

ARTICLES

HALE E. SHEPPARD*

Timber Certification: An Alternative Solution to the Destruction of Chilean Forests

Acronyms

| | |
|--------|--|
| ASEAN | Association of Southeast Asian Nations |
| CENMA | National Environmental Center/Centro Nacional del Medio Ambiente |
| CEPAL | Economic Commission of the United Nations for Latin America |
| CODEFF | Comité Nacional Pro Defensa de la Fauna y Flora |
| CONAF | National Forestry Corporation of Chile/ Corporación Nacional Forestal |
| CONAMA | National Environmental Commission |
| COREMA | Regional Environmental Commissions |
| DIA | Environmental Impact Declaration/ Declaración de Impacto Ambiental |
| DL 701 | Decree Law 701 of 1974/Ley Decreto 701 de 1974 |
| EIA | Environmental Impact Study/Evaluación de Impacto Ambiental |
| EMS | Environmental Management System |
| FSC | Forest Stewardship Council |
| GATT | General Agreement on Tariffs and Trade |

* Associate in the International Practice Group of Jorden, Burt, Boros, Cicchetti, Berrnson & Johnson LLP, Miami, Florida. B.S., University of Kansas; M.A., University of Kansas, Latin American Studies; J.D., University of Kansas; *Magister* (LL.M. equivalent), University of Chile, International Law.

This Article is the second of a two-part series, and was adopted from Mr. Sheppard's LL.M. thesis. Many of the sources are written in Spanish, and translated into English by Mr. Sheppard. For this reason, citations to specific pages are not available. Mr. Sheppard takes responsibility for the translations and lack of citation. All sources are on file with Mr. Sheppard.

| | |
|-----------|--|
| INFOR | National Forest Institute of Chile/Instituto Forestal |
| ISO | International Standards Organization |
| Ley Marco | Environmental Framework Law of Chile/Ley de Bases del Medio Ambiente |
| MERCOSUR | Southern Cone Common Market/Mercado Común del Sur |
| NAFTA | North American Free Trade Agreement |
| NGO | Non-Governmental Organization |
| SEIA | System of Environmental Impact Evaluation |
| SFD | Sustainable Forest Development |
| TBT | Technical Barriers to Trade |

Through growing awareness of the serious problem of native forest destruction,¹ countries around the globe have introduced the concept of sustainable forest development in an attempt to convert it into tangible mechanisms that will prevent massive deforestation and the substitution of native forests by plantations of non-native species.² As evidence of this, during the last half-decade, the United Nations (UN), acting as an inter-governmental body of the highest level, has attempted to establish an international forest convention. On these grounds, the UN Commission on Sustainable Development (CSD) was formed with responsibilities including, but not limited to, evaluating the

¹ FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO). *THE ROAD FROM RIO: MOVING FORWARD IN FORESTRY* (1994). According to the FAO, some 200 million hectares of forests were destroyed between 1980 and 1995. At the same time, 20 million hectares of forest plantations were established. These plantations of exotic species, explains the FAO, reduce pressures on natural forests yet they constitute a threat to biodiversity and other non-economic services associated with the indigenous trees. *Cf. id.*

² Eduardo Silva, "*Conservación, desarrollo sustentable y juego político en la política de bosques nativos en Chile,*" 85 SÍNTESIS 63 (1994). According to the author, Sustainable Forest Development is a holistic concept which may be described in the following manner:

Preservation refers to initiatives that prohibit the economic exploitation of the natural resources of an ecosystem: this is the most rigid form of protection. On the contrary, conservation does not discard the economic use of the ecosystem, intending instead to rationalize the use in order to assure the future availability of a determined resource. In spite of their differences, both of these concepts share a common denominator—in effect, the center of attention is the resource itself. Sustainable Forest Development, however, is a concept that pretends to link the ecological and social dimensions with the notion of conservation in three interrelated components: an economy of healthy growth, a commitment to social equity, and protection of the environment.

Id.

feasibility of a multilateral accord that would regulate the field of forest exploitation, the commercialization of wood products, and the environmental effects of such activities.³ After nearly five years, the lack of consensus among the nations accurately illustrates the present situation regarding this topic: "the divided and increasingly conflicting positions of the participants have impeded the progress [and] the apparent inability to reconcile has led this debate into a dead-end street."⁴ Although it is hoped that several concrete proposals will be formulated through the international forest convention by the year 2000, at this time, the CSD has only managed to introduce non-binding suggestions.⁵

In the absence of a convention of this nature and with the ineffectiveness of other instruments related to the forestry sector,⁶ Chile has recently taken considerable steps to establish an appropriate national legislation with the goal of preserving its natural resources and protecting its presence in the international markets. According to one Chilean expert, "Chile finds itself in the process of creating a rich and extensive forestry legislation principally designed to protect against indiscriminate harvesting and to promote the sustainable development of the forests, as one of this country's principal sources of revenue."⁷ Notwithstanding these governmental efforts, it is argued that Chilean environmental legislation is still deficient.

As commentator Roberto Delmastro points out:

In Chile, there exist around 700 norms related to environmental quality that are in many cases contradictory, juxtaposed and [that] leave gaps both in the content and the operability of the different State institutions that must administer them. A

³ Report of the Ad Hoc Intergovernmental Panel on Forests, U.N. Commission on Sustainable Development, 4th Sess. (1997).

⁴ Jorge Valenzuela, *Bosques: hacia dónde va el debate?*, DIPLOMACIA, Jan.-Mar., 1998, at 16.

⁵ *United Nations Commission*, *supra* note 3. The Intergovernmental Panel on Forests created by the CSD identified the following possibilities: (i) to continue the debate in the existing UN organizations, (ii) to proceed with discussions in a special forum dedicated to an international-level forest debate, while maintaining the issue of a convention under particular scrutiny, or (iii) to immediately begin negotiations for a convention on forests. *United Nations Commission*, *supra* note 3.

⁶ For a detailed analysis of both the Chilean legislation and the pertinent international instruments which have been incapable of protecting the native forests in Chile, see *Native Forest Protection in Chile: The Inadequacies of the Recent Environmental Framework Law and Relevant Multilateral Instruments*, Hale E. Sheppard, 14 J. ENVTL. L. & LITIG. 225 (2000).

⁷ Valenzuela, *supra* note 4, at 18.

significant advancement in this field was achieved with the enactment of the Ley Marco [in 1994]. But, it is necessary to ask the question: Are these provisions and laws sufficiently coherent [and] modern . . . to allow the country to continue developing at an acceptable rate in a globalized world?⁸

Based on the analysis of the problematic areas of the legislation in effect, the answer to this introductory question would be in the negative. In other words, due to the deficiencies in the legal and institutional frameworks that presently exist in Chile, the protection of the native forests is inadequate. The country, according to several local experts, finds itself in "a crisis" with respect to this natural resource and, as a result, now is the appropriate moment to identify new mechanisms to protect these areas.⁹ One tool in particular, environmental certification, has captured the attention of the forestry sector, and will be examined in detail in this Article.

