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## **CHILE - CANADA**

### **NAFTA**



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PRELIMINARY DRAFT\*

**CHILE'S READINESS FOR NAFTA ACCESSION:**

**AN ASSESSMENT FOR CANADA**

Fernán Ibáñez and Felipe Larraín

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## OUTLINE

	Page
Foreword	
Executive Summary	i
 Part I: Review of NAFTA-Chile Framework	
1. Background	2
2. Government Procurement	3
3. Investment	11
4. Intellectual Property	17
5. Dispute Settlement and Institutional Provisions	22
6. Environmental and Labour Standards	28
 Part II: Sectoral Analysis - Business Opportunities	
7. Agriculture and Agroindustry	35
8. Telecommunications	43
9. Financial Services	53
10. Energy	62
11. Mining	71
12. Forestry	79

## FOREWORD

The main objective of this study is to assess how Chile's trade, investment, legal and economic regimes complies with, or would have to be modified in order to meet, the disciplines of NAFTA.

The study was commissioned in October 1993 by the Canadian Embassy in Santiago. This is a First Draft, which is mainly intended for working purposes. It will be followed by a final version in the second half of January 1994, which will incorporate all comments to be received from Canadian as well as Chilean Government officials.

While the main responsibility for the report has been ours, we have already received important contributions from other Chilean professionals. We are pleased to acknowledge the enthusiastic support provided by Luis Jorquera, Joaquín Morales and Pablo García.

With all due attention to potential "conflicts of interest", we have discussed some of the findings of this work with our colleagues at Chile's Ministry of Finance, and we are deeply thankful for the valuable insights they provided to us. Any misinterpretations of those insights or any mistakes contained in the study are our own responsibility.

The authors

## **EXECUTIVE SUMMARY**

### **Overview**

Existing trade legislation as well as business practices in Chile are very open and well established. Both trade in goods and services, as well as investment, are based on non-discriminatory principles. This openness would greatly facilitate the negotiation of a free trade agreement. In fact, a negotiation with Chile would be substantially easier and faster than it was the negotiation with Mexico. In addition to its economic openness, Chile has a long tradition and a proven track record of active and law-abiding participation in international agreements. It was a founding member of GATT and a signatory of most of the international treaties mentioned in NAFTA.

Assuming an accession to NAFTA based on the present main text of the Agreement (with exceptions to be included in the annexes), a few changes may still be needed in Chilean legislation to comply with certain NAFTA provisions. The main anticipated changes include: extension of the coverage period of patents, elimination of time restrictions for repatriation of foreign capital, inclusion of binational panels in trade remedy legislation, and agreements on stricter enforcement of environmental and labor legislation.

A few additional points can be identified, where discussion may be more intense. These include: price bands in the agricultural sector, further opening in the financial sector, possible standardization of procurement procedures in state-owned enterprises, extension of patent coverage to include pipeline of pharmaceutical products, and stricter procedures in the application of trade remedy measures.

## 1. BACKGROUND

At present, and for more than a decade, Chile has had an extremely open economy with low, uniform tariffs, practically no non-tariff barriers, non discriminatory treatment to foreign investors, stable rules, and very few sectoral restrictions to the participation of the private sector. In such a context, the negotiation of an access to NAFTA and/or to other bilateral free-trade agreements has to been seen as the logical next-steps.

At year-end 1993, the Chilean economy will have registered its tenth consecutive year of growth at an average of over 6% for the period. Trade has grown from about US\$7 billion in 1986 to nearly US\$20 billion in 1993. Exports have grown from US\$4.2 billion in 1986 to an expected US\$10.5 billion in 1993. The trade balance has been in surplus all along this period, but will show a deficit in 1993—in spite of an increase in the quantum of exports—due to the substantial reduction in external prices of some of Chile's main exports (copper, pulp, fishmeal).

Foreign investment into Chile has also shown considerable growth since the mid-1980s, and will reach over US\$2 billion in 1993. This is equivalent to over 5% of GDP, and constitutes an all-time record for the country. As a result of significant capital inflows since the late 1980s—both in the form of investment and credits—Chile has accumulated foreign exchange reserves of over US\$10 billion, equivalent to 12 months of imports or to more than a quarter of GDP.

The recent presidential election of December 11th provided significant support for the Government coalition, whose Presidential candidate, Eduardo Frei, obtained 58% of the popular vote. At the same time, the election resulted in a continuity of the basic balance of power in Congress between the government and the opposition. President-elect Frei's basic campaign theme was continuity of the successful economic policies of the Aylwin administration.

A small but dynamic economy like Chile views NAFTA as a major step towards enhanced international free-trade, and as a signal to the rest of Latin America about the validity of the free-market economic model. It is also seen by some government officials and private sector representatives as a powerful incentive for introducing additional national and intraregional discipline in dealing with topics such as: protection of the environment, antidumping legislation, government procurement, and others.



## 2. GOVERNMENT PROCUREMENT

Government procurement—the purchase of goods and services by the central government, municipalities, and state-owned enterprises for their own use—reflects very clearly the basic institutional and economic principles governing Chile: unitary government (as opposed to federal government) and non-discrimination among sectors and suppliers.

Chile does not have, strictly speaking, a code of government procurement. Purchases by the government are expected to maximize efficiency in the use of public funds. As a consequence, each agency is encouraged to buy at the best possible combination of price and quality, regardless of origin of goods and services. These principles are equally valid for government offices, for municipalities, and for state-owned enterprises.

Moreover, the non-discrimination principle is embodied in the Chilean Constitution (article 19), as discussed in detail in other sections of this report. Strict control of the application of this principle comes from the Government itself, through the Comptroller's Office (Contraloría General de la República), an insatiable "hunter of irregularities". In addition, any violation of the non-discrimination principle or any minor irregularity in procurement can be investigated by the House of Representatives and prosecuted through the judiciary system.

### 2.1 The Central Government Supply Office

There is one institution within the Ministry of Finance, that operates as a Central Government Supply Office (Dirección de Aprovechamiento del Estado, DAE). Nevertheless, other government offices are not forced to buy from it, however, unless the price and other conditions are more competitive than those offered by alternative private suppliers. DAE's operating procedures, in turn, require all of its purchases to be made through either private or public bidding (depending on amounts).

In practice, DAE's only advantage is the better prices it can obtain through bulk purchases and the non-profit nature of its purchasing services. Considering the objec-

tives of this report, it is worth mentioning that DAE's bulk purchases favor the participation of large suppliers, and, therefore, of foreign suppliers. The usual procedure for any government office in need of supplies (which may include from small orders for stationery to a new computer, or from a piece of furniture to an automobile) is to quote prices from DAE. Subsequently, the interested office requests for direct or private bids from private suppliers, according to established procedures. It then decides on the basis of price and quality. It is worth underscoring that DAE is a self-financed agency and, as such, has to respect market prices and cannot practice unfair competition.

There are detailed instructions on thresholds for open tendering, for selective tendering, for private bids or, exceptionally, for direct purchases. While these thresholds may show slight variations among different entities, they tend to follow the general pattern established for DAE:

- a) open tendering, for purchases over US\$157.700. (3.600 UTM1)
- b) selective tendering, for purchases between US\$9.130 and US\$157.700.
- c) private purchase, for purchases under US\$9.130.

In all three cases, there is transparency, non discrimination, and plenty of available information about results and about the process for bidding or for selection. The main difference in the case of open tendering is procedural. Here, the notice asking for bids has to be published in at least three newspapers, and the submission and opening of tenders has to be made in public, in the presence of the bidders or their representatives. In the case of selective tendering, the opening of the bid can be made in a private act, in the presence of at least two of the purchasing agency officials. Information about the content of the different bids remains at the disposal of all interested parties.

Although the by-laws of DAE establish that, in equality of price and quality, local products will be preferred (art. 3 D.L. 1223/75), this criteria, which is seldom applied in practice, is a remnant of the initial wording of the law. The operating procedures also establish that bidders must be registered in a "Suppliers Registry", a permanent list of qualified and reliable suppliers; but access to this list is completely open and periodically updated as new suppliers appear on the scene.

In summary, the bidding process is transparent, the thresholds for open tendering are very low, and there is no special treatment given to local bidders. Therefore,



these procedures can be easily related —and, if needed, rewritten— to reflect NAFTA's Chapter 10 provisions.

## 2.2 Services

Procurement for services is not regulated through DAE procedures, but follows similar principles of non-discrimination and, whenever possible, of transparent bidding. Services by individuals can be hired directly, because it is assumed that they are narrowly specialized; services by firms are subject to open or selective procurement depending on the size of contracts.

With respect to personal services, the only existing restriction on nationality applies for the hiring of individuals as permanent government employees (*contrato de planta*). Foreign professionals are eligible, however, for temporary or fixed-term contracts in government agencies. An example to illustrate such openness is the case of a Swedish lawyer currently working for the Foreign Investment Committee, on successive one-year contracts, to assist in international tax studies and to be part of the Chilean team negotiating Foreign Investment Protection Treaties.

## 2.3 Public Works

Another important area of government procurement is that of construction contracts, which, in a majority of cases, are governed by the procedures of the Ministry of Public Works. This Ministry has been responsible for an overall investment program of about US\$700-800 million annually in recent years; its activities are expected to increase to about US\$1-1.2 billion per year for the period 1994-2000. Again, the procurement for construction contracts, consulting services or combinations of both, is done through open or selective tendering. Both will be fully open to locals and foreigners, with the sole limitation of registration in the Ministry's Contractors Registry (*Registro de Contratistas*).

The Contractors Registry, or list of qualified suppliers, is readily accessible. Its main purpose is to expedite the processing of needed information concerning the track record of contractors: legal status, past experience, financial solvency, professional qualifications, etc. All a foreign firm needs to qualify is a local "identity", which can take the form of a locally incorporated agency or a representation office. The purpose

of such a local entity is to assure financial and judicial responsibility in Chile for foreign firms' contracts.

In recent years, construction firms from different foreign countries, (Argentina, Brasil, Italy, Spain, France, etc) have been actively and successfully bidding, alongside Chilean firms or sometimes in joint ventures with them, for all kinds of construction contracts (road building, airports, ports, tunnels, irrigation projects, etc.). Benito Roggio, an Argentinean construction company, for example, was one of the successful bidders (as part of a consortium) for the construction of the new airport terminal for Santiago.

In addition to the local open tendering procedures just mentioned, the government agency will use normal IBRD ( World Bank ) procedures, and thus will call for international open bidding when the amount of contracts goes over US\$4 to 6 million (depending on loan agreements and types of projects) for construction bids, or over US\$500,000 for consulting services. For those bids under the above thresholds, the international agencies have accepted the Ministry of Public Works (MOP) procedures, which have been in place for nearly thirty years, as they were established and published in the official gazette back in 1965.

A recent development in the area of public works has been the new system of "concessions", which opens the building and operation of infrastructure projects to the private sector. The procedure for concessions is also based on open bidding, and decided on the basis of technical standards, proposed tariffs or tolls, terms of the concession, and payments to and from the government as necessary to finance the proposed project. Only one such project has been awarded so far: a traffic tunnel 120 kilometers to the north of Santiago (Túnel El Melón). This system of concessions, established by law in 1991 and started in 1992, is open on an equal footing to local and foreign firms.

## 2.4 The Public Health Sector

As an example of procurement in a different sector of the government, the procedures of the Ministry of Public Health were also reviewed. They are no different from those described for the rest of the central government. In fact, the Ministry of Public Health (MPH) has two major types of procurement: a) investments, which are partially financed under multilateral institutions (IBRD, IDB) and bilateral cooperation; and (b)

operational expenditure for the acquisition or renewal of equipment and nondurable goods.

In the case of investments, procurement procedures are similar to those described for public works, with predominance of international competitive bidding. Both local and international bidding are equally open to domestic and foreign suppliers. In the case of operational expenditures, goods and services would be acquired through either selective tendering (in the case of consulting) or through open tendering (in the case of supplies). The Ministry has also a Central Supply Agency which takes advantage of bulk purchasing but, as it was the case with DAE, hospitals and autonomous services have no obligation to buy from such agency. In every situation, decisions are based on a comparison of the prices of the Agency with those of private suppliers.

## **2.5. The educational sector**

Another example of sectoral procurement is provided by the procedures employed in the Ministry of Education. Their basic principles do not differ from those in use by the rest of the government. There is, however a special program, cofinanced by the World Bank, (Programa de Mejoramiento de la Calidad de la Educacion-MECE), which at present is responsible for the largest percentage of acquisitions by the Ministry. Procedures have been established in agreement with the World Bank. The majority of acquisitions under this program consist of teaching materials, libraries, textbooks, computers and software, and some building repairs.

Procedures of acquisition are the same as those in DAE, but the thresholds are slightly different: direct purchase, under US\$20,000; selective tendering, between US\$20,000 and US\$250,000; and open tendering for orders over US\$250,000. All tenderings are performed through DAE in order to take advantage of DAE's experience. All biddings are transparent, well informed and scrutinized by the Government Comptroller. World Bank regulations authorize a preference for local suppliers with a difference in price of up to 15%. This preference has seldom been applied and it has become a regular occurrence that foreign suppliers win the bids.

## 2.6. State-Owned Companies

In order to illustrate the situation of state-owned enterprises, two cases were analyzed in detail: the railroad company (Empresa de Ferrocarriles del Estado - EFE) and the state-owned copper company (Corporación Nacional del Cobre - CODELCO).

In both cases the experience confirms the principle of complete autonomy in procurement, subject to scrutiny by the Government Comptroller in the case of EFE, or to internal and external audits in the case of CODELCO. None of the two, nor any other state-owned enterprise, has any restrictions or obligations concerning preferences to local suppliers. On the contrary, both enterprises do substantial purchasing of foreign supplies and services.

In the case of EFE, the purchasing procedures tend to be more structured, with thresholds for direct purchase (under US\$25.000), for selective tendering (up to US\$250.000) and for open tendering (over US\$250.000). Along the years, EFE has compiled its own list of qualified and reliable suppliers, but, while being in the list may expedite bidding, registration is not a prerequisite to bid.

Average expenditures of EFE through the above procedures amount to about US\$15 million per year in current spending (supply parts, fuel, office supplies, etc. ) and a total expected US\$80 million of new investments during the next three years.

CODELCO's procedures are less rigid in terms of thresholds and more decentralized, with decisions delegated to the company divisions. Divisional managers are responsible for purchases up to about US\$3.5 million, the Executive Vicepresident of Operations for purchases up to US\$15 million, and the Contract Committee (senior managers) for purchases over US\$15 million. As a reference point, the total amount of purchases by CODELCO amounts to around US\$950 million per year, including operational inputs (grinding balls, explosives, tires, chemical products, fuel, etc.), contracts for construction, and consulting.

A register of qualified suppliers has also been compiled along the years but, again, the register is open to new suppliers and does not discriminate between nationals and foreigners.

While there is transparency in the procedures, there is no operating manual for purchases that covers the activities of the whole corporation. Procedures are essentially based on divisional guidelines.



## 2.7 Defense institutions

Purchases by the defense institutions, which are subject to specific reservations in the NAFTA annexes to Chapter 10, deserve special attention. In Chile, the armed forces enjoy one of the few exceptions to the normal tariff system, as they are exempted from both import tariffs and the value added tax. The sector is, therefore, an already existing free trade market. Considering that, in addition, defense institutions also have to respect the non-discrimination principle, and given the magnitude of resources at their disposal, this sector represents an area particularly attractive for foreign suppliers.

As in many other countries, the defense institutions play an important role in the support of civilian activities (e.g., construction of roads in isolated regions, assistance in cases of national emergencies like floods or earthquakes). They also benefit from tariff and VAT exceptions for equipment and inputs to be used in those activities. Therefore, the sector also offers ample opportunities to Canadian suppliers of mobile steel bridges, construction machinery, telecommunications equipment, aircraft, and other.

Probably the only restriction to full transparency in defense purchases is one of normal occurrence in other countries as well. The fact is that, for reasons of national security, procurement is predominantly made by selective private tendering. Particularly in the procurement of arms, war materials, war vehicles, and other elements for defense purposes, it is important to secure quality, technology, guarantees and spare parts. Consequently, short-lists of suppliers predominate over more traditional tendering procedures.

Nonetheless, the non-discriminatory principle also applies in this sector. So much so, that the Government has accepted or considered joint-venture agreements with foreign manufacturers of arms or equipment within the military manufacturing facilities (FAMAE, ENAER, ASMAR).<sup>2</sup>

An example of such ventures is the association between Western Canadian Marine Group and ASMAR. The Canadian consortium contributes the design, the engineering and the electronics for coastal patrol vessels which are constructed in the ASMAR shipyards and exported to third countries.



