



Groupe d'analyse des marchés internationaux

Market Report Geomatics Sector

Morocco



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1. Market Profile

1.1 Geopolitical Considerations

Morocco is a constitutional monarchy made up of 42 provinces and 9 prefectures. Rabat is its capital. Tangier and Casablanca are other major cities. As part of the Maghreb, the country's climate is favorable to agriculture.

Morocco is situated at the western extremity of Northern Africa and is bordered to the north by the Mediterranean, to the east by Algeria and to the south by the Sahara.

Even though the population is Islamic with Arab dominance, according to available analysis, the country does not have bases of support to religious fundamentalism such as found in its Algerian neighbor.

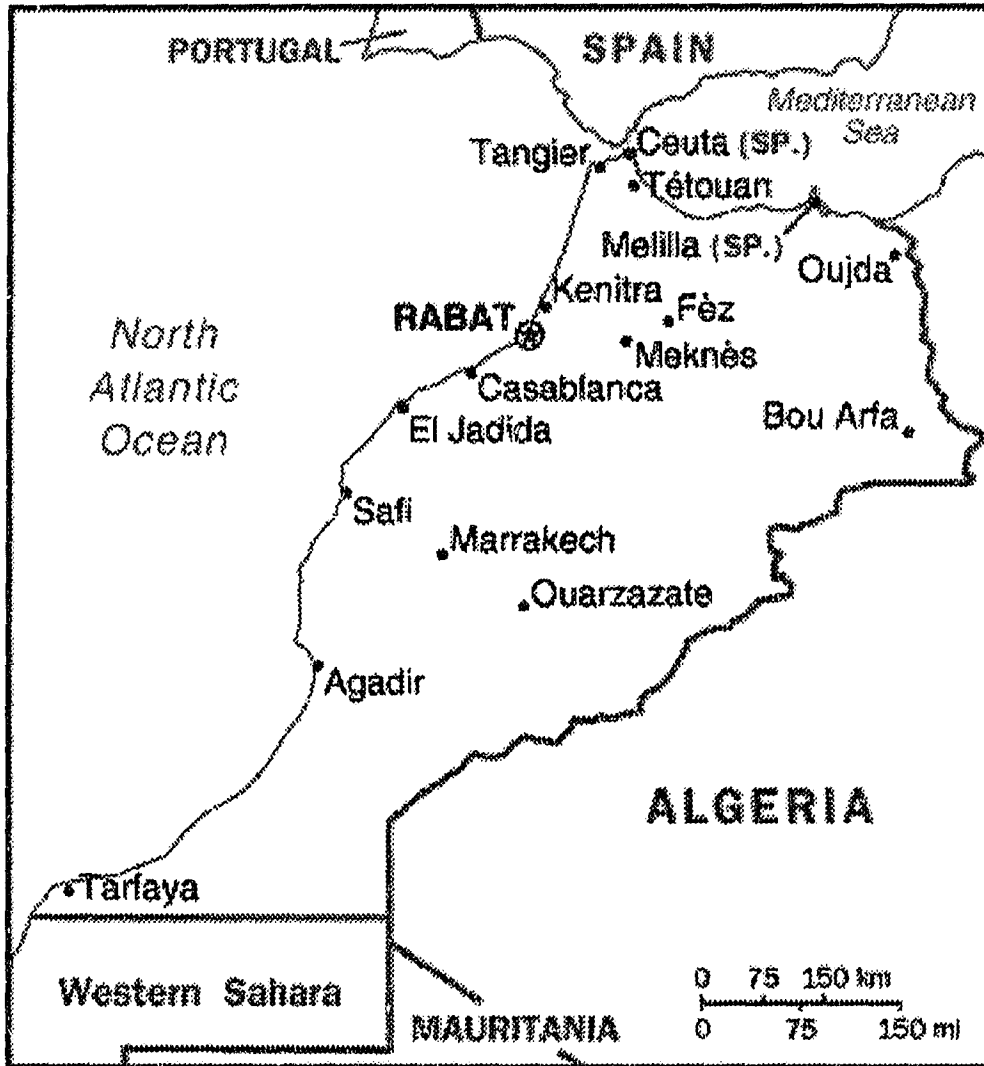
Arabic is the language of use but as the country is a former French colony, French is often used and remains the language of business and diplomacy.

Since 1961, Morocco is governed by King Hassan II. The king chooses the prime minister as well as the Cabinet members. The house of representatives is two thirds elected by universal suffrage while the last third is elected by syndicated representatives, colleges and universities, and government professionals.

The population is mostly rural (54 % in 1991) and is increasing rapidly. It is foreseen that the population will reach 30 million by the year 2000 and 43 million by the year 2025. Finally, the social fabric is very young as it is mainly composed of people under 24 years of age.

Overview of Morocco	
Area	446 300 km ²
Comparison	29 % of Quebec
Borders	Algeria Western Sahara
Population (1995)	29 779 156
Active Population	10 200 000
Demographic Growth	2,05 %
Population Breakdown (1995)	0-14 yrs : 38 % 15-64 yrs : 58 % 65 and + : 4 %
Life Expectancy	67,53 yrs (M) 71,61 yrs (W)
Ethnic Distribution	Berber 99,1 % Other 0,9 %
Present Languages	Arabic (official) French Berber Dialects
Religions	Muslim (98 %) Christian (1,1 %) Jewish (0,2 %)
Literacy rate	43,7 % Men 56,6 % Women 31 %

MOROCCO



Source : Central Intelligence Agency, 1995.

1.2 Climate

Morocco enjoys a mediterranean climate with hot summers and temperate winters in most of its northern lowlands. The average temperature in Rabat is 23°C in August and 12°C in January. More important climatic variations are observed in the region situated between the coast and the mountains, with in comparison, the average temperature in Marrakesh being 29°C in August and 1°C in January. Rainfalls are most important in the North and they decrease towards the South. Tangier, close to the Strait of Gibraltar, receives an average of 890 mm of rain annually. Agadir, situated on the south coast bordering the Atlantic Ocean, receives an average of 230 mm of rain. In the mountains, the average annual precipitations is of 1 000 mm which can be either snow or rain. In the desert, precipitations are unpredictable and usually average 100 mm. In 1995, there was a severe drought. This caused harmful effects on the economy which essentially relies on agriculture. The situation improved in 1996.

