



GOBIERNO DE CHILE  
MINISTERIOS DE ECONOMIA  
MINERIA Y ENERGIA

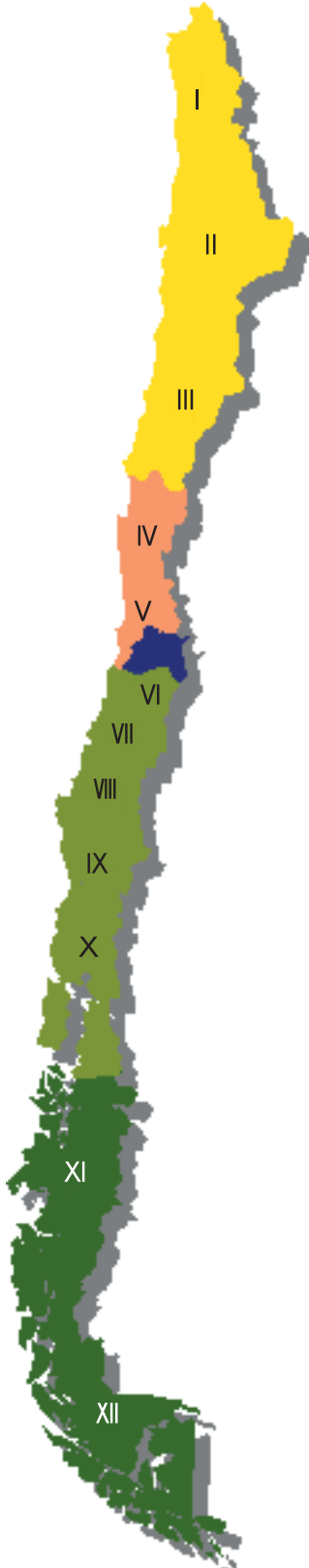
MINISTRY OF ECONOMY,  
DEVELOPMENT AND  
RECONSTRUCTION



JAPAN INTERNATIONAL  
COOPERATION AGENCY  
(JICA)



CHILEAN ECONOMIC  
DEVELOPMENT AGENCY  
(CORFO)



# EPIE

## FINAL REPORT

### Executive Summary

THE STUDY FOR PROMOTION  
OF INVESTMENTS AND EXPORTS  
FOR THE BALANCED  
ECONOMIC DEVELOPMENT  
IN THE REPUBLIC OF CHILE

October 2001

INTERNATIONAL DEVELOPMENT CENTER OF JAPAN  
UNICO INTERNATIONAL CORPORATION

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**JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
MINISTRY OF ECONOMY, DEVELOPMENT AND RECONSTRUCTION  
CHILEAN ECONOMIC DEVELOPMENT AGENCY (CORFO)**

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PROMOTION OF INVESTMENTS AND EXPORTS FOR  
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## Preface

In response to a request from the Government of the Republic of Chile, the Government of Japan decided to conduct a “Study for Promotion of Investments and Exports for the Balanced Economic Development in the Republic of Chile (EPIE)” and entrusted the study to the Japan International Cooperation Agency (JICA).


JICA selected and dispatched a study team headed by Dr. Norimichi Toyomane of the International Development Center of Japan to Chile between March 2000 and August 2001. In addition, JICA set up an advisory committee headed by Dr. Akio Hosono, Professor of Kobe University, between March 2000 and August 2001, which examined the study from specialist and technical points of view.

The team held discussions with the officials concerned of the Government of Chile and other people concerned both in the private and public sectors, and conducted extensive field surveys not only in Chile but also in Bolivia, Argentina, Brazil, Mexico, Japan, South Korea and China. Upon returning to Japan, the team prepared this final report.

I hope that this report will contribute to the promotion of export and investment and further to the balanced economic development of Chile.

Finally, I wish to express my sincere appreciation to the officials concerned of the Government of Chile for their close cooperation extended to the study.

October 2001

Handwritten signature in black ink, consisting of stylized Japanese characters.

Takao Kawakami  
President

Japan International Cooperation Agency

## Letter of Transmittal

The Study for Promotion of Investments and Exports for the Balanced Economic Development in the Republic of Chile (EPIE) began in March 2000 and has completed in October 2001, in accordance with the Scope of Work signed by the Ministry of Economy, Development and Reconstruction, Government of Chile, and the Japan International Cooperation Agency (JICA).

The Study has two main objectives: 1) to formulate new strategies for promoting investments and exports for five geographic zones in Chile; and 2) to formulate short-term action plans to realize the strategies. As the Scope of Work emphasizes, the Study has investigated Chile's new possibilities particularly in the global framework of MERCOSUR and APEC. Viewed in this framework, Chile has emerged as a country that has a strong potential to become an international "gateway" between Asia and South America. The five strategies that the Study proposes to promote export and investment are all formulated around this central concept.

In formulating the strategies, the Study has closely looked into the five zones for potentials and constraints. This regionalized approach has been very appropriate since Chile is a country with highly diverse regional characteristics. Furthermore, given the over-concentration of population and economy in the Metropolitan Region, the national capital, this regional approach has a particular importance in alleviating the imbalance.

Combining the international framework and the regional approach, the Study has produced a unique outcome. This Final Report details the results of the work conducted by the JICA Study Team during the one and a half years.

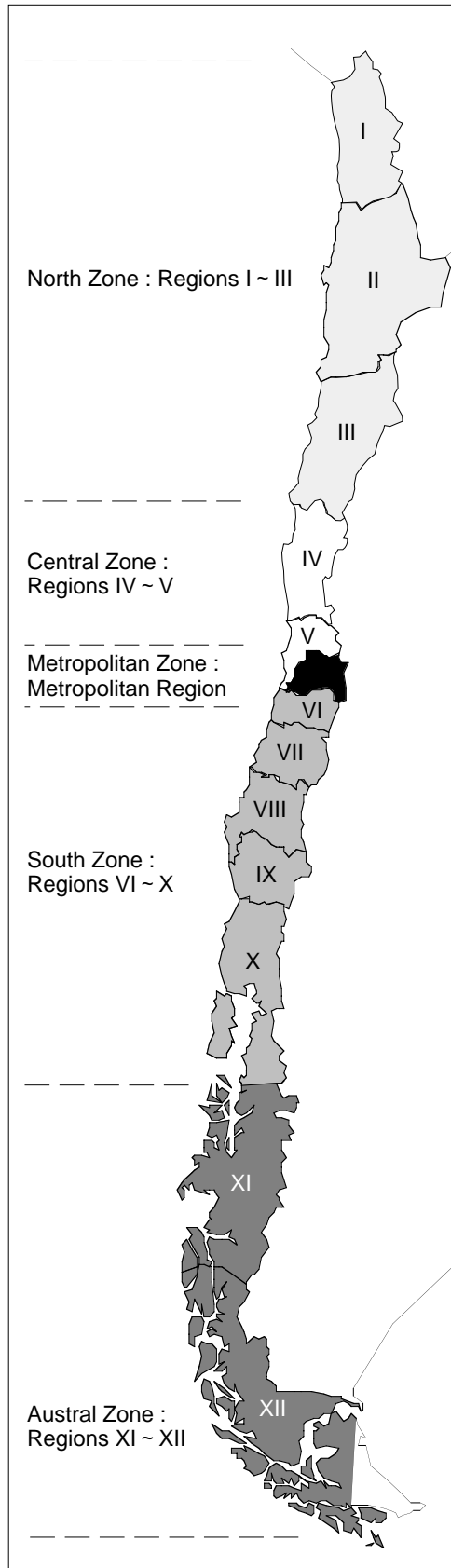
A 20-member consultant team of the International Development Center of Japan (IDCJ) and UNICO International Corporation was entrusted by JICA to carry out the Study. This JICA Study Team has worked in very close cooperation with the Ministry of Economy, Development and Reconstruction and CORFO (Corporación de Fomento de Producción). The Team has also greatly benefited from strong collaboration extended by hundreds of organizations and people, both in and outside of Chile. Without their contributions, this Study could never have achieved its goal. On behalf of the JICA Study Team, I would like to express my deepest gratitude for the wholehearted support given by them.

I strongly believe that Chile will play a larger role in the international arena in the future and hope this Study will stimulate various efforts to this end.

October 2001



Norimichi Toyomane  
Team Leader



Map 1 Chile and Five Zones

## **Exchange Rates**

US\$ 1 = 550 Peso  
(as of August 2000)

US\$ 1 = 660 Peso  
(as of July 2001)

## **GLOSSARY ENGLISH/SPANISH**

El presente miniglosario adjunto al Informe Final del Estudio para la Promoción de Inversiones y Exportaciones y un Desarrollo Económico Equilibrado de las Regiones de Chile (EPIE) sólo intenta constituir una pequeña ayuda lingüística bilingüe y conceptual, en algunos casos. No se trata en ningún caso de una recopilación completa o de una guía, sino simplemente de una contribución en el marco del estudio que el equipo de JICA llevó a cabo con el fin de uniformar terminología y, por ende, evitar confusiones.

La lista terminológica que se presenta se basa en los temas tratados a lo largo de estos meses de estudio, especialmente en los viajes y entrevistas en las regiones de Chile. Así, gran parte de los términos fueron incluidos porque en algún momento ofrecieron alguna dificultad de traducción o se prestaron para confusión, o bien porque el significado del concepto en cuestión no era evidente para todos los participantes. Cabe mencionar que las diferencias culturales entre las partes pudieron ser una de las barreras de comunicación, de modo que se han definido términos que algunos consideran obvios, sin embargo, no lo eran para todos.

Con todas las limitaciones que el glosario que se presenta a continuación pueda tener, espero que preste ayuda a los lectores del Informe.

\* \* \* \* \*

The current mini-glossary enclosed to the Final Report of the Study for Promotion of Investment and Exports for the Balanced Economic Development in the Republic of Chile just intends to be a small linguistic bilingual contribution as well as a conceptual contribution, in some cases. This is not a comprehensive guide, but rather a simple help in the framework of the Study this JICA's team has carried out, in order to standardize the terminology and avoid confusions.

The terminological list presented is based on the issues we have been dealing with all along these months, especially during the trips and the interviews to the regions of Chile. Thus, most of the terms were included since they offered some difficulties when they had to be translated or because they were somehow confusing, or even because the concept we were discussing was not clear to all the parties involved. We must say that some cultural differences may have caused some communication troubles, so that some terms may seem obvious to some people, but not to everybody.

Notwithstanding the limitations this work certainly has, we hope that it will help the readers of this report as well as the development of the Study.

