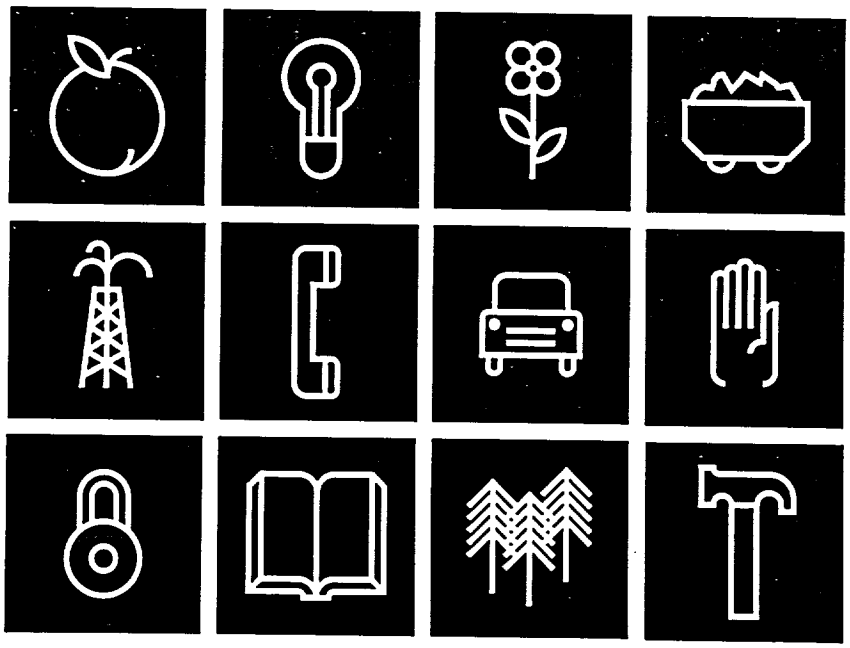
External Affairs and International Trade Canada

BUSINESS OPPORTUNITIES IN AFRICA AND THE MIDDLE EAST



Canada

BUSINESS OPPORTUNITIES IN AFRICA AND THE MIDDLE EAST

CONTENTS

I

INTRODUCTION

The markets of the Middle East and Africa are sometimes overlooked by Canadian businesses seeking new export markets. Factors that may be responsible for this include a lack of familiarity with local cultures and languages, or distance. Although access to these countries is undeniably more difficult than to other more familiar markets, such as those of Western Europe and the United States, an effective penetration strategy and a sustained effort can provide some very profitable business opportunities.

The Africa and Middle East Trade Development Division of External Affairs and International Trade Canada has prepared this document to provide some basic information to Canadian exporters who are interested in these markets. It is designed to introduce the markets of the Middle East and Northern Africa, and provides a bird's-eye view of the business opportunities afforded by these regions. It may be useful to acquire a general idea about a market in particular, but here we cover only the initial stages to help interested readers get started. The first section provides a general overview of the countries that comprise the region and the second part details by sector, the priority areas of opportunity for Canadians. The information contained in this section is a collection of reports compiled by the Trade Commissioners posted in the region and the information may be outlined only in part in some cases. Some information will be subject to change but some characteristics specific to the region will tend to remain: These markets require sustained activity, which in turn calls for frequent visits, long-term commitment, personal representation in many cases, familiarity with the culture, and regular use of Canadian embassy and consular services.

Canadian businessmen are advised to contact the Trade Commissioners currently assigned to these countries or officers in Canada to obtain further information on these markets. With this in mind, a list of contacts for trade information is given at the end of this document. It might also be useful to consult the Federal Government's International Trade Business Plan, which contains the regional and sectoral strategies of the federal departments active on the international scene. This publication is available from the regional international trade centres.

We hope that this document will be of use to Canadians wishing to become involved in trade in the Middle East and North Africa.

II

REGIONAL OVERVIEW

THE BUSINESS ENVIRONMENT

Since the Gulf War period and subsequent reconstruction efforts, Canada's reputation and visibility in the region has been greatly enhanced. Canada's participation in allied efforts in the Gulf heightened the awareness of Middle East countries towards Canada and our capabilities as a country and a trading partner. Markets have shifted and regional trade trends have tended to mirror the shifting political re-alignments. Our trade programme is adapting to these trends with the key being flexibility and adaptability to capitalize on new opportunities as they are developing. Altogether, there is enormous potential for Canada to capture a greater market share, although some constraints include financing restrictions in non-cash markets and lack of awareness on both sides of the demand/supply equation.

Merchandise exports in 1991 totalled almost $1.2 billion; when services are added to this, Canadian exports were in excess of $1.7 billion. 1992 merchandise exports are over $925,000,000 and the total figure, including services and one $400 million order which was transhipped, is expected to be over $1.8 billion. The region for the most part is a cash market with an enormous appetite right now for Canadian high technology products including defence equipment. Canada is a significant importer of Middle East oil, in the range of $700 million annually.

Although much of what we export to the region are commodities, increasingly, manufactured items, technology transfer and joint ventures are emerging as growth areas. Of great significance are recent major sales of defence products and the potential for substantially greater exports in this sector. Defence sales will remain inexorably linked to political issues and developments in the Middle East Peace process.

On the question of financing, EDC has concluded a $US 500 million line of credit for Kuwait; a $1 billion line of credit with Iran is pending. EDC has added to its existing three lines of credit with Israeli banks with a $35 million line of credit with Israel Electric Corporation, and a similar line is being discussed with Israel Chemicals Ltd. EDC has designated the Middle East as a priority market and is eager to review opportunities for project financing.

MARKET POTENTIAL (OVERVIEW)

- Canada imports over $400 million in petroleum products from the Middle East in addition to over $100 million in commodities and manufactured goods from Israel. Countries in the Middle East have petroleum resources to sell in exchange for manufactured and advanced technology exports.
- In addition to our growing reputation as a reliable supplier of goods, Canada is recognized as a country willing to assist in development and technology transfer. Tremendous opportunities exist in the education and training that Canada has the capability to supply. Many Canadian universities, community colleges and services exporters are active in this sector. Canada could be doing more in military-to-military training to bolster defence sales opportunities.
- Canada is a world leader in telecommunications, transportation, environmental technologies, agriculture, biomedical technologies, and power generation and transmission capabilities. All these sectors are priorities with our trade missions in the region and present viable export opportunities to many active Canadian exporters. Canada is recognized throughout the region as a supplier of quality high tech products. For example, Canada's position as a supplier of world-class products was established in the early 1980's by Bell Canada's $4 billion telecommunications project in Saudi Arabia.

- Service exports form a significant portion of Canadian exports to the Middle East, estimated to be in excess of $500 million plus per year. Consulting and engineering services in the oil and gas and power generation sectors have traditionally formed the bulk of these exports. New trends have seen service exports being added in diverse sectors such as environmental technologies, dairy genetics and livestock management, architectural services, education and training, geomatics, financial services, and even yogurt shop franchising!

MARKET POTENTIAL (BY COUNTRY)

Iran

- According to Statistics Canada figures, Iran has become Canada's largest market for goods and services in the Middle East over the course of the last two years: Canadian exports totalled more that $358 million in 1992, with prospects for dramatic increases in the next few years. The sheer number of projects in the pipeline that Canadian firms are chasing ($1.2 billion signed / $1 billion being finalized) guarantees that this market will be of continuing significance for Canadian exporters. Exporters have informed EDC of over $10 billion in projects that are of interest to Canadians.
- Canada has been selected as one of Iran's five partners in reconstruction and is viewed as a preferred trading partner due to its North American technology, its lack of political baggage and its demonstrated expertise. With the absence of direct American competition in Iran, there remains a strong window of opportunity for Canadian exporters dedicated to the long-term pursuit of this market.

Israel

- Canadian exports totalled more than $116 million worth of goods and services to Israel in 1992, with a full range of exports from resource commodities and manufactured goods, to advanced technology items.
- Construction and building products have become our largest export items to Israel, reflecting the surge in construction and infrastructure development resulting from increased immigration from Eastern Europe.
- Other areas of interest to Canadian exporters are: telecommunications, where solid plans in television, broadcasting and cellular telephone expansion are in place; environmental technologies; transportation; biotechnology; and power generation.
- Israel has a highly developed and advanced scientific and industrial R&D capability. It is a country Canada looks to, to acquire advanced technologies to bring to Canada. Opportunities exist for greater joint venture cooperation in industrial R&D.
- As a result of the April 1992 Joint Economic Commission, commitments were given for a telecommunications sector mission and the establishment of a telecom-munications working group, an environmental sector mission, and the examination of the possible establishment of a bi-national scientific/industrial R&D fund to support joint venture cooperation. An agreement on the R&D fund was reached in April 1993.
- The Fifth Canada Israel Joint Economic Commission (JEC) is tentatively scheduled for early 1994 in Israel where questions of market access, tariff barriers, bilateral trade and investment, and Israel's request for a bilateral FTA will be discussed.

Jordan

- Trade with Jordan, while modest, increased four-fold in 1991 over 1990, from $5.5 million to over $20 million in exports. Unfortunately it returned to traditional levels in 1992 to $6 million.
- The country, while still struggling with adjustments in the aftermath of the Gulf War, the return of over 300,000 refugees, and the loss of financial support from traditional Arab supporters, is following a well-defined restructuring programme. The Jordanian market experienced rapid growth due to an injection of over one billion dollars by hundreds of thousands of returnees from Kuwait.

- Because of our heightened bilateral aid program, Canada's visibility in Jordan has been greatly enhanced, contributing to much of our recent commercial activities. Trade and investment development priorities will continue to parallel our aid program, especially in industrial cooperation.
- Priority areas of exporter opportunities will continue to be in telecommunications, agro-industry, mining and mineral equipment and services, industrial machinery and construction, and transport.

Lebanon

- Lebanon is currently experiencing its longest period of peace in two decades. Expectations are high that Lebanon is poised for a rebound as our increasing level of exports would seem to confirm. Canadian exports to Lebanon have steadily increased over the past several years to almost $14 million in 1991, and over $25 million for 1992.
- Lebanon is currently embarking on a massive reconstruction effort after 16 years of conflict. Anticipated western and Arab aid is beginning to materialise with agreements worth over $300 million signed since August 1992.
- This market should be looked at for its medium to long-term potential. Priorities will be in telecommunications, energy, power generation and distribution, health products and services, and construction.
- Selective EDC support on IFI-funded projects will be crucial for Canadian exporters to bid on many international tenders expected in infrastructure reconstruction.

Saudi Arabia

- Canadian exports to Saudi Arabia totalled over $375 million in 1992, and promise to show a dramatic rise over the next few years as contracts are won by Canadian firms on some $4 billion worth of projects currently being pursued.
- General priority is given to sectors which include: telecommunications with a planned one-million plus telephone line expansion; security products; agriculture and food products; mining/mineral equipment; the service sector, with generous incentives for joint ventures; transportation; lumber and paper products; and aerospace.
- Over the next few years there are a number of projects planned for the oil field and oil refinery expansion that will require a wide range of consulting engineering services and large quantities of equipment and supplies.
- In 1992, Canada signed a Memorandum Of Understanding on bilateral defence industrial cooperation to facilitate the exchange of information between the two countries in defence R&D and production and to boost defence trade.
- The seventh Canada/Saudi Joint Economic Commission is tentatively scheduled for November, 1993 in Riyadh. This official bilateral meeting will bring together business persons and government officials from five key sectors: Education, training and health care, telecommunications, mining, geomatics, and transportation.

Syria

- Syria's participation with the coalition forces during the Gulf War and a more open attitude to the West has meant that Syria is now benefiting from over $ 3 billion in Arab investment funds to undertake agricultural, telecommunications, and infrastructure projects.
- Canadian exports of over $10 million in 1991 and over $11 million in 1992 have increased steadily as more Canadian exporters access the growing opportunities in this market. In January 1993, a single sale of 700 GM pick up trucks for $10 million doubled our exports with this market over night and is a sign of the potential to come.
- Easing of restrictions on investment laws have resulted in implementation of projects in virtually every sector including mining, transport, and industrial machinery.

- The oil sector continues to boom with investments of over $1.5 billion in the past four years, offering enormous potential. Petroleum revenues are being reinvested in an expanded petrochemicals industry, exploration, pipeline and refinery infrastructure. Canadian oil well service companies should continue to explore this emerging market.
- An increased emphasis has been placed on agriculture and the agro-industry in this time of economic and political changes. Consequently, demand for agricultural equipment has grown.
- With EDC financing and insurance services available, even on a sectoral basis in oil and gas or power and telecommunications, Canadian exports to this market could easily triple in the short term to over $35 million.

United Arab Emirates, Kuwait, Oman, Qatar, Bahrain

- With support of EDC's line of credit with the Kuwaiti Investment Authority that will provide for US $500 million, sectors offering potential for Canadians include education and training, agri-food, consumer goods, geomatics and security products. The telecommunications and oil and gas sectors have been designated for priority attention under the EDC line of credit.
- Kuwait, Qatar and the UAE are seeking Canadian technology in the petrochemical sector. Further opportunities exist in agriculture and telecommunications, and education and training services.
- In the United Arab Emirates, a market where Canadian exports have increased by 88% from 1990 to 1992, a Consulate was opened in Dubai on April 1, 1993.
- Currently, twenty-five Canadian firms have located regional offices in Dubai to better service the burgeoning market opportunities in the entire region.
- In Oman, a Canadian consortium may be established that will include Public Works Canada and Fisheries & Oceans to pursue the project planning and management of the Omani 10 year fishing port development plan that will see the construction of ten new ports. Follow on sales of fishing vessels, port facilities, equipment, technology and related training services could eventually represent a $2-3 billion opportunity.

Yemen

- In 1992, Canadian exports to Yemen were over $12 million, reflecting continued activity of Canadian exporters in the oil and gas sector. Canadian oil well drilling and servicing companies will find increased opportunities in this market. Canoxy has to date spent over $400 million developing oilfield discoveries with construction of delivery infrastructure under way. The first oil is to be loaded for export by September 1993. Canoxy's oil exploration and development activities will bring significant increases in oil revenues of $400 million per year to the Yemen government. As Canoxy has raised the Canadian profile in this market, there will be a need to manage the opportunities that will arise from infrastructure investment and projects of the Yemeni government.
- With substantial increases in oil revenues now a reality, the Yemen government is concentrating on infrastructure development with housing, transportation, telecommunications and agriculture as high priorities. Good potential exists in education and training services, and possible port development infrastructure projects.

THE BUSINESS ENVIRONMENT

The region of North Africa is made up of five countries with a total population of 120 million; although all five countries are Arab and Muslim, three of them are former French colonies (Algeria, Morocco and Tunisia) and the French language and culture are still strongly rooted. On the other hand, Libya and Egypt have lived under British rule for several decades and English is the most spoken foreign language in these countries.

The population in North Africa is very young, urban and growing faster than in Europe or North America: Export opportunities will be drawn upwards by this trend.

The North African countries are all confronted with major economic problems, in particular a heavy foreign debt burden which hampers their economic development and growth and has slowed down the pace of reform. This has led exporters to be caution in their commitments to the region. However, most countries are engaged in economic reforms in addition to efforts to promote foreign investment, to enhance of the private sector, liberalize trade and the economy and, in the long run, to convert their currencies. The reforms offer both new opportunities and challenges to Canadian exporters. Infrastructural changes offer new opportunities for equipment, services and investment.

The International Financial Institutions (IFI) including the World Bank, the African Development Bank and Arab Funds have important lending programmes in the region in support of the economic reforms and industrial restructuring programmes. In 1992, the World Bank approved US $1.3 billion of projects in North Africa alone while the African Development Bank also approved a similar volume of projects.

Excluding Libya, total imports by the North African countries in 1991 came to $29 billion (FOB). While France and other western Europe countries such as Italy, Germany, Spain are the major suppliers to the region (31% to Egypt, 55% to Morocco, 58% to Algeria, 62% to Tunisia), the USA has managed to get 20% of the share of Egypt's imports, 6% of Morocco's and 10% of Algeria's. European countries have a political agenda in the region which strongly influences their commercial relations: fear of increased immigration can often colour trade negotiations and export financing.

TRADE WITH CANADA

In 1992, Canada's exports to North Africa totalled $653 million in products and an estimated $100 million in services. Trade to the region is largely in favour of Canada as our imports totalled only $153 million. These export results are substantially lower than those achieved in the late '70s but we can expect that these results will increase as the political and economic situation improves in the region and as the world prices for hydrocarbons increase.

Canada's profile in the region has been enhanced by our lack of colonial past, our participation in the Francophone and the Commonwealth and by our debt-forgiveness initiatives. Additionally, our ability to provide the Maghreb with American technology in French is also a strong differential advantage for Canadian companies.

The development priorities of the North African countries fit very well with our industrial capabilities and our export ability. This is particularly the case in sectors such as Oil and Gas, Agriculture, Telecommunications, Transportation, Mining, Electrification, Environment and Financial/Banking services to name but a few.

The key to export development in North Africa is industrial cooperation, joint venturing and technology transfers. At present, there are 85 ongoing industrial cooperation projects in the Maghreb involving as many Canadian companies and targeted mostly at the manufacturing sector.

There is a common understanding amongst the North African countries that a key to economic development is closer cooperation within the concept of a common market (Union du Maghreb Arabe and partnership with the EEC). As the political situation of Libya evolves, the UMA should assist in fuelling new opportunities in sectors such as transportation and telecommunications and in encouraging the development of joint ventures.

On the horizon of 1997, new gas pipelines will likely boost Europe's dependency on North African resources.

MARKET POTENTIAL (OVERVIEW)

Egypt (52 million), Algeria (25 million) and Morocco (25 million) represent a relatively homogeneous market of some 100 million people looking for assistance in developing their economies. North Africa is strategically located between Europe and Sub-Saharan Africa. As economic development accelerates, the region can be expected to play an active role in the development of the rest of Africa.

The proximity of North Africa to Europe and the pressure that could result from increased immigration from the region to major European cities are factors that explain Europe's commitment to assist in the political stability and the economic development of North Africa. In the longer term, it can be expected that North Africa will be associated to the EC. Morocco is already negotiating a partnership treaty with the European Community.

For the most part, the key to North Africa's economic development is the oil and gas sector which provides a major share of these countries revenues (95% in the case of Algeria). This is a sector in which Canada has recognized expertise and which we can service in both French and English.

Other priority sectors, influenced by structural and financial reforms as well as population growth, urbanization and pressing social needs, are all sectors of Canadian expertise (consulting, telecommunications, construction, management of water resources, transportation, etc.).

In many instances, the needs of the different markets in the region are quite similar; this allows for a multi market approach in promotion initiatives and support private sector strategy for regional market penetration.

MARKET POTENTIAL (INDIVIDUAL REVIEWS)

Algeria

- Business as usual notwithstanding the recent events. Last Fall, 143 Canadian business contacts visited the Post and important projects are progressing including the signing of three oil and gas exploration investments by Canadian companies and the sale of 90,000 tonnes of wheat ($17 million). The next few months (as of April 1993) should also see the opening of an office by a building contractor, a major investment in the pharmaceutical sector, the conclusion of the sale of 10 locomotives, and the purchase of a helicopter from Bell Helicopter.
- Relations between Canada and Algeria are based on economic development and cooperation, with Canadian exports exceeding $289 M in 1990.
- Construction has been made a priority with the enormous shortage of housing and plans to build 60,000 dwellings in the next 12 months. The World Bank is currently negotiating a line of credit for the housing sector to address this shortage.

- The improvement of the transportation infrastructure has also been made a government priority. Canada is viewed as a logical partner due to similar characteristics such as diverse climates and long distances.
- While production of Algerian farms has increased, the country is still long from being self-sufficient. Canada can still expect to play a role in this sector.
- With the expansion of telephone lines by tens of thousands a year, the telecommunications area holds strong promise.
- Competition is as fierce as ever and already, 26 foreign companies have invested in oil and gas exploration deals with Sonatrach since 1991 (3 of them are Canadian).
- Financing is a major issue in Algeria where EDC has requested sovereign guarantees before renewing its line of credit: $185 million of projects are waiting in the pipeline and the Algerian Government has often commented that support received in difficult times will be remembered in better times. EEC has recently confirmed a credit of US $90 million for housing. France appears more inclined to assis Algeria in reprofiling its short term debt load.

Egypt

- 7 Canadian companies are present in Egypt and our product exports have risen 35% (to $110 million, $30 million in services) over the last 2 years. 40 Canadian companies are presently pursuing business.
- Largest population (55 million) and second largest economy after Saudi Arabia in the region. Additionally, its location as a gateway to Africa and Middle East is ideal.
- Investment climate characterized by initiatives at liberalizing the financial market, upgrades in numerous sectors of Egypt's infrastructure, and is an overall ideal partner for joint ventures with its commercial and political ties as well as its bountiful labour.
- Projects worth some $425 million are being pursued such as a museum in Aswan, vocational schools, newsprint production, sale of 12 helicopters, technology transfers, rural tele communications, cellular phone network, sale of data communications equipment, etc.
- Offsetting the debt issue, which results in financing not being available from the EDC, Egypt receives some US $4 billion in foreign aid (US $2 billion from non-US sources). The Egyptian private sector is also responsible for financing some 35% of total US $13 billion of imports.

Morocco

- Structural and economic reforms are being implemented in Morocco and the International Monetary Fund is confident that the country could become a success story in the next few YEARS. Quoting the IMF, few developing countries can show as good results as Morocco in growth (4%), control of inflation, debt management and improvement of the balance of payments.
- Morocco is a strong proponent of the Union du Maghreb Arabe and is presently negotiating a unique partnership agreement with the EEC.
- Financing is not available from the Export Development Corporation.
- 15 Canadian companies are established in Morocco mostly through sales offices but some are also producing locally (number expected to grow as Canadian companies have expressed increased interest in investing in Morocco). 110 Canadian companies have been actively pursuing business in Morocco during the last 3 years.

Tunisia

- Canadian exports totalled $59 M in 1991, mostly comprised of sulphur, pulp and paper, wheat and aluminium but prospects are numerous in the rebounding oil industry, in development of natural gas resources and in the environmental sector, where a need for anti-pollutant equipment and consulting services has been identified.
- An annual growth of 6% is targeted during the VIII Year Plan. The country's industrialization continues in the context of liberalization, with an objective to reduce dependence on petroleum resources.

