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# EGYPT: RAYS OF LIGHT MIDST A MULTITUDE OF PROBLEMS

by

Donna M. Taylor
Lieutenant Colonel, USAF

A RESEARCH REPORT SUBMITTED TO THE FACULTY

IN

FULFILLMENT OF THE CURRICULUM REQUIREMENT

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## DISCLAIMER

## ABSTRACT

TITLE: Egypt: Rays of Light Midst A Multitude of Problems

AUTHOR: Donna M. Taylor, Lieutenant Colonel, USAF

Egypt, land of the Pharaohs, is a vibrant country who has been an ally of the US for several years. Through the Suez Canal it controls shipping access to Middle East oil fields. It is also the first Arab country to make a separate peace with Israel. As such, Egypt is a valuable partner in the peace process. However, Egypt has several problems. Most are not insurmountable. Some require commitment and dedication. First, Egypt's population is growing rapidly. The country cannot keep urban dwellers housed and fed. Next, although the Arab-Israeli conflict is currently peaceful, Egypt's extremists may threaten internal stability. Water is an increasingly important concern. Egypt cannot survive without Nile water, yet other countries control Nile headwaters. Egypt has resolved occupied land concerns. However, it is committed to a Palestinian solution for the Gaza Strip and West Bank. Perhaps the darkest cloud on Egypt's horizon is the economy. While the Gulf War adversely affected Egypt's economy, it also provided some relief. Current economic reforms could lead to a market economy. Such reforms should be extended to military expenditures. This paper examines each of these issues. It details history and current prospects.

## BIOGRAPHICAL SKETCH

Lieutenant Colonel Donna M. Taylor (B.A., InterAmerican University of Puerto Rico; M.A., Webster University) is a career comptroller officer. She has experience in accounting and finance, budget, comptroller plans, and comptroller. She has held staff assignments at the base, group, and MAJCOM level. She has been a division chief at MAJCOM and a commander at the squadron level. She taught finance and budget at the DOD Professional Military Comptroller School. Colonel Taylor is a graduate of the Squadron Officer School and a Distinguished Graduate of the Air Command and Staff College.

## INTRODUCTION

Egypt, the land of the Pharaohs, is a vibrant country who has been an ally of the US for several years. It is the bridge between Europe and West Asia. However, Egypt has several problems. Most of these problems are not insurmountable. Some require dedication and effort. First, Egypt's population is growing rapidly. The country cannot keep urban dwellers housed and fed. Next, Egypt has been involved in a number of wars with Israel. While these seem to be settled, internal religious extremism remains a concern. Water is also a concern. Egypt cannot survive without the waters of the Nile, yet does not control Nile sources. Water has played a part in several Middle East wars. The potential exists for other wars over this vital resource. However, Egypt has resolved one grating issue. After the Camp David Accords, Israel withdrew from the Sinai. The only additional Egyptian land Israel occupies is the Gaza Strip. However, Egypt is committed to Gaza as a Palestinian homeland. This commitment extends to the West Bank and Egypt is active in the peace process to achieve this resolution. The current outlook is promising. The outlook for Egypt's economy is also promising, but to a lesser extent. Egypt received debt relief from several countries after the Gulf War. The International Monetary Fund is also restructuring significant debt based on current and promised reform efforts. These efforts should lead Egypt to a market economy which will alleviate some economic doldrums. Part of this reform may extend to military

expenditures, which are among the highest in the world. Egyptian forces proved themselves in the Gulf War. With little threat and a credible force, it is time to reduce defense spending. If Egypt moves forward in this area, the economy and the nation will benefit.

# EGYPT'S ISSUES

## Population Problems

Egypt has the largest population in the Middle East.[1] It is increasingly urban and large numbers migrate to other countries for work. The result is stressed city services, housing shortages, and increased reliance on food imports.

### Growth and Density

Egypt has a population of approximately 52.5 million people[2] and an area of 380,000 square miles. However, the geography limits habitation to a narrow area along the Nile River and Delta. This area of 15,000 square miles represents approximately four percent of the land. Further, although the rate of growth is slowing, the population is growing rapidly. Between 1947 and 1980 the population doubled.[3] From 1986 to mid-1990 it increased around eight percent,[4] and currently Egypt is growing by one million people every nine months.[5] Again, the number of people is not as dramatic as the density. Egypt's density is higher than Bangladesh or Indonesia.[5] In 1990, the Nile Valley exceeded 1,500 people per square kilometer.[6] Finally, thirteen million Egyptians live in Cairo, the capital. The density there is 75,000 per square mile.[7]

Rapid population growth and high density causes problems. These problems may be exacerbated by changing lifestyles.

## Migration Types and Effects

Egyptians migrate in two major patterns. Some move from rural to urban areas within Egypt. Some migrate to other countries. Each pattern affects both the individual and the entire country.