**A** - **artisanal fisherman** pescador artesanal  
- **artisanal fishing** pesca artesanal: Actividad pesquera extractiva realizada por personas naturales que en forma personal, directa y habitual trabajan como pescadores artesanales (...). [Decreto 430/91 MINECOM, D.O. 92. ene. 21]

**B** - **business** negocio, transacción, operación; la actividad económica, la economía, comercio e industria  
- **business environment** (see also investment environment) ambiente de negocios

**C** - **capital intensive** con gran intensidad de capital, con uso intensivo de capital: se aplica, en general, a una industria que exige mucho capital, en contraposición a las necesidades de otro factor de producción, a saber, el trabajo, o mano de obra. [Diccionario de dificultades del inglés, segunda edición, corregida y aumentada, Barcelona, Editorial Juventud, Alfonso Torrents del Prats, 1989.]  
- **cluster** complejo productivo integrado; conglomerado industrial [Cabe señalar que el término “cluster” es de uso cada vez más frecuente en contextos de lengua española.]  
- **company** (see also firm, enterprise, business) empresa, negocio [Cabe señalar que la palabra “compañía” es igualmente válida, en rigor, para referirse a una empresa, sin embargo, su uso mucho menos frecuente y más impreciso la hace poco recomendable en español.]  
- **concession (≠ privatization)** concesión (de obras públicas)/ también Sistema de concesiones o Programa de concesiones : sistema de explotación de obras y servicios públicos o fiscales en los que el Estado invita a participar al sector privado nacional o internacional en los procesos de inversión, mantención y uso; así, éste financia obras económicamente rentables y luego recupera su inversión a través del cobro directo de una tarifa a los usuarios. De esta manera el Estado libera recursos públicos para destinarlos a proyectos con mayor valor estratégico o de gran rentabilidad social. [Definición basada en la publicación *Infraestructura Pública y Programa General de Concesiones*, de la Coordinación General de Concesiones del Ministerio de Obras Públicas, 1998]  
- **corporate strategy** estrategia empresarial  
- **corporation** sociedad anónima, sociedad de capital, sociedad por acciones  
- **customer (≠ client)** cliente, usuario, consumidor

**D** - **differentiation** diferenciación: se aplica dentro de un sector industrial para señalar que cada productor vende un producto cuyas características son tan particulares que éste se distingue de los de la competencia. [The MIT Dictionary of Modern Economics, Third Edition, Cambridge Massachusetts]



- **distribution** (see also logistics) distribución, conductos de distribución: transporte de mercancías a través de los canales de comercialización hasta su destino final.
- **diversification** diversificación: acción o práctica de fabricar variados productos, invertir en variados títulos mobiliarios, vender variadas mercancías, etc. de manera que un fracaso o una depresión en alguno de los rubros no resulte desastrosa para todos. [Websters Encyclopedic Unabridged Dictionary of the English Language, New York, Random House, 1989.]

**E** - **economies of scale** economías de escala: reducción en el costo promedio de un producto, a largo plazo, como resultado de un rendimiento creciente (...). [The MIT Dictionary of Modern Economics, Third Edition, Cambridge Massachusetts]

- **enterprise** (see also company, firm, business) empresa
- **environmental impact** impacto ambiental: alteración positiva o negativa de la calidad ambiental, provocada o inducida por cualquier acción del hombre. Es un juicio de valor sobre un efecto ambiental. [CONICYT, 1988. Principios para una política ambiental]
 

la modificación de la condición y características originales de un área silvestre causada directa o indirectamente por la acción humana. [Ley 18. 362. Crea un sistema nacional de áreas silvestres protegidas del Estado. D.O. 84. dic. 27]

la alteración del medio ambiente provocada directa o indirectamente por un proyecto o actividad en un área determinada. [Ley 19.300. Bases medio ambiente. D.O. 9 marzo 94]
- **externalities** externalidades: se suele entender por externalidades los efectos externos de las economías y las deseconomías externas, los efectos indirectos o derivados. Las externalidades conllevan una interdependencia de las funciones productivas y de los servicios. [The MIT Dictionary of Modern Economics, Third Edition, Cambridge, Massachusetts]

- F** - **farm worker** campesino
- **firm** (see also company, enterprise, business) empresa [Cabe señalar que la palabra “firma” es válida para referirse a una empresa, aunque, a menudo, este término apunta más bien a la razón social de una institución commercial; con todo, es de mucho mayor profusión en inglés, de modo que se recomienda emplear otra terminología en español. Comentario basado en el Diccionario de dificultades del inglés, segunda edición, corregida y aumentada, Barcelona, Editorial Juventud, Alfonso Torrents del Prats]
  - **fringe benefits** beneficios sociales, beneficios extrasalariales; prestaciones suplementarias

**G** - **gateway** puerta/puerto de entrada/salida, paso, vía: para los efectos del presente estudio se quiere destacar la función de Chile como puerto de salida hacia Asia desde diversos países del Cono Sur y también como puerto de entrada a Sudamérica, no sólo a Chile, desde el continente asiático. No obstante el papel de puerto internacional que se le presenta a Chile no se limita al transporte y la infraestructura que pueda proporcionar, sino que va más allá; se trata de convertir al país en un centro de actividades múltiples que cuente con servicios e instituciones públicas adecuadas, a saber, servicios financieros, sistemas de información, servicios legales, políticas públicas transparentes, seguridad nacional y ciudadana, un alto nivel de educación, eventos sociales y culturales atractivos, así como un turismo de alto nivel.

**I** - **import-substitution** (industrialization) sustitución de importaciones: se trata de una de las principales estrategias de desarrollo escogidas por los países en desarrollo en los años de la postguerra. Se pensaba que una política de industrialización era la mejor estrategia para alcanzar el progreso económico. La sustitución de las importaciones mediante el establecimiento de una industria nacional amparada en aranceles y cuotas sería lo más apropiado. La fabricación de bienes industriales sería el comienzo de este camino para luego continuar con los bienes de capital. Se esperaba reemplazar las importaciones, lo cual fomentaría el crecimiento interno; el costo de tal estrategia estaría cubierto por los países más avanzados, los que proporcionarían bienes de consumo manufacturados.[The MIT Dictionary of Modern Economics, Third Edition, Cambridge, Massachusetts]

- **integrated pest management (IPM)** manejo integrado: término empleado en la producción agrícola; en la conversión desde un sistema convencional, éste es el paso previo a la producción orgánica, pues consiste en la producción agrícola con un uso reducido de fertilizantes, pesticidas y sustancias químicas sintéticas.

- **inter-firm cooperation** cooperación entre empresas

- **(to) investigate** fiscalizar, velar por el cumplimiento de las leyes o normas; supervisar

- **investment environment** (see also business environment) ambiente de inversión

**K** - **know-how** conocimientos, preparación, preparación técnica, técnica, método, método de fabricación, procedimiento industrial

**L** - **labor-intensive production** producción que exige mucha mano de obra: concepto que se contrapone al de *capital-intensive* e indica que una actividad

económica determinada exige el empleo de una proporción importante de mano de obra en comparación con las inversiones de capital necesarias. [Diccionario de dificultades del inglés, segunda edición, corregida y aumentada, Barcelona, Editorial Juventud, Alfonso Torrents del Prats, 1989]

- ***laissez faire*** liberalismo, política de no interferir: doctrina según la cual las decisiones de los individuos encausan mejor los asuntos económicos de una sociedad que la autoridad colectiva, hasta el punto de excluirla virtualmente. Esta idea se sustenta en los escritos de los fisiócratas, sin embargo sus fundamentos analíticos yacen en la obra de Adam Smith y su escuela clásica. [The MIT Dictionary of Modern Economics, Third Edition, Cambridge, Massachusetts]
- **logistics** (see also distribution) logística: término de origen militar, también empleado en el ámbito de la infraestructura pública y privada y el comercio internacional así como la planificación estratégica de la distribución de bienes para referirse al traslado de recursos o mercancías al destino requerido a través de medios óptimos y de un sistema complementario con el fin de alcanzar el objetivo propuesto.

**M** - **macro-region** macroregión: para los efectos del presente estudio se entenderá por macroregión un área geográfica internacional, es decir que incluye unidades territoriales\* de distintos países, con intereses y proyectos económicos y geopolíticos comunes, de modo que puede ser considerada como una unidad económicamente interdependiente. El objetivo de tal agrupación es aprovechar las ventajas del intrarregionalismo como forma de integración económica y comercial.

- **management** administración, gerencia, dirección, gestión, gestión administrativa, manejo.
- **manufactured goods** bienes/productos manufacturados.

**N** - **natural resource-based industry** industria intensiva en recursos naturales

- **non-natural resource-based industry** industria no intensiva en recursos naturales

**P** - **phytosanitary** fitosanitario: perteneciente o relativo a la prevención y curación de las enfermedades de las plantas. [Cabe mencionar que el Servicio Agrícola y Ganadero (SAG) no se rige por una definición oficial de este término, de modo

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\* Se entiende por unidades territoriales lo siguiente: provincias, en el caso de Argentina; departamentos en los casos de Bolivia, Perú y Paraguay; regiones, en el caso de Chile y; estados en el caso de Brasil.

que nos atendremos a la que proporciona el Diccionario de la Real Academia de la Lengua Española, en su edición de 1992]

- **privatization** ( $\neq$  concession) privatización: transferencia o venta de una empresa o actividad pública o fiscal al sector privado. A diferencia de la entrega de una empresa en concesión, caso en el que el bien de uso público sigue perteneciendo al Estado, la privatización implica traspasar un porcentaje o la totalidad del bien en cuestión al sector privado para su explotación, junto con los derechos que esto implique dentro de la ley. [Definición general, redactada para los fines del presente estudio, basada en el uso del término por parte de las autoridades chilenas]
- **profitability** rentabilidad
- **prospective mission** misión prospective: grupo de especialistas enviados a terreno a realizar un conjunto de análisis y estudios con el fin de explorar o predecir el futuro en una determinada materia, especialmente en el ámbito de las inversiones [Definición basada en el Diccionario de la Lengua Española de la real Academia de la Lengua ]

## S

- **seasonal unemployment** desempleo estacional: desempleo que resulta del modelo de trabajo estacional en ciertas industrias. Los sectores agrícola, turístico y de la construcción han sido tradicionalmente afectados por este modelo de empleo. Este es un elemento del desempleo estructural.[The MIT Dictionary of Modern Economics, Third Edition, Cambridge Massachusetts]
- **seasonal worker** trabajador de estación, temporero.
- **segmentation** segmentación: división del mercado en segmentos, es decir, en grupos de consumidores o usuarios que comparten características especiales y exigencias communes.
- **service industry** industria de servicios
- **SME (small-and-medium-sized enterprise)** pequeña y mediana empresa (PYME): la CORFO define las pequeñas empresas como aquellas que tienen entre 5 y 49 empleados y cuyas ventas anuales están en un rango de 2401 a 25.000 Unidades de Fomento (UF); mientras que las empresas medianas son aquellas que tienen entre 50 y 199 empleados y cuyas ventas anuales van de 25.001 a 100.000 UF.
- **structural unemployment** desempleo estructural: es el resultado de la existencia y el desajuste, a la vez, del desempleo, por una parte, y la disponibilidad de plazas de trabajo, por otra. Quienes se encuentran desempleados no poseen las habilidades requeridas o no viven en el lugar correcto para llenar las vacantes. [The MIT Dictionary of Modern Economics, Third Edition, Cambridge, Massachusetts]

- **supporting industries** industrias de proveedores de insumos; industrias de proveedores de servicios; servicios subcontratados

[Cabe señalar que el término “supporting industries” comprende tanto a los proveedores de insumos como a los proveedores de servicios, en inglés, mientras que en español es necesario especificar de qué tipo de proveedor se trata, a qué tipo de servicio de apoyo nos estamos refiriendo].