- The transportation equipment and industrial machinery sectors also offer enormous potential.
- Financing is available through the established EDC line of credit or LOC projects with the African Development Bank and the World Bank.
- EDC still has some $35 million available on the LOC with Tunisia. However, lack of concessional financing can be viewed as detrimental to Canadian companies.
- 85 Canadian companies are active in Tunisia, including 11 joint ventures, totalling some $75 million in investment (Dominion Textile, Metal Mining, etc.). Saskoil is about to joint venture with ETAP in 1993. Canadian companies are pursuing business worth $285 million.

2.3 SUB-SAHARAN AFRICA

Sub-Saharan Africa is a region composed of some 45 countries with a 1990 population estimated at 500 million. With countries smaller than Mauritius (with a population of 1 million) and as large as Nigeria (population in excess of 100 million), generalizations about the region are difficult to make and indeed are misleading.

Known mostly as a recipient of development assistance, the economies of Sub-Saharan Africa offer a multitude of opportunities, albeit not without challenge. Sub-Saharan Africa imports approximately $100 billion in goods and services per annum. Of that, Canada has traditionally supplied $1 billion. With a market share of approximately 1%, significant growth potential exists in this highly diverse continent. Nonetheless, almost 10% of Canada's top ten export markets are in the Sub-Saharan Africa Region.

Canada has been involved in Sub-Saharan African markets for some time. Our commercial exchanges in goods, equipment and services over the last three decades have been highly diversified. The most active periods were in the late 1970s and the early 1980s. Two way merchandise trade has since held at around $600 million annually.

Canada's largest trading partners in Sub-Saharan Africa are: South Africa ($130 M merchandise exports per year, even with sanctions); Nigeria (at $50 M in 1992, up 70% from $30 M in 1991); Ghana ($25 - $30M per annum, with significant potential foreseen); Kenya (at $26 M in 1992, despite significant decreases in aid).

The economic development of Sub-Saharan Africa continues to offer opportunities for Canadian exports of goods and services. With Canada's active role in the Commonwealth and La Francophonie and the support provided to Africa through bilateral and multilateral development assistance programs, the Canadian image in Africa has been positive.

Structural adjustment programs implemented throughout Sub-Saharan Africa during the 80's and early 90's are resulting in significant reforms offering new opportunities to Canadian exporters. Most countries are diversifying and restructuring their economic infrastructure and reinforcing their private sectors; there is a renewed emphasis on education and training; and interesting new opportunities in consulting, training, management and financial services are opening as a result of major privatization programs.

With increasingly limited trade promotion resources directed towards Africa, the challenge facing interested Canadian firms is to obtain maximum benefit for limited investment in an environment that demands commitment. It is clear that successful firms develop partnerships with their clients, involving themselves in joint ventures, technology transfer and investment opportunities.

The African Development Bank (AFDB) and the World Bank continue to be major sources of financing, particularly for projects that are part of national economic reform and industrial restructuring programs. Although serious potential exists for Canadian contracts financed by the World Bank and/or the African Development Bank, it is increasingly the case that winners of these contracts have established relationships with the client.

The limitations to Export Development Corporation's (EDC) activities in the region, resulting from the debt situation of many African countries and the restricted access to concessional financing, mean that other financial sources must be tapped.

Based on the premise that significant potential trade exists within the region, the following areas have been targeted for Trade promotion support: notably in the oil and gas, telecommunications, transportation (road and rail), and the mining sectors. In addition to the natural linkage between African need and Canadian expertise, in many projects in these sectors, private financing and/or foreign exchange earnings provide the basis for Canadian interest.

Four geographic areas of priority for Canada are: Western Africa (Nigeria, Gabon, Cameroon), Southern Africa (SADC countries), Eastern Africa (Kenya, Tanzania and Uganda) and as sanctions towards South Africa are lifted, South Africa.

Constraints to tapping the potential offered by Sub-Saharan Africa include lack of awareness, understanding of the market potential, financing and Canadian Trade Commissioner presence.

As part of a modest pro-active trade development program, Canada is focusing on sector-specific trade initiatives emphasizing commercial and multilateral financing and specialized missions to priority countries. Increasing the awareness of Canadian capabilities in Sub-Saharan Africa and of Sub-Saharan African market opportunities in Canada, are goals that are being pursued through a program aimed at both business communities. A focused trade strategy has been developed for the region, including:

- a program of awareness building
- continuation of a program to encourage access to IFI financing
- a targeted trade promotion program in key market niches such as oil and gas and mining, with emphasis on private financing and foreign exchange generation; identification and nurturing of new ways of doing business (eg rationalize the work of private sector interest groups in the region and increased training and development of Mission staff to improve efficiency and effectiveness of remaining trade program staff).

3.1

PRIORITY SECTOR GRID

North Africa and Middle East Missions

The following grid represents the priority sectors of each country as identified by our trade commissioners. The Sectoral Reports in the following sections contain detailed information on the countries indicated.

PRIORITY SECTORS

1 Agri-food
2 Energy
3 Environment
4 Mining
5 Oil & Gas
6 Telecommunications & Hi-Tech
7 Transportation
8 Miscellaneous
- Defence, Security, Education & Training, Forest Products, Construction

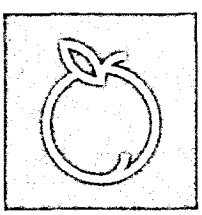
PRIORITY SECTOR GRID

Country/Mission	1	2	3	4	5	6	7	8
Algeria/Algiers	•				•	•	•	•
Angola*				•				
Egypt/Cairo	•	•	•		•			
Ghana*				•				
Iran/Tehran	•	•		•	•	•	•	•
Israel/Tel Aviv			•			•	•	•
Jordan/Amman	•			•			•	•
Kenya*						•		
Kuwait/Kuwait	•	•			•	•		•
Lebanon/Amman	•	•				•		•
Morocco/Rabat	•	•	•			•		•
Namibia*				•				
Nigeria*						•		
Oman/Kuwait	•				•			
Qatar/Kuwait					•			
Saudi Arabia/Riyadh	•			•	•	•	•	•
Syria/Amman	•			•	•		•	
Tunisia/Tunis			•	•	•	•	•	
Tanzania*				•		•		
United Arab Emirates/Dubai	•				•	•		•
Yemen/Riyadh	•				•			
Zimbabwe*						•		

* There are no Canada-based Trade Commissioners in these countries

3.2

AGRI-FOOD



3.21 ALGERIA

Over the years, the largest Canadian export to Algeria has been wheat. Other food and agricultural products such as powdered milk, butter and seed potatoes have also been major exports. Canada continues to play an active role in the agricultural market in Algeria, but for several reasons Canadian exports have been shrinking.

Algeria has always been a fertile country and now, with vast improvements in farming methods, the productivity of Algerian farms has increased tremendously. Imports have naturally suffered as the domestic production has expanded. This does not, however, mean that there is no future for Canada in this sector.

Algeria's domestic harvest has indeed multiplied, but the country is still a long way from being self-sufficient in food products. The rapidly expanding population, and the vast desert areas of the country mean that distribution of food resources is an increasingly difficult problem. Much produce is lost due to spoilage and Canadian companies have been active in seeking out Algerian partners to start-up joint ventures in areas such as refrigeration, distribution and land management.

One of the government's priorities is to increase production to reduce dependency on imports, thereby reducing expenditures of scarce hard currency. Canadian firms would be wise to look at some form of partnership or joint venture, and possibly at various types of investment in order to ensure a place in the market.

There is currently no market for `luxury' food products, as recent government import restrictions have cut back to essentials only.

3.22 EGYPT

In spite of its 6.5 million acres of productive agricultural land, Egypt is not able to feed its population of 56 million which is growing at the rate of 2.2% per year. Egypt imports approximately US $3.75 billion of food related products per year. This includes some 6.6 million tonnes of wheat, 1.4 million tonnes of corn, 70,000 tonnes of lentils, 150,000 tonnes of frozen fish, 605,000 tonnes of vegetable oils, and 3.5 million tonnes of butter and dairy products.

Egypt imported more than US $16 million of agri-food products in 1992 (January to August). However, the bulk of food imports fall into the non-processed or semi-processed categories as Egypt possesses a well-developed food processing industry. Egypt also imports more than US $1.5 billion of farm and food machinery, fertilizers, pesticides, peat moss and seeds per year.

Agri-food exporters should contact the Embassy for advice on exporting to Egypt and dealing with Egyptian Government and private sectors.

Agricultural consultants should also look closely at the numerous agriculturally-related projects sponsored by institutions such as the World Bank and the various Arab funds as these are open to all competition and make up a significant amount of the approximately US $2 billion spent on improving this vital sector per year.

AGRI-FOOD AND FISHERIES

The market for Canadian agri-food and fisheries products, equipment and support services is just beginning to be explored by Canadian companies. American and European brands dominate supermarket shelves and the patterns of consumption are moving increasingly towards the North American model, albeit with distinct preferences. Canadian products are generally not visible except for the McCain's line of goods that is found throughout the area. The Embassy receives a steady flow of enquiries about potential Canadian suppliers of processed food and agricultural products. Care must be taken in approaching the market since there is a range of semi-processed and brand products for which competitors have distinct advantages. However, there would seem to be potential for specialty food, seafood and beverage products for which Gulf consumers may be willing to pay a premium.

For primary agriculture and fisheries there are distinct markets developing in the United Arab Emirates and Oman. Abu Dhabi specifically is committed to increasing self-sufficiency in various crops and livestock in the longer term and to that end has allocated approximately $60 million over the next five years. Opportunities should exist for Canadian dry-land farming expertise, crop management systems, seeds, genetic materials, forage, agricultural support services and consultants. In Oman the opportunities relate to development of that Emirate's marine resources.

OVERVIEW

Iran's agriculture and food sectors offer increasingly attractive opportunities for Canadian exporters willing to enter a competitive but growing market. Iran's population has experienced the largest growth of all countries in the region, reaching an estimated 60 million people in 1992, and is expected to continue growing at around 2-3% annually perhaps reaching 82 million in 2001.

The Iranian Government recognizes the increasing demand for food and basic staples to feed its population and has placed a high priority on expanded food production within the country, while continuing to import some food products from abroad. This trend will continue in the foreseeable future, and will result in excellent opportunities for Canadian suppliers of food items such as rice, beef and poultry (both halal slaughtered), flour, wheat and some prepared foods. As well, as the Iranian Government continues its drive to produce more food, Canadian companies can take advantage of opportunities to sell agricultural equipment and related services necessary to modernize and expand Iran's food production capacity.

Responsibility for Iran's agriculture sector is divided between two ministries whose roles continue to evolve. The Ministry of Jihad-e-Sazandegeh, in general, is responsible for dairy cattle imports and expansion of Iran's dairy cattle industry and rangelands, while the Ministry of Agriculture takes the lead in food production. Opportunities for Canadian companies can be divided into five main areas as follows:

Grains & Seeds
The Canadian Wheat Board is responsible for marketing Canadian wheat to Iran, and has a long-standing relationship with the Iranian General Trading Corporation, which has the authority to import cereal grains. As Iran continues to expand its own production, estimated to reach 10.3 million tonnes in 1993, opportunities for technical cooperation with Canada in grain handling and management will become increasingly important. Iranian officials have shown interest in canola seed production and in certifying canola oil for human consumption. Given that Iran annually imports about 400,000 tonnes of edible oils, canola may represent one of the largest untapped opportunities for direct sales in this market.

Grain Storage & Handling Equipment
Iran has placed, as a high priority, increased production of wheat, barley and other cereal grains. Grain storage facilities and grain handling equipment currently in place in Iran are insufficient and, in some cases, antiquated. The Ministry of Agriculture is developing an expansion and updating programme, leading to opportunities for Canadian companies with the appropriate technology and expertise. Technology transfer will be an important element of Iran's expansion in this sector.

Agricultural Equipment & Services
Large-scale farming enterprises are not the norm in Iran, and smaller agricultural land holdings are predominant. As a result, there is little demand for large agricultural equipment, except in the case of agricultural cooperatives established following the Revolution. Farming and food production will require more sophisticated planting and harvesting techniques in Iran in the future, and demand will increase for agricultural implements such as seeders, sprayers, harvesters, irrigation equipment and the like. In most, if not all cases, agreements to sell such machinery and equipment in Iran will require technology transfer and possibly local production agreements as Iran moves towards its commitment to be a manufacturer and supplier of this equipment in the region. This holds true as well for poultry stock, equipment and services, for which there is a large demand as Iran's population increases.
Requirements for agricultural services, farm management training and exchange of expertise on dryland farming techniques will increase as Iran's agricultural community modernizes and updates techniques virtually unchanged in the past decade or more.

Dairy Cattle, Semen & Embryos
Currently, Iran's dairy cattle population stands at around two million head, distributed among individual dairy farmers. The largest dairy enterprises have herds as large as 1500-2000. Many of these dairy cows have been imported from Canada, the United States, Germany and Holland. Canadian dairy cattle are highly regarded for both quantity and quality of milk production, and there will be continuing demand for registered dairy cattle whose import is now controlled by the Ministry of Jihad-e-Sazandegeh.

At the same time, quality semen for Iran's own dairy cattle reproduction programme, and to a lesser extent the sale of embryos, will mean increased marketing opportunities for Canadian suppliers. A Dairy Genetics Seminar, sponsored by Agriculture Canada in the fall of 1992 with the cooperation of the Ministry of Jihad-e-Sazandegeh, highlighted Canadian capabilities in these areas, and underlined the possibilities for training and services from Canada as well.

Veterinary Supplies & Pharmaceuticals
A virtually untouched area for Canada to date, there are attractive possibilities for the sale of all types of veterinary supplies and pharmaceuticals for Iran's two million dairy cattle. Local production of veterinary medicines, vitamins and supplements, antibiotics and other supplies does not meet local demand. Imports from Eastern European countries (which are regarded as poor quality), and from Europe (seen as very expensive), means that Canadian veterinary suppliers can carve out a profitable niche in this market. As in other sectors, foreign suppliers must also be willing to consider joint-venture agreements for local production.

OVERVIEW

There is no doubt that Jordan was the country most severely affected by the Gulf Crisis and the aftershocks will continue to be felt for the foreseeable future. While the crisis might have had many negative impacts, it also created significant non-traditional opportunities in a variety of sectors which should encourage rather than discourage exporters. Canadian exports, partially assisted by an increasing aid programme, grew three-fold in 1991 to reach a record of CDN $20 million in goods and approximately CDN $15 million in services in 1991.

The Kingdom, not well endowed with natural resources, relies heavily on imports for its domestic consumption. The influx of over 300,000 "returnees" from Kuwait boosted the population by almost 10% in the space of months, stretching social infrastructure. The Planning Ministry estimated the cost to resettle the returnees will be at least CDN $5.0 billion, generating additional demands for imports of all types, notably foodstuffs and raw materials.

The flood of returnees from Kuwait has already created a construction boom and a build-up of bank deposits and it is only a matter of time before spin-offs to other sectors take place. The new residents, mostly skilled professionals, face limited job prospects and it is equally unlikely they will find work in other countries. Many bring substantial savings from years of employment in the Gulf and are actively pursuing investments to establish themselves.

This, combined with an increasing awareness of the need for economic restructuring and diversification, should induce greater investments in technology to boost output of existing industry. The emphasis on private investment has produced what is being heralded as a new era of industrialization in Jordan. One local bank estimates that over 300 new industrial firms were started in the second quarter of 1991 alone, concentrated in agro-industry and light manufacturing in metal, electrical, plastics, pharmaceutical and chemical industries. The future now appears more secure as Jordan has just signed a new IMF programme and is rescheduling foreign debts. In addition, substantial aid from western and OECD countries, the vast majority of it untied, should be forthcoming at a special donors consultative group about to be convened. There is also a wide expectation that the eventual lifting of sanctions on Iraq will result in enormous benefits to Jordan-based companies, especially in agriculture, transportation, consulting engineering and construction services.

Given the effects of the Gulf Crisis on Jordan's economy, the priority attached to agricultural development by the Jordanian Government has grown, predicated on the need for security of food supply and import substitution of basic commodities and staples. As a result, a multitude of new agricultural investments are taking place in the northern and southern regions of the country both by the government and private sector. The Jordan Valley, Jordan's historic agricultural centre, is also witnessing significant investment in new technology in order to boost output.

Agriculture varies widely in Jordan and can be divided into four major regions: the Jordan Valley, the Northern Highlands, the Desert Region and the Southern Plains.

ONE: THE JORDAN VALLEY

The "Valley" is the traditional centre of Jordan's agriculture production, focusing primarily on vegetables and green house crops using drip irrigation. The land in the valley is worked hard and, as a result, has high salinity and contents of potassium chloride requiring major consumption of peat moss, soil mix products and fertilizers. Canadian companies annually export over $500,000 in soil mix products alone and the recent introduction of Canadian peat moss is already registering modest sales. Good potential also exists for hybrid seeds and other horticultural products of which certain varieties have already been introduced by Canadian companies this year. The projected sales figure for Canadian companies this year is over $52,600 particularly in the area of agricultural machinery.

TWO: THE NORTHERN HIGHLANDS

Canada can play an active role in agriculture in the Northern Highlands given the similarity of conditions to western Canada. The area is suitable for dry-land farming (250 mm rainfall per year) making it a key growing area for wheat, barley, lentils, chickpeas and other pulses. In addition, it is also the focal point of dairy cattle farming in the country with over 40% of Jordan's dairy herd.

A CIDA-funded lentil mechanization project implemented in association with the Jordan Cooperative Organization (JCO) was highly successful as a technology transfer tool. The two-year project demonstrated adequately the use of Canadian equipment and expertise to mechanize the preparation and seeding of fields and harvesting of lentils. Government and private institutions were very pleased with the results creating excellent opportunities for sales of farm implements.

THREE: THE EASTERN AND DESERT REGIONS

The Eastern and Desert Regions depend on both irrigated and rainfed agriculture. Vegetables, barley, wheat and legumes are among the major crops and much of Canada's promotion in the Highlands region mentioned above will affect the potential in these regions. It is worthwhile mentioning that water is the mitigating factor, and is critical to the ability of putting in place a cost effective agricultural programme in these areas.

FOUR: THE SOUTHERN PLAINS

This is Jordan's newest agricultural area and is largely a desert region requiring extensive pivot irrigation systems similar to those used in southern Saskatchewan. The region offers good potential not only in cereal grains farming, which has been the basis of production efforts, but in a growing spectrum of other crops as well. Canada already has extensive presence in this region where CIDA/Inc funded the design for a large wheat farming operation and recently introduced Canadian seed potato varieties have performed exceedingly well. These large-scale farms have also become increasingly good customers for Canadian farm implements and Canadian suppliers are well positioned to obtain lucrative sales.

OPPORTUNITIES FOR CANADIAN EXPORTERS

Dairy, Livestock and Poultry

This sub-sector is becoming increasingly important to Jordan's agriculture. Several investments and technology transfer programmes have been proposed in the biotechnology area including artificial insemination, embryo transfer where several projects are currently being implemented. Recently, the University of Jordan initiated a biotechnology and embryo transfer project with McGill University to promote the quality of cattle in Jordan. This project is also geared to serve the surrounding region.

Local milk production has developed rapidly, primarily to produce drinking milk and yogurt. Recently, surpluses have appeared and farmers have been protesting about imported powder at a time of excess milk production. No appropriate outlets for further processing the whole milk for other purposes are available for this surplus and farmers are often faced with the alternative of destroying there products, resulting in a loss of potential income and wasted resources. In an effort to resolve this problem and eliminate this glut, the government has issued a ruling forcing all dairy products manufacturers to use fresh milk in their products rather than imported powder. As a result, local farmers and entrepreneurs have seized an excellent opportunity for investment, and interest in establishing dairy operations is increasing rapidly. The potential for technology transfer and/or joint ventures is excellent in this area. A Canadian technical expert, funded by CIDA, recently visited Jordan to review a number of existing dairy operations and examine the feasibility of establishing new ones. This presents a golden opportunity for Canadian dairy machinery suppliers as well as the possibility of technical transfer between the two parties.

The poultry sub-sector is well developed and Jordan exports eggs to several neighbouring countries. Canadian companies sell small amounts of incubators and breeding stock, but low local feed production has greatly impeded sectoral development.

Availability of animal feed is a critical problem in Jordan and restricts a great deal of the potential of this sector. There is little or no local production of protein or concentrate and all raw materials are imported for blending by local feed mills. As a result Jordan imports large quantities of fresh and frozen meat. The Embassy has been approached by several local entrepreneurs regarding Canadian technology for feed production and any such initiatives would likely enjoy excellent future potential. Negotiations are underway between a Canadian and a local company for a turn-key feed mill project in Jordan.

As a consequence of limited local fodder production, there exists great potential for the export of dehydrated alfalfa cubes to Jordan. Jordan's minimal annual alfalfa production is insufficient for local demand leading to acute shortages during the months of March to August. These have normally been relieved by imports from Saudi Arabia but this source is now strained, presenting an excellent opportunity for Canadian suppliers. Previous attempts by Canadian exporters to penetrate the Jordanian feed market with superior quality product have been stymied by high transport costs to this price sensitive market. Volume requirements are now much higher, which could make Canadian products more competitive if exporters can consolidate shipments to a larger number of importers.

Agricultural Commodities

Exports of Canadian agricultural commodities have grown solidly from a small base in the past five years. Pulses, canary seed, flour products and oilseed-based products have all been recently introduced to local buyers. Efforts to introduce oilseeds including canola are proceeding in an effort to position Canadian oilseeds as an alternative to traditional corn and soya oil imports. Presently, a joint venture project for a canola crushing plant between a local and Canadian company has been submitted to the Jordanian Ministry of Industry for approval. A number of large Jordanian companies are also studying the possibility of planting canola to be used in their food processing operations.

Wheat exports to Jordan face tough challenges to Canada due to subsidized purchases of grain from American and European suppliers. However, barley, oats and flour offer extensive scope to Canadian suppliers. Almost without exception, purchases are undertaken by the Ministry of Supply through international competitive bidding.

CIDA recently assisted a Canadian company to export a large trial shipment of seed potatoes in an effort to introduce Canadian varieties in Jordan. The trials have been an outstanding success and commercial sales of large quantities are anticipated. In addition, a local company, which is also participating in this trial planting, is also negotiating with a Canadian company for establishing a frozen french fries plant in Jordan using Canadian potatoes.