Migration to Egyptian urban areas is increasing. Since World War II, Egypt has increasingly urbanized. Growth rates in urban areas exceed those in rural areas. For the last forty years, urban areas grew four percent annually. By 1989 roughly 50 percent of all Egyptians lived in cities and 20 percent of the total population lived in Cairo. The largest city, Cairo is most affected by urbanization. However, all areas are affected.[8]

Population growth strains city services. Although Cairo is the extreme, because it is the largest, its problems are indicative of those in other urban centers. Cairo is experiencing multiple problems associated with rapid growth. Public transportation is not adequate. Water supplies, sewer facilities, and trash collection are overburdened.[9] Unemployment is approximately 20 percent.[10] However, housing is the greatest problem. Skilled labor and construction materials are scarce. Therefore, many live in semi-legal housing. About 200,000 live in wooden, cardboard, or metal huts on apartment roofs. Another 500,000 live in city cemeteries.[11] Cemetery living is now so accepted, the city has supplied water and electricity to the areas.[12] Other homeless live in rowboats.[13] These arrangements were devastating during the October 1992 earthquake. Approximately half the 600 killed were in poorly constructed

buildings which collapsed. Additionally, thousands of homes were leveled and about 10,000 were injured.[14]

Rapid urbanization causes problems. For Egypt, overseas migrations ameliorate some problems and exacerbate others.

President Sadat's 1974 Open Door Policy encourages Egyptian workers to migrate outside the country for work. By the late 1980s approximately 1.7 to 2.2 million Egyptians worked abroad. Most were employed in Arab countries of Iraq, Saudi Arabia, and Libya. These migrant workers generally benefited by working outside Egypt; however, the effects on the country vary.[15]

At the personal level, migration raised the income and living standards. It also exposed workers to better living conditions abroad and increased expectations. This aspect is dramatic when the annual turnover rate is 350-400 thousand workers. With male workers outside the country, other family members assumed more responsibility. Women of migrant workers experienced dramatic change. In Lower Egypt, they are more independent and assertive. In Upper Egypt, they take a more direct productive role in the fields.[16] In a primarily Islamic society, these changes may lead to other problems.

Overseas migration also affects Egypt as a country. One positive aspect is easing unemployment. Egypt has surplus manpower. When those workers relocate to other countries, Egypt does not have to employ or house them. Another benefit is income. Worker remittances are the second largest source of foreign exchange earnings for Egypt.[17] Egypt estimates worker remittances at seven to eight million dollars for the period of

the Gulf War.[18] Finally, overseas migration increased salaries in Egypt. Those sectors which employed workers outside the country increased most in Egypt. For example, between 1975 and 1978 construction wages grew rapidly and labor shortages still occurred.[19] These areas may benefit the country; however, there are also drawbacks.

Negative aspects of overseas migration relate to skill shortages, labor shortages, increased urbanization, and agricultural impacts.

First, other countries hire Egyptians skilled in specific areas. Professions such as engineers, college professors, and doctors migrate. So do skilled technicians such as plumbers and tradesmen. In the late 1970s and 1980s, construction workers migrated when Egypt needed them. This may have adversely affected urban housing.[20]

Next, unskilled workers move to fill the gaps created by overseas migration. Egypt is left with unskilled labor attempting to fill shortages. In some sectors, labor shortages persist although wages increase.

Another effect is ongoing urbanization. As skilled workers migrate and rural workers move to cities to take their place, cities continue to grow. Now, rural workers are also migrating directly. Few of either group return to rural living. Therefore, urbanization is ongoing and cumulative. This pattern affects society by causing shortages and shoddy workmanship. However, the agricultural sector is perhaps most affected.[21]

Between 1972 and 1979 agricultural labor decreased 14 percent or 650,000 workers.[22] Since 1980 the trend continues. Egypt progressed from a country self sufficient in food production to one which imports 60 percent of its needs.[23] While there are several factors affecting food production, migration has a tremendous impact. For example, although agricultural wages increased four-to-fivefold by the mid-1980s, there were still shortages.[24]

Finally, although overseas migration eases unemployment initially, it may also increase unemployment in the long run. Migrant workers continue at the sufferance of the host nation. They are very susceptible to market fluctuations and demands. One dramatic example is the effect of the Gulf War. About 670,000 fled back to Egypt. This dramatically affected unemployment in Egypt.[25]

Population density and migration stresses Egyptian services and affects quality of life. In some cases, disenchantment and dissatisfaction may lead to extremism.

## Religious Conflict

With approximately three percent of the population minorities, Egypt is a fairly homogeneous society. However, Egypt has experienced two types of religious splits. First, some differences with other countries have been based, to some extent, on religion. Next, some internal discord has been due to

repression and religious extremism. Both appear to be under control but have potential for future conflict.

Egypt's primary external religious problem is the Arab-Israeli conflict. Although the current foundation of the conflict may be nationalism, it is nevertheless between two of the world's three great religions, Islam and Judaism. Further, it began before nationalist ascendancy in Egypt.[26]

Fighting between Egypt and Israel began in 1948. Israeli defeat of Arab forces set the stage for continued conflict. During the Suez Crisis in 1956, Israel occupied the Sinai but withdrew after the cease-fire. However, Israel and Egypt did not sign a peace treaty and peace did not last. During the 1967 Six-Day War, Israel attacked and recaptured the Sinai. Several incidents led to a coordinated Egypt and Syria attack on Israel in 1973. Although initially successful for the Arabs, Israel prevailed before another cease-fire eventually halted direct conflict. Although Israel continued to occupy the Sinai, it gave up a portion of the land to become a demilitarized buffer zone.[27]