## 2.8 Conclusion

Government procurement procedures in Chile are quite transparent and non-discriminatory, with none, or very little, preferential treatment to local bidders. Most provisions in Chapter 10 of NAFTA are fulfilled in excess, due to low thresholds for open bidding and plenty of available information.

The central government has uniform regulations for procurement and strict supervision and scrutiny by the Government Comptroller's Office which enforces non-discrimination procedures as well as strict transparency.

State-owned enterprises, in turn, enjoy a large degree of autonomy which includes no guidelines or requirements on preferential treatment to local suppliers. Although strictly supervised on transparency by internal and/or external audits as well as by Congress, they do not always have uniform procedures. While their procedures are clear and transparent, in some cases they do not fulfill the kind of formalities established in Chapter 10 of NAFTA.

As a consequence of the above, it may be said that procurement by the government and by state-owned enterprises offers interesting opportunities to Canadian suppliers which may decide to undertake more aggressive selling campaigns in this market.

Some officials in the Government believe that Chapter 10 provisions could be beneficial to Chile in introducing additional discipline to the already transparent procurement procedures. Others believe that very strict formalities, like those in Chapter 10, could introduce unwanted rigidities and unnecessary cost increases in the government's operating costs.

Negotiations about government procurement could be rather simple. Instead of discussions about lengthy lists of exceptions or reservations, negotiations may center around maintaining agile but non-discriminatory procedures and about the level of thresholds.

### 3. INVESTMENT

#### 3.1 The Foreign Investment Statute (DL 600)

For nearly 20 years, Chile has had a very liberal foreign investment policy. Its principles are basically spelled out in the Foreign Investment Statute (Decree Law 600). Although the original DL 600, issued in 1974, has been partially amended through several laws, it has retained its basic principles and even its name, as a signal of stability in rules.

As a result of these policies, and of overall macroeconomic stability and growth, Chile has been very successful in attracting foreign direct investment. This trend has been quite strong in the last decade, and more so since 1990, when the country returned to a fully democratic system and to full diplomatic and economic relations with western democracies.

Since 1988, Chile has received an accumulated US\$6.4 billion of materialized foreign investment under the DL 600 regime, an average of almost US\$1.1 billion per year. Counting investment through ADRs, foreign investment reached US\$1.43 billion in 1992 (about 4.2% of GDP), and will surpass US\$2 billion in 1993, which represent over 5% of GDP. Relative to the size of its economy, Chile has one of the highest rates of foreign investment in the world.

The basic principles of the DL 600 are:

- a. Non-discriminatory treatment to foreign investors.
- b. No economic sectors or geographical regions reserved for national investors.
- c. No limits to foreign ownership or to the duration of foreign participation.
- d. Non-discretionary processing of foreign investment contracts.
- e. No performance requirements of any type.

The DL 600 regime is administered by an autonomous agency of cabinet level: the Foreign Investment Committee (FIC). The Committee is a Board consisting of four Ministers (Finance, Economic Affairs, Foreign Affairs and Planning) and the President of the Central Bank. Under them, an Executive Vicepresident and a small staff of 12 professionals and 6 clerical employees run a very efficient agency responsible for the promotion, approval and registration of foreign investments.

The term "approval" may be misleading because, in practice, it has been basically a formality to ensure that the investor and the recipient company are legal and known entities, and that the investment is not in conflict with public morals or with legal economic activities. Between 1990 and 1992, for example, only 2 applications out of 986 presented were rejected, due to unclear origin of the investment funds.

### **The foreign investment contract**

A foreign investment application includes only summarized legal information about the investor and the investee, the expected amount of the investment, and the sector where it will be materialized. In a period of time that can be as short as 48 hours (and as long as a couple of months if information is unclear), the application is approved and the State signs a contract with the foreign investor where all the rights of the investor are spelled out. Any funds brought into Chile during the processing of the application are fully covered by the contract.

It is important to mention that, while investors have another option for investment which does not require an approval and a contract,<sup>3</sup> they have predominantly preferred the DL 600 contract which provides them with additional guarantees. Each contract sets the rules for the right to transfer profits and capital, the right to national treatment, the unrestricted guaranteed access to foreign currency in the official market, the possibility of tax invariability, and a brief description of the purpose of the investment. Because the contract requires the consent of both signing parties in the event of a modification, it gives unconditional security to the investor about of the continuity of the rules affecting his investment.

In case of disputes, foreign investors have the right to a legal review about interpretation or execution of the foreign investment contract, and they can sue the authorities through a normal judicial procedure. They are also allowed to invoke a "Protection Appeal", a constitutional recourse for the guarantee of some of the fundamental rights having to do with the freedom to undertake any economic activity and to be treated in a non-discriminatory way (Article 19 of the Chilean Constitution).

Moreover, DL 600 reaffirms the non discrimination principle, and provides for a special recourse for foreign investors. Under such recourse (art. 9 of D.L. 600) the investor has the right to obtain a decision from the Foreign Investment Committee on

whether any administrative regulation or new legislation can be considered discriminatory. If that is the case, the law establishes a time limit to modify the regulation.

### **Investment protection treaties**

Starting in 1990, the Chilean government decided to further reaffirm the principles in DL 600 through the negotiation and signature of Investment Protection Treaties (IPT), whose basic contents are the same as in DL 600, but adding an arbitration clause. One first step was to sign the ICSID<sup>4</sup> Convention, which was ratified in 1991 by the Chilean Congress. Chile was, therefore, one of the first Latin American countries to ignore the so-called Calvo doctrine (which precludes disputes to be resolved outside the judiciary system of the host country) and to accept international arbitration for the settlement of investment disputes.

Between 1991 and 1993, Chile negotiated and signed 14 IPTs with the following countries: Germany, Spain, Argentina, Switzerland, France, Belgium, Denmark, Sweden, Italy, Norway, Netherlands, Finland, Venezuela, and Malaysia. The policy is to continue negotiating with other countries. Preliminary discussions for an IPT with Canada have also taken place recently.

These treaties incorporate most of the clauses in Chapter 11 of NAFTA: national treatment, most-favored-nation treatment, right to transfers, expropriation and compensation, settlement of disputes, etc.

The only additions included in Chapter 11 but not incorporated by the IPTs are articles 1106 and 1107, referred to Performance Requirements and to Senior Management and Board Directors. Both articles are, nevertheless, non applicable in the case of Chile, because no requirements are imposed on foreign investors and there is no obligation to appoint either local management or Chilean directors (except for a couple of minor exceptions mentioned below). Because the above matters have been dealt with, and negotiated in the investment treaties, there should be no major problems in meeting the obligations in Chapter 11 of NAFTA.

With respect to the relationship between Chilean and foreign partners in any joint venture, there are no special regulations other than local legislation governing corporations. As it is normal practice in international business, shareholders agreements are freely negotiated among partners.



## Possible exceptions to Chapter 11 of NAFTA

Some of the few exceptions, which could become points of discrepancy between Chile's foreign investment legislation and Chapter 11 of NAFTA, are the following:

a) The repatriation of capital under DL 600 may be made only one year after its entrance to the country. This restriction, whose only purpose is to discourage short-term speculative capital from coming into the Chilean markets, has been accepted by all the countries with which Chile has signed investment treaties. Formally, it has been dealt with in a special protocol stating that: notwithstanding the provisions of article 5 (about transfers) the Republic of Chile retains the right to allow the repatriation of equity capital at the latest after one year has elapsed from the date it was brought in by the investor".

b) Under the Chilean constitution, activities related to the exploration or exploitation of hydrocarbons are to be undertaken exclusively by the state. Local and foreign investors can enter into joint-ventures or "risk contracts" with the National Petroleum Enterprise (Empresa Nacional de Petróleos - ENAP). Uranium exploration and exploitation is subject to similar regulations. Notwithstanding the above, the restriction has become a "non-issue" in view of the limited oil and uranium reserves which have been prospected in Chile.

c) Coastal trade (cabotage) is restricted to Chilean vessels, but foreign owned vessels can bid for cargoes exceeding 900 tons. d) Under the fishing law, any fishing vessel under Chilean flag has to be owned either by Chilean individuals or by companies with majority Chilean capital. On the basis of reciprocity, however, this prohibition can be waived to nationals from countries which provide the same privilege to Chilean nationals.

e) In radio and TV stations, there is no limitation to foreign ownership in the operating company, but the president, executive director and manager of the company have to be Chilean nationals. Examples of foreign ownership in TV stations are those of Televisa, from Mexico, which owns 49% of channel 9, and CANWEST of Canada, which owns 49% of channel 4.

With respect to article 1114 (environmental measures), the Chilean Government will certainly endorse paragraph (2) where it is stated that "the parties recognize that it is inappropriate to encourage investment by relaxing domestic health,



safety or environmental measures". In fact, environmental, health and safety standards are not explicitly included as part of DL 600. But the foreign investment contract, as well as the national treatment investors benefit from, impose on them the obligation to respect all existing and future Chilean legislation, including non-discriminatory standards related to the conservation and protection of human, animal and vegetable life or health.

### **3.2 Debt-Equity Conversions (Chapter XIX)**

Although still "alive" as a legal alternative for investment by foreigners, the debt-equity conversion mechanism, otherwise known as Chapter XIX,<sup>5</sup> is today completely out of use.

This scheme started operations in 1985, when Chile's foreign debt papers were traded in secondary markets at almost 50% of face value. The Central Bank provided the owners of such papers with the equivalent in Chilean pesos of their face value minus a fee (in the order of 10 to 12 percent of face value). The investor could, then, use those pesos to buy a company or invest in a project in Chile.

Nearly US\$3.5 billion of debt were recovered through this mechanism between 1985 and 1990. Today, Chilean debt paper is internationally traded at around 95% of face value. At this price, and considering the commissions involved in the purchase of debt papers and in their exchange at the Central Bank, the system has turned unattractive. As a consequence, no new transactions have been registered during 1992 and 1993. While, investments under Chapter XIX had larger resident periods for capital and profits, and special operating rules, it would be impractical to discuss them because they are probably not going to be part of any negotiation.

### **3.3 Conclusion**

The present Chilean legislation on foreign investment presents a remarkable coincidence with NAFTA's Chapter 11 provisions. Topics like national treatment (or non-discrimination), most-favored-nation treatment, transfers, expropriation and compensation, and settlement of disputes between foreign investors and the government, are not only part of Chile's Constitution and/or of its Foreign Investment Statute (D.L. 600) but also have been negotiated and included in all the bilateral investment treaties

signed by Chile in recent years.

Aspects of Chapter 11 not included in such treaties, such as the agreement to avoid performance requirements or unnecessary restrictions on senior management, have been part of the Chilean foreign investment practice and economic policies for years.

It is not expected, therefore, that difficult points could appear in the negotiations of this Chapter. In any event, the few exceptions to national treatment or sectoral freedom mentioned previously in this section are minor compared to the list of exceptions by Canada, Mexico and the United States included in the annexes to Chapter 11 of NAFTA. The Chilean exceptions are not expected to create any problems, at least from the Canadian side.

Moreover, even without NAFTA, Canada's investment in Chile has developed strongly under the current legislation. It is, indeed, remarkable that the largest volume of authorized foreign investment into Chile during 1992 —over US\$1.1 billion— came from Canada. This especially reflects the growing attraction to Canadian investors of Chile's mining sector.

## 4. INTELLECTUAL PROPERTY

Protection and enforcement of intellectual property rights are provided in the Chilean Constitution and in two specific pieces of legislation: Law N°17.336 of 1970 (updated in 1990 and 1992), about copyright, and Law N°19.039, of 1991, about industrial property. Chile is also a signatory of the Paris Convention for the Protection of Industrial Property (1967).

Article 19 of the Chilean Constitution includes a list of fundamental and personal guarantees. The right of authors over their intellectual and artistic creations is explicitly spelled out among such guarantees (Article 19, section 25). Furthermore, the Constitution guarantees the property over patents, trademarks, models, technological processes and other similar creations for a time period to be established by law. Last, but not least, the Constitution also establishes procedures of compensation in the event of expropriation of patents and industrial properties, which are identical to those established for other types of physical properties or investments.

### 4.1 The Copyright Law

The Copyright Law (N°17.336) covers all aspects of intellectual creation including: all types of literary or artistic works, soundrecordings, films, videograms, software programs, etc.; all these are clearly defined and described in the text of the law. Protection granted by that law covers the rights of Chilean as well as foreign authors. This protection is granted for the duration of the author's life and extends for 50 years after death, on behalf of his or her heirs.

The law provides to the authors of the registered works the sole right to authorize or prohibit the publication, reproduction, adaptation, emission, public audition or distribution of such creations. The copyright in Chile is based on the moral right of authors, that is even if the right of exploitation is transferred the author will have the paternity right and, therefore, his or her work cannot be altered or mutilated. In this matters, it can be said that the Chilean copyright legislation follows the "European School" rather than the American.

Penalties for violations of the law and misuse of the author's creations include pecuniary compensations, penalties, and, in extreme cases such as proven bad faith

or falsification, imprisonment. In this matter, Chile has ratified the Geneva Convention for the Protection of Producers of Phonograms Against Unauthorized Duplication of their Phonograms (1971), the Berne Convention for the Protection of Literary and Artistic Works (1971), and the Paris Convention for the Protection of Industrial Property (1967).

The Copyright Law (No. 17.336), together with the Industrial Property Law (Nº19.039), cover most of the standards included in NAFTA's Chapter 17.

## 4.2 The Industrial Property Law

Law Nº19.039 on industrial property covers trademarks, patents on inventions of products or processes, utility models (instruments, tools, spare parts, etc.), and industrial designs.

Excluded from patentability are:

- a) Plants and animals.
- b) Diagnostic, therapeutic and surgical methods for the treatment of individuals and animals.
- c) Economic or financial methods, principles or plans which are easily verifiable.
- d) Inventions which go against morality, public order or national security.

The term of protection for patents is 15 years from the date of granting the patent and 17 years from the date of filing. This is one of the few areas of conflict with Chapter 17, where terms are set at 17 years from the date of granting and 20 years from the date of filing.

Notwithstanding the general terms mentioned above, the Chilean law also establishes that in the case of inventions already patented abroad, the term in Chile will be limited to the remaining protection period available in the country where such invention was patented.

Another topic of potential disagreement with Chapter 17 is contained in one of the provisional articles of the Chilean law, and refers to the protection of pharmaceuticals. Only pharmaceutical products that have applied for a patent in their country of origin after the publication of law 19.039 (January 25, 1991) may apply for a patent in Chile. In other words, there is no retroactivity in the patenting of pharmaceutical

products.

With respect to the extent of coverage, the Chilean law is quite similar to NAFTA regulations contained in Chapter 17. Coverage is non-discriminatory between nationals and foreigners and includes all economic activities without limitation of region, market or quantity of products.

Procedures for application and registration of patents are transparent and well defined. They provide adequate timing for presentation and examination of applications, public notice of such applications, a reasonable opportunity for affected parties to oppose the application, an opportunity for the applicant to respond, and reasonable time for completing the registration and publication of the patent. The same procedure applies to the registration and publication of trademarks.

The law provides two administrative instances and one judicial instance for disputes related to the applications, registration or oppositions of patents and trademarks. The first instance for a claim will be the Head of the Industrial Property Department in the Ministry of Economy. His decision may be appealed before an Arbitral Tribunal composed of three members, one appointed by the Ministry of Economy, one by the Chilean equivalent of the Attorney General (Consejo de Defensa del Estado), and one former member of the Court of Appeals of Santiago. The third and final instance is the Supreme Court, which is always an available instance but will be used only in extreme cases.

Enforcement of intellectual property rights is fair and equitable under Chilean law. Judicial Authorities have the power to order the necessary investigations, to compensate the right holder for injuries suffered, to order the infringer to pay the right holder's expenses, to confiscate the infringer's products and give them to the right holder for appropriate disposition. Moreover, the law requires the judicial authority to impose, in addition to the above compensation, a fine on the infringer at Government's benefit.

Procedures for registration, disputes, and law enforcement for other areas of intellectual property—such as trademarks and industrial designs—are the same as those for patents, with the exception of the term of protection. Trademarks are protected for 10 years, which can be indefinitely renewed, whereas industrial designs are protected for a non-renewable term of 10 years. These terms are the same contemplated in Chapter 17 of NAFTA.