Food Processing

Although Canada has made solid progress in promoting tinned and bottled food products in the past, imports have decreased in accordance with Jordan's current economic situation. This dictates that greater potential lies in participating in the development of the food processing industry. Local investors, with a preliminary goal of import substitution, are actively considering investments in food processing, especially of fruits and vegetables from the Valley. This significant increase in activity could benefit from Canadian technology and expertise either through joint-venture, licensing or direct sales of equipment.

CONCLUSIONS

Jordan's stated priority of import substitution and the increase in the number of new projects spurred by investment from the Gulf "returnees" should continue to offer encouraging market opportunities for Canadian exporters. The following are products/services which offer the most promising opportunities for the Canadian exporters:

- Farm consulting and other services;
- Dairy production and operations consulting;
- Feed and feedmill technology, including canola processing;
- Fertilizers, pesticides and soil enhancement products;
- Dryland farming technology and services;
- Food processing equipment and services;
- Dairy cattle, genetics enhancement and veterinary;
- Seeds of all types, including vegetable and cereals; and,
- Greenhouses and irrigation systems.

3.26 MOROCCO

Morocco has a tradition in agriculture, a sector which receives special attention from the Government. However, the country is dependent for a portion of its food requirements. The market is estimated to be between Cdn $500 and $600 million.

AGRI-FOOD

The Moroccan agri-food sector contains about 1500 units (1/3 of all industrial units), and has a turnover in the vicinity of $4.5 billion, $600 million of which consists of exports. Some branches are more developed. They include milling, beverages, and preserved fruit, vegetables and fish. Other branches afford especially interesting opportunities, namely sugar producing, dairy and oils and oilseeds. Partnership and technology transfer opportunities exist in the areas of agricultural and fish processing and conversion (cooked foods, fish fillets, etc.), the processing of livestock and dairy products (production of patés, meat conversion, cheese, yogurt, powdered milk, butter, ice cream, etc.), conversion of food, in particular industrial and commercial refrigeration, and conservation by ionizing. There is a concentration of activities in the Moroccan agri-food sector, where about 70% of the turnover is achieved by a few major groups.

MARKET OPPORTUNITIES HAVE BEEN IDENTIFIED IN:

- Consultative services
- Agricultural machinery and equipment
- Dairy products
- Livestock, feed

COMPETITION

Competitors have been identified as France, Benelux, Spain, U.S.A., and the FRG.

FINANCING

Some agricultural projects have multilateral funding from the World Bank, the African Development Bank, etc., by way of the Caisse Nationale de Crédit Agricole, the main financial instrument for development of the agricultural sector. Food products are generally payable by 120- or 180-day documentary credit.

ONE: OVERVIEW - AGRICULTURE

During the past ten years, Saudi agriculture has changed from traditional agriculture to large scale commercial farming. Saudi Arabia now produces an increasing quantity of basic agricultural commodities.

The Saudi Government brought about this transformation by providing support to the private sector agriculture companies in the form of: a) free distribution of lands for projects approved by the government b) interest free loans for the development of agricultural projects c) investment subsidies ranging from 20 to 100% on the total cost. The government also subsidizes agricultural production by maintaining procurement prices for some crops at levels above world prices. For example, when subsidies are included Saudi farmers received US $543 per tonne of wheat compared to the world price of US $110.

Saudi Arabia is among the world's fastest growing food producers. The GDP in the agricultural sector recorded an average annual growth rate of 13.4% during the period 1985-90. Agricultural production increased by approximately 7% in 1991 and the same growth rate is expected for 1992 and 1993. However, the Kingdom still imports large amounts of food. Agricultural imports totalled US $2.965 million in 1989. Live animals and meat products accounted for 33% of this total.

Saudi Arabia is an exporter of wheat and recently become a net exporter of eggs. Fresh fruit and vegetable production accounted for more than 3 million tonnes in 1991 satisfying more than 50% of the domestic market for vegetables and 20% for fruits. Saudi Arabia is the world's largest importer of live sheep; mutton is the preferred meat and a number of breeding projects are being developed.

Opportunities for Canadian Exporters

Government programmes to promote the development of the agricultural sector through long-term interest-free loans and generous subsidies are expected to continue. However more attention will be paid to lowering the cost of production and to diversifying output to reduce imports.

As a result, there will be a demand for new and more efficient technology for farming operations and maintenance. There should also be interest in new crop varieties such as pulses, legumes, and potatoes. Other opportunities exist for animal feedstuff, agro-chemicals (insecticides, fertilizers, etc.), greenhouse equipment, veterinary products, irrigation equipment and sprayers.

TWO: OVERVIEW - FOOD

Saudi Arabia is a major food importer. It has a growing population, which currently numbers 17 million. This is a cash market; Saudi Arabia spends an estimated US $4 billion annually for food imports. Saudi Arabia is investing heavily in agriculture with the goal of reducing dependence of imported food. As a result, Saudi Arabia is producing increasing quantities of basic commodities such as wheat, vegetables, meat, and poultry.
The commercial catering market is quite important in Saudi Arabia. Many of the four million expatriate workers resident in Saudi Arabia are fed by corporate catering arrangements. In addition, an average of 2 million Hajj pilgrims visit the Kingdom each year.

The Saudi market is quite open and competitive. Competitive pricing is essential for success. There are no restrictions on imported food products but goods must comply with Islamic law (pork, pork products, and alcohol are forbidden) and with local standards regulations (eg. shelf life and Arabic labelling). The Embassy can assist in obtaining the relevant standards regulations from the Saudi Arabian Standards Organization. Local customs on imported food products are 12% of landed cost.

Opportunities for Canadian Exporters
As Saudi Arabia is producing more of its basic food commodities locally, foreign exporters should consider targeting niche markets. There is a growing demand for speciality items such as: spices, cheese, smoked salmon, grain legumes and pulses, frozen poultry, smoked salmon, non-alcoholic beer , powdered milk, chocolate and other confectioneries.

There are also good opportunities for manufacturers of food processing and packaging equipment, especially for companies who are willing to consider joint ventures with local partners. For example, the government recently established a food processing company which produces tomato ketchup and spaghetti from local produce. This company is interested in expanding its operations with the help of foreign expertise in food processing.

For success in this market both price competitiveness and aggressive market development are necessary. Frequent visits, participation in trade shows, and advertising are all important.

3.28 SYRIA

OVERVIEW

Syria is historically an agricultural country. For centuries, farmers have cultivated the abundant arable land which, contrary to many other countries in the region, normally had abundant availability of water. Despite this agricultural tradition however, the world oil boom of the 1970's diverted the government's attention to develop hydrocarbon resources and place emphasis on industry for future prosperity, to the detriment of agriculture. The boom quickly vanished as Syria found only limited amounts of oil.

The over-extended and somewhat isolated government refocussed on agriculture. Development and modernization of the by then collectivised farming system was, however, thwarted by Syria's centrally-planned economy which has long suffered acute shortages of foreign exchange and western credits with which to import western equipment and technology. Perhaps the most brutal of several setbacks has been the persistent drought conditions that began to hit the country, most recently from 1987 to 1991, although preliminary estimates of 1991/92 rainfalls were above average.
Syria has, however, recently been showing strong signs of economic recovery led by its transformation from a net oil importer to a major exporter due to large new crude discoveries in 1987. The country was also a major beneficiary of the Gulf Crisis and events thereafter, benefitting not only due to windfall oil profits, but also from its political stance as a member of the coalition forces. It is expected that this will yield literally billions of dollars in cash transfers from the oil-surplus Gulf states.

Syria's increased prosperity has unleased billions of dollars of major project activity and the government is placing increased emphasis on agricultural and other development with greater participation of a long restrained private sector. The agriculture sector, which according to official estimates accounts for over one-half of private economic activity and employs an equal ratio of the non-government workforce, will benefit from increased government revenues to implement badly needed modernization, much of it through the import of western goods and services.

In an effort to promote large-scale agriculture, the government has allowed the forming of "mixed companies" which enjoy exemptions from taxes, custom duties plus import and foreign exchange controls. Basically, these large companies are granted land rights, formerly illegal under Syria's socialist system, while the private investors provide management and capital.

Although most of Syria's cultivation is currently on rain-fed land, massive irrigation projects are being developed along the Euphrates River which will help to offset the effect of adverse climatic conditions in the future. In an effort to boost output, the government subsidizes the price of some types of seeds, seedlings, fertilizers, fuels and also the electricity used to operate water pumps. The Cooperative Bank also provides subsidized loans to buy farm machinery, and operational inputs. In short, the facilities are in place to ensure constant demand of goods and equipment.

MAIN CROPS

Although wheat and barley are the prime crops on approximately two thirds of the cultivated area, cotton remains the main cash crop and an important earner of export revenues. While a small amount of high quality cotton satisfies local consumption, the bulk of it is exported, primarily to Europe. Sugar beet is another important crop as are potatoes, maize, pulses, vegetables, oil seeds, tobacco and lentils.

The government directly subsidizes the production, particularly of pulses and wheat, by purchasing crops from the farmers at prices higher than international market prices to encourage production considered essential to food security.

OPPORTUNITIES

Opportunities for Canadian exporters are very encouraging as new investments are made to return agriculture to its former strength and process production. The large, private sector agricultural development companies which are essentially joint-venture between Syrian and foreign private investors and the government offer particular appeal. Healthy potential also exists in supply of agricultural goods and services to the state/collective system, badly in need of a multitude of agro-industry inputs, including machinery, seeds, pesticides, fertilizers and technology. Recently, for example, the government has called for international bids for a turnkey pesticide/insecticide factory and cotton processing facility, flour and feed mills and several large scale land reclamation projects, to name but a few.

Livestock & Feed

The live animal and genetic improvement sub-sector is growing rapidly and represents a significant opportunity for Canada. Canadian cattle were sold to Syria in the 1960's and 70's but little has happened since then primarily because no foreign exchange was available for imports. New attempts are now being made by Canadian companies to re-enter the long dormant market which in the interim developed alternate sources of supply. Efforts are being directed mainly at the more quality conscious private sector which is interested in establishing high quality, "model" farms. While most livestock imports will be by state and collective farms, they remain highly priced sensitive and private companies are believed to offer better immediate potential.

New opportunities are also evident in the feed sector; Syria's limited fodder production and storage capacity do not satisfy local demand, resulting in extreme shortages during the summer months. There is heightened interest, again mostly by private sector sources, in establishing feed mills as a result of those chronic shortages.

Dryland Farming

Canadian dryland farming technology and other services could provide a definite boost to Syria's agriculture. The best prospects are in the areas of field preparation, planting and harvesting equipment for large scale wheat, vegetable and pulse farming, as well as fodder production for an increasing number of sheep and cattle feedlots. Canadian firms have successfully entered the area of agricultural research and technical services in Jordan through active participation in research programmes such as dryland farming and lentil mechanization. Syria has yet to recognise the full benefits of widespread mechanisation and it will require a committed sales effort to enter the market for everything from rock-pickers to seeders to windrowers and other harvesting equipment.

Specialty Seeds

Specialty seeds could capture good market share in Syria, but it will be necessary to penetrate the market through strong introduction incentives and competitive pricing in order to compete effectively with other suppliers, mostly European, who have long dominated the market. Recently, trials of Canadian seed potatoes, sponsored in Syria by Potatoes Canada in order to introduce and register Canadian varieties in Syria, were conducted successfully.

Food Commodities

Wheat, more than all cereals, represents the best potential in Syria. While 1992 domestic crop forecasts are the most favourable in the past half decade, the requirements are still large and imports of up to 1.5 million tonnes of soft wheat and flour are projected. Canadian wheat exports to Syria were displaced by European suppliers during the early 1980's due to their ability to offer subsidized wheat and flour with available financing. It is worthwhile to note however that neither the USA or Australia sell wheat to Syria. Recently, the Syrian Government has shown a keen interest in the possibility of future supply of Canadian wheat based on a desire to diversify sources of supply.

Other Food Products

Exports of Canadian food products to Syria suffered extensively as a result of the special import quotas imposed on the private sector in 1987. However, the import regime has just been relaxed indicating that Canadian food products such as honey, juices, jellies, oil and oilseed all have excellent chances of recapturing a good share of the Syrian market. A baby food manufacturing project is being considered by private entrepreneurs with an inclination towards Canadian expertise in a joint venture, under licence agreement or technical assistance in addition to the supply of machinery. In 1991, as many as 65 new food processing factories have been established under the new investment law geared towards encouraging private sector participation, a trend which is expected to increase in the future.

CONCLUSION

Syria's increased emphasis on agriculture and agro-industry at a time of rapid economic and political changes present highly promising market opportunities. Potential is especially good for dairy cattle, genetic material and related dairy and feedlot equipment as well as dryland farming technology.

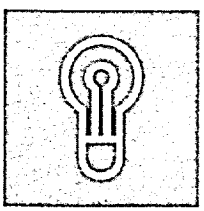
Agricultural development in Syria will be coupled with a very high demand for agricultural equipment, long difficult to import and we estimate that the following products and services have the best market prospects:

- Dryland farming technology and services;
- Commodities, including wheat, flour and seed potatoes;
- Food processing equipment;
- Dairy cattle and genetics;
- Livestock enhancement products, including veterinary;
- Fertilizers and pesticides;
- Feed plant equipment and services; and,
- Milling and handling equipment;

Canadian exporters must act quickly to consolidate representation and partners in order to capitalize on opportunities. Participation in agricultural demonstrations and research as well as providing technical services are all excellent ways of promoting Canadian agricultural equipment and products. Those interested in the market should contact the Commercial Section of the Canadian Embassy in Amman, Jordan for specific assistance.

3.3

ENERGY



3.31 EGYPT

Egypt's present requirements for electricity are met by 40 interconnected power stations with a generating capacity of about 13,000 MW of which thermal steam accounts for 50%, combustion turbine, combined cycle 26%, and hydropower 24%. The transmission system consists of a unified grid totalling 7,400 km of high and low voltage overhead lines which connect Upper Egypt and the High Dam Hydro Plant to the Delta area of Lower Egypt.

The Government's five-year development plan forecasts investment of US $3 billion for the construction, rehabilitation and expansion of generation, transmission and distribution facilities. Several thermal generating power stations are currently being upgraded and or constructed in an effort to increase overall capacity by 800 MW per year until the year 2000. Four hydropower generating projects are being developed and implemented currently. Some tenders have already been let and more will come for cable, insulators, conductors, fittings, towers, substations and transformers.

In addition to its own internal developments, Egypt is a major partner in three electrical grid projects. These include the Egypt Zaire Interconnect, the North Africa Network which will link up eventually to Europe through Spain, and the Europe/Islamic Countries grid linking Egypt, Jordan, Syria, Iraq and Turkey.

The Government of Egypt has placed a priority on reducing imports by increasing local manufacturing capability whenever possible. Indeed Bechtel Egypt and AECL Canada were commissioned to carry out a study to identify local companies capable of joint venturing with foreign partners to produce equipment for the nuclear industry, when and if nuclear power development becomes a reality.

Nuclear power repeatedly comes up as a means of meeting future needs. However, existing financial constraints, the desire not to incur crushing new debt, the population's reticence about this form of energy creation following the Chernobyl incident and the recent earthquake, are keeping the project on a back burner for the present. Nevertheless, on the research side Egypt has signed for a $60 million mini-research reactor and is expected to invest up to $200 million in further projects and research in order to take advantage of the latest advances of modern nuclear technology.

3.32 IRAN

OVERVIEW

Iran's energy production capacity can currently generate 16,600 megawatts of electricity. However, given Iran's demographic explosion (3.5% increase per year), the accelerated urbanization of the country and the renovation and expansion of the local industry, the demands upon the power generation system fall well short of what it is able to supply. While the economy is experiencing growth, its ability to expand is in fact hampered by an insufficient or unreliable energy source. Although recently improved, daily power outages of at least one hour or more are still common in many parts of the country.

These conditions have led Iranian authorities to make the energy sector one of the top priorities (along with the petroleum industry) in the 1989-1994 Five-Year Plan. With this in mind US $5.8 billion has been allocated to energy sector development for the 89-94 period with approximately 60 percent of this allocation having been spent to date. The Ministry of Energy reports that energy production has increased approximately 13 percent per year since the commencement of the Five-Year Plan. By the end of the century authorities hope to have reached a goal of approximately 36,300 megawatts of installed capacity.

The Ministry of Energy's budget for the 1992 -1993 fiscal year has been allocated as follows:

- Rls 650 billion for investments
- US $1.35 billion for investments
- Rls 300 billion for running and maintenance costs of existing facilities.

HYDRO-ELECTRIC POWER GENERATION

The 1990 to 1998 investment plan envisaged by the Ministry of Energy places the accent upon hydroelectric power generation. In 1990 power from this source produced 1,968 megawatts and by 1998 it is hoped that this amount will have more than tripled to 6,620 megawatts. This will represent over 20% of Iran's total production capacity. Steam turbines, currently producing 50% of Iran's energy needs will rise to 66% by the end of the century once new plants and upgraded facilities come on stream.

ATOMIC ENERGY

Iran's Atomic Energy Organization wishes to accelerate its plans for nuclear energy development. With President Rafsanjani's announcement in September 1991 that Iran will proceed with its plans to establish a number of nuclear power plants over the course of the next 10 years, it is clear that a nuclear program has the full backing of the State. That said, there is no interest among western countries capable of co-operating with Iran to develop nuclear energy production facilities. Germany, for example, despite heavy political pressure from the Iranian government, has formally stated that German firms would not recommence construction of the Boushehr nuclear power plant (construction was interrupted by the onset of the Islamic revolution). China is the only country known to have promised Iran access to nuclear power technology. Political factors and concern over nuclear proliferation make participation by Canadian companies in this field of power generation extremely doubtful.

CANADIAN PARTICIPATION

A number of Canadian companies such as Acres, Monenco, Babcock and Wilcox, The Howden Group and Trench Electric Ltd are already enjoying success in Iran's energy sector. With both a substantial number of new projects planned and further upgrading of number of existing power generation sites, opportunities for Canadian companies not yet familiar with the market should prove ample. Current contracts awarded by Tavanir account for approximately 9,500 megawatts, of a total of 19,700 megawatts required if Iran is to meet its century-end target of 36,300 megawatts. A number of tenders to construct 1000 megawatt plants such as that awarded to the Babcock and Wilcox led consortium are expected within the next few years.

3.33 KUWAIT

POWER GENERATION

Gulf Ministers have agreed on the concept of an inter-connecting power grid for GCC countries. Total cost of the project is put at $1.2 billion of which one-third will be borne by Saudi Arabia and Kuwait. The first phase will link Kuwait, Saudi Arabia and Bahrain. Hydro-Quebec International participated in the GCC grid pre-feasibility study. Most national power systems will require upgrading of the capital stock before implementation of the common grid system. Opportunities exist for H.V. generation and transmission, power-plant trouble-shooting, systems monitoring and consumer services. Large-scale desalination units are usually co-located with power stations in the region and are operated by the same public utility. At the same time, power authorities are aware of the age, inefficiencies and costs of existing power generating facilities. Privatization, including infusions of foreign equity and management systems, is one of the options under active consideration in Kuwait.

3.34 MOROCCO

This is a sector of steady growth in Morocco. Energy consumption in Morocco averages increases of 4% per year, and 6% to 7% in electricity. The market is estimated at Cdn $400 million per year.

MARKET OPPORTUNITIES HAVE BEEN IDENTIFIED AS FOLLOWS:

- Equipment and material for the electrical industry;
- Engineering services, maintenance services for electrical infrastructures and facili ties, training, rationalization of energy consumption, etc.;
- Natural gas:
- Engineering study for the introduction of natural gas to Morocco by way of the Maghreb-Europe gas pipeline (planned for 1995);
- Conversion of industries to natural gas;
- Equipment and services for natural gas transportation.

MAIN COMPETITOR/SUPPLIER COUNTRIES

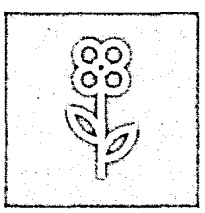
Currently, main competitors and/or suppliers in this market are France, Benelux, Spain, the U.S.A. and Germany.

FUNDING

This sector requires funding. Some multilateral funding (World Bank, African Development Bank) is available, in particular for the rural electrification program.

3.4

ENVIRONMENT



OVERVIEW

Because of the myriad of other priorities which it has had to address the Government of Egypt is only now getting around to environmental concerns. While this makes it extremely difficult to pinpoint projects which are imminent or even in the planning stages it creates an advantage for Canadian companies. The environment market in Egypt is now in the process of being shaped and defined. By being in on the ground floor Canadian companies can get an early jump on opportunities. The most difficult barrier is financial: Egypt cannot or most likely will not pay for environmental cleanup. Funding will have to come from bilateral or multilateral sources. In general, countries or donors determine the sub-sectors they want to pursue. For example waste water treatment has received the attention of Denmark, the European Community (EC), Italy, U.K. and the U.S.A., while Denmark in conjunction with Germany and the World Bank is currently working on a project to reduce air pollution in the Helwan area, a suburb of Cairo.

The recently completed national environmental action plan focuses on the following specific areas: water resources management, land resources management, air pollution, solid wastes, marine and coastal resources, institutional issues, global heritage preservation, and generally raising the public's awareness of environmental issues. The action plan calls for investments of about US $300 to 500 million during phase 1 which could last up to five years. The highest priorities are those for strengthening environmental institutions and actions to reduce industrial pollution of water and air.

COMPETITION

Many countries are already involved in environment protection projects. At the top of the list are Denmark, the European Community (EC), Italy, the U.K., the Netherlands, U.S.A., Finland, Germany, Japan, and Switzerland. The World Bank and the UNDP are also playing leading roles in the institutional strengthening of the Egyptian Environmental Affairs Agency.

PENETRATING THE MARKET

As for Canada's role so far, CIDA recently organized a Geographic Information System Seminar (GIS) in Cairo. This seminar was part of a pre-feasibility study to set up an Egyptian Environmental Information System (EEIS). The study was conducted by Energy, Mines and Resources Canada. SNC, a Canadian consulting firm,is starting the second phase of the River Nile Development Project (RNDP), which encompasses a large environmental component, and is funded by CIDA.

To penetrate the market in Egypt, companies can take one of many approaches: (1) through multilateral funds such as the World Bank, the UN, the ADB, etc.; (2) through the CIDA environmental programme in Egypt; (3) by selling equipment directly to the Egyptian Government or to specific projects; (4) by appointing local agents to assist; (5) by cooperating with companies from other donor-countries. This latter action applies particularly well in cases of advanced technology unique to Canada and where a project will be financed bilaterally. At this stage, the Post sees opportunities in three areas : training, equipment,and consulting services.