Incidents continued with no peace treaty between Egypt and Israel. The Camp David agreements in late 1978 provided a framework for the countries to sign agreements in 1979.[28]

Camp David ended Egyptian and Israeli fighting. However, Arab countries ostracized Egypt. Further, the agreements left most issues open to negotiation. Although the Egypt and Israel

disagree on the extent and nature of the settlement, they have not fought since the agreements were signed.[29]

Egypt has, however, remained involved in the peace process and its return to the Arab community could generate renewed hostilities with Israel. However, at least in the short term, Egypt's internal religious conflicts are more vitriolic and potentially harmful.[30]

Over 90 percent of Egyptians are Islamic and approximately 8.5 percent are Christian Copts.[31] However, most of the Islams are of the Sunni branch which is less extreme than the Shiites. The result has generally been tolerance but some aspects of fundamentalism occur. For example, the state-run airline stopped selling alcohol and state-run television dropped some risqué shows. Many Moslems carry prayer rugs and stop daily activities to pray. Overall, the environment is magnanimous; however, some extremist incidents occur.[32]

Christian Copts have survived as a distinct culture in Egypt since the year 64. They retained their culture through several Islamic regimes and worked as surveyors, scribes, and clerks. To survive, many assimilated Muslim language, customs, and manners and hired Muslim protectors. They also withdrew somewhat to separate communities, primarily in Upper Egypt. They have been unfairly taxed, repressed, and punished. However, they remain a viable, but small segment of Egyptian culture.[33]

The resurgence of Islam during Gamal-Abdel Nasser's regime threatened the Copts. Eventually, Nasser allowed them more freedom because he feared rising Islamic fundamentalism. When

Anwar Sadat became president he affirmed Islam as the official religion.[34] In 1981, before he was murdered by Islamic militants, President Sadat exiled the Coptic Pope to a desert monastery. President Mubarak later released him.[35]

Although many devout Muslims do not believe Copts threaten or denigrate them, extremists still persecute them. For example, since 1972 Coptic churches have been burned and Islamists frequently denounce Copts in prayer meetings and pamphlets.[36] Clashes in Cairo in 1981 left more than 50 dead.[37] Between March and May 1992, 18 were killed in one village and two Christian Copts died in another village after a Coptic landlord refused to pay a tax demanded by extremists.[38] Such extremists are also a potential threat to the Egyptian government.

Egypt was the location for the initial Islamic fundamentalist group, the Muslim Brotherhood. Established in 1928, it stood for extreme puritanism and opposition to western culture. Although it served as a charity and welfare society, it evolved to primarily a terrorist group which tried, unsuccessfully to assassinate President Nasser in 1954.[39]

Another, more violent group, in Egypt is the Islamic Jihad (Holy War). It took responsibility in 1981 for President Sadat's assassination and the slaughter of 100 policemen and may be responsible for continuing violence.[40] During 1993, 54 people have been killed in Egypt by militant violence. Many believe they have moved to Cairo so they can hide after attacks. They have also aimed recent attacks at tourism and police to undermine

the government.[41] Finally, Egyptian extremists have been linked to the World Trade Center bombing in February 1993.[42]

President Mubarak has moved to counteract fundamentalism by tolerating and accommodating the moderates and crushing extremists.[43] He allowed Islamic investment companies to overextend themselves before he shut them down and he successfully divided the moderate groups.[44] Therefore, although there are about 70,000 to 100,000 extremists in the country, they do not presently represent a great threat.[45] However, economic problems could lead to resurgent violence. So could water shortages.

## Water Issues

Water is necessary to sustain life; yet water control is often the impetus for war. It has been a source of conflict in the Middle East for many years. Egypt is particularly sensitive to water issues due to limited resources and growing needs. Further, water has been both a source of cooperation and benefit as well as a point of conflict for Egypt. Without prompt action, the future portends conflict.

Egypt is approximately the size of Texas and New Mexico, but only about four percent of the land is arable.[46] The nation is primarily desert and receives an average of one to two inches of rain per year. The country's life source is the Nile River.[47]

### Egypt's Nile

At 6695 kilometers, the Nile River system is the longest in the world and drains almost one tenth of Africa. It passes

through many climatic zones but has no perennial tributaries for the last 2000 kilometers. While the most distant source is in Burundi, Ethiopian sources contribute approximately 86 percent of the annual flow. The river enters Egypt from Sudan in the South and flows into the Mediterranean Sea in the North. Consequently, approximately 99 percent of the people live in the Nile Valley and Delta.[48] Two facets of this huge river system are monumentally important for Egypt. First, all Nile sources lie outside Egypt. Therefore, other countries have the capability to disrupt Egypt's flow of Nile water.[49]

The Nile has been a source of Egyptian prosperity but it has also created problems. One of the primary causes of the Anglo-Egyptian dispute in 1920-1929 was the allocation of Nile waters between Egypt and Sudan.[50] Britain attempted to allocate Nile water at a ratio of 8.2:1. This gave Egypt 50,000 million cubic meters (MCM) and Sudan 6,000. Egypt was dissatisfied with the distribution and after international arbitration received a ratio of 12:1.[51]

In the early 1950s, the Egyptian government decided to further dam the Nile. The Aswan High Dam had both benefits and costs.