1.3 Infrastructures

Thanks to multilateral loans from foreign banks, the Moroccan government continues to expand its infrastructures. The sectors that benefit from this are telecommunications, the road network, water distribution and electrical installations. Internal telecommunication are adequate but international transmissions are difficult. The country benefits from transportation infrastructures that are very well developed throughout the territory. There are over 29 440 km of paved roads in Morocco as well as an efficient railway service for the transportation of people and merchandise. Finally, there are ten principal ports and six international airports in the country.

1.4 Economy

Morocco faces the typical problems of developing countries. With the support of the International Monetary Fund since 1980, the government follows an economic plan which aims to reduce expenses while liberalizing international commerce and internal economic activities. Moreover, the government is trying to control the rate of inflation in order to attract foreign investments.

Despite these initiatives, the country's unemployment rate is high (16 %), its balance of trade is in deficit (-2 billion US dollars in 1996 and an expected -2.3 billion US dollars for 1997) and the country widely depends on foreign creditors with an external debt of 23.4 billion US dollars in 1996 (24.2 billion US dollars predicted for 1997).

	1995
GNP per capita \$ U.S.	3 000
Annual Growth of the GNP	-7.6 % 12 % for 1996
Inflation	6.1 %
Unemployment	16 % (1994)
Exports \$ U.S.	6.9 billion
Imports \$ U.S.	9.3 billion
External Debt \$ U.S.	23.8 billion

Morocco's economy is strongly based on the exploitation of natural resources and on agricultural activities. The latter represents about 20 % of the gross national product. Also, half of the Moroccan labor force works in the agricultural sector.

1.5 Investments and International Trade

Canadian exports to Morocco have more than doubled between 1993 and 1996, representing from 93 million to 198 million respectively for these years. However, Quebec's performance for this period is much less important with a setback of 3 million dollars in total.

Trade Balance of Morocco (in \$ millions cad)	1993	1994	1995	1996
With Canada				
Exports towards Morocco	93	74	189	198
Imports from Morocco	69	50	70	82
With Quebec				
Exports towards Morocco	27	15	16	23
Imports from Morocco	32	27	37	37

In \$ millions Canadian.

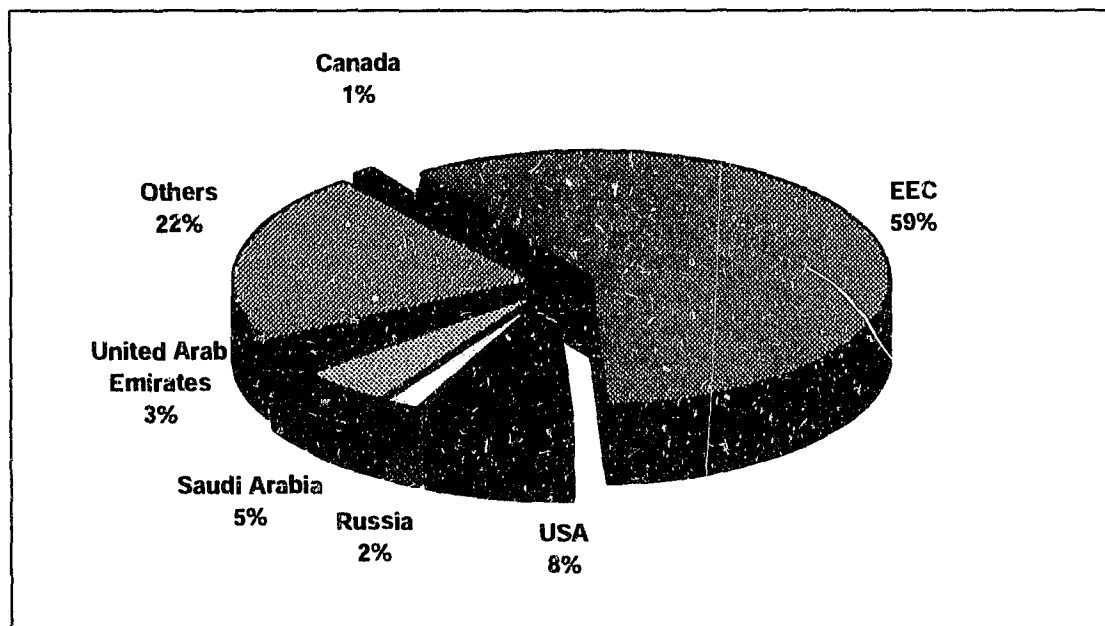
Source : Industry Canada

Despite the strong increase of Canadian exports towards Morocco and the fact that this country is our third most important partner in Africa, our trade relations are still at an embryonic state.

The Moroccan government is presently looking to attract foreign investments. Among the displayed measures to reach this goal are the simplification of procedures and tax alleviations such as a 35 % reduction of company taxes with the possibility of total exemption for export businesses during a five year period. Also, there is an exemption of the VAT (value added tax) and a reduction of custom tariffs at a rate of 2.5 % to 10 % on the purchase of equipment.

The countries that trade the most with Morocco are members of the European Union (59 %). The country's principal exports are phosphate, phosphate by-products and semi-transformed goods (raw materials subject to a first transformation). Its principal imports are petroleum, foods, chemical products and machinery.

Efforts are being made to reduce the country's dependence on the import of petroleum. Since 1976, Moroccan products benefit from the preferential status of the European Union.



Principal Trade Partners of Morocco.
Source : Central Intelligence Agency, 1995.

The Canadian share of Moroccan imports is minor but it is strongly increasing. Our principal products exported to Morocco are hard wheat, sulfur, butter, electrical apparatus, aluminium and aluminium by-products.

In November 1995, Morocco signed a partnership agreement with the European Union preparing the set-up of a free-trade area following a transition period of twelve years. The country is a member of the WTO and of the Union du Maghreb arabe (UMA). Morocco is presently working to strengthen its relations with its partners (Algeria, Libya, Mauritania, Tunisia) in order to establish a wider economic integration between these countries.

1.6 Canadian Aid to Morocco

Many Canadian agencies offer aid to Morocco for different projects: the CIDA (Canadian International Development Agency), the Export Development Corporation, the IRDC (International Research and Development Center). This aid is of a financial or technical nature and it essentially aims at favouring cultural and economic exchanges between the two countries as well as helping Morocco benefit from a certain knowledge of Canada's own expertise sectors.

Among the CIDA's programs, it is important to mention the Programme du Fond de Développement du Secteur Privé (PFDSP) in Morocco which was launched by the Canadian International Development Agency (CIDA) and the Moroccan Ministry of Finance and External Investments. Through this Program, admissible private businesses and other organizations can request aid in order to transfer Canadian know-how in management and technology and purchase Canadian technology. An Institutional aid for the reinforcement of the entrepreneurial context is also offered.