**T** - **training** (of workers) capacitación

**U** - **unskilled labor** mano de obra no calificada

**V** - **value-added** valor agregado

- **venture capital** capital de riesgo: como fuente de financiamiento de una empresa, conjunto de medios que constituyen el patrimonio neto y que, por lo tanto, están plenamente al riesgo de gestión. El capital de riesgo se compone de inversiones iniciales y sucesivas de capital (comprendidas las eventuales reservas de sobreprecio de emisión) y del autofinanciamiento generado en el curso de la gestión. El capital de riesgo, o capital propio, se contrapone al capital de préstamo. [Glosario de términos financieros. CEPAL, Sede subregional de México, 1996]

- **vocational education** formación técnica, adiestramiento profesional; instrucción práctica; capacitación: enseñanza profesional de grado inferior al universitario, destinada a preparar al alumno para ingresar en determinada profesión o mejorar la situación de trabajadores ya empleados.[Glosario internacional para el traductor inglés-castellano/castellano-inglés, tercera edición revisada y aumentada, Santiago de Chile, Editorial Universitaria, Marina Orellana]

**Z** - **zone** zona: para fines prácticos del presente estudio se ha dividido el país en zonas geográficas. Cada una de ellas comprende varias regiones, excepto la Zona Metropolitana que corresponde exactamente a la Región Metropolitana. Las zonas geográficas de Chile en este caso son las siguientes: Zona Norte, incluye las regiones I, II y III; la Zona Central, incluye las regiones IV y V; la Zona Sur, incluye las regiones VI, VII, VIII, IX y X; y la Zona Austral, incluye las regiones XI y XII; además de la Zona Metropolitana.

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**Executive Summary**

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## EXECUTIVE SUMMARY

### *About EPIE*

This Study,<sup>1</sup> entitled EPIE<sup>2</sup> in Spanish, is a technical cooperation project implemented jointly by the Chilean and Japanese governments. The Ministry of Economy and CORFO (Chilean Economic Development Agency) were the executing agencies on the Chilean side and JICA (Japan International Cooperation Agency) was the executing agency on the Japanese side. The one-and-a-half-year Study started in March 2000 and was completed in October 2001.

The Study's objectives are: 1) to formulate new strategies to promote investments and exports for five geographical zones in Chile; and 2) to formulate short-term action plans to realize the strategies. The five geographical zones, defined specifically for this Study, are as follows:

North Zone	Regions I, II and III
Central Zone	Regions IV and V
Metropolitan Zone	Metropolitan Region
South Zone	Regions VI, VII, VIII, IX and X
Austral Zone	Regions XI and XII

### *About the JICA Study Team's role*

The JICA Study Team's role in this joint study is to study and analyze Chile with non-Chilean eyes. Since the team members are far less familiar with Chile than Chilean people are, they can be of greatest support by offering an "unconventional" perspective to the Chilean counterpart. Though the JICA Study Team's search for the new possibilities cannot be entirely thorough, they can at least *show* different ways to look at various situations. This is the JICA Study Team's true role in this Study.

### *About approaches*

The JICA Study Team's five approaches to the Study are: 1) From top down; 2) From bottom up; 3) To be systematic and comprehensive; 4) To be concrete; and 5) Chile-Japan collaboration.

### *About this Report*

This is the EPIE Project's Final Report. All results are presented in three volumes, which are organized as follows:

EXECUTIVE SUMMARY
Volume 1 ANALYSIS
Part 1 Export and Investment
Part 2 Infrastructure
Volume 2 STRATEGY AND ACTION PLANS

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<sup>1</sup> The official title is: "The Study for Promotion of Investments and Exports for the Balanced Economic Development in the Republic of Chile."

<sup>2</sup> EPIE is an abbreviation of the Spanish title of the Study: "Estudio para la Promoción de Inversiones y Exportaciones y un Desarrollo Económico Equilibrado de las Regiones de Chile."



## **Chapter 1        RECOMMENDATIONS**

EPIE has stressed two criteria to develop appropriate sets of strategies and action plans:

- 1        Long-term view
- 2        JICA Study Team's maximum contribution

That is, the JICA Study Team has: 1) favored long-term strategic thinking over short-term achievements; and 2) opted to focus on measures by which the Team can maximize the utility of its Japanese perspectives. The results are the five strategies:

North Zone: Macro-Region and Gateway  
 Central Zone: Toward a Gateway City from a Port City  
 South-Austral Zone: Eco-Region Development  
 Solution-Oriented Manufacturing  
 Information Technology Industry

To accompany the five strategies, more general policy recommendations are also presented to give a conducive policy framework within which the five strategies may be pursued. There are 12 recommendations grouped into four categories.

To Become a Global Gateway:

- |                         |  |
|-------------------------|--|
| <i>Recommendation 1</i> | <i>Facilitate regional integration within South America</i>    |
| <i>Recommendation 2</i> | <i>Look at Japan in Asia; watch China and South Korea next</i> |
| <i>Recommendation 3</i> | <i>Shift the "iso-transport cost line" eastward</i>            |

To Develop Industries:

- |                         |                                      |
|-------------------------|--------------------------------------|
| <i>Recommendation 4</i> | <i>Focus on SMEs</i>                 |
| <i>Recommendation 5</i> | <i>Develop industrial clusters</i>   |
| <i>Recommendation 6</i> | <i>Eliminate the "anti-SME" bias</i> |

To Promote Export and Investment:

- |                         |   |
|-------------------------|---|
| <i>Recommendation 7</i> | <i>Adopt a national strategy</i>            |
| <i>Recommendation 8</i> | <i>Select "strategic partners"</i>          |
| <i>Recommendation 9</i> | <i>Create and disseminate Chile's image</i> |

To Facilitate Implementation:

- |                          |   |
|--------------------------|---|
| <i>Recommendation 10</i> | <i>Utilize the existing organizations and schemes</i>           |
| <i>Recommendation 11</i> | <i>Strengthen coordination</i>                                  |
| <i>Recommendation 12</i> | <i>Implement the strategy and action plans as one "package"</i> |

## ***PART 1 EXPORT AND INVESTMENT***

### **Chapter 2 ANALYSIS OF THE CHILEAN ECONOMY**

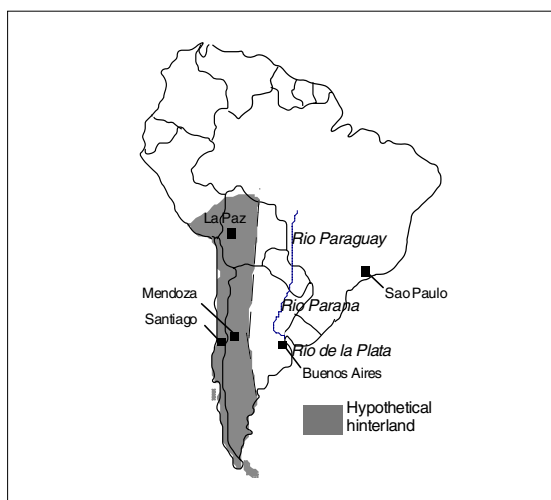
#### **2.1 Chilean Economy: Past, Present and Future**

Chile's economic performance has been exemplary since the mid-1980s. This success is largely attributed to Chile's liberal economic policy that favors openness and fair competition. The phenomenal increase of foreign direct investment and the very successful export expansion during the 1990s testify the Chilean economic system's strength. However, Chilean export is heavily dependent on natural resources and foreign investment recently shows a sign of tailing off. Furthermore, there still remain considerable economic disparities among the Regions. To achieve a higher per capita income and a more balanced regional economies, Chile must diversify its exports and attract more investments into non-traditional sectors and Regions.

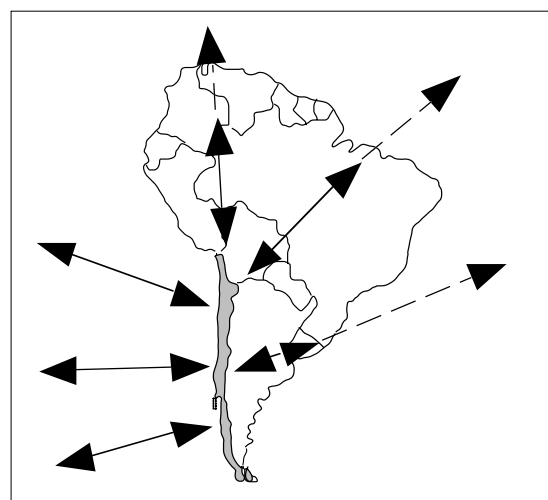
#### **2.2 Chile in the World Setting**

Chile became a member of APEC in 1994 and further joined MERCOSUR in 1996 as an associate member. Such relations have been favorable for Chile particularly to increase its trade. Chile has also sealed a number of free trade agreements. Negotiations are underway with the United States, the EU and South Korea. As an international leader of free trade, Chile's move is being closely watched throughout the world.

Examining Chile and its position in South America, the concept of "Chile as a gateway" seems very possible. The concept, however, has two distinct meanings: "gateway to pass through" and "gateway as the initial destination." Chile as the "gateway to pass through" is already real and may be fully achieved in ten years. However, its hinterland is limited (Figure 2.1). Chile as the "gateway as the initial destination" is a long-term concept to be pursued at the second stage (Figure 2.2).



**Figure 2.1 Chile's Hypothetical Hinterland as the "Gateway to Pass Through"**



**Figure 2.2 Chile as the "Gateway as the Initial Destination"**

Though Chile's financial market is advanced and reliable, its possibility to become a financial center for South America is limited due to its small transaction size. However, with Chile's high credibility advantage, it may develop a Latin American database of trade- and investment-related companies.

With respect to trade, Table 2.1 summarizes Chile's future markets in the world.

**Table 2.1 Chile's Future Markets**

	MERCOSUR	Latin America (excluding MERCOSUR)	North America and Europe	Japan and South Korea	Other Asian countries
Natural Resources (including agricultural produce and fishery products)	○	○	●	●	◎
Natural Resource-Based Manufactured Products	○	○	●	●	○
Non-Natural Resource-Based Manufactured Products	◎	◎			
Services	○	○			
Tourism	○		○		

Legend: ● Already major market; should be explored further for new possibilities.  
 ◎ Already medium-size market; should be promoted further.  
 ○ Emerging market.

Chile's position in the world economy could show a few drastic shifts in the long run. In this light, the expansion and deepening of bilateral and regional economic relations with Argentina and with Latin American neighbors will be important for Chile. This will in turn facilitate Chile's economic relations with Asian countries.

### **Chapter 3 ANALYSIS OF EXPORT AND INVESTMENT**

#### **3.1 Chilean Export**

Chilean exports steadily increased during the period of 1985-1999. Their destinations are well diversified. While the majority of the exports are natural resources-based products, the highest growth was recorded by general machinery, whose main market was Latin America. Agriculture and livestock products, particularly fresh fruits, have successfully penetrated into North America but not into Asia due mainly to sanitary problems. The remarkable diversification of exporters, their products and markets during the past decade is largely attributed to ProChile's effective activities.

Keys to expand Chilean exports include: 1) strengthen risk management, e.g., by providing the world's latest supply-demand information and by responding to environmental concerns; 2) follow up exporters' performance, particularly of those who are no longer in the trading business; 3) assist exporters to design strategies for marketing; 4) solve phytosanitary problems to expand fresh fruit exports to Asia; 5) accelerate R&D on aquaculture; 6) explore Asian markets while paying attention to their cultural similarities; and 7) identify types of competitive non-natural-resource-based manufactures.

