

United States Marine Corps
Command and Staff College
Marine Corps University
2076 South Street
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Quantico, Virginia 22134-5068

MASTER OF MILITARY STUDIES

**Food Security as a Constraint on National Policy Decision Making in the Arab Region:
A Case Study on Food Security in Sudan**

SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF MILITARY STUDIES

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AY 2008-09

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Date: April 17, 2009

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE 2009	2. REPORT TYPE	3. DATES COVERED 00-00-2009 to 00-00-2009			
4. TITLE AND SUBTITLE Food Security as a Constraint on National Policy Decision Making in the Arab Region: A Case Study on Food Security in Sudan		5a. CONTRACT NUMBER			
		5b. GRANT NUMBER			
		5c. PROGRAM ELEMENT NUMBER			
6. AUTHOR(S)		5d. PROJECT NUMBER			
		5e. TASK NUMBER			
		5f. WORK UNIT NUMBER			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) United States Marine Corps, Command and Staff College, Marine Corps University, 2076 South Street, Marine Corps Combat Development Command, Quantico, VA, 22134-5068		8. PERFORMING ORGANIZATION REPORT NUMBER			
		10. SPONSOR/MONITOR'S ACRONYM(S)			
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		11. SPONSOR/MONITOR'S REPORT NUMBER(S)			
		12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited			
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 29	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

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Executive Summary

Title: Food Security as a Constraint on National Policy Decision Making in the Arab Region: A Case Study on Food Security in Sudan

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Thesis: This paper will briefly talk about food shortage and its contribution to food security in the Arab states. Second, it will identify the causes of this problem and discuss how the Arab governments did not engage in long term solutions and did not try to emulate successful models. Third, it will explore the Sudanese model, which was a successful one for the last thirty years. Finally, this paper will offer a suggestion as a solution to the food shortage problem.

Discussion: As the food shortage problem spreads in the Arab states because of shortages in food production, rising costs of agriculture raw materials, possible floods and others, Arab policymakers can no longer ignore it. Shortages in food productions are caused by the population growth, the lack of agricultural lands in the Arab region, the increase of competition in the global markets of grains and crops. The rising costs of agriculture raw materials are caused by the tariffs and other trade barriers on these imported materials. However, the floods are part of a normal climate cycles in countries such as Egypt, Sudan, Iraq and Lebanon. As a result, the Arab policymakers need to develop strategic plans including government subsidies to resolve the problem. These plans may include the adoption of the Sudan's program, which has shown to be successful for decades.

Conclusion: Due to several issues talked about in this paper, food shortage became a serious problem in the Arab states. These states are encouraged to tackle the problem most importantly because of the population growth. Further, the Arab states have a success model of Sudan that they all can follow and adopt to improve food security in the region. This model may be coupled with government incentives including tax deductions, agricultural loan facilitation, and the introduction of effective mechanisms to increase local production and job creation in rural areas. Finally, the Arab policymakers should reconsider the establishment of agricultural scientific research centers for enhancing food production in the Arab region.

references and authentication. He also provided me with keen insight regarding Arab agricultural and cultural awareness. I am also thankful to Dr. Moqbel Al Zokair and to my classmate and to my close friend, LCDR Bryan Hudson, for their valuable contributions in garrison and off duty. I would also like to thank my parents for all their prayers and support.

Finally, I would be remiss if I did not acknowledge the contribution of my wife; she played a tremendous role in enhancing my life. Like any of my other personal or professional successes, this undertaking was not possible without her support and unwavering patience.

Preface

The Arab region faces many political, economic and social challenges from within the Arab community; however, one pressure/challenge that is often overlooked is food security. The region contains vast amounts of natural resources that are rarely utilized to improve the food security, which is largely due to the lack of cooperation among the Arab states. Further, the problem lies in the inability of Arab agricultural policymakers to form a consensus on the problem. These disagreements have pushed Arab countries to literally cease efforts to meaningfully attempt to address the food problem. Consequently, Arab officials refer to the food security problem as a result of rapid growth in the population.

