were attained in the study period.

Mr. Grad concluded his lecture by suggesting a further push towards the integration of the Syrian market with the Arab and European markets in order to improve the Syrian economy's efficiency.

## **The Impact of Syrian Trade Policies on Agricultural Trade Performance**

*Mr. Bashir AL- Hamwi, NACP*

Mr. Basheer Hamwi, head of the Agricultural Trade Policy Division (TPD) of the NACP, introduced his presentation as a revision of the macroeconomic reforms and sectoral competencies attained in the country, as well as an assessment of the impact of these reforms and implementations of global and regional agreements on overall Syrian trade in general and on the agricultural part in particular.

Syria is a key country in the Middle East region due to strategic geographical location and relative commercial advantage. The total area is 18.5 million ha (5.9 million hectares are cultivable, with an irrigated area of 1.4 million ha, or 24%).

The state of Syria has adopted gradual economic reforms significantly covering all sectors. They include opening up the domestic markets, foreign trade liberalization, adoption of market mechanisms, and targeting integration with the world economy.

As for trade liberalization, it is intended to promote exports and stimulate economic growth to consequently increase social welfare and reduce poverty.

### **Policy framework reconsideration**

Aiming to enhance the competitiveness of the Syrian economy, Syria has carried out substantive policy reforms in the last few years at the macroeconomic level with special focus on the agriculture sector.

The most important macroeconomic reforms achieved include:

- Opening trade as a means to promote exports, stimulate economic growth and social welfare, and reduce poverty.
- Setting up fiscal and monetary policies designed to achieve harmony and stability in exchange rates; encourage the establishment of private and Islamic banking systems and allowing accounts to be opened in local and foreign currencies and to transfer funds within and outside the country; and promote the establishment of private insurance agencies. At the same time, policies were issued to modify the taxation system such as reducing income tax and increasing the minimum cash exempted from income tax. In addition, a modernization of the financial services was addressed recently, such as increasing the exchange of electronic money.
- Adopting new investment-enabling policies to encourage private sector participation in economic development, e.g. Investment Law No. 8 issued in 2007 that granted more incentives, guarantees and releases from taxes, in addition to adopting a single-window system to facilitate the needed procedures to start new projects.
- As for customs policy reforms: issuing Customs Law No. 38/2006 that includes eliminating barriers on customs clearance and simplifying customs procedures. Other measures have been taken also to rationalize the tariff system, reduce charges on imports, activate free trade zones, and exempt primary goods and inputs from customs fees.
- In the last decade, the Syrian trade sector witnessed rapid reforms focused on simplification of the related procedures and laws for import and export documentation, abolition of import restrictions, relaxing the import ban list to allow import of new commodities, elimination of all restrictions on exports, and exemption of agricultural commodities exports from taxes.
- The agricultural sector reforms were mainly directed to a gradual diminishing of state control on cropping pattern, output pricing, access to imported inputs, and marketing arrangements. In addition, several actions were taken to enhance agricultural trade through exempting all agricultural exports from taxes on income and profit, and abolishing customs restrictions and the banned lists of agricultural goods.

### **Impact of trade agreements on economic reform**

As the speaker indicated, several bilateral, regional and multilateral agreements were endorsed with other countries aiming to enhance Syrian trade opportunities.

The Great Arab Free Trade Area (GAFTA) noticeably facilitates Syrian market access and trade with 17 Arab member countries. In addition, a free trade agreement was also concluded with Turkey. The process for developing an Association Agreement with the EU was initiated, and preparations undertaken for joining the WTO, both of which are anticipated to accelerate the trade reform process.

### **Impact of Policy Reforms on Economy**

The expert then turned to consider the impact of policy reforms on the aggregate Syrian economy. As he addressed, the sound improvements attained in macroeconomic policies have advanced and supported overall national economic growth, particularly in this decade. As noticed, the growth consistently has averaged at about 5%.

Several indicators have signified the effectiveness of the undertaken policy reforms that contributed to the stability of the overall national economy. Significantly, they include a low budget deficit with relatively low inflation rates, stability of exchange rates, adjustment of foreign debt, and liquidity surplus in national banks.

### **Impact of policy reforms on investments**

The impact of policy reforms on investments reached the anticipated goals. In 2006 alone, 351 new projects were established with 161 of them invested in agricultural production.

### **Impact of policy reforms on agricultural trade**

Clarifying the major role of the agriculture sector in the Syrian economy, the speaker stressed that it is one of the largest contributors to GDP. Agricultural trade rose rapidly with a rate of 94% during 2000-2006 reaching a value of more than US\$883 million. Agricultural export volume grew by 14% annually with a value of more than US\$1.2 billion in the period 2000-2006. Accordingly, the share of agricultural trade to GDP improved significantly to reach 61% in 2006.

### **Impact of GAFTA on agricultural imports and exports**

The lecturer indicated that agricultural trade was particularly stimulated by the elimination of tariffs on agricultural products among GAFTA member countries. As recorded, during 2001-2005 the value of agricultural imports from GAFTA countries tripled from US\$85 million to US\$270 million. In the last five years, agricultural exports to GAFTA grew by 12%, reaching a value of US\$228 million.

### **Conclusion**

Mr. Hamwi concluded his presentation by reassuring that the considerable reforms taken by the Syrian state in the last decade aimed at modifying its economic strategy and to opening for further integration with the world market. This has resulted in shifting toward trade liberalization, and it called for relevant adjustments in the related legislative structure. The Syrian economy underwent considerable changes in the regulations governing almost all economic sectors. Consequently, the agriculture sector benefited the most from trade liberalization, which has been reflected in its advanced trade performance.

In addition, the implementation of GAFTA has positively affected the total and agricultural trade. Moreover, signing the Association Agreement with the EU and the application to join the WTO has accelerated trade reforms and has substantially improved Syrian trade.

## **Organic Agriculture in Syria: Option or Necessity?**

*F. M. Santucci, University of Perugia, Italy*

Dr. Fabio M. Santucci, Associate Professor in DSEEA/Faculty of Agriculture in Perugia, Italy, assured in the beginning of his presentation that organic agriculture (OA) is expanding nowadays everywhere.

The expert gave an overview of the evolution of OA in the world, which first emerged in 1926. For decades, OA has very slowly expanded without any public support. There has been no related legislation at all, no grants or credit schemes, any public applied research or extension programs. Just a few self-managed farmers' associations and private firms adopted OA and acquired the trust of the consumers.

In the 1970s, norms of OA production and incentives began to appear including a legislative framework regulating the OA; with grants and subsidies made available for different stakeholders in the agro-food chain; and related public research and extension programs have been activated.

As he clarified, the implemented positive and coherent political actions have enormously sped up the growth of organic agriculture all over the world in the last two decades. The OA have had great support since 1992 in the EU and in a few other countries, such as the USA, Japan, Argentina, Tunisia, Turkey, etc.

In addition, the consumers demand for organic foods (OF) steadily and rapidly grew in 2006 to reach in the US to 48% and in Europe to about 50%. The OF world market involves many countries such as Saudi Arabia, Egypt, Lebanon, Afghanistan, and others. Moreover, many kind of OFs are increasingly made available in the world market, such as lentil, olive oil, dairy products, wine, eggs, etc.

In 2006, the overall global area of OA exceeded 30 million hectares, with the EU ranked second after Oceania in regards to the aggregate invested areas. In addition, 700 thousand farmers are certified as organic producers, with a growing number of traders, plants, and shops of organic products.

Almost all the Mediterranean countries have OA with total areas approaching to 3.6 million ha. Noticeably, in Turkey and Tunisia, it is quickly growing, and Lebanon also produces organic olive oil.

In Syria, the expert noted that OA started a few years ago with growing areas reaching to more than 30 thousand ha. Syria finds itself at the early stage of development for several organic commodities such as cotton and olive oil that are already produced and marketed abroad, with the organic producers certified from Germany and exporting their production to the Netherlands.

It would be wrong to limit the focus only on these two products and only for the EU market, while other markets as well as the domestic market already have demand for organic goods. Furthermore, OF, if properly adopted on a wide scale, could reduce the environmental risks and the loss of fertile topsoil, which characterizes present agriculture in Syria. For these reasons, a coherent policy framework is required, to direct Syrian agro-food chains towards a more sustainable development approach.

In his opinion, OA is not just a dream or a new idea some people want to attain, but it is a solution for many problems the farmers are facing nowadays in several regions. Thus, OA is a necessity for Syria, taking into consideration the climatic changes, which are leading to a decrease in rainfall and a shortage of water resources, in addition to increased population growth.

In regards to water scarcity in Syria, the conventional farming system with chemicals (fertilizers and pesticides) is no longer reasonable, e.g. using “nitrogenous” fertilizer required more irrigation to avoid soil saltiness, since it is responsible for raising it up to 30%. Moreover, the strategic crops should be reconsidered because they are water intensive crops e.g. sugar beat, and it would be better to explore other alternative crops.

### **What is organic agriculture?**

The expert defined OA as it is the fusion of the MOST advanced knowledge about life cycles along with respect for nature, aiming for sustainable long-term development. It is different, therefore, from the traditional agriculture practiced in the past, and it is NOT *DO NOTHING* agriculture.

About the institutions acting in this field, he indicated the “International Federation of Organic Agriculture Movements (IFOAM)”, and he introduced the basic objectives of this organization, which highly matches the traditional farmer’s customs:

- Re-naturalization of the environment: by planting shrubs, hedges, and trees, in addition to building canals and stonewalls to reduce erosion. All of that will help catch rainfall, shelter predators and parasitoids, and have a beautiful landscape;
- Using appropriate techniques including rotations, mixed cropping, and agro-forestry to limit weeds and parasites, in addition to tending towards less mechanization, saving water and energy, and then reducing erosion and having a better natural cycle;
- Utilization of green manure and compost;
- Developing biodiversity for animals and vegetation;
- No genetically modified organisms (GMO) species;
- Adopting production systems compatible with animal welfare and the environment; where mostly, the productive animals are rudely treated, while domestic pets are very carefully regarded;
- Reduction of plastics and stopping the use of synthetic chemicals;
- Applying appropriate storage, processing, and packaging; and
- Managing fair trade and intelligent consumption (pay more, eat less, spend the same, and be healthier); whereas obesity, allergies, and diseases linked with bad nutrition have increased everywhere, even in Syria, the average calories consumed increased from 2800 to 3800 per person.

### **Should governments support organic agriculture food systems?**

The expert agreed that support of OA means we support health, biodiversity, food security, etc. As some people insist, OA has come to be a necessity nowadays, due to the growing awareness and increasing concern being given to the following issues:

- Reduction of pollution and hazards
- More attention to food safety and nutritional aspects of health
- Other public goods: biodiversity and animal welfare
- Food security, since organic systems are more resilient
- Too much water and energy used by conventional agriculture
- Too many hidden and open subsidies received by conventional agriculture
- Domestic and international market opportunities through certification

Relying on the above-mentioned key concerns, the lecturer stressed that governments of developing countries should support organic agriculture food systems. Therefore, the logical process the Syrian government should adopt to attain integrated organic agricultural policy is:

- Presenting the situation of organic agric-food systems (production, processing, trade, research, services, etc)

- Determining priorities and future objectives and strategies: where to be within 5-10 years, and how to get there;
- Identifying instruments and addressing regulations and resources (grants, loans, subsidies) for the various stakeholders;
- Following up, monitoring and evaluating the role of public institutions, civil society organizations (CSOs), and private profit-oriented firms;

### **Areas of intervention**

In this respect, the expert addressed that the required intervention of the government should be oriented to issue appropriate legislation regulating the certification and accreditation of organic agriculture, in line with the avoidance of conflict with other policies. In addition, a shared responsibility should combine public institutions with the local community. Thus, the government should provide the needed activities such as extension and training for farmers, education at university level, scientific research, and financing. It should also maintain the role of forecasting domestic supply and demand, and anticipating foreign trade through the related institutions.

### **Conclusions**

Closing his presentation, Dr. Santucci outlined his suggestions for Syria that started by FAO Project 011 for Organic Farming a process that could lead to substantial improvements in this field. The crucial points he indicated:

- Ecological conditions for now and in the future require a more sustainable approach to production;
- Economic conditions impose a better use of public resources;
- Domestic and external markets demand more organic products;
- The engagement of public institutions should be strengthened;
- CSOs and private firms should be further encouraged; and
- Links with other institutions should be improved (industry, trade, tourism, health, education, etc.).

He finally addressed the need to promote the role of the private sector and the local community to assist in improving OA, which requires more efforts integrated by and with public and civil authorities. He also stressed the need to increase people's hygienic awareness.

### **Summary of Discussion**

In regards to the interventions made by the audience and the questions they raised, the expert replied with the most important points outlined below.