### **3.2 Foreign Direct Investment in Chile**

Incoming foreign direct investment phenomenally increased after 1993. The main recipients were the mining, services, utilities and manufacturing sectors. One third was destined to the Metropolitan Region alone and another one third to Regions I, II, III and IV. The United States is by far the largest investing country, followed by Spain and Canada. Japan is ranked number sixth while Argentina is number twelve. Investing countries generally favor some specific sectors over others to reflect their respective needs and strategy (e.g., Spain for utilities and Japan for mining).

A survey of Japanese investors has revealed that some, if not many, companies continue to have genuine interest in Chile. Smaller companies show flexibility in decision-making and interest in non-traditional products. Another survey of foreign companies in Chile has emphasized that they favorably evaluate Chile as the host (principal reasons: stability, human resources, low-level corruption). They also cite an underdeveloped financial system, excessive bureaucracy, limited market size and over-concentration in Santiago as main problems.

Keys to investment promotion include: 1) reinforce Chile's "gateway" functions *from Asia to South America*; 2) promote Chile-Argentina cross-investment; 3) provide information on specific investment projects rather than on the general business environment; 4) approach Japanese SMEs; 5) conduct investment surveys periodically; 6) develop various investment schemes by financial engineering; 7) strengthen natural resource-based industrial clusters; 8) maintain and enhance competitiveness of fresh foodstuffs; and 9) accelerate TodoChile's activity.

### **3.3 Asian Markets and Investors: Survey and Recommendations**

#### ***Japan***

A questionnaire survey revealed that only 18% of the responding Japanese companies were interested to invest in Latin America. Among the 42 respondents, 22 were interested in or considering some kind of investment in Chile in the future. Their main motive for the investment was to secure natural resources (31%). Main reasons for their reluctance to invest in Chile were 1) concern with the Chilean investment climate (16%), 2) long distance from Japan (13%), and 3) small domestic market (12%). Generally, Japanese investors are holding back from foreign investment because of the lingering recession in Japan. However, they also indicate that if Chilean or Latin American economy shows a strong growth, they might seriously consider investment there.

According to the follow-up interviews with 13 respondents, small- and medium-sized corporations showed a relatively higher interest and flexibility in investing in Chile than larger corporations. They look eagerly for new areas of investment as well as traditional areas such as mines.

#### ***South Korea***

Chile continues to be an important trade partner both as a major consumer of Korean manufactured products and as a major supplier of natural resource-based commodities.

Some Korean experts clearly understand that Chile can become the platform to MERCOSUR and other Latin American countries. This strategic consideration is one reason why South Korea has selected Chile as its first FTA partner. However, Korean investors are not enthusiastic about making foreign investment for the time being. Like export promotion, Chile must publicize its strong points to Korean investors first. Conventional investment promotion activities will be the first step to take.

### ***China***

China will eventually become a big economic player in the world. Chinese manufacturing will become sophisticated even to produce high-quality, high-tech products. As for investment, China has shifted its policy from “absorption only” to “go investing for ourselves.” China can become a rich source of investment as well as a huge market for exports for Chile in the 21st century. Chile must develop an appropriate strategy to approach this country. Some strategic considerations regarding China are as follows:

- 1) China will become the world’s major source of investment. Some Chinese investors will be interested in South America where Japanese or Korean presence is still weak.
- 2) “Chile as the gateway to South America” is a realistic option for Chinese exporters and investors since China has little experience in doing business in South America. Chile can become their choice for the platform.
- 3) Chinese highly appreciate special attention. More frequent approaches and broader contact may be a very effective means to attract them.
- 4) Chile must have a long-term Chinese strategy. Both in terms of trade and investment, China may become Chile’s strategic alliance.
- 5) Station more local experts in ProChile offices in China to realize such strategic considerations.

### ***Hong Kong***

As a market, Hong Kong is limited in size (population: 7 million) and primarily consumes finished, consumer products. Chilean exports to Hong Kong will therefore be confined to foods such as fruit, fish and wine. However, there still remains considerable room for such products to enter that market. On the other hand, Chile must not expect that Hong Kong will become a major source of investment. Generally, Hong Kong businesses are not interested in investing outside of China or, at best, Asia. However, their interest in Chile as a destination to invest may increase when Chile fully realizes its potential as a gateway between South America and Asia.

### ***What the Asian surveys taught***

- 1) Chile and Asia must gain a better understanding of each other. Visit Asia. Invite and welcome Asian counterparts. Seek help from those Asian people who are familiar with Chile.
- 2) Provide specific and exact information.
- 3) Chile’s good image also matters.
- 4) Differentiate Chilean products. For example, Chilean wines are known as being

of good quality at reasonable prices. The problem is they taste almost the same irrespective of their labels or prices. Differentiation is necessary to expand and deepen their market.

- 5) South Korea and China deserve special attention from Chile. China, in particular, should be approached with a defined strategy, persistence and care.

## **Chapter 4            ZONAL ECONOMIES AND THEIR PROSPECTS OF EXPORT AND INVESTMENT PROMOTION**

### **4.1            North Zone**

*Characteristics:* The North Zone consists of Regions I, II and III. Its climate is arid. The population in 1992 was approximately 1 million, concentrating in the coastal areas. The zone's GDP in 1997 accounted for 15% of the national total, a larger share than its population. The export-oriented mining sector, together with its supporting industries, generates a substantial part of GDP in the zone. ZOFRI in Region I is also a significant player in the zonal economy. Manufacturers in Region I take advantage of the Law of Arica and the second Law of Arica is expected to draw more investments into the area. Agriculture is possible and quite promising thanks to irrigation technology coming from Spain and Israel. A few very large mines dominate the economy in Region II. Water shortage constrains the development of the manufacturing sector. In Region III, mining is also dominant. In addition, a variety of crops are grown with irrigation and scallops are widely cultivated.

*Export:* The North Zone is the principal exporter of mineral products, accounting for over 90% of total export (1996). Exports in the zone nearly doubled between 1990 and 1996 while 97% of the growth was attributed to the mining sector alone. This sector will remain competitive in the world market. Other potential future products include vegetables, fruits, scallops, sea urchins, metalwork and machinery, chemicals, car parts, food (e.g., based on soybeans from Bolivia, Brazil or Argentina), mining-related engineering services and other services.

*Investment:* The zone received a large share of national foreign direct investment while 97% was directed to the mining sector (1974-1999). This trend will continue. The Law of Arica II may bring in new investments in the services and manufacturing sectors.

*International Perspective:* Neighboring countries are particularly important to this zone. As regional economic integration deepens within the zone and with neighboring countries, it will become a full-fledged gateway. Such integration will increase trade flows and create a new "macro-regional market" enabling the development of new types of industries and services.

*Keys to Export and Investment Promotion:* Principal suggestions for the zone are as follows.

- Strengthen the gateway function and develop industries specifically for the macro-regional market
- Develop manufacturing industries by designing a strategic policy

- Pioneer export of agricultural products
- Capacity expansion to cultivate and process fishery products
- Launch a “second salmon” plan
- Improve the environment to foster venture business

## 4.2 Central Zone

*Characteristics:* The Central Zone consists of Regions IV and V. Located at the geographical center of the country, this zone plays a key role as the “gateway.” Climate is basically dry but conditions are rather suitable for agriculture and fishery. The population is about 2 million. Economic structures are very different in both regions. In Region IV, mining and agriculture are the two leading sectors while in Region V manufacturing and transport/communication are the largest. Region V has strong relations with the Metropolitan Region but Region IV is relatively independent. Region V is rapidly changing from an industrial to a commercial region in various aspects. Although some large companies exist in the zone, the majority of the enterprises are SMEs. They find it difficult to secure buyers and finance for commercialization.

*Export:* The zone accounted for 10% of total national exports in 1998. Both regions have similar exports such as gold, copper and fresh grapes. In addition, two unique non-natural-resource-based exports are rubber tires from Region IV and gearboxes from Region V. Prospective natural-resource-based exports include organic products, shellfish, wine and *pisco*. Two important future strategies will be to preserve the natural environment and create a strong brand image.

*Investment:* During the years 1974-1999, the zone received 6% of total national foreign direct investment. In Region IV, mining alone accounted for 63%, and in Region V, electricity, gas and water accounted for 22%. Prospective sectors include agro- and fishery-based manufacturing, non-natural-resource-based manufacturing, tourism, education and port services.

*International Perspective:* This zone is a natural “gateway” that may be further developed by improving physical access and defining a clear division of labor among the ports. Proximity to Santiago will prove beneficial, leading to the development of the financial, commercial and transportation sectors.

*Keys to Export and Investment Promotion:* Principal suggestions for the zone are as follows.

- Development of an integrated gateway by effective function sharing
- Differentiated marketing of natural-resource-based products
- Fostering industrial clusters through organizing SMEs
- More effective support for SMEs’ commercialization
- Year-round tourism promotion

## 4.3 Metropolitan Zone

*Characteristics:* The Metropolitan Zone includes only the Metropolitan Region. It is

both the geographic and economic center of Chile. About 5.3 million inhabitants or 40% of the total national population lives in this area. It generates nearly half of total GDP in Chile. Unlike other zones, this zone has strong and rapidly growing service and manufacturing sectors. In contrast to other zones, large enterprises account for greater shares in this zone. Even so, however, 98% of total enterprises are SMEs.

*Export:* In 1998, this zone accounted for 20% of national exports. Its exports show a wide variety. Major exports are wine, corn seeds, copper wire, juice, export-related service, fresh grapes and newspapers/magazines. The zone is expected to lead others in export promotion, with a strong support from the tertiary, particularly financial, sector. The high concentration of information in the zone will prove advantageous in future years.

*Investment:* More than one third of total foreign direct investments were directed to this zone (1974-1999). Its largest recipient was the service sector, absorbing half of the total, followed by the industry sector. The major challenge for the zone is not how to attract investment but rather how to have a leading role in national investment promotion. Competition for investment among the regions will prove positive in order to improve the investment climate but their cooperation and coordination is also necessary in order to help overcome limitations in available resources. Another issue is how to induce enterprises located in the zone to re-locate to other areas.

#### **4.4 South Zone**

*Characteristics:* The South Zone consists of Regions VI to X. Rich natural resources and variations in landscape characterize the zone. Geographically protected from diseases and pests, this zone is particularly suitable for organic agriculture. The population is about 5 million. Leading sectors are agriculture, forestry and fisheries but, in Region VIII, manufacturing is the largest. In agriculture, a change is taking place from grain and dairy production to export-oriented horticulture, viticulture and forestry plantation. Manufacturing plays a significant role particularly in export, but the products are based primarily on natural resources. In spite of high-potential tourist attractions, tourism has yet to be fully developed. SMEs are particularly important in this zone because of their contributions to export. In spite of high economic growth during the last decade, social improvements have not been effected. Poverty rates continue to be higher in this zone.

*Export:* The zone accounted for 30% of total national exports in 1998. Export performances greatly vary by region. Major exports are copper, fruits (Region VI), cellulose, fruits (Region VII), cellulose, fishmeal, sawn board (Region VIII), wood products (Region IX) and salmon and other fish (Region X). Considering the limitations with natural resources, diversification and enhancing value added are necessary strategies.