The clients of the PFDSP are small and medium size manufacturing and service businesses in which there is the participation of a Moroccan majority as well as other organizations, public businesses and professional and industrial associations which have a strong influence on the entrepreneurial context. The sectors of priority are the agricultural food industry, fishing, food transformation, energy, environment restoration, water treatment, finances, computerized management technology and textiles.

2. Morocco's Geomatics Sector

Geomatics is the discipline which manages space related data and which calls upon the science and technologies related to its acquisition, stocking, treatment and distribution (Office de la langue française du Québec, 1993). Geomatics covers geodetics as well as cadastral surveys and construction surveys. This field also includes satellite positioning systems, cartography activities and the acquisition of remote sensing data as well as the creation of geographical information systems.

2.1 General Outline

In Morocco, geomatics is a newly emerging field of activity for which a tangible interest has developed in the past ten years. However, all that is related to cadastre and cartography has existed for much longer as it was inherited from the French administration. A good basis of geomatics infrastructures in the same lines as the French Institut Géographique National (IGN) infrastructures therefore already existed.

Close to everything that concerns geomatics in Morocco is state related. The lead data producers

are public organizations, mainly the Land Tenure, Cadastre and Cartography Administration which works under the Ministère de l'agriculture et de la mise en valeur agricole. The Centre Royal de Télédétection Spatiale (CRTS), which will be examined further on, ensures the coordination of remote sensing activities in Morocco. Moreover, the main client for geomatics products and services is the State itself with the different ministries concerned. The major companies which could be concerned are public companies such as the Office Chérifien des Phosphate (OCP) or even the company that manages the country's hydrocarbon resources.

2.1.1 Fields of Application in Morocco

As of the past few years, the Moroccan government intends to follow a sustainable development policy. In this context, a phenomenal increase is noted for the need of reliable information and space related data integration in the process of territorial planification and management.

The fields of application of geomatics in Morocco essentially reach cartography, environmental management, management of the fishing industry and national development.

The sector of Geographical Information Systems (GIS) is in growing progression and the needs are tangible in many sectors where the potential of these tools for management and planning has been understood.

This is demonstrated by the installation of GIS in different departments of the ministries related to urbanism and habitat, environment, water resources, road networks, agriculture, forests and also, desertification monitoring.

The economical stakes of this modernization are very important for this developing country because geomatics applications will enable it to better optimize its resources and avoid waste and environmental deterioration which could slow its future development.

2.1.2 The Centre Royal de Télédétection Spatiale

Morocco has adopted the necessary means to support this will towards sustainable development by creating, among other things, the Centre Royal de Télédétection Spatiale (CRTS).

The CRTS is at the center of geomatics activities in Morocco and plays the same role as our Canadian Center of Teledetection (CCi).

It contributes to the country's remote sensing policy, coordinates projects in Morocco but mostly archives and distributes satellite data. Among the specialties offered by the CRTS are space cartography, satellite photogrammetry and geographical information systems for forests. The CRTS also organizes training sessions on space remote sensing, geographical information systems, urbanism and environment management.

The CRTS is responsible for the distribution of satellite images in the entire Kingdom of Morocco. Moreover, in order to realize this task, this organization has concluded many different agreements with numerous distributors of satellite images, notably with Spot Image in France for Spot data, with Eurimage in Italy for LANDSAT, NOAA, ERS and IRS, as well as with RadarSat International of Canada.

The CRTS has material as modern as ours at its disposal and therefore uses many work stations enabling the treatment of images and the running of GIS, digitalizers, scanners, plotters, etc.. Recently, this center was equipped with NOAA reception equipment thanks to funding from the European Community.

It is important to know that the CRTS is controlled by the army.

2.1.3 The Role of Universities and Research Centers

Universities and research centers play an important role in the development of geomatics in Morocco. The Institut Agronomique et Vétérinaire Hassan II and the Institut National de Recherche Agronomique (INRA) must be mentioned. The Institut Agronomique et Vétérinaire Hassan II is an establishment of higher education as well as a research center focusing on the following fields : studying the impact of urbanization on farm land, studying field irrigation problems, agriculture in arid areas, soil development, forest management and pedology. As for the INRA, it is very active in the field of agronomical research and everything that relates to cultivation in arid areas.

Considering the research interests of these institutions, they represent the forerunners of the use and application of geomatics as they quickly understood its contribution. They therefore favoured the entry and massive use of decision making tools that the GIS and space related data can represent.

Morocco also plans to develop an expertise in the geomatics sector and local universities are concerned parties of the process. However, a major part of higher training in this field is done abroad. For the past ten years, the Moroccan government has been sending many students to France, the United States and also Canada to acquire masters or doctorate degrees.

Our ties with Morocco are reinforced by the growing presence of Moroccan students, with or without grants, in our schools. There are many students in remote sensing at the University of Sherbrooke (CARTEL), at the Geomatics Research Center of Laval University and at the Geography Department of the University of Quebec in Montreal (UQAM). It must be noted that it could be interesting for a local business to establish ties with these students as they constitute a pool of potential future decision makers in their country. This presents a non negligible opportunity to form a contact network, especially since some of these students are already employed in their country.

2.2 Moroccan International Cooperation in Geomatics

In this section, the countries which have been cooperating with Morocco for many years will be presented. This will enable us to define the position Morocco plans to have regarding the use of geomatics applications and also to identify the organization with whom it may be interesting to develop connections. In fact, the organizations presented here sometimes call upon private expertise. It is therefore important to be aware of their activities and projects.

2.2.1 At the Regional Level

Morocco is part of the Centre Régional de Télédétection des États d'Afrique du Nord (CRTEAN). The CRTEAN is located in Tunis and is devoted to the promotion of remote sensing activities among its members (Algeria, Morocco, Libya, Mauritania, Tunisia) and the implementation of regional projects in applied remote sensing.

Concerning training, the Center insures the coordination of remote sensing training at all levels. In close collaboration with the cooperating organizations, the CRTEAN takes responsibility for insuring continued training and high level training for the citizens of the member countries. The CRTEAN is also responsible for the organization, at a national and regional level, of conferences, seminars, expositions and other scientific manifestations dealing with all aspects linked to remote sensing.