Two subjects in NAFTA are rather new in Chilean business practices, and, while no particular problems are anticipated, they will need to be integrated in the Chilean legal system: Trade Secrets and Layout Designs of Semiconductor Integrated Circuits.

The Trade Secret concept is not explicitly developed or defined in the existing Industrial Property Law. This lack of definition, however, should not preclude a reasonable discussion and negotiation about the concept and the future integration of an operational definition in the administrative procedures of the Department of Industrial Property.

In turn, the regulations about semiconductor layout designs would require additional review about its implications for Chile.

### 4.3 Conclusion

Most of the NAFTA provisions in Chapter 17 appear to be well satisfied by existing Chilean legislation on copyrights, and on industrial property, including trademarks, patents, industrial designs, and industrial models.

Procedures for application and registration of patents and trademarks are fair, transparent and simple. Settlement of disputes over registration of patents and trademarks have well established procedures with different instances for appeal.

Enforcement of existing laws is guaranteed through appropriate faculties in the administrative branch and in the judicial authorities.

Notwithstanding the above, some potential problems may arise in negotiations:

- a) The track record of application of the industrial property law is rather new, and the experiences about violations of the law are, therefore, not conclusive.
- b) There are differences concerning the term of protection of patents (15 years in Chile, 17 years under NAFTA).
- c) Patents for pharmaceutical products are not retroactive under the Chilean law, and, therefore, Chile will not provide coverage to pharmaceutical products patented in their countries of origin before January 1991.
- d) The concepts of trade secrets and layout designs of semiconductor integrated circuits need to be further clarified and/or incorporated in the Chilean legislation.

Notwithstanding the above, it is worth noting that the discussion on most of the above topics has, in practice been superseded by the recent agreements in GATT's Uruguay round. In effect under the TRIPS chapter the duration of patent rights, the trade secrets, protection of satellite signals and the regulation of rental rights, have all been covered. Being Chile one of the signatories of this agreement it will have to adapt its legislation to fulfill its obligations and, as a consequence, many of the topics would be resolved by the time of a possible NAFTA negotiation.

## 5. DISPUTE SETTLEMENT MECHANISMS

Chile's position with respect to dispute settlement mechanisms, and in particular to those of antidumping and countervailing duties, will closely resemble that of Canada because both are middle-sized economies dealing with larger players. It is not by chance that these topics have been longstanding goals of both countries in international trade and that both have supported more transparent and clearly enforceable trade rules in the recently concluded Uruguay Round of GATT.

The private sector and the governments of both countries are acutely aware of the impact that unfair trade remedy actions may have on products like timber, fruits, fish and others. Effective and binding dispute settlement legislation and mechanisms have been in the tradition of a law abiding country like Chile, where it is seen as the most effective means for dealing with "security of access" to foreign markets. Given this background, there should be no problem for Chile to accept the principles and procedures contained in chapters 19 and 20 of NAFTA, as well as the sector-specific mechanism described in the respective chapters.

### 5.1 Antidumping and Countervailing Duties

The procedures to establish trade remedy actions in Chile are contained in Law Nº18.525 of 1986. This law provides that the President of the Republic has the right to apply several antidumping measures and countervailing duties following on the proposal made by a special commission on trade distortions. Before making its recommendation, this entity should be convinced —after appropriate investigation— that a trade distortion on specific imports of goods may produce serious and imminent damage to national production. The distortion must be of such nature that it artificially reduces the exporting prices of the goods, creating unfair competition in the recipient market of the imports.

### Chilean procedures and the Commission on Trade Distortions

The Commission on Trade Distortions is regulated through Decree Nº575 of 1993. This Commission was established by Law 18.525, to analyze and determine price distortions on imported goods. Its members are: two representatives of the

Central Bank, one representative from the ministries of Finance, Economy and of Foreign Affairs, the Head of the Customs Department and the National Economic Attorney (Fiscal Nacional Económico). The technical secretariat of the Commission is located in the Central Bank.

The procedures for filing a claim, and the subsequent investigations and decisions, are transparent and well established. The procedure starts with the filing of a claim at the Technical Secretariat. Within 10 days the Secretariat must inform the claimant whether the claim is inappropriate or has insufficient information; otherwise, it will be submitted without delay to the Commission. Within 5 days of its submission, the Commission must inform the claimant about the investigation. Such notice of information is published in the Official Gazette describing the products involved in the claim, the identification of the claimant, the producers, the exporters and importers of the merchandise, and a description of the trade distortion and the expected damage it may produce to other local producers of the good. It will also indicate where and when should the response to claims be filed.

The Commission is instructed by law to hold hearings with all parties which have expressed their interest in writing. It should also inform the Chilean Ministry of Foreign Affairs about the claim with the purpose of communicating it to the country whose products are under investigation, as a way to facilitate official consultations and proper advice from foreign governments to the affected exporters.

Interested parties have a 30-day period for the submission of evidences, facts and arguments in support of their respective positions.

The Commission, in turn, has a 90-day period, counted from the day of the publication in the Official Gazette, to adopt a decision about the existence of distortions and to recommend (or not) appropriate countervailing duties, minimum customs values, and/or any other antidumping measures. Such measures are applied by Presidential Decree based on the Commission's report. The commission may, if justified, recommend the application of provisional countervailing measures to be effective during the time of investigation.

The above procedures are similar to those of Canada and United States. They differ, however, from existing legislation in Mexico, which according to Annex 1904.15 will have to undergo several changes to adapt to NAFTA obligations.

## The issue of binational panels

The process of judicial review of determinations of domestic agencies by "ad-hoc" binational panels is not presently included in the Chilean legislation. Neither has Chile any obligation to notify or consult with any other country in case Chile plans to amend its national trade remedy legislation.

There is, however, a local instance of appeal for Presidential antidumping decisions. The procedure consists of a Protection Appeal which has been established in the Constitution for any administrative measure considered by the affected party, foreign or domestic, to be in violation of Article 19, section 21 of the Chilean Constitution. That article consecrates the fundamental right of residents to develop any economic activity which is not contrary to public order or national security. This appeal is of normal occurrence, although not frequent, and is submitted by any affected party in the respective Court of Appeals.

The "issue" of the review by a binational panel will arise only in the case of Chile acceding to NAFTA. There is no precedent of binational trade-distortion reviewing panels in the current Chilean legislation, with the possible exception of the Andean Pact mechanisms to which Chile was a member in the late 1960s and until 1974.

Nevertheless, Chile has a long tradition in the settling of international disputes through arbitration (arbitral decision for border disputes with Argentina, arbitral decision accepted under the investment protection treaties, and in the FTAs with Argentina, Mexico and Venezuela, which are structure under the ALADI (Asociación Latinoamericana de Integración) umbrella, etc.). Thus, the concept of a binational panel should not be difficult to negotiate and integrate in the Chilean legal system.

The schedule of Chile in a possible Annex to Chapter 19 would probably read very similar to the present schedule of Canada in those sections describing the amendments to be introduced in the "Special Import Measures Act", in order to provide for the establishment of the binational panel and its proceedings, and for the establishment of extraordinary challenge proceedings.

Additional trade disputes not related to antidumping or countervailing duties can also be resolved through GATT, of which Chile is a signatory.



## 5.2. Settlement of Disputes

NAFTA's Chapter 20 covers institutional arrangements for the operation of the Agreement and dispute settlement procedures for matters having to do with the interpretation or application of the Agreement, which were neither included in Chapter 19 nor in the sector-specific procedures of other chapters.

Chapter 20 builds in these matters on the experience gained in the operation of the FTA between Canada and United States. The main changes in NAFTA, as compared with Chapter 18 of the FTA, are an enhanced institutional relationship resulting from the establishment of the Free Trade Commission, and a greater commitment to reach agreements at the level of working groups, as opposed to seeking agreements through litigations under formal dispute settlement procedures.

### Institutions

The Free Trade Commission of NAFTA is composed of cabinet-level representatives or their designates. It can establish standing committees, working groups or expert groups and it can delegate responsibilities for information gathering and dispute settlement to such groups. More specifically, NAFTA establishes about twenty sectoral working groups (e.g., Committees on Trade in Goods, on Worn Clothing, on Sanitary and Phytosanitary Measures, on Small Business, on Financial Services, etc; as well as working groups on Rules of Origin, on Agricultural Subsidies, on Trade and Competition, etc). The idea behind the sectoral groups is to create a greater obligation by the signing parties to seek agreement on a daily basis and to prevent technical disagreements from becoming a full-blown political dispute.

An important institutional development in NAFTA is to give an enhanced role to the Secretariat, which is expected to provide assistance to the Commission as well as to all the dispute settlement panels, working groups and "ad-hoc" committees. This expanded Secretariat function is expected to facilitate not only daily agreements, but also possible accession of other nations to NAFTA.

### Procedures

Dispute settlements under NAFTA will proceed in three stages. First, any party

can request consultations with any other party and dispose of a 45-day period to resolve the matter in dispute. Second, parties can formally request a meeting of the Commission, which disposes of a 30-day period to resolve and is empowered to extend a wide range of good offices, conciliation and/or mediatorial services. The third stage is to request the establishment of an Arbitral Panel under Article 2008 of NAFTA. In order to form a panel, the parties must establish by consensus a common roster of 30 individuals experienced in law, international trade and dispute settlement.

In addition, and as a separate alternative, Article 2005 deals with the option of parties to take their disputes to the GATT in lieu of a NAFTA panel. It is established that either forum may be chosen by the complaining party but, once the choice is made, the disputes shall be resolved in that forum to the exclusion of the other. Nevertheless, if no agreement is reached among disputing parties as to which forum should be consulted, The NAFTA mechanism will supersede.

### **The potential for an agreement with Chile**

It is difficult to anticipate in all certitude how difficult could be the negotiations with Chile around Chapter 20. On the basis of historic experiences as those mentioned in the discussion of Chapter 19, however, it is worth mentioning that Chile has a very good track record of successful and active participation in international forums and in multilateral and bilateral working groups (e.g., the Andean Pact Secretariat, LAFTA working groups, GATT's Uruguay Round, etc.).

Chile also has a long tradition of negotiations with and acceptance of decisions from international arbitration panels, whether it has been for territorial matters (e.g., border disputes with Argentina), or economic matters (e.g., the negotiation and acceptance of international arbitration clauses in more than a dozen bilateral investment protection treaties). In addition, Chile is a signatory of the 1958 U.N. Convention on the Recognition and Enforcement of Foreign Arbitral Awards, as well as of the 1975 Inter-American Convention on International Commercial Arbitration. Chile is also a founding member of GATT and a frequent user of GATT panels ( e.g., GATT Apple Panel ).

On the basis of the above, it is estimated that Chapter 20 should present very few, if any, obstacles in a formal NAFTA-Chile negotiation.

### 5.3 Conclusion

Dispute Settlement procedures to deal with anti-dumping and countervailing measures as they appear in Chapter 19 of NAFTA, do not differ much from existing Chilean legislation in these matters. The main exception has to do with the existence, in Chapter 19, of binational panels, which, for obvious reasons, are not included in the current Chilean national legislation.

Procedures under the existing Chilean trade remedy legislation are quite transparent and provide adequate time and hearing instances for disclaims of all interested parties. No major obstacles can be anticipated in the review of the national legislation. Nevertheless, as it was the case with the other NAFTA signatories, Chile will have to review its national procedures and identify the necessary amendments to legislation in order to provide for the establishment of binational panels. The experience of Canada before and during the implementation of the FTA may prove very valuable for Chile in reviewing the applicability of its existing procedures vis-a-vis the larger partners in NAFTA.

Chapter 20 should present even less difficulties than Chapter 19. Moreover, in the present Chilean political and economic context, significantly ratified in the recent presidential and congressional election, major opposition to the negotiation and approval of the concepts of the Commission, the settlement of disputes through working groups or the appeal to Arbitral Panels, would be quite unlikely.

A point of potential discussion that may arise is more related to economic and institutional considerations rather than to legal aspects. The issue brought up by Chilean government officials is the convenience or inconvenience for a small country like Chile of incurring the human and economic costs of a rather "heavy" and time-demanding institutional and procedural structure of NAFTA (Commission, Secretariat, National Section of the Secretariat, working groups, technical groups, "ad hoc" committees, etc.), in view of the size of its trade with the NAFTA countries (21% of total Chilean trade in 1992).

As pointed out in the sections of this report dealing with Government Procurement, Intellectual Property, Standard-Related Measures and others, the question confronting the Chilean Government would be whether the additional benefits to be accrued from joining NAFTA clearly justify the additional costs mentioned above. This point may have to be taken into consideration not only with respect to a possible accession of Chile to NAFTA but also regarding a few other countries that could follow.

## 6. ENVIRONMENTAL AND LABOUR STANDARDS

### 6.1. Environmental protection

Environmental protection was, since the very beginning, one of the major topics of discussion during the NAFTA negotiations. Opponents of the treaty consistently argued that further trade liberalization would result in significant incremental environmental damage. Those in favor of NAFTA have argued that trade liberalization, on the contrary, may well promote an even more careful use of environmental resources.

The intensity of the discussion produced what government officials from Mexico, Canada and the United States, have lauded as the "greenest" trade agreement ever negotiated. So much so, that some analysts claim that, if anything, NAFTA may err in the direction of giving too much emphasis to environmental matters. And efforts to enforce environmental standards through trade policy measures invite a serious risk that importing countries will invoke spurious environmental claims in order to protect domestic markets.

Several environmental provisions in NAFTA are similar to those in GATT. In particular, NAFTA allows other specified environmental agreements to take precedence. This is an important provision for Chile since one of those agreements is the Montreal protocol on substances that deplete the Ozone Layer (1987), in which Chile has been a very active member.

### NAFTA's supplementary agreement on the environment

While there is no special chapter about the environment in the main body of NAFTA, a supplementary agreement was signed (the North American Agreement on Environmental Cooperation). Its main objective is to set the ground for stronger cooperation on the development and improvement of environmental laws, regulations, policies and practices. In addition, sector-specific measures with environmental implications have been included in the respective chapters of NAFTA. Examples of such measures are the subcommittees for the compatibility of vehicle emission standards, and for the compatibility of standards related measures from local, provincial, and state authorities.

The supplementary accord begins affirming the right of each country to choose



the level of protection of human, animal or plant life or health, or of environmental protection, that it considers appropriate. Nonetheless, in what is probably a new departure from traditional international trade agreements, it contains general statements committing the signatories to work jointly in the enhancement and protection of human, animal and plant life, and the environment.

To facilitate the implementation of these general statements, part two of the accord establishes the requirement of periodic preparation and publication of reports on the state of the environment, the need to promote education in environmental matters, the assessment of environmental impact, and so on. More important yet, part two spells out suggestions for specific actions to be taken by each government in order to ensure enforcement of each party's legislation. Examples of such actions are: appointing and training inspectors; monitoring legislation compliance through on-site inspections; public releasing of non-compliance information; and the initiation of judicial or quasi-judicial proceedings to seek sanctions or remedies for violations of environmental regulations. The enforcement measures are probably the key point that may differentiate environmental policies in most countries of the region. As discussed later on, this may become one of the key elements of negotiation with Chile.

The rest of the supplementary accord spells out details about the creation of the Commission for Environmental Cooperation, which comprises a Council, a Secretariat and a Joint Public Advisory Committee. The functions of the Council are clearly established, and so are the steps to be taken in order to facilitate the provision of information as well as the consultation and resolution of disputes.

### **Chilean environmental legislation**

In the past, Chile has concurred to the signature of several international agreements concerning environmental issues (Toxic Waste, Basel 1989; Antarctica, Washington 1959 and Madrid 1991; Ozone Layer, Montreal; Marine Life, 14 different agreements). But it is fair to say that real concern about environmental problems (such as air pollution in Santiago, water pollution in coastal resorts, native forest over-cutting, depletion of some marine species, etc.) is very recent. The public institutions to overview and handle environmental problems are CONAMA (National Environmental Commission) and the COREMAs (Regional Environmental Councils), which were only



established within the last four years.

Chilean environmental concerns used to respond to isolated problems in different industries, regions or activities that endangered human or animal life. During 1991, as a first major effort to develop a modern and comprehensive legal regime on the matter, the government undertook a complete survey and inventory of all existing legislation with environmental implications. The result was a compilation of 718 (!) laws and decrees. An annex to the initial compilation identified another 58 legal texts in 1993.