- The rational support of governments is always needed to motivate appropriate practices or to reduce waste, as for example the unwise decision of producing bananas in plastic houses in Italy. Rich countries can easily provide the needed support to organic agriculture, but not all of them do that e.g. New Zealand is the only country in the world that does not give any agricultural support.

OA is a long-term objective, because it is slowly growing and needs time to be adopted by the farmers. They were gradually taught to use chemicals, and also they need to be gradually taught to give up using these materials.

- About the productivity of OA; the comparison between traditional and organic farming productivity should take into consideration drought and rainy years. In fact, in dry years even traditional agriculture will face difficulties and have decreased yield. Precisely, with the availability of appropriate conditions, OA would attain better outcomes. In traditional

agriculture, even when farmers pay much for chemicals and other inputs they may get bad outcomes under bad conditions. On the other hand, we should take into consideration quality differences of traditional and organic agro-products. For example, the traditional apple contains more water than the organic one, which has more vitamins and dry substances; therefore, it can be stored for a longer time (for 3 weeks out of refrigerators).

The key issue, the expert explained, is to use a reliable indicator reflecting the real value of the nutritious substances. Thus, it is better to use the indicator 'dollar per gram' of dry substance, not per kilogram of the whole product.

- In regards to the OA certification cost, it is very high and not feasible in Syria (USD\$1000-2000 for each farmer), while in Italy it costs only USD\$100-150, based on the farm size.

As he addressed, there must be a public Syrian institution responsible for issuing the organic certification at a lower cost, such as the GCASR, MAAR (as in Denmark), or other specialized organizations.

- The decrease in OA production numbers in Morocco and Egypt between 2005 and 2006 is due to the methodology used in collecting statistical data. Before 2006, the wild land containing champignon and herbs were regarded as OA areas. After, only the specialized farms in organic production were considered.
- According to a study carried out by the NAPC, Syrian consumers are willing to pay more for buying 'baladi' products (which are similar to organic products), since people are terrified of chemicals used and prefer high nutritious and healthy food. We should also notice that the cost of OA production, processing, and distribution decrease when the productivity increases. In Italy, for example, sometimes the organic products have prices less than the non-organic products, and they are available everywhere.

## **Quality Improvement of Value Chain Products - A Multi-Sectoral Approach; the Experience of MAI Bari on Olive Oil Production in Syria**

*Dr. Alberto Dragotta, MAI Bari/Italy*

Dr. Alberto Dragotta, Coordinator of Project “Quality Improvement of Value Chain Products for Olive Oil in Syria”, started by introducing an overview on the Italian Mediterranean Agronomic Institute (MAI-Bari) as the operating facility of the “International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM). MAI- Bari was the first institute to be created, together with the one in Montpellier, and it enjoys the privileges of extra-territoriality attributed to international organisations ruled by the Republic of Italy.

As he clarified, the mission of MAI-Bari is that of implementing the institutional goals of CIHEAM in the sectors that have been assigned to it. The MAI philosophy is to enhance cooperation and integration for education and research in order to attain sustainable agriculture and rural development in the Mediterranean countries.

Within this respect, MAI cornerstones are the programmes of international co-operation of development and specific requirements of different territories and national economies of Mediterranean countries. In this framework, MAI carries out activities in education of high-ranking officials; implementing applied scientific research; and promoting cooperation projects.

The main fields of activities adopted by the MAI covers natural resources management and protection of the environment; improvement of plant and animal production techniques; rural development; agricultural and food policies; agricultural and agro-food business management; and information science.

### **Project key information**

Dr. Dragotta outlined the mission of the Project that started in 2004, and funded by the Italian Ministry of Foreign Affairs with a total sum of 1,916,969 euro, and the Syrian counterpart with a total sum of 270,000 euro. The implementing agencies are CIHEAM & MAI-Bari of Italy and the General Commission for Scientific Agricultural Research (GCSAR) of Syria.

The Project focused on three working packages including upgrading and updating lab equipment for olives/olive oil; supporting multi-disciplinary training for trainers and stakeholders in Italy and Syria; and designing a national strategic plan for olive oil quality improvement.

Justifying the focus on olive oil quality, the expert said it is highly needed for getting the value added on the product, a higher price especially on retail, and higher export potential. On the contrary, the low-quality olive oil gets a low price, especially when exported, and it can be stored only for short time, which is by far a crucial matter for Syria. While the usual amount of low-quality Syrian olive oil is over 70% of total production, the estimated olive oil surplus by 2010 will reach between 23,000 up to 85,000 tons.

To produce high quality olive oil, therefore, the product should meet international regulations and laws, the desire of purchasers, and different market targets; in addition to adopting international standards based on sensory characteristics and chemical parameters, the origin or place of production, traditions, etc.

### **Olive oil production chain**

As the expert explained, the olive oil production chain is affected in the first place by ecological and agricultural factors including variety, agricultural practices, pest control, and harvesting. In second position are technological factors relating to pre-milling, milling, and storage.

Mr. Dragotta also addressed the responsibility of MAI-B is to provide technical support through training and research within a package of integrated activities, taking care of the

environment, food security, quality production, and extension. The GCSAR in turn provides the Project with the needed facilities through its departments.

The Project, based on SWOT analysis, explored the olive oil production related biotic factors including pedo & climate, pests, and olive cultivators; and human factors concerning habits, know-how, skills, assumptions, etc, and involving farmers, millers, and traders. Moreover, the analysis covered main internal and external factors affecting the whole process of producing this product.

The analysis of internal factors identified several points of strength such as favorable pedo-climatic conditions, landmass and high production. In addition, Syria enjoys a strong tradition in olive cultivation going back more than 2000 years; most of olive growing areas really vacated to organic production; the presence of 65 local olive species produced in olive nurseries expanded all over the country; and the availability of a high number of mills. Moreover, the local government places olive oil as one of the priorities for the country.

While the identified weak points mainly include:

- Lack in training and information for farmers (farming techniques, pest management, etc), for millers (extraction technology, storing, panel test, etc); and for traders (panel test, market strategies, olive oil quality);
- Difficulty in obtaining complete oil analyses, though laboratories are available but not upgraded and personnel not sufficiently updated;
- Finally, the Syrian olive oil it is not very well known by foreign consumers (promotional aspects), in addition to difficulties in having some required packaging.

The external factors analysis determined opportunities and challenges to Syrian olive oil production. The opportunities signify increasing consumption of organic olive farming; increasing consumption in new emerging countries, e.g. Far East emerging markets; and the multi-functional aspect of this product. On the other hand, the challenges affecting the sector relate to a high quality improvement rate in traditional competing countries, particularly the two main competitors Spain and Italy that playing an important role in olive oil supply and pricing. In addition, new countries have started to produce this product with new technologies.

### **National strategic plan for Syrian olive oil quality improvement**

The expert turned the attention to the actions taken by the project to improve the quality of Syrian olive oil, referring to the National Strategic Plan including:

- Environmental scan focusing on potential high quality stakeholders (millers + farmers + traders) in order to get the main key data to study the possibility of locating a potential “olive oil quality network”; and
- Applied research and interdisciplinary activities to lead to concrete initiatives supporting the beneficiaries

These activities were realized through specific surveys, training in Syria and Italy, demonstration activities, Project promotion, and awareness-raising activities.

Furthermore, the Project carried on several procedural activities relating to olive oil quality and germoplasm characterization; establishment of an integrated network with operational Pilot Groups; setting a plan for Syrian olive oil quality improvement; and olive byproducts disposal and defining of ecologic maps.

### **Rural development**

The Project has also promoted initiatives focusing on rural development activities in the Idleb region, fostering as well the creation of the first Syrian LAG (local action group) involving both private and public institutions/partners.

### **Main Impacts at National Level**

Eventually, Dr. Dragotta concluded the main impacts of the Project at the national level:

- National Syrian standards for olive oil and table olives can be now adapted to the European ones (proceedings started in 2005).
- New analyses for olive oil quality are possible and new fees are applicable for the oil chemical analyses both supporting private Syrian sector and public quality control units with collaboration with the Ministry of Commerce, through accreditation of the GCSAR laboratory by IOC (Inter-Oil Corporation).
- Inter-ministerial synergies between the Ministry of Agriculture and other Ministries (Ministry of Environment, Ministry of Industry, Ministry of Economy) have been initiated.
- The role and competence of GCSAR as a support for the Syrian Ministry of Agriculture has been strongly empowered.
- Pilot experience in high quality production and common storage was provided.
- Italian olive oil firms have established strong contacts with Syrian exporters (ref. GIOTEC Damascus 2006), and contracts have been signed for virgin olive oil purchase for hundreds tons.
- Accordingly, it is possible now to produce Syrian olive oil able to satisfy the European demand concerning the quality standards.
- Private Syrian sector is planning quality improvement via specific pilot initiatives involving all stakeholders, where the GCSAR has already asked for technical advice through the Italian Project.
- The first private producer union in Syria has been progressing.
- A multi-disciplinary and modular national plan for improvement of Syrian olive oil quality has been designed and is ready to be implemented.

## **Agriculture and Economic Reforms in Syria: Impacts on Poverty and Inequality**

*Dr. B. Rocchi and Dr. D. Romano, University of Florence/ Italy*

Dr. Donato Romana<sup>1</sup> began the lecture pointing to the report “Income Distribution and Poverty Impacts on Selected Policies in Syria”, as a reference for this presentation. Dr. Benedetto Rocchi<sup>2</sup> carried out the report in collaboration with the Rural Development Division of the NAPC.

The main objectives of the study, as he noted, are to apply technical analysis and simulation to define several potential policy reform scenarios. The tool used in this simulation is the social accounting matrix (SAM), which is an inclusive means used to record all the actions done in a certain economy, and it can be used to predict the outcomes of applied reforms in a particular sector. In this study, he commented, the SAM of the Syrian economy built by the NAPC would be considered the only comprehensive economic model in Syria, and it is a great achievement attained by the Center. Still, the Statistical Central Bureau CBS seeks to examine the possibility of setting up such a matrix that is reliable for the study of poverty.

In this paper, the SAM is used to explore rural vs. urban household accounts and income deciles<sup>3</sup>, in addition to activities accounts in agriculture and food processing.

The policy simulation assessment focused on the impacts of the recent orientation of the Syrian policy reform towards a social market economy regarding poverty and inequality. In addition, it weighs up the impacts of the changing environment, e.g. soaring food prices, on poverty and inequality.

### **Definition of policy reform scenarios**

Aiming to make changes in existing policies towards a less distorted environment, three virtual policy scenarios are defined in the study, combining in different ways the suppression of three current policies for food and agriculture:

1. Dropping subsidies to agriculture and food processing production
2. Reducing by 20% the price of strategic crops
3. Abolishing the Price Stabilization Fund (PSF) that provides food consumption subsidies

### **SAM structure**

The lecturer clarified that the main sources of information for disaggregating the reference national accounting matrix (NAM) for Syria are the following:

- a) Statistical Abstract published by the Central Bureau of Statistics (CBS, 2005),
- b) International Monetary Fund country report for Syria (IMF, 2007),
- c) The final report of the FEMISE Research Programme Study on fiscal impact of trade reform in Syria (Lucke, 2001), and
- d) The CBS survey on household budgets.

The expert noted it is not enough to set scenarios when we make reductions or cuts for some means or state agreements, but we should ask how we could use the savings realized from them. Therefore, when using SAM we need to assess alternative uses of budget savings to define increasing investment by the fiscal deficit reduction; increasing public expenditures

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<sup>2</sup> Professor in the Department of Agriculture and Resource Economics- University of Florence/Italy, and a FAO Consultant

<sup>3</sup> Deciles rank: A rating, usually of performance, on a scale of 1 to 10 where 1 is best, 10 is worst.

proportional to the current composition; and increasing direct transfers to rural households. Thus, nine relevant possible scenarios were suggested.

Then he introduced the three scenarios of redistribution of the chosen policies, in slides 7, 8, 9, 10. As he explained, SAM is organized into three columns to assess the policy reform impacts on output, income, and poverty forming nine possible scenarios. The positive figures indicate the positive effects of the scenarios on outputs, income, poverty and other indicators, while the negative figures signify reductions in the index. Thus, under the poverty column, the negative figures show a significant reduction in poverty attained by the assumed policy reform.

According to this analysis, the most important impacts derived the suggested policy reforms can be summarized as follow:

1. Both the elimination of subsidies to production activities and the cut of prices for strategic crops show a potential positive effect on the Syrian economy leading to economic growth.