This paper reviews a number of recent important publications on the nature and causes of food insecurity in Arab countries. The focus is on one specific aspect of food insecurity -- food production and the elements that affect production. Unfortunately, food shortage is widespread in Arab countries and causes food insecurity throughout the region. Also, this paper explores the pros and cons of how Sudan's successes in confronting food deficiency and the possibility of serving as a model for other Arab countries.

The completion of this paper could not be done without the help of Dr. Douglas E. Streusand, Associate Professor of International Relations, at the Marine Corps Command and Staff College, who served as my mentor for this project. He is largely responsible for keeping me on the right track -- from the inception of my research until the completion of this paper. Also, my deep thanks go to Lt. Col. Burton, my faculty advisor, and Dr. Patrice Scanlon, Director of the Leadership Communication Skills Center at Marine Corps University. Dr. Scanlon not only provided me with sage technical advice during my research and writing, but also proved to be a positive reinforcement during times when this task seemed a bit discouraging. Many thanks also to Mr. Ziad Wehbe, Cultural Specialist at Computing Technologies, for his support of my Arabic

Introduction

In the midst of the current events affecting Iraq, Palestine, and Afghanistan, the decision-makers in the Arab region seem to be paying less attention to other national issues that are crucial today and in the future. The importance of food security, which is defined as *providing food* to individuals as well as providing them *access to food*, is not limited to the fact that it is an economic issue; it also extends to the core issue of sovereignty. Specifically, the Food and Agricultural Organizations of The United Nations define food security as:

Food security exists when all people, at all times, have access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.¹

Arab food shortage that contributes to food insecurity² ranks near the bottom of the scale among other regions of the world. Food insecurity exists when people do not have adequate physical, social or economic access to food.³ Today, many of the Arab countries (see Appendix (A) for a map of the Arab region) are experiencing not only a lack of productivity, high unemployment, and increased migration of Arab youth, but also a lack of food security that seems to become serious.⁴ In an effort to tackle the food shortage problem, some Arab states recently sought investment in the agriculture in foreign countries such as Sudan and Kazakhstan. These measures will contribute to a surplus of food reserves, thereby saving many nations from experiencing famine. In comparison, countries such as China and India, which have large populations and were on the verge of famine, have successfully transformed their food situation from heavily depending on imports to exporting food.⁵

Some Arab economists and agricultural officials, who focus on food security in the region, argue that the food shortages and their management are tied to nature as opposed to any man-made factors⁶. Yet, there are published documents that state the Arab region is trying to improve its food security from traditional production techniques to modern production

equipments, such as the use of fertilizers, heavy tractors and efficient irrigation. When Sudan experienced food security problems, its leadership addressed the problem right away and has implemented a successful strategic plan, to be addressed later. Similarly, Arab states should follow the Sudanese example and adopt it as an alternate solution to food security. An even better plan would be for Arab policymakers across the region to unite to develop a cohesive and specific policy based on Sudan's plan and experience in order to prevent food insecurity.

Food Security in the Arab Region

Food production is not the same as food availability.⁷ The writer contends that food availability is not a new problem in the Arab region. In fact, it is one of the region's most serious problems that still exists and needs extensive research on and collaboration with the region's governments, academics, and policymakers. The growth of the Arab population and the governments' failure to keep up with its needs necessitates the development of a strong policy against importing an excessive amount of food. Many of the programs that have already been instituted have met with mixed success. In fact, during the last two decades, agricultural production in the Arab region has failed to support the people's need.⁸

Unlike the European Union (EU), the Arab League does not have a unified policy about agriculture and food production and there are no plans to develop a specific policy. Instead, each Arab country has its own policies and procedures to deal with agricultural production. Many policies in each country revolve about the availability of fertile soil, different patterns in the weather, and differences in irrigation technology. For example, Turkey and Greece have semi-tropical weather patterns and fertile soil, while Egypt and Algeria are more arid.⁹

Major Causes of Food Insecurity

Although the Arab region is rich in natural resources, currently, the region's governments are not able to provide adequate and sufficient food for their populations. It is noteworthy to mention that the population growth is probably the single most important factor influencing food consumption and ultimately its supplies. Therefore, if population growth continues, and it is expected to continue, insufficient food and food availability will create other problems, such as inflation, unemployment, and perhaps famine. In addition, the lack of secure and stable agricultural policies in the region will result the followings:

1. A tendency towards bulldozing agricultural lands and replacing them with new factories and industrial development.
2. The lack of codified law that determines land ownership and its use, which allows people to establish new residential and industrial developments.
3. Failure to provide fresh water for irrigation purposes in areas far from rivers.
4. The absence of government intervention widened the gap in the value of food commodities in the Arab countries among investors and farmers.
5. Reduction in food production due to drought, floods, and cold waves.
6. Depression of food production due to the lack of pesticides and regular agricultural guidelines.
7. The commitment of Arab countries to implement World Trade Organization (WTO) agreements and the termination of the support provided by those countries for agricultural production and export of foodstuffs, which led to an increase in food prices. When considering the average income of Arab individuals, the high food prices feed into the issue of consumption of food, which is highly related to food security.
8. Lack of self-sufficiency and the absence of clear agricultural reform plans.

Improving the Food Security Situation in the Arab Region

The Arab countries can improve their food security situation in a number of ways. They can lower food prices while subsidizing food productions, facilitate farmers' access to modern tools and

equipment. In addition, well-organized plans and long-term strategies are needed to support improving the food security situation. For example, although the countries can increase the food supply through significant commercial agriculture and/or imports, this strategy is likely to improve food security for the citizens of the country but; it is likely to cause conflicts of interest between urban and rural area. In addition, the Arab governments can intervene during a food crisis by increasing food subsidies and facilitating farmers' access to equipment necessary for increasing immediate food productions.

On the other hand, it is impossible to achieve food production goals without good governance, which, unfortunately, has proved challenging for the Arab region. Specifically, various entities including banks not allocating funds to the agricultural sector, narrow political and policy making views, centralized government power, and market/government corruption have failed to achieve food security and food production improvement. Furthermore, the governments also face the challenge of how to manage effectively their countries' financial and natural resources in order to promote trust, transparency, answerability, and capability. To be more specific, food production and food security must be accompanied by a "safety net-like" program to achieve price stability in order to help the food producers in the Arab region safeguard food for the lean years.

The Arab country of Sudan is rich in natural agricultural and mineral resources which, provides a case study in the realm of producing food efficiently. On the contrary of what is perceived, particularly in the west, that Sudan experienced famine in the modern history, Sudan has never underwent such conditions. In fact, neither famine nor major shortage in food production was mentioned in the Sudanese modern history. However, during the last few decades, the country has seen major civil wars and political unrest that contributed to the displacement and the killing of

millions. Perhaps, this led some observers in the international community to believe that Sudan suffered from food shortages. But this perception coupled with the fact that millions were displaced, in a way propelled international organizations such as the United Nations, to expand their humanitarian aids to the people and help developing the Sudanese fertile land for the purpose of eliminating any food shortage throughout the country. The information provides details connecting the problems mentioned earlier and demonstrates why Sudan's food production strategies should be a model for all Arab countries.

Sudan as a Model in Countering Food Insecurity

Location, Topography, and Weather

Sudan is located in the northeast part of Africa.¹⁰ As Professor Mustafa El Maghrabi states in his article, Reform of Economic Governance in the Sudan:

Sudan is one of the largest geographic lands in the world. Its land is equal to one million square miles. One third of this land is fertile and suitable for agriculture. In fact the Sudan is rich in natural resources, such as forests, animal wealth, and different mining which support the economy and development in the country.¹¹

The country of Sudan is divided into three zones (see Appendix (B) for a map of the Sudan state). Across the middle of the country lies the dry savannas which literally means Sudan, in northern Sudan lies the dry land, and in the south, Sudan has moist savannas. The Nile runs the length of the country providing crucial water resources for agriculture. For the most part, modern and successful agricultural development in Sudan has been the result of irrigation projects; which cover its one million square miles.¹² Further, El Maghrabi described above, Sudan's other natural resources are numerous and plentiful. For example, the country has extensive productive and fertile soils, generally flat topography, and perennial, seasonal sources of surface water and under-ground water aquifers.