Moreover, Morocco is at the center of a project with coastal countries of north-western Africa (Guinea, Mauritania and Senegal) whose aim is the set-up of regional data base thanks to a GIS. This is a wide-ranging project that is managed by the CRTS. The Centre Royal de Télédétection Spatiale is, in fact, very active in the training of experts coming from the neighbouring countries mentioned earlier. Following the request of the FAO (*Food and Agriculture Organization*), the CRTS gave many training sessions to citizens of Guinea, Mauritania and Senegal.

2.2.2 At the International Level

Morocco also collaborates strongly with the countries of the European Community (European Space Agency) and particularly with France from whom Morocco receives a lot of financial and technical assistance.

In the past few years, Moroccan collaboration with **Canada** has been reinforced by the GLOBESAR¹ project. In preparation for the launching of the Canadian satellite RADARSAT, the Canadian Remote Sensing Society (CRSS) in collaboration with the Canadian Space Agency and Radarsat International chose the CRTS as Moroccan coordinator of the GLOBESAR research

¹ GlobeSAR is an international program introduced in 1993. Its goal is to prepare participants for the use of RADARSAT data for applications of resource management in their country. In an international perspective, GlobeSAR offers training in the form of preliminary projects of practical demonstrations using simulated data acquired with the airborne radar of the CCT, combined with field data acquired in participating countries. These countries are China, Jordan, Kenya, Ouganda, Tanzania, Malaysia, Morocco, Thailand, Tunisia and Vietnam.

project. This project aimed to implement national expertise in the field of radar image use in different environment related studies. GLOBESAR data will be mostly used for the surveillance of natural resources, particularly to determine regions affected by erosion where there exists a serious irrigation problem. The satellite images will also be used for cartography.

2.2.3 International Organizations

Morocco takes part in the research activities of the **Sahara and Sahel Observatory (SSO)**. The SSO is an international institution which offers the opportunity for African countries to unite their efforts, with the support of northern countries, in order to identify and undertake the necessary actions against desertification.

The SSO's mission is to encourage the development and enhance the value of its partners informational capital in order to make optimal use of the means destined to fight desertification. The SSO also hopes to set up Integrated Information Systems on the Environment (IISE) and Information Systems on Desertification (ISD). There has been a regional experimental project named *ISD Morocco*. The SSO also displays its efforts in weather forecasting.

Morocco also receives assistance from the **United Nations Institute for Training and Research (UNITAR)**. UNITAR is an independent institute of the United Nations which aims to stimulate training and research. Each year, UNITAR organizes approximately 70 training activities on five continents. Over 3 000 government officials, at different levels of duty and responsibility, benefit from these activities annually.

Four of UNITAR's major programs are directly related to the transfer and development of new information and communication technologies in developing countries. Among the programs are: the «Integrated Information System on the Environment» program in Africa, better known as AFRICAGIS and jointly carried out with the Sahara and Sahel Observatory, and the «Space Information System» for climatic change.

Morocco also widely benefits from the assistance of the **FAO (Food and Agriculture Organization)** which is an organization of the United Nations as well as of the **UNDP (United Nations Development Program)** particularly for projects concerning the protection of the environment.

2.3 The Different Projects Concerning Geomatics

In this section, a few projects of the past years concerning geomatics will be presented. Thus it will be possible to estimate the actual needs in remote sensing.

Some of the projects undertaken by the Centre Royal de Télédétection Spatiale

The CRTS has been involved in various fields and very often in fields directly related to agriculture

and environment management. The following are some of the projects undertaken by the CRTS :

- The use of satellite images for the monitoring of deforestation : This project monitored the deforestation phenomenon in the Mamora forest (154.000ha), which was chosen as trial site. The satellite data that was used entirely covered the Mamora forest on two dates : 1989 and 1991. A thematic map of the forest regression which occurred between the two dates was produced at a 1/50 000 scale.
- The use of remote sensing in order to carry out cartography and the monitoring of soils in irrigated areas : The CRTS used SAR radar data of the European satellite ERS-1 to establish the soil occupation map based on a series of images acquired at different dates and to estimate the humidity of the soil. The goal of this project was to validate the relations between the measures of the backward diffusion coefficient provided by ERS-1 and estimate the uncertainties in a case of actual use.
- The use of remote sensing and GIS in the field of housing : this project consisted of the elaboration of model a using a GIS which integrated cartographic, statistical and image data. The model was structured into four levels of information corresponding to scales at different intervention. The image treatment consisted in establishing the cartography of the evolution of the urban fabric for the extended region of Rabat during a ten year period.
- The development of sea resources management system based on satellite images : The general goal of this project was to implement an observatory of sea phenomenon by using satellite data. This observatory would necessitate continual maintenance and updating. Piloted by the CRTS and the ISPM (Institut Scientifique des Pêches Maritimes), the observatory would be responsible of producing information to facilitate sea resources management. This observatory became completely operational at the end of 1996.
- The use of satellite remote sensing for statistical inventory means and the forecast of agricultural yield : The goal of this project is the implementation and the composition of an advanced system of farm information for the Ministry of Agriculture. Completed at the end of 1996, this system meets the following objectives :
 - To establish thematic cartography and updating stratification ;
 - To make use of farm inventory and integrate satellite data into the present system of farm statistics ;
 - To elaborate methods of monitoring the principal crops.

This concerned the AGRIMA project (financed by the PNUD and the Moroccan Ministry of Agriculture), a ARC-INFO/ERDAS type ISG is actually in place.

- The GEOSTAT project must also be mentioned. This project worked towards the cartography and surveillance of farm land in Morocco. The CRTS and the Ministry of Agriculture collaborated with the French Centre National d'Études Spatiales and the OSS. It is very possible that this project be extended to the rest of the region and that the CRTS becomes its principal organizer.

Finally, it is useful to mention another project carried out by a subsidiary of the Canadian company **LAVALIN** (Photosur). This project consists of proceeding to an inventory of national forest resources. Different technologies were use such as photo-interpretation, space remote sensing and measuring from the ground. All space related data was structured and integrated in a system

of geographical information (GIS/PAMAP). Theoretically, this study should be revised every ten years.

3. Business Opportunities

Thanks to the inventory presented above, the needs hoped to be met by geomatics applications can be known.

For the past ten years, there has been an important economic development in Morocco and the agricultural sector remains a sector of prime importance. It is therefore essential for this country to call upon all available technology to ensure its perennity. To meet the demands of the planning and management of sustainable development, it is now acquired that geomatics applications offer new possibilities to fill the gaps concerning spatial information.

The fields of vital interest for the country are the following :

- The elaboration of cartographic and cadastral data bases ;
- The IGS applied to agricultural planning and management ;
- Natural resources management ;
- Sea resources management (fisheries) ;
- National development and urbanism.