The environmental master plan of Egypt is a unique document for a Middle East country. Historically, Egypt has exported its expertise to other Arab States. Any success that Canadian companies will have in Egypt could result in sales of know-how and equipment to other markets of the Middle East in conjunction with Egyptian partners. The relationship that Egypt has established with the other countries of the Middle East in sharing know-how and manpower cannot be over emphasized.

Israel is an emerging market for environmental products and services. Israel's Ministry of Environment was created only in 1988. Prior to its establishment, there was little meaningful legislation in the area of environmental protection. However, it is now likely that much-needed legislation will be enacted as the situation with regard to the environment (various types of pollution, hazardous waste, sewage disposal and treatment, solid waste recycling, etc.) has become intolerable and there are more and more pressure groups urging that new laws in this area be passed and that existing ones be enforced. In addition, we believe that there is a genuine will amongst key decision makers to enact tougher regulations on a whole range of environmentally related areas.

MARKET OPPORTUNITIES

Water

Deterioration in water quality is now the most serious environmental problem in Israel. Drinking water provided by the two main aquifers show traces of chemical and microbial pollutants, salination, nitrates, heavy metals, fuels and toxix organic compounds.

Wastewater remains a serious problem. Sixty percent of treated wastewater is now used for irrigation. Plans are to utilize some 85% of Israel's total wastewater flow by the year 2000. As a first priority the Environment Ministry has called upon several municipal authorities to improve and expand their sewage treatment and disposal facilities.

Opportunities in this field include providing technologies to ensure more effective recovery of wastewater and services to assist the authorities in better implementation of existing regulations.

Air Pollution

The main sources of air pollution are energy production, transportation and industry. Air pollution levels are monitored constantly. In the past two years, several power plants and refineries have been compelled to install scrubbers in their facilities. Israeli automobile owners are not presently required to use unleaded fuel, which has only recently become available. In addition to industrial scrubbers and filters, opportunities for pollution abatement technology and equipment exist, (e.g. emission reduction devices). Most industrial and commercial vehicles burn diesel fuel thus creating excessive exhaust fumes, especially in urban centres.

Hazardous Waste

There are plans to build an incineration plant for hazardous waste at the Ramat-Hovav hazardous waste site. However, plans have been delayed due to the upcoming privatization of the government company managing the site. It is expected that a decision will be taken early in 1993. Opportunities also exist for medical hazardous waste incinerators.

Solid Waste

Ninety-eight percent of Israel's solid waste is disposed of in sanitary landfills. There are over 100 of these landfills all over the country. Despite attempts to minimize damage to the environment, these sites are becoming increasingly controversial as liquid seeps into the waterbed. Israel needs more effective disposal techniques and consulting services. Two large municipalities have recently issued tenders for Post Consumer Waste (PCW) incinerators.

Recycling
Very little recycling is being done at this stage as it is felt that recycling is not feasible in Israel. Once the Garbage Separation Law is passed, recycling of PCW will become economically viable.

Opportunities exist for consulting services and recycling equipment (e.g. separators, shredders).

The cumulative three year export potential for Canadian products in this sector is valued at US $30-60 million. Most foreign companies bidding on local tenders are represented locally. Dealings with local government and/or municipal authorities is laborious and slow. Major competitors are American and European companies. There are no trade shows in this sector.

We believe that opportunities exist for consulting services as the Israeli Government needs assistance in the design and implementation of environmental legislation. In addition, many infrastructure projects have been budgeted for and many of these, in fields such as sewage treatment, port development, etc., will require environmental impact studies. Furthermore, the municipalities and local councils will increasingly be called upon to share the burden of water supply, sewage treatment, disposal of toxic wastes, etc., and they will require outside assistance as they do not, in most cases, have in-house capabilities.

Opportunities also exist in the area of technology transfer. Several large Israeli companies have recently decided to allocate resources for the development of so called environment-friendly products and these companies have expressed interest in joint ventures and transfer of technology with Canadian partners.

Financing
Israel is not eligible for World Bank financing or African Development Bank financing. However, EDC is on cover and willing to finance qualifying projects. In the context of the current peace process, other sources of multilateral financing might become available for projects on a regional scale.

3.43 KUWAIT

Damage to the environment as a result of the Gulf war was great, but not as devastating as had originally been feared. The main source of concern, pollution from the oil well fires, has been eliminated. The government-owned Kuwait Institute for Scientific Research (KISR) conducted several studies on behalf of the government, including: air pollution concentration, environmental impact, coastal damage, and health effects. The most important to be held is the onshore oil splill clean-up.

SANITATION

The sanitary sewage system will eventually need major refurbishment. In the meantime a number of smaller contracts are being let. Even before the invasion of Kuwait, the country's sanitary sewage system was inadequate, and a lack of maintenance during the war exacerbated sewage problems. The Ministry of Public Works has proceeded with several sizable contracts, including a replacement of the collection system, worth some $13 million, and a round of operations and maintenance contracts.

3.44 MOROCCO

The environment sector is becoming increasingly important in Morocco. The highest priority is now on water treatment and purification, and drinking water supply. A few Canadian companies are already active in this area. The market is estimated at approximately Cdn $250 million per year.

Morocco's environmental protection activities will increase in importance in the coming years. Canada, which has much to offer in this area, could play an important role.

MARKET OPPORTUNITIES

- Studies and master plans for water purification, treatment and recycling
- Geological surveys
- Environment, pollution, waste management studies
- Maritime and port development studies
- Hydraulic, geological, geophysical equipment
- Laboratory equipment

COMPETITION

As in other sectors, competition is comprised mainly of France, Spain, Germany and the U.S.A.

FINANCING

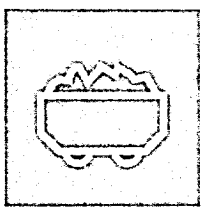
This sector requires financing. World Bank and ADB funding are available for water purification projects. Some countries offer interesting financing in the form of gifts.

3.45 TUNISIA

With the recent creation of an Environment Ministry, Tunisia has demonstrated its increasing interest in pollution control (air, water), especially in the Gabès area, which has been severely polluted for years by the phosphate industry. In this sector opportunities exist for sales of specialized equipment and services. This sector will benefit in the coming years from financing from World Bank and ADB and also financing from some European countries (i.e. Sweden, Germany etc.).

3.5

MINING



3.51 GHANA

All existing Ghanaian mines are in the process of rehabilitation, with market opportunities for Canadian firms in the supply of winding systems, conveyors, pumping machinery, physical concentrators, crushers, earth moving machinery and equipment for underground mining in general. Demand also exists for consumables such as explosives, chemicals (activated carbon, sodium cynide, grinding balls) but this may change with coming on stream in near future of local explosives plant. Opportunities for consultancy contracts in institutional strengthening and research exist.

To enter the market, common practice is to send an expresion of interest to the mine indicating the area of interest and asking to be invited to participate in future tenders. The use of local agents is recommended but the Canadian High Commission in Accra will continue to be of service to Canadian companies.

Projects funded by International Financial Institutions (IFI's) are usually subject to international competitive bidding (ICB).

There is potential for joint ventures with both the Government of Ghana and the private sector. By law, the Government is entitled to acquire a minimum of 10 percent share with an option for a further 20 percent. The 1986 Mineral Law permits foreign exchange transfer of dividends, payments in respect of loan serving and remittance of foreign capital.

Ghana is a stable country. The business environment is favourable for mining, with well-defined policies, programmes and incentives. Industry continues to receive support of IFI's. Competitors come from U.K., U.S.A., Japan, Sweden and Australia.

The Africa and Middle East Trade Development Division of External Affairs and International Trade Canada has a list of active agents and companies on file which are available upon request.

3.52 IRAN

OVERVIEW

Iran has vast mineral resources which include ferrous and non-ferrous metals such as iron ore, copper, bauxite, chromate, lead and zinc, titanium, magnesium and gold. Major non-metallic minerals include coal, sulphur, kaoline, perlite, mica and construction and decorative stones.

The Ministry of Mines and Metals is the government authority responsible for the mining industry in Iran with the exception of the oil and gas sectors. The mining sector currently accounts for approximately 1% of the GDP. of the country. Target growth rate for the mining sector is set for 20% per annum and it is hoped that its share in the GDP. will grow to 5% by the end of the current five-year economic development plan (1990-94) and to 10% by the middle of the next five-year plan. US $3 billion in hard currency has been allocated in the 5 year development plan for the importation of various machinery, equipment and technical know-how needed by the mining sector.

There are currently some 1600 mines in the country, of which 985 mines are active. Roughly 40% of mines are operated by the government, 20% privately and the rest by cooperatives. Total number of the work force is approximately 60,000. The government is encouraging the private sector to become more active and foreign financing is increasingly welcomed.

AREAS OF GROWTH

According to the Ministry of Mines and Metals, Iran has 5% of the world's known lead deposits, 3.5% of its copper and 2% of its zinc. Special significance is attached to five "strategic" metals - steel, copper, aluminium, lead and zinc and the development of the ore mines to sustain their manufacture. Decorative and construction stones have also been given priority as major export revenue earners.

Iron Ore

Output of iron ore rose by 24% to 2.6 million tonnes in 1990. The target figure stands at 5.4 million tonnes per annum by the end of the 1990-94 plan period. Anticipated iron ore requirements are estimated at 10 million tonnes per annum once the country's steel production capacity reaches 5.5 million tonnes in the mid-1990s from the current level of 3 million tonnes. Reserves of the four biggest mines are estimated at 2,000 million tonnes. Current production is mainly by the mines at Bafq, of which Choghart is the most important. The other three mines at Chadour Malou, Golgohar and Sangan are at the design and development stage. EBE from Germany has been awarded the project for Chador Malu, Acres from Canada is acting as consulting engineers to the Golgohar project which has established reserves of 185 million tonnes. Feasibility studies for the Sangan project with estimated reserves of 280 million tonnes have been awarded to BHP engineering of Australia.

Copper

Two new copper deposits are being developed to feed the Sarcheshmeh Copper Complex in Kerman which produced 120,000 tonnes of copper last year. Plans are being studied to increase the capacity to 200,000 tonnes in future. Total reserves at Sarcheshmeh are estimated at 1,224 million tonnes with an average copper content of 0.7%. In 1989 some 5.7 million tonnes of copper ore were extracted which was increased to 7 million tonnes in 1990.

Alumina

Two big mines are being developed to supply the Iran Aluminium Company (IRALCO) plant at Arak which has a current capacity of 75,000 tonnes, and the joint venture Bandar Abbas Smelter with the Dubai based IDC consortium with a capacity of 220,000 tonnes. SNC-Lavalin is following up on IRALCO expansion project in consortium with Pechinery and Technip (France) to increase aluminium production from the above mentioned current level to 200,000 tonnes. Technoexport of Czechoslovakia has been awarded a US $322 million contract for a bauxite mining and alumina plant project in the Semnan region. The plant is designed to produce 150,000 tonnes of alumina per year. Proven reserves are 22 million tonnes.

Lead and Zinc

There are some 330 lead and zinc mines across the country with estimated reserves of 60 million tonnes. The Mehdiabad mine with an estimated deposit of 24 million tonnes tops the list. Total output of the lead and zinc mines was 360,000 tonnes in 1989 which rose to 480,000 tonnes in 1990. Contract has been awarded by the National Iranian Lead & Zinc Co for building 60,000 tonnes Zanjan zinc plant as part of consortium with Kloeckner-Ina of Germany with substantial Canadian involvement.

Coal

Major emphasis is also being placed on developing the country's coal mines and processing plants to produce coking coal suitable for the expanding steel industry. The Tabas Coal project with one billion tonne reserves of coking coal is one of the most important coal mines in Iran and Adam Consultants (Acres Davey Mcfee, ICML) were awarded the contract for both feasibility and detailed engineering.

FOREIGN PARTICIPATION

The Ministry of Mines and Metals welcomes participation by foreign companies/consortiums for the transfer of technology and/or supply of equipment with either direct payment for goods and services or, by the foreign party taking a share in the final output. Since most of Iranian exports of minerals is in the raw and unprocessed form, participation in processing projects is also looked upon very favourably.

3.53 JORDAN

OVERVIEW

Mining in Jordan revolves around three major non-metallic minerals: phosphates, potash and cement which, combined, generate significant export revenues and foreign currency for the Kingdom. Minerals are, in fact, Jordan's number one export item, accounting for almost 50% of all exports.

Phosphates are produced by the Jordan Phosphate Mining Company [JPMC], a publicly held organization, from three major open-pit mines, El Hasa, Al Abiad and Shidiya, all located in the south of Jordan and employing about 4,000 people. Projections indicate that the recently developed Shidiya mine, financed in part by the World Bank, possesses enormous recoverable reserves and can sustain ore production of up to 12 million tonnes per year [TPY], although actual targets are much lower. It had been expected that production from the two older mines, Hasa (started 1962) and Abiad (started 1978) would be displaced entirely by Shidiya due to their declining yields. Recent evaluations demonstrate however that the lives of these mines could be extended for the foreseeable future. Original annual design capacities for the two older mines are 4.1 and 3.0 tonnes respectively.

JPMC plans to concentrate 70 to 80% of production activities at Shidiya which is still under development. The remaining 20 to 30% of total output will be maintained at Al-Hasa and Al-Abiad for as long as possible in accordance with JPMC's strategy to lengthen their life and maximize output. Shidiya now produces just over one million tonnes annually but that will soon jump to over 3 million TPY under the current phase of the World Bank project. Overall corporate production targets for the three mines by the year 2005 shows an anticipated increase of 20 to 25% from present. Eight million tonnes will be exported while 5 million tonnes will be consumed by JPMC's Aqaba Industrial Complex which produces phosphate-based fertilizers.

In 1988, JPMC achieved a record 13.8% world market share in phosphate export tonnage and a 99% increase in net profits. The upward trend in exports continued in 1989 and exports reached 5.81 million tonnes. The improvement in world prices and devaluation of the Jordanian currency resulted in enormous increase in revenues. Estimated profits were Jordan Dinars (JD) 160 million (about US $240 million) on revenues of just over US $425 million. India is the largest customer, purchasing 1.135 million tonnes, or 20% of total exports. For the most part however Jordan's largest buyers remain financially hard-pressed customers, primarily from the East bloc, and barter and counter-trade are dominant factors in the industry.

Potash production is newer to Jordan and is exploited by the Arab Potash Company [APC], another public share company managed by an ex-Director of JPMC. APC was established in 1982 to recover minerals through evaporation from the Dead Sea. Its main plant produces approximately 1.3 million TPY of potassium chloride annually and represents an investment of US $450 million which will soon be increased to 1.8 million TPY under a US $120 million partially funded by the World Bank. The equity of the company is widely held with the Arab Mining Company, a pan-Arab mining investment company based in Amman, owning 25%.

Cement while produced primarily for the domestic market is also an increasingly important commodity export. The Jordan Cement Factories Company [JCFC] was established in 1951 and, as the others, is a public company owned 49.5% by the Jordanian Government with the balance held by private shareholders. JCFC has two factories with a design capacity of two million tonnes each and enjoys a special status which allows it to import equipment duty free. JCFC has had a tumultuous history due to large swings in local and world demand and prices. It is, however, predicting a boom in the cement industry by 1993, due to expected increases in oil prices which will also cause cement demand in regional markets to climb.

OPPORTUNITIES

Total annual purchases of mining equipment amount to over US $40 million, primarily for replacement parts and other consumables. Outside contractors for various services represent a similar expense while anticipated capital purchases in the next ten years are US $360 million.

Equipment and materials purchased on an ongoing basis by JPMC includes off-road trucks and other earth moving equipment, rotary drills, screens, conveyor belts and systems, filters, pumps, detonators and explosives as well as about 4000 tonnes of aluminium fluoride for the fertilizer plant. Increased production targets should require 35 to 40 off-road trucks in the next two years. The company's six draglines [3 at Hasa, 2 at Shidiya and 1 at Abiad] are sufficient to meet production targets. The company still imports spare parts.

Considerable potential exists not only for Canadian mining and related equipment exports but also for consulting engineering companies. Those interested in bidding for engineering procurement and construction must pre-qualify with JPMC and it is desirable to team up with local contractors. Plans include installation of a benefaction plant at Shidiya mine for calcination or flotation processes to upgrade phosphates. A US $25 million World Bank loan has been approved for turnkey engineering, procurement and construction of the processing plant with a capacity of 1.5 million tonnes annually of phosphate products. JPMC might also build a third berth at the port of Aqaba by 1993 requiring substantial handling equipment.

JPMC has long suffered from problems with a caking phenomenon which causes deforming in the shape and size of fertilizer granules. JPMC has successfully tested an anti-caking process by coating the granules with increased concentrations of acid. A project to utilise the new technology has been tendered and four foreign companies have submitted bids.

The recent crisis in the Gulf has much affected shipments to and from Jordan's only sea port, Aqaba. Enormous increases in marine insurance and other measures effectively reduced ship traffic to the port and consequently caused a decrease in export of Jordanian minerals. While most development plans are suspended until the situation stabilises, mining in Jordan and production of exportable minerals remains a vital concern. All three of the major companies are continuing to operate and there have been signs of an improvement in ship availability. The companies should therefore be able to sustain viable operations in the medium term and be in a position to reactivate investment programmes.

Namibia is one of Africa's major mining countries. It ranks among the first twenty in the world and is the fifth largest in sub-Saharan Africa after South Africa, Botswana, Zaire and Zambia. Diamonds and uranium are its most important commodities and Namibia is also Africa's largest producer of refined lead and zinc concentrate. Other commodities mined include copper, pyrite, cadmium arsenic, antimony, tin, tantalum, silver, gold, semi-precious stones, industrial minerals and dimension stone.

Namibia is a mineral-rich country but it should be noted that deposits are generally small and widely scattered and some cannot readily be exploited. New mining opportunities and properties call for up-to-date technologies and risk capital. Water, power, labour and transport facilities must be secured.

The Namibian mining industry is plagued by falling world mineral prices and the approaching mineral exhaustion of some Namibian mines. (Rossing Uranium cut production by 50% as long as the world market price continues to decline). A recovery in the mining sector is however anticipated in the medium and long-term. New mining projects include diamond mining - Elizabeth Bay and Auchas mine, as well as Navachab, a gold mine.

Legislation regulating the mining sector was recently under review. The Mining Act was passed and approved by Cabinet in 1992. Interested investors should also refer to the Foreign Investment Act of Namibia, approved by the Namibia Government in December 1990.

The industry was and is by far the single largest contributor to Namibia's GDP, as well as to its exports (min 70% - max 80%) and public revenue. There are 50 major mines in operation and are largely run by subsidiaries of overseas-based or South African companies. The three major mining companies, who contribute 80% by value of the country's mining output are: Rossing Uranium Ltd, Consolidated Diamond Mines (CDM) and Tsumeb Corporation Ltd. Except for CDM's new projects, major capital expenditure on equipment and services is not foreseen, although purchasing managers stressed that in maintaining their assets, competitive pricing and quality will always be investigated.

3.55 SAUDI ARABIA

Saudi Arabia has promising but largely undeveloped mineral resources. Saudi Arabia is now investing in the minerals and mining sector in an effort to diversify its economic base away from its present dependence on petroleum. To date, more than 14 billion Saudi Riyals have been invested in the minerals and mining sector. Despite the important potential of Saudi Arabia's mineral deposits investment has been concentrated in the minerals processing industry rather than in the exploration and development of mineral deposits.

The Ministry of Petroleum and Mineral Resources has publicized commercially exploitable reserves of several minerals. These include: gold, silver, copper, iron, uranium, zinc, chromite, niobium, magnesite, and rare metals. Saudi Arabia also has reserves of phosphates, bauxite, potash, gypsum, and bentonite. Phosphate reserves have been estimated at 4.47 billion tonnes with a phosphate concentration rate of 19.4%.

Saudi Arabia has one operating mine, the Mahd Ad'Dahab gold mine, which opened in 1988. Raw reserves are estimated at 1.2 million tonnes. Daily production averages 400 tonnes. The mine produced 3,800 kgs of gold in 1991. Petromin, which runs the Mahd Ad'Dahab mine, plans to invest 200 million Saudi Riyals to open a magnesite mine. Saudi investment in this sector has been focused on minerals processing. The Saudi Iron & Steel Co., established by SABIC, the Saudi Basic Industries Corporation, is expanding its capacity from 1.4 million to 2.2 million tonnes per year. SABIC and the Gulf United Industries Corporation have invested 4 million to build a specialized metal alloys plant. A large Saudi corporation, the Alujain Corporation, is attempting to raise financing for 220,000 tonnes per year aluminum smelter.

The Saudi Government is actively promoting the mining and minerals sector. It recently set up a specialist mining organization, Maaden, which will be responsible for all government shareholdings in existing and future mining ventures. Maaden will be owned by Petromin, a state owned oil company, but will operate independently.

OPPORTUNITIES FOR CANADIAN EXPORTERS

In time, as Saudi Arabia's mining industry develops, there should be a good market for Canadian manufacturers of mining equipment and for mining engineering firms. Saudi Arabia offers generous incentives to joint ventures. Companies interested in joint ventures in mineral processing, particularly for specialized niche markets, should seriously consider Saudi Arabia.

3.56 TANZANIA

Tanzania is rich in minerals, the major ones being gold, diamonds, natural gas, phosphates, coal, kaolin, Tanzanites, rubies and nickel. Mining contributes about 10% of the country's export earnings.

The State Mining Corporation (STAMICO), a parastatal under the Ministry of Energy, Minerals and Water, charged with the responsibility of commercial exploitation of the country's mineral deposits, has not yet been very effective.

OPPORTUNITIES

Gold
Gold exists in several areas of Tanzania. Mining is being undertaken at the Kahama gold mines, Lupa & Buckreef gold mines. Other deposits are known to exist in most areas around Lake Victoria in both Mwanza and Mara regions, in addition to Shinyanga region where two Canadian companies are based. One company is carrying out studies to determine the economic viability of the deposits while the other is mining and processing gold, albeit in a small way. Gold also exists in South-Western Tanzania around Chunya. The area surrounding Lake Rukwa has alluvial gold deposits.