Sudan Food Insecurity: The Beginning

Food security remains an enormous challenge confronting policymakers in Sudan. Sudan experienced a severe economic and financial crisis since the mid-1970s. Throughout the 1970s, the government adopted a strategy that led to reforming the agriculture. This reform extended to reach the export sector by producing food, sugar, fabric, and meat. The assumption was that by developing Sudan's large unemployed agricultural workforce, the country would be able to provide food security for the Middle East through a combination of Arab and Western funds. The essence of these plans was the expansion of major agricultural projects; a strategy that led to a huge inflow of capital, primarily from oil-rich Arab countries. Currently, the most food insecure areas are those that were more affected by the Sudanese second Civil War which started in 1983 and ended in 2005. This war has resulted in more than four million people to be displaced and more than two million deaths¹³. After the war ended, these displaced individuals made effort to return to their homes. These inhabitants incurred very high social costs to support their return and resettlement. Therefore, the Sudanese government took the initiative and allowed the United Nations (UN) food organizations earlier to stop any anticipated starvation in Sudan.¹⁴

In May 1998, FAO issued a Special Alert on the grave food supply difficulties in southern Sudan, particularly in Bahr el Ghazal, as a result of a succession of drought-reduced food production coupled with an intensification of the long-running civil strife. Later in the year heavy rains and flooding displaced a large number of households and damaged crops in the central and eastern parts of the country. These events prompted the fielding of an FAO Mission to southern Sudan in October and a joint FAO/WFP Crop and Food Supply Assessment Mission to all the production areas in northern Sudan from 15 November to 3 December 1998 to estimate cereal production and food supply and assess food aid needs from the current harvest of mainly sorghum and millet and to make an early forecast of wheat production in the first quarter of 1999.¹⁵

Solutions and Remedies

As highlighted in the report *Country Strategic Outline Sudan*, published by the United Nations World Food Program (UNWFP) in October 2000, Sudan was the first recipient country of WFP development food aid.¹⁶ In June 1963, WFP's governing body approved Project Sudan 001-“Resettlement of Wadi Halaf.” Since then, a range of development activities have been supported through 21 projects.

Although Sudan implemented many projects, it is still home to the highest number of internally displaced persons (IDP) in the world. For that reason, Operation Lifeline Sudan (OLS), established in 1989, is the main mechanism for humanitarian aid in Sudan and incorporates the United Nations' system and international non-governmental organizations (NGOs).¹⁷ Within OLS, WFP is the principle partner for the provision of food and related logistics.

Sudan is one of the first Arab countries to open its doors widely to UN food programs in order to avoid famine and mass death among populations. The following are examples of different agencies inside Sudan that are carrying out world food programs under the umbrella of the United Nations.

UN Food Programs and Agencies in Sudan

Sudan is one of the first Arab countries that started to regulate its relations with the United Nations organization's representatives. This is largely due to the eagerness of Sudan's politicians to facilitate the humanitarian sides of these organizations in order to advance the standard of living of the Sudan's constituents. Despite the obstacles, such as utilization of food, demographic changes, the underlying dynamic of population's growth, poor delivery of human services, falling per capita income, poor financial access to food, malnutrition, poor infrastructure, and trade links that were facing politicians in Sudan, the Sudanese policymakers were able to allow good number of these organizations and associations to establish a mechanism to help the

Sudanese and find solutions for their problems. Policymakers in Sudan did not stop because of limited capabilities and abilities, but they worked deliberately to expand their work to include accurate databases that helped to eliminate the manifestations of confusion and duplication of work when dealing with inhabitants of ruler agricultural lands. Sudan has no difficulty and will not spare any efforts in sitting newly agricultural projects that match with its basic needs and requirements. In Sudan, many of humanitarian relief organizations work side by side with the government to stop or limit any expected famine and natural disasters. The following are examples of such initiatives:

(1). *Institutional Capacity Programme Food Security Information for Action (SIFSIA)*

SIFSIA was developed in 2005 and it was one of the European Commission's development assistance to Sudan. The European Commission (EC) assistance is based on a multi-track response strategy involving the design of interventions for different timeframes (immediate, medium and long-term) and for different geographic / administrative levels. SIFSIA is expected to contribute to food security by supporting the strengthening of policy and planning initiatives and of food security and market information systems.¹⁸