This Article is organized in the following manner. First, the idea of forest certification as a solution to the judicial controversy is introduced. Second, both the positive and the negative aspects of this type of ecological certification are explained, focusing on the two most relevant initiatives in the forestry sector: the Forest Stewardship Council (FSC) and the International Standards Organization (ISO). Later, the justifications for which forest certification will prove to be an efficacious tool both in preserving the local native forests and in protecting the presence of Chilean timber products in the global market are enumerated. Fourth and finally, I conclude that the ideal solution consists of the promulgation of a legally-binding international accord that would regulate the forestry sector while discussing the notable opposition still perceivable on this matter, and how it makes such an agreement improbable within the next few years. Therefore, forest certification represents an appropriate mechanism to counteract the destructive forces in the native forests, especially in nations such as Chile, where the national legislation has been shown to be incapable of confronting this problem.

⁸ Roberto Delmastro, *Política y legislación forestal en un mundo globalizado*, CORMA, Feb. 1997, at 28-29.

⁹ *No hay plazo que no se cumpla*, CHILE FORESTAL, Jan./Feb. 1998, at 17. This article suggests that due to the fact that State financial incentives, for all practical purposes, are granted solely for tree plantations, the Chilean forestry sector finds itself facing a crisis. *Id.*

I

FOREST CERTIFICATION: AN INTRODUCTION

It is suggested that

the certification of forestry products is growing and gaining impetus like an avalanche. The topic draws the attention of governments, industry, environmentalists and consumers around the world [and] recent attempts to convert theory into practice have placed the forest industry at the center of the transition to a green market.¹⁰

The introduction of timber certification programs is normally attributable to three primary causes: consumers' environmental concerns, the pressure exercised by the non-governmental organization (NGOs) in the national legislatures, and the reaction of the wood industry representatives. In the case of Chile, the NGOs have assumed a notable role in the establishment of methods to protect the native forests. In addition to advocating the implementation of a forest certification system, certain organizations have performed environmental studies,¹¹ held public protests,¹² inundated the press with editorials,¹³ sought the support of certification groups located in other countries,¹⁴ and presented legal complaints before the Chilean courts.¹⁵

¹⁰ Alfredo Unda, *Certificación forestal: acelerado avance*, CHILE FORESTAL, NOV. 1996, at 12.

¹¹ Análisis Técnico Comparativo del Segundo Estudio de Impacto Ambiental del Proyecto Río Córdor - Tierra del Fuego. Elaborated by Dr. Jorge Morello and commissioned by Greenpeace Chile, Defensores del Bosque Nativo and FIDE XII, Chile, Oct. 1997.

¹² *Fuertes contrastes de Día Mundial del Medio Ambiente*, EL MERCURIO, June 6, 1998, at C7. More than fifteen members of Greenpeace were arrested during a public manifestation against the Río Córdor project held in front of the Moneda, the presidential building located in Santiago, Chile. According to this group of environmentalists, the action was intended to call the attention of the authorities to the problems of native forest protection due to the fact that "the measures that are being taken now are insufficient." *Id.*

¹³ See, e.g., María Luisa Roblete, *El ambientalismo y Trillium*, LA EPOCA, Apr. 8, 1998, at 6; Nicolo Gligo, *El Caso Trillium*, EL MERCURIO, Mar. 1, 1997, at A2; Constanza Santa María, *Benditos bosques, benditos dólares*, EL MERCURIO, Mar. 30, 1997, at B3.

¹⁴ Letter from Greenpeace Chile to Mr. Tim Synott, Executive Director of the Forest Stewardship Council in Mexico (Apr. 20, 1998), asking him not to grant the ecological certification to Trillium and to join an international boycott of the products elaborated by this timber company.

¹⁵ Jon Friedland, *Corte suprema de Chile cancela proyecto Trillium*, EL MERCURIO, Mar. 21, 1997, at B9.

In general terms, a certification system allows the consumer's pocketbook to exert pressure over certain industries in such a way that they modify their harmful products and processes. Regarding the forestry sector, "it is hoped that the consumer purchases certified products in order to transform this instrument into a market condition that the producer who wants to sell timber is forced to respect."¹⁶ Although the quantity tends to vary, there are at least five general objectives of certification, including: (1) improving the sales or image of a determined product, (2) increasing the consciousness of the consumers, (3) providing accurate information about environmental impacts, (4) stimulating the producers to take into account the ecological ramifications of their industries, and (5) protecting the environment.¹⁷ However, in order for a program to be successful in the timber sector, four assumptions must be met: (1) it is possible to influence the buying habits of consumers by differentiating similar products based on their ecological characteristics, (2) it is feasible to influence the conduct of the producers through market signals that respond to environmental concerns, (3) the advantages derived from this product differentiation create an economic incentive which is large enough to make the producers adopt more adequate practices, and (4) the internalization of the environmental concerns will be converted into an increase in efficiency and competitiveness.¹⁸ With regard to the introduction of certification in the forestry sector, at first the environmental groups believed that the international timber commerce was prejudicial to the environment, irrespective of the techniques utilized in the extraction and processing. Subsequently, however, their attitude has tempered, thereby permitting the use of certification:

The environmental NGOs promoted in the press a campaign blaming international trade as the primary cause of the exhaustion of the native forests. Originally, these campaigns tried to impose prohibitions or boycotts of timber products. Later, the NGOs modified their position when they recognized that the timber trade was not prejudicial in itself, as long as the wood originated from a forest managed in a sustainable manner. Thus, the central objective became the establishment

¹⁶ René Hernández, *La iniciativa de certificación forestal*, BOSQUE NATIVO, BOLETÍN DE DIVULGACIÓN, June 1998, at 22.

¹⁷ COMISIÓN ECONÓMICA PARA AMÉRICA LATINO Y EL CARIBE, EL SELLO DE RECONOCIMIENTO AMBIENTAL EN CHILE, June 1993, at 5.

¹⁸ H.G. Baharuddin, *Certificación de la madera: Discusión Vigente*, CHILE FORESTAL, Apr. 1997, at 23.

of eco-labeling systems which would permit the consumers to identify and purchase products derived from sustainable forests.¹⁹

Currently, public concern over the destiny of the forests has reached global proportions. That is, now the complaints regarding the negative social and environmental repercussions of irresponsible timber exploitation are prevalent in both the temperate and tropical countries. As a result, it is estimated that there presently exists "an unprecedented international effort to confront forestry problems."²⁰

Because of concern that the proliferation of certification programs could provoke massive confusion in the market and, in turn, reduce industry credibility, two major international initiatives have emerged that intend to regulate timber products: the Forest Stewardship Council (FSC) and the International Standards Organization (ISO). In order to unify the international rules, these initiatives employ a species of quasi-harmonization, a model according to which the particularities of each country involved are taken into consideration.²¹ Specifically, the programs use distinct methodologies to arrive at the same goal: the protection of the forests in countries where the national legislation has proven incapable of rectifying the large scale destruction of the native forests.