Diamonds
Diamonds are found in Shinyanga Region particularly around Mwadwi where a diamond mine, opened by a Canadian in the early 1940's, is located. The diamond mill is run down and the hope of salvaging it with government financing is small, although it is a source of foreign exchange. Data available at the Ministry of Energy, Minerals and Water indicate the existence of diamonds within a radius of fifty miles (around Mwadwi) which include industrial diamonds.

Nickel: A Canadian Success Story
Nickel deposits discovered in the early 1970s in northwestern Tanzania near the border with Burundi attracted a Canadian company, Sutton Resources, which recently signed an exclusive agreement to develop Kagera, a major nickel-producing area of 26,000 sq. km. (considered 12% of the mineral rights of Tanzania). The perception is that this mining project could potentially be very lucrative not only to Sutton but to other companies in the minerals extraction and processing sector.

Phosphates, Coal, Kaolin, Tanzanites, Rubies
Phosphates around Minjingu hills in Arusha Region have been developed, and the mine supplies its products to the Tanga-based fertilizer company.

The Kiwira Coal Mine (established with Chinese assistance) started producing coal in the mid-1980s. Several coal deposits, in addition to the Kiwira deposit are known to exist in several parts of the country particularly southern Tanzania.

Kaolin deposits at Pugu near Dar es Salaam are being exploited. A Canadian company is involved.

Tanzanites (a semi-previous stone known to exist only in Tanzania) have been discovered in the Mirerani area in Arusha region. Mining is mostly done by small-scale miners, illegals and aliens and a large part of this is smuggled to neighbouring countries.

Rubies and various types of gemstones are found in Morogoro especially around the Ifakara and Ulanga areas. Mining is mostly done by small-scale miners, illegals, aliens and small cooperatives. Due to the vast expanse of the country, it is fairly difficult to control smuggling as most deposits are far away from indigenous habitats. Several foreigners, including diplomatic personnel mostly from South East Asia, were caught with large quantities of various gemstones valued at several million US dollars. The Tanzania Gemstone Industries based in Moshi, cuts and polishes and markets various gemstones.

EQUIPMENT AND SERVICES

Opportunities for the supply of mining equipment and technology exist and may be exploited by Canadian companies and suppliers. The possibility of joint venture mining contracts with STAMICO exists although these opportunities may become brighter if the Investment Promotion Centre succeeds in marrying the code with workable legislation in collaboration with the Bank of Tanzania and various government departments.

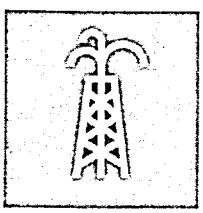
With regard to small-scale mining, the main requirements which may be supplied by Canadian companies and suppliers are compressors, rock-breakers, pneumatic drillers, pumps and other accessories. Small-scale miners at times abandon rich deposits prematurely due to their limited capability to mine deeper, and limited ability to determine actual quantities of deposits, and also for safety reasons. Provision of processing equipment and technology may also appeal to Canadian suppliers. Environmental degradation especially in the gold mining areas due to the careless use of mercury (supplied by the Bank of Tanzania as an incentive to small-scale miners) is on the increase and may become hazardous.

3.57 TUNISIA

The management contract, won by the Canadian company Kilborn in 1991 with the Société Minière de Bougrine in the mining sector, could offer some interesting prospects for our firms. The best opportunities would be: specialized equipment and services related to zinc-lead mines, and construction of production facilities on the surface.

3.6

Oil & Gas



BACKGROUND

At the time of writing, Angola remains embroiled in civil strife.

Angola is the second largest country south of the Sahara (1.24 million sq.) after Zaire. In 1990 the population was estimated at 10.5 million with 42% under the age of 15 years. A massive exodus of 350,000 whites to Portugal in 1974-75 resulted in a serious shortage of technical and managerial manpower, which Cuban and East bloc advisers have only partially filled during the 1980's. About 72 percent of the African population is involved in farming and cattle-raising.

Prior to independence in 1975, Angola had a dynamic economy which achieved near self-sufficiency in food production, exported agricultural goods and had developed a vibrant manufacturing sector. Economic growth has been seriously interrupted by a continuing civil war. A peace agreement was reached in May 1991 and multi-party elections took place between September and November 1992. However, since the elections, the peace accords have broken down and the fighting between MPLA and UNITA forces has escalated. Within the current unstable conditions, the development of ongoing economic activities remains difficult.

THE OIL INDUSTRY

Angola has an astonishing wealth of minerals which can form the basis of a viable economy, providing the country can recover internal peace and attract development resources. Petroleum extraction, refining and distribution is Angola's most important economic activity. Oil reserves are estimated at 2 billion barrels and gas at 37 billion cubic meters. Petroleum production has grown rapidly during the 1980's making Angola the 2nd largest producer in Sub-Saharan Africa after Nigeria.

Although significant oil production took place for many years and substantial new reserves were discovered, Angola remains one of the most under-explored petroleum provinces in the world. Before the recent civil war and political instability it excited considerable interest among international oil companies and had become the focus of active new exploration.

Petrofina and CABGOC (Cabinda Gulf Oil Co., now part of Chevron) had been active for many years in Angola, Petrofina on land concessions and CABGOC on offshore Cabinda. During the war leading up to independence from Portugal in 1975 and the civil war which quickly followed, very little exploration was done, although Petrofina and CABGOC continued to produce throughout this period from their established fields.

During the 1980's, other multinationals led by Elf, Texaco, AGIP and Conoco began to return to explore offshore Angola. These companies operated nearly exclusively with expatriate personnel, not only in skilled technical positions but also importing many unskilled roughnecks and rig-hands from neighbouring countries. With the civil war winding down, Angola was left with an active oil industry, but with very few Angolans involved in the development of their petroleum resources.

Sonangol (the Angolan national oil company) was established by the Angolan government in 1976, shortly after independence from Portugal. It was initially created to play a dual role: on the one hand it was to share in the production of all producing fields in the country, while on the other, it was to play a technical monitoring role with respect to the activities of the multinationals operating in Angola, ensuring that resources were developed in the most advantageous way. While the first of these roles has no doubt been effectively carried out, delivery on the second part of the company's mandate suffered from the shortage of resident technical expertise.

At the beginning of 1990, the Government set out to try and rectify this problem by establishing a new subsidiary of Sonangol, to be called Sonangol E&P, to take on a more active role in the development of the country's petroleum resources as a fully-fledged exploration and production company. The first project for the new company was determined to be the development of two offshore fields which had recently been discovered by a constorium of Fina, Petrobras, BP and Sonangol but which this group had decided it did not wish to develop. This consortium subsequently relinquished its concession and left any further development to Sonangol.

The Export Development Corporation, (EDC) has characterized Angola as a category 4 country (meaning there is a high risk of serious arrears) for transactions under Section 29 Corporate Account and, in general, wishes to limit its exposure to the oil sector only. Because of civil wars, EDC's current position is to give consideration on case by case basis for loan financing in the oil and gas sector.

OVERVIEW

Egypt's oil production peaked at 930,000 barrels per day in 1986, though production until the year 2000 is expected to level off at 890,000 barrels/day. Revenues from exports of oil were more than US $1.4 billion in 1991. While Egypt's oil reserves are modest and hopes for new discoveries may be slim the Government of Egypt is actively encouraging new foreign interest in exploiting some of its untapped areas not only to discover more oil but to discover new gas reserves. The government is granting increasingly attractive modifications in standard concession agreements to attract foreign interest.

In the oil sector the most significant opportunities would appear to be found in the areas of enhanced recovery methods, horizontal drilling, well logging, corrosion technology, pipe replacement and control instrumentation and scada systems. The government however has publicly stated that, in its view, technology transfer is a necessity if the Egyptian oil sector is to progress and has established several oil related service companies (drilling, engineering,air service) in order to compete with foreign companies on domestic needs. Registering with and working with these firms is one way of winning contracts.

As for refining, the government plans to raise the existing production capacity from 24 million tonnes per year to 30 million tonnes by the end of the decade. It is anticipated that there will be expenditures totalling some US $2 billion in oil developments, over the next 5 years in area such as distillation of petroleum condensates, recycling of lube oil, treatment of diesel fuel and production of butagaz

As mentioned, the Government of Egypt has placed a high priority on exploiting its gas reserves which are estimated at 40 trillion cubic feet. New projects are underway in Abu Qir and El Karaa, others are in their final design phase. The end goal is to increase Egypt's proven gas reserves to 27000 bn cu ft from the current level of 12000 bn cu ft. Again significant opportunities exist to supply or work with Egyptian concerns on these developments.

INTRODUCTION

Gabon, a former French colony, lies astride the equator on the Atlantic coast of West Africa. It is bordered in the north by Cameroon, in the north-west by Equatorial Guinea, in the west by the Atlantic Ocean and in the south and east by the Congo. Its population approaches 1.3 million and is comprised of 40 different ethnic groups, with as many dialects. The population on the whole is young with CGDP of more than 67% under the age of 40.

Gabon is a moderately wealthy country and has diverse natural resources. Petroleum, which constitutes the principal source of revenue, with a production of more than 13.4 million tonnes in 1990 (273,000 b/d), accounts for more than 80% of Gabon's export revenues. Gabon is a member of OPEC.

CURRENT SITUATION

In 1990 thirteen oil companies operated in a total concession area of approximately 87,000 km. Four of these companies were also involved in the operation of the 40 producing fields. Twenty eight other companies have interests in these exploration or production licences.

Gabon remains a young country in petroleum terms, and offers good opportunities for new discoveries, notably onshore and in the deep water area. In fact, although the relatively shallow post-salt northern and central offshore areas are comparatively well explored, the same cannot be said for the pre-salt and post-salt sections onshore nor for the pre-salt of offshore south Gabon. The deep water area is at present totally undrilled. Even in the north and central offshore areas new fields are found each year

For a variety of reasons the deep offshore did not arouse the interest of oil companies until very recently. With the offshore discoveries by Amoco in the Congo, and the deepwater discoveries offshore Brazil, mirror images of the West African Salt Basin, oil companies are recognizing that excellent exploration potential exists in the deep water region.

The Government of Gabon propose to open the deep offshore area to oil exploration. To that effect, integrated studies have been undertaken to aid companies in their evaluation of the potential of this area before the launch of the invitations to tender.

POTENTIAL FOR CANADIANS

An oil producing country since 1957, Gabon still has tremendous potential, with:

- 55 exploration permits, 13 of which are being offered as of September 15, 1992
- 7 huge fields, including Rabi, with 730 million recoverable barrels of oil until year 2035
- 80 production platforms
- 1500 km of pipeline.

There are currently four producing companies: Shell; Elf, British Gas and Amoco-Kelt, to which number Amerada Hess will shortly be added. Operating companies include AGIP, FINA, Amerada Hess, Occidental, Total and, in the near future, Marathon.

More than 1300 wells are in operation. There are 17 deposits to developed by the year 2000 (5 at sea).

Production is stable at between 270,000 and 300,000 b/d.

There is still room for other companies and for other para-petroleum sectors such as gas, transportation, EDP, research, analysis and construction.

The Southern Gulf, as a region, is probably unrivalled with respect to refinery expansion and plant development in the next few years. There is a major push to produce unleaded fuels and to broaden both up and downstream refining activity. Canadian firms are currently competing for or involved in 22 oil and gas projects, including 14 with an estimated potential value of $2.7 billion.

KUWAIT

In Kuwait, the Bechtel Corporation has been responsible for Phase I stabilization of the oil fields and refineries. Al-Awada and Al-Tameer projects are now completed. Kuwait oil production is already above pre-war levels with an average output of 1.7 million barrels a day. Award of a multi-year contract for production Production Management Consultant (PMC), a position held by Bechtel since 1991, is expected to be announced in March. Foster-Wheeler has won the contract for Phase II restoration of Kuwait's three refineries. Aggregate expenditures on petroleum production and refining in the Emirate may be as high as $3-4 billion during the next 18 months. It is important to note that Kuwait has rigid system of prequalification for tenders which companies must adhere to in bidding requirements.

BAHRAIN

In Bahrain, the Bahrain National Oil Company (BANOCO) is proceeding with offshore exploration elsehwere. The Bahrain Petroleum Company (BAPCO) refinery at Sitra will be accorded a $700 million upgrading. A PMC for this work is in the final stages of evaluation.

UNITED ARAB EMIRATES

In the United Arab Emirates, the world's fourth largest oil producer, planned activities include the development of the UMM Shaif gas project; a $1.2 billion expansion of the Ruwais refinery and a $2.0 billion set aside for a new refinery in Jebel Ali.

QATAR

Qatar is among the top four countries in the world for natural gas production. Four liquid natural gas (LNG) projects, each costing $5 billion, are currently under evaluation. Fluor Daniel Canada has been selected as the engineering project manager for a $250 million methanol facility.

OMAN

In Oman, Petroleum Development Oman (PDO) is proceeding with a $9 billion natural gas project. This market also holds potential for a host of related activities e.g. pipelines. The International Petroleum Corporation has been awarded a contract for the development of the Bukha gas field.
Iranian oil reserves are estimated at approximately 93 billion barrels. Gas reserves are approximately 13.7 trillion cubic metres (17% of total world reserves and second only to the Soviet Union). Iranian production in 1991 has been close to 3 mbd, slightly above the OPEC quota, with approximately 800 to 900 mbd used for domestic consumption.

3.65 IRAN

Development of the oil and gas sector is the priority of the current Iranian Five-Year Plan (1989-94) given that this sector is the origin of virtually all of Iran's foreign exchange earnings. During the five years, US $8.4 billion will be invested in reconstruction and expansion of oil production and refining capacity, US $3 billion in the petrochemical sector, and US $2 billion in expansion of gas production and distribution.

OIL SECTOR

Iran in this fiscal year (starting from March 21, 1992) will inject $4 billion into its upstream sector to boost oil output. It is the biggest annual allocation made since the 1979 Revolution. As a result, Iranian capacity is expected to rise to 3.8 mbd in May. By March 1993 this would be 4 mbd, 816,000 b/d above Iran's current OPEC ceiling. Areas of potential for Canadian companies include:

Exploration
Exploration activity to develop and expand gas reserves will double over the next two years (NIOC is responsible for all exploration activity). This will include expanded seismic and drilling activity, which will provide both equipment supply and service opportunities. NIOC will increasingly be interested in purchasing software, related data interpretation and processing equipment and associated training.

Production
Refurbishment, reconditioning, replacement and upgrading of production equipment is planned over the next five years to increase production capacity. This will encompass all aspects of production, ranging from the wellhead to the processing plants.

Heavy Oil
NIOC has identified two heavy oil fields (API 7 to 15 in the F-structure and Mond field) which need to be developed. Total estimated reserves of these fields is 40 billion barrels in a fractured limestone formation. Development of these fields could be by private companies operating on a contract basis with repayment by crude oil produced there or by other buy-back arrangements.

Reservoir Engineering
As Iranian oilfields mature, maximization of production through reservoir engineering will be increasingly important. NIOC is interested in developing sophisticated reservoir engineering and modelling technology and will require appropriate software programmes and related equipment.

Refinery Upgrading

Although all NIOC refineries, with the exception of Abadan, are operating above original design capacity, dated control and related systems have reduced efficiency. Replacement and upgrading of instrumentation and distributed control systems is expected to occur over the next five years. Other areas of interest range from the installation of naphtha conversion to middle distillates and the introduction of hydrocracking technologies.

GAS SECTOR

During the present five-year plan, the National Iranian Gas Company (NIGC) plans to increase daily production from 40 million m3 to 100 million m3 and expand the distribution network by 3,000 km of trunk lines, 15,000 km of distribution lines, and 1,000,000 new service connections. Exports of between 2 - 3 million m3/day through the existing IGAT pipeline system to the USSR started in 1990. Exports of LNG is currently under study and may begin as soon as the mid-1990's. NIGC is responsible for the processing and distribution of natural gas from the wellhead.

PETROCHEMICAL SECTOR

Prior to the revolution, Iran planned to develop a world-scale petrochemical industry. Central to this was the Iran-Japan Petrochemical Company (IJPC) at Bandar Khomeini, approximately 80% complete prior to the beginning of the Iran-Iraq war. Iran now plans to reactivate this project and other projects in Tabriz and Arak. Major products to be produced include low and high density polyethylene, polypropylene, vinyl chloride, polystyrene, latex, butyl rubber, among others.

National Petroleum Company (NPC) has identified the Khorassan fertilizer complex as an area of possible interest to Canadian companies. This plant would produce 225,000 mt/year of urea, 90,000 mt/year of sulphur coated urea, 65,000 mt/year of agricultural sulphur, and 120,000 mt/year of ammonium sulphate.

RESEARCH AND DEVELOPMENT

The Ministry is interested in information exchange, research and receiving experts from institutes such as AOSTRA and ARC, with particular emphasis being placed on heavy oil and reservoir engineering technology.

EDUCATION AND TRAINING

The Ministry is interested in assistance in development of programmes for middle-management training. This would focus on upstream rather than downstream activities and programmes, such as the Alberta Summer Petroleum Institute, are of interest to officials.

OVERVIEW

The Nigeria oil business is going into 1990's with more ambitious targets and more confidence than at any time since the early 1970's. Major oilfield developments are going ahead, exploration is being pushed into new areas as the search attracts new companies and projects are rolling in refining and gas.

On the basis of present plans, the Nigerian oil industry will be a very different scene by the mid 1990's. The government wants production capacity to reach 2.5 million b/d - up from the 1.9 mb/d average maximum of recent years - and proven reserves should be expanded from the 16 billion barrels of not long ago to 20 bb. The structure of the industry will change too, with Nigerian-owned firms and smaller foreign-owned companies establishing production operations.

MARKET OPPORTUNITIES

The outlook for onshore and offshore oil industry activity in Nigeria is positive. The Gulf of Guinea is one of the few areas of the world that holds the promise of substantially higher productivity.

Nigeria offers two types of productivity opportunity, economies of scale and technological progress. Due to the dominance of large, multi-national firms in Nigeria, price softness should not unduly constrain the availability of capital. For most firms, cash flow should remain reasonable for the foreseeable future. In general, oil and gas exploration activity will be on the increase in the 1990's.

PRIORITY AREAS OF THE NIGERIAN NATIONAL PETROLEUM COMPANY

The priority areas of NNPC up to 1995 are:

- increase in reserves and in productibility
- completion of on-going projects
- maintenance of existing assets
- LNG project
- gas utilization projects
- management development

THE NIGERIAN GAS COMPANY (NGC) AND INDUSTRY

The Federal government through NNPC and its subsidiary, NGC, is committed to promoting and providing favourable economic environment to allow private companies (local and foreign) to participate in the Gas Industry.

The Federal Government has already identified four gas-based export oriented projects - which are:

- Liquefied Natural Gas (LNG)
- Aluminium Smelting Project
- Gas Condensates
- Petrochemicals (Phase II) Project

PAYMENT IN THE OIL AND GAS SECTOR

The private sector of the oil and gas industry pays its bills promptly. The public sector also pays, but delays invariably occur. However, there is never total default.

The emerging preference of the oil and gas companies is to do business with service companies having credible and competent local presence.

Business may be conducted through local agents, joint ventures or wholly or partly-owned subsidiaries. The third option is usually the most effective, especially where high technology or know-how, is involved. In any case, it is advisable that effective control of share capital be maintained in all circumstances.

The reality of market economics suggests that partnerships, joint efforts and steady exploration will likely characterize the Nigerian oil search in the near term.

INVESTMENT OPPORTUNITIES

The following investment opportunities are also available and private companies are highly encouraged to invest in such ventures.

- Setting up of gas utility companies responsible for gas distribution from "City Gates" to ultimate industrial, commercial and domestic consumers in urban centres.
- Establishment of CNG plants, conversion workshops and filling stations to commercialize the use of CNG as automotive fuel. NGC has embarked on converting petrol driven vehicles to compressed natural gas. The conversion has been successful in view of the pilot scheme programme. The use of Compressed Natural Gas (CNG) as an alternative fuel is gaining recognition in Nigeria due not only to rising cost of refinery products and is therefore, seen as a cost saving device, but also due to increasing concern about the atmospheric pollution caused by petrol and diesel exhaust fumes.
- Establishment of small and large scale plants to manufacture chemicals using natural gas as feedstock. The plants can be totally owned by the interested private investors and such companies will be free to market the products both locally and externally.
- Commercialisation of NGLs for export or local markets either in the bulk form or as LPG and natural gasoline fractions. Options available here are for the interested private parties to invest either solely or in partnership with NGC to set up the recovery plants and market the products locally or externally.

SAUDI ARABIA

OVERVIEW

Saudi Arabia has at least a quarter of the world's oil reserves. As the world's largest crude oil producer and the third largest producer of natural gas, Saudi Arabia currently accounts for over a third of OPEC oil production. Oil income provides more than 40% of Saudi GDP and over 80% of government revenues. More than 90% of the country's export earnings are oil related.

The outlook for 1992 is excellent for exports, production and earnings. Estimates suggest that end-year cumulative production average could range between 8.4 and 8.6 million barrels per day. Exports could then average 7.1 to 7.4 million barrels per day, yielding export revenues of up to US $45 billion.

Saudi Aramco, the state-owned oil company, is responsible for oil exploration and production in Saudi Arabia and for downstream activity overseas. Samarec is the state-owned company responsible for domestic refining.

Saudi Aramco is in the midst of a major production expansion programme which aims to increase the county's maximum sustainable daily production capacity to 10.0 million barrels by end-year 1994. While some of the major contracts for this US $25 billion upgrade and expansion programme have already been awarded, there remain a large number of tenders for sub-contracting work.

Saudi Arabia plans to refine half of its crude production within its own refinery network by the end of the decade. Saudi refinery production in 1991 averaged an estimated 1.43 mbd in 1991, a drop from 1990's average of 1.5 mbd. Samarec has awarded upgrade and expansion contracts for its refineries.

Saudi Aramco's dissatisfaction with state-mandated natural gas prices of 50 cents/million btu has compelled it to resist needed investment in expanding its gas gathering and treatment facilities. Concerns about feedstock availability for the growing petrochemical industry is creating increased flexibility in natural gas pricing. However Saudi Aramco is not convinced that this justifies large increases in gas gathering and treatment capacity.

OPPORTUNITIES FOR CANADIAN EXPORTERS

The Saudi Aramco production expansion programme presents significant commercial opportunities for Canadian petroleum industry supply and service companies. Important sub-contracting work is tendered on a regular basis. Saudi Aramco purchases large quantities of equipment and supplies for its projects. In addition, Samarec's refinery upgrade programme generates substantial engineering work.