At present, a General Environmental Law is under discussion in congress. This law will create a framework for environmental laws in Chile, similar in intent to the National Environmental Policy Act of the United States. It sets forth some basic criteria which would include the "polluter pays" principle, the forms of regulation that should be considered in environmental policy, and creates the institutions that should be in charge of enforcement of environmental policies. This law will not set standards, but rather will establish the procedures to set specific standards in follow-up legislation. Article 24 of the proposed law authorizes the President to establish all the above mentioned standards by Presidential Decree.

This General Law would be the first legal instrument to set forth a systematic approach to environmental issues. The law will cover five areas: environmental impact assessments, quality standards, emission standards, prevention plans, and preservation standards.

In the meantime, and based on the increased public awareness on environmental problems, the government has taken important steps in the direction of the law. It has set up strict emission standards for the mining industry and levels of toxic emissions in certain geographic areas, the compulsory use of catalytic converters in all new cars imported after September 1992, the installation of sewage treatment plants in large cities, a strict enforcement of forest management plans by CONAF ( although still with limited financial resources ).

While it took some time to create the necessary awareness in Chile, all recent actions demonstrate that there would be little, if any, resistance to the standards and cooperation arrangements established either by NAFTA or its supplementary accords. Three recent Supreme Court rulings may serve to illustrate the prevailing attitude towards this matter:

- (i) People of Chungará vs. Ministry of Public Works: this ruling prohibited the use of water from Lake Chungara for irrigation in parts of the Chilean desertic valleys;
- (ii) People of Chañaral vs. CODELCO: The court ordered CODELCO to stop throwing its tailings into the Bay of Chanaral; the company had to spend US\$21 million to build a tailing dam);
- (iii) Farmers vs. Pacific Mining Company: case similar to that of Codelco.

## Conclusion

The existing Chilean environment legislation contains numerous standards disseminated in several laws and regulations. The latter did not follow a consistent pattern or a logic, but rather represented emergency solutions to isolated cases. While many of these standards follow international principles or criteria, they cannot be added up or structured under one single body. If they were all enforced today at the same time, they could even stop completely some sectors of economic activity.

Because of the above and due to a more up-to-date approach to environmental matters, the executive branch has proposed to Congress a new body of legislation which, at least in paper will set the basis for an integral and well-structured approach to environmental protection. The proposed legislation would meet all NAFTA's principles and standards. In this case, while there is basic agreement in the fundamentals, the initiation of negotiations under NAFTA could accelerate the approval of legislation and the setting up of enforcement mechanisms. The substantial issues may probably center around the enforcement capabilities and resource availability for such enforcement .

## 6.2. Labor cooperation agreement

Opposition to NAFTA, especially in the United States, focused on potential job losses and downward pressure on wages. The root fear was that low wages and poor enforcement of labor standards in Mexico could attract foreign investment, deprive U.S. workers of their jobs, and drive down U.S. wages. While the same themes were discussed in Canada, the issues were less sensitive because of the geographic distance that makes the migration problem less acute. It is beyond the scope of this study,

however, to discuss the validity of the pauper labor arguments just mentioned, or to assess the occupational impact of NAFTA.

The official response to the labor concerns was a series of bilateral agreements to promote closer cooperation and joint actions on a variety of labor issues. In the context of NAFTA, the response was twofold. On the one hand, implicit safeguards were set through the inclusion of 15-year transition periods for the most sensitive sectors, such as glassware, some footwear, ceramic tile, certain fruits and vegetables, etc.

Improved safeguard mechanisms were also established to protect sensitive industries against a flood of imports, and strict rules of origin attempted to ensure that the free-trade benefits of NAFTA accrue to North American workers. Interestingly, however, only the United States and Canada obtained 15-year transition periods, while Mexican tariffs on all manufactured products will be eliminated within 10 years. NAFTA also establishes special safeguards in the form of tariff rate quotas for sensitive agricultural products and a different causation test for textiles and apparel.

### **NAFTA's supplementary labor agreement**

As a second mechanism to meet labor concerns, a supplementary accord (the North American Agreement on Labor Cooperation) was signed. This agreement sets forth a list of guiding principles for labor: freedom of association, right to collective bargaining, right to strike, prohibition of forced labor, labor protection for children, minimum employment standards, elimination of employment discrimination, etc.

The agreement also reaffirms full respect for each country's constitution and recognizes each member's right to establish its own domestic labor standards, as it is the case for environmental standards. It provides, however, a list of actions through which the governments are expected to enforce their legislation (Part two, article 3). Such actions include: appointment and training of inspectors, monitoring compliance through on-site inspections, encouraging mediation, conciliation and arbitration services, and initiating proceedings to seek appropriate sanctions or remedies for violation of labor laws.

Through the establishment of a Commission for Labor Cooperation, a Council, a Secretariat, and the National Administrative Office of each country, the Agreement sets the ground for improved levels of information on employment conditions and for

long term improvement of such conditions in the NAFTA countries. The supplemental agreement is expected to make an important contribution to the enforcement of labor standards by using the trinational commission to expose offenders and by ultimately authorizing trade countermeasures if governments do not succeed in halting the abuses.

### **The Chilean labor legislation**

The current Chilean labor legislation covers a wide spectrum of standards that meet most of the existing international guidelines in this matter. Moreover, in many respects it provides more benefits and guarantees to workers than existing legislations in developed economies. One of the reasons for such wider coverage stems from a different philosophical approach in labor legislation. A comparison with labor legislation in the United States may illustrate the point. Whereas workers and legislators in the U.S. prefer an open labor legislation where everything is permitted unless it is specifically excluded, Chilean workers feel more comfortable in a tighter regulatory environment where as many benefits as possible are established by laws or regulations.

Examples of benefits established by law in Chile are: paid maternity leave for six weeks before and twelve weeks after childbirth; prohibition to use scab workers during the first 15 days of strike; compulsory provision of day-care centers in any firm employing more than 25 female workers.

Labor principles included in the NAFTA supplementary accord are all included in the current Chilean legislation. One of the few points of discrepancy, not with NAFTA but with American and Canadian legislation, could be in collective bargaining at the industry level. Such form of negotiation is allowed in the Chilean legislation, but discouraged in practice by large employers.

With respect to social benefits, social security is compulsory through a private pension fund system, and medical insurance is provided either through the National Health Fund, FONASA, or through private medical insurers (Institutos de Salud Previsional-ISAPRES). Total contribution for the two concepts is 17% of the base monthly salary (10% for retirement and 7% for medical insurance).

Enforcement of labor legislation is constantly strengthened through specialized government agencies and, in particular, through the Labor Inspection (Inspeccion del Trabajo). This agency has direct dependency from the Ministry of Labor and ensures

that workers and their organizations receive proper attention in their complaints and in the necessary advice. As an illustration of the coverage of inspections, it is worth mentioning that in 1992 alone, 41,000 firms were monitored for compliance with labor laws, and that 760,000 workers (out of a working force of about 5.1 million) benefited from such inspections.

## **Conclusion**

Present Chilean labor legislation complies with the principles and guidelines established by the North American Agreement on Labor Cooperation (Labor supplementary accord). The standards established in the agreement are not substantially different from those existing in Chile. While enforcement may still benefit from additional strengthening, no difficulties can be anticipated in the negotiation of either a bilateral labor agreement with Canada or an accession to the existing NAFTA mechanisms.

Regarding the employment impact of NAFTA, Chile's economy is already very open and presents a very low level of unemployment. As a consequence, no problem is anticipated in this front.



## 7. AGRICULTURE AND AGROINDUSTRY

### 7.1. Agricultural sector

#### 7.1.1. Overview

The Chilean agricultural sector represents around 8% of total Gross Domestic Product (GDP), and has experienced uneven growth over the last decade. During the 1982-1983 economic crisis, agricultural GDP fell (although considerably less than total GDP), then grew substantially between 1984 and 1989, as part of an overall export boom. (Table I in the Statistical Appendix shows the evolution of sectoral GDP and exports.) As a result of this, the Chilean agricultural trade balance evolved from a deficit in the early 1980s of almost US\$400 million to a surplus of around US\$1 billion a decade later (See Table II in the Statistical Appendix).

In recent years, growth has stagnated because of falling external prices, a significant appreciation of the real exchange rate (almost 10% per year in 1991 and 1992) and rising export restrictions in foreign markets, especially in Europe. Nonetheless, external prices will recover with the end of the international recession, and the real exchange rate will stabilize or appreciate smoothly.<sup>6</sup> Chile's long-term economic strategy will continue to be based in world markets, and it is expected that the agricultural sector will remain one of the most dynamic and innovative, especially in the non-traditional sub-sectors such as fruitgrowing and agro-industry.

The Chilean agricultural sector is widely heterogeneous. It includes traditional and low-profitability crops such as wheat, maize and sugarbeets, and more modern and competitive sub-sectors like fruitgrowing and agroindustry.

This heterogeneity has influenced the degree of protection that each sector faces. Traditional crops are basically import substitutes. They are subject to a price-smoothing device (price bands) that establishes a variable import tariff so that the domestic price of wheat, sugar, and oilseeds falls within the limits of the band. In principle, price bands are not designed to be a protection scheme, but in practice they have operated as such. All other sectors of the economy (excluding automobiles) are subject to the flat 11% import tariff, with no additional protection.<sup>7</sup>

### 7.1.2 Traditional crops

This sector has traditionally been of great importance, due to its wide geographical coverage, the employment it generates, and the number and relatively small size of its producers. It represents about one third of agricultural GDP.

Wheat is the main traditional crop, with 400,000 to 600,000 hectares under cultivation each year. Its share in the total value of the agricultural production is around 19%. Due to the fall in production during the 1982-1983 crisis, a system of price bands was introduced. The maximum and minimum prices of the band are set annual on the basis of the evolution of FOB prices during the last 60 months.

As a result of this new price scheme, domestic production recovered; imports fell and became nil in 1989. The fall in world prices in recent years has depressed production somewhat, and has induced increasing imports. Wheat production is concentrated mainly in small producers in the central-south part of the country. Canada is today, the principal source of wheat imports (Durum variety) to Chile.

In contrast to wheat, maize production is highly technified. Demand for this product comes mainly as animal consumption (basically poultry and pigs). This sector is open to external competition, with 90% of imports coming from the United States. Another important product of this sector is maize seeds. Over the last decade, Chile has become an important producer and exporter of this product, due to the favorable climatic conditions and the inverse seasonality with the main final markets (the United States, Europe and Japan). The main competitor for Chilean production in the United States is Canada.

The Chilean sugarbeet sector is an important source of employment. There are between 9,000 and 11,000 producers that employ directly and indirectly some 60,000 people. The market for sugarbeet is characterized by a monopsony, with a sole buyer: IANSA, the national sugar producer. In the early 1980s, the crisis in the agricultural sector resulted in 88% of domestic sugar consumption coming from abroad. Beginning in 1982, a plan to encourage sugarbeet production was put in place. Initially it took the form of a subsidy; since 1986 it has consisted of a price band similar to the one implemented for wheat.

Other important products in this sector are tobacco, which is very labor intensive and has experienced fast export growth, and oleaginous production. The latter has also been subject to a price band.

### **7.1.3 The fruitgrowing sector**

This sector developed its export potential since the mid 1970s, and quickly became the most dynamic in agriculture. Indeed, the total area covered by fruit plantations grew from 65,000 hectares in 1974 to over 130,000 hectares in recent years. This surge was concentrated mainly in the years 1984 to 1989, with a gradual stabilization in recent years. The structure of fruit plantations is shown in Table 3 of the Statistical Appendix.

The most important product in this sector is grapes, around 80% of which are exported. The main final markets are the United States, with a share of 69% of grape exports, and Europe, which represents 18% of that total. The importance of Chilean grape exports in final markets is very significant. In the U.S., around 90% of total off-season imports come from Chile, and this represents wholly 30% of total consumption. The share of Chilean grapes in European consumption is not as large as in the U.S., but is also quite substantial. Other important fruit exports from Chile are peaches, nectarines, apples and plums; in these products, however, Chile's share of the main consumer markets is low.

### **7.1.4 Vegetables**

Vegetable production, especially that oriented to the internal market, is mainly done by small farmers. Larger producers, however, have also entered the market, centering in exports and in the provision of inputs to agroindustry. This has induced an increase in the export share of the sector, from 10% in 1980 to over 20% in recent years.

Asparagus is an important new product in this sector, due to its potential for exports. The principal market for fresh asparagus is the United States, with a share of over 75% in total exports of this product. The United States, however, represents only a minor share in Chile's exports of processed asparagus, which is partly explained by the high tariffs faced by this product. This practice of placing higher tariffs on products with higher value added is a common feature of the main industrial markets (Europe, Japan, and the U.S.).

## 7.2. The agroindustrial sector

Agroindustry has experienced considerable growth since the second half of the 1980s. This development has come together with a major expansion in the installed capacity to process fruits and vegetables. Dehydrating plants increased from 19 in 1986 to 30 in 1990, cold storage facilities rose from 13 to 32, tomato concentrate plants from 5 to 10, and fruit concentrate installations from 6 to 11 during the same period. Overall, exports of processed vegetables and fruits have come to represent 18% of agricultural exports and around 3% of total exports.

### 7.2.1 Processed vegetables

Exports of processed vegetables reached US\$102 million in 1992, representing 6.4% of total agricultural and agroindustrial exports. These were mainly in the form of pulp and pastes (over 40% share), seeds (17%), dehydrated products (17%), and canned and frozen vegetables (10% and 9%, respectively).

Tomato is, by far, the most important vegetable used in agroindustry. Processing capacity has grown exponentially, from 17,000 tons of concentrates and 5,600 tons of canned products in 1988, to 85,000 tons and 14,000 tons, respectively, in 1991. The main output produced is tomato paste, followed by canned tomatoes at considerable distance; production of tomato juices and sauces, however, is currently marginal. One third of exports of tomato concentrates go to Brazil, and about one quarter to the United States.

### 7.2.2 Processed Fruits

Exports of processed fruits were about US\$200 million in 1991, representing 70% of total agroindustrial exports. The most important among them are dehydrated fruits, with a 37% share, fruit juices (32%), and canned and frozen fruits (13% and 12%, respectively).

The increase in foreign demand coupled with the rise in the availability of abundant raw materials have given an important boost to national production of fruit juices, which traditionally have not been important in the Chilean agroindustrial sector. Clearly, the surge in production of fresh fruit does not mean that 100% of production qualifies for export. A significant minority share of production (which varies by fruit) is



left behind for local consumption, and as input to agroindustry. With the development of this sector, however, some new plantations have been geared specifically to supply agroindustry.

In 1989-92, 11 juice plants were among the most modern in the country. Exports of this product have grown spectacularly, rising from US\$17 million in 1988 to US\$76 million in 1992 (a 450% increase). Of these, apple juice represents 76% of the total, with grape juice accounting for half the rest. The main markets for this product are the United States, followed by Japan, Australia, and Canada.

### **7.3. The Chilean Agricultural Sector and NAFTA**

In case Chile joins NAFTA, the most likely outcome in agriculture is a couple of bilateral treaties with Canada and the U.S. This was the precedent established in NAFTA for agriculture: a collection of bilateral treaties between each pair of countries, rather than one trilateral treaty, as was the case in all other sectors. Moreover, the agricultural section of NAFTA says very little about the conditions that new members must comply with in order to join NAFTA.

Chile already has an FTA with Mexico, which includes agriculture. Under such agreement, only the products subject to the price band mechanism (wheat, sugar, and oilseeds) have been exempted from either gradual or accelerated tariff elimination.

In the event Chile starts negotiations to join NAFTA, it is likely that liberalization will be slower in this sector, with exception lists of sensitive goods taking a period of up to 10 years to become fully liberalized. Price bands are likely to be the most sensitive aspects in Chile's agricultural sector for this negotiation. In fact, price bands are the only truly special treatment that Chile applies in agriculture.

To keep things in perspective, however, it is fair to say that Chile is possibly more liberal than NAFTA members in agricultural trade. Although Chilean tariffs (set at 11%) are higher than those of NAFTA members, nontariff barriers do not exist. And Chile's phytosanitary measures are not a barrier to imports from North America.

The United States, however, currently has significant agricultural import quotas, and has obtained waivers from the GATT for them every year since the 1950s; it also has marketing orders which pose severe restrictions to imports during the U.S. production season. Mexico, on the other hand, has a government agency (CONASUPO)



which used to intervene in farm production, food processing and retail sales. Canada, in turn, has a sophisticated supply management system for agricultural goods. Even though the Uruguay Round will force tariffication of quantitative and non quantitative barriers, agriculture remains highly protected in all three countries.