Businesses in geomatics will also find opportunities in the following sectors :

- Road network management ;
- Railway network management ;
- Petroleum research.

It is necessary to mention various projects to come :

- The European Commission recently financed a major project which aims towards supporting the promotion and development of space remote sensing in Morocco. This project's main goal is the development of a management system for maritime and forest resources.
- Concerning the Land Tenure, Cadastre and Cartography Administration, the elaboration of a cartographical data base in digital format is planned.
- Concerning the Administration des Eaux et Forêts, the first inventories should be revised and the demarcation of the State's forest sector should be determined. It is also necessary to elaborate computerized maps of forest management .
- The ministère des Pêches et de la Marine marchande plans to implement a system enabling it to locate by satellite the fishing boats which are in the economic area exclusive to Morocco. This implies the set-up of four transmission stations and a system of GPS

(*Global Positioning System*) type.

- Recently, the Moroccan Office national des postes et Télécommunications (ONPT) issued an invitation to tender concerning the supply, installation and putting into service of a spatial information for telecommunications system. This invitation to tender is financed by the World Bank.
- Finally, it is mentioned that the Société nationale des autoroutes du Maroc has undertaken a major plan of highway development and extension. This plan is laid out until 2004. It is most probable that there will be needs concerning land surveys and impact studies.

3.1 Clients of the Public Sector

As mentioned earlier, the majority of geomatics applications clients are public organizations.

Sales carried out to the Moroccan government are decentralized. Thus, the department or ministry making the demand or the public tender deals directly with the designated supplier. Public tenders are published in local newspapers. Copies are conveyed to the different Moroccan consulates abroad. However, it is necessary to check with the Canadian Embassy in Morocco in order to know of the most recent public offers.

The closure of tenders is usually of 30 to 90 days after the publication of the offers and they depend on the complexity of the project. All tenders must be written in French. The potential supplier's tender must include two copies of the following information :

- the name of the company ;
- the address of the company ;
- the company's activities ;
- bank account numbers ;
- bank guarantees ;
- the company's technical and human resources ;
- references (undergone projects, sub-contractors, etc.).

It is recommended to use the help of a local partner in order to complete the necessary documentation for the tender. Usually, the contract is granted to the lowest bidder. Generous funding plans offered by the bidder or his government of origin can also weigh in his favour.

In most cases, projects that require remote sensing are largely financed by international financial institutions such as the World Bank, the African Bank of Development, the European Bank of Development, CIDA, as well as certain Arabic development funds (Koweit, etc.).

It is recommended to be registered with these organizations in order to be on their list of service suppliers. However, this isn't always necessary because it's possible that a Moroccan ministry

receives money directly and chooses its suppliers itself.

The Canadian Ministry of Foreign Affairs offers a very good internet service which keeps one aware of business opportunities linked to international financial institutions. **IFinet** offers to Canadian exporters an access to information on projects financed by international financial institutions (IFI), in close to 20 sectors in emerging markets and developing economies. Business guides destined to help businesses in their tenders as well as useful website addresses can be directly obtained through this website. IFINET provides information on business possibilities with IFI starting the month of November 1995 and it is regularly updated. This service can be found at :
www.dfait-maeci.gc.ca/ifinet/menu-f.htm

3.2 Clients of the Private Sector

There are two types of clients of the private sector :

- Certain big public businesses that work natural resources such as phosphate mines and hydrocarbons.
- Private businesses that wish to subcontract certain aspects related to geomatics within the framework of study projects concluded with various ministerial departments.

In all cases, businesses do not represent the largest market share. However, it can be interesting to develop ties or promote yourself to certain lead players working in the country (railway, road and bridge construction, etc.), as they may offer contracts.

3.3 Distribution Channels

A foreign business that wishes to enter the market must have a long term outlook as establishing contacts can take a long time. This is due to the business culture of Maghreb countries. To do business, it is necessary to know your partner well and this requires the development of strong ties on which trust depends.

It is strongly recommended to establish a local presence because it is always preferable to be the closest possible to the worked for market. This enables the company to stay well informed. Also, a local presence is a sign of commitment towards the country and its business community will appreciate this demonstration of reliability. It is difficult to achieve long distance business relations with Moroccans.

If opening a local office is not possible, it is possible to acquire the services of an agent who will represent the company in its local endeavors. Though this can be difficult to find due to the technical nature of geomatics services, academia or certain employees of research centers can fill this role. It must not be forgotten that in general, Moroccans have a highly developed business sense. That is why it is important to establish contacts with the various research institutions.

Finally, another way to establish a presence in Morocco is to sign an agreement with a local business. Not many businesses in Morocco have the necessary expertise to provide geomatics services. Thus, it is possible to approach engineering-consultant companies interested in this type of agreement. The two businesses therefore become complementary : the local company provides its knowledge of the market and its contacts while the Canadian company provides its technical competence.

4. Local and Foreign Competition

Local competition is not very important in Morocco. A few small businesses work in cartography, photogrammetry and topography but their presence in these very technical fields is not very important.

To our knowledge, there exists one large semi-private company called TELE CART S.A. which holds an important expertise in remote sensing, cartography and topography as well as in GIS. This company regularly intervenes on projects concerning agriculture. It works with public organizations and particularly with the Direction de la Conservation Foncière (land tenure department).

However, international competition is quite strong as European companies, particularly French, hold a large share of the market. France has always had privileged ties with the Maghreb countries and despite a few passing tensions between the two countries, French presence is still very strong in Morocco. It must not be forgotten that for France, the Maghreb countries represent a «natural» market. It is also important to remember that Morocco often looks to France for support on the international front.

American presence is also worth mentioning, specially since the United States are making considerable efforts to establish themselves in Africa in order to counter-balance European presence.

However, this fierce competition must not discourage Canadian businesses. Canada is well liked in Morocco and Canadian competence in geomatics is starting to be recognized. Moreover, various actions of technical cooperation undertaken by Canada in the past years has contributed to our countries good reputation. Also, Canada started establishing ties with Morocco many years ago and those efforts are starting to bear fruit.

5. Factors to Consider to Access the Market

5.1 Standards, Certification and Local Registration

Even though ISO 900 certification is not required by the Moroccan government, European firms use it as a sales argument. Having this certification places the Canadian business on equal footing with the competition.

5.2 Import Regulations

In accordance with the economic orientations of the government aiming notably to relax barriers to entry, custom tariffs have been lowered and now vary from 0 to a maximum of 35 % of the imported good's value. It must be noted that the highest tariffs are imposed on luxury goods and goods that compete with locally manufactured products.