Canadian companies are actively pursuing business with Aramco. Major Canadian engineering firms have entered into joint ventures with Saudi firms to bid for work on the Saudi Aramco expansion programme. The Alberta Government regularly organizes oil and gas sector trade missions to Saudi Arabia.

3.68 SYRIA

OVERVIEW

Syria's hydrocarbon sector remains extremely active and is growing steadily. The Syrian government is determined to push ahead with ambitious hydrocarbon resource development programme as well as encourage domestic energy consumers to convert from oil to gas usage for their requirements. The double approach is aimed at the tripling of oil production from the 1987 level by 1995, something it has almost accomplished already, and making significant investments in downstream operations. The strategy is also aimed at substituting gas for oil in power generation, industry and for household use thereby enabling the country to release crude oil for export and generate foreign currency revenues. The inauguration of a gas power station supplied with gas from the Al Thayyem field and recent new oil discoveries show the progress on both fronts.

The development of the oil and gas resources in Syria have been rapid. Syria's total production is presently 575,000 bbl/day(expected to rise to 600,000 bbl/day by end of 1992). This is in no small part due to Al Furat Petroleum Co. which has brought its production of light crude oil to 400,000 bbl/day. The figure level of new activities now totals about US $1 billion annually with Al Furatalone investing USA $500 million in capital procurements per year.

For 1992, ongoing exploration activity is expected to yield an increase of 15% in overall oil production and a 25% increase in export volume which should earn Syria about US $2.0 billion in 1992. It is important to compare these figures to only five years ago when Syria was actually a net importer of oil.

Oil was first discovered in Syria in 1956 by Menhall company which was nationalized in 1958 and the Syrian General Petroleum Authority was formed. Now called the Syrian Petroleum Company (SPC), they began their own drilling with Soviet and East European assistance. While some might claim this impeded development, SPC did make further discoveries in Suweidiya in 1959 and Rumeilan in 1962 as well as the Jbisseh and Olayan fields which began production in 1975 and 1976. Al Thayyem and its surrounding small fields started production in 1984 bringing an additional 65,000 bbl/day of heavy crude oil. The total oil production of SPC fields reached about 155,000 bbl/day of heavy oil (API-average 24). The major part of production 126,000bbl/day comes from Sweidieh fields. SPC operates 18 oil drilling rigs all its own, for both exploration and production. Three major gas plants in Sweidieh, Gbisseh and Omar are being developed to produce and treat associated gas with capacities of: Sweidieh 660,000 cub.meters; Gbisseh 1,700,000 cub.mtrs; and Omar 5.0 million cub.mtrs of associated gas. Present production of gas is 3.5 mln cub. meters with plans to be raised to 17.0 mln. cub. mtrs.

SPC's present annual equipment procurements reached US $100 million in 1991-1992. The recent change of the Minister of Oil and Mineral Resources may have a temporary negative effect on pending tenders and contracts as a special committee has been assigned to re-evaluate and study all current bids to find out if the related equipments are still needed. This will entail delays of unknown lengths for signing contracts and opening of letters of credit.

The current boom in oil and gas activity began slowly, starting with several concession contracts signed with multinational exploration companies. When the Royal Dutch Shell/Deminex/Pecten (referred to hereafter as "Shell") consortium discovered large oil deposits in the Deir-Ezzor region however, it began in earnest. Since that time there has been almost frantic exploration, field development and considerable related project activity. According to the Syrian law, SPC automatically enters into a joint-venture partnership with any multinational exploration company that strikes oil in commercial quantities. A new company is formed and registered to undertake all petroleum and gas exploration and production on the concession. Al Furat Oil Company (AFPC) came into being as the result of the Shell find and is now developing the Deir-Ezzor and Al Sham concessions. The present oil production from these two concessions is about 400,000 bbl/day of light crude with very low sulphur content. AFPC now stands as the single largest oil producer in Syria and has a very impressive programme in development of production facilities, oil and gas treatment plants, gathering stations and about 650 kilometres of connecting oil and gas pipelines for transportation of oil and gas to Homs and Banias refineries as well as to two major power generation stations in the middle area and Damascus which SPC and the Ministry of Electricity are converting to gas, with future plans to supply gas for domestic uses.

Shell's success attracted many other western oil companies and by late 1991 there were 14 multinational companies operating in Syria including USA, UK, Canadian, Belgian, Dutch, French, German, Spanish, Scandinavian and Japanese firms. The French "Total Syrie" struck oil in late 1990 and is now producing about 3,000 bbl/day of heavy oil. Their 9330 square kilometre concession in the north-east of Syria was originally relinquished by Shell. Total's agreement with the Syrian Government entitles the company to 25% of the oil produced with the remainder of the oil shared on a sliding scale, reaching a ratio of 87.5:12.5 in the government's favour for output above 200,000 bbl/day. A new operation company has recently been formed jointly between Total Syrie and Syrian petroleum Co. under the name of Al-Bishri Petroleum Co., exactly similar to Al-Furat Petroleum Co.

At about the same time, another French company, Société Nationale Elf Aquitaine, made a more fortunate discovery on their 4000 square kilometre area, also in Deir Ezzor and also relinquished by Shell in early 1989. Oil was struck at two wells in the Atallah north field and in Al-Mazraa. The two fields are now producing about 8,000 bbl/day of light, low-sulphur crude.

The Jaffra field may well be developed if production in commercial quantities is proven. According to Deir Ezzor officials, a potential of 50,000 bbl/day is being looked at. A new joint-venture company was established with SPC, under the name of Deir Ezzor Petroleum Company. Under their contract, Elf is committed to the construction of a 20 km export pipeline linking their fields to the oil gathering stations of AFPC, for delivery to the Homs oil refinery and the Banias export terminal on the Mediterranean.

Marathon Petroleum Syria, with head office in Houston, was also in the final stages delineating what it hoped was a large gas field on its concession when they recently struck a minor oil deposit without associated gas as expected. Faced with major terrain and geological difficulties, Marathon is still uncertain of the discovery and the reservoir contents. Other oil exploration companies, i.e. Neste OY, BP, Enron and, Tricentrol, have so far failed in striking oil during their concession programmes and have relinquished their concessions and are leaving Syria. At the same time REPSOL is reported to have made a new discovery which appears to be commercial but quantities are yet to be decided.

OPPORTUNITIES

Canadian equipment, oilfield services and engineering companies are now becoming more active in pursuing the substantial opportunities which exist in this sector but there is still to be done. Canada is a respected source of oil and gas goods and services and some of our companies have won some large contracts for the supply of equipment and also services including well drilling [four Canadian rigs were working there until recently], well cementation, fracturing and servicing and a major contract for gas pipeline engineering. Estimated Canadian exports of oil & gas equipment and services to Syria in 1991 were estimated at about US $30 million, representing a 100% increase over that of 1991.

The greatest potential lies in the sale of exploration and field development equipment and services to the major operating companies, of which AFPC and SPC are the largest. AFPC has the largest appetite and ready access to foreign exchange and its spending programme is in the hundreds of millions of dollars annually as it brings more and more fields into production. SPC has, in the past, suffered from the same chronic shortage of foreign exchange faced by many state enterprises in Syria's centrally planned economy. That is now changing as a result of revenues from its mandatory joint-ventures and SPC has become a more than interesting potential client. While it does possess in-house drilling capabilities, SPC is badly in need of western technology for field development and production.

While exploration goes on, the Syrian oil sector has entered a new phase of development and upgraded production facilities with ever-increasing demand on oil-well enhancement, servicing, mudlogging, control systems, and oil and gas treatment plants, heaters, separators and gathering systems. Brown & Roote's U.K. office, for example, recently completed the construction of a huge gas plant with an integrated system of gas gathering stations at AFPC's Omar Field (Phase 2). The construction of a 460 km, 18 inch pipeline is being executed by SNC-Lavalin of Canada, in partnership with the largest Syrian public sector contractors, the Military Housing Establishment (MILIHOUSE). Work on the project was expected to be finished by the end of summer 1992 and once finished will transport gas from Deir Ezzor to the Homs refinery and other power generation stations near Damascus.

The Canadian Embassy in Amman is responsible for Canadian trade activities in Syria. We have developed a good base of contacts in oil and gas including government officials, oil companies, local engineers and agents. The Commercial Section is pleased to assist Canadian exporters seriously interested in the Syrian market to introduce their products and provide ongoing guidance and market advice. Our main concern and strategy is to connect the Canadian exporters of equipment and services to effective local agents and counterparts who are essential to obtain business in the country with SPC and foreign operators alike.

3.69 TUNISIA

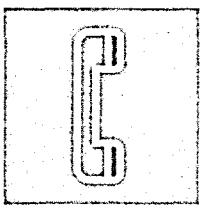
Oil and gas reserves dominate Tunisia's energy resource base. Gas reserves with 80 million toe are more than double those of oil which are only 36 million toe. Oil reserves are enough to last about eight years at the current production rate of 4.6 million toe per year.

After ten years of decline, Tunisia's oil industry is finally on the rebound. Output is increasing and new discoveries are encouraging and there are plans to expand exploration in the coming years. The challenge ahead is to uncover substantial hydrocarbon resources, in using new techniques and rethinking drilling strategy. With energy consumption increasing by 5 to 6% a year, Tunisia is pushing the development of natural gas resources as an alternative to oil for domestic use, including electricity generation. At the present time, Tunisia's gas reserves are meeting less than 10% of primary energy requirements.

In this regard, two main projects are currently underway: the Miskar gas field and the World Bank project for the transmission and distribution system linking the north with the south. The Miskar gas field, offshore Tunisia in the Gulf of Gabes, is to be developed by British Gas. The total cost of Miskar's development will be approximately US $630 million over a three-year period. The development of the field will initially involve drilling 12, installing two offshore platforms linked by a 26 inch diameter pipeline to an offshore gas processing plant. Buying operations for supply of equipment and services will be concentrated at British Gas International based in Houston, Texas. The STEG project financed by the World Bank in the gas sector, as mentioned previously, is estimated at $100 million. Although this project is already underway towards completion, some opportunities still exist for Canadian firms in the technical assistance area. The products and services for which there is good potential are: vertical and horizontal drilling; pipeline maintenance and inspection equipment; process trains and equipment for oil and gas production; specialized equipment for oil fields and drilling operations and instrumentation, remote sensing, and data analyses.

3.7

TELECOMMUNICATIONS & HI-TECH



3.71 ALGERIA

Many opportunities exist in the high tech sectors in Algeria. Telecommunications, computer hardware and software, as well as consulting services are among the more active subsectors. The Algerian PTT is planning to vastly expand its telecommunications network, with new public switching contracts expected to involve tens of thousands of new lines a year for the next five years. As well, other areas such as spectrum management are being discussed by the PTT.

As the former state-run companies begin to downsize their work forces and attempt to increase their efficiency and productivity, they are turning increasingly to high tech solutions. Computerization will continue, but consulting services are also required to ensure that the new hardware will bring with it solutions rather than problems.

The Algerian Government has imposed import restrictions on some electronic equipment, notably consumer products, but equipment which is essential for the recovery of the Algerian economy is still admitted. Financing remains a concern and long delays are not uncommon as the Algerian government is reviewing all expenditures, sometimes several times. The sector remains one with promise and given the reputation for quality that Canadian high tech firms enjoy, Canada continues to succeed in the Algerian market.

3.72 GULF STATES

ADVANCED TECHNOLOGIES

Arabian Gulf Emirates are a burgeoning market of advanced technologies, especially those with defence and security applications. Canadian companies are currently pursuing 12 defence projects in the area with a potential value of $5.6 billion. The effort is exemplified by the number of firms which participated at IDEX in mid-February 1993.

In addition, Canadian firms continue to enjoy an enviable reputation in the Gulf for quality telecommunications goods and services due in large measure by the work of Bell Canada International and Northern Telecom in Saudi Arabia and elsewhere in the Middle East. The market is attracting an increasing number of Canadian visitors. In late January, for example, fifteen Canadian firms participated in or were represented at MECOM '93 in Bahrain, the premier telecommunications trade show in the Arabian Gulf. All Canadian participants indicated success either in direct sales or in contacts for future business. The show attracted a select business audience, including representatives of the major telecommunications authorities in the region and oil companies such as ARAMCO that operate independent communications facilities. Buyer interest was apparent for products and services ranging from mobile telephone systems, satellite communications, data handling, batteries, to portable PC film editing systems and software with training and management applications.

COMPUTERS

During the occupation, Iraquis looted Kuwait's supply of computer hardware, software and peripherals. Liberation brought with it a tremendous need to resupply the university, various ministries, businesses and other institutions. While "emergency phase" restocking is over, significant computer requirements remain to be met. Kuwait is continuing to make purchasing decisions largely based on price. Western firms with competitive prices have been very succesful in this post-liberation market.

Computer training programs for everything from word processing and data entry to systems management and design will be key factors in coping with Kuwait's changing demographics.

There are ample opportunities to supply Kuwait with PC's mainframe, and mini computers. However, you should be aware that this market is extremely competitive. Although Kuwaitis continue to buy lower priced PC's from the Far East, they are beginning to recognize qualitative differences in computer products.

Even though a strong demand in Kuwait exists for computer software, especially Arabic language programs, there is at present no protection for intellectual property rights and pirating is a common problem.

TELECOMMUNICATIONS

The major market in the region is Kuwait. Kuwait's telecommunications infrastructure sustained major damage during the Gulf war. The Ministry of Communications has worked very closely with a number of western companies in restoring emergency service and in helping to replace permanent infrastructure.

The Ministry of Communications is now focusing on replacement of its permanent earth stations, the installation of new lines and switching gear, and restoration and improvement of customer services. As soon as service is completely restored, the Ministry of Communications plans to privatize its telecommunications services. The Kuwait Institute of Scientific Research (KISR), the government-owned research facility, undertook a study of the form privatization will take.

UPCOMING PROJECTS

Switch gear for 150,000 new lines
The switch gear will pass through between 4 and 6 areas. The total value of this project may be as much as $20 to $30 million.

Cables and other equipment
The Ministry of Communications' stocks of equipment and spare parts were entirely looted or destroyed during the war. The Ministry is currently replenishing its strores.

Telecommunications services
Although budget constraints limit the degree to which all of the Ministry of Communications' telecom service goals can be met at once, the Ministry will design a number of service packages in the near future, including: inproved customer service systems, increased frequencies, and new maintenance systems.

OVERVIEW

The Ministry of Post, Telegraph and Telephone (MPTT), and its affiliate, the Telecommunication Company of Iran (TCI), are the ultimate decision making authorities responsible for planning and operating the telecommunication network of the country. Private networks belonging to other state affiliated organizations are generally operated under the supervision of TCI.

Transition from the analogue to the digital system and wider introduction of satellite networks are the major aims of the country's telecommunication plan. Fibre optical systems will increasingly be used as junctions or for long distance connections.

US $2,400 million has been allocated in the five-year economic development plan (1990-1994) for the purchase of telecommunication equipment. Also equivalent of US $730 million has been set aside in rials to cover the local costs of buildings, installations, etc. It is estimated that US $345 million was spent on telecommunication equipment in 1990 and this figure may rise to US $1,400 million in 1995. The market in 1991 reached US$ 483 million, with more than half of it accounted for by switching and transmission purchases.

PUBLIC SWITCHED TELEPHONE NETWORK

There are some 2.2 million lines currently in operation. Of the approximately 600 exchanges, 65% are connected to the national network through the automatic toll exchanges and the remaining ones are low capacity automatic exchanges (100-200 lines) serving the needs of rural subscribers. The installed exchanges are mainly electro-mechanical.

TCI hopes to be able to increase the number of subscriber lines to 3.2 million by the end of the five-year plan. Some sources put this figure nearer to 5 million. TCI intends to introduce the digital system where possible. There is also emphasis on the expansion of rural area telephone networks.

TELEGRAPH AND TELEX NETWORK

The national telegraph network consists of point-to-point and Gentex systems. The telex network has about 12,500 subscribers in Tehran and 9 other major cities. The telex exchanges are computer controlled analogue, electromechanical and digital types. Plans are to increase the nominal capacity to 28,500 in the near future.

SATELLITE NETWORK

Satellite telecommunications projects are expected to play an important part in TCI's activities. As part of developing a national microwave satellite grid network, installation of 56 earth stations supplied by Alcatel Telspace, which are mainly in rural areas, has started. Total number of VSAT earth stations will eventually reach 10,000. TCI is currently using 5 transponders of the Intelsat network and is working on a project to build an Iranian domestic satellite with a capacity of 14 transponders worth approximately US $300 million. There are also plans to launch a satellite tracking service using the Inmarsat system.

MICROWAVE CHANNELS

The number of microwave intercity channels is to be increased by between 1200 to 5000 from the present 20,600. The number of international channels is being increased from the present 850 to 2,400 by the end of the five-year plan.

FIBRE OPTICS

During the five year plan 5,000 km of fibre optics lines will be installed and utilized as junctions or for long distance connections. Longer term plans call for increasing the fibre optical network to 20,000 km.

LOCAL PRODUCTION OF PABX EQUIPMENT

Long Distance Telecommunication Industries in Shiraz, affiliated, to TCI are currently producing some 5000 PABX system units per year. There are also private manufacturers of PABX equipment.

RURAL TELECOMMUNICATION

In 1989 about 3,200 villages (with 4 million or 17% of the total rural population) of the country's approximately total 30,000 villages had access to the country's telecommunication system. Plans call for the addition of 10,000 public call offices by 1994. The government intends to use multi-access rural radio equipment to link 6000 villages by the end of the plan period.

KEY PLAYERS

While TCI is by far the most important single organization in the market, other state affiliated organizations such as the National Iranian Oil Company (NIOC), the banks and Qehsm and Kish islands free trade area authorities will be expanding or establishing private networks. Tehran Urban and Suburban Railway Company intends to install 2,000 kilometres of fibre optics links worth approximately US $200 million. Iranian banks are establishing data transmission networks including message and package switching. 200 VSATS have reportedly been bought for this purpose.

COMPETITION

Competition from traditional suppliers from Germany, France and Japan is strong. Siemens is one of the co-founders of the Iranian Telecommunications Manufacturing Company (ITMC) established in 1961. Iran has a wide range of requirements for modernizing its telecommunication industry and is aware of the high standards of Canadian products. Iran is keen to find access to North American technology which has generally been denied since the early days of the 1979 Revolution, and is also anxious to diversify sources of supply. In 1991 two telecommunications missions from Quebec visited Iran and a Middle East Telecommunication mission also visited the market in early 1992. Both of the missions from Quebec yielded memoranda of understanding.

OVERVIEW

In Israel, major investments are being made in infrastructure in order to modernize and improve the country's present communications/telecommunications systems and to provide new services for businesses and private consumers. There is a clear trend towards privatization of government-owned corporations and towards opening up of monopolies to competition.

About US $1.8 billion is expected to be invested in the field of telecommunications over the next three years. There are major opportunities for the Canadian sector since the Israeli government and business community view Canadian achievements in the field very favourably. The Israeli delegate to Intercomm '90 noted that prices for Canadian equipment are approximately 20% less expensive than similar equipment made in the USA.

Under the terms of a 1985 agreement, almost all Canadian equipment with DOC approval is automatically approved after a very short waiting period (7 days).

Specific opportunities for the Canadian telecommunications industry in Israel exist primarily in the following four fields: 1) Transmission for VHF and UHF television systems (PAL standard), cable TV, AM medium and short-wave radio; 2) Two-way radio and satellite communications; 3) Telephony; 4) Cellular mobile telephones.

TELEVISION, CABLE TV AND RADIO

Until recently, Israel had only one TV channel which was government-run plus an experimental channel. New legislation call for an additional channel to be set up, and the experimental channel (Channel 2), which began functioning in 1991, is to become a commercial channel. A recent tender calling for bids to operate Israel's Channel 2 was unsuccessful as no bids were submitted (possibly as a result of an understanding among the four main contenders, who may have been unhappy with the terms), but it is likely that another tender with revised terms will be tendered in the near future. There are also plans for another Hebrew-only channel, which would operate 18 hours daily, but this has been delayed due to budgetary constraints. Each channel will have to acquire up to 39 small (1-5kW) transmitters. Cable TV with 30-channel capacity is now being installed throughout the country and it is estimated that there will be two million subscribers within three years. There are also solid plans to enhance the quality and increase the broadcasting hours of Israel FM radio, as well as to offer more programs. The installation of 16 new transmitters for each program is planned. In addition, a new commercial radio program similar to the new TV commercial station was approved last year and it will require a similar number of transmitters. Israel's AM broadcasting system equipment is both antiquated and inefficient. The eleven 100KW transmitters in use today, which are more than 13 years old, will be replaced gradually. For short wave transmission, Israel recently purchased two new 500KW transmitters but still needs five more to replace the old Brown Bovery and Philips ones (250KW) currently in use.

TWO-WAY RADIO AND SATELLITE COMMUNICATIONS

Two-way radios in Israel operate on the same systems and frequency allocations as in Canada and the USA. The number of two-way radios has doubled every five years since they were introduced. Today there are about 310,000 two-way radios, cellular telephones and pagers, with an annual growth rate of 15%-25% (1991 rate: 25%). Motorola Israel controls 80% of the market with the other 20% divided between European and Japanese companies. No Canadian companies are presently in the market, to the best of our knowledge.

There is a large and growing demand for satellite receiving stations, and for V-SAT's (Very Small Aperture Satellite) communications for data transmissions. Israel is a member of both Intelsat and Inmarswat and receives all DBS transmissions aimed at Europe, as well as those from the Intersputnik and Raduga Soviet satellite systems.

TELEPHONE

At present approximately 53% of Israel's phone system operates on digital exchanges. Telrad, an Israeli firm, makes 20% of the locally manufactured exchanges using Canadian technology (from Northern Telecom). The other 80% of locally made exchanges are manufactured by Tadiran, using Belgian technology from Alcatel. The only telephone company in Israel at present (a monopoly) is Bezeq, which intends to invest heavily in telecommunications equipment. Bezeq's 1993-1997 five-year plan calls for an investment of NIS 8 billion (approximately US $3.3 billion), including a significant increase in the number of public telephones, infrastructure to accommodate up to 180,000 cellular phones, the laying of 66,000 km of fiber optic cables, and much more. This plan may be compressed into a shorter time period (3 years) in order to accelerate investment in the telecommunications infrastructure. Bezeq's general policy is to purchase about 85% of its equipment from local sources and the rest from abroad.