(2). *Operation Lifeline Sudan (OLS)*

It was established in 1989, following the famine in Bahr al-Ghazal, to provide relief to the population affected by the second civil war and natural disasters. One of OLS's main tasks is to negotiate with the warring parties access for the humanitarian agencies to deliver aids to the population affected by the conflict. OLS works in concert with many other national and international NGOs, among its objectives, is to provide peace and food security in Sudan. OLS operates within the government and non-government agencies in both southern and northern Sudan. Further, the OLS' main job is focused on humanitarian affairs.¹⁹

The initiatives described above are two examples of UN food security monitors. In a special report published in 11 February 2004 by the FAO/WFP crop and food supply assessment mission to Sudan it listed the following two reasons. First, the UN organizations provide relief food assistance -if needed- to the most vulnerable populations groups including displaced populations and returnees. Second, the UN agencies working in Sudan helped providing basic agricultural inputs including crop, vegetable seeds and also conduct pre-harvest crop assessments to identify agricultural and livestock gaps among the Sudanese²⁰. On the other hand, the UN organizations support agricultural production through the promotion of good agricultural practices and agricultural intensification through improved agricultural technologies, including water harvesting and handling of small irrigations systems. Finally, The UN food aids include support of the early warning systems, food disaster awareness and response capacity through training, provision of equipments and logistics support.²¹

Arab World Breadbasket

During the first oil eruption in the seventies of the last century, Arab governments have gathered their efforts to establish the Arab Organization for Agricultural Investment and Development, based in Khartoum. The promotion of stability in Arab food security stands among the highest priorities of the organization. The organization aimed to focus most of its projects in Sudan, but officials argued that the little achievement is due to a combination of mismanagement, the lack of adequate funding, and the regional policies. Arab agricultural investors tried to recover agricultural land in poor countries, where they can start their own agricultural projects to face the potential food insecurity in the area. Saudi Arabia, for example, is like the rest of the Arab Gulf Cooperation Countries (GCC) has no permanent rivers or lakes. The rainfall is scarce and unreliable. Thus, crops cultivation can only be fruitful through

expensive projects that drain groundwater sources. In the dairy farms, cooling fans and water spraying machines are used to cool the cows. However, Saudi officials see the urgency in changing the situation. Saudi policymakers considered different parts of the world on the fertile land and through research chose Sudan to conduct various alternative food and agricultural cultivations. Their plan is the establishment of large-scale projects abroad to accommodate a later stage in the private sector for the cultivation of certain crops such as maize, wheat and rice. With that the Saudi projects are considered among the largest projects in the region, but it reflects a growing desire in such projects in the rich countries, which funds most of the food imported from abroad.²²

As stated in *Arab News*, a Saudi daily newspaper, Saudi Arabia is in a better position to forge politico-economic partnerships with other countries for the purpose of achieving food security. The best partner in this respect is Sudan, known as the food basket of the Arab World.²³

Clearly, from all that has been said above, Sudan is blessed with fertile agricultural lands. Abundant irrigation facilities are also available. Furthermore, Sudan has varying terrain, ranging from deserts to savanna and equatorial, which make Sudan's land fertile for different kinds of plantations and agricultural products.

Conclusion

It is time to guide the Arab funds to invest in Sudan to make it the breadbasket of the Arab countries, and perhaps export food. Again, Sudan is rich in natural resources, most of which had not been yet exploited and could be regarded as a major asset to serve the largest joint investment projects. One can rarely find the combination of these resources available in a single state. These natural resources include agricultural land, freshwater resources, in addition to

forests and grasslands, livestock and mineral resources, is available in Sudan, where more than 200 million acres of fertile soil suitable for cultivation and for agricultural investment.²⁴

Food Storage and the King of Egypt Vision

As stated in the Holy Quran the king (of Egypt) said:

"I do see (in vision) seven fat kine, which seven lean one devour-and seven Green ears of corns, and seven (others)²⁵.

(Joseph) said:

"For seven years shall ye diligently sow as is your wont: and the harvests that ye reap, ye shall leave them in the ear except a little, of which ye shall eat. Then will come after that (period) seven dreadful (years) which will devour what ye shall have laid by in advance for them-(All) except a little which ye shall have (specially) guarded. Then will come after that (period) a year in which the people will have abundant water, and in which they will press".²⁶

The above verses clarify that Joseph (PBTH) not only foresaw what would happen, but also, unasked, suggested the measures to be taken for dealing with the catastrophe when it comes. There will be seven years of plentiful harvest. With hard-working cultivation they should get buffer crops. From them they should take a little for their food and store the rest in- the-ear to preserve it from the mice that attack.