Moreover, an additional charge of 10 to 15 % can be imposed. Finally, an import surcharge (VAT) is applicable on products imported to Morocco. This tax varies from 7 to 19 %.

Equipment or material which save water or energy or protect the environment are exempted from custom duties and sales taxes. These demands of exemption must be requested to the Moroccan Ministry of Industry.

5.3 Copyrights

The legal system regulates patents and other copyright titles. Morocco has signed many international agreements that guarantee copyrights.

5.4 Financing and Payment

The majority of efforts to get rid of pollution come from government initiative. Financing these projects is made possible thanks to special lending programs of the World Bank, the African Bank for Development and other European and world organizations.

Most Moroccan imports are paid by an irrevocable letter of credit emitted by a well-known local bank having branches in the supplier's country. Terms of payment are usually of 90 days.

6. Cultural Considerations

When doing business with commercial partners, despite the existence of a certain standardization of transactions (shipment and reception of merchandise, methods of payment and required documents) particularities surface in the preliminary phase of closing a transaction. As the negotiator has a cultural background different than yours, you may not understand things the same way. However, as Morocco was under French influence for many years before its independence in 1956, many of the country's business customs and traditions are similar to those prevailing in the Western World.

6.1 Particularities

Even though religious fundamentalism is not established in Morocco, the Muslim religion prescribes certain rules to follow. Thus, it is forbidden to drink alcohol during the Ramadan period, except for foreigners.

6.2 Travelling Inside the Territory

There are certain unstable zones in Morocco, notably in the Western Sahara which is the object of sovereignist claims from the Polisario Front. Though a cease-fire is in force, the region is considered unstable due to many incursions in the sector.

Also, certain unexplored zones are bristling with anti-personal mines. This is the case for the Western Sahara and the regions along the Mauritanian border. A special permit is required for all travel in this sector.

6.3 Measure Standards

The metric system is used in Morocco. Electrical standards are of 50 cycles, one and three phases, with a nominal voltage in the major cities of 110 or 220 volts (mostly 220 volts).

6.4 Currency

The local currency is the dirham (DH). There are 100 centimes in each dirham. Bills have a denomination of 200, 100, 50, 20 and 10 dirhams.

Bibliography

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NATIONAL TRADE DATA BANK (1996), *Environmental Projects : Morocco*, June 1996.

NATIONAL TRADE DATA BANK (1996), *Trade Conditions : Morocco*, March 1996.

PRICE WATERHOUSE (1991), *Doing business in Morocco*, Price Waterhouse - Ernst & Young, New York.

U.S. DEPARTMENT OF STATE (1996), *Morocco Country Commercial Guide*.

WORLD BANK ORGANISATION (1997), *Middle East and North Africa Region*.

Useful Websites

Gouvernement Marocain

http://194.204.210.2/frensh/f_page.html

Ministère de l'Environnement marocain

<http://www.minenv.gov.ma>

Department of Trade (U.S.A.)

<http://lepnt1.itaiep.doc.gov/>

Ministry of Foreign Affairs and International Trade (Canadian government)

<http://www.dfait-maeci.gc.ca>

Export Source (Canadian government)

<http://exportsource.gc.ca>

Virtual Office of Environmental Industry

<http://virtualoffice.ic.gc.ca/>

Trade Compass

<http://www.tradecompass.com>

Groupe d'analyse des marchés internationaux - GRAMI

<http://cetai.hec.ca/grami>

Federal Office of Regional Development

<http://www.bfdrq-fordq.gc.ca>

APPENDICES

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Appendix 1

Trade Shows

For more information concerning trade shows in Morocco, contact :

L'Office des Foires et des Expositions de Casablanca (OFEC)

Direction générale : 11, Rue Boukraa (ex. Jules Mauran), Casablanca, Maroc

e-mail: ofec@casanet.net.ma

Tel: (212) 2 27 15 45 / (212) 2 27 16 64 / (212) 2 27 15 32

Fax: (212) 2 26 49 49

Teleg. addr.: FOIRINTER - Telex: 22093 M

ARCADIE (International show on architecture, urbanism and environment)

Date : October 9 to 12 1997

Location : Casablanca

Contact : OFEC

Environmental Missions of Canadian Businesses in Morocco

Date : January 19 to 22 1998

Location : to be confirmed

Contact : M. Jacques Laberge, (MAECI),

Tel : (613) 944-6590

Appendix 2

Canadian Contacts

**Market Information Department
Ministry of Foreign Affairs and International
Trade**

Ottawa (ON) K1A 0G2
Tel.: (613) 996-8086
Fax : (613) 944-0050
Contact : Jeffrey Tracey (Space Industry
/geomatics/ fine products technology)

**Maghreb and Arabic Peninsula Department
Ministry of Foreign Affairs and International
Trade**

125, promenade Sussex
Ottawa (Ontario)
K1A 0G2
contact : Jacques Laberge
Tel :613-944-6590
Fax :944-7431

Industry Canada

5, Place Ville-Marie, 7^{ème} étage,
Montreal (PQ), H3B 2G2
Contact : M. Aomari, délégué commercial,
Technologies de l'information
Tel : 514-283-7814
Fax : 514-283-5157
E-Mail : aomari.aissa@ic.gc.ca

**Canadian International Development Agency
(CIDA)**

Person in charge, Tunisia : Luce Bourgault
200, promenade du Portage
Hull (Québec), K1A 0G4
Telephone : (819) 953-0500
Fax : (819) 953-6088
Internet : <http://www.acdi-cida.gc.ca>
E-mail : info@acdi-cida.gc.ca

**Ministère de l'Industrie, du Commerce, de la
Science et de la Technologie. (Quebec)**

380, Saint-Antoine Ouest, 5^{ème} étage
Montreal, (Quebec) H2y 3X7
Person in charge, Northern Africa : Michel Gélinas
Tel : 514-499-2195
Fax : 514-873-4230

Canadian Embassy

13 bis, rue Jaafar As-Saddik,
Rabat-Agdal, Maroc
Postal address :
B.P. 709, Rabat-Agdal, Maroc
Telephone : (212-7) 67-28-80
Fax : (212-7) 67-21-87
Ref. : Mme Najat Benyahia