The primary purposes of the dam were to meet demands for food, energy, and industry.[52] Limited cultivation area and annual flooding were factors which constrained food production. A dam creating a large lake could control flooding and expand food production through irrigation and multiple harvests.

Hydroelectric power would meet energy needs. Finally, industry needed both water and energy to expand.

The Aswan High Dam created the world's largest lake, 350 miles long and six miles wide, which holds three times the annual flow of the Nile. It increased crops from one to two plantings per year to three or four and it expanded cultivable land by 30 percent. Twelve generators produce sufficient, inexpensive electricity.[53] The dam achieved its purpose, but there were drawbacks.

The dam caused internal and external problems. Egypt anticipated some, but others were surprises. First, the dam trapped rich silt that had served as fertilizer downstream. Now, farmers use chemical fertilizer that may have damaging long-term effects. The silt loss also hurt the sardine-fishing industry; however, Lake Nasser fishing offset this loss.[54] Consequent irrigation increased soil salination and disease. Many Nile valley residents suffer schistosomiasis, a parasitic disease carried by snails.[55] Finally, increased food production did not solve the food shortage. Some categories of food production are estimated to have doubled since 1947, but the population also doubled. Livestock population has also grown. Between 1970 and 1980, livestock grew 32 percent. This may result from improved living conditions. Many believe quality of life improvements result in higher meat consumption and more pressure on food production.[56]

Egypt has also experienced external problems due to this dam. First, people and antiquities were relocated to build Lake

Nasser. Approximately 60,000 Nubians were moved.[57] Although many decried building the dam at the expense of historical treasures dating from the Paleolithic era, others believe the benefit outweighed the archeological cost. This resulted in a worldwide effort which rescued twenty-three temples in Egypt and Sudan.[58] Egypt built the Aswan High Dam within its borders, but effects were far-reaching.

Several water sharing issues arose between Egypt and Sudan between 1945 and 1958. These culminated in a military confrontation when Egypt attempted to regain disputed border area and Sudan abrogated the 1929 agreement. However, in 1959 the two countries signed the Agreement for the Full Utilization of the Nile Waters. This agreement gave Sudan a more equitable ratio but the amounts for each country increased with the completion of the Aswan High Dam. Sudan received 18,500 MCM and Egypt got 55,500 MCM. Future increases were to be shared equitably.[59] The issue was finally resolved cooperatively. However, Sudanese officials did not attend official dam ceremonies and economic cooperation attempts have been sporadic.[60]

While there have been no subsequent military clashes, the potential for conflict remains. This propensity rests on the fact that water needs continue to increase while supplies diminish.

## Egypt and Gaza Strip Water

The Gaza Strip, currently occupied by Israel, also plays a role in water politics. Israel uses water from the aquifer beneath Gaza.[61] The coastal aquifer is being used 50 percent

faster than it is being replenished. There is already sea-water intrusion and pollution from the over-loaded sewer system.[62] However, when Egyptian President Sadat discussed diverting Nile water through a canal to Gaza, both Egyptians[63] and Ethiopians[64] objected. In fact, this comment was one reason President Sadat was murdered.[65]

As early as 1955, Egypt used water as a reason to back Palestinian guerrilla attacks on Israel from Gaza. This was one factor which led to the Suez crises.

From 1956 until late 1973, Egyptian relations with the US were hostile. While there were complicating factors, the primary root of the controversy was water. As early as 1953 the World Bank, Britain, and the US agreed to finance the Aswan High Dam project. However, the US withdrew financial guarantees based on Egyptian President Nasser's non-aligned movement, weapons purchases from Czechoslovakia, and an increasingly hostile stance including support of raids on Israel from Gaza. One week after the US announced the change, Nasser nationalized the Suez Canal Company.[66] The US decided the action was legal, though inflammatory. Britain and France held financial stakes in the canal and viewed the action detrimental to their vital Middle East interests. Israel used this excuse to conspire with Britain and France and invade the Sinai.[67] The US exerted considerable pressure to achieve a cease-fire in late 1956, but the Suez Canal did not reopen until early 1957.[68]

The Suez Canal crisis signaled new beginnings. The Israelis invaded fairly deep into an Arab country and they were abetted by

western powers. Also, the superpowers became more directly involved in the area. The US instigated the cease-fire and by 1958 the Soviet Union pledged funds to construct the dam.[69]

## Danger to the Egyptian Aquifer

Libya's GMR threatens Egyptian water in another way. It is designed to move water from the south to the Mediterranean coast. The second phase began in 1989 and included immense pumping abilities. Libya may tap into aquifers beneath Libya and Egypt which contain water deposited 24,000 to 30,000 years ago. These waters are recharged very slowly or not at all. Many think of them as non-renewable. Hydrologists and geologists predict rapid depletion. If true, this project may well deplete Egypt's western oases.[70]

## Needs and Supplies

Egypt's population is large and growing at the rate of one million people every nine months. Rapid urbanization requires more power which necessitates more water.[71] Finally, Egypt is planning additional irrigation and land reclamation.[72] Even with increased production, Egypt currently imports 60 percent of its food.[73] Additionally, Egypt's allocation of Nile water is 55,500 MCM annually. However, Egypt uses approximately 5.5 MCM from Sudan's allocation each year. This may not be available as Sudan population, consumption, and irrigation increases. Finally, Egypt predicts needs of at least 16 percent more than current annual usage by the year 2000.[74]