- All alternative uses of resources previously allocated in the considered policies generate a multiplicative effect exceeding the negative direct impacts on household incomes included in the vector of exogenous shocks (decrease of incomes in real terms for changes in prices and for reductions in the income accruing to factors).
- The elimination of subsidies to production activities seems to determine the largest increases of output and income. These general impacts result in a small reduction in poverty (holding the population constant).
- The multiplier effect is larger for 'closure rules' corresponding to deficit reduction and to increase of transfers to households. Even though the impact on the structure of the economy caused by the two alternatives would likely be completely different in the long run.

2. The effects simulated for the third policy scenario (elimination of PSF) are more controversial:

- The elimination of subsidies to food consumption generates an increase of poverty whatever the 'closure rule' adopted.
- Only the exclusive destination of financial resources set free to the increase of transfers to households seems able to maintain substantially unchanged the level of poverty. In fact, the direct (monetary) support to household incomes generates an expenditure increase large enough to counterbalance, through the multiplier effect in the whole economy, the initial cut of real incomes due to the elimination of food subsidies
- This is true notwithstanding the vector of initial shocks (increase of transfers is less the real income reduction due to the elimination of food subsidies) resulted in negative figures for about half of family groups (mainly in the rural area).

As for the impacts of the virtual policy reforms, the expert underlined the main findings:

- On output: The elimination of subsidies is the policy reform more likely to generate an increase in output. The positive effects on poverty seem to be generated by the "activation" of the economy via the multiplier effect.
- On income: The use of budget savings to increase transfers to households shows the larger impact on the incomes of poorer households.
- On poverty: Only the use of budget savings to subsidize household incomes is able to counterbalance the negative effect on poverty of the PSF elimination, this is true only for the urban poor. Considering that, the simulation assumes that the distribution of transfers among households would be the same observed in 2004.

It is quite clear that the implementation of a reform with such a large social impact would require a careful design of distribution of resources among social groups, according to equity criteria. A model like this could support the design of "compensative" transfers.

## **Soaring cereal prices: redistributive effects**

Referring to slide 11, the expert explained that reading the table by columns gives the redistributive effects of for each policy scenario inclusive of cereal prices increase.

The redistribution process is presented as a zero-sum game, given that equation accounts only for *redistribution* (changes in *relative* position), excluding the income increase due to multiplier effect. Consequently, the absolute redistributive effects sum to zero. The total of positive values (last row) accounts for the *magnitude* of the redistribution implied by each exogenous injection.

The signs of figures identify *winners and losers* in the redistributive game, while percentage shares help to assess in which extent redistribution affects different household groups.

He addressed that all scenarios show the largest part of negative redistributive effects for rural households. The use of budget savings for compensative transfers seems more able to spread positive redistributive effects among deciles even if only in the urban context.

With compensative payments, however, the scenario of PSF suppression shows a larger concentration of positive effects for richer urban households that don't use food subsidies.

## **The impact on poverty of soaring cereal prices**

As the speaker assured, the recent sharp increase in international prices for food commodities should likely have a relevant impact on poverty. As shown in slide 12, the impact on poverty of alternative policy scenarios is combined with a hypothetical 100% exogenous increase in the price of cereals.

Through the analysis of forward linkages, the increase in cereal prices has been transformed in a general increase in prices of all commodities. The direct impact of increases in prices has been then transformed in a real income decrease for each household group, according to the expenditure composition.

Therefore, the increase in cereal prices negatively affects the poverty impact of policy reforms, leading to increases of the poverty index also in the scenarios of subsidy elimination and reduction of prices of strategic crops.

Again, only a system of compensative transfers to households seems able to reduce negative impacts on poverty, showing the only negative value (reduction) also in the scenario with increases in cereal prices.

## **Conclusions**

Dr. Romano addressed the estimated SAM for Syria is a suitable tool for policy impact simulations. Then he concluded his presentation by noting three main axes:

- **Policy lessons:** Many policy lessons can be derived from the simulation exercise mostly stressing on the related crucial role and influence of overall strategies for government budgets on the outcomes of sectoral policies; the fundamental importance of output growth for poverty reduction; and the existence of structural asymmetries in income distribution (e.g. rural vs. urban).
- **Limitations:** The model used is a static model that can be applied to only short-run impacts; in addition, the classification of household groups by deciles may change as a consequence of simulated policies.
- **Future developments:** The expert assured that it is possible to update the SAM structure of the NAPC in 2010 by renewing its data in order to update the policy results. It is possible also to rebuild the questionnaire carried out by the NAPC in collaboration with other institutions, as for example to update previous studies such as "poverty in Syria" that was held by the CBS and UNDP of Syria. He added, whenever the information is more detailed, the results attained would be more accurate, taking into account that SAM is a changeable "fixed price" model.

Moreover, the expert suggested other relevant domains to complement the SAM of Syria including: analyzing less 'extreme' alternative policy mixes; the impact of debt service on production loans to HHs; and the decrease in oil production and its impact on foreign exchange and hence on accessibility to international food markets. It is also possible to adopt alternative classification criteria for the households sector (sector of occupation of the reference person, education level, composition of the household's total income).

Furthermore, it might be also used to assess regional disaggregation of the Syrian SAM and to measure the Computable General Equilibrium (CGE<sup>4</sup>), as well as to define the impact of an exogenous shock.

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<sup>4</sup> CGE: a class of economic model that use actual economic data to estimate how an economy might react to changes in policy, technology or other external factors.



## **Second day**

### **Management of Sustainable Agriculture Development in Syria**

- 1. Sustainability of the Exploitation of the Water Resources of Syria and its Implications for the Future Development of the Irrigated Agriculture** (*J. A. Sagardoy, FAO Consultant*)
- 2. Approach and Policies against Drought: the Experience of the IAM Bari in Syria** (*L. Cavestro, IAM Bari*)
- 3. WTO and the Challenges/Opportunities for Syrian Agriculture** (*N. El-Amin, FAO RNE*)
- 4. Agriculture and Euro-Med Association - an Assessment of Preference Margins: Lessons for Syria** (*J.M. Alvarez Coque, Polytechnic University of Valencia, Spain*)
- 5. Food Security and high International Market Prices – Issues of Concern for Syria** (*N. El-Amin, FAO RNE, and A. El-Hindi, NAPC*)
- 6. FAO Approaches and Initiatives in Support to Member Countries** (*V. Cistulli, FAO TCAS*)

Mr J. Vercueil, FAO Senior Project Advisor and Dr. N. Rasheed Mohammed, Deputy Minister of Agriculture and Agrarian Reform chaired the discussion sessions.



# **Sustainability of the Exploitation of the Water Resources of Syria and its Implications for the Future Development of the Irrigated Agriculture**

*Mr. Juan Antonio Sagardoy<sup>5</sup> and Dr. Consuelo Varela-Ortega<sup>6</sup>*

From the outset, Mr. Juan A. Sagardoy, FAO Consultant and Project Manager of the EC funded Research Project GEWAMED, outlined the four parts of his presentation. They focus on the evolution and present state of the irrigated areas of Syria; scenarios of future water demand developed in 2000; updates of the water balances and a revised future scenario for 2015; and lastly conclusions and recommendations.

## **PART ONE**

### **Evolution of the irrigated areas in Syria**

The expert revised the growth of Syrian irrigated areas during the period 1985-2006. He highlighted the key drivers of the growth, putting much emphasis on the favourable prices for wheat, cotton and sugar beet and relatively the low cost of irrigation. As he noted, the cost of irrigation in Syria has recently increased due to the increase in fuel prices.

As observed, during the last decades the objectives of self-sufficiency for wheat and cotton has been largely surpassed, whereas the ratio of wheat production has increased from 0,51 in 1989 to 1,41 in 1997 and of cotton production from 1,56 to 1,76 during the same period (World Bank data). The key factor is that the farmers are adherent to these crops to maintain a good sustainable source of income essential to improving their livelihood. Hence, the irrigated areas significantly expanded.

The expansion of irrigated areas in Syria has been based largely on groundwater resources up to the point that they are nearly triple that existing in 1985. This has resulted in overexploitation of most of the aquifers of the country and the decline of the water basins. With this regard, the government has promoted important irrigation modernization plans to maintain the remaining water resources.

Referring to a study done under FAO Project GCP/SYR/006/ITA in 2000 and 2001 by both Mr. Consuelo Varela Ortega and Mr. Sagardoy, the speaker confirmed that Syrian water resources are very limited compared to the needs of the country. The main rivers in Syria are Barada & Awag, Al-Yarmouk, Orantos (Asi), Al-Khabour, Euphrates and Tigris. As he noted, estimates of available resources vary considerably depending on the sources of information. In addition, obtaining realistic data of the natural flows of the Euphrates River is difficult, as releases from the Turkish side are not fully available. The study therefore has assumed a conservative approach, that Syria's share from the Euphrates River is 210 m<sup>3</sup>/second equivalent to 6818 million m<sup>3</sup> per year.

## **PART TWO**

The expert moved on to the second part of his presentation to highlight the related four strategies of planning of future water demand that were suggested by the study:

- Scenario 1: Government policy started in 2000 to attain a combination of irrigation modernization (in 4 years) and irrigation expansion of 417000 ha (within 15 years);
- Scenario 2: Modernization of all existing irrigation system (80000 ha/year) with no expansion of irrigation; which, if maintained, would further the progress of preserving water resources in Syria in the long run.

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<sup>5</sup> FAO International Irrigation Management Consultant, Project Manager of the EC funded Research Project GEWAMED.

<sup>6</sup> Professor, Department of Agrarian Economy, Polytechnic University of Madrid (UPM)

- Scenario 3: Long-term combined policy for combination of irrigation modernization and irrigation expansion (15 years for both processes);
- Scenario 4: Differentiated policy by applying modernization in critical basins and limited irrigation expansion in selected basins; the areas to be developed in the Euphrates basin 120000 ha and in the Coastal basin 45000 ha. In Orantos and Al Khabour basins, all the irrigated area will be modernized in 5 years and no expansion.

### **PART THREE**

By making a comparison between 2007 and 2000, the expert assessed the evolution of irrigated areas according to water source availability in the last 7 years, depending on Scenario 4:

- The total increment of irrigated area in the period considered is of 125000 ha.
- Most of the increment has arisen from the groundwater areas 93000 ha (73%).
- A strong reduction of 45000 ha in the irrigation areas was developed by the government
- Most of the increments took place in the Euphrates basin (97657 ha) and Orantos + Al Badia (28476 ha), which were basins with positive modest water balances.

Assessing the irrigation modernization programme, the expert said it represents now 17.4% of the irrigated area, forming a high percentage in comparison to other Mediterranean countries, with Syria ranked second in the region. Most of the modernization areas concentrate in the Orantos and Euphrates basins.

Moreover, Mr. Sagardoy addressed the two hypotheses made by the revision of future demand (as Scenario 5):

- The development of new irrigation takes place from year 2000 to 2007 at the rate of 17000 ha/year. After that year, only new irrigation is permitted in the Coastal areas at the rate of 3000 ha/year.
- Modernization takes place in all the basins proportionally to existing area but not exceeding in total more than 15000 ha/year for the whole period of 15 years.

### **PART FOUR**

In the final part of his presentation, the expert outlined his conclusions and recommendations:

- The development of new irrigated areas, even if combined with a modernization programme, has strong negative effects on the water balance of national resources and some river basins. With respect to the declining ground water resources, due efforts should be devoted to stop the development of new irrigated areas in the Euphrates and Al Khabour basins.
- In cooperation with the users, the government should seek the establishment of regulatory measures that would lead to reduced overexploitation of the aquifers. One of the possibilities is to use the water/crop quota system. The other alternative is to increase the control of groundwater used by applying the 'aqua card' system to groundwater wells.
- A differentiated water basin policy would offer the best opportunity to reduce the imbalance among basins as was recommended earlier.
- The development of new government irrigated areas from surface water in the Euphrates basin has been practically stopped and even reduced. This policy should be strengthened and continued.
- The modernization of irrigation systems is an effective policy to reduce the irrigation water demand, and therefore should be maintained and wherever possible further supported with greater incentives for farmers.

## Summary of Discussion

- Mr. El-Hindi presented an intervention to clarify the water sharing agreement with Turkey that has applied on a temporary basis since 1987, and is still not permanent. The Agreement stated that Turkey should allow a volume of 500 cubic meters per second to flow into Syria, and then Syria should pass 58% of this amount to Iraq and keep the remaining 42%. That is to say, the Syrian share of the Euphrates River is 18 milliard cubic meters including the Iraqi share of 9.5 milliard cubic meters.

Mr. El-Hindi also noted that negotiations are taking place currently to amend the Agreement relying on the current friendly political and economic relationships between the countries. The only related disagreement was the interpretation of the article concerning the volume of water pumping (500 cubic meters per second). We insist that be considered as the minimum quantity, while the Turks want that to be considered the medium. This would make a difference, when the Turks take this point as a justification to stop the water flow during the summer, while we insist on maintaining the same volume in winter and summer.