**Geomatics Business Expansion Canada
Ministry of Natural Resources**

615, rue Booth
Ottawa (ON) K1A 0E9
Tel.: (613) 995-9941
Fax : (613) 943-8838
Contact : A.S.R. Terjanian ou P. Chagarlamudi
Internet: <http://www.geocan.nrcan.gc.ca/>
e-mail: geomatics.info@geocan.nrcan.gc.ca
Services provided : trade information, market access,
facilitating and promoting trade, strategic brokerage

Canadian Association of Geomatics Businesses

170, av. Laurier ouest, Pièce 1204
Ottawa (ON) K1P 5V5
Tel.: (613) 232-8770
Fax : (613) 232-4908
Contact : Ed Kennedy, président
e-mail: giac@globalx.net

International Research and Development Center (IRDC)

BP 8500, Ottawa, Canada K1G 3H9
Contact : Djilali Benmouffok
Tel : 613-236-6163 ext 2469
Fax : 613-567-7749

Geomatics Development Center

140, Grande Allée Est, Bureau 470
Quebec (Quebec) G1R 5M8, Canada
Telephone : (418) 523-2400
Fax : (418) 523-2329
Contact : Bernard Plante
E-mail : cdg@cdg.cefric.qc.ca
Internet : <http://www.cdg.qc.ca>

FEDERAL OFFICE OF REGIONAL DEVELOPMENT (QUEBEC)

SMALL BUSINESS ACCESS CENTER -
Abitibi/Témiscamingue
 906 5th Avenue
 Val d'Or, Québec J9P 1B9
 Telephone : (819) 825-5260
 Fax : (819) 825-3245

SMALL BUSINESS ACCESS CENTER - Bas Saint-
Laurent/Gaspésie/ Îles-de-la-Madeleine
 2 Saint-Germain Street East, suite 310
 Rimouski, Québec G5L 8T7
 Telephone : (418) 722-3282
 Fax : (418) 722-3285

SMALL BUSINESS ACCESS CENTER - Bois-Francs
 Place du Centre
 150 Marchand Street, Suite 502
 Drummondville, Québec J2C 4N1
 Telephone : (819) 478-4664
 Fax : (819) 478-4666

SMALL BUSINESS ACCESS CENTER - Côte-Nord
 701 Laure Blvd, 2nd floor
 Suite 202B, P.O. Box 698
 Sept-Îles, Québec G4R 4K9
 Telephone : (418) 968-3426
 Fax : (418) 968-0806

SMALL BUSINESS ACCESS CENTER - Estrie
 Place Andrew Paton
 65 Belvedere Street North
 Suite 240
 Sherbrooke, Québec J1H 4A6
 Telephone : (819) 564-5904
 Fax : (819) 564-5912

SMALL BUSINESS ACCESS CENTER - Île de
Montréal
 800 Place Victoria Tower
 Suite 3800, P.O. Box 247
 Montréal, Québec H4Z 1E8
 Telephone : (514) 283-2500
 Fax : (514) 496-8310

SMALL BUSINESS ACCESS CENTER -
Laval/Laurentides/Lanaudière
 Tour du Triomphe II, Suite 204
 2540 Daniel-Johnson Blvd
 Laval, Québec H7T 2S3
 Telephone : (514) 973-6844
 Fax : (514) 973-6851

SMALL BUSINESS ACCESS CENTER - Mauricie
 Le Bourg du Fleuve
 25 des Forges Street, Suite 413
 Trois-Rivières, Québec G9A 2G4
 Telephone : (819) 371-5182
 Fax : (819) 371-5186

SMALL BUSINESS ACCESS CENTER - Montérégie
 Complexe Saint-Charles
 Suite 411
 1111 Saint-Charles Street West
 Longueuil, Québec J4K 5G4
 Telephone : (514) 928-4088
 Fax : (514) 928-4097

SMALL BUSINESS ACCESS CENTER - Nord-du-
Québec
 600 Place Victoria Tower
 Suite 3800, P.O. Box 247
 Montréal, Québec H4Z 1E8
 Telephone : (514) 283-5174
 Fax : (514) 283-3637

SMALL BUSINESS ACCESS CENTER - Outaouais
 259 Saint-Joseph Blvd
 Suite 202
 Hull, Québec J8Y 6T1
 Telephone : (819) 994-7442
 Fax : (819) 994-7846

SMALL BUSINESS ACCESS CENTER -
Québec/Chaudière/Appalaches
 905 Dufferin Avenue
 2nd floor
 Québec, Québec G1R 5M6
 Telephone : (418) 648-4826
 Fax : (418) 648-7291

SMALL BUSINESS ACCESS CENTER - Saguenay/Lac-
Saint-Jean
 170 Saint-Joseph Street South
 Suite 203
 Alma, Québec G8B 3E8
 Telephone : (418) 668-3084
 Fax : (418) 668-7584

Appendix 3

Moroccan Contacts

3.1. Consultants, Sectorial and Professional Associations

Association marocaine de consultants en ingénierie
16, rue Ait Atab
Rabat
Maroc
Telephone : (212-7) 75-51-91
Fax : (212-7) 73-03-53

Office des foires et expositions de Casablanca (OFEC)
11, Rue Bookraa
Casablanca
Maroc
Telephone : (212-2) 22-38-40
Fax : (212-2) 26-49-49

Association marocaine du Conseil et de l'Ingénierie
Charil Maryninyines, Secteur 22 Hay Ryad
Rabat
Maroc
Telephone : (212-7) 73-46-60
Fax : (212-7) 72-42-96

Association professionnelle des travaux publics, du bâtiment et des industries annexes
Immeuble Ortiba
25, rue D'Azilal
B.P. 667
Casablanca
Telephone : (212-2) 31-59-81
(212-2) 30-75-10

International Chamber of Commerce
201, Boulevard de Bordeaux
Apartemet 505 (5^{ème} étage)
20 050 Casablanca, Maroc
Tel : 212-2-22-51-11
Fax : 212-2-22-51-19

Fédération des chambres de commerce et d'industrie du Maroc
56, avenue de France - Agdal
Rabat
Telephone : (212-7) 77-65-23

Association Nationale des Ingénieurs Topographes***

Comité National de Télédétection Spatiale (regroupe les départements gouvernementaux concernés par le domaine***)

*** : We know that this organization exists but we were unable to obtain its address.

*** : We know that this organization exists but we were unable to obtain its address.

3.2. Government Contacts Concerned with Geomatics

Ministère de l'Agriculture et de la Mise en valeur agricole

Place Abdallah Chefchaoui
B.P. 607 Rabat
Tel. (07) 76 50 81

DEPARTMENTS

Direction de la Conservation Foncière

Director: M. Mohamed BENHAJ SOULAMI
Tel 212-(07) 70 31 81
Fax: 212-(07) 70 89 58

Direction du Cadastre et de la Cartographie

31 avenue Moulay al Hassar Rabat
Director : M. Maâti BEKKAR
Tel. : 212-(07) 70 89 61
Fax: 212-(07) 70 89 58