*Investment:* The zone accounted for a low 4% of total foreign direct investment into Chile (1974-1999). The majority of the investments were dedicated to the manufacturing sector but sizable shares also went to agriculture and forestry. Those sectors and infrastructure will likely continue to receive investment from abroad in the future.



*International Perspective:* Chile's economic integration with MERCOSUR will affect traditional agriculture of the zone but at the same time open new possibilities of agricultural export to Argentina and Brazil. It will also benefit tourism development. This zone is already a major destination for domestic and foreign tourists. However, care should be taken not to damage natural resources in the zone by hastily exploiting them for short-term benefit.

*Keys to Export and Investment Promotion:* The zone's strength and competitiveness lie in its natural resources. People should utilize such advantages in more efficient ways to achieve a long-term economic growth and a more equitable distribution. Therefore, two main general strategies are diversification and value added enhancement. Specific strategies are:

- Diversification and value added enhancement of natural-resource-based products
- "Eco-region" concept for attractive products (IX and X)
- More systematic and focused tourism promotion (VI, VII, IX and X)
- Improvement and consolidation of the cultivation and marketing of organic products (VI, VII and VIII)
- Development of new fields of export with a long-term perspective
- Infrastructure development
- Support to achieve the above strategies

#### **4.5 Austral Zone**

*Characteristics:* The Austral Zone consists of Regions XI and XII. Diversity in topography makes the zone a potentially major tourist destination. Severe geographical conditions have hampered infrastructure development connecting the zone with other zones. Population is sparse, totaling only 230,000 in 1992. Share of GDP is also small and growth rates were low in the 1990s, yet social indicators show relatively good records. The two regions have completely different economic structures. Leading sectors in Region XI are fisheries and agriculture-forestry whereas manufacturing and mining are the two mainstays of Region XII. Size composition of the enterprises is quite similar to the national average. SMEs in the zone are faced with the same problems as in other zones. Major constraints include lack of transportation infrastructure, low economic diversification, low value added and lack of support to micro enterprises.

*Export:* The zone's exports account for only 2.5% of the national total. The exports are concentrated on a few products (fish and related products for Region XI; methanol and marine products for Region XII) and a few markets (Japan, the United States and Spain). The strategies for export promotion should be twofold: strengthen traditional sectors and support emerging sectors.

*Investment:* During 1990-1999 this zone received 3.4% of total foreign direct investment into Chile. The majority of the investments were directed towards Region XII. A special plan called *Plan Austral* has been implemented since 1995 to further develop the zone. Two laws (Austral Law and Navarino Law) provide economic incentives exclusively to those investors with interest in the zone. Taking TodoChile's priority sectors into account, prospective sectors include tourism, forestry, livestock and

energy.

*International Perspective:* Relations with Argentina are important in the development of the zone. A mutual agreement to grant free passage over the territory will be essential. It will particularly benefit tourism development since over 40% of tourists visiting the zone are Argentinean.

*Keys to Export and Investment Promotion:* The zone must overcome constraints such as high transportation costs, low value added and limited diversity in products and markets. Keys to export and investment promotion are as follows:

- Diversification and enhancement of value added
- Support to micro and small enterprises through building associations
- Promotion of tourism as the “pulling sector”
- Development of physical, social and economic infrastructure

## ***PART 2 INFRASTRUCTURE***

### **Chapter 5 CORFO’S PROGRAMS FOR SMEs IN CHILE**

Small- and medium-size enterprises (SMEs) are usually handicapped by uneven access to finance, commercial information, technological know-how, managerial skills and training. In the past decade, various programs have been instituted in Chile to support SMEs. CORFO is an organization in charge of many such programs. The SME support programs under CORFO are implemented with a three-tier organization: first tier for execution (consultants, R&D institutes, executing enterprises); second tier for administration and intermediation (banks, promotion agents); and third tier for financing (CORFO, the State Bank and others). The whole structure is coordinated by CORFO. Some representative programs under CORFO or other institutions include:

- 1) CORCAPYME provide technical assistance to SMEs for employee training;
- 2) SIE (Business Information System) created and maintained by SERCOTEC and connected to a Latin American SME development network;
- 3) FONTEC (National Technological and Productive Development Fund), under CORFO since 1991, finances more than 400 projects with US\$50 million through five credit lines, with 80% beneficiaries being SMEs;
- 4) PROFO (Development Project), under CORFO, provides administrative and professional capability to promote SMEs’ cooperative activities;
- 5) FAT (Technical Assistance Fund), under CORFO, finances SMEs to hire consulting services to solve specific problems;
- 6) PDP (Suppliers Development Program), facilitating the establishment of long-term relationships between large enterprises and their small- and medium-sized suppliers;
- 7) Long- and medium-term loans extended through commercial banks (the “second tier”), amounting to US\$1.8 billion during 1990-1999;
- 8) Export Committees, organized under ProChile by entrepreneurs of similar business lines, supports export promotion with partial financial assistance; and

- 9) CORFO co-financing pre-investment feasibility studies by companies interested in investing in certain regions.

## **Chapter 6 BUSINESS ENVIRONMENT**

The world's business community perceives Chile's business environment very favorably. There are practically no obstacles for foreign companies wishing to make direct investment in Chile. If Chile's own market is small, its free trade agreements with many countries or its "gateway" status can transform Chile into a viable export base. There remain some unsolved social-political issues such as investigation of missing people (*desaparecidos*), conflicts associated with indigenous people, unemployment insurance and labor law reform. However, the new administration is helping to advance in a positive manner regarding these issues. The Foreign Investment Committee is the entity in charge of the foreign investment policy in Chile and ProChile collaborates with it in international investment promotion through its overseas representatives. However, this responsibility should be borne by the Foreign Investment Committee. It would be highly advisable for the Committee to hire local professionals to realize such promotion tasks.

## **Chapter 7 FINANCE FOR SMALL AND MEDIUM SIZED ENTERPRISES (SMEs)**

Small- and medium-sized enterprises (SMEs), together with micro enterprises, provide 90% of total national employment. Their importance is more marked in the regions rather than in Santiago. One serious problem that they face is limited access to finance. CORFO offers various types of finance to SMEs but the problem remains unsolved due to the banks' unwillingness to take risk. Several other institutions also provide credits to SMEs, but their size is not large enough to realize any significant investment. The government is studying the possible transformation of the State Bank (*Banco del Estado*) into a bank exclusively for SME finance, though this does not appear entirely satisfactory according to SMEs. A case study conducted by the Team indicates that Japan has long had a similar problem and that government financial institutions have played a significant role in lessening the problem.

## **Chapter 8 LABOR AND HUMAN RESOURCES**

The Chilean labor market is characterized by: 1) relatively low unemployment; 2) low participation of women; 3) a large wage gap between the uneducated and the educated; and 4) fewer labor conflicts. Although education and vocational training are generally well developed in Chile, some areas such as tax incentives for training, training of unskilled workers and administrative and computational training should be strengthened. Many foreign companies in Chile consider the labor situation to be "favorable for employers and investors," but they also feel a need for "multi-functional" workers and suggest that school education should be designed to meet the real-world needs. Human resource development is a key to enhance the productivity level of Chilean enterprises, SMEs in particular, and thus the possibility of export and investment expansion. Measures to improve SMEs' human resources include: 1) focus on the training of workers of SMEs with specific skills for marketing and quality control; 2) increase cooperation with universities; and 3) establish a labor accreditation system.

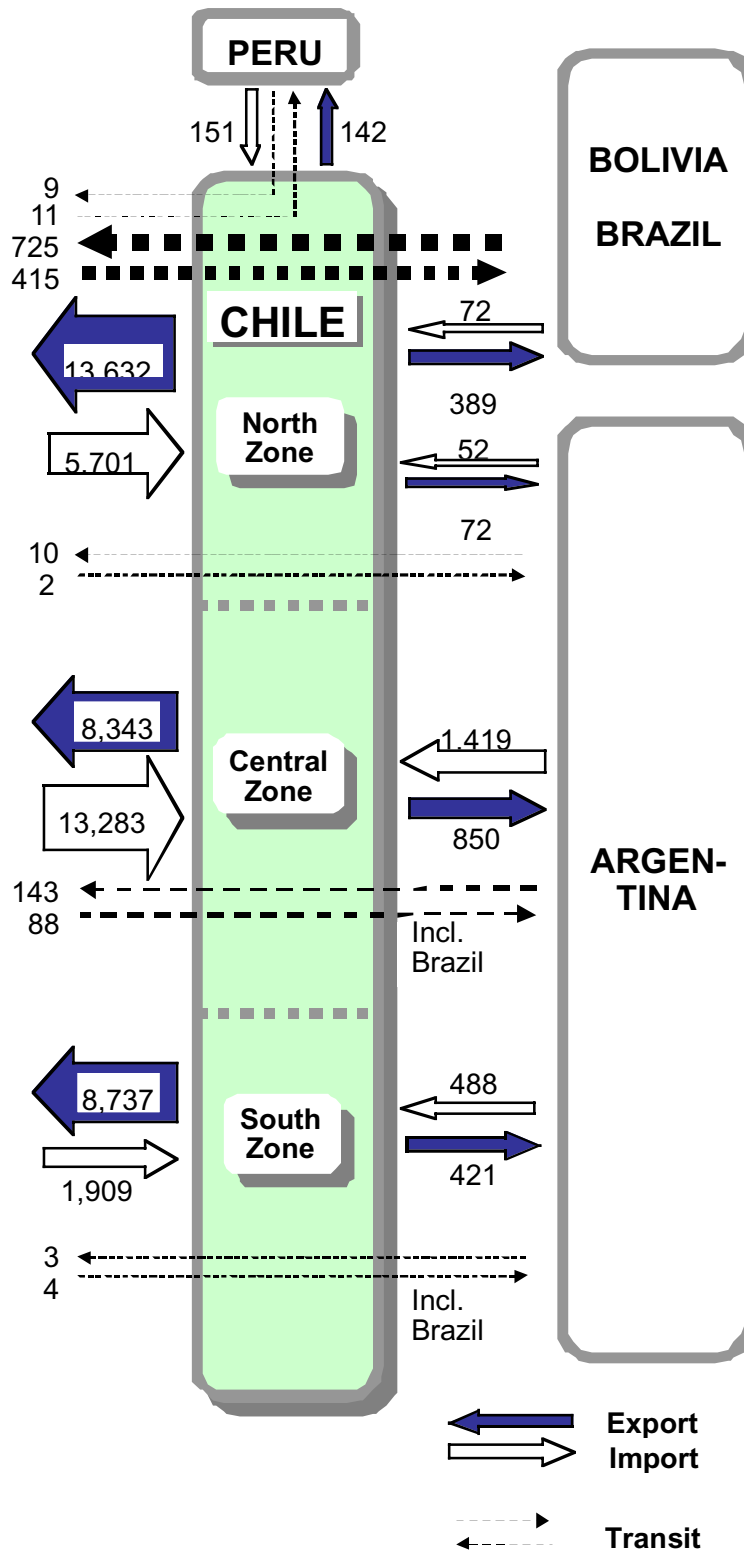
## **Chapter 9        INDUSTRIAL STANDARDS**

In Chile, the National Institute of Standardization (INN) is the central organization in the fields of measurement standards, conformance and documentation standards. INN coordinates three custody laboratories of national reference standards for weight, temperature, force and length. It has accredited a number of laboratories that can provide working standards or certify the conformance of products. INN has also developed a series of documentation standards. The Chilean standards are acceptable for internationally traded goods. However, Chile's presence in the international networks of related organizations is still limited. Its weak relationships with Asian counterparts in particular can be damaging to Chile's trade prospects.