- The speaker pointed to “Transition to Modern Irrigation Fund” that has been established recently by the Syrian state and involved in the Tenth Five-Year Plan. As he clarified, the state dedicated a sum of US\$1.3 milliard for ten years starting from this Plan, whereas 40% of this amount was devoted to be spent during this Plan. It is worth mentioning that the state currently gives support to water modernization loans by exempting 40% of the cost from interest. Yet, the main constraint for the modernization process is still the non-licensed wells excluded from benefiting from loans of modern irrigation, whereas most of the wells in Syria are not licensed.

- Mr. Sagardoy then replied to queries raised by the audience, first commenting on the intervention of Mr. El-Hindi. He said that the water volume flowing from Turkey is not such a good amount, because in winter the medium volume if considered would be much more important. In addition, the new support given by the government would significantly help the farmers to be directed to modern irrigation.
- He highlighted the importance of carefully applying the irrigation modernization process in line with establishing integral procedures to ensure the rational use of water. Taking into consideration, not only the way of irrigation, but also the continuous expansion in irrigated areas.
- As for water deficiency, he said we assume that there is a real balance, but actually, we should suppose the existence of negative balances. The most important foreseen effect is the reduction in water availability and the social consequences that would be emerged from this fact.
- Concerning the water demand for agricultural products, he addressed that it is relevant for Syria to depend on the concept of “virtual water value” to import crops with a high consumption of water which do not have competitive advantages to be produced in Syria. Namely, the importing of agricultural products should be based on water consumption standards. Even though no country in the world applies such a standard for imports yet, it is the time to be adopted.
- The economic revenues from irrigation modernization are significantly positive for all crops, and it will increase more along with the new support given by the state, though the duration of the loan repayment is 20 years.

## **Approach and Policies Against Drought**

*Mr. L. Cavestro, IAM Bari/Italy*

Mr. Lougi Cavestro, the Executive Manager of the Cooperation Project “Rationalization of *Ras El Ain*<sup>7</sup> Irrigation Systems”, framed within the activities of IAMB<sup>8</sup>. The Project was started in 2005 and the first phase completed in February 2008.

Starting his presentation, Mr. Cavestro noted that the general objectives of the Project are to overcome food & income insecurity in the region, while the specific one is reduce the use of groundwater resources in the project area.

As he clarified, the Project was implemented in response to the declining capacity of water resources in north-eastern Syria, particularly the Al Khabour basin, which has declined since 1996, and the region’s groundwater.

The Project practices, therefore, were addressed to face the related problems of irrigation in Ras El Ain region that mainly include inappropriate irrigation techniques, scarce water resources, and high salt content of irrigation water. All of those factors led to decreased crop productivity and groundwater availability. The estimated declining capacity of groundwater was 15000 cubic meters since 1996 until 2006/2007.

As he addressed, the project gave due attention not only to irrigation in the farming process, but also to other conditions that significantly affect crop yield and conservation of water resources in the project area. Considerable efforts therefore were dedicated to adopt new irrigation systems, new machinery, training, new crops, and appropriate agricultural techniques.

The Project achieved its goals of attaining good results in saving water resources by using new and improved surface irrigation systems, through which the rate of water saved for wheat ranged from 42-55%, and for cotton 42%. This system is similar to what was used previously but saves more water, and it is easy, applicable, and well accepted by farmers. In this system, a new good quality of pipes, at a cheaper cost, is used. The associated tools needed in the system are a “weather station” to provide weekly meteorological data and a “Tensiometer”, an instrument used for field irrigation capacity monitoring. The key issue is to teach the farmers how to use this irrigation system effectively to save water and not to waste it, as in the “dropping technique”.

The expert addressed that the new adopted technique is good when accompanied with a good irrigation methodology, which should be realized according to the region’s ecological specifications and to a crop’s needs in different agricultural stages. It should be also verified technically to avoid water loss.

The Project introduced new machinery which helps in saving seeds and water:

- Mechanical seeding machine by furrows for winter crops: wheat and brassica, soybean, sorghum, and chickpea; and
- Pneumatic seeding machine used for seeding cotton, sunflower, maize, and soybean.

The other important result was capacity building of personnel in the Ministry of Irrigation and Ministry of Agriculture in Al-Hassakeh. It was recognized by training technicians, setting up of a Project database and programs to support technical work, using GIS/TIS, and providing all equipments and tools (laboratories and guidelines and crop manuals) used during the 3 years of the Project.

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<sup>7</sup> Ras El Ain is a region in Al-Hassakeh governorate located in north-eastern Syria

<sup>8</sup> IAMB is The Italian Mediterranean Agronomic Institute of Bari

In order to attain potential sustainability of the Project that was implemented together with the cooperation of technicians at the Ministries of Irrigation and Agriculture, the expert indicated that the Expatriate staff still supervising the Project are a Project Manager, one senior expert, and one junior expert.

The speaker summarized the actual situation and future prospective of problems the region encountered and that were explored by the Project:

- Excessive and irrational use of natural resources water, soil, and biodiversity; in addition, the use of salty water increased soil salinity and then harmed the biodiversity in the area;
- Poor agriculture and high-cost production due to old and poor mechanization; inadequate irrigation and irrational agronomic practices; and the increase in fuel prices pushed input costs higher and increased the cost of production; and
- Low-efficiency and water-consuming agriculture production.

The expert concluded that losses in any step of the production process results in a loss of water. For example, when we loose 1 kg of production we lose the water exploited to produce it. As he clarified, the amount of water consumed by one KG of cotton on average is from 1,700 to 3,300 liters and for wheat from 600 to 1,600 liters. Therefore, maintaining the agricultural production is significant to saving and maintaining water resources.

Finally, Mr. Cavestro moved on to talk about the future of the north-east region, addressing a new way which focuses not only on irrigation but also on an integrated process to save and effectively use the water resources. As he suggested, substituting the crops adopted in this area with more ecological compatible crops according to their water needs could be also one of the potential solutions. As for example, moving to rain-fed wheat farming instead of irrigated cotton would be more valuable, whereas the rainfall rate in the region is 1250 cubic meter.

Again, the expert put a lot of emphasis on efforts that should be dedicated to orienting a more efficient exploitation of water with rational technologies and methodologies; seeking more efficient use of rain-fed cultivation, probably by applying water harvesting; realization of agronomical practices and an integrated process of irrigation; and adopting genetic resources and crops more resistant for draught.

Mr. Cavestro then concluded his presentation by promoting a new concept that not only agriculture is consuming water, but also inside any product whether from agriculture or industry there is water!

Accordingly, he addressed more efficient use of inputs (less inputs >> less water); decreasing the losses in production, transportation, storage, and food processing; carrying out correct evaluation of resource availability and water demand; adopting more efficient system of water distribution to decrease losses; and finally decreasing water loss and consumption from all civil and productive sectors by applying new policies and management for water.

As a starting point for the future, the expert stressed again on enhancing the knowledge of available natural resources by conducting studies and analysis. In addition, carrying out evaluation for crops and people's demand and necessities, as well as regulating new plans for sustainable exploitation and use of water. Therefore, an appropriate wateriness policy should be considered with collaboration of concerned people and institutions.

### **Summary of Discussion**

- Replying to a query about substituting petroleum pumps with solar energy pumps, the expert said it is not yet adopted, because the price of fuel had been cheap, unlike the present, but it is quite needed according to present conditions. Therefore, the project will likely carry out such a study.

- He clarified that the costs of energy used in irrigation pumps and motors of the project were revised carefully, while for those of the Al-Khabour basin it was difficult to be estimated, because the instruments and pumps used are old. However, he said, we could increase the

efficiency of those pumps by 30%. The cost of the new irrigation system we promoted was of €500-700 per ha based on last year's prices. According to the information taken directly from farmers who adopted our system, the estimated increase in their income reached 30%.

- Concerning system sustainability, he noted that continued overexploitation of underground water will decrease the un-renewable storages until they are depleted. The estimated time to reach such a situation in the Project area is not more than 10-15 years. The generated potential risk from such a situation is the landslip phenomenon, which is recorded by 10-15 approaching to 20 incidences in some areas, with 20 incidences accounted for by the end of 2007. One of them was in Ras El Ain. The situation would be drastic and would imply immense social effects and cause people death from houses collapsing.

- The estimated water savings from a new irrigation system would reach up to 42%. However, the process of modernizing irrigation is not the only solution to rationalize water use, but also it should be coupled with an integrated approach by the state, technicians, farmers, and people to effectively adopt water-saving practices.

## **WTO and the Challenges/Opportunities for Syrian Agriculture**

*Dr. Nasredin Hag Elamin* *FAO Regional Office for the Near East/ Cairo*

With regard to the Syrian application for WTO membership, first presented in 2001 and reiterated in 2004, Dr. Nasredin Hag Elamin declared that the focal point of his lecture is identifying the most relevant policies and rules and the related procedural preparations concerning Syria's accession negotiations.

### **Requirement and implications of accession**

As he addressed, there should be recognition that in line with the expected gains emerging from the accession, there are potential risks and most of them are certain. In addition, attaining the gains requires a lot of effort, in terms of negotiating capacity and enhanced supply-side capacities. The Syrian government, therefore, has to apply certain obligations to gain certain rights.

### **What does WTO offer?**

The expert clarified that becoming members in the WTO would allow Syria to get the rights offered by the organization. These rights include access to a more transparent and predictable trading system, and exporters receive Most Favorite Nation (MFN) treatment in markets abroad, which could be considered a major improvement for those who face sanctions or unfair treatment in world markets. In addition, member states gain access to the WTO's dispute settlement process and the opportunity to 'bind' tariff commitments so as to avoid future policy back-sliding.

Furthermore, the potential gains of these rights are to reduce business uncertainty, encourage investment, increase exports, and ultimately raise incomes. While the risks brought by these rights are reduced space to design domestic policy priorities, in addition to possibly prematurely exposing some of the emerging and growing sectors/sub-sectors to unnecessary, and possibly unfair, external competition.

### **WTO provision on accession**

Moving to a more specific issue, the speaker pointed out to Article XII of the Marrakech Agreement establishing how the WTO deals with accession. It stipulates the following:

*"Any State or separate customs territory possessing full autonomy in the conduct of its external commercial relations and of the other matters provided for in this Agreement and the Multilateral Trade Agreements may accede to this Agreement, on terms to be agreed between it and the WTO. Such accession shall apply to this Agreement and the Multilateral Trade Agreements annexed thereto."*

Obviously, this Article gives no guidance on:

- The "terms to be agreed", these being left to negotiations between the WTO Members and the applicant; or
- The "procedures to be used" for negotiating these terms, these being left to individual Working Parties to agree

Opposite to what people think, the lecturer assured that new members' countries would not enjoy the same advantages the old members have.

### **The driving factors of WTO negotiations**

Shedding light on how the negotiations are conducted, the lecturer clarified that WTO members ask for concessions from applicants, considering that "Accession of new members should strengthen the system rather than weaken it". Therefore, they ask for "meaningful market-access commitments" and additional "WTO-plus" obligations.

On the other hand, applicants look for flexibility, e.g. market access commitments to be appropriate to the level of economic development of the applicant.

## **WTO agreements of direct relevance to agriculture**

WTO has evolved several agriculture-related agreements:

- Agreement on Agriculture (AoA)
- Agreement on the Application of Sanitary and Phytosanitary Measures (SPS)
- Agreement on Technical Barriers to Trade (TBT)
- Agreement on Trade-Related Intellectual Property Rights (TRIPS)
- Ministerial Decision on measures concerning the possible negative effects of the reform programme on least-developed and net food-importing developing countries

As the lecturer noted he will cover only the first two agreements.

### **Agreement on Agriculture (AoA)**

The three main provisions of the AoA aim at:

- Improving market access by abolition or gradually reducing the tariff, to then be eliminated;
- Reducing domestic support through a regular subsidy fund and the developing countries fund that Syria can benefit from; and
- Reducing export subsidies.

### **SPS Agreement**

Basically any member country can have the right to take SPS measures, which is necessary for the protection of human, animal or plant life or health. On the other side, the country member is obligated to ensure that any SPS measure is applied only to the extent necessary to protect human, animal or plant life or health based on scientific principles.

The key provisions of this agreement include scientific justification and risk assessment, in addition to harmonization with WTO standards (CODEX<sup>9</sup>, IPPC<sup>10</sup>, OIE<sup>11</sup>), and be equivalent to the country conditions.

He also noted that experiences of some countries of the Near East could be similar to Syria's, e.g. Tunisia where most tariffs were more than what is applied therefore it used the green box for support.