There will follow seven years of dreadful famine, which will devour all the stores which they will have laid by in the good years. They must be careful, even during the famine, not to consume all the grain. They must be special arrangement to save a little for seed, lest they should be helpless even when the Nile brought down abundant waters from the rains at its sources. This is a symbol of very plentiful years, following the seven years of drought. The Nile must have brought abundant fertilizing waters and silt from its upper reaches, and there was probably some rain also in Lower Egypt. The vine and the olive trees, which must have suffered in the drought, now revived, and yielded their juice and their oil; among the annuals, also, the oil seeds, such as linseed, sesame, and the castor oil plant, must have been grown, as there was

irrigated land to spare from the abundant grain crops. With the people's spirits recharged, to enjoy the better products of the earth, their absolute necessities had been more than met in their grain crops. In truth, the Arab World states have implemented food assistance programs of some sort, but many of these have proved expensive, ineffective, or both. The fact is food security remains a prominent concern that constrains the Arab region in all aspects.

Arab Security Gab

Some Arab policymakers anticipated that they would face food deficiency and somehow were able to come up with reasonable solutions to stop its occurrence. The Gulf Cooperation Council, for example, plans to create a warehouse of the food strategy will be based in Oman. Oman was chosen because of its strategic geographical location. The logic is that the area is vulnerable to emergencies, such as wars, shocks or closures of the Strait of Hormuz, through which passes through vital supplies of oil. This plan was one of the benefits of collective cooperation in the area of the Gulf food security, but the strategy did not materialize, mostly for political reasons.

According to Ahmad Al Khalaf, respectable late member of Arab chamber of commerce, he stressed that it was time to adopt that strategy. He emphasizes that the Arab policymakers should act collectively to manage the food crisis that is approaching rapidly. He further suggested easing the burden on the citizens living in the Arab states and the building of strategic stocks of food. He insisted that agricultural production in GCC countries is very limited and would not amount to the growing demand because of the lack of the basic infrastructure for agriculture that can achieve self-sufficiency. No adequate water, agricultural land, skilled labor and sufficient climate suited for agriculture, because of the overall nature of the region. So, this in his opinion what drove some regional states to scope the problem and take advantage of the

agricultural land in other Arab countries such as Sudan which is known as the breadbasket of the world. Further, he wondered, in reference to the rich Arab states, why one should have money when it is not invested in the most important sector; food security. The food is now a dangerous weapon more powerful than the weapon of oil, and the countries that possess such a weapon could use it as vital as any other pressuring weapon. Major countries are using food productions as a means of power to pressure other nations and governments.

Additionally, he stated that the GCC countries would have been better years ago, had they developed plans to counter food insecurity through the establishment of collateral agricultural rescue plans, ensured the enforcement of mutual imports, stocked sufficient amounts of food, and took advantage of agricultural capabilities in some Arab countries such as Sudan, Syria and Egypt. On the other hand, Dr Aseem Shellah, an economic expert in Qatar Ministry of Industry and Commerce, mentioned that the Arab region is facing a food gap estimated at 20 billion dollars of goods, particularly in the main, such as grain, oil, sugar, red meat and poultry; fresh fruit and vegetables are expected to rise to 32 billion dollars over the next five years in light of the increasing population. He implied that the gap might be worsening, and the Arab policymakers should narrow it down by adapting certain guidelines, (i.e. agricultural strategies), in which if implemented would represent one of the solutions to meet the challenges of the food gap, he warned that much of the land in the Arab region is subject to economic exploitation and in some cases, however, to be used badly for non-agricultural usages.