II

THE FOREST STEWARDSHIP COUNCIL (FSC)

The FSC is a civil association founded in 1993 in Oaxaca, Mexico, by diverse representatives of environmental institutions,

¹⁹ H.G. Baharuddin, *Reseña de la certificación de la madera*, 46 UNASYLVA 19 (1995).

²⁰ B. Cabarle & A. Ramos de Freitas, *La búsqueda de credibilidad en el ámbito de la certificación de la madera*, 46 UNASYLVA 25 (1995).

²¹ Julio César Centeno, National Institutional Arrangements for the Certification of Forest Management (May 12-16, 1996), Paper for the conference on Economic, Social and Political Issues in Certification of Forest Management (Malaysia) (on file with author) at 4. The author indicates that certification should cover all types of forests and that "the standards of Sustainable Forest Development should be adopted on the basis of the general universal principles adjusted to the specific circumstances of each country or region involved." See also H.G. BAHARUDDIN & MARKKU SIMULA, *TIMBER CERTIFICATION: PROGRESS AND ISSUES* at xiv (Dec. 1997) (Publication of the International Tropical Timber Council (ITTO)). Due to the diversity of the forests, it is widely accepted that every proposed international standard must be accommodated to the local conditions. *Id.*

wood dealers, professional foresters and indigenous organizations of 25 countries. The principal mission of the FSC is to "support the environmentally appropriate, socially beneficial and economically viable management of the forests."²² In order to reach this objective, the FSC is dedicated to three principal activities. First, it is in charge of the evaluation, accreditation and monitoring of the certifiers that actually perform the certification of the applicants through use of the label of the FSC.²³ Such certification contemplates two aspects: (1) an independent evaluation of the operation of sustainable management in conformity with the principles of the FSC, and (2) the verification of the chain-of-custody of the forest products. Although its requirements may appear rigid, the FSC recognizes that there must exist a certain degree of flexibility in the evaluation.²⁴ In the second place, the organization promotes the formation of Work Groups whose job consists of adjusting the criteria of the FSC to national realities.²⁵ Finally, the FSC is dedicated to collecting and dissem-

²² Carlos T. Leal, *Certificación forestal en Chile: Forest Stewardship Council*, BOSQUE NATIVO, BOLETÍN DE DIVULGACIÓN, Mar. 1998, at 22. According to the FSC: (1) environmentally appropriate forest management guarantees that the method of wood extraction contributes to the long-term conservation of forest productivity, (2) socially beneficial management assures that both the local population and the society as a whole enjoy the benefits at the same time, and (3) economically viable forest management contemplates a model in which the use of the timber is in itself profitable and not at the expense of the forest resources. *Id.*

²³ Seminar on Iniciativa nacional sobre certificación forestal, (presented by) Comité Nacional Pro Defensa de la Fauna y Flora (CODEFF), Santiago, Chile (July 9, 1998). Currently, the FSC has approved only four certifiers: The Forest Conservation Program of the Scientific Certification Systems, Smartwood Program of the Rainforest Alliance, Woodmark Scheme of the Soil Association, and the Qualiflor Program of SGS Forestry. During the seminar, however, it was announced that, although their approval was not yet official, there exist various initiatives that will be capable of certifying forests in the name of FSC within a few months, including: Silva Forest Foundation - Canada, Recursos Naturales Tropicales - Costa Rica, Natureland Verband - Germany, and Svensk Skogcertifiering - Sweden. *Id.*

²⁴ FOREST STEWARDSHIP COUNCIL, PRINCIPLES AND CRITERIA FOR FOREST MANAGEMENT (Oaxaca, Mexico, 1997). This document explains that neither the FSC nor the certifiers will demand "perfect conformity" with all of the principles. Upon conducting the evaluation, the following factors are taken into consideration: the scale and intensity of the forest management, the peculiarity of the affected resources, and the relative ecological fragility of the forest. Furthermore, the document stipulates that "the difficulties in the interpretations of the Principles and Criteria will be considered in the national and local standards." *Id.*

²⁵ Par Stenmark, *Forest Certification: Main Ideas and Present Status in Sweden*, JAAKO POVRY MAGAZINE, Jan. 1997, at 36. Just as in Chile, the FSC initiated a national certification program in Sweden in 1996. The Work Group of this program announced that "the FSC and the ISO are independent yet totally complementary initiatives." *Id.*

inating information related to certification on a global level and using it at the same time to improve its training programs that are offered primarily in developing countries.

After three years of functioning, this association unveiled its "Statutes and Criteria" for the management of native forests and guidelines for the certification institutions. The statutes, criteria, and guidelines are applicable to all forests.²⁶ The FSC does not possess regulatory powers, yet it exercises considerable influence over the multilateral systems of the States and their populations in such a way that the cited criteria may be utilized as a framework for Sustainable Forest Development.²⁷

III

THE INTERNATIONAL STANDARDS ORGANIZATION (ISO)

The ISO was founded in 1946 with the purpose of systematizing the products industry on a global level. It is an organization composed of the national standardization institutions of some 117 countries.²⁸ The developed the quality management

²⁶ The 10 principles of the FSC are: (1) Compliance with the law - the forest management must respect all of the national laws, as well as the treaties and international accords to which the country is a signatory; (2) Rights and Responsibilities - the right to use the land and the forest resources must be defined, documented and legalized; (3) Rights of the indigenous people - the rights of these groups to possess, use and manage their resources shall be recognized and respected; (4) Labor Relations - the forestry operations must maintain or elevate the social and economic well-being of the workers and local communities; (5) Forest Benefits - the forest management must promote the efficient use of the multiple products and services of the forest to assure economic viability; (6) Environmental Impact - each forest project shall conserve the biological diversity, the water resources, the soils and the ecosystems; (7) Management Plans - a plan in accordance with the scale of the operations must be drafted, implemented and updated; (8) Monitoring - the condition of the forest, the output of forest products, the chain-of-custody and the environmental impacts must be evaluated; (9) Forest Preservation - the primary and secondary forests as well as the sites of great social and/or cultural importance may not be replaced by forest plantations; and (10) Plantations - the plantations must complement the native forests in order to reduce the pressure on them.