### **Experience with Implementation**

Presenting the implementation experiences of these agreements, Dr. Elamin highlighted that there is a high level of compliance with the AoA, while agriculture support in the developed countries remains high (above 1986-88 levels). In addition, no clear improvement in border protection has been achieved (with a few exceptions), and just a slight reduction in export subsidies has been applied. He also noticed that the developing countries face some difficulties in implementing their commitments.

The expert noted the widespread evidence of increasing SPS barriers to exports over time. Apparently, the SPS standards are becoming increasingly complex, and products are treated inconsistently in different markets. In addition, a lack of resources and technical expertise is a problem for many developing countries to meet SPS standards.

Dr. Elamin also pointed to contradictions in the commitments made by individual countries in the context of the WTO limiting the scope for deepening and expanding Regional Trade Agreements (RTAs) in the region. In this regard, he presented a table showing the range of the different bound tariffs applied in the NE region for several agricultural commodities (slide 12).

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<sup>9</sup> CODEX= *Alimentarius for food health.*

<sup>10</sup> IPPC = *International Plant Protection Convention*

<sup>11</sup> OIE = *Office international des epizooties*

## **Near East country commitments made in the AoA**

In reference to the three main elements of AoA, the expert highlighted the commitments made by the NE member countries Morocco, Tunisia, Egypt, Bahrain, Jordan, and Oman:

- As for tariffs: they have relatively high bound tariffs characterized by significant overhangs with no access to Special Agricultural Safe-Guards (SSGs), except for 2 countries; tariff-rate quotas (TRQs) are only applied for 2 countries. The type of applied tariffs is shown in slide 13.
- In terms of domestic support, they enjoy sufficient flexibility
- Sector-wide support is available for irrigation, fuel and transport, though it is rather important but much of it has not been reported in base years.
- The Export Subsidy (ES) is totally eliminated.

## **Major issues raised by developing countries**

The lecturer noticed that more than twenty developing countries joined the WTO after 2005. Most of those countries raised opposition to the discriminatory treatment they are exposed to. The main issues of the on-going dispute:

- Imbalance in commitments between the developed and developing countries;
- Additional flexibility in domestic policy is needed to improve agriculture development and food security.
- The need to operationalize the Marrakech Decision on LDCs and NFIDCs<sup>12</sup>;
- The need for assistance for capacity building;

As for the Near East countries, the key concerns are managing food imports, as well as accessing the developed country markets, particularly the EU.

## **Experience of the Recently Acceded Members (RAMs)**

The expert moved on to explain the major concerns of RAMs. They made more concessions compared with countries that joined before 1995. Some of them could not get some of the essential special and differential treatments for developing countries. In addition, they have due complications with the new Doha negotiations.

Despite the concerns, RAMs have attained success in some cases. Noticeably, some countries succeeded in achieving some additional special treatment: e.g. flexibility in terms of base period (Nepal and Taiwan), and getting seasonal tariffs for horticultural crops, e.g. Jordan. Moreover, some countries bound a number of specific or compound rates (Bulgaria, Kyrgyz Republic, Latvia, Georgia and Croatia), while China gained a longer implementation period. See tables in slides 18 and 19.

Assuming Syria would receive average treatment as compared with the other RAMs, Dr. Elamin discussed the possible treatments it will get. It would have sufficient flexibility in regards to domestic support through applying Green Box measures, *De minimis* (10%), and Article 6.2. In addition, it would obtain support to inputs, agricultural credit and investment as well as getting total 'Aggregate Measure of Support (AMS)'.

With respect to market access, Syria will have to take tighter commitments including the binding of tariffs at their applied levels. However, Syria may consider asking for seasonal tariffs for some products and access to special safeguards.

As for Export Subsidies, Syria would possibly gain access to the Support Domestic Trade (SDT) for subsidising marketing and freight of agricultural exports.

After that, Dr. Elamin pointed out to lessons of special importance derived from developing countries experiences.

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<sup>12</sup> *NFIDC's = Net Food-Importing Developing Countries*

- Special and differential treatment for developing countries is not automatic and the applicant country has to ask for them.
- Countries should avoid making any statement or commitment that prohibits any form of a measure other than those implied in the basic rules.
- Logical justifications, existing legislation, programmes and proof of information and their sources are always critical in obtaining the required treatment.
- Use of new forms of alternative trade measures e.g. seasonal tariffs (e.g. for horticultural products).

### **Recommendations**

Lastly, Dr. Elamin ended his lecture noting that two main issues are the top priority for Syria. The first is the preparation for effective participation in the negotiations by taking the following actions:

- Continue to strengthen analytical capacity and access to information;
- Conduct impact studies;
- Develop a negotiating strategy and fall-back positions;
- Raise awareness and involve all stakeholders in the process;
- Strengthen negotiating skills and tactics;

The other issue, taking advantage of existing and new trading opportunities by the following procedures:

- Raising quality standards (regardless of WTO); and
- Focusing on products for which opportunities are relatively high, e.g. olive oil, sheep meat, fruit and vegetables.

## **Agriculture and Euro-Med Association - an Assessment of Preference Margins: Lessons for Syria**

*Dr. J.M. Alvarez Coque, Polytechnic University of Valencia/ Spain*

Dr. Jose-Maria Garcia-Alvarez-Coque, Professor of Economics at UPV- Valencia, started by presenting an overview of Syrian agro-food exports based on UN data covering the period 2001-2006. A noticeable increase in per capita exports in the agro-food industry is observed, and that Syria is concentrating on certain regions and market destinations. Therefore, tending towards market and product diversification are potential key options to enhance Syrian agro-food exports.

The list of mainly exported agricultural products includes live animals, cotton, olive oil, and edible vegetables and fruits, accounting for nearly 50% of non-petrol exports.

The EU share accounts for nearly 18% of total agricultural exports, with an average of 40% of it focusing on cotton, textile, and by-products, and 27% in olive oil.

As he addressed, Syrian products have a good chance to access the European markets, similar to Tunisia and Morocco that have most of their exports directed to the EU.

Moving to more critical points, the lecturer focused on the basic factors of export success. They include comparative advantages as the main factor driving the economy; access in foreign markets; and adaptation to global supply chains coupled with competitive advantages.

In this respect, the speaker shed light on Syria's scores in a group of 48 'factor driven' economies according to the Growth Competitiveness Index (GCI) assessment, which was presented by the World Economic Forum (WEF)<sup>13</sup> (in April 2007) for 124 countries in the world.

In this analysis, Syria is ranked fifth in the assessment of *Basic Requirements* available in the country such as institutions, infrastructure, and macroeconomic variables, in addition to health and primary education, for which Syria ranked second. In the *Efficiency Enhancers* assessment, which includes higher education & training and market efficiency, Syria ranked thirty-seven; and in access to technology, Syria was ranked thirty-one. Moreover, the *Innovation Factors* assessment indicates that Syria is having high business sophistication coupled with lack of innovation and modern technology.

As he addressed, the information mentioned above is very valuable to the country, in order to serve as a guide of weak factors to consider for more attention.

### **The EU market-access issue**

The expert gave some insights on the Association Agreement between Syria and the EU. As he said, though the related negotiations have not been endorsed yet, a promising opportunity may come in the near future. The primary anticipated benefit of the Association Agreement is to open new market opportunities for Syrian products within a stable framework for trade.

He also assured that so far trade preferences have not become a great impulse of Syrian major commodity SMC exports to the EU, but a continuation of traditional trade flows. In addition, Doha negotiations could change the picture of trade in the world. Apparently, there is a European orientation towards the Mediterranean countries with a potential expectation to increase the percentage of exports to the EU, particularly from Egypt, Lebanon, and Jordan. However, as for Syria we should ask on what the benefits of the Association Agreement depends, taking into consideration that Syria will be obliged to open its markets to European products according to the reciprocity concept.

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<sup>13</sup> The World Economic Forum (WEF) is a Geneva-based foundation whose annual meeting of top business leaders and national political leaders aims to create the foremost global partnership of business, politics, intellectuals and others.

## **Adaptation to supply chains**

The expert clarified that shifting from traditional marketing and seeking for adaptation to supply chains is the key change Syria should be directed to. Noticeably, stakeholders in the value chains usually share interests in cost reduction, quality upgrading and risk management. Therefore, there is a need to understand clearly what enables coordination in the value chain to perform successfully. Moreover, attaining value chain competitiveness needs to target measures different from traditional subsidies.

For dealing with competitiveness, the expert mainly stressed on adopting the ‘Systemic Approach’ that is highly needed to cover economy-wide aspects and rules of governance within the value chain. Many influencing variables are involved to assess national competitiveness: government bureaucracy, access to financing, corruption, inadequately educated workforce, foreign currency regulations, supply of infrastructure, restrictive labour regulations, tax regulations, market efficiency, and access to technology.

Dr. Garcia-Alvarez-Coque concluded his lecture suggesting themes for research that would serve in future improvement of Syrian trade with the EU.

The first, ‘Impacts of trade liberalization’ detailed by product, season and territory, with the aim to discuss the issue of preferences versus multilateral liberalization focusing on the growing role of SPS and TBT standards, including the quality policy of large retailers.

The other potential studies are ‘Supply Chains and the Agro-Food System’, ‘Domestic Policies’ and ‘Transnational Cooperation’, which is a must for the analysis of Euro-Mediterranean integration by means of research groups and workshops.

## **Soaring International Food Prices**

*Dr. Nasredin Hag Elami - FAO Regional Office for the Near East, Cairo*

Dr. Nasredin Elamin introduced his presentation as an overview of the main features & recent trends of soaring international food prices, referring to the latest FAO Food Outlook of June 2008. With special focus on the Near East Region, the lecturer revised the underlying reasons and implications of this economic crisis. In addition, he clarified and assessed the short, medium, and long terms international measures useful for confronting this phenomenon.

At the beginning of his lecturer, the expert highlighted the trends in cereal export prices in the world food market, especially for wheat, rice and maize. As it is shown in FAO graphs, the rice export price has sharply increased, reaching triple last year's price. He also presented the trends in prices of meat and dairy products, which increased with moderate rates in comparison to previous years' prices.

### **What about future trends?**

To visualize future trends of food prices, the lecturer presented a time series from 1971 to 2007 with projections to 2017 for nominal and real prices of food commodities. As is shown, the increase in wheat prices will slow down after falling in the period from 2008 to 2010 then will remain relatively stable. The prices of coarse grain will also slow down and keep around the same level during 2008 to 2010, and then will gradually decrease after that. The rice prices also will slowly decrease from the next year up to 2010 then will be approximately stable, while the prices of oil seeds will slightly decline then maintain the same rate.

### **Underlying causes**

Tracing the causes of this crisis, Dr. Elamin underlined the most significant factors raising the prices of the two main sides of agricultural production.

#### I. Supply Factors

- Unusual climatic events (2004-2006) lead to disruptions in production in key exporting countries. Thus, world cereal production fell by 3.6 % in 2005 and 6.9 % in 2006.
- Historically low levels of global stocks in the recent years;
- Increasing fuel costs;
- Increasing ocean freight and fertilizers costs, related to increasing fuel costs;

#### II. Demand Factors

- Long-term changes in the structure of food demand in developing countries, whereas rapid economic growth has led to diversifying diets away from starchy foods to meat products.
- The biofuels industry boom

### **Soaring international food prices: Who gains?**

In attempt to explore who gains from the soaring food prices, the expert addressed first, farmers in food exporting countries as the main gainers (USA, Canada, France, Australia, Brazil, Argentina, etc); second, multinational agribusiness such as international grain traders the "usual suspects"; and finally the newly developed "biofuels industry".

Additionally, the farmers in developing countries are also involved as gainers, to a certain extent, as he clarified, provided that:

- If farmers are not isolated from international markets (export restrictions; price control.)
- Net producers (vs. net buyers);
- Larger farmers who have the means to invest to expand production with high input costs and benefit from the price increases;
- Producers of the "right" commodities (cereals and oil seeds); and

- Producers who have access to markets

### **Magnitude of change in domestic food prices in Near East countries**

Stressing that change in domestic food prices differ widely across countries and commodities, the speaker turned the attention to the Near East countries, assessing the impacts of this crisis on the domestic food prices. He clarified that changes in domestic prices have been higher in countries with relatively less or no interventions in food markets. Moreover, in some of these countries, the increases in domestic consumer and producer prices have been more than proportional to border prices.

### **Vulnerability to high food prices in the Near East at the micro level**

The presenter further provided an assessment of Near East countries' vulnerability to high food prices at two economic levels:

- The Macro Level: The NE countries have difficulty coping with high increases in food import bills due to high import dependence and the high share of food imports in their total export earnings, in addition to their limited and fragile food production capacity due to scarcity of water and arable land and the environmental risks they encounter.

The speaker presented a graph showing the dependence on food imports and the ability to pay for imports in 2003-2005. He explained that the least vulnerable countries have upward trends of export while the most vulnerable ones have downward trends of imports. Although exports have declined since 2002-03, there has not been a significant increase in imports during the same period.