## **Chapter 10        TRANSPORTATION**

The Chilean road network consists of 79,200 km of public roads. In spite of the government's emphasis on road improvement since the mid-1980s, only 18% of the network is paved. There are more than 70 cargo ports in Chile, of which 36 are commercially used. Eleven of them are national ports and used to be administered by EMPORCHI (the Port Company of Chile), while 25 others are private commercial ports. In the late 1990s, EMPORCHI was divided into 10 independent entities in order to accelerate investments to the national ports by awarding concessions to the private sector and to enhance the competitiveness of each port. The State Railway Company (EFE) and a few private railway companies and mining companies run the Chilean railway system. Demand for freight transportation has declined, leaving EFE in a serious financial trouble. Main issues regarding the transportation systems include the low rate of pavement, inadequate trans-Andes routes, limited cargo handling capacity at the ports, poor access to the major ports, and difficulties with the concession schemes to improve unprofitable facilities, finance large-scale projects and collect accurate statistics.

Import and export transport volume totaled 65 million tons in 1999, of which 60% was export. Marine transport was dominant handling 90% of total cargoes. Value per ton of import (US\$593) was still higher than that of export (US\$463) in 1999, but the difference has decreased considerably during the past decade. This indicates increasingly higher value added to Chilean exports. Trucks are the principal transporter of domestic cargoes accounting for 57%, while coastal shipping transports 37% of total. International cargo movements are summarized in Figure 10.1. Transit cargoes do exist but the majority is to and from Bolivia; Argentine cargoes are increasing but still remain limited. Two thirds of the Chilean exports consist of three commodity groups: copper and other mineral products, wood and wood chips, and fruits and vegetables. Each group shows its particular pattern of movements.



Unit: 1000 ton/year

Figure 10.1 International Cargo Movements in 1999

Source: Elaborated by the JICA Study Team, based on data obtained from Cámara Marítima y Portuaria de Chile A.G.; and Customs Office in Valparaíso, *Tráfico Terrestre Avanzadas Fronterizas: Enero a Diciembre 1999.*

The transport sector has been the dominant recipient of public investment (45%). About 70% of total investment has been dedicated to road improvement. According to the forthcoming investment plan issued by the government, three basic policies regarding transportation are privatization, decentralization and physical integration of national land. In view of export and investment promotion, remaining major issues include: 1) low road density; 2) expansion of port capacity (Talcahuano/San Vicente, Valparaíso, San Antonio and Iquique); 3) containerization and draft; 4) development of trans-Andes routes; and 5) possible problems with the concession schemes.

The three bioceanic corridors first identified in a 1996 IDB study as priorities are also priorities for Chile. The central corridor (Valparaíso-Santiago-Buenos Aires) is by far the busiest trans-Andes route. However, due to closings during winter months, another alternative route is under study. The north corridor (Arica-La Paz-Cuiaba-Sao Paulo) has missing sections in Bolivia. The south corridor (Concepción/San Vicente-Bahia Blanca) is almost complete except for some missing road sections at the border passage. A railway connection is a possibility for this route. The Antofagasta/Mejillones-Resistencia route seems to have good potential. Among the 16 major border-crossing points in Chile, 15 are trans-Andes and 13 are Chile-Argentina. The two governments have agreed to give priority to five routes while recently another four are under consideration.

## **Chapter 11      DISTRIBUTION AND LOGISTICS**

Chile is already functioning as the “gateway” but transit cargoes are still insignificant (880,000 tons westbound and 510,000 tons eastbound annually) and limited mostly to Bolivian freights. Viewed internationally, however, this function can and will further expand. Several concepts exist to support this projection: Macro-region Andina, ZICOSUR, central bioceanic corridor and Concepción-Bahia Blanca bioceanic corridor. However, Bolivia is the “missing link” of the South American transportation networks. Brazil, because of this, is constructing railways to connect its western part, a huge grain producer, to the seaports on the Atlantic coast. Argentina is cooperating with Chile to improve trans-Andes routes and its new plan to construct a north-south trunk highway along the Andes will definitely help Chile’s gateway prospects. Panama is striving for the Latin American distribution center with an ambitious plan to develop several strategic facilities in the Canal Zone. Chile may take advantage of this by using the Panamanian center as the overseas manufacturing base where Chilean-made products are further processed and exported to North America and Asia.

One central issue regarding international distribution is which route is less expensive for Argentine cargoes, via Valparaíso or via Buenos Aires. A recent study concludes that for Mendoza-Yokohama shipments, the Valparaíso route is less expensive by 5 to 10%. This conclusion may not be definitive. The Chilean system of domestic distribution is relatively small scale and strongly influenced by Chile’s geographical conditions. Approximately 57% of Chilean domestic freights (in terms of ton·km) utilize truck transportation while 37% use coastal shipping. Railway transportation accounts for the remaining 6%. In Chile, there exist few logistic or distribution centers. This may change as its “gateway” functions increase. Chilean customs operations are smooth and transparent.

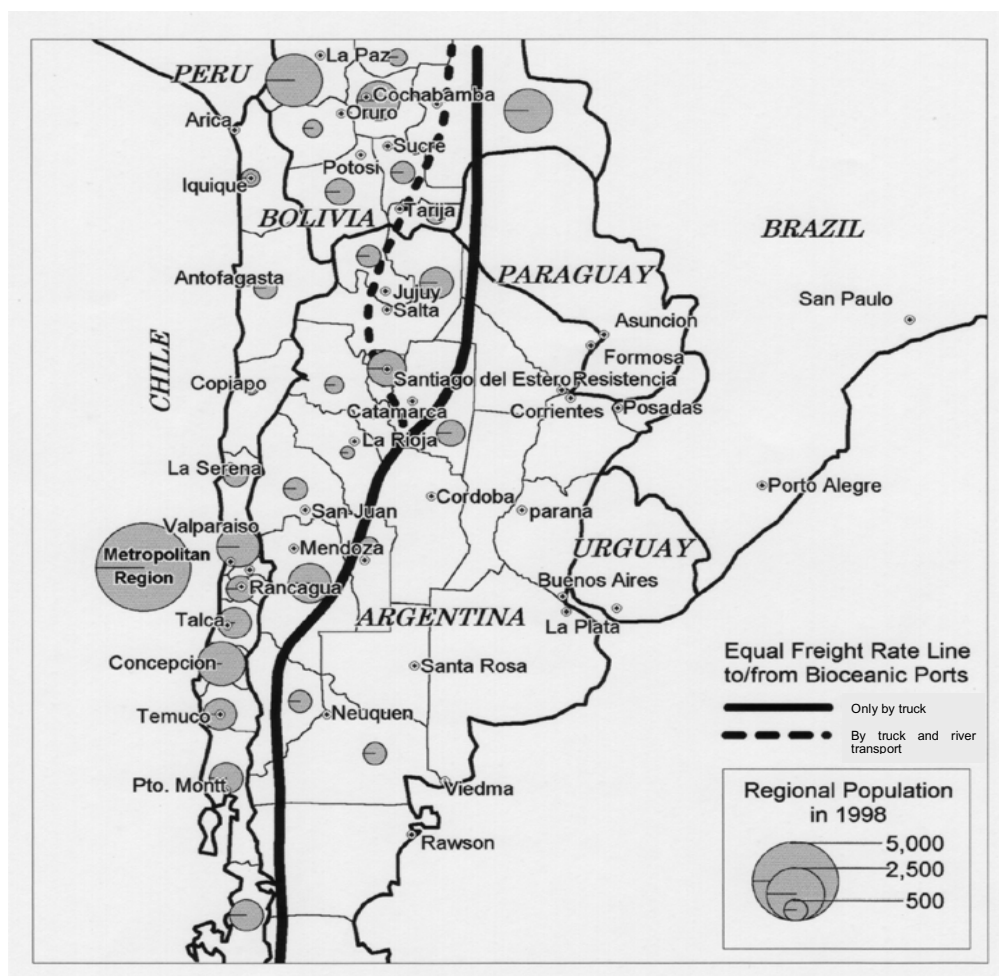
## **Chapter 12      TRANSPORTATION DEMAND IN 2012**

In Chile there has not yet been a comprehensive attempt to make a future forecast regarding the flow of transit cargo. For this reason, the JICA Study Team has approached this task through a commodity-by-commodity method covering Argentina, Bolivia, Mato Grosso (Brazil) as well as Chile itself. This estimation has been done meticulously following the steps below:

- Step 1* Forecast of main Chilean export commodities (copper, other mineral products, fishery products, forestry products, fruits, etc.)
- Step 2* Forecast of main Chilean import commodities (solid and liquid fuel, cereals, flour meal, fruits, vegetables, etc.)
- Step 3* Forecast of trade (export and import) with Argentina and Bolivia by commodity
- Step 4* Estimation of the hinterland of Chilean ports vis-à-vis Atlantic coastal ports (estimation of the iso-transport cost line)
- Step 5* Forecast of transit cargoes to/from Argentina, Bolivia and Mato Grosso by commodity
- Step 6* Forecast of total international cargo movements at Chilean ports
- Step 7* Identification of future bottlenecks with ports and trans-Andes routes

The results of Step 4 indicate that Chilean ports can currently claim as their hinterlands most of Bolivia, Argentina's Northwest Region (Jujuy, Salta, Tucuman, etc.), the Cuyo Region (San Juan, Mendoza, etc.), and the western part of the Patagonia Region. However, if river transport on the Paraguay River is taken as a viable alternative, the hinterlands will shrink 100-300 km westward in Bolivia and in the Northwest Region of Argentina (Figure 12.1).

Step 6 above produced the projections of total international cargo and trans-Andes cargo in 2012 as shown in Tables 12.1 and 12.2.



**Figure 12.1 Potential Hinterlands of Chilean Ports**

Source: Elaborated by the JICA Study Team.

**Table 12.1 Projection of Chilean Port Cargo (1,000 tons)**

	Export Cargo		Import Cargo		Total	
	1999	2012	1999	2012	1999	2012
Chilean Cargo through Ports	30,712	60,663	20,893	39,841	51,605	100,504
Transit Cargo through Chilean Ports	890	2,453	520	917	1,410	3,370
<b>Total</b>	<b>31,602</b>	<b>63,116</b>	<b>21,413</b>	<b>40,758</b>	<b>53,015</b>	<b>103,874</b>

Source: The JICA Study Team.

**Table 12.2 Projection of Trans-Andes Cargo (1,000 tons)**

	Export Cargo		Import Cargo		Total	
	1999	2012	1999	2012	1999	2012
Bilateral Trade	1,732	3,644	2,031	3,695	3,763	7,339
Transit Cargo through Chilean Ports	881	2,438	509	899	1,390	3,337
<b>Total</b>	<b>2,613</b>	<b>6,082</b>	<b>2,540</b>	<b>4,594</b>	<b>5,153</b>	<b>10,676</b>

Source: The JICA Study Team.

Note: Excluding trade with Peru.



### ***Necessary measures for capacity expansion***

Based on the projections, the following measures are deemed necessary:

1) Expansion of port capacity

The cargo volume at Chilean ports is estimated to approximately double by 2012 exceeding their current handling capacity.