Supplies are also decreasing. First, Lake Nasser is a vast Lake which loses vast amounts to evaporation.[75] Next, during the

1980s, Africa experienced the worst drought in a century. This dropped water behind the Aswan Dam to 20 percent of capacity. Finally, deteriorating infrastructure and inefficient water management contribute to the problem.[76] Egypt's 20,000 mile network of canals seep water and more than two million cubic meters of irrigation runs off each year.[77] Approximately two thirds of the water allocated to cities is lost through inefficient use and farmers use twice as much as necessary.[78] This is particularly telling when nine of every ten cubic meters of Nile water consumed goes to agriculture.[79] Finally, Ethiopia, Sudan, and Libya all have the capability to divert Nile water.

Ethiopia wants to build dams on the Blue Nile. This would store water in Lake Tana and curtail evaporation experienced by Lake Nassar.[80] As early as 1970 Egyptian President Sadat threatened war if Ethiopia built a dam.[81] In 1990, Ethiopia's foreign minister traveled to Cairo to reassure the Egyptian parliament after rumors of dams again surfaced.[82] Ethiopia has agreed to keep Egypt informed, but possesses blueprints for a number of small dams, has experienced recurrent droughts and famines, and in 1990 refused to receive a United Nations Development Program investigative mission exploring water cooperation opportunities.[83]

The Sudan has been wracked by political problems. These prevented Sudan from completing the Jonglei Canal which cuts across the Sudd swamp and would reduce evaporation by 3.8 MCM annually.[84] If Sudan solves internal problems and claims the

water to which it is entitled under the 1959 agreement, Egypt will experience a shortfall.[85]

Libya may threaten Egypt's Nile water as well. Libya has depleted many of its water resources and has developed a massive project, the Great Manmade River (GMR). Qadhafi has considered diverting the Nile from Sudan to Libya. In 1984, Egyptian President Mubarak accused Qadhafi of planning to attack the Aswan High Dam and drain off water reserves.

Egypt maintains colonial agreements stating no hydrological projects will be built on the Nile remain in effect until they are renegotiated. Other countries disagree.[86] Boutrous Boutrous-Ghali, formerly President Sadat's undersecretary of foreign affairs said "The only thing which could make Egypt go to war again would be an attempt by Ethiopia or another power to divert the Nile River. Egypt has gone to war over water before.

## Egyptian Water Solutions

Egypt has begun to work toward resolving water constraints. Drip irrigation systems and public canal upgrades reduce waste.[87] Conservation and reclamation policies also save water as does changing crops to less water-intensive ones. Egypt is also prospecting for water in nonrenewable aquifers.[88] Additionally, Cairo now houses the pan-Arab initiative for the Center for Environment and Development in the Arab Region and Europe (CEDARE). Target areas for this group include freshwater use, management, and conservation.[89] Finally, Egypt hosted the inaugural African Water Summit in 1990. The attention and emphasis on water problems may lead to peaceful solutions.[90]

Water is vitally important to Egypt, who relies heavily upon the Nile but does not control its sources. However, the implications are far greater than a single country. Usama al-Baz, a senior advisor to President Mubarak, says: "This issue could decide the fate of the region. If the water problem is not solved, you will have famine. And this will destabalize big countries and instability will move to neighboring countries."[91]

## Occupied Land

Israel has occupied Egyptian land several times during the last 45 year. Today those conflicts appear resolved.

The Sinai peninsula changed hands several times during the Arab-Israeli conflict. The Camp David accords resolved most of the issues. They stipulated a phased withdrawal of Israeli troops from the Sinai. Israel returned final portions of the Sinai in 1982.[92] However, the agreements also addressed resolution of the Palestinian question in the Gaza Strip and West Bank. Egypt suffered suspension from the Arab League and other indignities as a result of the separate peace with Israel. Now Egypt has rejoined the Arab community, President Mubarak is working harder to resolve the Palestinian issue.[93]

During 1989, Egypt not only became more active in the peace process but also resolved a border dispute with Israel over the town of Taba.[94] After peace with Israel for 14 years and renewed Arab acceptance, Egypt will work the peace process for the Palestinians diligently, but carefully. Under the present

circumstances, there is little risk of conflict for Egypt. However, internal strife over economic policies may occur.

## Egypt: A Have Not

Egypt is not a country without resources. In addition, the independent peace settlement with Israel through the Camp David Accords gave Egypt access to US aid. One aspect of the agreement was Egypt would not receive less US economic aid than Israel.[95] However, even with over 18 billion dollars of economic aid between 1975 and 1992,[96] Egypt still suffers from a stagnant economy. The Gulf War both helped and hurt the economy. However, President Mubarak has begun reform efforts which may help his country to a free market economy.[97]

### Resources

Egypt's agriculture is an important part of the economy. Cotton, rice, maize, sorghum, wheat, beans, and clover (for animal feed) grow along the Nile. Egypt remains self sufficient in fruit and vegetables but not in grain. Overall, although Egypt grew enough food in the early 1970s, it now imports about 60 percent of the total food required. Long-staple cotton is Egypt's most important field crop and provides 15 percent of all agricultural employment. However agriculture is diminishing as the competition for arable land increases and laborers move to the cities.[98]