- The Micro Level: Food forms a high share of household expenditures in the region, while a high proportion of the poor and undernourished in the region do not produce food (the urban poor and rural non-food producers). On average, about 35% of the poor in the NE are urban, and more than 35% of the rural population is non-food producers. As he noted, though most of the households are vulnerable to price volatility, the less the household share of food expenditure the less vulnerable this household is to food prices changes.

After that, Dr. Elamin presented a graph (slide 15) forecasting changes in food import bills of selected Low-Income Food-Deficit Countries LIFDCs (from 2008 over 2007) including Egypt, Sudan and Morocco.

As he commented, most LIFDCs that remain heavily dependent on imported staples look set to face substantially higher import bills in 2008 compared with last year, as surging prices of wheat, rice, and vegetable oils will have their impact on import costs.

### **International emergency measures:**

About the international emergency actions being taken by the United Nations system, the expert mentioned that a high level task force is being assembled in the FAO, IFAD, WFP, World Bank, IMF, WTO, etc. as well as the related preparations for a comprehensive framework for actions are also being carried out including the high-level conference "Food Summit" at FAO/Rome on 3-5 June 2008, and several high-level meetings are scheduled in the coming weeks and months.

The main emphases of these actions are to be on:

- The urgent need to prevent hunger and social unrest, with regards to the 100 million people became newly hungry from this crisis. Consequently, there is need to focus on protecting social safety nets, as well as existing food subsidies.

- On the other hand, there is a need to make sure that farmers are not isolated from international markets, so that they could benefit from price increases to expand production as a supply response.

- The role of International Monetary Fund (IMF) and World Bank are to support countries with balance of payments and budgetary support as committed by ALL donors under the Paris Declaration.

### **Policy responses in the Near East Region**

Moving again to the Near East region, Dr. Elamin addressed the most important policies and measures should be taken to tackle with the recent prices crisis.

The expert first stressed that the major concern should be oriented to protect consumers against the continual increase in food and fuel prices as well as against inflation by taking relevant policies aiming to:

- Keep food prices low by applying:
  - Export restrictions (e.g. rice/Egypt; wheat/Syria)
  - Reduce duties on imports of basic foods
  - Price control
- Maintain and expand food subsidies, at much higher costs, as in the Gulf Cooperation Countries (GCC), Algeria, Libya, and to reduce fuel subsidies, e.g. in Syria, Egypt.
- Seek income compensation and support by increasing salaries for government employees, as was done in the GCC, Egypt, and Syria. However, this process would possibly generate negative macroeconomic impacts affecting government revenues, balance of payments, inflation, etc.

The expert then moved on to determine anticipated measures to be applied in the NER:

- In the **short-term**, basically, enhancing domestic production by:
  - Increasing producer floor prices by carrying out measures to align them with international prices, especially for cereals (e.g. Egypt, Syria, Jordan, Morocco);
  - Targeting input subsidies such as of fuel, fertilizers, seeds, etc;
  - Rescheduling farmers' loan repayments and adopting emergency credit schemes; and
  - Expansion of food buffer stocks
- In the **medium- and long-term**, due attention should be dedicated to the following issues:
  - Sustainability should remain the overarching goal irrespective of high prices;
  - Temptation for policies to expand wheat farming: decisions should be based on careful assessment of comparative advantages emphasizing net returns per drop of water; and
  - Emphasis on increasing productivity and avoiding horizontal expansion

Moreover, the expert outlined additional issues of special importance for Near East-North Africa countries over the medium- and long-term:

- Improving national food security concerns and sustainability should remain the overall goal (e.g. decision by Saudi Arabia to phase out wheat by 2012);
- Trade-off between exports and sustainability (e.g. rice in Egypt);
- Considering lessons from the 1970s: lots of bad policies driven by national food security concerns; and
- Preserving buffer stocks with careful assessment of costs and benefits, and alternative instruments for managing risk (e.g. future markets)

Eventually, Dr. Elamin pointed out the recent proposals of the Arab Organization for Agricultural Development (AOAD). Primarily, it emphasizes the need for coordination of cereal imports, since NE & NA are the largest wheat-importing block in the world. As well as carrying out collective negotiations with suppliers, to explore the feasibility of establishing a “wheat import cartel” and “joint regional stocks”.

## **Summary of discussion**

Dr. Nasredin Elamin briefly answered the key questions raised by the audience, as the following:

- About implementing the Intellectual Property Rights (TRIPS) and SPS Agreements, the developing countries are facing several difficulties in regards to:
  - a. Seeking the protection of human, animal and plant life or health
  - b. Obligations related to the Agreement of Genetically Modified Organisms (GMO's), which most of them signed and which may not be useful to them.
- He agreed upon the necessity to forecast the long-term reasons that determine the supply and demand of food. In his opinion, the projection done by the FAO will be reflected in the short-term.
- Nowadays, an increasing orientation is taking place in the NE region to produce what they eat by attaining self-sufficiency. Therefore, the countries with 40% self-sufficiency are trying to increase their food self-sufficiency up to 60-70%. However, this issue should be examined carefully.
- Presently, there is much talk about increasing the stockpiling of cereals at the country and regional levels, which would be costly and need regional coordination and cooperation.
- Some countries are putting great efforts in local agricultural investments to increase their own food security, while others are increasing their agricultural investments in other countries. Though it is considered positive, it is affected by political interests. After the Doha Round most NE countries confirmed their willingness to attain food self-sufficiency, while several countries in the region were classified as net food importers e.g. Jordan.

## **Food Security and High International Market Prices – Issues of Concern for Syria**

*Mr. Atieh El-Hindi, NAPC Director*

Introducing the subject of his presentation, Mr. Atieh El Hindi, NAPC Director, confirmed that one of the state priorities has been to provide the agricultural sector with those things required for growth and to fend off potential negative impacts from this sector, because of its vital role in the Syrian economy and its importance to food self-sufficiency and national security.

Food security, therefore, has been one of the main objectives of the development strategies applied in Syria. The Syrian policies and plans aimed to increase self-sufficiency of the main food staples coupled with several support actions, such as input and output subsidies and agricultural services. However, the policy modification programme initiated in the 1980s aimed at reducing subsidies and ensuring efficient natural resource employment and sustainability, with avoidance of negatively affecting the social side.

In recognition of the importance of food security, various actions related to Syrian development strategies and policies have been taken to enhance production according to comparative advantages, improve agricultural marketing, improve accessibility to food commodities, ensure price stability, and improve product quality.

### **Indicators of agricultural development and food security**

Shedding light on the status of the Syrian agricultural sector, the expert clarified it is one of the main contributors to GDP, with a share of 25% with annual growth rates of 4-5%. Noticeably, the agricultural sector is characterized by production fluctuations due to rainfall inconsistency.

Aiming to enhance trade in general and agricultural trade in particular, several actions were taken leading to an annual growth rate of 8.9% for Syrian agricultural trade during the period 2000-2006. On average, the contribution of agricultural trade ranged between 12 and 20% of the Syrian trade balance. Furthermore, the tangible improvement of agricultural production had a positive impact on average calorie intake, which exceeded 3200 calories per capita per day.

### **Evolution of international prices**

Mr. El Hindi traced the causes of the unprecedented hike in food prices, which accelerated dramatically between 2007 and 2008. According to several economists, various reasons contributed in the creation of this crisis such as:

- Reduced production of main food commodities due to unfavorable weather conditions, mainly the recurrent droughts;
- Increased income in India and China which resulted in the increase of food and fodder demand;
- Considerable increase in international oil prices which resulted in the increase of fixed and variable costs of production;
- The use of agricultural products for bio-fuel; and
- Emergence of huge food production companies and international monopolies

As he detailed, during the period 2000 and 2007, the Freight On Board FOB price index of the main food products increased to reach to 209% for soft wheat, 226% for durum wheat, 189% for maize, 163% for rice, 123% for sugar, 135% for beef, 161% for banana, and 160% for soybean flour. These rates were even more for oil seeds and vegetable oils, let alone the dramatic increase of the transport costs resulting from the high increase in fuel prices that took place in 2008 leading to a further increase in food price indexes.

## **Impact of local price increase on food security**

Affected by the soaring international prices plus the unfavorable weather conditions, most of the local food prices were exposed to considerable increases during 2007 and 2008. The average price increase between February 2007 and 2008 was around 50% and reached unprecedented levels for wheat, rice, vegetable oils, dairy products, and feed (more than 100%).

The speaker added further details on the causes that contributed to the increase in local food prices. They mainly involve trade openness and the import of many inputs from the international markets; increase of Syrian products export volumes as a result of the international price increases; poor harvests and decline of local production due to bad weather conditions such as drought, with the key wheat sector being particularly hard hit; and increases in production costs due to increases in labor and machinery costs.

Consequently, Syrian food security, mainly of vulnerable social segments, is negatively affected by the soaring prices. According to national statistics indicators, Syrians spend on average 42% of their income on food. In addition, the flexibility of changing other living expenditures (housing, education, health care, communications and other services) is limited by the expense of food. Considerably, the situation was further worsened due to diesel price increases, which account for 15-25% of the cost of production.

### **Actions taken by the government**

To ease the impacts of price increases on food security, the government has taken various actions on all levels:

1. Income increase and price control measures:
  - Raising public employee salaries and wages by 25%;
  - Linking the local currency with a basket of foreign currencies;
  - Enhancing the state role in the stable provision of basic foods to control prices and keep prices down, in particular wheat used in bread, based on national wheat stocks;
  - Reactivating price control systems to ensue price stability and prevent monopoly;
  - Enforcing strict control on agricultural exports; and
  - Suspending export of main food staples
2. Legislation:
  - Issuing Legislative Decree No. 29/2008 include establishing an agricultural subsidy fund (ASF) that will be operational at the beginning of 2009, with current actions to assign the ASF management board and the director. The ASF is planned to cover the following domain:
    - production inputs involving improved seeds distributed by the public institutions;
    - Seedlings (fruit, forest, and pastoral) distributed by the MAAR;
    - Veterinary medicines, artificial insemination requirements and vaccinations of the animal production;
    - Agricultural pesticides for epidemic and blight control; and
    - Fodder produced and distributed by public institutions.
  - Prices of agricultural products: particularly of strategic crops wheat, cotton, barley and sugar beet; and plant and livestock products whose production is supported and encouraged by the government
3. Actions taken to ensure delivery of produced crops to the state companies:
  - Increase of the strategic crop prices, whereas producers were offered better prices to ensure delivery of their production to the state companies in order to replenish the strategic stocks.

- Decisions issued to guarantee wheat delivery to the state companies for considerations related to food security. The main objectives of these decisions were to prevent private trading of wheat, prevent farmers from keeping a stock that exceed their household consumption needs, prevent illegal movement of wheat between traders, and to control smuggling between governorates.

## **FAO Approaches and Initiatives in Support to Member Countries**

*Dr. Vito Cistulli, FAO TCAS*

From the outset Dr. Vito Cistulli, FAO Chief Technical Advisor, assured the importance of the Workshop giving a valuable opportunity to present the significant aid the FAO provides to member countries through wide reforms agreed upon recently at the UN.

### **The Context: UN Reform**

UN reform was addressed in the 2005 World Summit to launch an effort to further strengthen the management and coordination of United Nations operational activities so they can make an even more effective contribution to the achievement of the internationally agreed upon development goals, plus the Millennium Development Goals (MDGs), including proposals for consideration by member states for more tightly managed entities in the fields of development, humanitarian assistance, and environment.

In 2005, High-Level Forum in Paris was attended by development officials and ministers from 91 countries, 26 donor organizations, representatives of civil society organizations and the private sector, as well as the heads of multilateral and bilateral development institutions. They all committed their countries and institutions to far-reaching monitoring actions to significantly increase aid effectiveness, which is better known as the *Paris Declaration on Aid Effectiveness*.

The foremost commitments agreed on in the *Paris Declaration* mention that the developing countries will exercise effective leadership over their development policies and strategies, and coordinate development actions; while the donor countries will base their overall support on receiving countries' national development strategies, institutions, and procedures. That is to say, they work to make their actions more harmonized, transparent, and collectively effective. Taking into consideration that both donors and developing countries will manage resources and improve decision-making for results, as well as both pledging to be mutually accountable for development results.

Accordingly, the FAO adopted two major reform modalities:

- Independent Evaluation of FAO's Decentralization: a further management response conducted on September 2005
- Independent External Evaluation (2007): a recommendation on the technical cooperation at the country level

### **Implications of the Changing Environment**

Dr. Cistulli pointed to the tools used to explore the implications of the changing environment of technical cooperation at the country level. Among others, they include adaptation of programming approaches, new funding modalities and frameworks (HACT, SWAPs, Budgetary Support, JAS, etc.), and new management mechanisms of programmes and financial resources in line with the principles of country ownership, effectiveness, transparency, accountability, and capacity.