²⁷ Leal, *supra* note 22, at 20-21. Such influential capacity is attributable to three factors: (1) the independence and autonomy of the FSC before the interests of the State and businesses, (2) the ability to express a consensus achieved through a wide, diverse and balanced representation of interests, and (3) the transparency and technical rigor of the procedures. *Id.*

²⁸ Salto "Cualitativo", CHILE FORESTAL, Nov. 1995, at 24. The author indicates that although this country "finds itself behind other Latin American nations, the positive thing is that the phenomenon finally arrived in Chile." *Id.* In this country, the Instituto Nacional de Normalización (INN), one of the five technical divisions of

criteria for the productive processes within a business. Unlike the FSC principles, although documents related to the application of the ISO standards to specific sectors such as forestry are published, these norms may be applied to any company, irrespective of its productive focus.²⁹

The companies that seek ISO certification are required to have an Environmental Management System (EMS) in place prior to soliciting certification. The EMS is the central tool of the ISO and is composed of five parts. The first part, Environmental Policy, is implemented to verify the commitment of the company's directors to establishing an environmental policy; that is, to find "a declaration of the intentions and principles of the company regarding its environmental performance which provides a guideline for action." In the second part, Planning, a plan is formulated to implement the Environmental Policy which must be reviewed and updated as company policies or circumstances change. The third part, Implementation, involves the placement of support mechanisms to actualize the Environmental Policy, focusing particularly on the indispensable human, physical, technical and financial resources of the company. In the fourth part, Measuring and Evaluation, the success of the policy is analyzed. Finally, in the last part, Review and Perfection, the policy is honed and reimplemented.³⁰ Although it is necessary that the EMS be in place when applying for certification, true environmental efficiency is normally reached through gradual stages of improvement.³¹

the Corporación de Fomento de la Producción (CORFO), is in charge of this issue. The principal functions of the INN include the establishment of voluntary technical norms, the accreditation of organizations that participate in the certification of products, and the representation of Chile before other international bodies. *Id.*

²⁹ ISO/TC 207 DRAFT TECHNICAL REPORT - DRAFT 09: INFORMATIVE REFERENCE MATERIAL TO ASSIST FORESTRY ORGANIZATIONS IN THE USE OF ISO 14001 AND ISO 14004 ENVIRONMENTAL MANAGEMENT SYSTEMS STANDARDS, Dec. 1997, at 1. The objective of this report is to preserve the integrity and applicability of the generic standards of the ISO and to provide forest organizations with information related to international events in this sector that could be of benefit in the implementation of the ISO standards. It is emphasized, moreover, that the standards should be adapted to the local conditions since "the integration of the specific criteria for the forestry sector in an Environmental Management System provides a framework in which a company may improve its practices to reach the goal of Sustainable Forest Development." *Id.*

³⁰ Sanford Malman, *ISO 14000: nuevas orientaciones ambientales y desempeño de la empresa chilena*, AMBIENTE Y DESARROLLO, Dec. 1995, at 44-45.

³¹ *Id.* at 43. According to the author, the progress of a business is analogous to an evolution of environmental management which includes the following steps: (1)

Strangely, the ISO does not expressly include the concept of “environmental performance” in its text. In fact, the introduction clarifies that the program does not establish absolute environmental requirements for the company and, instead, demands three things: (1) a commitment to continual improvement of the EMS, (2) compliance with the pertinent national and international legislation, and (3) compliance with obligations voluntarily assumed by the company.³² Within an enterprise, the EMS includes all aspects of management of environmental impacts of its products, services, and operations. In the case of timber products, the concept is “more an accreditation of the process, how the site ended up subsequent to the productive operation, than a certification of the products themselves. Therefore, the basis of the certification must be adequate practices of forest management.”³³

Notwithstanding the distinct styles of these two certification initiatives, according to numerous experts, they are compatible and may even be mutually reinforcing.³⁴ For instance, according to a Chilean study, “the certification through the procedures established by the FSC should be considered complementary to the

Non-existent Environmental Management: there is not a definition of the policies and responsibilities in the business related to compliance with environmental norms; (2) Fragmented Environmental Management: here, the environmental norms are complied with, but “they are accepted as another cost of the commercial activity [and] the efforts in this area are secondary, of low priority and uncoordinated.” *Id.*; (3) Integrated Environmental Management: in this stage, there exists support from the corporate level for the integration of environmental criteria in the long-term business strategies and for a high level of coordination. *Id.*

³² HERNÁN BLANCO, *Las Normas ISO 14000 en Chile*, MERCOSUR Y MEDIO AMBIENTE 185 (Hernán Blanco & Nicola Borregard eds., 1998). As a result of these exigencies centered solely on the EMS, the authors emphasize the necessity of having national environmental laws that provide “a very precise framework for the EMS” in order that the ISO has an appreciable effect. *Id.*

³³ Jorge Gayoso, *Un procedimiento de certificación para Chile*, CHILE FORESTAL, May 1997, at 40.

³⁴ Comité Nacional Pro Defensa de la Fauna y Flora (CODEFF), *Certificación forestal: iniciativas internacionales*, BOSQUE NATIVO, BOLETÍN DE DIVULGACIÓN, Apr. 1988, at 5. The principal differences between the ISO and the FSC are the following: (a) Objectives: FSC - promote the sustainable management and conservation of forests vs. ISO - harmonize the international forestry standards; (b) Structure: FSC - association of non-governmental members vs. ISO - worldwide federation of national normative organizations; (c) Activities: FSC - support the establishment of criteria and certification programs vs. ISO - harmonize the standards; (d) Strategy: FSC - certify the forest management in conformity with regional and national criteria vs. ISO - certify self-defined company goals related to the production process. *Id.*

certification by the ISO norms since each is aimed at distinct elements and different activities.”³⁵ The use of both initiatives simultaneously also has been labeled as “a formidable combination.”³⁶ Therefore, in the following sections, these two chief international initiatives will be treated as one concept.

IV

POSITIVE ASPECTS OF FOREST CERTIFICATION

A. Access to “Green Markets”

Although consumer preferences have traditionally been based on quality and price, environmental considerations are also prominent in the market. Various studies indicate, for example, that a significant part of the North American population considers itself ecological, and, provided that the quality and price are comparable, they would prefer to purchase products that have less environmental impact.³⁷ This phenomenon, called “green consumerism,”³⁸ has been increasing as a result of the campaigns opposing the indiscriminate cutting of certain forests which has converted itself into a demand for eco-labels that would assure the consumer that the product is derived from a forest cultivated in a sustainable manner.³⁹ Entry into this segment of the economy is of utmost importance since, according to various trade experts, “the consumers have the last word and will reward or

³⁵ LOUIS OTERO, WORLD WIDE FUND FOR NATURE, DISEÑO DE UNA ESTRATEGIA PARA LA PROMOCIÓN DE LA CERTIFICACIÓN ENTRE LAS EMPRESAS FORESTALES DE CHILE 11 (1998). See also *Conference Offers Differing Opinions of ISO 14001's Adaptability to Forests*, BNA INTERNATIONAL ENVIRONMENTAL DAILY, June 14, 1996. Richard Sandbrook, executive director of the International Institute for Environmental Development, explained that the ISO-FSC debate is unnecessary since “the industry requires a standard to define the product, which the FSC adequately manages, and it also needs a standard to define the management processes, a task that the ISO has accomplished. Both systems [thus] are complementary.” *Id.*

³⁶ *As Things Stand*, TIMBER TRADES JOURNAL, Mar. 15, 1997, at S10.