The Aswan High Dam is another revenue source. Although its primary purpose was to control the annual Nile flood, provide water for irrigation, and enhance land reclamation; it also

generates electricity. The dam was inaugurated in January 1971 and by 1974 electricity revenue already exceeded construction cost.[99]

The Suez Canal is another major revenue source. Continued expansion coupled with rate increases after the 1973 War combine to enhance revenues. That income reached one billion dollars in 1982 and was approximately two billion dollars for 1991.[100]

Egypt's oil and gas industry is small by Middle East standards but has a great impact on the economy. Revenues which totaled only four percent of Egypt's exports in 1974 rose to about 60 percent by 1982. Egypt has proven oil reserves of 6.2 billion barrels and natural gas reserves of 325,000 million cubic meters. Unfortunately, massive government subsidies and growing population reduce oil and gas revenues.[101]

Finally, worker remittances have been the second largest foreign currency source for Egypt. Workers who returned to Egypt during the Gulf War cost the government seven to eight billion dollars in remittances.[102]

Although Egypt has several credible resources, it also has staggering debt.

## Debt/Economy

Egypt's economic problems continue. Table one reflects key economic indicators.

Key Economic Indicators (1)

| DOMESTIC ECONOMY | FY87/88 | FY88/89 | FY89/90 |
|---|---|---|---|
| GDP (LE billion, current prices)(2) | 58.7 | 77.6 | 84.0 |
| GDP/Capita (LE, current prices) | 1180 | 1511 | 1588 |
| Gross fixed invest (LE billion)(2) | 10.8 | 12.6 | 26.1 |
| of which public sector (%) | 73 | 70 | 76.7 |
| Urban consumer price increase (%)(3) | 19 | 17 | 21.2 |
| Commercial Bank exc rate (LE/USD)(4) | 1.50 | 2.21 | 2.61 |
| BALANCE OF PAYMENTS ($millions)(5) | | | |
| Trade Balance | -6567 | -7556 | -7567 |
| Exports (fob) | 3274 | 2737 | 3206 |
| of which:Petroleum | 1563 | 1066 | 1129 |
| Imports | -9841 | -10294 | -10773 |
| Services Balance | 1941 | 1796 | 1530 |
| Receipts | 4575 | 5058 | 5580 |
| Of which :Suez dues | 1269 | 1307 | 1472 |
| Investment income | 624 | 734 | 776 |
| Tourism (6) | 886 | 901 | 1067 |
| Payments | -2634 | -3298 | -4050 |
| Of which: interest payments(7) | -785 | -1123 | -1686 |
| Transfers | 4081 | 4243 | 4824 |
| Governmental (8) | 698 | 711 | 1080 |
| Worker Remittances (9) | 3384 | 3532 | 3744 |
| Current account balance | -545 | -1553 | -1214 |
| Long Term Capital Balance (10) | 1521 | NA. | NA. |
| Balance on current and long term capital payments | 976 | NA. | NA. |
| Additions to debt service arrears | 800 | 4000 | |
| Total external debt ($ billions) | 43.1 | 45.7 | |

Table 1

Source:[103] Foreign Economic Trends and Their Implications for the United States Prepared by The United States Embassy, Cairo April, 1991

Notes:

(1) Primary sources are Egyptian and US Government official data, IMF International Financial Statistics, World Bank World Development Report, and Embassy estimates. Egyptian fiscal year is July-June.

(2) Government estimates: they exclude the large volume of small-scale private sector ventures in Egypt, and are consequently understated by a significant margin.
(3) Period average. Calendar year 1990: 16.8 percent; 1990 December over December 1989: 7.2 percent.
(4) Period average. Calendar year 1990: 2.71; year-end 2.87.
(5) Central Bank data; compiled on a cash basis; exclude the large volume of outward short-term private capital flows (capital flight) and all accumulation of debt service arrearages.
(6) Data as reported by banks; generally assumed to understate actual flow; extrapolations on the number of tourist nights in hotels suggest actual flow at least double the recorded figure.
(7) Data on debt principal and interest payments are on a cash basis, excluding the arrearages that Egypt has been running since 1980. Military loan drawings and repayments are generally excluded.
(8) Cash aid.
(9) Central Bank estimates based on surrogate data.
(10) Data on debt principal and interest payments are on a cash basis, excluding non-payments (arrearages). Military loans drawings and repayments are generally excluded.

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This data reflects the generally worsening trend. In the same report the American Embassy highlighted some of Egypt's economic problems:

> CONTINUING ECONOMIC PROBLEMS: With fertile land, excellent climate, important hydrocarbon and mineral endowments, and a relatively well-educated and talented labor force, Egypt's economy has far more potential than it has so far realized. Economic problems are largely a reflection of policies that have impeded, rather than encouraged productivity and efficiency. On the supply side, extensive state ownership in the industrial sector has burdened the economy and state budget with large subsidies and pervasive economic controls,....
> At the same time, excessive demand has been generated by large fiscal deficits and unsound monetary policies. The normal result, inflation, has been partly suppressed by price controls, more subsidies, and restraint of the exchange rate. While price controls and subsidies add to waste and inefficiency, an over-valued currency has discouraged export diversification and contributed to shortages of foreign exchange and growing debt arrearages. Attempts to shore up the external balance through restraints on imports and foreign-exchange rationing have further damaged the economy....Initial steps towards correction of these policies were not adequate....[104]

The key to Egypt's viable survival may be the last sentence in this quote "Initial steps towards correction of these policies ..."[105] These steps were only partially a result of the Gulf War.