## 7.4 POTENTIAL FOR CANADIAN EXPORTS OF GOODS AND SERVICES

Canada is a net exporter of agricultural goods, with exports of about US\$13 billion and imports of around US\$9 billion per year. As such, it stands to gain significantly from trade liberalization in agriculture, both in the GATT's Uruguay round and through regional treaties like NAFTA. Chile is a relatively small market, but may provide opportunities for Canadian exporters in traditional crops such as wheat, barley, and oilseeds. In return, Chile has a major competitive edge in fresh fruits and some segments of agro-industry, whose exports are likely to benefit the most from an FTA.

The Chilean import-substituting agricultural sector, mainly consisting of traditional crops, is subject to price bands, as mentioned. There is no other form of protection such as quotas or licenses, except for the general 11% ad-valorem tariff. These imply the imposition of variable import tariffs, which are raised when the international price falls below the preestablished lower limit of the band. The negotiations prior to Chilean accession to NAFTA could result in a reduction of these import barriers.

The final status of protection for Chile's traditional crops will depend on three main issues: (a) the implementation of the result of the recently completed Uruguay round of GATT regarding agricultural goods; (b) the evolution of the process of agricultural restructuring, currently under way in this sub-sector;<sup>8</sup> and (c) the extent of liberalization for Chilean exports granted by Canada and the U.S. in agriculture and other sectors.

Indeed, NAFTA specifies that parties should endeavor to work towards domestic support measures that have minimal or no trade distortion effects, and measures that are exempted from any applicable domestic support reduction negotiated under the GATT. If the GATT talks are successful in limiting the degree of domestic protection to agricultural producers, the Chilean import substituting sector could face increasing foreign competition, in particular from important grain producing countries such as Canada and the United States.

In contrast, Chile's agricultural export sector is highly competitive, and subsidies to export activities are non-existing. The main barriers for the development of this sector lie in tariff and non-tariff barriers in the developed world. These are particularly high in processed products, like apple juice and canned fruits and vegetables. A reduction of these barriers resulting from a free trade agreement would imply a substantial increase in exports of these products, probably inducing the adoption of new technologies and new methods of production in the agroindustrial sector.

The experience of Canada in fruit growing and agroindustry could prove valuable for the continuing expansion of these sectors. In case Chile joins NAFTA, some large Canadian firms may become interested in establishing joint ventures with large local producers or exporters, oriented to the international markets.

## STATISTICAL APPENDIX

**TABLE 1 - AGRICULTURAL GDP AND EXPORTS**

Year	GDP (% of total)	Exports (US\$ mill.)
1974	8.2	42.9
1981	7.5	268.0
1986	8.8	650.8
1992	7.4	1132.0
1993(e)	7.0	1046.8

**TABLE 2 - AGRICULTURAL TRADE BALANCE**

Year	Trade Balance (US\$ million)
1981	-383.0
1982	-190.2
1983	-177.5
1984	-22.7
1985	268.8
1986	530.3
1987	583.4
1988	646.7
1989	749.6
1990	901.3
1991	1097.8
1992	931.5
1993 (e)	930.0

(e) estimated figures

**TABLE 3 - STRUCTURE OF FRUIT PLANTATIONS (TH. HECTARES)**

Year	Apples	Grapes	Pears	Peaches	Other
1974	11.4	4.3	2.6	14.8	30.8
1981	17.4	16.8	3.2	12.7	36.7
1986	21.6	38.8	7.6	7.6	29.7
1991	23.7	48.0	16.3	10.5	31.2

## **8. TELECOMMUNICATIONS**

### **8.1. Overview**

Until recently, this sector was almost completely under state ownership. Following the privatizations in the second half of the 1980s, however, the situation reversed almost completely. Now all important companies are in private hands.

The strong situation of the Chilean economy has allowed for ambitious telecommunications development plans, which will imply a boost in equipment spending that will reach US\$500 million in 1995 (See Table 1 in the Statistical Appendix).

### **8.2. Telecommunication services and products**

In Chile there exists a variety of services defined by law. These include public, limited, and intermediate services. Public services are classified in fixed and mobile telephony, public telegraphy, telex, data transmission and faximile. Intermediate services are defined as those which satisfy the needs of transmission and commutation of public utility concessionaires.

Private entities can provide for their own telecommunications needs. In such cases, the services are classified as limited, and have no access to the public network. Private services are not recognized explicitly in the legislation, but also exist. These include the renting of infrastructure and equipment to telecommunication firms. For example, the (state-owned) national petroleum company (ENAP) satisfies its telecommunication needs renting infrastructure and equipment from the (privately owned) national telecommunications company (ENTEL). Some of the firms providing each of the above services are detailed in Table 2 in the Statistical Appendix.

The most important single service is the local and long distance telephony, with a share of approximately 50% of total revenues in the sector.

### **8.3. Market participants**

All this sector is currently under private hands. The only exceptions are the private and intermediate services demanded by state-owned firms, which are not available to the public. At present, there are eight companies that have concessions for the provision of public services. These are:

- Compañía de Teléfonos de Chile (CTC, including CTC celular).

- Empresa Nacional de Telecomunicaciones (ENTEL).
- VTR (including CNT and TELECOY).
- Complejo Manufacturero de Equipos Telefónicos (CMET).
- Compañía Telefónica Manquehue (CTM).
- CID Comunicaciones (CIDCOM).
- Cooperativa Rural Eléctrica de Llanquihue (CRELL).
- TELECOM (ENTEL is a share owner).
- VTR Celular (VTR is a share owner).
- TELEX Chile (including CHILESAT and CHILEPAC).

The Chilean Telephone Company (CTC) was born as a modern company in 1927, when it was purchased by ITT. It functioned as a foreign-owned private entity until it was nationalized by the Chilean government in 1971. In 1974, Chile's Development Corporation (CORFO) acquired 89% of the shares of CTC. By 1986, CORFO had reduced its share to 49%, and in 1988 CTC became totally private.

CTC provides 95% of the national telephone service, including the basic urban telephone services. CTC owns approximately 95% of all telephone lines in Chile, and its principal business is to provide local telephone services. Domestic long distance services are provided between Santiago and Valparaíso-Viña del Mar through a microwave radio-link. Additionally, CTC operates a cellular telephone network in those areas, and provides international long distance services through rented circuits.

CTC has designed a medium-term development plan whose aim is to satisfy fully the existing demand for basic telephone services, improving their quality and reliability. The main goals of this plan are presented in Table 3 of the Statistical Appendix.

The dynamic expansion of CTC and its potential growth in long distance telephony has resulted in legal controversies with ENTEL, the major long distance operator. A new telecommunications law is currently under discussion in Congress. It will probably result in the segmentation of the market between local and long distance telephony; the government's position is to allow CTC to participate in both markets through separate companies. A rapid decision in this matter would facilitate prompt operation of a dialled multicarrier system, which allows for free choice among competing long distance carriers.

The National Telecommunications Company (ENTEL) was originally created as



a state-owned monopoly for long-distance communications. Its main source of income is still long-distance telephone services —both national and international— which represent about 80% of total revenues (mainly due to the demand generated by CTC). The company has a microwave trunk network, transverse links and satellite links for national and international communications. In addition to telephony, it offers a selection of services ranging from telegraphy and data links to television signals and radio transmission and videoconferencing.

Until 1989, ENTEL maintained a monopolistic position in the long-distance market. This changed in 1990 with the entry of CHILESAT, a company providing national and international long distance services. With the possible entry of a CTC subsidiary in this market, ENTEL will probably face increasing competition.

ENTEL has a number of subsidiary companies, such as SATEL (providing all types of telecommunication services) and TELECOM (providing cellular telephone services).

VTR is a private Chilean company that started to operate in Santiago in the early 1980s, providing mainly data transmission services and especially telex. At present it has extended its operation to other areas such as computer services and informatics.

VTR has the concession for a number of public telecommunication services, including cellular telephony, data transmission; it has recently started to provide intermediate services. The latter was authorized with the purpose of opening up competition in the long distance communications field. Thus, VTR appears as an alternative to ENTEL for users of long distance telephone services.

A point worth mentioning is the foreign participation in the ownership of several of the largest telecommunications companies. Telefónica de España and foreign ADR holders own nearly 70% of CTC; Telefónica de España and —until recently— the Chase Manhattan Bank and Banco Santander owned 40% of ENTEL; Italcable owns 25% of VTR; Bell South owns 50% of CIDCOM cellular; and so on. Moreover, some of these stock blocks have been changing hands with no objection from the authority. In fact, there is widespread impression that foreign ownership and free movement within the sector has facilitated its very dynamic growth.

## 8.4. Regulation of the public services

The provision and operation of telecommunications services, systems and equipment in Chile is regulated by the Telecommunications Law, which specifies which telecommunications services require a concession (permit) from the Undersecretary of Telecommunications. Among those services requiring a concession are public, intermediate and limited services.

Concessions are valid for a fixed period of time and may apply only within a specified geographic area. By virtue of receiving the concession, the holder is obliged to provide services to all parties requesting the service in the area of the concession for a specified period of time. The concession holder must also provide service to those users located outside the concession area who are willing to pay for the extensions needed to provide the service.

Technical rules have been established governing the routing, transmission, signalling and assignment of numbers in the Chilean telephone network. Every new installation must comply with these technical specification set forth by the Undersecretary of Telecommunications. Non-compliance of these norms can carry the consequence of terminating a concession.

Along with technical norms and concessions, the Telecommunications Law provides that, in general, prices for telecommunication services should be established by market forces. Nonetheless, if the Antitrust Commission, charged with assuring free market conditions in various sectors of the Chilean economy determines that market forces are distorted in a given sector of the industry, prices and tariffs will be regulated. This is the case for local basic telephone services, where natural monopolies exist.

In the regulated sector, the structure, level and indexing of user tariffs are fixed by a decree issued by the Undersecretary of Telecommunications and the Ministry of Economics. The procedure to determine such tariffs is based on an economic model designed to result in tariffs for various telephone services which reflect the real cost of providing those services, including a given rate of return on capital. This tariff-fixing process takes place every five years, and results in the setting of maximum tariffs. The law also establishes the prohibition for service providers to discriminate among users in the same concession area.

During 1993, the government introduced a bill to Congress for a new telecommunications law. One of the main elements of that law, would be to reinforce the tech-

nical capabilities of the Undersecretariat ( Subsecretaría de Telecomunicaciones - SUBTEL ) which, until now, has proven rather weak, underbudgeted and technically unprepared to resist the lobbying power of the telecommunications companies and groups.

### **8.5. Development in private services**

Chile was the first country in Latin America to offer private telecommunication networks and is today the most technologically advanced country in the region. In spite of being a relatively small country in the region, it holds about half of all private data transmission circuits in Latin America.

This sector is open and very competitive. The CTC Data Red Company (a CTC subsidiary) offers private digital services in data transmission. Also, Entel Data (an ENTEL subsidiary) offers package commuting, also provided by VTR and Chile Pac. In 1990, Chile introduced the International Business Service (IBS), a private telecommunication system through satellite that allows Chile to be connected to the rest of the world. This is reckoned to be one of the most important tools designed in the telecommunications field in the last five years to help the development of organizations and firms.

Chile was the first country in Latin America where cellular telephone services began to operate. At present, these are spreading around the continent, with more than 200,000 cellular telephones in operation. There are four companies that offer the cellular telephone service in Chile, two for each concession zone. There is roaming among them, that is, the possibility to use the same cellular telephone in every geographical location. The market is highly competitive, and this has resulted in the lowest cost of service in Latin America. The total number of cellular telephones and the service cost in some Latin American countries is presented in Table 4 of the Statistical Appendix.

### **8.6. Compatibility with NAFTA**

NAFTA's Chapter 13 sets the rules for participating countries with respect to:

- (a) measures related to the access and use of public telecommunications transport networks;
- (b) measures related to the provision of enhanced value-added services;

(c) standards-related measures related to the attachment of terminal equipment to public networks.

The establishment and provision of long-distance telephone and other basic services were purposely excluded from the NAFTA negotiations. The reason was that the market has been organized around regulated monopolies. While in Chile there is no restriction of accession to the installation and operation of basic telephony, it is not expected that this would be a topic for negotiation.

The emphasis of the Chapter is in ensuring equal treatment to enhanced value-added services, as well as common North American rules for providers and users of telecommunications and computer services. The agreement is expected to create a more competitive environment for telecom equipment companies. The Chapter also establishes a common approach for the standardization of the telecom equipment attached to public networks, and sets up a Telecommunications Standards Sub-Committee.

A few identifiable points of discrepancy between Chilean legislation and Chapter 13 are the following:

(a) There are restrictions in Chile to interconnect privately leased or owned circuits to the public network. This interconnection is explicitly prohibited in Chile because it omits the cost of use of the public network which is implicit in the regulated tariff.

(b) The pricing of private services could also represent a discrepancy, as NAFTA contemplates only a flat rate; in Chile the price would be freely negotiated between user and supplier (Law 18.268, article 29).

(c) With respect to standards, Article 1304 section 6 requires each country to accept tests and results from laboratories in the territory of another member country. This may face technical objections from the regulatory agency in the Chilean government (SUBTEL).

A matter where no objections are anticipated is that of conditions for the provision of enhanced value-added services. At present, there is freedom in the provision of many services under agreement with the concessionaire of public telephone services, subject to the fulfillment of technical conditions which are compatible to those in Article 1303.

A final word about Article 1305 (Monopolies) and Article 1306



(Transparency). Monopolies in Chile are regulated not only through tariffs and technical standards. The largest Chilean telephone company —CTC— is a public corporation which trades in both the Chilean and New York stock exchanges. As such, it is subject to the scrutiny of governments and independent private auditors, and it fulfills all the requisites set forth in NAFTA.

As for transparency, due to the dynamism of the sector, the lack of an up-to-date legislation (the new telecoms law has been in discussion in Congress since mid 1992), and a rather intensive lobbying by the largest companies (which has included several legal fights), the regulatory environment of the sector has lacked full transparency. Being an exception, as it is, to the normal governmental procedures, it has created a certain climate of uncertainty among investors. Chilean telecommunications is a sector that could certainly benefit from the disciplines imposed by a NAFTA negotiation.

## 8.5 OPPORTUNITIES FOR CANADIAN SUPPLIERS OF GOODS AND SERVICES

The telecommunications sector in Chile can be characterized as extremely dynamic and competitive both in public and private services. Technological developments, however, have gone faster than the government's regulatory capacity. In any event, the openness of the Chilean economy and the strong perspectives for this sector in the near future open up business opportunities for firms providing technologically advanced equipment and specialized consultancy in telecommunications.

Opportunities in the telecommunications sector are highlighted by CTC's medium-term development plan, whose total investment —principally in equipment and technology— will top \$1.5 billion during the next 5 years. This is clearly the main investment program in the industry. Smaller companies participating in the telecommunication sector, however, have aggressive expansion plans of their own. In a fast-growing country that has privatized its telecommunications sector relatively recently, it is likely that this industry will grow more than Chile's GDP for many years to come.



Moreover, as mentioned, entry into Chile's telecommunications sector is open to all companies, regardless of their country of origin, and no restrictions to foreign ownership apply. This stands in sharp contrast to Canada's restriction on foreign ownership of telecommunications companies, set at a maximum of 20 percent.

Unlike the case of Mexico, for example, no special protection applies to the import of telecommunications equipment into Chile, other than the flat 11% tariff. In case of Chile's accession to NAFTA, Canadian suppliers will gain a competitive edge over non-NAFTA suppliers, to the extent of this 11% tariff. Sources consulted in the major telecom companies of Chile have even expressed their regret about not having more aggressive Canadian suppliers in telecom equipment for telephone lines, rural communications, mobile phones, and private service terminals.