³⁷ Baharuddin, *supra* note 18, at 24. In spite of this declaration, Baharuddin clarifies that there are still not any trustworthy statistics that would permit one to be sure that the certified products will obtain a considerably higher price in the market. Baharuddin affirms, however, that there are segments which have exhibited a predisposition to pay more and, as a result, they should be exploited by the timber merchants. Baharuddin, *supra* note 18.

³⁸ Kristine Forstbauer & John Parker, *The Role of Eco-labeling in Sustainable Forest Management*, 11 J. ENVTL. L. & LITIG. 165 (1996).

³⁹ *La sustentabilidad va más allá de la madera*, CORMA, Oct. 1997, at 47.

punish through [purchasing] preferences . . . a product or a process that is contrary to the environment.”⁴⁰

With regard to the external markets, the Europeans are clearly inclined to purchase products that contemplate the environmental element in the production process.⁴¹ For example, five percent of the sales in Chile currently involve certified timber, a situation caused by a shortage of available product.⁴² According to English experts, however, the market “is desperately searching for additional certified wood and is willing to pay a higher price to obtain it.”⁴³ In Germany, the concern of citizens not to exhaust the natural resources has been transformed into regulations that affect commercial flows into that country. In 1992, for instance, a law was enacted that requires the use of recyclable containers for virtually all products that enter the German market.⁴⁴ From the perspective of various European experts, this market has traditionally been exigent in terms of both quality and the origin of the products. Therefore, instead of alleging protectionism, the countries that export goods to the European nations should accept the rigid environmental prerequisites as “rules of the game in a solid, demanding market.”⁴⁵

⁴⁰ Leonel Sierralta, *Los impactos del comercio internacional sobre el medio ambiente y la economía en Chile: una visión desde el sector forestal*, CHILE ANTE EL NAFTA Y OTROS ACUERDOS COMERCIALES: UNA PERSPECTIVA AMBIENTAL, 1995, at 166.

⁴¹ Pedro Navarrete Ugarte, *La empresa y la certificación ambiental*, AMBIENTE Y DESARROLLO, Oct. 1997, at 24.

⁴² CHILE SHELL, THE GREEN CONSUMER: TREND OR FAD? (1991). According to a study performed by Shell, the consumers may be divided into five categories based on their level of environmental concern: (1) True blue greens, (2) Greenback greens, (3) Sprouts, (4) Grouzers, and (5) Basic browns. *Id.* at 16. It is contended, moreover, that in Holland, Sweden, and England, more than 80% of the consumers manifest that, if more environmentally friendly products were offered in the European market, they would be willing to pay elevated prices to acquire them. *Id.* at 14.

⁴³ Nancy Vallejo, Potential Economic, Social and Environmental Impacts of Certification 11 (May 12-16, 1996) (Paper for the conference on Economic, Social and Political Issues in Certification of Forest Management (Malaysia)).

⁴⁴ Andrés Gomez-Lobo, *La cuestión ambiental en un acuerdo de libre comercio con Estados Unidos*, in ESTRATEGIA COMERCIAL CHILENA PARA LA DÉCADA DEL 90 - ELEMENTOS PARA EL DEBATE, CIEPLAN (1992) at 226. The author explains that, obeying the tendency toward the greening of the world markets, in 1992 the European Union adopted various laws similar to those in Germany regarding recyclable containers. This legislation, in the opinion of the author, could have serious ramifications for Chile due to the fact that this nation exports numerous fruit products to Europe. *Id.*

⁴⁵ Nelson M. Soza, *Europa Exige más, pero También Paga más*, CHILE FORESTAL, Nov. 1995, at 33. According to this European trade expert, the consumer in this region purchases, for instance, less wine than in other continents, but demands in-

Due to this pressure in external markets, forestry companies located in Chile will be obligated to eventually cede, at least to a certain degree, to the demands of the individual consumers.⁴⁶ Forest projects today, in addition to being feasible from the financial and technical points of view, must have political or public viability.⁴⁷ The need to please the green consumers has increased recently as a result of the economic crisis in Asia. Traditionally, the market of greatest importance for Chile, in terms of timber exportation, was Japan, a nation which purchases twenty percent of the total Chilean production and is characterized by minimal environmental concerns. However, it is expected that the present Asian financial crisis will cause a reduction of imports in this country during an extended period.⁴⁸ Consequently, the crisis could constitute an interesting juncture in the timber certification process since, according to the predictions, "many companies will redirect a large portion of their products to the European or North American markets where the environmental demands are considerably higher."⁴⁹ Hopefully, a part of Asian recovery will include the implementation of environmental standards.

creasingly fine wines. The lesson, he explains, is that Europeans are willing to pay more, but they also tend to demand much higher quality. Thus, it is argued that the Chilean companies that desire to establish themselves in this market must accept the quality standards. *Id.*

⁴⁶ UNITED NATIONS ECONOMIC COMMISSION FOR LATIN AMERICA AND THE CARIBBEAN (CEPAL); *EL SELLO DE RECONACIMIENTO AMBIENTAL EN CHILE*, U.N. Doc. LC/L 1286 (1993). The author argues that the consumer has considerable influence. After all, the purchasing decisions of the consumers are what make the certification programs possible: "The technological innovation that the production of environmentally friendly goods and services contemplates is going to have a cost, an effect in the value of the final product, and the consumer must be willing to cover . . . such a cost." *Id.*

⁴⁷ Rafael Asenjo, *Los Impactos Ambientales y la Utilización Sustentable de los Bosques - parte II*, 15 *JORNADAS FORESTALES* 20 (1994). Various Chilean forest engineers report that in Chile's primary export markets there exists considerable concern for environmental protection, a preoccupation that is expressed in requirements of both the governmental authorities and the direct consumers. On this basis, Asenjo concludes that to have any appreciable level of success in the present, a forestry project must be feasible from diverse perspectives: the financial, technical, and popular. *Id.*

⁴⁸ Ricardo C. Merino, *Crece el valor agregado*, *CHILE FORESTAL*, Apr. 1998, at 45. It is predicted that the Japanese market, although strongly affected by the crisis, will remain relatively solid. It is calculated that the effects of the economic crisis will manifest themselves solely through a decrease in the growth rate during a period which, according to market analysts in Chile, could extend for three years. *Id.*

⁴⁹ See *OTERO*, *supra* note 35, at 13.