CELLULAR MOBILE TELEPHONES

At present, the market for cellular mobile telephones, which grew by 51% last year, is a monopoly controlled by Bezeq and Motorola. However, it is likely that an international tender will be proferred in 1994 for other customer equipment and, in 1997, for another supplier of systems.

Despite the country's small size, Israeli sales in telecommunications reached US $670 million in 1991 and data communications sales reached US $150 million in 1991. There is a great commitment to the industry as evidenced by the fact that approximately 70% of all R&D monies are invested in electronics. With its highly qualified labour force, Israel is well positioned for joint ventures with leading telecommunications companies. Israel also exports telecommunications equipment to several African countries and these are potentially an excellent market for Canada-Israel joint business ventures.

Kenya Posts and Telecommunications Corporation (KPTC) is a parastatal organization that, until recently, had the monopoly over the provision of all telephone services in Kenya. As part of a recent liberalization program, many private Kenyan companies have been licensed to provide some of the telecommunications services such as internal wiring and provision of allied telecommunications terminal equipment. KPTC continues to have the authority to approve telecommunications equipment intended for connection to the national network, and to inspect complerted work that has been done by private contractors and vendors, and to issue certificates of satisfactory completion and wiring.

The Canadian Embassy in Nairobi has identified telecommunications as a priority sector for Canada's trade development strategy in Kenya. The market is estimated at $120M for 1993 growing to $130M in 1994 with Canada's market share considered small but expanding at around $8-10M. Good market prospects will be found in rural telecommunications equipment, PABX equipment, modems and cellular phones. Limited import restriction, aggressive marketing, competitive pricing, strong sectoral capability in Canada, competitive Canadian financing and willingness of Canadian exporters to invest/joint venture in the territory have contributed to Canada's penetration of the Kenyan telecommunications market.

The majority of financing for telecommunications projects in Kenya originate in International Financial Institutions (IFI) such as the World Bank and the African Development Bank.

3.76 MOROCCO

The prospects for the data processing and telecommunications market in Morocco are promising. In terms of both equipment and services, the country's needs are considerable and the market is estimated at Cdn $500 million. Canadian exports rose steadily from 1988 to 1991. However, since 1991, the rate of exports has tended to decline. Major projects afford some real opportunities for the Canadian market in the future. Competitors in this area are primarily from France, Germany, Japan and Sweden.

MARKET OPPORTUNITIES

- Telephone switchboards and lines
- Data processing and office communications equipment
- Telecommunications equipment
- Data processing, telecommunications technical assistance
- Consultative services
- Packet data transmission
- Maintenance
- Spectrum management
- Mobile radio-telephony
- Radio message services
- Videotex systems

FINANCING

This sector requires financing. World Bank financing is available for Morocco's telecommunications development projects. A number of international tender calls funded by the World Bank have been launched, with Canadian companies having bid on them (supplying of modems, EDP master plans, computerization of government departments, supply of measurement equipment and transmission equipment). The World Bank has made a loan to Morocco for the second phase of the telecommunications development project (expansion of network, promotion of private investment). Consultative services are required for this project, which should begin early in 1993.

3.77 NIGERIA

The Telecommunication Network in Nigeria until recently was under the sole control of the Nigerian Telecommunication PLC(Nitel). It is structured into territorial, zonal and corporate headquarters for easy administration. However, planning and implementation of company's projects are centralised at the corporate headquarters the current demand for telecom services in Nigeria is well over Nitel's supply capability. Nigeria with a population of almost 100 million has a current network capacity of 600,000 lines. This is expected to be increased to about 800,000 lines within the next fifteen months. Nitel's network contains different types of switching and transmission equipment namely ITT, L.M Erickson, AT & T and Marubeni.

In the past three years, Nitel has introduced digital technology into its network as a policy gear towards the modernization of its network. So far 200,000 digital lines have been provided mainly by Siemens. All subsequent expansion in the network are to be digital based.

There are currently not less than two million applications (for telephone services) on Nitel waiting list, especially in the urban centers. Having realised this major shortfall problem, the federal government recently enacted a decree (the Nigerian Communications Commission decree 75 of 1992) which has just been published. It "empowers private firms to provide and operate public pay-phones, install telephone lines and operate network links with the use of cable, radio frequencies and satellite within the country. They are also empowered to operate public mobile communication, community telephones and value-added network services as well as repair and maintain telecommunications facilities". Nitel has in the past five years secured foreign loans worth over US $865 million. These include $225 million from the World Bank, dm 441.18M from Germany and a $170 million national telecommunication improvement project loan handled by ITT. Others are the $100 million loan from the Japanese Overseas Economic Corporation Fund and $100 million Turkish Loan.

In the area of international services, Nitel has recently installed two non digital earth stations and gateway in the country to compliment the two existing analogue gateways.

Despite the increased demand for telecommunication services, Nigeria lacks the financial and technological resources to enhance its expansion programmes. Opportunities for foreign participation exist in the following areas;

- Digital switching equipment and spare parts
- Digital transmission equipment and spare parts
- Cables
- External line plant
- Optic fibre
- Remote monitoring devices
- Testing equipment and tools
- Technician's maintenance vehicules
- Cellular mobile phones
- Paging systems/devices
- Associated spares for telecommunication installations

In 1992 Nitel introduced cellular phone services. 10,000 lines have so far being installed. Nitel has recently formed a joint venture company with digital communications of Atlanta to operate the cellular phone service. Voice mail and paging services have also been provided for in the network which takes off in march 1993.

OVERVIEW

In 1992, the Saudi Ministry of Posts, Telegraph and Telephones announced the first phase of a planned one million-plus telephone line expansion project valued in total at US $2-3 billion. This will double the capacity of the Kingdom's existing telephone system. With this announcement, Saudi Arabia became one of the world's largest markets for telecommunications equipment and expertise.

The Kingdom's present telecommunications network incorporates a total of some 1.5 million telephone lines serving a total of 350 cities and villages, 30,000 telex lines, and 20,000 mobile telephones in 30 cities. Overall investment in the sector during the current Five-Year Plan could total as much as US $6.5 billion.

As a member of the International Telecommunications Union (ITU), the Kingdom is now a major user of the INTELSAT system. Earth stations in Riyadh, Jeddah and Taif provide about 3,500 circuits for international calls. Over 180 countries can now be reached through direct dial facilities. The communications system has been enhanced by other links to the outside world including the SEA-ME-WE underwater cable, the INMARSAT satellite system, and ARABSAT, which links members of the Arab League.

The one million-plus new lines of the expansion project represent the single largest increase of the Kingdom's telecommunications system. Phase one of the project, comprising 190,000 new lines, has recently been awarded to the German firm Siemens. The RFQ for the 500,000 line second phase of the project is expected to be released in early 1993.

Even with this major expansion project, which will effectively double existing telecommunications capacity, the resulting upgraded and expanded system will probably represent only about 30% - 40% of the Kingdom's overall demand requirements. The potential for further expansion will be significant.

OPPORTUNITIES FOR CANADIAN EXPORTERS

In addition to the line capacity expansion, there are many other opportunities in telecommunications: the upgrading and expansion of the microwave and telex systems, PBX, mobile telephones, pagers, spectrum management, and airtraffic control. ARABSAT is looking for other satellites whose owners would be willing to move them into the ARABSAT orbit.

Canada has played a substantial and respected role in the development of Saudi Arabia's telecommunications sector. For ten years Bell Canada was responsible for the operation and maintenance of the Kingdom's telephone system. Saudis have a high regard for Canadian telecommunications expertise.

3.79 TANZANIA

Tanzania Posts and Telecommunications Corporation (TPTC) is the organization which provides public telecommunications and postal services throughout Tanzania. It is expected that the Corporation will split into two entities in early 1994, one for postal service and the other for telecommunications. Tanzania has an installed telephone network capacity of 108,000 lines, of which 80,000 are connected. The exchanges are 37% digital, and plans to increase that proportion are underway. (The network is 86% automatic in urban areas, but only 14% automatic in rural areas). The major trunk transmission networks are analog. The telex network has an installed capacity of 4550 lines, of which 2000 are connected.

TPTC is undertaking a $200 million US dollar modernization and expansion plan to improve the quality and quantity of Tanzania's telecommunications services. This project will encompass: radio, multiples, exchanges, local ine plan, power, building and terminal sets. Several consultancy studies are also expected to be undertaken.

OVERVIEW

The telecommunications sector in Tunisia received $500 million in investment during the VII year plan (87-91). The situation in the communications sector in Tunisia is comparable to those prevailing in other North African countries. During the seventh plan just completed, Tunisia connected 113,000 lines compared to the 203,000 initially expected. The level of subscribers in December 1991 was 330,000 compared with the 420,000 planned. The telephone density now reaches 4.02 lines per 100 people, rather than 5 lines per 100 people as initially expected.

DEVELOPMENT FORECAST (92-96): OPPORTUNITIES FOR CANADIAN EXPORTERS

Installation of 460,000 subscribers' equipment, connection of 339,000 new subscribers for a total in 1996 of 669,000 Tunisia suscribers with a density of 7.4 main line per 100 people by 1996.

These objectives will require investments estimated at US $1.26 billion, with $350 million dedicated to existing projects. New telecommunications projects will include public switching equipment - $373 million, transmission systems - $145 million, subscriber lines - $292 million. In addition, US $100 million will be allocated to projects to be specified early in 1993. Sectors offering the best opportunities for Canada are: rural telephones, cable TV equipment and services, public and private switching, paging and radio-telephone system, microwave transmission links, spectrum management.

Zimbabwe PTC is 100% owned by the Government of Zimbabwe. The company's investment program for the next five years is as follows (in order or priority):

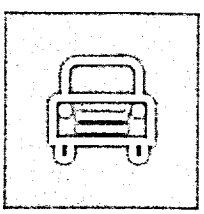
Materials for Network Improvement
The present fault ratio is about 2.4 faults per mainline and has increased 30-40% in about five years. As well, the average fault repair time has doubled in the same period. About 50% of real faults occur in subcscribers' apparatus and overhead lines. PTC will therefore focus on imports of spare parts for the whole network and locally-produced material for preventative maintenance and overhead lines and subscriber apparatus as given by Telecom Operations.

External Line Plant - Cables and Accessories
The objective is to provide for local subscriber network replacement and expansion in Harare, Bulawayo and other major cities. Most network undertakings are connected to digitalization. The planned switching capacity is roughly: Julius Nyerere (49,600); Cranborne (6,000); Borrowdale (7,000); Glenview (15,000); Highlands (12,000); Southerton (22,700); Matebeleland Province including Bulawayo (157,100).

Subscriber Equipment
The five-year procurement estimate for telephones is 120,000 (50,000 in 1993, 27,000 in each of 1994, 1995 and 1996 and the remainder in 1996/1997). Annual procurement of payphones is set at 400 per year. Fax bureaux are planned for major post offices, requiring 200 machines in the five year period. In addition, PTC is solely responsible for provision of PABX's to government departments. The present waiting list is 209 department units, corresponding to about 22,640 extension lines. 30,000 telephone sets are also included. The procurement of extensions lines is as follows: 1993-5,200; 1994-10,040; 1995-7,400.

3.8

TRANSPORTATION



3.81 ALGERIA

Improving the transportation infrastructure of Algeria remains a government priority. The main priorities will be rail, urban transit, aerospace and port improvement. The government acknowledges that 1993-1994 will be difficult times in Algeria, with security concerns predominating. Economic development will assist the government in dealing with the social problems at the root of the current unrest. The next two years will see reduced spending as the government tries to reorganize and meet its debt obligations, but the sector will remain important to Canada.

Canada is a well respected partner in the Algerian transport sector, due in part to the similar problems facing the two countries, such as long distances and harsh, diverse climates. Canadian success at establishing such an advanced transportation network is admired by the Algerian industry. In the past, Canadian firms have provided aircraft overhaul services, locomotives, helicopters, trucks, and many other products and services.

The Algiers Subway project has been much discussed for a long time now. The Algerian Government continues to insist that it will go ahead with the project, and are seeking foreign partners and foreign capital to proceed. This project will take a long time to come to fruition, if it ever does, but the enormous potential has kept several Canadian firms interested.

Financing, technology transfer and investment will remain very important factors in the sector. Training and improvement of existing infrastructure are among the top priorities in the sector and Canadian companies should expect to include such proposals in any contract negotiation. The Algerian Government seeks to improve its own ability to produce necessary products and services and in the long term to reduce dependence on foreign technology and foreign products.

3.82 IRAN

The transportation sector as a whole accounts for some 6.5% of the GNP. Government investments in this industry has generally been inadequate, indicating only 5% of growth in real terms from 1974 to 1985. Given the rapidly rising population of Iran which now stands at approximately 60 million and growing at a rate of almost 3.5% per annum, the transportation sector must be renovated and expanded to meet the growing basic requirements of the country.

RAILWAYS

Iran Islamic Republic Railways (IIRR) under the Ministry of Roads and Transportation is the authority responsible for planning and operating the railway system of the country. The railway system currently has 4821 kms of main lines, 328 locomotives, 13,000 cargo and 800 passenger wagons.

The current Five Year Economic Development Plan (1990-94) has allocated Rls. 936 billion to railway maintenance and development, together with some US $1.5 billion. The plan aims to increase passenger traffic on the railways by over 100%, from 7 million per year now to 16 million in 1994. Similarly, freight traffic is planned to increase from 14 million tonnes to 30 million tonnes per year. These increases in capacity are to be achieved in part by double tracking of the (as-yet-uncompleted) Bandar Abbas-Bafgh line, by renovation and upgrading of a further 1750 km of track, and by investment in rolling stock, telecommunications and electrification. Currently only the 146 km Tabriz-Jolfa line is electrified.

Major lines under construction include the vital 790 km Bafgh-Bandar Abbas link. Daewoo from South Korea has won contracts for two stretches of the line (total of 67 kms) worth approximately US $250 million. Another project in progress is the double tracking of the line from Bandar Imam Khomeini to Ahwaz and of certain sections of the line between Ahwaz and Tehran. A third major project is the construction of the 180 km Mashad-Sarakhs line to link Iran to the border with the Republic of Turkmenistan. Other major long-term development plans include the construction of the 560 km route between Kerman and Zahedan, an 800 km link from Mashad to Bafgh and the extension of the Bandar Turkman-Gorgan line as far as Gonbad-e Kavus.

AVIATION

The Civil Aviation Authority under the Ministry of Roads and Transport is responsible for all policy-making issues, the operation of the airports and supervising the purchasing decisions of the airlines. There are currently 52 operational airports in Iran, of which six are international and six are exclusively used by the National Iranian Oil Company (NIOC).

Replacing the aging fleet of aircraft is the first priority, followed by the expansion of the fleet, building new airports, and re-equipping the older airports with state of the art technologies. The average age of the Iran Air fleet in International flights is 15 years which is four years more than the average international norm. During the past two years, Iran has purchased two Air-Bus and six Fokker planes to replace its aging fleet in both International and national networks. Iran is also negotiating to purchase 5 ATR planes for Asseman Air Lines, and has also recently announced the purchase of 12 training planes (joint production by France and Italy) worth approximately DM 5 million. Twelve Topolov planes have also been rented by the recently formed Iran Air Tours Company to increase the local network capacity. Iran is also building eight new airports and updating its radar and landing systems which would require a minimum investment of US $350 million in hard currency. This is not including the Imam Khomeini Airport located south of Tehran which is the most important airport project in Iran.

ROAD TRANSPORT AND VEHICLE MANUFACTURING INDUSTRIES

Road transport accounts for about 80% of total passenger and freight movement throughout the country. According to the Ministry of Roads and Transportation, between 1979 and 1988, 388 kms of express-ways, 5411 kms of main roads and 2989 kms of subsidiary roads were built throughout the country.

Urgent requirements to replace the obsolete cars and trucks, and meeting the demands of a population growing at a rate of 3.5% per annum provides promising opportunities in this sector. The Five Year Economic Development Plan (1990-94) aims at introducing some 43000 trucks, 18000 buses and 33000 mini-buses, but the actual result has been far short of these targets. Major international vehicle manufacturers have been approached to provide technology or enter into joint-venture agreements for local assembly of passenger vehicles and trucks. Mercedes Benz trucks and buses have been locally assembled for more than 20 years. General Motors Market Development of Canada has been actively monitoring the local industry.

MARINE TRANSPORT

The Islamic Republic of Iran Shipping Lines (IRISL) under the Ministry of Roads and Transport is the major shipping line carrying the bulk of cargo to and from Iran. IRISL also owns 51% of Irano-Hind Shipping Company which is co-owned with the Indian Government, and is the other major shipping company in Iran. The size of the commercial fleet has increased from 42 ships with a total DW capacity of 525,000 tonnes in 1980 to 110 ships with a DW capacity of 2.3 million tonnes in 1991. Of the total imports of 21.5 million tonnes in 1991, 80% came through the ports, with Bandar Imam and Bandar Abbas in the Persian Gulf handling the major part.
Containerized cargo transport and handling facilities are going to be expanded and major ports in both the Persian Gulf and the Caspian Sea are going to be renovated and reequipped. Also during the Five Year Economic Development Plan, the capacity of the commercial fleet is going to be increased by some 7 million tonnes by renting foreign ships. There are several plans for building and developing ports in Jask, East of Hormuz Strait, Shahid Beheshti Port, Hormuz Island and Pasa Bandar in the most southern point of the country. The Korramshahre Port which was almost totally damaged during the war with Iraq is also being rebuilt. Several ports are also planned to be built and developed on the Caspian Sea shores, the most important of which are the expansion of Bandar Anzali and Noushahre ports.

3.83 ISRAEL

AIR TRAFFIC CONTROL AND AIRPORT REQUIREMENT

The Israeli Government plans to issue another international tender for a new airport north of Eilat, Israel's fast growing Red Sea resort city. The proposed facility is to be located 11km north of the town and would be capable of handling all types of aircraft on a single runway. It will replace the existing facility which is on prime property in the center of the town and can only handle small jet aircraft. At present, larger aircraft, operating primarily charter flights from Europe, have to land at an Israeli Air Force base 60km to the north.

Earlier tenders for the airport were cancelled after the government ruled that the bids that were submitted were unsatisfactory.

This is the major opportunity in Israel at the present time for Canadian companies producing air traffic control and airport equipment.

3.84 KUWAIT

AVIONICS, AVIATION GROUND SUPPORT & AIRPORT RECONSTRUCTION

Kuwait International Airport was seriously damaged during the Gulf war. All of the airport's avionics equipment was destroyed or looted and several major structures will have to be rebuilt from scratch. A Dutch firm, Narco, consulted with the Directorate General of Civil Aviation, the Kuwaiti Government agency which manages the airport, to establish a "Master Plan" for the future of the airport.

Projects include:

- construction of a new administrative centre and headquarters for government-owned Kuwait Airways Corporation (KAC).
- construction and supply of a new Communications Centre, with a VHF ground to air communication system. According to the Directorate General of Civil Aviation, this will be a priority after completion of the master plan.
- purchase of long range, final approach, and secondary radar elements and support systems.
- possible re-establishment of KAC's aircraft maintenance facility. KAC may rebuild this centre. If so, this would create major opportunities for contractors, suppliers of all types of aircraft maintenance equipment, and maintenance service providers.
- purchase of avionics, spare parts for electronics, parts and engines, and limited amounts of ground equipment.

OVERVIEW: THE AEROSPACE SECTOR

The Saudi Land, Navy and Air Forces all possess substantial aircraft inventories. The Saudi Land Force has an aviation battalion of UH-60 Desert Hawk and Bell 406 Combat Scout helicopters. Kiowa OH58D armed reconnaissance helicopters and AH-64 Apache helicopters have recently been purchased. The Saudi Naval Force operates a number of Aerospatiale Helicopters while Royal Saudi Air Force hardware includes Boeing E-3A's (AWACS), F-15C/D's, A,B,E and F model F-5's, the RF-5, Hawks, Tornados, DC-9's and C-130's along with other aircraft including assorted jet, turbo prop and propeller aircraft. The Saudi Air Force has a total of 93 F-15C/D's. McDonnell Douglas will supply the Saudis with 72 F-15XP fighter aircraft at a cost of US $9.5 billion.

The national airline, Saudia, has a fleet of more than 100 aircraft. The airline serves more that 70 international and domestic destinations, operating 300 flights daily from Saudi Airports. Saudia reportedly spends approximately CDN $8 million annually on the maintenance of its fleet. Saudia is replacing it's aging fleet of 737's, some of which are almost 20 years old. Any plans to expand/upgrade the Saudia fleet have, until recently, been put on hold due to funding constraints. Saudia has now announced its intention to purchase eight fifty-seat aircraft. Saudia also plans to purchase new aircraft in the 100 to 150, the 200 to 250 and the 250-plus seat classes. Saudia plans to buy some 68 new aircraft in this fleet modernization programme. Saudia generally operates its own maintenance facilities although, in certain instances, work may be contracted to foreign (including joint venture) firms. Also on the civilian side, ARAMCO operates a number of remote air strips and maintains a large number of fixed wing and rotary aircraft.

Maintenance of both civilian and military aircraft in Saudi Arabia is generally performed by the initial supplier either solely or as joint venture (JV) with a Saudi partner. In recent years there has been a growing tendency to submit new contracts to public tender.

OPPORTUNITIES FOR CANADIAN EXPORTERS

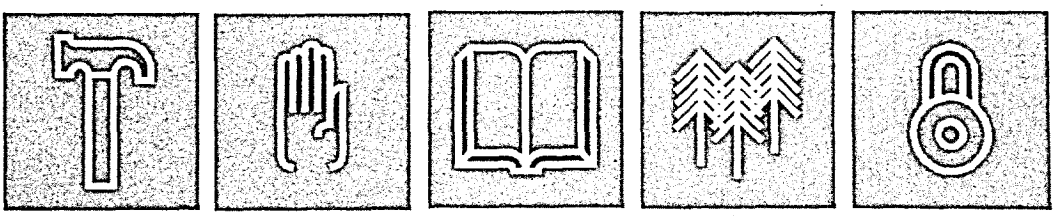
Canadian firms interested in the Saudi aerospace sector will find opportunities in various areas including: aircrafts sales, maintenance, air traffic control, training, flight simulators, and airport construction. This is a competitive market with a strongly entrenched American, British, and French presence. However, Canadian firms have done well in this sector in Saudi Arabia. There is excellent potential for Canada to increase its aerospace presence in the Kingdom. The Canadian Embassy is ready to assist any Canadian firm willing to invest the time and effort in pursuit of these contracts.