## STATISTICAL APPENDIX

**TABLE 1**  
**EQUIPMENT SPENDING**

Year	US\$ million
1986	109.0
1990	188.0
1995	468.0
2000	780.0
2005	996.0

**TABLE 2**  
**PROVIDERS OF TELECOMMUNICATION SERVICES**

Telecom.Service	Provider
Public Local Telephony	CTC, CNT, CMET CTM, TELCOY, CRELL
Public National Long Distance Telephony	ENTEL, CTC, CNT CHILESAT, VTR
Public Internat'l Long Distance Telephony	ENTEL, CHILESAT
Private Local Telephony	ENAP, CODELCO
Private National Long Distance Telephony	ENTEL, CHILESAT
Private Internat'l Long Distance Telephony	ENTEL, CHILESAT
Telex	TELEX CHILE, VTR
Data transmission	ECOM, CHILEPAC, VTR

**TABLE 3**  
**TARGETS FOR BASIC TELEPHONE SERVICE**

	1987	1991	1997
Installed Lines (thousand)		1163	1872
In service Lines(thousand)	688	997	1774
In service Lines(p/100 inhab)	7.4	8.0	13.0
Telephones (thousand)		1345	2343
Telephones (p/10 inhab)		10.8	17.1
Digitalization (%)	51.1	70.6	100.0
Automation (%)	99.3	99.8	100.0

**TABLE 4 - CELLULAR TELEPHONES AND SERVICE COST**  
**(AS OF 1/1/93)**

Country	No of phones total p/1000hab.		Cost (US\$ cent/minute)
Chile	64.400	4.73	.24
Argentina	45.000	1.36	.30
Brazil	30.700	0.19	.40
Peru	27.100	1.20	.40
Mexico	267.200	2.98	.39
Venezuela	7.400	0.38	.33

## 9. FINANCIAL SERVICES

### 9.1. Overview

Chile's financial sector has suffered a profound liberalization that started in 1974. Since then, it has experienced major progress and high technification. Today, it is probably the most developed financial market in all Latin America. This process of development, however, has not been smooth. Indeed, the development of the financial system can be divided roughly in three phases:

(a) 1975-1981. In this period, the financial system was deregulated almost completely. Interest rates were set free, and entry to the banking industry was allowed. The capital account was gradually liberalized. At the beginning of the 1980s, the Chilean financial legislation—both for the domestic market and for international capital flows—was extremely liberal.

(b) 1982-84. Due to the economic crisis of 1982-83, and the massive indebtedness incurred by the banks, some regulations came back; in 1983, the authorities even intervened the administration of the two principal private banks.

(c) 1985-1993. Drawing on the lessons of the 1982-1983 crisis, regulations were improved and the regulatory power of the authorities (the superintendencies) was enhanced. Later on, in 1985, the intervened banks were reprivatized. In the second half of the 1980s, the Chilean financial sector and capital markets experienced fast growth. Institutional investors, especially pension funds and insurance companies, started to play a major role in the market.

### 9.2. The banking sector

For many years, the Chilean banking sector was wide open for both national and foreign institutions. Witness of this is the fact that, for a relatively small market as the Chilean, there are 36 commercial banks and 4 financial houses ("financieras"). Twenty three out of the 36 banks, or almost two-thirds of the total, are foreign. All domestic banks but one (Banco del Estado) are private, and have been so for about 15 years.<sup>9</sup> Foreign banks account for 20% of assets of the banking system, and 15% of its equity (See Table 1 in the Statistical Appendix).

The operation of the Chilean banking sector is regulated by the General

Banking Law (DFL No. 252), which dates back to 1960, and whose main modification took place in November 1986. A new project modifying the banking law is currently under discussion in congress; its main provision is the opening of new lines of business for banks.<sup>10</sup> The Superintendency of Banks and Financial Institutions is the entity charged with the enforcement of the law and the regulations.

### **Regulations affecting foreign banks**

In principle, foreign banks can establish in Chile under one of two options: through a subsidiary, or through a representation office. The latter, of course, is much more limited than the former (a representation office, for example, cannot obtain deposits from the public). In case a foreign bank decides to establish a subsidiary, it also faces two alternatives: through an agency depending directly from headquarters, or forming a Chilean corporation.

The Superintendency can repeal an application for the establishment of a foreign bank in two cases:

(a) If the by-laws of the specific foreign bank enter into conflict with Chile's General Banking Law.

(b) If the foreign entity does not offer enough guarantee about its solvency, and thus may endanger the domestic financial market.

Traditionally, (b) has implied that only banks with international recognition have been able to establish themselves in Chile, thus denying this possibility to banks incorporated in "financial heavens" and "off-shore centers". Indeed, the Superintendency did not approve the establishment of BCCI in Chile when the bank applied for it. Analogously, the law forbids the incorporation of national banks whose owners do not have a well-known and solid reputation.

It is worth noting that this legislation does not imply discrimination, as it reaches for the maximum solvency of the banking entities wishing to participate in the Chilean market.

The exclusion of dubious banks incorporated in financial heavens implies just prudence.

In practice, however, the authorities will not approve today applications to establish new banks in the Chilean market. This stems from a diagnosis that there are too many banks operating in the domestic market, and the authorities would like the



current ones to strengthen. Thus, they encourage joint ventures between local and foreign banks, especially in the case of weak local banks teaming up with stronger foreign partners. Thus, the only practical way for a foreign bank to establish in Chile is through one of two ways: a joint venture with a local bank, or a direct purchase of a domestic bank.

The General Banking Law indicates that foreign institutions established in Chile must comply with the same legislation and regulations as their domestic counterparts. This is reflected, for example, in the need to form a local board of directors (without restriction of nationality), in case the bank chooses to establish a subsidiary.

The law does not discriminate between foreign and domestic banks. Foreign banks are entitled to the same rights and duties as domestic banks. Also, the foreign bank cannot invoke rights derived from its nationality. As an example, small deposits (whether in foreign or in domestic banks) are equally covered by state insurance.

The minimum capital required for the establishment of a bank is around US\$10 million, independent of the bank's nationality. However, foreign banks cannot publicize the capital and assets of their headquarters without also publicizing these same variables for the subsidiary.

### **9.3. Insurance companies**

The insurance market has experienced significant growth in Chile since the mid-1980s. Part of this growth is due to the evolution of the Chilean economy, but most of it stems from the development of private pension funds (present assets close to US\$14 billion, or more than one third of GDP). Thus, the fastest growing segment of the market for many years has been life insurance, closely tied to the provision of old-age, disability, and survival pensions.

Out of a total of 20 general insurance companies in Chile, 7 are owned by foreigners, and have a substantial share of the market: they account for 61% of the assets, 31% of the capital, and 25% of the profits. Life insurance companies total 26, with 11 under foreign ownership. The latter have a majority share of the market (more so than in general insurance), with 52% of total assets, 41% of capital and 55% of the profits.

The operation of insurance companies is regulated by DFL No251 of 1931. In

contrast to the situation in the banking sector, this legislation does not provide for the establishment of foreign subsidiaries or agencies of foreign insurance companies. The law establishes that insurance activities can be performed only by corporations that participate exclusively in the insurance business. Thus, foreign institutions wishing to participate in this market must constitute a corporation directly.

Foreign competition is assured by allowing the free contracting of insurance with foreign firms abroad. These operations are subject to the same taxes affecting insurance with domestic companies.

The law allows the contracting of insurance with foreign firms, provided the foreign institutions comply with the following requisites:

- (a) Capital of at least UF 300.00011 (US\$7.5 million approx.)
- (b) The foreign entity must certify that it is legally constituted in the foreign country.
- (c) The foreign entity must certify that, in conformity with the respective foreign legislation, it has no hindrance for the provision of insurance abroad.

#### **9.4. Securities trading**

The trading of securities in Chile is regulated by the Securities Law (Ley del Mercado de Valores), which dates back to 1981. This activity is performed by two types of intermediaries: stock brokers and securities dealers (agencias de valores).

Measured by total assets, the size of the stock brokers market approached US\$1 billion in June 1993. Firms under foreign ownership accounted for one fifth of total assets; another important share (37%) was held by subsidiaries of domestic banks. The shares in total capital were 23% and 24%, respectively. Total assets under management of securities dealers surpassed US\$500 million in June 1993, with almost 70% of these belonging to the foreign-owned companies. (See Table 3 in the Statistical Appendix.)

According to the Securities Law, the requirements of capital, solvency, and liquidity are set through general regulations by the Superintendency of Securities and Insurance (Superintendencia de Valores y Seguros). The operation of stock brokers and securities dealers can be performed only through the establishment of a corporation in Chile, that must be registered at the Superintendency. Other activities that have the same requisite are mutual funds, capital funds, risk classification companies, finan-

cial consultants, and so on.

As noted previously, the legislation only provides for the requisites established by the Superintendency. So, besides from the need to establish a corporation and other adequacy standards, there is no discrimination between securities dealers or stock brokers owned by foreign or domestic capital.

## 9.5. Chilean Financial Services and NAFTA

The need to have a separate NAFTA chapter for financial services stems from the rather particular characteristics of this sector: (a) trade in financial services differs substantially from trade in goods; (b) the financial sector is more regulated than most other sectors; and (c) countries have adopted national approaches to regulation that are not only different, but sometimes even incompatible.

Additionally, some financial services require active presence of the supplier of the service near the customer (e.g. retail brokering, consumer loans, retail deposit gathering, etc.), while others can be provided through a "long-distance" approach (e.g. loans to large corporations by international banks, underwriting of securities for corporations, etc.). In one case, the relevant issue will be that of the right of establishment, while on the other it will be that of freedom in cross-border transactions.

To further complicate negotiations in the financial sector, proper attention has to be given to existing national regulatory schemes, which cannot be dismantled in the short run without severe damage to the host country. NAFTA clearly accepts this principle, and in Article 1410 states that nothing in the agreement shall prevent the Signatory Party from: protecting investors, depositors and other market participants; maintaining the safety, soundness, and integrity of its financial institutions, and ensuring the solvency and stability of its financial system.

Just as Canada and the U.S. have adopted contrasting approaches for the regulation of their financial institutions, Chile has its own regulatory approach (as mentioned before). With respect to ownership restrictions, Chile is closer to the U.S.A., as it has almost no barriers to foreign ownership. Regarding entry requirements, it is closer to Canada's legislation, as it has strict entry requirements and proportionately fewer banks. On power setting, Chile is also closer to Canada, as powers are set by rule, and not determined on a case-by-case situation as it is in the U.S.

In one area, there is a major difference between Chile and both Canada and the U.S.: the responsibility of provincial governments in Canada and state governments in the U.S. in regulating the financial sector. Because Chile is a unitary nation, only the central government has the power to regulate, and regulations have nationwide validity.

To keep things in perspective, however, it is important to contrast Chile's situation to that of Mexico, whose banking sector was completely nationalized in the early 1980s, and only recently has been privatized. Moreover, for many years only one foreign bank (Citibank) operated in Mexico, and the sector was closed to foreign participation. This situation has changed very recently, with the economic reforms that Mexico has undertaken, and due to its incorporation to NAFTA. Mexico will allow Canadian banks, securities dealers, and insurance companies to establish wholly owned subsidiaries or to buy existing firms starting in 1994. But a limit on the overall share of foreign firms in financial market will apply during a transition period of 6 years (which could be extended if the foreign share goes over 25% of the market).

Chile's financial industry, on the contrary, has been quite open for many years. After a proliferation of local and foreign banks in the late 1970s, the authorities decided not to accept more applications to open new banks. This was importantly influenced by the 1982-83 crisis, and by the authorities' perception that the banking sector was overextended. In any case, this restriction does not discriminate between local and foreign investors.

A negotiation of Chile's accession to NAFTA would therefore differ to that with Mexico in at least two aspects: (a) Mexico was a very closed market and Chile is very open; and (b) Mexico is a very large and potentially attractive market, whereas Chile is a smaller market. As a consequence, Mexico had a large stake to trade in for concessions in other sectors. Chile's objective, on the other hand, may be focused on gaining additional access to the NAFTA-expanded financial markets and to facilitate the flow of financial services to and from Chile.

One important aspect in facilitating the opening of these markets and the flow of funds and cross-border services may be the mutual recognition of national regulatory institutions as responsible for the solvency and soundness of financial institutions. The same is true for regulatory agencies responsible for overseeing stock markets and stock transactions.



A final word is necessary about Canadian financial institutions. In spite of the openness of Chile's financial industry, and of the participation of 23 foreign banks in this market, it is important to mention that only two Canadian banks ( Bank of Nova Scotia and National Bank of Canada) have participation in the Chilean market through their ownership of minority stock (29% and 9%, respectively) positions in two Chilean banks ( Sudamericano and Osorno ). It is possible, therefore, that Chile's policy of not approving the applications of new banks could be contested by Canada in case of Chile's accession to NAFTA. In such a case, this issue could become part of the negotiation process. Under the current law and regulations, Canadian capital may own insurance companies, securities dealers, or purchase an existing bank (or enter into a joint venture with an established bank), but will not be allowed to open new banks.



## STATISTICAL APPENDIX

**TABLE 1 - BANKING SECTOR STATISTICS**  
(US\$ MILLION, SEPTEMBER 1993)

	Assets	Capital	Loans	Profits
Foreign Banks	9130	2590	773	681
Domestic Banks	35658	19794	1508	3949
Share of Foreign Banks	20.4%	15.5%	34.0%	17.3%

**TABLE 2 - INSURANCE COMPANIES STATISTICS**  
(US\$ MILLION, MARCH 1993)

	Assets	Capital	Profits
<b>General Insurance</b>			
Foreign companies	157	51	1
Domestic companies	98	114	4
Share of foreign companies	61.5%	30.9%	25.1%
<b>Life Insurance</b>			
Foreign companies	1719	193	8
Domestic companies	1575	276	7
Share of foreign companies	52.2%	41.1%	54.6%

**TABLE 3 - BROKERS AND DEALERS STATISTICS**  
**(US\$ MILLION, JUNE 1993)**

	Assets	Capital	Profits
<b>Brokers</b>			
Foreign brokers	207	28	2
Banking brokers	375	29	2
Other brokers	410	64	5
Share of foreign brokers	20.9%	23.1%	22.2%
<b>Dealers</b>			
Foreign dealers	341	24	1.5
Banking dealers	163	13	1.4
Other dealers	6	4	0.1
Share of foreign agencies	66.8%	59%	50%

## 10. ENERGY

### 10.1 Overview

The Chilean energy sector is widely heterogeneous, both in the market structure and orientation of each sub-sector, and in the structure of property. Oil exploitation and refining are still in the hands of the state, although distribution is made by private firms. On the other hand, electricity generation and transmission is now mainly under private ownership, after the privatization round of the second half of the 1980s.

National consumption of energy is diversified among a number of sources. Petroleum is by far the most important source, representing 42% of total energy consumption. Hydroelectricity, natural gas, coal, and firewood come at a considerable distance, accounting for around 14% of total consumption each (see Table 1 the Statistical Appendix).

### 10.2. Petroleum

For a long time, the production of oil in Chile has been in decline, with the slow depletion of existing fields, and the lack of significant new discoveries of reserves. Nowadays, close to 80% of national consumption is imported. Thus, the main activities in this sector are the import of crude, its transportation and refining, and the distribution of refined products to final users.

The petroleum sector has been liberalized progressively since the mid-1970s. Prices are now freely determined by the market for all petroleum products. There is free entry to import, refine, and distribute oil in Chile. With the flat 11% tariff as the only import barrier, prices of oil and oil derivatives move along with world prices.

### Exploration and exploitation

A number of sedimentary basins have been studied along the Chilean territory, representing a total area of nearly 300,000 square kilometers. They are located mainly in the straits of Magellan, the southernmost end of the central valley, and northern Chile. Of these, the most significant and the only one under current exploitation is the

Magellan basin, which represents 29% of the total area.

The only company pursuing exploitation is the state-owned Empresa Nacional de Petroleos (ENAP). This is explained by the fact that, under constitutional mandate, the state is the sole owner of all hydrocarbon deposits. Nonetheless, the state can pursue exploration and exploitation in association with national or foreign private investors. The law provides several incentives for these joint ventures, in the form of special petroleum-operation contracts. These are risk-contracts guaranteeing the contractor a previously agreed compensation in petroleum (that can be exported or purchased by the State). In addition, when authorized by the Presidency, the contractor may be granted special tax treatments (which include a reduction for 10% to 100% of payable income tax).

Several explorations through risk-contracts with American and Canadian firms (Hunt-USA, Hamilton-Norcen-USA, Maxus-USA, Eurocan-Canada) have been pursued in northern Chile. To date, however, the results have not been promising.

## Refining and distribution

There are two refineries and a topping plant in Chile, all of them subsidiaries of the National Petroleum Company (ENAP). Each refinery is located near a main urban center, one in Con-Con (close to Santiago and Valparaiso-Viña del Mar), the other in Concepción.

The distribution of liquid fuels has been traditionally handled by three big companies: ESSO Chile (since 1913), SHELL Chile (since 1919) and COPEC (established in 1934). In 1979, however, a change in the regulation allowed a number of new, smaller firms to start operations. In addition to the three traditional firms, six new companies now operate in the market (ABASTIBLE, APEX, COMAR, ENEX, GAZPESA, and TEXACO).

### 10.3. Electric power

Traditionally under public sector ownership, the electric power sector was privatized almost completely between 1985 and 1989, both in generation and distribution. In fact, it has become one of the most dynamic sectors in the economy, and one that concentrates a substantial share of stock-market transactions.