In addition to external markets, it is estimated that there exists a substantial quantity of Chilean consumers who desire the certification of the national forestry products. For example, the Chilean businesses of “wood commodities”—that is, furniture factories, residential construction companies, large hardware store chains, etc.—represent internal consumers that are interested in protecting the environment.⁵⁰ With the globalization of the economy, it is predicted that in the near future the concepts of marketing and environmental management “will be intermingled in the label of each forestry product, whether for export or domestic consumption.”⁵¹ Although the practice of demanding environmental quality had its beginning in the European markets, this tendency has spread to multiple Latin American nations, including Chile.⁵²

This market pressure does not exist solely on an individual level, rather it often involves large companies which exercise greater influence. In the USA, various paper-purchasing businesses have committed themselves to considering environmental factors during their negotiations, a situation which will directly affect the decisions made by certain paper producers as these companies together spend a total of approximately \$2 billion annually on such products.⁵³ For example, after receiving a substantial amount of criticism regarding the packaging utilized in its

⁵⁰ See OTERO, *supra* note 35, at 14-15.

⁵¹ Roberto N. Delmastro, *La mujer de César*, CHILE FORESTAL, June 1997, at 40. The author indicates that “the concept of an environmentally friendly product is more deeply rooted every day in the mind of the contemporary consumer.” *Id.*

⁵² Carlos Weber, *Criterios internacionales de sustentabilidad para el sector forestal*, Corporación Nacional Forestal (CONAF), 1995, at 1. In the opinion of the metropolitan region CONAF director, if the Chilean forest industry wants to maintain or increase its competitiveness in the larger markets such as Europe and the United States, it will eventually be forced to adapt to the timber certification tendency. The director explains that one of the most important factors has been the demand for environmental quality by the populations of both the producer and consumer states. “This tendency first appeared in Europe, but it has been slowly extending to other markets” *Id.*

⁵³ Martin Wright, *Los consumidores de papel se ponen más exigentes*, AMBIENTE Y DESARROLLO, Sept. 1996, at 67-71. Four large North American companies including McDonald’s, Time Warner, Johnson & Johnson, and Prudential Life Insurance purchase more than two billion dollars worth of paper products annually. During the last four years, these businesses have worked to develop a program that tends to mobilize market forces “which encourage the paper-producing entities to improve their environmental practices.” *Id.*

restaurants, McDonald's redesigned its system in order to reduce the quantity of wood products employed.⁵⁴ As a result, this chain not only managed to reduce the amount of paper products used in its operations, but also created a positive public image. Based on this type of success story, the formation of ecological consumer groups is in a process of expansion across the country, especially in relation to forest products.⁵⁵ In addition to the efforts in the United States, there is also an appreciable presence of these groups in Europe.⁵⁶

The governments that have manifested their demands for certified wood may be added to the individual consumers and the large ecological business groups. The support for certification continues to rise, especially in state initiatives in the United States. In fact, during the last few years there have been multiple bills debated in state legislatures which would prohibit governmental agencies from acquiring uncertified wood products.⁵⁷ This environmental attitude has long been observed in Europe, a region where various national and local governments have re-

⁵⁴ Leyla Boulton, *Vote on Green Passport - Environmental Issues*, FINANCIAL TIMES, Oct. 13, 1995.

⁵⁵ Curt Anderson, *Forest Preservation: Certification System Helps Protect Ecology*, CHICAGO TRIBUNE, Nov. 30, 1997. As an example of the precipitated expansion of ecological consumer groups, the author cites the Certified Products Council, based in Beaverton, Oregon, that enjoys the participation of approximately 140 companies across the United States. See also Eric Hansen, *Forest Certification*, FOREST PRODUCTS JOURNAL, Mar. 1997, at 16-22. Participation in these groups is often strategic as the members protect the environment on the one hand and improve their own business on the other. The primary reasons for joining these consumer groups include: (1) to avoid possible negative publicity related to environmental controversies; (2) to broaden their markets as a result of doing the right thing; that is, they convert the environmental demands into an opportunity to be a market leader; (3) to gain access to the knowledge of other participants, and (4) to obtain a competitive advantage. *Id.*

⁵⁶ *Turning a New Leaf*, THE ECONOMIST, Aug. 31, 1996. In England, more than 60 businesses have committed themselves to purchasing only certified timber products as of 1999. These businesses have determined that "they will win more customers through green credentials than they will lose through higher prices." *Id.* See also Hansen, *supra* note 55, at 16-22. It is calculated that in March 1997, more than 11 large consumer groups had been formed in at least nine European countries including England, Holland, Austria, Germany, Switzerland, Ireland, and France. *Id.*

⁵⁷ World Forest Institute, *Feasibility Study Regarding Forest Product Certification in Oregon, Washington and British Columbia* (Aug. 1993). This type of measure is being evaluated in California, New York, New Jersey, Washington, Pennsylvania, and Arizona. *Id.*

fused to purchase tropical wood that does not possess an acceptable certification.⁵⁸

V

CERTIFICATION IS ALREADY IMPLEMENTED IN DIVERSE AREAS

The concept of certification in itself cannot be classified as novel since, in Germany the first program of this nature was introduced more than ten years ago. This initiative, named "Blue Angel," was a cooperative effort in which various organizations, with a certain degree of public participation, established environmental criteria for diverse products.⁵⁹ The coverage of this program, however, was limited given that it only included regulations related to the minimal acceptable levels of recycled materials and prohibitions of dangerous substances.⁶⁰

Another notable initiative was Codex Alimentarius (CA), a code of standards for food products on a worldwide level founded in 1962. The purpose of CA is "to guide and promote the elaboration of definitions and requirements for food products in order to assist in the harmonization and to facilitate international commerce."⁶¹ The CA standards are applicable to both the final products and the production processes, requiring that each pertinent code contain at least: the name of the product, ingredients, weight, name and address of the producer, date of packaging, and instructions for use. However, in the case of timber certification, the CA is not legally binding. Despite this, the CA "serves as one of the best examples of international cooperation in establishing standards covering both processes and products that effectively promote environmental protection, human health and international trade."⁶²

⁵⁸ Cheri Sugal, *Labeling Wood*, WORLD WATCH INSTITUTE, Sept. 19, 1996. In England and Germany, numerous local authorities have ceased purchasing tropical wood for governmental construction projects. *Id.*

⁵⁹ DEUTSCHES INSTITUT, RAL, *Umweltzeichen: The Environmental Label Introduces Itself*, Berlin (1990).

⁶⁰ *Id.* In spite of its beginning in a restricted area in 1990, it was calculated that the program had more than 60 categories which covered approximately 3,500 distinct products. *Id.*

⁶¹ Markku Simula, International and Institutional Arrangements for Certification of Forest Management and Eco-Labeling of Forest Products 4-5 (May 12-16, 1996) (Paper for the conference on Economic, Social and Political Issues in Certification of Forest Management (Malaysia) (on file with Murkku Simula).