Finally, it is worth mentioning that Mr. Abdullah Al Khater, another Qatari economist revealed, who sees that the current food insecurity in the Arab World is not the first in the region, that there was another one in 1983. The repetition of the problem is largely attributed to the lack of solid groundwork on the part of the Arab officials. The little progress achieved does not rise to the aspirations of the citizens of the region, the size and importance of the problem.²⁷

Future / Recommendation to solve Food Insecurity in Arab Region

Explicit speeches and sermons cannot solve the Arab food problem. Furthermore, hungry inhabitants need food instead of false promises. It is true that, many food summits held recently to solve the Arab food problem. But that is not enough; the needed requirements are more concerted effort and the implementation of effective ideas that help to recognize the food insecurity problem. Many Arab economic experts consider the food problem in the Arab region a great failure. Further, those agricultural experts demand that Arab policymakers give the Arab population the right in having nutritious and sufficient food. I recommend the following solutions to help establish the start of food security in the Arab region.

The first solution is taking into considerations proposals and solutions related to food security that were offered in Islamic summits and conferences, and applying whatever fit as a solution to the problem at hand. Several of those conferences dealt with food security as a constraint problem. Thus, it is important to consider the outcome of such conferences in order to come with appropriate solutions for the crisis. The outcome of a conference held in Kuala Lumpur titled "Poor Muslims" was resolving the problem in a fundamental way. Among the solutions was a suggestion that called for the need for joint actions and to provide facilities for Muslim's agricultural investors to plant in other Islamic countries without restrictions. In Colombo, Sri Lanka, a similar conference was held in which the leaders of the South Asian Association for Regional Cooperation (SAARC) agreed to set up a food bank, or what can be called contingency plan in one of the poorest part of the world to counter the soaring food prices. The mechanism of the Food Bank functions as a storage and distribution of food to serve one or more of the SAARC countries when they encounter food deficiency. This experience can be imitated by Arab countries and conduct the same direction by establishing enough food banks to lift the armies of the hungry that have ravaged some Arab countries.²⁸

The second solution is to focus on Arab agricultural investments outside of the Arab countries because of water scarcity, limited arable land and pressure on groundwater. For example, when Sheik Khalefah bin Zayed, United Arab Emirates president visited Kazakhstan early this year, he discussed with its president many issues, among them; investing in Kazakhstan agricultural lands for the purpose of serving the local markets in the UAE. This visit goes along with the UAE policies that call for the diversification of food sources.

Thus, the Arab states should have a unified strategy for food supplies. This type of unique strategy should be based on initial agricultural integration. This strategy must take into account the comparative advantages especially among the oil- rich countries and other ones. In a study named: The spatial dimension of farm crops production in the Arab countries, by Saif Al-Qaydi he says:

We explore the possibility of investing available capital from the relatively wealthy GCC countries (Saudi Arabia, Oman, UAE, Kuwait, Qatar and Bahrain), to support farming activities in countries more suited to agricultural production. The idea is to encourage the transfer of food between Arab countries most suited for their production to those least able to develop their own agriculture.²⁹

The third solution should be done by the Arab governments through supporting and subsidizing farmers by providing the right policies and buying the most recent tractors, modern irrigation tools, and fertilizers. In a paper about food subsidies in Egypt published in 1983, Von Braun states that food subsidies can be an obstacle in the overall food production. He writes:

In general, food producers are losing because of the policy, while consumers gain, although for some markets like meat and milk the picture is actually reversed. How this policy affects farm households, which are both producers and consumers, deserves further analysis.³⁰

By razing the government support or subsidies, it is not meant that the Egyptian experiment is still valid and could work in any other Arab country. What achieved in Egypt may

not succeeded in other Arab countries. What is new about the Egyptian food policy is that it provides an important lesson for countries keeping producer prices low to support consumers.

On the other hand, Karen Pfeifer Says:

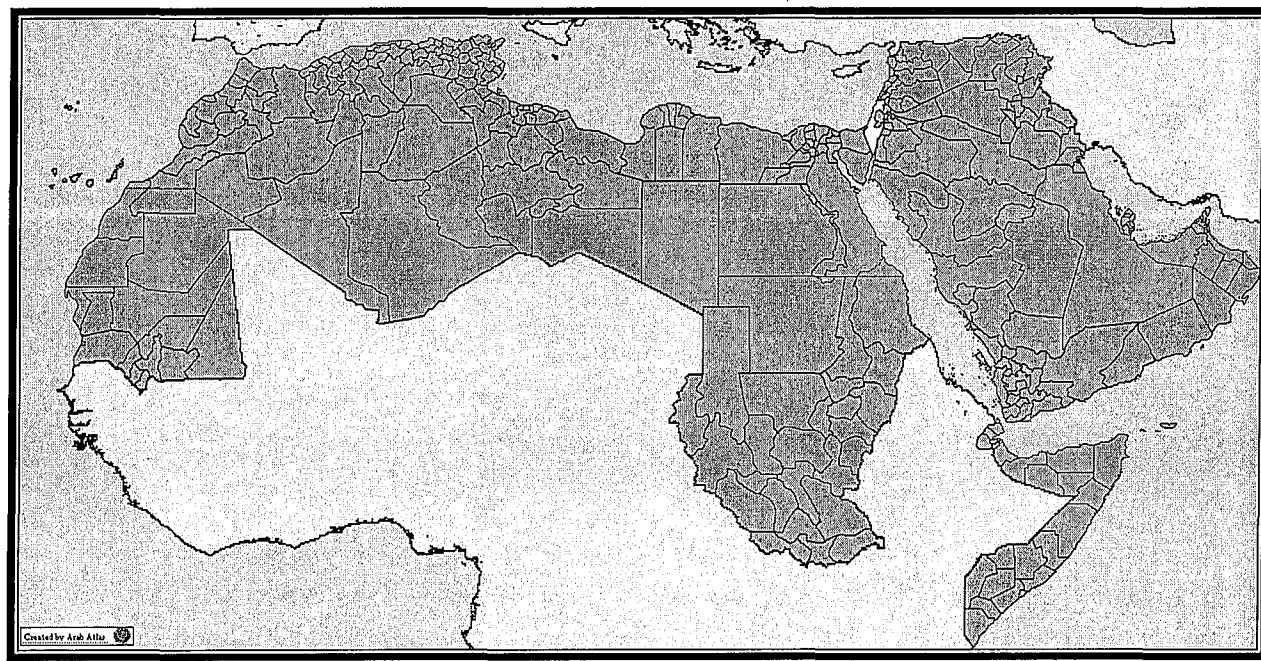
In both Egypt and Algeria in the 1980s there has been some improvement in food production for domestic consumption, but still not enough to catch up with the growth in demand. The improvements have come about partly because of the reduction or elimination of government procurement quotas for basic foodstuffs and rising prices paid to producers. Furthermore, following the usual free-market prescription of the IMF, gradually and without fanfare due to its politically sensitive nature, subsidies to urban consumers have been cut in real terms, simply by the government's subsidy increases failing to keep with the rate of inflation".³¹

Arab agricultural policymakers should have comprehensive plans to solve regional agricultural problems. These plans must reconsider the question of excessive consumption of energy. It must also provide incentives including tax deductions, agricultural loan facilitation, and the introduction of effective mechanisms to increase local production and job creation in rural areas. The Arab states must work in parallel to expand the social safety net to protect the poorer segments of the population that depend on limited income and enhance competition to provide educational programs to the rural populace.

Finally, the Arab policymakers should reconsider the establishment of agricultural scientific research centers for enhancing food productions in the Arab region. Some research centers do exist, but it seems that the Arab agricultural policymakers miss the culture of scientific research. A further problem is the governmental failure to provide these capabilities which come from the lack of confidence in scientific research. If Arab agricultural legislators require a successful example of overcoming food shortage crises, they need to study Sudan to see how the Sudanese implemented their strategy. The author has confidence that Arab agricultural policymakers will take advantage of their short falls and speak out about the food insecurity in

their region with a mature way and a clear voice in order to provide what is suitable for their citizens.

While the Arab region currently is able to provide enough food and water to its people that may not always be the case in the future, which require the policymakers in the region to look forward and make long-term plans. The Arab region relies on individual country food production strategies. This propel the Arabs to come together to develop and produce a unified policy for food production the same way the European Union did. This paper presented Sudan's food production plans as a model for other Arab countries to follow. In addition, effective plans from other countries in the region were described. This paper suggests that the Arab countries should adopt collaborate efforts and share information in order to develop good policy and long-term strategies in support of the region's food security.



Appendixes (A) Arab States



Appendixes (B) Sudan cites.

Endnotes

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