### **FAO Response**

The FAO responded to reforms specifically by adopting the following:

- **Decentralization strategy**, namely instead of placing a budget for a certain project to be applied by the FAO, the fund is provided to the state to choose the relevant development project and to place efforts in attaining the modality. That should be done through introduction of a new operating model and delegation of administrative, budgetary and programme responsibilities to the FAO representatives (FAOReps). As for example, the establishment of sub-regional MDTs to study water availability in the Mediterranean region composed of

technical officers including the FAOREps in the sub-region, who will facilitate the transfer of best practices and assist in promoting capacities to respond to the country and regional needs.

- **Programme approach:** the FAO switched from project to programme approach to country support. This is recognized through National Medium Term Priority Frameworks (NMTPFs), linked to UNDAF, and National Programmes for Food Security.

### **National Medium Term Priority Framework (NMTPF)**

The expert clarified that NMTPF is a planning and management tool introduced in 2005 by 90 FAO member countries. It is considered as FAO's input in the UN Common Country Programming Process (UNDAF), and a Government-FAO programme for FAO assistance and support in the country.

The importance of NMTPF is because it allows the member states and FAO to achieve strategic vision of priority areas for FAO assistance in the short and medium term; higher predictability of resources if and when mobilized (FAO not being a funding agency); and increased assistance effectiveness as it is more focused. In addition, it is useful to attain better performance through inclusion of a results-based approach, and realize alignment with the other development partners. Moreover, it helps in reaching transparency and accountability between the country and partners.

Explaining who formulates NMTPF, the speaker said at the request of the Government, FAO launches the formulation of NMTPF based on a wide consultation process at the country level involving all the stakeholders.

The formulation of NMTPF relies on guiding principles driven by a country's priorities. They are based on the national development agenda and programming cycle that is determined by the Government. In addition, it should be complemented to assistance provided by other development partners, and focused on a limited set of priorities where FAO's assistance would have the greatest impact, and for which there would likely be some funding. Finally, it must be accompanied by a short-term action plan (6 to 12 months) to guarantee the start.

### **FAO Conceptual Framework for Assistance to Member Countries**

Dr. Cistulli turned to review the FAO conceptual framework for assistance to member countries. The key advanced initiative the FAO has launched is **The National Programmes for Food Security (NPFS)**, a country-driven solution to eradicating hunger within the local population. The NPFS program is representing the FAO mission, which is to serve members with knowledge and capacity building. Therefore, they can develop and implement sound policies and programmes to enhance food and nutrition security, health, income and environment in a globalised world and to achieve the targets of the World Food Summit (WFS) & Millennium Development Goals (MDGs) of hunger and mal nutrition reduction.

The NPFS is a twin-track approach addressing:

- Sustainable and stable *supply of food* and household income through improved production and productivity; and
- Improved and stable *access to food* with a focus on food utilization quality and the most vulnerable groups

The NPFS geographical coverage is based on pilot programmes to countrywide programmes to have the highest impact towards the achievement of national development plans and MDGs.

Moving to more details, the speaker clarified the NPFS components:

- **Natural resources preservation:** in line with enhancing productivity, it is a challenge that can be addressed with higher attention to e.g. low-input techniques.
- **Institutional framework:** taking into consideration the range of institutions and stakeholders and the interdisciplinary nature of food security, the NPFS provides a framework for increased coordination and cooperation towards shared objectives.

• *Partnership*: both within the country (e.g. between the public and the private sector) and with international and bilateral partners (e.g. South-South Cooperation) to create motivation and capitalize on demonstrated experience and lessons learned.

• *Policy options*: establish a transparent, coherent and conducive environment to achieve food security objectives.

Eventually, Dr. Cistulli concluded his presentation assuring that FAO carries on a holistic mission not only to implement the programme but also to help in the execution, management, and follow-up. He outlined the role of FAO:

- Facilitate a multi-disciplinary formulation process and provides technical support as required;
- Assist in resource mobilization within the donor community;
- Arrange for technical assistance through South to South Cooperation; and
- Report on progress vis-à-vis 2015 targets.

### **Summary of discussion**

- Replying to a query on NPFS success, the expert explained that it is assured by examining the NPFS in two stages. The first is to test theoretically the framework, and the second is to practice the proposed technique to improve production and to enhance the farmers' ability to adopt such tools. In addition, related obstacles are also examined, which are usually connected to marketing systems and institutions, whereas FAO works at the macro-economic level in the countries.

As he assured, sometimes FAO cannot achieve the intended integrated success. As observed, NPFS success depends significantly on the funding potential of each country, since some countries cannot afford the costs, such as the sub-Saharan countries of Africa. Moreover, NPFS success is connected to local obstacles that should be explored and analyzed through a participatory approach combining stakeholders, farmers, and social nets to define their decision-making priorities for choosing relevant projects.

However, good results were attained in the fields of soil and water management and crop diversity, and the key factors of farming processes, besides addressing rain farming when it is possible.

- Regarding sustainable follow-up for the execution of the programmes by the FAO consultants after the project termination, the expert assured that the new strategy of the FAO in providing assistance is to seek projects with continuity. Particularly in the case of the NPFS, it is easier to ensure future improvement of the assistance provided in due time.

- Discussing the relation between NPFS midterm plans and a poverty reduction strategy, the expert clarified that these plans are programmed tools agreed on by the state governments and other partners. In addition, one of the NPFS principles is attaining program sustainability and agreement with the development strategies of these countries.

The speaker confirmed that FAO is seeking to make such national plans compatible with the country strategies designed to achieve certain goals, in particular to attain successful poverty reduction measures. In most countries, however, the strategies designed to reduce poverty are connected to the funds available and state priorities.

## Annex 1

### Workshop Program

<b>The Contribution of Agriculture to the Economic Reforms of Syria 1-2 July 2008</b>	
<b>1<sup>st</sup> day</b>	<b>Syrian Economy and its Reform Agenda – the Relevance of Agriculture</b>
8:30-9:30	Registration
9:30-10:00	Opening <i>H.E the Ambassador of Italy in Syria</i> <i>H.E the FAO Representative in Syria</i> <i>H.E the Minister of Agriculture and Agrarian Reform</i>
10:00-10:15	Coffee Break
10:15-11:00	<b>Key note presentations:</b> <ul style="list-style-type: none"> <li>▪ Orientations of the 10<sup>th</sup> Five-year Plan (2006-2010) and the Strategic Role of Agriculture (<i>A. El-Hindi, NAPC</i>)</li> <li>▪ Social Sustainability of Reformed Syrian Agriculture: the Risk Dimension (<i>C. Cafiero, University of Naples - Federico II, Italy</i>)</li> </ul>
11:00-11:30	Discussion – Chair H. de Haen, International Member of the NAPC Scientific Committee
11:30-11:45	Coffee Break
11:45-13:30	<b>Burning Issues on Agricultural and Rural Development</b> <ul style="list-style-type: none"> <li>▪ The State of Food and Agriculture in Syria (<i>S. Grad, NAPC</i>)</li> <li>▪ The Impact of Syrian Trade Policies on Agricultural Trade Performance (<i>B. Hamwi, NAPC</i>)</li> <li>▪ Organic Agriculture in Syria: Option or Necessity? (<i>F. M. Santucci, University of Perugia, Italy</i>)</li> <li>▪ Quality Improvement of Value Chain Products, a Multi-sectoral Approach; the Experience of MAI Bari on Olive Oil Production in Syria (<i>A. Dragotta, IAM Bari</i>)</li> <li>▪ Agriculture and Economic Reforms in Syria: Impacts on Poverty and Inequality (<i>B. Rocchi and D. Romano, University of Florence, Italy</i>)</li> </ul>
13:30-14:30	Discussion – Chair Orfan Alloush, Advisor of the Minister of Agriculture
14:30	<b>Lunch</b>
<b>2<sup>nd</sup> day</b>	<b>Management of Sustainable Agriculture Development in Syria</b>
9:30-11:15	<b>Syrian Agriculture and Emerging Global/Regional Concerns</b> <ul style="list-style-type: none"> <li>▪ Sustainability of the Exploitation of the Water Resources of Syria and its Implications for the Future Development of the Irrigated Agriculture (<i>J. A. Sagardoy, FAO Consultant</i>)</li> <li>▪ Approach and Policies against Drought: the Experience of the IAM Bari in Syria (<i>L. Cavestro, IAM Bari</i>)</li> <li>▪ WTO and the Challenges/Opportunities for Syrian Agriculture (<i>N. El-Amin, FAO RNE</i>)</li> <li>▪ Agriculture and Euro-Med Association - an Assessment of Preference Margins: Lessons for Syria (<i>J.M. Alvarez Coque, Polytechnic University of Valencia, Spain</i>)</li> <li>▪ Soaring international food prices (<i>N. El-Amin, FAO RNE</i>)</li> <li>▪ Food Security and high International Market Prices – Issues of Concern for Syria, (<i>A. El-Hindi, NAPC</i>)</li> </ul>
11:15-12:15	Discussion – Chair J. Vercueil, FAO Senior Project Advisor
12:15-12:30	Coffee Break
12:30-13:00	<ul style="list-style-type: none"> <li>▪ FAO Approaches and Initiatives in Support to Member Countries (<i>V. Cistulli, FAO TCAS</i>)</li> </ul>
13:00-13:30	Discussion – Chair N. Rasheed Mohammed, Deputy Minister of Agriculture
13:30-14:00	Closing Ceremony
14:00	<b>Lunch</b>



## Annex 2

### Presentations Abstracts

#### 1. “Social Sustainability of Reformed Syrian Agriculture: The Risk Dimension”

*Dr. Carlo Caffero, Università degli Studi di Napoli Federico II/ Italy*

One of the key aspects of socio-economic sustainability of any economic activity is the ability of the enterprise to sustain a minimum sufficient level of consumption for the people involved in the activity.

For many years, Syrian agriculture has been characterized by high levels of subsidies that were granted to farmers through fixed prices and secure outlets for their outputs. In addition, participation in the ‘strategic crops programs’ has granted farmers a preferential access to relatively inexpensive credit, in the form of in-kind credit through the Agricultural Cooperative Bank of Syria. Farmers in possess of a production license for crops such as cotton or wheat could obtain credit using the licensed production as collateral.

Access to other kinds of credit has been usually very expensive for Syrian farmers, due to the presence of high transaction costs, which has in fact reduced the effective flexibility they have had in choosing production patterns and in exploring new potential markets.

A large part of transaction costs can be traced to the absence of effective insurance markets. One of the frequent causes for failure to repay loans, for example, has been the occurrence of drought related production failures, which has increased the cost of either formally or informally provided credit, to the extent that it had to include a risk premium.

In such an environment, the foreseeable effects of any agricultural policy reform will depend crucially on the ways in which the reform will address the problems of access to credit and to insurance mechanisms for Syrian farmers.

To the aim of contributing to the debate on the sustainability of agriculture in Syria, this paper discusses on:

- a) Possible ways in which the risk dimension can be included in agricultural policy analyses
- b) The potential impact of various agricultural policy ‘strategies’ on the level of consumption risk exposure of farm households in Syria
- c) Possible lessons that can be derived from the experience of agricultural risk management initiatives in other parts of the World.

#### 2. Organic Agriculture for Syria: Option or Necessity?

*Dr. Fabio M. Santucci, University of Perugia/ Italy*

This paper deals with organic farming (OF) and policy options, with special reference to Syria. Its full version will enter into more details, with the most recent data, and policy recommendations.

First of all, it is important to remind that OF exists since 1924, when the first German producers began to follow the ideas of Rudolf Steiner. It has very slowly expanded, over the years and the continents, without any public support. There has been no legislation, no grants or credit schemes, no public applied research or extension. In many cases, the organic farmers, medical doctors and the few agronomists who supported them, were object of derision. Sometimes, the organic producers, processors and traders were even persecuted and fined, their goods confiscated, for “misleading the consumers”. Only in the very recent past, since mid-80s, some very local authorities, some local and national governments have supported OF. Nowadays, in a few countries, such as in EU since 1992, USA, Japan, Argentina, Costa Rica, Tunisia, Turkey etc. a legislative framework begins to exist; grants and subsidies are made

available for the different stakeholders in the agro-food chain, public research and extension have been activated. In addition, the consumers demand is growing very fast, with supermarkets entering aggressively into this market. History demonstrates that a) very slow progress can happen even without a policy, but also that b) positive and coherent political actions can enormously speed up the process.