## Gulf War Impacts

The Gulf War significantly affected Egypt's economy. While some influences were negative, the overall long term effect may be positive.

The war cost Egypt revenues in many areas. First, several hundred thousand Egyptian migrant workers returned penniless. Not only does this constitute a serious social problem, it is also expensive.[106] One expense estimate is five billion dollars. Additionally, the government lost seven to eight billion dollars in worker remittances. Next, Suez Canal dues fell because ships did not transit to and from Iraq. The Suez Canal Authority chairman said losses were approximately one million dollars a day. Finally tourism losses were about two billion dollars.[107] President Mubarak said Egypt's losses totaled 20 billion dollars.[108]

Gains in some areas offset the losses. First, Egyptians increased oil revenues. Oil prices went up and Egypt boosted oil production about 13 percent. Imported wheat was cheaper because Iraq did not receive wheat.[109] Finally, Egyptian debt was restructured or forgiven. Although all debt relief was not a direct result of the Gulf War, the war affected negotiations. The US canceled seven billion dollars of high interest loans. Saudi Arabia, Kuwait, the United Arab Emirates, and Qatar forgave

six billion.[110] Finally, Egypt and the International Monetary Fund (IMF) reached an accord which significantly eases the debt burden. This accord includes: 372 million dollars of IMF standby credit, a 300 million dollar World Bank structural adjustment loan, a 400 million dollar social fund for jobs and development, a 250 million dollar loan from the African Development Bank and European Community, and restructuring 20 billion dollars of debt. Thirty percent of the 20 billion will be written off in 18 months and twenty percent will be canceled in three years if Egypt follows through on economic reform.

## Economic Stabilization

In order to receive IMF assistance, Egypt must continue economic reform which will move the country toward a market economy. Although President Mubarak insists changes must be gradual, Egypt has started to reform. Current reform includes many areas. First, the budget deficit for 1991/92 is reduced to nine and one half percent of the gross domestic product and it will fall to three and one half percent by 1994/95. This occurs through reduced debt service payments, increased taxes, and reduced public sector spending. Next, prices are increasing because government subsidies have been cut. Fuel and electricity are key targets. Sales tax is increased and interest rates are liberalized. The exchange rate system is overhauled and is now fully convertible.[111] These reforms offer real hope to a flagging economy. They could eventually make the economy as strong as the military.

## Military Might

With Iraq's military forces reduced, Egypt is one of the two most capable Arab forces in the Middle East.[112] This is true although the outside threat against Egypt is limited.[113] This military is one reason Egypt's economy is weak.

### Military Forces

Egypt possesses a modern, credible military force. Total active defense manpower is approximately 450,000 with another 300,000 para-military. The Land Force is the primary military force with 320,000 active members and 420,000 reserves. However, the Air Force includes 25,000 and 20,000 reserves and the Air Defense Command is 80,000 personnel. Finally the Navy is 20,000 personnel and 20,000 reserves.[114] These numbers are impressive but the equipment is as important.

Navy equipment is not significant. However, the Land Force includes 850 T-54/55, 580 T-62, 750 M-60A3, 680 M-60A1, and 30 PT76 light main battle tanks. Further, the Army will be modernized with the addition of 555 M1A1 main battle tanks. The Air Force includes 33 F-4E, 74 Shenyang F-6, 48 MIRAGE 5D/E, 32 F-16A, 32 F-16C, 48 F-7, 76 MiG-21, 16 MIRAGE 2000, and 15 MIRAGE JET MS2 combat aircraft. Additional F-16Cs are being delivered.[115] These forces represent a credible deterrent given Egypt's defense policy.

### Defense Policy

Egypt has a three pronged security policy. First, it sustains a deterrent against Libya or Israel. Next, Egyptian

forces stand ready to join other Middle East forces for regional security. This aspect was achieved during the Gulf War. Finally, Egypt wants to build a defense industrial base. Current production of 550 M1A1 main battle tanks and M-60 tank upgrades support this aspect of the policy. Although Egypt has more than adequate military forces and a defensive policy posture, success in this area came at the expense of the Egyptian economy.[116]

## Military Budgets

Until the Camp David Accords in the late 1970s, Egypt spent 37 percent of its budget on defense. From 1967 until 1975 military expenditures increased from 285 million Egyptian pounds to 2.6 billion Egyptian pounds. Although this was primarily reaction to Egypt's defeat in the 1967 war, Camp David allowed budget reductions. However, ensuing budgets represented ten percent of the gross national product. This is still one of the highest in the world. Since 1986 the total remains around six billion US dollars per year. These expenditures have been possible because US aid averaged one billion dollars annually to the Egyptian military. However, this aid resulted in the seven billion dollar debt forgiveness Egypt received after the Gulf War.[117] These military expenditures ensure a dynamic force; however, Egypt's greatest challenge may be a result of economics.