In 1991 and 1992, the transport equipment and industrial machinery sector represented our second export sector in Tunisia after sulphur. Our sales were mainly based on gradders and industrial loaders, aircraft engines, spare parts for locomotives and diesel engines.

If we consider recent purchases by Tunisia in the urban transport and airline sectors, the best commercial prospects for Canada are: railways (long distance) with SNCFT's intention to buy 15 new diesel locomotives; construction and maintenance road equipment (gradders) and mining pit equipment such as industrial loaders and specialized trucks. In the aviation sector, possibilities exist in the fields of civilian and military helicopters, aircraft engines and business aircraft. Otherwise, Canadian firms will probably be able to consolidate their position in the short-term for spare parts for diesel engines used for locomotives and industrial machinery, etc. With the future development of a new freeport in Zarzis, Tunisia will also have to improve in port handling equipment.

3.9

MISCELLANEOUS



Construction

3.91 ALGERIA

The Algerian government has made construction a major priority and has ambitious plans for the construction of social housing and other dwellings. There is an enormous shortage of housing and, with a rapidly expanding population, Algeria faces grim social problems if solutions are not found promptly. The government estimates that there is a current shortage of 1.5 million dwellings and has recently announced plans to construct sixty thousand new dwellings within the next twelve months and to complete well over three hundred thousand others within twenty-four months. These will be social housing units, subsidized by the state, intended to alleviate the worst of the housing crisis. Even this ambitious program will not satisfy the ever-increasing need for more construction. With such a pressing need, the Algerian construction sector has enormous potential and Canadian firms have the opportunity to capitalize on the priority given to this sector by the Algerian government. In particular, the government is encouraging joint ventures and other forms of Canadian-Algerian partnership in an attempt to enlist Canadian firms in the struggle with the housing crisis. In a meeting with the Canadian Ambassador, Mr. Marc C. Lemieux, the heads of some of the most important Algerian construction companies indicated that they had not only the license, but indeed the obligation, to make their companies more efficient and productive through better use of existing facilities, reduction of excess personnel, and an increased emphasis on sound business practices.

OPPORTUNITIES

The Algerian government is attempting to revitalize its industry and to improve both production and productivity. The opportunities for Canadian firms lie, therefore, not so much in the export of raw building materials, but rather in the export of the valuable experience and techniques perfected by Canadians. Joint ventures with Algerian firms to modernize and replace aging factories are much sought after by Algerian companies. The construction industry is paralysed by a lack of materials brought on by poor management of construction companies and suppliers of materials. Canadian firms willing to form partnerships or joint ventures with Algerian firms, and willing to transfer technology and management techniques to Algeria, have an enormous potential for success in the Algerian market.

FINANCING

One difficult aspect of the market involves the financing of projects. Currently Algeria is suffering, due to the lower level of world oil prices, from a shortage of hard currency. Virtually all contracts signed in Algeria must bring with them a package of financing. The EDC is very active in Algeria and financing from other international banking institutions is on the increase. The World Bank is currently negociating a $250 million line of credit, specifically for the construction and housing sector.

OVERVIEW

Following the 1973 oil boom, Saudi Arabia emerged as a strong and solid market for defence sales. By 1982, government spending in this sector amounted to about CDN $25 billion annually (or some 25% of the total state budget). While defence spending decreased on an absolute basis throughout the 1980's ($16 billion in 1988), the defence sector remained the government's top priority, accounting for some 35% of the total national budget by the end of the decade. In the period 1986-1990, Saudi Arabia was second only to India and Japan in the import of large conventional weapons systems. In 1990, it became the largest such market. The country has spent an estimated CDN $60 billion on military equipment over the past ten years.

At the present time, Saudi defence and security forces consist of about 145,500 personnel employed in three organizations: the Ministry of Defence and Aviation, the Saudi Arabian National Guard and the Ministry of Interior. Each of these organizations is totally separate and distinct, reflecting the feudal nature of the country's defence/security force structure.

As a result of the Gulf Crisis, the government is now in the process of reassessing the country's strategic military needs with a view to increasing the number of personnel as well as expanding existing hardware inventories. Until such time as the government decides on a new direction for the defence and security forces, most major new purchases (such as tanks, multiple launch rocket systems, fighting vehicles) will likely be delayed. Nevertheless, as reflected in the 1992 national budget, Saudi Arabia continues to be a viable market for defence products. This, coupled with recently announced cutbacks in military expenditures in the US, Canada and other western countries, has resulted in Saudi Arabia emerging as one of the largest potential international markets for military sales.

OPPORTUNITIES FOR CANADIAN EXPORTERS

The Canadian Government has played a strong and increasingly active role to promote Canadian involvement in the Saudi market. In 1991 and again in 1992, the Department of External Affairs organized trade missions to participate in the Kingdom's security trade shows, known as ASTEX. On February 4, 1992, Canada and Saudi Arabia signed a Memorandum of Understanding (MOU) on bilateral defence industrial cooperation to facilitate the exchange of information between the two countries in defence R&D and production; to foster industry dialogue and cooperation; and, to boost defence trade through the establishment of a Joint Committee. The Joint Committee will create a tremendous opportunity for Canadian firms to identify Saudi security and defence requirements for equipment, repair/maintenance services and training.

Education and Training

3.93 **KUWAIT**

Gulf nationals have a long tradition of learning and commitment to education. Following the Gulf war the priority has been enhanced for Kuwait with the decision to cap the size of the expatriate population and the consequent need for more effective nationals in the Kuwait economy. The same forces are at work elsewhere in the Gulf, including the United Arab Emirates, where expatriate populations sometimes dwarf the native component. The priority on training will be highlighted October 24-27, 1993 with an international educational conference, "Training for the Future", sponsored by the Kuwait Public Authority for Applied Education and Training (PAAET).

Traditionally the United States and the United Kingdom have attracted the bulk of Kuwaiti students. Ties formed through education have given those countries a considerable competitive advantage in commercial activities. However, there is increased interest in Canadian educational and training capabilities. During the past year training contracts have been signed in such areas as management and corporate planning, health, fire-fighting, power and military training. In addition, training components incorporated in commercial proposals are proving increasingly attractive to Gulf buyers since training tends to be underfunded notwithstanding the need.

Forest Products

3.94 **MOROCCO**

Forest products represent a major sector in Morocco and the country imports nearly all of its requirements. The market has been estimated at Cdn $215 million in paper and cardboard, $215 million in wood and $15 million in services.

MARKET OPPORTUNITIES

Specific opportunities exist in the following areas:

- Wood: Softwoods, mainly white pine, telephone poles, supporting timber for mines.
- Paper and Cardboard: Newsprint, other papers, corrugated cardboard.
- Consultation: Studies and engineering/forestry inventory

MAIN COMPETITIVE COUNTRIES/SUPPLIERS

- Spain
- France
- Sweden
- Russia
- Finland

FINANCING

ADB financing is available for forestry inventory projects. Lumber and paper are generally payable by irrevocable documentary credit.

Security Products

OVERVIEW

Responding to Israeli special security needs, Israeli industry has developed a variety of high quality security products.

Included are devices ranging from surveillance equipment, smart fences, through various types of metal, chemical and other detectors, personal protection equipment, identification systems, to physical security material.

The local market is estimated to be in the range of $50 million per year. Opportunities for Canadian companies in marketing to the local market lie in those areas in which Canadian companies have special expertise which is not available in Israel.

As a result of Israeli industry's fine reputation in meeting exacting requirements, another area of opportunities exists in joint venture partnerships with leading Israeli security products companies.

IV

TRADE STATISTICS

Middle East Trade Statistics - 1992

The following contains a summary of the export/import statistics for Canada and the Middle East for 1992 in forms that effectively illustrate recent trends and changes in Canadian commercial activity in the region.

OVERVIEW

Exports from Canada to the region are continuing to enjoy steady growth, particularly to the countries of the lower Gulf, Iran and Saudi Arabia. If taken as a total for the region, the figures would seem to indicate a small decline in exports to the region ($1.16 billion in 1991 vs $1.01 billion in 1992). When the figures are subjected to a country-specific analysis however, the picture that emerges is significantly more positive:

- Saudi Arabia exports, while showing an increase over 1991 ($286 million in 1991 vs.$296 million in 1992), do not however, include $88 million of GM LAV's that originated in Canada in 1992 but were transhipped via France. With these figures factored in, the 1992 Saudi Arabia export total is approximately $375 million, a 26% increase over 1991, increasing the Middle East figures to over $1 billion. The figure could have been even higher if the level of barley exports to Saudi Arabia had not declined in 1992 due to much lower Canadian crop levels and increased foreign subsidies. The commodity breakdown for Saudi Arabia also reflects the increasing diversification of Canadian exports to that market. The figures do not include the increasing number of joint ventures, service contracts and manufacturing agreements that are becoming a significant percentage of Canadian commercial activity in the Kingdom.
- Exports to Iran continued to increase, from $333 million in 1991 to $359 million in 1992, this despite EDC not yet having concluded the proposed Line of Credit.
- Kuwait export figures for 1991 ($336 million) included an aircraft leasing contract worth $304 million. The 1992 figures ($24 million) reflect pre-Gulf war export levels.
- Import/export levels have remained steady over the last five years and are consistently diversified over many sectors.
- A significant increase in exports to Lebanon (86%) are the result of the reconstruction efforts underway in that country and illustrate the revitalisation of an important Canadian export market.
- The increase in exports to the UAE (55%) and Oman (40%) reflect an increasing diversity in the types of Canadian exports to the region and the increasing shift in commercial activity towards the countries in the lower Gulf. The opening of a Canadian Consulate in Dubai, staffed by a Trade Commissioner, is intended to take advantage of this trend.

Canada/Middle East Trade

CANADIAN EXPORTS ($'000 Canadian)

Importer	*1988*	*1998*	*1990*	*1991*	*1992*
Bahrain	3,994	6,476	2,603	4,833	5,357
Iran	140,166	299,102	335,508	303,085	358,920
Iraq	191,444	258,109	118,041	0	4,021
Israel	124,897	118,780	129,454	132,803	116,676
Jordan	13,078	6,608	5,542	20,190	6,171
Kuwait	22,526	20,743	34,283	335,882	23,924
Lebanon	13,948	6,637	7,805	13,795	25,731
Oman	7,867	4,233	6,505	7,366	10,316
Qatar	5,686	5,375	4,720	10,649	8,608
Saudi Arabia	202,535	337,220	273,466	275,791	286,685*
Syria	4,133	5,833	8,090	10,606	11,791
UAE	23,604	32,083	29,127	35,365	54,871
Yemen	8,525	6,795	11,615	12,608	12,897
Total	**887,924**	**1,234,888**	**1,115,314**	**1,163,073**	**925,968***

CANADIAN IMPORTS ($'000 Canadian)

Exporter	*1988*	*1998*	*1990*	*1991*	*1992*
Bahrain	7,396	7,222	9,062	2,128	3,239
Iran	70,327	163,490	20,943	68,436	126,109
Iraq	8,774	61,836	112,728	149	59
Jordan	183	283	583	278	638
Kuwait	2,297	783	1,621	10	12,121
Lebanon	6,374	4,006	3,143	4,173	4,545
Oman	49,617	57	156	3,225	575
Qatar	0	0	1,064	3,633	2,882
Saudi Arabia	95,407	253,248	634,718	539,589	542,186
Syria	300	152	63	13,821	668
UAE	46,765	36,207	58,050	22,546	3,606
Yemen	230	207	15,161	34,503	27, 167
Total	**621,121**	**393,060**	**687,724**	**991,324**	**855,321**

* Figures do not include $88.4 million of exports to Saudi Arabia that are routed via France.

Canada/North Africa Trade

CANADIAN EXPORTS* ($'000 Canadian)

Importer	*Dec. 89*	*Dec. 90*	*Dec. 91*	*Dec. 92*	*Feb. 93*
Algeria	292,872	289,144	238,737	151,822	22,816
Djibouti	375	346	3,919	404	93
Ethiopa	24,765	21,184	22,731	12,968	4,155
Egypt	59,915	72,480	110,487	98,008	16,706
Libya	62,158	52,261	56,448	80,621	8,811
Morocco	119,098	232,483	188,835	125,311	31,282
Somalia	2,834	3,004	66	1,319	17
Sudan	9,445	7,215	13,241	7,717	694
Tunisia	39,886	53,140	58,337	45,307	3,569
Total	**611,348**	**731,212**	**692,801**	**523,477**	**88,143**

CANADIAN IMPORTS* ($'000 Canadian)

Importer	*Dec. 89*	*Dec. 90*	*Dec. 91*	*Dec. 92*	*Feb. 93*
Algeria	29,770	62,048	60,474	98,379	47,800
Djibouti	102	0	0	0	0
Ethiopa	8,516	5,808	5,724	4,534	597
Egypt	5,343	9,398	11,900	58,863	2,118
Libya	0	0	0	0	0
Morocco	39,418	39,634	70,556	76,439	9,458
Somalia	57	0	0	2	0
Sudan	307	97	2,626	97	1
Tunisia	1,988	2,778	10,394	1,527	317
Total	**85,501**	**119,763**	**161,674**	**239,841**	**60,291**

* Updated 30 Mar/93

Canada/Sub-Saharan Africa Trade

CANADIAN EXPORTS ($'000 Canadian)

Importer	*1988*	*1998*	*1990*	*1991*	*02-1992*
West Africa					
Bénin	1.6	2.1	4.2	1.5	0.4
Burkina Faso	5.8	1.6	4.3	5.5	0.2
Chad	-	-	1.1	0.1	-
Côte d'Ivoire	11.7	9.9	7.0	6.9	0.4
Gambia	-	-	-	0.2	-
Ghana	33.0	16.9	38.1	26.7	2.9
Guinea	4.7	7.0	2.1	1.9	0.2
Ginea-Bissau	-	-	-	0.1	-
Libéria	-	-	1.9	2.3	-
Mali	14.3	4.6	2.8	6.4	0.6
Mauritanie	0.3	1.5	8.1	1.5	0.1
Niger	5.1	1.7	1.7	1.0	0.1
Nigeria	32.9	29.7	29.8	51.3	7.0
Sao Tomé & Principe	-	-	0.2	0.2	-
Sénégal	18.2	12.0	19.5	20.2	2.4
Sierra Lione	0.2	2.1	0.2	0.7	-
Togo	4.3	2.4	2.0	6.2	-
Total	**132.1**	**91.5**	**123.0**	**132.7**	**14.3**
Central Africa					
Burundi	-	-	0.3	0.2	0.1
Cameroun	38.3	30.6	19.7	17.4	6.1
Congo	0.7	0.7	0.9	1.0	0.1
Gabon	6.3	5.3	5.9	7.2	0.3
Rwanda	1.4	0.8	3.5	3.2	0.5
Zaïre	18.4	8.8	9.3	7.7	0.5
Total	**65.1**	**46.2**	**39.6**	**38.7**	**7.6**
East Africa/Island					
Comores	0.1	-	-	-	-
Kenya	6.1	52.9	13.6	25.3	2.6
Mauritius	1.5	0.9	1.2	1.7	0.2
Tanzania	21.2	20.0	19.4	16.2	1.2
Uganda	5.3	3.1	2.5	9.2	0.9
Total	**34.2**	**76.9**	**36.7**	**52.4**	**4.9**
Southern Africa					
Angola	11.3	25.4	10.1	6.4	-
Botswana	5.8	2.4	1.9	3.3	-
Cape Verde	-	-	0.2	-	-
Lesotho	-	-	0.2	-	-
Madagascar	-	-	0.6	0.8	-
Malawi	5.0	2.5	2.4	2.8	-
Mozambique	11.0	26.9	17.7	23.4	0.1
Namibia	26.8	2.7	1.9	1.6	0.1
Swaziland	-	-	0.1	0.5	-
Zambia	18.8	7.1	4.5	13.2	36.7
Zimbabwe	15.9	17.1	14.6	18.0	2.0
Total	**94.6**	**84.1**	**53.5**	**70.0**	**38.9**
South Africa	100.5	155.9	118.8	134.7	16.7
Grand Total	**426.5**	**454.6**	**371.6**	**428.5**	**82.4**

Canada/Sub-Saharan Africa Trade

CANADIAN IMPORTS ($'000 Canadian)

Exporter	*1988*	*1998*	*1990*	*1991*	*02-1992*
West Africa					
Benin	-	-	-	-	-
Burkina Faso	0.1	-	-	-	-
Chad	-	-	-	-	-
Côte d'Ivoire	29.6	21.3	24.1	22.0	2.5
Gambia	0.1	0.1	-	-	-
Ghana	4.9	5.3	8.2	5.1	0.2
Guinea	18.9	14.3	17.3	10.0	-
Guinea-Bissau	-	-	-	-	-
Liberia	6.2	3.7	-	1.4	-
Mali	16.0	13.4	8.0	5.8	-
Mauritania	-	-	-	-	-
Niger	9.8	6.8	11.3	9.1	-
Nigeria	505.6	561.4	518.0	473.9	47.7
Sao Tomé & Principe	-	-	-	-	-
Senegal	0.7	7.0	4.0	4.9	-
Sierra Leone	15.9	5.4	14.7	6.1	0.1
Togo	41.5	35.3	31.0	35.4	6.0
Total	**649.3**	**674.0**	**636.6**	**573.7**	**56.5**
Central Africa					
Burundi	-	0.1	0.1	0.2	-
Cameroon	1.5	2.2	7.4	1.6	0.2
Congo	-	-	4.2	0.1	-
Gabon	0.4	0.1	0.1	0.4	-
Rwanda	1.3	1.8	0.4	0.4	-
Zaïre	19.0	9.7	40.3	53.0	-
Total	**78.7**	**13.9**	**52.5**	**55.7**	**0.2**
East Africa/Island					
Comores	-	-	-	0.5	-
Kenya	14.2	13.6	12.5	13.3	1.0
Mauritius	13.5	7.0	4.5	13.7	0.8
Tanzania	2.0	1.1	1.5	2.8	0.3
Uganda	6.5	5.1	2.2	3.0	1.3
Total	**36.2**	**26.8**	**20.7**	**33.3**	**3.4**
Southern Africa					
Angola	88.8	56.8	42.4	0.2	-
Botswana	-	-	0.1	0.1	-
Cape Verde	-	-	-	-	-
Lesotho	1.7	2.6	2.8	2.9	-
Madagascar	1.7	2.0	2.1	6.7	0.2
Malawi	0.8	1.0	1.3	1.2	-
Mozambique	1.8	2.8	12.6	6.1	-
Namibia	15.6	13.2	14.2	20.6	-
Swaziland	48.8	28.1	17.2	20.0	-
Zambia	0.1	0.1	-	6.0	-
Zimbabwe	12.7	22.0	4.0	4.2	1.0
Total	**172.0**	**128.6**	**96.7**	**68.0**	**1.2**
South Africa	**206.1**	**141.3**	**125.8**	**137.7**	**10.9**
Grand Total	**1,142.3**	**984.6**	**932.3**	**868.4**	**72.2**

V

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Israel/Jordan/Lebanon/Syria
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Egypt/Morocco
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INTERNATIONAL TRADE CENTRES

If you are new to exporting or want to find out about trade services offered by External Affairs and International Trade Canada, your first step is to contact a trade commissioner at the International Trade Centre (ITC) nearest you. ITC officials will have the necessary information to aid you in getting your product or service to market in Iran. Before contacting ITC, it might be useful to prepare a brief marketing plan, outlining the needs of your firm (advertising product use, projected markets, transportation, etc.) and have questions prepared to ask the trade commissioner responsible.

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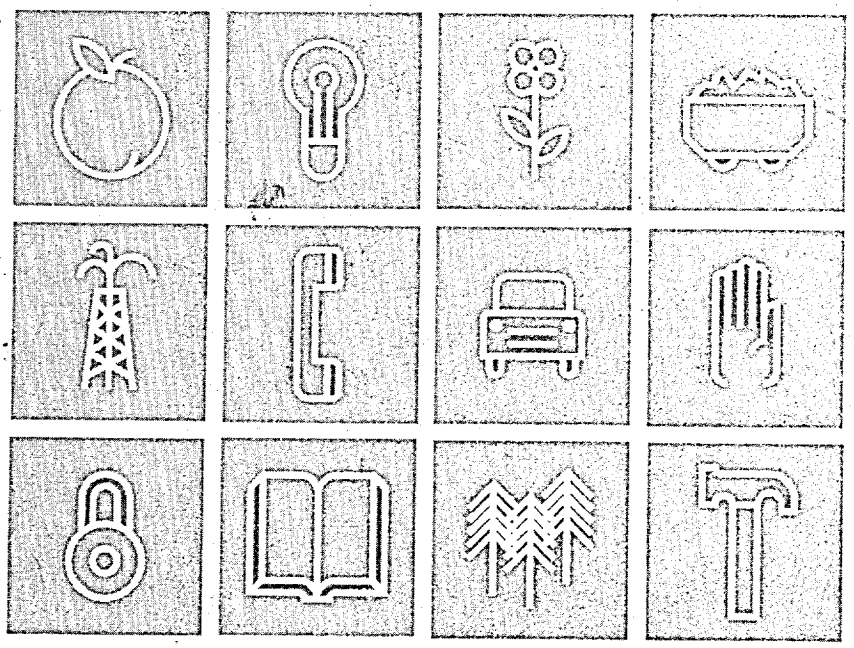
H4Z 1E8
Tel.: (514) 283-8185
Fax: (514) 283-8794

Prince Edward Island
International Trade Centre
P. O. Box 1115
l34 Kent Street, Suite 400
Charlottetown, P.E.I.
C1A 7M8
Tel.: (902) 566-7400
Fax: (902) 566-7450

New Brunswick
International Trade Centre
P. O. Box 1210, Assumption Place
770 Main Street
Moncton, New Brunswick
E1C 8P9
Tel.: (506) 851-6542
Fax: (506) 851-6429

Newfoundland
International Trade Centre
P. O. Box 8950, Atlantic Place
215 Water Street, Suite 504
St. John's, Newfoundland
A1B 3R9
Tel.: (709) 772-5511
Fax: (709) 772-2373

Export counselling is also available through EAITC's INFO-EXPORT.
Tel.: 1-800-267-8376
Ottawa area: (613) 944-4000
Fax: (613) 996-9709



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