⁶² *Id.*

On the basis of these positive experiences, the concept of certification began to be applied in the Chilean forestry sector in the early 1990s. Massive participation in forest certification is illustrative of the degree of interest in this matter, and with the introduction of the two major international initiatives, FSC and ISO, the discrepancies among various standards will be resolved without difficulty.⁶³ This argument, furthermore, is strengthened by the governmental support prevalent in various wood-importer nations.⁶⁴

VI

BUSINESS BENEFITS

From a business perspective, the motivations to implement a certification plan in the forestry sector are numerous. First, although only twenty-five percent of all forestry products enter the international market, this represents approximately \$200 billion annually,⁶⁵ enough to influence countries like Chile whose econ-

⁶³ Rachel Crossley, *A Review of Global Forest Management Certification Initiatives: Political and Institutional Aspects* (May 12-16, 1996) (Paper for the conference on Economic, Social and Political Issues in Certification of Forest Management (Malaysia)) (on file with Rachel Crossley). According to Crossley, depending on the point of view adopted, the information about the abundance of programs could lead to distinctly different conclusions. For example: "Those in favor of certification will be encouraged since the activities related to certification are multiplying rapidly . . . The detractors, however, will criticize the programs, labeling them as marginal." *Id.* See also Baharuddin & Simula, *supra* note 21, at IX. It is calculated that, notwithstanding the efforts of the FSC and the ISO to harmonize the standards, there currently exist dozens of different programs which have diverse scopes of application: national, regional, and industrial. Therefore, Baharuddin and Simula argue that "there is a need to identify common ground, be it through the comparability, compatibility, convergence or harmonization of the national, regional and international processes." *Id.*

⁶⁴ U.S.D.A. Forest Service Position on Certification, F. Dale Robertson, Chief of USDA Forest Service, July 1993. The National Forest Service of the United States has announced repeatedly its support for timber certification as a mechanism to decelerate the destruction of the native forests. Mr. Robertson, leader of this organization, has indicated that

the USDA Forest Service supports the objectives on which the certification is based, in particular the standards that indicate sustainable forest development should be defined realistically and applied with a certain amount of flexibility in order to promote the conservation . . . of forest resources and, at the same time, avoid the imposition of political, economic and social prohibitions on the producers.

Id.

⁶⁵ Christian Callieri, *Degradación y deforestación del bosque nativo por extracción de leña*, AMBIENTE Y DESARROLLO, Mar. 1996, at 41-48.

omy is characterized by a high rate of exports.⁶⁶ Second, after the initial investment, utilizing environmental management in a business could reduce the costs of production. In the forestry sector, for instance, the following improvements have been detected: (i) increased efficiency in the use of water, energy, raw materials, etc.; (ii) saved expenses for obligatory cleaning by preventing negative environmental impacts, fines and other legal problems; and (iii) fortified community relationships, with minimal costs, permitting the community to discover improvement opportunities.⁶⁷ Third, industries in both the developed countries and those less advanced tend to adopt the ecological certification regimes of the importer states in order to avoid commercial conflicts.⁶⁸ In other words, often the interaction between the exporter-producer and the importer-consumer determines the quality and environmental standards of the products, since access to certain markets is assured only through compliance with laws of the trade partner. Certain Chilean exporters, for instance, have adapted to the external exigencies "not by imposition, but rather due to the need to maintain efficient and expedient access."⁶⁹ Fourth, environmental laws exist on diverse levels: international, regional and national. Consequently, such norms tend to be redundant or, even worse, contradictory. This situation can be observed now with greater clarity due to the increase in international commerce.⁷⁰ A stable certification system, therefore, would avoid confusion and surprises, thereby "reducing the risk of threats and favoring the identification and exploitation of opportunities."⁷¹ The fifth benefit associated with the use of certification is the strengthening of the organization itself since the implementation of a project of this nature consti-

⁶⁶ Hans W. Grosse, *La situación de los bosques nativos chilenos*, 8(31) RENARRES 4-8 (1991). It is estimated that the forestry exportations generate some \$900 million annually in Chile. *Id.*

⁶⁷ Ugarte, *supra* note 41, at 27.

⁶⁸ Sharif Haron, *Malaysia: Ensuring Good Forest Management*, BUSINESS TIMES, Apr. 11, 1994, at 6-7.

⁶⁹ Francisco Vicuña Orrego, *Medio ambiente y competitividad exportadora: un nuevo desafío para el derecho internacional del medio ambiente*, 110 ESTUDIOS INTERNACIONALES, Apr./June 1995, at 258.

⁷⁰ Kenneth A. Freeling, *Implementing an Environmental Management System in Accordance with ISO's Draft Standards Is Not Necessarily Costly and Could Yield Benefits As Well*, NAT'L L.J., July 24, 1995, at B5.

⁷¹ Ugarte, *supra* note 41, at 28.

tutes "an evident manifestation of the ability to work as a team."⁷²

Without prejudice to these direct benefits to the businesses, certification may also facilitate three additional positive aspects. First, certification improves the availability of financial resources and technical assistance, elements that are usually derived from multilateral banks.⁷³ Various authors affirm the idea that forest management and timber products certification encourages sustainable development; this concept is promoted by the World Bank.⁷⁴

Second, the avoidance of legal liability and all of the associated costs are benefits of certification. Companies may elude or at least mitigate the costs related to environmental responsibility before the tribunals, if they comply with the requirements of the ISO for example. More specifically, the Environmental Protection Agency (EPA) of the United States has indicated that it will directly reward adherence to certain principles. The EPA has committed itself to reducing fines, accelerating legal procedures, and lowering the number of inspections in exchange for total cooperation with a certification regime such as the ISO or FSC.⁷⁵ Additionally, on the basis of recent legal tendencies, the insurance companies have incorporated these standards in their analysis, favoring the companies that have adopted the international environmental measures.⁷⁶

⁷² Ugarte, *supra* note 41, at 28. Ugarte maintains that the changes regarding environmental protection is a process which tends to last for various years, requiring a contribution from all members of a forestry company, and making all employees feel a direct relationship with management generating an appreciable degree of personal motivation. Ugarte, *supra* note 41, at 28.

⁷³ William Vaughan, *Economic Analysis of the Environmental Aspects of Investment Projects*, Inter-American Development Bank - Environment Protection Division, Washington D.C. (Dec. 1993).

⁷⁴ Crossley, *supra* note 63. See also David Freestone, *The World Bank and the Environment*, ALI-ABA CONTINUING LEGAL EDUCATION (1997). Upon designing a project which will be submitted to the World Bank, the environmental protection aspects will likely require the inclusion of specific measures and other conditions. *Id.*

⁷⁵ Genevieve Mullet, *ISO 14000: Harmonizing Environmental Standards and Certification Procedures Worldwide*, 6 MINN. J. GLOBAL TRADE 379 (1997).

⁷⁶ Mark Bennett, *ISO 14000: New Standard for Environmental Integrity*, PROB. & PROP., July-Aug. 1995, at 30.