Newly privatized companies in this sector have been the pioneers in the inter-



nationalization of Chilean enterprises. ENDESA and ENERSIS, for example, have actively participated in Latin America's privatization process, and now own a significant share of electricity generation and distribution in Argentina. More recently, Chilean companies have been looking with great interest at Peru's privatizations in the electric power sector.

## Generation

Due to Chile's geographical features, the electric power sector is physically divided into four independent areas. In the far north, the plants supplying the local interconnected system are mostly coal- or oil-burning thermoelectric plants. In central Chile—an area covering nearly 92% of the country's total population—the local interconnected system is supplied mainly by hydropower. Finally, in the southern area of the country—a region of quite difficult access—electric power is generated either by small hydroelectric plants or by oil and diesel. Due to the scant population of the area, most plants supply only specific locations, such as Punta Arenas or Puerto Natales. A decomposition of electric installed capacity by type of generation is provided in Table 2 of the Statistical Appendix.

Electricity generation is open to private capital by concession, with a pricing scheme regulated by state agencies. The main principle behind this regulated pricing system is the charging of marginal costs in the prices to distributors. Generation companies are allowed, however, to sell energy directly to big consumers under a freely set price.

This sector is in private hands, except for the Colbún-Machicura hydroelectric plant which is still under public sector control.

## Distribution

The distribution of energy to final consumers is separated from its generation, *except in the southern part of the country*. Because electricity distribution companies are natural monopolies, their pricing system is also regulated. The maximum tariffs that can be charged are computed every four years taking as a basis a model company, with typical consumer density and a representative cost structure.

## 10.4. Coal



As with petroleum, the state is legally the sole owner of all coal fields. The possibility for exploration and exploitation of coal by private investors is available only under concession. Concessions are, by law, a real and immovable right. Thus, the concession holder has exclusive rights to freely explore and exploit his claim.

Ownership in the coal sector is mixed. Coal exploitation is concentrated in one state company (ENACAR) and three private firms (SCHWAGER, CARVILLE, and COCAR). Of these, ENACAR has suffered deep financial problems over the last couple of years, and has avoided bankruptcy only through heavy subsidies from the state. The reason for this decision is the dependence of some 150,000 people—located in a highly concentrated geographical area—on these mining works. The government has insisted, however, that this is a temporary measure used only to give the opportunity for cost reduction and modernization.

The main reserves of coal are located in the 8th, 10th and mainly in the 12th regions (see Table 3 in the Statistical Appendix). Considering only demonstrated reserves (about 600 millions of metric tons), the Chilean demand for thermal coal can be met for about 150 years. This demand reflects mainly the use of coal by thermo-electric power plants. But because these plants operate as a supplement to the hydropower stations (because of cost considerations) actual demand for coal depends critically on the unpredictable behavior of hydrology. The main end users of coal are industry and mining.

### 10.5. Gas

Gas fuels used in Chile include natural gas and manufactured gas. Until now, natural gas has been produced only as a by-product of petroleum exploitation in the Magellan area, and has been used only in the surroundings of that area. A new project, however, is likely to change this situation. If this goes as scheduled, a pipeline will supply natural gas from Argentina to the central region of Chile.

Manufactured gas is produced from naphtha cracking processes, and has been used mainly in the Santiago area. In other parts of the country, manufactured gas is produced in steel mills (as in Concepción) or by coal distillation. Also, since 1978 GASCO, the now private distributor of gas in Santiago, has been conducting studies for production and use of biogas from trash landfills. This project has been successful,

and biogas now provides over 30% of manufactured gas in Santiago.

The incentives for natural gas exploration and exploitation are similar to those given for petroleum operations. That is, the contractor receives an agreed compensation and has the possibility of receiving a tax deduction.

Natural gas is a competitive substitute for the more expensive imported fuels. So far, however, natural gas has only been found in the southern area of Magallanes. Distance makes it unfeasible to send it to the more industrialized central region. This situation could eventually change if the new pipeline that could bring natural gas from Argentina goes through, or from discoveries of new sites.

## 10.6. Chile's Energy Sector and NAFTA

As a large exporter of energy products (US\$16 billion in 1991), Canada's interest is clearly in the side of liberalization of the energy sector. Chile —although a net importer of oil, coal and (in the near future) gas— will certainly support this goal. Indeed, Chile's energy sector is very liberal, and it is unlikely to cause any significant conflict in future NAFTA negotiations.

Prices of energy products are freely determined by the market for all products, except those where a natural monopoly exist. The latter is the case of electricity distribution, where a clear regulation exist, and prices are set on the basis of marginal costs (as they should be). Foreign investors are allowed to participate in all sub-sectors. And imports are subject to the regular, flat 11% tariff as the only trade barrier. Thus, the Chilean Government will quickly agree to one of NAFTA's rules for the sector: the commitment not to apply restrictions on imports or exports (except in limited situations).

The only departure from a totally liberal setting is that Chile's Constitution stipulates that the state is the sole owner of all hydrocarbon deposits. As such, private exploration and exploitation of hydrocarbon fields can only occur under concession from the state. This restriction, however, is unlikely to create a conflict in Chile's NAFTA negotiations, for several reasons.

First, the concessions regime is transparent and full of incentives, and has already attracted foreign companies (including Canada's EUROCAN). Second, Chile's regime is far less restrictive than Mexico's, whose state-owned PEMEX controls virtually everything in the petroleum sector (exploration, exploitation, refining, processing, and

pipelining). Third, Canada's provincial governments also have the ownership of energy resources. And finally, the ownership restriction applies to the hydrocarbon sector, which is not Chile's most attractive.

## 10.7 POTENTIAL FOR CANADIAN BUSINESS IN THE CHILEAN ENERGY SECTOR

Over the last 10 years, average annual investment in the oil sector has been close to US\$150 million, of which less than one third has gone into exploration. This has been clearly insufficient to prevent a significant decline in the national production of crude petroleum. Chilean authorities thus have a clear interest in attracting foreign investors into this sector. This presents an opportunity for Canadian firms to become involved in the exploration and eventual exploitation of new sites. A Canadian firm (EUROCAN) has already participated in exploration through risk-contracts in the northern region of Chile, although so far with negative results.

It is important to bear in mind, however, that the gas pipeline from Argentina (which will supply natural gas to the central region of Chile) will likely reduce the demand for crude derivatives. But the transition from oil to gas will not be instantaneous. The public transportation system, for example, would face important technological changes in the process of transforming diesel engines to gas-fueled engines.

Canadian firms may also participate in Chile's oil sector through the supply of equipment and spare parts to new and existing operations. The distribution of refined oil and derivatives is also fully open to foreign companies.

As with oil distribution, electricity generation and transmission are open to private capital, and thus Canadian firms can participate directly in the development of new plants.

Also, most of the machinery and equipment used in the construction of these plants (turbines, generators, transformers, etc.) is imported. Nearly 20% of this equipment comes from the USA, with other important suppliers being Germany, France,

Japan and Brazil. The strong expansion that this sector will experience in the near future opens an interesting area for Canadian firms to get a share of this market.

The largest reserves of coal existing in Chile are located in the far south, which makes it difficult to use them in the central region. Also, the declining production of the state-owned ENACAR has already meant that some local coal consumption has been met by foreign suppliers.

Canada has been one of the main suppliers of imported metallurgical and bituminous coal (54.7% and 11.0% of total imports, respectively, as shown in Table 4). Strong competition can be expected, however, from other suppliers like Colombia, with large reserves and low production costs.

One of the main opportunities for foreign firms in the Chilean gas sector is in the exploration and exploitation of new reserves. A Canadian firm has participated through risk-contracts in oil and gas exploration in northern Chile, although results have not been encouraging.

As mentioned, the future construction of the gas pipeline from Argentina to central Chile may imply a reconversion of the public transportation services, switching from diesel to gas use. The supply of equipment for this "new" fuel, used in a massive scale, could provide interesting business opportunities for Canadian firms.

The possibility of using natural gas as raw material in the development of new industrial operations such as methanol or ammonium-urea plants in the Magellan area is also present.

## STATISTICAL APPENDIX

**TABLE 1 - TOTAL ENERGY CONSUMPTION**

	Equiv.oil barrels (x 1000)	Percent
Petroleum	136	42
Hydroelectricity	46	14
Natural Gas	43	13
Coal	49	15
Firewood	51	15
Total	325	100

**TABLE 2 - INSTALLED CAPACITY AND GENERATION  
IN THE ELECTRIC POWER SECTOR**

Area	Installed power (MW)			Production (GWh)
	Hydro	Coal	Oil	
North (I,II regions)	10.2	406	261	2860
Center (III,X regions)	2850	655	195	15000
South (X,XI regions)		15		33
Far south (XII region)		45		95



**TABLE 3 - MAIN RESERVES OF COAL**  
(AS DEFINED BY THE US BUREAU OF MINES)

Area	Reserves(mill. metric tons)		
	Measured	Indicated	Inferred
Concepción-Arauco (VII region)	10	25	100
Valdivia-Chiloé (X region)	3	6	20
Magallanes (XII region)	181	410	5000

**TABLE 4 - IMPORTED COAL**

Metallurgical coal

Total imported : 473,000 tons

Main suppliers :

	(tons)	CIF cost (mill.US\$)
Canada	259,000	15.7
Australia	155,000	8.9
Indonesia	35,000	1.6
USA	28,000	1.7

Bituminous coal

Total imported : 703,000 tons

Main suppliers :

	(tons)	CIF cost (mill.US\$)
South Africa	232,000	10.7
USA	167,000	8.0
Canada	77,500	4.3
Australia	64,000	3.5
Colombia	100,000	4.9
Hong Kong	62,000	2.9

## 11. MINING

### 11.1. Overview

Chile has traditionally been labeled as a mining country. During the XIX century it was the world's largest copper producer. Early in the XX century it became the largest nitrate producer of the world. As of 1993, Chile is the world's largest producer and exporter of copper (22% of total world exports), potassium nitrate and sodium nitrate. The country is also the largest world producer of rhenium, lithium, iodine and molybdenum; the fifth largest producer of boron; the seventh largest producer of selenium; the eighth largest producer of silver; and the ninth largest producer of gold.

The mining sector's contribution to GDP was 6.6% in 1992 (see Table 1 in the Statistical Appendix). But the importance of this sector cannot be underestimated, as the share of mining products in total exports was 47% on that year. Copper exports represented 82% of this total. Copper mining has been mainly in the hands of the state for the last twenty years, through the Corporación del Cobre (CODELCO), which represented 57% of total copper exports in 1992. More recently, however, the development of new private mines (of which Escondida is the largest) has led to a significant decline in the public sector's share in copper mining.

In recent years the mining sector has attracted a major share of foreign investment. In the period January-October 1993, the mining sector accounted for 45.7% of the almost US\$2 billion of materialized external investment. Also, the biggest single investment projects have been made in this sector.

### 11.2. Copper mining

Copper mining is mainly done by CODELCO in five productive divisions: Chuquibambilla, El Teniente, Salvador, Andina and Tocopilla. Although CODELCO's annual production is over 1 million tons, it is expected that it will decline to 800,000 tons by the year 2010, due to a fall in average grades. In spite of this, it is expected that Chile's share of world primary copper production, which was 22% in 1990, will increase to 25% by the mid-1990s, due to the implementation of expansion programs in present companies and to new private investments.

CODELCO faces a number of challenges. The need for an increase in produc-

tivity has strongly appeared in the face of rising costs due to declining grades. In fact, extraction methods have not varied significantly over the last 15 to 20 years, while labour costs have severely risen. 1992 was the first year to see an increase in productivity in recent times.

One of the measures to overcome these difficulties has been the approval this year by Congress of the new CODELCO law. In a nutshell, the new law empowers CODELCO to dispose of currently unexploited mining rights, allowing its free association with private investors.

The first practical result of this new law has been the association between CODELCO and a Canadian-North American Consortium, Cyprus - Lac Minerals, for the joint exploitation of the El Abra claim (with CODELCO retaining 49% of property). This represents a direct payment from the foreign investors of over US\$500 million, with an additional US\$1 billion committed for the implementation and exploitation of the project.

However, this law does not consider eligible for joint ventures with the private sector those claims that qualify as "reposition" claims (those used for expanding the production of existing divisions). In practice, this has left out some of the biggest claims existing (Mansa Mina and Radomiro Tomic). State exploitation has also been suspended (or significantly slowed down) due to budgetary reasons.

The most important investment project carried out in recent times has been the Escondida copper mine. This represented over US\$800 million in direct investment, thus making Escondida the largest private mine in Chile. Some of the new projects in copper mining are given in Table 2 of the Statistical Appendix. In total, these new projects will increase copper production to more than 2.3 million tons towards the year 1996, 69% of which will be extracted from open pit mines.

Second in importance to CODELCO is the state-owned Empresa Nacional de Minería (ENAMI), with a completely different nature and functions. Its major objective is to encourage small and medium-sized mining. Thus, ENAMI does not exploit mine sites; rather, it buys minerals from private entrepreneurs, which are then processed, smelted, refined and marketed.

### 11.3. Gold and silver mining

In 1992, the Chilean production of gold was 33,774 kilos. Only a decade before, it barely surpassed 3,000 kilos. This impressive growth began with the start-up of the El Indio mine at the end of the 1970s. Traditionally, gold production came as a by-product of copper mining. Only with El Indio has gold mining in itself become a principal activity, mainly as open pit operations.

Foreign companies currently produce most of the gold in Chile. The increase in gold production will thus depend on new prospections and new foreign investment. Projects for gold production currently under study, however, could expand production to 37.5 tons in 1995.

As with gold, silver production has increased substantially over the last decade. In 1980, the annual production of silver was under 300 tons, while in 1992 it has climbed to over 1,000 tons. Medium-term projections, however, estimate silver output at around 900 tons by 1995 (See Table 3 in the Statistical Appendix). In Chile, silver comes mainly as a by-product of copper and gold exploitation, while direct silver mines are very small.

### 11.4. Iron mining

Iron mining in Chile is made up exclusively of open pit operations, and is completely under the hands of Compañía Minera del Pacífico. This is a subsidiary of Compañía de Acero del Pacífico (CAP) S.A. de Inversiones (formerly a group of state enterprises), a holding company which also owns the Huachipato Siderurgy and the Huasco Pellet Plant.

The investment of CAP S.A. companies that are now being developed are estimated at an accumulated US\$850 million for the period 1989-1994. The most important project at the Huachipato steel mill has been a coke plant with a capacity of 500,000 tons per year, inaugurated in 1990. Total investment for this plant was US\$140 million.

### 11.5. Non-metallic or industrial minerals

Non-metallic mining mainly consists of the exploitation of nitrate, lithium and

calcium carbonate. It is worth noting that Chile is the second world producer of iodine (a by-product of nitrate) and lithium, which are mostly exported. Calcium carbonate is used basically in the production of cement for the domestic market, thus depending heavily on the overall growth rate of the economy.

Several projects will be undertaken in the near future regarding aluminum refining, an area not yet developed in Chile. One of them is the Alumisa Project, which contemplates an initial investment of US\$1.1 billion. Its location is the far south of the country (XI region), where low-cost hydroelectric power is readily available. The raw material would be imported from Australia. This project could imply a substantial economic impact for the country, and especially for the region. With annual production estimated at around US\$400 million starting in 1996, it would triple regional GDP.

Another aluminum processing plant, with an investment of US\$1.5 billion is under study by Endesa, the largest power generating company in Chile. It is similar in its characteristics and location to Alumisa.

## 11.6 POTENTIAL FOR CANADIAN EXPORTS IN THE CHILEAN MINING SECTOR

Canada already has a significant presence in Chile's mining sector through the ownership of significant stakes in several large projects. Some of the most important mining companies in Canada, such as Placer Dome, Río Agom, Falconbridge, Cominco and Lac Minerals are heavily involved in the exploitation of copper, gold and silver. The largest projects include Quebrada Blanca, Cerro Colorado, El Abra, La Coipa and El Indio. This presence has been growing fastly in recent years, and now Canada is one of the main foreign investors in Chile.

Besides from direct participation in the ownership of companies, the main opportunities for Canadian companies in the Chilean mining sector are in the provision of equipment for new projects and for the development of existing projects. An estimate of the demand for equipment for the next few years gives an approximate figure of around US\$500 million per year for 1994-96 (see Table 4 in the Statistical Appendix).