The Governments of developed countries act in favor of OF because they desire to reduce the pollution due to excessive use of chemicals, or because the animalists lobby for better animal welfare. In some cases, it is just a way to bypass the opposition by other countries to subsidies, which cannot be coupled any longer with production. Subsidies to OF become a possible income support for farmers (environmental subsidies included in the blue & green boxes of the WTO). In addition, the pressure from NGOs and some environmentalist parties cannot be ignored. Last but not least, consumers are asking safe and healthy products, and this originates the setting up of high added value and labor intensive agro-food systems in rural areas.

In most developing countries, organic products are still considered a specialty for foreign markets, or for small domestic markets represented by local elites, but there is also a growing awareness that OF is a must also for food security, because bio diverse organic systems are more resilient and require less cash investments. This leads to develop knowledge intensive systems, based on local resources, for cash stripped small producers. In addition, the pressure from NGO and some foreign donors should not be underestimated, because endogenous development still needs the support, in many cases, of some external help.

Syria finds itself at the early stage of development for several organic commodities: cotton and olive oil, for example, are already produced and marketed abroad, but it could be wrong to limit the focus only on these two products and only for the EU market. Other markets as well as the domestic market already require organic goods. Furthermore, OF, if properly adopted on a wide scale, could reduce the environmental risks and the loss of fertile topsoil, which characterize present agriculture in Syria. For these reasons, a coherent policy framework is required, to orient Syrian agro-food chains towards a more sustainable development.

### **3. Agriculture and Economic Reforms in Syria: Impacts on Poverty and Inequality**

*Dr. Benedetto Rocchi & Dr. Donato Romano, Department of Agricultural and Resource Economics - University of Florence/ Italy*

In this paper a SAM of Syrian economy is used to build a “fixed price” model to simulate the impact of selected policy options for agriculture and food industry. Several policy scenarios are defined combining in different ways the suppression of three current policies for food and agriculture (subsidies to agricultural production activities, price support for strategic crops, support of food consumption through the Price Stabilization Fund) with alternative uses of financial resources set free for the Government budget (deficit reduction, Government expenditure increase, transfer to households increase).

Both the elimination of subsidies to production activities and the cut of prices for strategic crops show a potential positive effect on Syrian economy. All alternative uses of resources previously allocated in the considered policies generate a multiplicative effect exceeding the negative direct impacts on household incomes due to the elimination of policies. Above all the elimination of subsidies to production activities seems able to produce the largest increases of output and income.

These general impacts result in a small reduction in poverty (holding the population constant). The multiplier effect is larger for Government ‘budget strategies’ corresponding to the deficit reduction and to the increase of transfers to households. The third policy option (elimination of PSF) leads to more controversial results. The elimination of subsidies to food consumptions generates an increase of poverty whatever the ‘budget strategy’ adopted. Only the exclusive

destination of financial resources set free to the increase of transfers to households seems able to maintain substantially unchanged the level of poverty. In fact, the direct (monetary) support to households' income generates an expenditure increase large enough to counterbalance, through the multiplier effect in the whole economy, the initial cut of real incomes due to the elimination of food subsidies.

Many policy lessons can be derived from the simulation exercise: the influence of overall strategies for Government budget on the outcomes of sectoral policies; the fundamental importance of output growth for poverty reduction; the existence of structural asymmetries in income distribution. The analysis highlighted also a different position of rural households with respect to policy outcomes. Rural households seems less affected by positive multiplier effects on incomes and more exposed to poverty. The results clearly show that payments to households, substitutive of suppressed policies should be carefully designed to overcome these undesirable distributive outcomes.

#### **4. Sustainability of the Exploitation of the Water Resources of Syria and Its Implications for the Future Development of the Irrigated Agriculture**

*Mr. Juan Antonio Sagardoy<sup>14</sup> & Dr. Consuelo Varela-Ortega<sup>15</sup>*

The demand for water in most countries of the Near East region is approaching the available water resources, and in many cases is exceeding them. This is mainly due to the growth of population but also to the deliberate policies of governments that have promoted many irrigation development projects and the uncontrolled exploitation of ground water resources. This crucial issue is particularly relevant for the agricultural sector, which often uses up to 85% of the available water resources.

As a result, many countries of the Region are facing a critical stage in the development of irrigated agriculture. The expansion of this area appears is facing serious difficulties and new policies are needed to promote the demand management whereby the demands are kept under control. Syria is one of the countries facing that dilemma, already in year 2000 the GOS implemented important policies to conserve the water resources, but at the same time promoted a considerable expansion of the irrigated areas, which was not compatible with the available water resources.

The present paper is drawn largely in the work done under the GCP/SYR/006/ITA Project, during three missions undertaken in 2000 and 2001, by a team of two consultants, namely: Consuelo Varela Ortega and Juan Antonio Sagardoy. The study covered a large spectrum of activities, but essentially, elaborated several policy scenarios for the future development of the irrigation sector including the feasibility of the modernization of the irrigation methods. The scenarios had a time horizon of 15 years starting in year 2000, and therefore now more than the half of the time horizon has elapsed. Therefore, it appears relevant to verify the validity of the recommendations made having into consideration the evolution of the sector during the last years.

In this attempt, the difficulty of obtaining up-to-date data regarding the present situation of the irrigation sector has met considerable difficulties. Nevertheless, the limited information obtained permits to delineate what have been the main trends of development of the irrigated agriculture, and therefore, to check the validity of the assumptions made 7 years ago.

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<sup>14</sup> International Consultant, Project Manager of the EC funded Research Project GEWAMED.

<sup>15</sup> Professor, Department of Agrarian Economy, Polytechnic University of Madrid (UPM)

## **5. Quality Improvement of Value Chain Products – A Multi Disciplinary Approach**

*Dr Alberto Dragotta CIHEAM MAI- Bari Project Coordinator*

The Olive Oil Quality Project has been funded by the Italian Ministry of Foreign Affairs and jointly implemented by CIHEAM MAI Bari and the Syrian Ministry of Agriculture and Agricultural Research represented by GCSAR (General Commission for Scientific Agricultural Research).

The integrated related activities of the project has been converging finally in a Strategic national plan for the olive oil quality improvement starting from a very preliminary SWOT analyses thanks to that has been possible to focus on the main problems and needs for the sector.

This analyses has concerned on one hand the potential and effective capacity-institutional building training needs (at decision makers level) and from another hand it has concerned a preliminary multifactor analyses and environmental scan in order to assess the related priorities to the different factors affecting production of the Syrian olive oil.

Main key project activities were held especially those concerning laboratories update and upgrade, olive germ plasm assessment through molecular and chemical tests, the constitution of the first informal “olive oil quality network” by modeling a new pilot group orbiting around a pilot mill in 4 Syrian regions.

An interactive production of technical documents has integrated the technical background of farmers and engineers and this updated knowledge has been applied at the demonstration plots level for IPM and organic olive oil production.

Byproduct disposal practical and related strategic approach has been also realistically faced during the implementation of the project and main data taken from the preliminary analyses has been inserted in a dedicated GIS program to draft ecologic impact regional maps allowing decision makers to assess the environmental risk for opening new oil mills in some regions.

The project has also promoted dedicated initiatives focusing on rural development activities in Idleb region, fostering as well the creation of the first Syrian LAG ( local Action Group) involving both private and public institutions/partners where valorization of archeological sites, typical products and artifacts has found in the “Idleb Olive road” its full concretization.

The completely step-by-step multi disciplinary approach synthetically has been published as “Syrian national strategic plan for the improvement of Olive oil quality” in the CIHEAM review - Series A, Mediterranean Seminars “Options Méditerranéennes” No: 73.

## **6. Concise Summary of SOFAS 2007**

*Mr. Samir Grad, NAPC*

The agricultural sector plays a foremost role in the economic and social development of Syria, contributing to more than a quarter of the employment and income of the country. It is vital to achieve national food security, to enhance the Syrian trade position and to foster the development of other economic sectors, especially the agro-industrial sector.

In recognition of the role of this sector, the NAPC periodically publishes the SOFAS (The State of Food and Agriculture in Syria), providing policy makers, researchers and stakeholders with an updated overview of agricultural issues and related information. The SOFAS is an instrument for dealing with the challenges facing the sector in the current process of opening and liberalizing the economy.

The present study is the third edition of the biennial report on the SOFAS issued by the NAPC. The first edition was published in 2003<sup>16</sup>. In this report, SOFAS 2007, the focus will be on the changes that occurred in the agricultural sector during 1997-2006 highlighting the period 2000-2006 and considering some results of the recent study about supply and demand for agricultural products undertaken by the AFD (Agro-Food Division).

It can be said that a substantial progress was achieved in the field of food security because of the availability of food for consumption, stability of food supply and the improved access to food. However, still there are constraints in balancing the vegetal and animal sources to get the required calorie and protein intakes. Therefore, it is necessary to push the integration of the Syrian market with the Arab and European markets to place the Syrian economy on its production possibility frontier, to improve the efficiency of both the use of domestic scarce resources and the agricultural sector and to ensure the availability of food supply, its stability and its access (through income improvement).

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<sup>16</sup> The State of Food and Agriculture in the Syrian Arab Republic, 2002.



## **Annex 3**

### **List of Participants**

#### **Agricultural Engineers' Syndicate**

Alsamara, Nasser Chief for Damascus' Branch.

#### **Agricultural Cooperative Bank**

Altaleb, Riad, Chief for Special Credit Division

Hadad, Leila, Information Circuit Chief

Yazagi, Elias, Deputy Director

#### **Arab Organization for Agricultural Development (AOAD)**

Yacoub, Abdullah, General Director of Damascus Office

#### **Arabian Association for Social & Economy Agricultural Science**

Alhalabi, Mohammad Saeed, Consultant

#### **Arab Centre for Studies on Arid and Dry Lands (ACSAD)**

Al-Asouad, Mohammed, Deputy General Director

#### **Al-Thawra Daily**

Alwanleh, Fouze, Chief of Locality Division

#### **Baraka Company**

Junbert, Riyad, Director

#### **Cabinet Presidency**

Marieh, Manal, Decision Shoring' Establishment Researcher

#### **Delegation of European Union**

Shhadeh, Ahmad, Economic Division

#### **Egyptian Embassy**

Sadek, Mohammad, Commercial Attaché

#### **French Embassy**

Kaadan, Weal, Agricultural Attaché

#### **Food & Agriculture Organization (FAO)**

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Perri, Pirro-Tomaso, Chief Technical Adviser/Italy

Romano, Donato, Professor in Florence University/Italy

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- FAO Consultant

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Genadi, Usama, Researcher  
Kamal Aldin, Kinan, Researcher

### **General Union for Farmers**

Al-Shaar, Mowafak Agricultural Affairs Director  
Al- Mustafa, Bassam, Journalist

### **ICARDA Organization**

Mazied, Ahmad, Agricultural Economy Consultant

### **Indian Embassy**

Subramanyan, Palaniswamy Karthigeyan, Third Secretary and Agricultural Attaché

### **International Bank**

Buhabib, Shadi, Economist

### **Islamic Bank for Development**

Abd Al-Motalib, Abd Al-Rafee, Agricultural Economy Consultant

### **Italian Embassy**

Gasparini, Paul, Agricultural Attaché

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Al-Attar, Fatat, Horticultural Division

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Ayoub, Majed, Deputy Director

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Sewar, Hassan, Chief of the Costs Study

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Alabdulah, Mohammad, Agricultural Engineer

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Alghaze, Mohammed, Quality Division & Marketing Structures

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Kabani, Falak, Circuit Chief

Masri, Gada, Circuit Chief

Zaher, Abdul Alnaser, Chief of Marketing Studies

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Nasma, Abedl-Ruhman, Chief of Planning Circuit

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Abu Ras, Zainab, Bees Division.

- Planning and Statistics Dept.

Katana, Hassan, Dept. Director

Mohsen, Amal, Agricultural Statistical Abstract

Dali, Yaal, Preparing the Main Presidial Report

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Saleh, May, Statistics Division

- Project of Fruit Trees Development

Ezzo, Adnan, Project Director

- Project Development in Middle & Coast Zone

Aljoughmani, Louia, Planning Division

- Journalistic Office

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Al-Ajlouni, Ali, Journalist

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- Rainmaking Project

Soukar, Lina, Raining Report

- National Project for Transfer to Modern Irrigation

Alkaderi, Ahmad, Project Director

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### **State Planning Commission**

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### **Syrian Arab News Agency (SANA)**

Abu Shakra, Saber, Editor

### **The Television**

Branbo, Haitham, News Division  
Essa, Moaad, Editor in Aldounia TV  
Sbaih, Gassan, Editor

### **Tishreen Newspaper**

Hanawi, Moaza, Editor in Econom Section

### **United Arab Emirate Embassy**

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Almekdad, Ghazi, Professor in AED

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