Direction du Développement Forestier

Director: M. Omar M'HIRIT
Tel : 212-(07) 76 42 60
Fa.: 212-(07) 76 44 46

Direction de la Conservation des Ressources Forestières

Director : M. Lahcen LAALLAM
Tel : 212-(07) 76 24 62
Fax 212-(07) 76 44 46

Direction des Aménagements Hydro-Agricoles

Director: M. Abdelkrim RAHHALI
Tel : 212- (07) 75 68 16 / 75 17 1 0
Fax : 212-(07) 75 20 42

Direction des Aménagements Fonciers

Director: M Mohamed AIT EL QUADI
Tel : 212-(07) 69 00 47
Fax : 212- (07) 69 8.4 32

Direction de la Programmation et des Affaires Economiques

Director : M. Albert SASSON
Tel : 212-(07) 69 84 07/08
Fax: 212-(07) 69 84 01

Ministère des Travaux publics

Avenue Mohammed V Quartier Administratif - Rabat
Tel. : (07) 76 28 1 1 / 77 54 73
Fax (07) 76 48 25

DEPARTMENTS :

Direction des Routes et de la Circulation Routière

Director : M. Othmane Fassi FIHRI
Tel. : 212-(07) 71 33 78

Direction de la Planification et des Etudes

Director: M Karim GHELLAB
Tel 212-(07) 76 30 25 / 76 37 06

Direction des Affaires Techniques

Director : M. Mohamed Jamal BENJELLOUN
Tel 212-(07) 76 24 20 / 76 12 68

Direction des Equipements Publics

Director : M Mustapha LAAZIZI
Tel 212-(07) 75 34 45 / 75 46 51 / 75 39 92

Direction de l'Aménagement Hydraulique

Director : M. Lhassan. BOUFOUS
Tel. : 212-(07) 77 87 62 / 77 86 32

Direction de la Recherche et de la Planification des Eaux

Director : M Mokhtar BZIOUI
Tel. : 212- (07) 77 86 90 / 77 87 51

Direction de l'Hydraulique

Director : M. Mohamed JELLALI
Té.: 212-(07) 77 87 42 / 77 90 08

3.3. Other Ministries

Ministère de l'Environnement

36, avenue Al Abtal
RabatMaroc
Telephone : (212-7) 77-76-81
Fax : (212-7) 77-76-97

- **Direction de l'Observation des Études et de la Coordination**

Director : Mme Bani LAYACHI
Tel : (07) 77 26 71

Laboratoire public d'essais et d'études

Complexe d'activités Oukacha
Boulevard Moulay Silmane - Ain Sebaa
Casablanca
Maroc

Telephone : (212-2) 66-08-37
(212-2) 66-08-38
Fax : (212-2) 66-08-40

Ministère des Postes et Télécommunications

Avenue Moulay Hassan - Rabat
DIRECTION DES TELECOMMUNICATIONS
Director : M. El Jilali ANTARI
Tel : 212-(07) 70 64 64 / 71 45 00
Fax : 212-(07) 71 45 20

Ministère du Commerce et de l'Industrie

1, Place Sefrou
Rabat
Maroc
Telephone : (212-7) 76-50-33
Fax : (212-7) 76-06-75

3.4. Private Contacts

TELECART S.A , Société de télédétection, de Cartographie et de Topographie

17 rue Abou Hanifa, Rabat-Agdal
Tel : 212-7-67-23-23 / 212-7-77-23-23
Fax : 212-67-18-06 / 212-7-77-18-06

Société d'études topographiques Africaines (SETA)

4, rue Alaraich, Rabat
Tel : 212-7-76-58-62

Société Maghrébine de Travaux Topographiques et d'Études (SO.MA.TE)

12, rue Oued Zem App3 , Rabat
Tel : 212-7-76-80-94

Société Marocaine de Photo-Topographie (SMPT)

25, rue Oujda, Rabat
Tel : 212-7-73-13-83

Société d'Études des Projets et des Réalisations Topographiques (SEPRET)

Angle rue Ibn Al Khatib et Taibi Alami, Rabat
Tel : 212-7-70-45-11
Fax : 212-7-70-45-11

Aviation-Topographie-Photogrammétrie-Études (ATPE)

14 rue Tafraout , Rabat
Tel : 212-7-73-49-86
Fax : 212-7-72-77-63

Bureau d'Études Techniques Aménagement Sud (BETAS)

Inm.7 App3, Zankat Moktar Soussi, Rabat
Tel : 212-7-72-52-41
Fax : 212-7-73-68-40

3.5. Banks

Banque commerciale du Maroc

2, boul. Moulay Youssef
Casablanca
Maroc
Telephone : (212-2) 22-41-69
Fax : (212-2) 49-14-88

Banque marocaine pour le commerce et l'industrie

26, Place Mohammed V
Casablanca
Maroc
Telephone : (212-2) 22-41-61
Fax : (212-2) 20-89-78

Citibank-Maghreb

52, avenue Hassan II
Casablanca
Maroc
Telephone : (212-2) 22-41-68
Fax : (212-2) 20-57-23

Banque centrale populaire

101, boul. Mohammed Zerktouni
Casablanca
Maroc
Telephone : (212-2) 20-25-33
Fax : (212-2) 26-78-89

Banque marocaine du commerce extérieur

140, boul. Hassan II
Casablanca
Maroc
Telephone : (212-2) 20-03-25
Fax : (212-2) 26-49-20

Crédit du Maroc

48-58, boul. Mohammed V
Casablanca
Maroc
Telephone : (212-2) 22-41-42
Fax : (212-2) 27-71-27

Société générale marocaine de banques

55, boul. Abdelmoumen
Casablanca
Maroc
Telephone : (212-2) 27-92-69
Fax : (212-2) 20-09-52

This study was carried out by : Jérôme Larédo in September 1997.
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Antoine Panet-Raymond (Professor at the HEC)
Germain Simard (BFDR(Q) / CETA)

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For more information :

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École des Hautes Études Commerciales
3000, chemin de la Côte Sainte-Catherine, Montreal (Québec)
Canada, H3T 2A7
Tel : (514)-340-7328
Fax : (514)-340-6177
E-mail : grami@hec.ca