## CONCLUSIONS

Egypt is a country with great potential. Although problems in Egypt are interrelated, the most pressing ones are economic. The rapidly population requires services and housing. Religious extremism causes concern but is not greatly significant. Externally, Egypt and Israel have achieved peace for several years and Egypt has been accepted back into the Arab family of nations. Water could be a cause for major conflict. However, Egypt has kept a vital water sharing agreement with Sudan for several years. Although not perfect, this agreement may be the only one of its kind. It has proven effective, with minor problems. The only occupied land which is still contentious for Egypt is the Gaza Strip. Egypt is committed to a Palestinian settlement for Gaza and the West Bank and the peace process appears promising. As long as Egypt stays involved enough to satisfy Arab counterparts, this should not cause problems. Recent debt relief and economic reform efforts are positive aspects of Egypt's stagnant economy. President Mubarak appears committed to IMF suggestions. These steps should move Egypt toward a market economy, although the road will be long and arduous. Egypt's military is not only one of the strongest in the Arab Middle East, it gained respect during the Gulf War. With ongoing peace efforts, military budgets can be cut. This action will also help the strained economy. Overall, Egypt is a stable, growing country with great promise.

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[3]Mitchell, 18.
[4]Metz, 104.
[5]John Kolars, "The Course of Water in the Arab Middle East," *Arab-American Affairs* 33, (Summer 1990): 61.
[6]Metz, 104.
[7]Peter Theroux, "Cairo: Clamorous Heart of Egypt," *National Geographic* 183, no.4 (April 1993): 38,53.
[8]Metz, 104,107.
[9]Ibid., 107.
[10]Theroux, 61.
[11]Metz, 107.
[12]Theroux, 54-55.
[13]Ibid., 68.
[14]Ibid., 53,68.
[15]Delwin A. Roy, "Egyptian Emigrant Labor: Domestic Consequences," *Middle Eastern Studies* 27 (October 1991): 551.
[16]Ibid., 559, 569, 571.
[17]Ibid., 551.
[18]Amir N. Ghazaii, ed., "Egyptian Economy Struggles as the Gulf War Cuts Deep Into Nation's Revenue," *Middle East Monitor* 21, no. 2 (February 1991): 13.
[19]Roy, 551.
[20]Ibid., 552.
[21]Ibid.
[22]Ibid., 560.
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[24]Roy, 560.
[25]Ghazaii, 13.
[26]Daniel C. Diller, ed., *The Middle East*, 7th ed. (Washington DC.: Congressional Quarterly, 1990): 13-32.
[27]Ibid.
[28]Ibid., 30-32.
[29]Ibid., 31-33.
[30]Ibid., 146-147.
[31]Metz, 130.
[32]Ibid.
[33]Mordechai Nisan, *Minorities in the Middle East: A History of Struggle and Self-Expression* (Jefferson, NC: Mcfarland and Company, Inc., 1991): 115-119.
[34]Ibid., 125-127.
[35]Ibid., 115.
[36]Metz, 142.

[37]"Drifting Apart," *The Middle East* 212 (June 1992): 23.
[38]Max Rodenbeck, "Vendetta's Coptic Victims," *Middle East International* 425 (15 May 1992): 13.
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[40]Massimo Dini, "The Growing Influence of 'God's Fanatics,'" *World Press Review* 39 (March 1992): 18.
[41]Dalia Baglish, "Muslim Extremists Step Up Terror Campaign in Cairo," *Sunday Montgomery Advertiser*, 28 March 1993 p. 8A.
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[46]Diller, 140.
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[49]Mary E. Morris, *The Arab World in the 1990s and Beyond: Old Problems and New Challenges* (Santa Monica, CA, 1990): 6.
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[52]Hussein M. Fahim, *Dams, People, and Development: The Aswan High Dam Case* (New York: Pergamon Press, 1980): 3.
[53]Fisher, 383.
[54]Fahim, 28-30.
[55]Pat Ohlendorf, "The Coming Water Crisis," *World Press Review*, February 1983, 29.
[56]Mitchell, 20-22.
[57]*Water as a Source of Cooperation or Conflict in the Middle East*, 158.
[58]Fahim, 34-35.
[59]*Water as a Source of Cooperation or Conflict in the Middle East*, 136-139.
[60]Fahim, 13.
[61]Morris, 5.
[62]*Problems Over Water in the Middle East*, (London:Great Britain Foreign and Commonwealth Office, 1992): 7.
[63]George D. Moffett, III, "Pouring Oil on Troubled Middle East Water," *The Christian Science Monitor*, 16 March 1990, 5.
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[65]John K. Cooley, "Middle East Water: Power for Peace," *Middle East Policy* 2 (1992): 6.
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[69]Mostyn and Hourari, 320.
[70]Kolars, 65 and Sinai, 24.

[71]Kolars, 61.
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[73]George D. Moffett, III, "Middle East's Cup Runneth Dry," *The Christian Science Monitor*, 8 March 1990, 11.
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[75]*Water as a Source of Cooperation or Conflict in the Middle East, 141.*
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[78]Morris, 5.
[79]Kolars, 64.
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[109]Butter, "Gains and Losses," 8.
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