The largest kinds of equipment imported are heavy trucks, power shovels,



drilling equipment, loaders, crushers and motorized vehicles, reflecting the importance of copper mining in this sector (see Table 5 in the Statistical Appendix). However, the strong expansion of private investment in this sector will imply a declining share in total production for CODELCO, and some diversification in equipment needs.

In the last few years, the largest volumes of imports of equipment have come by far from the United States, followed by Germany, Brazil, Japan, the United Kingdom and Canada. (See Table 6 in the Statistical Appendix).

## STATISTICAL APPENDIX

**TABLE 1 - SHARE OF THE MINING SECTOR IN GDP AND EXPORTS**  
(PERCENT)

Year	Share of GDP	Share of Total Exports		
		Total mining	Copper	Codelco
1975	7.9	67	54	44
1985	8.7	56	47	37
1992	6.6	47	39	22
1993 (e)	6.3	46	40	-

**TABLE 2 - RECENT AND FUTURE COPPER PRODUCTION PROJECTS**

Project	Production (tons/year)	Year	Investment (US\$MM)
Cerro Colorado	40,000	1994	140
Quebrada Blanca	75,000	1994	160
Collahuasi	345,000	n.a.	n.a.
El Abra	225,000	1997	
1,550			
Mantos-Blancos	75,000	1995	n.a.
Leonor	28,000	n.a.	n.a.
Ivan-Zar	10,000	1994	40
Chimborazo	50,000	n.a.	n.a.
Zaldívar	125,000	1995	n.a.
Escondida	80,000	1993	n.a.
	80,000	1995	n.a.
Las Luces	12,000	n.a.	20
Manto Verde	40,000	1995	500
La Candelaria	400,000	1995	
n.a.			
Andacollo	40,000	1995	n.a.

**TABLE 3 - GOLD AND SILVER PRODUCTION**

Year	Gold (kg.)		Silver (tons)
	Total	Open Pit	
1975	3,997	n.a.	194
1985	17,240	n.a.	517.3
1992	33,774	22,000	1,028.6
1995 (p)	37,500	24,500	870

**TABLE 4 - ESTIMATED DEMAND FOR EQUIPMENT BY COMPANY**  
(US\$ MILLION)

	Total	1993	1994	1995	1996+
El Teniente	122,6	11,5	19,3	19,5	72,3
Salvador	38,4	8,4	10	10	10
Andina	111,5	19,6	25	30,5	36,5
Chuquicamata	333,1	80,7	88,4	84	80
Disputada	151,3	10,3	76	65	
Quebrada Blanca	89,9	24,9	65		
Candelaria	97,2	69,2	28		
Alumisa	300				300
Andacollo	123,7			123,7	
Other	672,7	207,1	154,4	163,9	146,2
Total	2040,2	431,7	466,1	496,6	645

**TABLE 5 - SELECTED EQUIPMENT IMPORTS**  
(US\$ MILLION, 1991)

Heavy Trucks	11,4	
Machinery	28,0	
Spare Parts	37,2	
Shovels		19,2
Bulldozers	8,7	
Crushers	6,8	
Various electrical	28,9	
Various transport.	16,5	

**TABLE 6 - EQUIPMENT IMPORTS BY COUNTRY**  
(US\$ MILLION, 1991)

USA	178,6
Brazil	28,9
Germany	28,6
Japan	24,1
UK	15,9
Canada	14,7
France	13,9
Sweden	7,9
Finland	7,8
Austria	3,2

## **12. FORESTRY**

### **12.1. Overview**

The Chilean forestry sector has been one of the main contributors to the export boom experienced by the Chilean economy since the mid-1980s. Forestry exports, including processed and unprocessed products, represented 7.8% of total exports in 1975, and increased their share to 11.5% in 1992. This figure is even more impressive considering that the share of exports in Gross Domestic Product (GDP) peaked at almost 35% in 1992, and was only 23% in 1975. The contribution of this sector to the country's GDP has increased from 2.14% in 1975 to nearly 3.5% in 1992.

In spite of its very rapid growth since the mid 1970s, the Chilean forestry sector is still small compared to the forestry industries of the Northern Hemisphere. This has a favorable aspect, in that a strong expansion of Chile's forest exports would not have a significant depressing effect on international prices.

Chile's international competitive advantage in the forestry sector is based on very favorable soil and weather conditions, low costs of production, and a convenient location of plantations with respect to processing plants and ports. The only shadow of doubt about the medium-term evolution of this sector is cast by the weak situation in the international markets for some of the most important forestry products.

### **12.2. Resource base**

The Chilean soil and weather conditions are very favorable for the growth of trees. Indeed, an examination of Chile's soil use capabilities reveals that, out of a total surface of 75.8 million hectares, 44% of the soil (32.8 million hectares) is suitable either for productive or for conservation forestry, with an additional 10.8% (8.2 million hectares) currently used for grazing, which could significantly expand the potential for industrial wood plantations (see Table 1 in the statistical appendix).

There is a sharp contrast, however, between the territory suitable for forestry and the land area currently under plantation or with productive natural forests. Presently, less than 50% of the potentially forestable land supports forests.



Chile's native forests are basically under private ownership; of a total of 15 million hectares, 13.2 million are privately owned, which include 3.5 million of productive hectares. Their economic role in the Chilean forestry sector, however, is not very significant, as native forests represent 5% of the total forest output. This is explained by a variety of factors, including government regulations, public opinion and green movements, isolation of productive forests and smallness of standing volumes due to over-maturity.

During the last century, two main exotic species have been introduced in Chile. These are *Pinus Radiata* (which came from California) and *Eucalyptus Globulus* (from Australia). The former has been traditionally used for pulpwood and sawnwood, while the latter, traditionally used for pit props in coal mining, only in recent times has been industrially processed.

The total land surface under industrial plantations is around 1.5 million hectares, with radiata pine accounting for 85% of the total.

It is important to note that the increase in plantation forestry is the main cause of the surge of Chilean forestry exports. This increase in plantations began basically in 1974, when the government provided strong incentives and subsidized plantations (as explained below).

### **12.3. Current legislation**

Ninety five percent of all plantations and natural forest are privately owned. The rest are managed by the SNAPSE (Sistema Nacional de Areas Silvestres Protegidas), the government entity which manages Chile's National Parks and Forest Reserves, dependent of CONAF (Corporación Nacional Forestal).

The forestry sector has been a subject of legislation since the XVI century, but regulations currently in place are recent. Decree 701 of 1974, and its amendments of 1980, establish the following rights, limitations and incentives for forestry practices:

Private ownership rights are understood here as with other forms of real estate. A prohibition of all harvesting and reforestation not approved by

CONAF applies, however. Thus, a management plan must be submitted for approval by this agency before the exploitation of a native forest. But some species, like *Araucaria araucana* and *Fitzroya cupressoides* (Alerce) cannot be harvested at all.

The following tax incentives exist for forestry operations: an exemption from territorial taxation (2% of the value of the land), and a 50% reduction of personal taxes applied to income earned from these operations.

As with native forests, regular private ownership rights also apply to plantations. In contrast to native forests, however, there are no restrictions on forestry practices, unless the owner has declared that his estate is suitable only for forestation ("forestry land"). In this case, a Management Plan must be submitted to CONAF, with the only requirement being that the owner must commit to keep the land forested.

If located in soil unsuitable for agriculture, the plantations have the same tax incentives described above. In addition, however, about 70% of the costs of plantation and silvicultural practices are reimbursed to the plantation owner. This has been the most important incentive for the development of the forestry sector over the last two decades.

The practical effect of this legislation has been the creation of a substantial plantation base of around 1 million hectares (see Table 2 in the statistical appendix) with a relatively small cost in subsidies of around US\$71 million.

In contrast, the regulation of native forests has ensured neither its conservation nor its rational exploitation. A new law is currently being discussed in Congress, which puts a strong emphasis on conservation, but also proposes a subsidy on replantation of productive native forests.

## 12.4. The Forest Industry

Despite its recent development, Chile's forest industry is diversified and modern in most of its sub-sectors. In particular, the branches of pulp and paper, sawmilling and wood based panels have developed to become internationally competitive.

In 1976, total consumption of raw materials stood at 4 millions of cubic meters of logs underbark. Since then it experienced fast growth, reaching 17 million cubic

meters in 1992 (see Table 3 in the statistical appendix).

Sawmilling remains the largest consumer of raw materials in the forest sector, although its importance has declined in recent years. As with other forest industry activities, sawmilling has experienced fast growth, more than tripling lumber output between 1975 and 1992 (960 millions and 3,217 millions of cubic meters, respectively). Despite this, sawmilling is characterized by a large number of small and low-productivity sawmills, although this situation has been slowly reversing in recent times.

As with much of the forest industry, sawmilling is oriented almost exclusively to the export market.

This sub-sector of the forest industry is very heterogenous. Indeed, the four basic product lines (plywood, fiberboard, chipboard and medium-density fiber MDF) present considerable differences in efficiency and market orientation.

Fiberboard, plywood and chipboard are basically oriented to the internal market, with exports representing less than 50% of total production. In contrast, the newly started plants producing MDF are focused on the external markets.

In just a couple of decades, this industry has changed its orientation from the internal to the external markets. Along the process, it has become one of the most dynamic sectors in the Chilean economy.

As of 1993, pulp production is considerably smaller than installed capacity, due to a major revamping of existing plants since 1990. Despite this, the depressed price of pulp in the international markets has provoked a difficult situation for the industry during the last year.

For all papers and cardboards, exports from Chile almost double imports from the rest of the world. Except for newsprint, which is produced by two medium-sized modern mills, the rest of the papers and cardboards are produced in small scale plants. The production of newsprint is focused on the external market (Latin America), while the rest of the paper and cardboard production is centered almost exclusively in the domestic market.

## 12.6 Possible elements in NAFTA negotiations

Tensions or eventual conflicts in the forest sector during Chile's negotiations to join NAFTA are very unlikely to happen. First, Chile represents a very small share of the world export market in all sub-sectors of forestry (in pulp, for example, Chile's share is less than one percent). Second, Chile has no trade barriers for final products, raw materials or equipments other than the 11% flat import tariff. And third, Chile faces no special restrictions for the entry of its forest products in NAFTA markets.

There is one area, however, where differences of opinion may arise between Chile and NAFTA countries, which is the existence of subsidies to reforestation and to native forests in Chile. These subsidies have a large environmental value, and could be justified on economic grounds due to the presence of externalities in the growth of trees. Nevertheless the United States has contested a similar support mechanism used by Canada through "stumpage fees" to encourage softwood lumber activities. The subsidy under DL 701, may be also contested on similar grounds.

## 12.7 POTENTIAL FOR CANADIAN EXPORTS IN THE CHILEAN FORESTRY SECTOR

The potential for Canadian exports in the forestry sector is closely linked with the future trends of this sector. Indeed, the reliance on plantations makes it possible to project industrial wood availability toward the end of the present decade. Even maintaining the current level of natural forests, total wood availability will more than double between 1990 and 2000. A recent government projection shows an increase of 44% in lumber production, of 76% in wood-based panels and of 150% in pulp and paper production over this period.

This expansion will imply strong growth in sectoral exports. Compared to the level of 1990, exports of wood-based panels will be 44% higher in the year 2000, while pulp and paper exports will expand by 200% during the same period (see Table 4 in the statistical appendix).

Obviously, these results cannot be taken at face value, due to the evolution of international markets. Still, they show a strong potential for continuity of the rapid growth enjoyed by the sector in recent years.

Much of the total investment required to face this substantial expansion in pro-

ductive capacity will be in the form of imported specialized goods and services, thus opening an opportunity for countries with substantial experience in the forestry sector such as Canada. Estimates of the total investment in each sub-sector for the period 1992-2000 are presented in Table 4 of the statistical appendix.

#### Areas of interest for Canadian suppliers

This section identifies potential areas of interest for Canadian suppliers of goods and services in several sub-sectors of the forest industry.

### **Silviculture**

- Consultantcy and training in wildlife management and organization of National Parks.
- Training and technology in tree breeding, nurseries and plantations.
- Equipment for wildlife and nursery laboratories.
- Machinery and equipment for plant breeding, planting, thinning and pruning.

### **Forest harvesting**

- Technical planning and equipment selection for site preparation and harvest.
- Felling and logging equipment.
- Loading and unloading equipment
- Specialized log transportation trucks.

### **Kiln drying**

- Consultantcy in the planning and design of kiln drying operations.
- Kiln instruments, equipment, chambers and control systems.

### **Chipping equipment**

- Portable softwood chippers, to run in conjunction with



logging operations.

- Stationary sawmill chippers for softwoods, and pulp mill chippers for softwoods and hardwoods.
- Stationary chippers for export operations.

### **Sawmills**

- Sawmilling feasibility studies, programming design and engineering.
- High technology machinery and equipment.
- Wood preservatives and anti-stain chemicals.

### **Pulp and paper**

- Engineering consulting for new mills, adaptation of existing ones to operate on Eucalyptus.
- Machinery and equipment.

### **Environmental studies**

- Studies on the impact of natural deforestation.
- Studies on the impact of plantations growth.

## STATISTICAL APPENDIX

**TABLE 1 - RESOURCE BASE**

Land use capability class	Area (1,000 ha)	Share of territory (%)
- Arable	5,480	7.2
- Grazing	8,199	10.8
- Productive forestry	8,638	11.4
- Conservation forestry	25,162	33.2
- Non-productive	28,223	37.3
	75,702	100.0

**TABLE 2 - PLANTATIONS (1,000 HA)**

Year	Radiata Pine	Other species	Total
1974	-	-	568.7
1983	967.7	100.0	1067.7
1992	1,312.8	259.3	1572.1

**TABLE 3 - CONSUMPTION OF RAW MATERIAL BY END-USERS**  
(1,000 M3/YEAR)

Year	Pulp and paper	Sawmills	Panels	Exports		Total
				Sawlogs	Pulpwood and chips	
1975	1,936	2,006	91	6	-	4,409
1980	2,634	4,562	218	1,056	-	8,471
1985	3,393	4,578	316	1,259	13.9	9,560
1991	5,057	6,875	688	760	4,357	17,045
1992	6,986	6,449	697	1,039	3,336	18,804

**TABLE 4 - PRODUCTION AND EXPORTS: PROJECTIONS**

Year	Lumber		Panels		Pulp and paper	
	Prod.	Exports	Prod.	Exports	Prod.	Exports
1990	3326.9	1052.0	340.1	85.0	1116.0	696.1
1995	3800.0	1000.0	500.0	95.0	2025.0	1490.0
2000	4800.0	1000.0	600.0	120.0	2800.0	2060.0

**TABLE 5 - INVESTMENT REQUIREMENTS (1,000 US\$)**

Period	Sawmilling	Panels	Pulp and paper
1992-1995	79,848.0	80,000.0	1,985,000.012
1996-2000	120,000.0	50,000.0	1,425,000.0

## NOTES

1 UTM is the Unidad Tributaria Mensual (monthly tax unit), an index of constant purchasing power that evolves monthly according to the CPI. In December 1993, one UTM was equivalent to Ch\$18,619, or slightly over US\$43.

2 Fabrica de Maestranzas del Ejército, FAMAE; Empresa Nacional de Aeronáutica, ENAER; and Astilleros Marítimos de la Armada, ASMAR.

3 Chapter XIV of the Foreign Exchange Law.

4 International Center for the Settlement of Investment Disputes from the World Bank.

5 Because it is Chapter XIX of the International Exchange Law (Ley de Cambios Internacionales) of the Central Bank of Chile.

6 In 1993, Chile's real exchange rate will recover slightly, which is not surprising given the adverse terms of trade shock. Beyond 1993, an appreciation cannot be ruled out as a long term trend, but at a much smoother pace than in 1991-92.

7 Countervailing duties are available to offset export subsidies granted by other countries. Imported milk, for example, is subject to such duty, as a response to widespread subsidization of this product in Europe and the United States.

8 Lower profitability and the prospects of trade integration with countries such as Argentina, have prompted a natural restructuring process in the traditional sector.

9 It must be noted, however, that several domestic banks were intervened in January 1983. Although they remained under private ownership, their administration was nominated by the State for a few years until they were capitalized by private investors.

10 The project also redefines capital adequacy standards, and presents new rules for the payment of subordinated debt (this is the debt that some banks still have with the Central Bank as a result of the 1982-83 crisis).

11 The UF (Unidad de Fomento) is a unit of constant purchasing power that fluctuates daily according to the evolution of the Chile's CPI during the previous month. As of December 20, one UF was worth Ch\$10,619, or about US\$25.

12 Most of this investment has already been made.