2) Trans-Andes routes: road

Road transport demand across the Andes will grow 2 to 2.5 times by 2012. The traffic capacity will be large enough to accommodate this future demand, provided that some critical points like Colchane, Jama, Cristo Redentor, Agua Negra and Cardenal Samoré are sufficiently improved.

3) Trans-Andes routes: railway

Among the three trans-Andes railways under operation, two lines connecting Bolivia to Chile would need capacity expansion by 2012.

## **Chapter 13 INFORMATION TECHNOLOGY INDUSTRY**

The competitive level of Chile's IT industry is summarized as follows. 1) Chile has good IT infrastructure but Internet penetration remains relatively low. 2) Economic openness is Chile's most prominent strength. However, the lack of incentives and finance is a major weakness. 3) Human resources are generally of high quality. However, good IT professionals are still in short supply and R&D is generally weak. Overall, Chile is highly competitive in South America but behind IT-advanced countries.

To improve Chile's IT competitiveness, it would be worthwhile to learn from the actions and experiences of other countries. Some prominent examples include:

1) Financing ventures and SMEs

Ireland's "Seed and Venture Capital Fund" (1995-) and Australia's "Information Technology Online Program" are two typical examples in this category.

2) Producing IT professionals

Ireland has been particularly interested in this category. "Middle Level Technical" and "Higher Technical and Business Skills" Programs (1994-1999), "New Support Scheme for Post-Doctoral Students" (1995-), and "Start Technology Program (STARTECH)" (1995-) are examples.

3) Providing incentives

Ireland's "International Services Program" (1985-) and "Measure One Scheme" (1993-), Taiwan's "Plan for Developing Taiwan into an Asia-Pacific Regional Operation Center" and Singapore's "Pioneer Club Project" all provide some kind of tax breaks or grants.

4) Promoting contents industry

New York City, keen to attract the contents industry, provides various forms of assistance and amenities to this particular industry.

Case studies of IT industrial clusters around the world reveal that keys to successful cluster formation are proximity to higher educational institutions, special zones with privileges, good amenities for living, public-private collaboration, good telecommunication infrastructure, and various forms of incentives.

Valparaíso has several strengths to develop an IT cluster: strong universities, a good living environment, well established industries and services, and its location as the access point to the submarine fiber optic cable network. However, its advantages are not strong enough to compete with Santiago. Proper measures are needed to enhance such prospects.

#### **Chapter 14 TELECOMMUNICATIONS, ENERGY AND WATER SUPPLY**

Chile pioneered the privatization of telephone services, which resulted in a modern and competitive system. Telephone line density (20 per 100 persons) is high as a Latin American country but low compared with the United States or Japan (60 per 100 persons). The mobile phone market is growing fast together with Internet use, with an annual growth rate of 84% over the past three years.

Energy demand increased 7.64% per annum during the period of 1990-1998. Chile is a net importer of energy, able to provide only one third of total demand domestically. Although hydropower is the least expensive source, Chile favors natural gas in its energy strategy. However, Chilean natural gas meets less than half its demand. The rest is imported from Argentina through pipelines. Argentina also supplies half of Chilean oil imports. Coal production has been curtailed drastically. Wind energy is a newly emerging possibility.

Two independent private systems provide most electricity in Chile. Major consumers are mines and large urban centers. Hydropower generation capacity previously accounted for 60% of the total but currently accounts for less than half. Thermal power generation has increased rapidly in recent years while suitable dam sites are decreasing.

About 85% of water consumption in Chile is for irrigation. Mining and industrial uses account for 11% and domestic uses for 4%. In the northern regions, water demand will greatly exceed the available volume. Recycling wastewater and desalination are the only measures to cope with the problem. One serious deficiency with the current water administration is that water property rights are mostly owned by the private sector. The government is therefore unable to consistently support water resource development.

#### **Chapter 15 NATURAL ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT**

Chile's exports are highly dependent on natural resources. Natural-resource-based, pollution-prone industries ("dirty industries") substantially increased the quantity of exports during the past two decades. Much of foreign direct investment was also directed towards the natural resource sector. However, Chile did not impose

systematic environmental regulations until 1997. As a result, various environmental problems have already occurred throughout the country. Environmental factors are usually perceived as being restraining particularly in the production sector. However, they can also open new opportunities for export and investment. For instance, environmental labeling (eco-labeling) is a popular means to differentiate the products and appeal to consumers in the world market. Organic products and wood products from sustainable forests are other potential exports. It is advisable to involve foreign investors and companies in the Clean Production Program currently underway among Chilean companies. In accordance with the Kyoto Protocol, Chile could benefit from the CO<sub>2</sub> emission right market once it is implemented with an international consensus by selling its rights due to the abundant forestry reserves.

## VOLUME 2    STRATEGY AND ACTION PLANS

### **Chapter 16      SELECTION OF STRATEGIES**

Based on the “strategies” and “priority sectors/products/issues” identified in Phase I, the JICA Study Team, together with the Chilean counterpart team, further elaborated the strategies and formulated concrete action plans in Phases II and III. The purpose of this chapter is to explain the process in which the JICA Team selected strategies to be studied in detail in Phases II and III since the Team could not focus on all the strategies identified in Phase I. What the Team intended to formulate was a set of “plans” to materialize the strategies, or “strategic plans.” It should be noted, however, the selected strategic plans were modified to a greater or lesser extent during the course of the Phase II-III study as the Team obtained new information and data.

In addition to the strategies identified in the zonal analyses, some strategic issues identified in the sectoral analyses were also listed as candidates for the selection. The candidate strategic plans were first grouped into four categories: (1) sectors or products; (2) infrastructure; (3) gateway between Asia and South America; and (4) institutional arrangements. They were also classified into three groups with respect to the level of contribution the JICA Study Team can make:

- Group 1: Needs market study in Asia; JICA Study Team's cooperation may be very effective.
- Group 2: May not need market study in Asia; JICA Study Team's cooperation may still be useful.
- Group 3: Can be formulated without JICA Study Team's cooperation.

The strategic plans will be evaluated with these criteria:

- 1) Necessity of a long-term perspective
- 2) Impact on the zonal economy
- 3) Depth of industrial linkage
- 4) Involvement of SMEs
- 5) Necessity of building consensus among concerned parties

The selection results are shown in Table 16.1.

**Table 16.1 Strategic Plans Proposed for Study in Phases II and III**

Category	Strategic Plans
Product or sector	<ul style="list-style-type: none"> <li>• “Eco-region” tourism promotion (South and Austral)</li> <li>• Information Technology Industry (Multi-zonal)</li> </ul>
Gateway between Asia and South America	<ul style="list-style-type: none"> <li>• Strengthening the gateway functions and developing industries targeting the macro-regional market (North)</li> <li>• Development of an integrated gateway (Central)</li> </ul>
Institutional arrangement	<ul style="list-style-type: none"> <li>• Development of non-natural-resource-based (solution-oriented) manufacturing (Multi-zonal)</li> </ul>

## **Chapter 17 NORTH ZONE: MACRO-REGION AND GATEWAY**

### ***Why this strategy?***

The promotion of investments and exports in the North Zone will be greatly facilitated through regional economic integration between the zone and neighboring countries, or within the so-called “macro-region.” Economic integration with the macro-region is expected to: 1) expand the zone’s trade with Asia and the West Coast of the United States; and 2) enhance the possibility of creating new industries (manufacturing, services, tourism, etc.) targeting the macro-regional market. In order to reap the benefits of integration and carry out its development potential, there are three basic requirements the zone must satisfy:

- 1) Improvement of transportation infrastructure, ports and roads in particular;
- 2) Development of supporting industries for the gateway such as logistics, finance, insurance, telecommunications, etc.; and
- 3) Development of manufacturing industries whose main target is the macro-regional market.

When these requirements are satisfied, one particular vision will emerge for the North Zone, which is “Arica as the major gateway to the Pacific Ocean in the macro-region.”

### ***The strategy***

The North Zone should pursue the following four-point strategy:

- 1) Improvement of Arica Port;
- 2) Infrastructure development in the macro-region;
  - Export corridor between Chile-Bolivia-Mato Grosso (Brazil)
  - Export corridor for Iquique Port
  - Inter-modal transport system
  - Nationwide review of port development plans and operation systems
  - Streamlining customs procedures
- 3) Development of diverse gateway functions;
  - Port-related logistics and other services with national and international alliances
  - Research and education, medical services and tourism for Bolivia and Peru
- 4) Industrial development through strategic alliances; candidates for “strategic

partners” including:

- Bolivian wood-processing companies with export experience
- Consumer goods manufacturers in Santiago and Bolivia
- Multinational mining-related engineering companies
- General Motors (GM) located in Arica

### ***Action plans***

The following actions plans have been identified for the North Zone:

#### *Improvement of Arica Port*

- 1) New Schemes to Improve Facilities and Services (Arica Port)

#### *Infrastructure development in the macro-region*

- 2) Study on the Export Corridor of Chile-Bolivia-Mato Grosso, Brazil
- 3) Development of an Export Corridor for Iquique Port
- 4) Development of the Inter-Modal System
- 5) Review and Study of Port Development and Operation System
- 6) Improvement of Procedures at Entrance/Exit Points

#### *Development of diverse gateway functions*

- 7) Chile-Bolivia-Peru Business Roundtable of Arica
- 8) Arica as a Gateway City: City Planning Competition with Participation of Residents
- 9) Tourism Development: Link Arica with Altiplanic Route
- 10) Research and Education: Set up a Macro-regional Research Institute at the University of Tarapacá
- 11) Medical Services: Implement the Health Complex Plan at University of Tarapacá

#### *Industrial development through strategic alliances*

- 12) Wood-Processing: Special Incentives for Bolivian Investors
- 13) Mining-Related Industries: A Pilot Alliance Program with CORFO Assistance
- 14) Mining-Related Industries: Setting up Associations of Mining-Related Industries
- 15) Mining-Related Industries: Strengthening CORFO Schemes
- 16) Mining-Related Industries: Setting up a Section in Local Governments to Promote Direct Investment
- 17) Mining-Related Industries: Accelerating Industrial Accumulation by Taking Advantage of Arica Law
- 18) Mining-Related Industries: Establishing A Macro-Region Center for Technology Development
- 19) Automobile Industry: Arica Development Committee (Including GM)

## **Chapter 18      CENTRAL ZONE: TOWARD A GATEWAY CITY FROM A PORT CITY**

### ***Why this strategy?***

The Central Zone (Regions VI and V) is indeed Chile’s principal gateway. Its seaports are major outlets of Chilean exports as well as the main entrance for foreign goods imported and consumed in Chile, particularly in the Metropolitan Region. The ports,

together with the reasonably developed road network, also allow the zone to be one of the few international corridors connecting Asia and the Pacific to Argentina and beyond. The export and investment promotion strategy for the zone cannot ignore this fundamental characteristic. Being an international gateway close to Santiago is one of its most valuable geographical assets.

Argentina should become a key partner in various aspects. The zone's export and investment promotion could not be so effective if this new partnership were not sought or strengthened. As prerequisites, collaboration in transportation, customs and quarantine as well as complementary business relations in trade and investment should be earnestly pursued.

This Study focuses on the development of the city of Valparaíso as an international gateway, though the strategy and action plans are intended for the use of the Central Zone as a whole. This focus was chosen because the port, the city's main economic activity and source of strength, has been in a declining tendency. This has affected the competitiveness of port-related services and industries in the city, the province and the region, though it has potential to become an important business center of South America. The strategy and action plans for transport infrastructure development cover the entire zone with emphasis on the connection with the Metropolitan Region and Argentina, as it is a basis for the development of the gateway. This chapter also examines the applicability of these strategies and action plans to other areas of the Central Zone.

### ***The strategy***

The strategy for Valparaíso should be as follows:

- 1) Increase demand for the gateway;
- 2) Infrastructure development;
- 3) Logistics sector reinforcement;
- 4) Diffusion of the good image of Valparaíso;
- 5) Research for regional integration; and
- 6) Tourism development.

### ***Action plans***

The following actions plans have been identified for Valparaíso:

#### ***Increase demand for the gateway***

- 1) Export Promotion of Trade-related Services

#### ***Infrastructure development***

- 2) Improvement of the North-South Trunk Route 5
- 3) Improvement of the International Corridor between Chile and Argentina
- 4) Trunk Road Development to Activate the Regional Economy
- 5) Improvement of Ports and Port Access
- 6) Comprehensive Study on Physical Distribution
- 7) Feasibility Study on Strategic Projects for Transport Corridor Development
- 8) Impact Study of IT Revolution on Port Functions and Related Industries

- 9) Study of the Infrastructure Investment Scheme to Accelerate Infrastructure Development of Valparaíso Port

*Logistics sector reinforcement*

- 10) Integrated Port Sales
- 11) Incorporation of SMEs to the Total Logistics Information System

*Diffusion of the good image of Valparaíso*

- 12) Disseminate the image of Valparaíso as an Open and Dynamic International Gateway City in Asia and the Pacific

*Research for regional integration*

- 13) Establishment of a Joint Research Institute for Regional Integration

*Tourism development*

- 14) Transformation of Tourism into Integrated Service Industries through Organizing Young Entrepreneurs

***Applicability of action plans***

The study also examined the applicability of the action plans to San Antonio and La Serena/Coquimbo. The application of one of the action plans to La Serena is:

- 15) Transformation of Tourism into a Service-oriented Industry Targeting Specific Customers in La Serena

## **Chapter 19 SOUTH-AUSTRAL ZONE: ECO-REGION DEVELOPMENT**

### ***Why this strategy?***

The South and Austral Zones are endowed with abundant natural resources, which are the economic mainstay of the zones. The zones produce and export a variety of natural resource-based products such as salmon and wood products that are highly competitive in the world market. However, this economy, largely dependent on natural resources, is faced with difficult challenges. Natural resources have to be managed carefully to curb the rising production costs and remain competitive. More environmentally sound production methods must be adopted. Indiscriminate utilization of resources should be avoided to protect the tourism potential. Moreover, products with appropriate environmental consideration can fetch higher prices in the developed world. Differentiation including environmental friendliness has become a way of obtaining higher added value.

The “eco-region” is a concept that targets these challenges and opportunities. It combines three objectives to achieve the “right” balance between environment and growth in the long run:

- 1) Conservation of the environment;
- 2) Attracting the world market and people; and
- 3) Vitalizing the regional economy.

### ***The strategy***

The “eco-region” strategy should be pursued in the following way:

1) Improving co-ordination among actors by creating a new mechanism  
Many entities have implemented projects that are closely related to the eco-region concept. However, co-ordination has been lacking among and within the private and public sectors, the universities and non-governmental organizations.

2) Creating new and innovative products and processes  
There is a lack of variety, quality and uniqueness in products that are produced in the zones. Innovation and discovering new processes, new materials and new usage would differentiate the products, create higher added value, and improve competitiveness.

3) “Basket”: a new marketing strategy  
One particular method to promote eco-products is to create a “basket” of products and services. A group of local producers and service providers will create an alliance under one common concept; an “eco-product” that “identifies” the differences from other products and seeks new market channels and promotion methods.

4) Creating an eco-region industrial cluster  
An industrial cluster can be organized under the eco-region concept. This would create new services such as eco-tourism, environment-related engineering services, hotels, restaurants, etc. and would utilize products such as wood materials, goods with regional identity, etc. This would ultimately bring about synergic effects on the dynamic development of other services and products.

5) Promotion of clean production initiatives  
The Ministry of Economy and CORFO are currently promoting the clean production initiative. Through such promotion, the eco-process can be attained and eco-products may be increased.

6) Strengthening micro and small enterprises through the collaboration of actors  
The number of producers that may contribute to the “basket” strategy is limited. There have been many attempts to strengthen micro and small enterprises, but they have not brought about expected results. Therefore, this strategy aims to establish a mechanism, which requires each actor to participate in strengthening these enterprises.

7) Increasing people awareness on eco-region issues  
Awareness regarding environmental issues plays a crucial role in the long term. Educating children and adolescents is considered important in the future development of the eco-region.

### ***Action plans***

The South and Austral Zones have taken the two following cases as pilot projects to elaborate operational mechanisms and action plans:

Case of Valdivia: Eco-region Cluster Development Plan (case of tourism and products)

- 1) Establish an overall coordinating body for the eco-region strategy.
- 2) Create a marketing strategy for eco-baskets.



- 3) Create a coordinating mechanism, or committee, for the development of eco-tourism.
- 4) Establish a center of innovation for new products, processes and tourist services through an alliance between private and public sectors and the university.
- 5) Create an incubator mechanism for the strengthening of micro and small-sized enterprises under the eco-region concept.

Case of Puerto Montt: Innovative Mechanism for Solving Environmental Problems (case of net workshops for the Salmon Industry)

- 1) Conduct a comprehensive study on the present situation of net workshops.
- 2) Accelerate the restructuring of the workshop industry through financial incentives.
- 3) Accelerate basic research and development in the fields related to net workshop business.
- 4) Hold investment promotion seminars in Japan to publicize the investment opportunities in the salmon industrial cluster.

## **Chapter 20 SOLUTION-ORIENTED MANUFACTURING**

### ***Why this strategy?***

During the last decade Chile has remarkably increased its export of natural resource-based products due to their strong competitiveness. However, Chile needs to diversify its exports to sustain growth in the coming decade. Three strategic options to achieve diversification are 1) to export Chilean-type solution-oriented manufacturing products; 2) to expand service exports such as tourism and education; and 3) to expand the export of non-natural resource-based products.

Statistics show that machinery is Chile's fastest growing export item. Chemical products have also recorded a substantial increase. Contrary to the common notion, the export potential of Chilean solution-oriented products seems considerable.

To materialize this potential, Chile has to make use of its strengths. An extensive survey of Chilean companies has revealed that the three keys to becoming a successful exporter of unconventional products are 1) high engineering capability, 2) solution- and service-oriented products, and 3) serious commitment.

If this strategy is successful, Chile may come to possess a competitive manufacturing sector known internationally as the "Chilean type."

### ***The strategy***

The following strategy is recommended to develop solution-oriented manufacturing:

- 1) Accelerate conversion of the manufacturer from a marginal exporter to an export-oriented company through professional management;
- 2) Formulate appropriate export strategies based on Chile's competitive advantages;
- 3) Develop innovative industries focusing on Chile's three main resources, i.e., human capital, gateways and materials, to develop innovative industries;
- 4) Organize alliance and integration programs to develop the machinery industry; and

- 5) Attract “strategic partners” for “high-quality investment.”

### ***Action plans***

The following actions plans have been identified to achieve the strategy:

- 1) Organization of a Follow-Up Committee
- 2) Setting a Five-Year Target
- 3) A New Training Program
- 4) A New Consultation Program
- 5) A New Manager Exchange Program
- 6) Financial Schemes for Management Buy-Out (MBO), Leveraged Buy-Out (LBO) and Redeemable Preferred Stock (RPS)
- 7) Information Services for SMEs
- 8) Export Promotion of Solution-Oriented Products to Japanese Companies on the American Continent
- 9) A Ten-Year Plan to Establish Chile’s Image in Solution-Oriented Manufacturing
- 10) Alliance and Integration Programs for Material-Related Industries
- 11) Strategic and Selective Investment Promotion
- 12) Preparation of a Statement on “Omnibus Competitiveness Enhancement” by the government

## **Chapter 21 INFORMATION TECHNOLOGY INDUSTRY**

### ***Why this strategy?***

The present situation of Chilean IT companies can be described as an “IT solution provider,” i.e., developing services built on “core” software technology (e.g., applications, programming languages and tools, system software, etc.). Because of the small size of the domestic market, IT companies in Chile have to be export-oriented by all time effort in R&D. They should strengthen their position as a gateway of the Latin American market, e.g., an IT consultant, a data center, human resource development center, a center that develops prototypes and customizes software specifically for the Latin American market. The Chilean government has introduced several policies for this purpose and been successful to some extent. To gain momentum for further development, however, a clear direction in the government policy and steady implementation are indispensable.

### ***Tasks for IT industry development in Chile***

- 1) Vision : “e-Chile: a world-level IT country”
- 2) Accelerate collaboration among IT companies, universities and the public sector.
- 3) Strengthen R&D by establishing a “national innovation system” and inviting multinational corporations.
- 4) Promote exports and investments by strategic alliance.
- 5) Develop human resources.

### ***Strategy and action plans for IT industry development in Valparaíso***

The strategy and action plans proposed for Valparaíso are summarized in Table 21.1. It should be noted that these action plans are applicable to other areas of the country and

that some of them are useful in achieving two or more strategies.

**Table 21.1 Strategy and Action Plans for IT Industry Development in Valparaíso**

Strategy		Action Plans
Vision for the future	Clarification of vision "Valparaíso as an IT city"	Establish "IT Charter"(declaration to become a world-level IT city) by participation of all players
		Establish "Task Force"
		Investor Relations (IR) of Valparaíso
Strengthen R&D	Improve public support and collaboration system	Establish "IT Development Center"
		Restructure public support program : "Autonomy", "Localization" and "Direction and Priority"
	Good IT environment	New incentives for R&D expenditures
		New incentives for multinational corporations (MNCs)
Public sector initiative	Establishment of "Science & Technology Park"	
Foster export-oriented businesses	Stimulate IT companies' motivation and support	Improve infrastructure
	Support IT companies' activities	"National Innovation System"
	Promotion of IT industry overseas	New incentives for export business
Improve IT environment and its competitiveness	Good IT environment	Establishment of "IT Development Center"
		Investor Relations (IR) of Valparaíso
		Strategic Sister Cities
		Establishment of "Science & Technology Park", "IT Special Zone"
		Improve infrastructure
	Good human resources	Increase human resource supply
Give support to entrepreneurs	Increase human resources supply	
	Establishment of "a court" specialized in IT	
Increase of business opportunity	Demand-side approach	Improve living conditions
		Financial incentives and support
		Establishment of incubation centers in "IT Special Zone"
	Improve infrastructure	IT training by "IT Development Center"
		e-government at provincial and municipality levels
	Dissolve digital divide	
	Good connection between the Valparaíso area and Santiago	
	Develop broadband infrastructure	

Source: The JICA Study Team.

## Chapter 22 LIST OF ACTION PLANS

A summary list of action plans is attached, which indicates the title, implementation body and current status of each action plan.