VII

ENVIRONMENTAL BENEFITS: PROTECTION OF THE NATIVE FORESTS

As previously explained, the goal of using forest certification as a complementary measure to the national and international legislation is simply to protect the native forests. If certification programs are applied in strict conformity with the established criteria, it is predicted that the timber product industry, in addition to protecting this natural resource, may also be more productive.⁷⁷ One of the factors that has considerable influence in the destruction of native forests is the substitution of non-native species to create wood plantations. With respect to the FSC, some presume that the products from such plantations would be readily certifiable due to the high degree of planning in these ventures. However, according to experts, this supposition "is inappropriate since the . . . productive processes of the plantations in many cases do not comply with the sustainability criteria."⁷⁸ Based on the FSC's parameters, the emphasis of certification in Chile should first be centered on the plantations since their sustainable management will lead to the protection of the native forests.⁷⁹ Due to the tight relationship between the diverse industries in the forestry sector, certification of both sec-

⁷⁷ Harald Schmidt, *Requerimientos ambientales en el comercio internacional a las maderas provenientes del bosque nativo*, Corporación Forestal Nacional (CONAF), 1995, at 2. Schmidt indicates that the environmental demands included in the certification regimes are reasonable since they do not exclude the use of the native forests and, in the long term, they directly benefit the producer States. The benefit, argues Schmidt, is that through sustainable management, not only are the ecological problems avoided, but also the production levels are substantially increased. *Id.*

⁷⁸ Antonio Lara, *Certificación forestal: una necesidad para la conservación de los bosques en Chile*, BOSQUE NATIVO, BOLETÍN DE DIVULGACIÓN, Mar. 1998, at 17. The author indicates that, on the basis of the ninth criteria of the FSC, the primary forests, the well-developed secondary forests, and the places of great environmental, social or cultural importance must be conserved. He claims, additionally, that "[t]he cited areas may not be replaced by forest plantations. The planting of trees in natural forests may supplement the natural regeneration [but] such techniques may not replace nor significantly alter the natural ecosystem." *Id.*

⁷⁹ *Id.* According to the leader of this group of forestry engineers, certification in Chile should be centered on plantations, taking into account the native forests afterwards. In Lara's opinion, in order to certify the products from the plantations, it is necessary to guarantee that they do not come from the substitution of native forests. In this manner, it is argued, it will have a significant impact on the reduction of the substitution of the native forests and will orient the plantations toward the uncovered terrain. *Id.*

tors: the native forest and the plantations, is necessary for their mutual survival.⁸⁰

Although these initiatives are relatively new, certain benefits that directly or indirectly lead to an increase in the protection of the native forests have already been demonstrated. These benefits include: a constant dialogue over the issue on an international level; the redefining of forest management using a holistic concept; institutional reforms; technological innovation such as the new methods of verifying the chain-of-custody; an increase in forest management capabilities attributable to the informative programs of the certifiers; and the education of the public regarding the forests and the environment in general.⁸¹ Advancement of industry concerns is inherent to the concept of sustainable development.

VIII

CERTIFICATION AND LEGISLATIVE DEFICIENCIES

As a market mechanism, timber certification programs lack the legal authority necessary to enforce their criteria. Therefore, various authors reason that certification constitutes, at best, an auxiliary instrument whose principal task should be to supplement the existing relevant legislation.⁸² For example, it is argued that certification should be considered a partial contribution to all of the factors which are combined in order to protect the na-

⁸⁰ *Id.* Lara indicates that there exists adequate proof to affirm that "the certification of plantations in the future depends on the good management and protection of native forests today." *Id.* This stance, he suggests, is based on the need to project the image of a nation which uses sustainable practices in *each and every* sector of the forest. *Id.*

⁸¹ William E. Mankin, *Will Certification and Labeling Assist SFM Globally?*, Australian Dept. of Primary Resources and Energy, International Conference on Certification and Labeling of Products from Sustainably Managed Forests, Session 3—Contribution of Certification and Labeling to Sustainable Forest Management (last modified Oct. 1, 1996) <<http://www.dpie.gov.au/dpie/conference/icocal/papers/3panel2.html>>.

⁸² Jean-Pierre Kiekens, *Eco-Certification: Tendencias Internacionales e Implicaciones Forestales y Comerciales, étude réalisée pour le Ministère de l'Environnement, des Ressources Naturelles et de l'Agriculture de la Région Wallonne (Belgique) - Novembre 1997* - (visited Mar. 10, 2000) <<http://www.ulb.ac.be/assoc/iff/study>>. According to Kiekens, certification is not an essential instrument in sustainable forestry since this level of development is achievable without it. It is alleged, in particular, that "contrary to those instruments such as forest regulations, eco-certification constitutes only an auxiliary instrument. Despite what its promoters might suggest to the contrary . . . certification should not be considered the best way to significantly improve forest management." *Id.*

tive forests, such as present environmental policies and regulations.⁸³ In other instances, the idea that certification represents a supplementary tool has been more vehemently expressed through arguments that “certification may not replace adequate and clear laws, nor a coherent policy. It is solely an additional strategy which tends to improve the situation of the world’s forests.”⁸⁴ Due to its role as an exporter of forest products, Chile’s participation in international markets will demand, especially in the case of timber products derived from natural forests, a certification program that assures the existence of Sustainable Forest Management practices.⁸⁵

This limitation on certification, however, should not be considered a weakness. On the contrary, as it is now structured, certification may permit the fortification of the existing legislation at both the national and international level. According to the Principles and Criteria of the FSC, for instance, these should be utilized in conjunction with the relevant regulations. The intention of the FSC “is to complement, and not to replace, other initiatives that support responsible forest management,”⁸⁶ a concept that has received support from diverse sectors.⁸⁷ In Chile, the use of certification could substantially facilitate the administrative procedures associated with the national legislation. It is recommended, therefore, that the State assume the role of an active collaborator in the promotion of these standards. Specifically, it is suggested that the National Forestry Corporation of Chile (CONAF) ease the requirements related to the Management Plans for those companies that obtain a legitimate timber certification. The National Environmental Commission (CONAMA)

⁸³ Sargio Vergara, *Objetivos y Utilidad del Sello Ambiental*, in *EL SELLO DE RECONOCIMIENTO AMBIENTAL EN CHILE 6* (Comisión Económica Para América Latina y el Caribe (CEPAL) 1993). The text explains that the eco-label as a system to incorporate the environmental variable in purchasing decisions has become an important market instrument for the protection of native forests, “but its function should be seen only as a partial contribution.” *Id.*

⁸⁴ CODEFF *Certificación Forestal: Iniciativas Internacionales*, BOSQUES TEMPLADOS, Apr. 1998, at 3.

⁸⁵ Hernán Cortés, *Los desafíos forestales*, CHILE FORESTAL, Mar. 1997, at 13.

⁸⁶ FOREST STEWARDSHIP COUNCIL, CONSEJO DE MANEJO FORESTAL, PRINCIPIOS Y CRITERIOS PARA EL MANEJO DE BOSQUES (1996).

⁸⁷ Sheila Polson, *Cutting With Conscience: Sustainably Harvested Certified Wood is Gaining Popularity*, E-MAGAZINE 42 (1996). Various North American forestry experts agree that certification “is not a panacea for forest management improvements and is best used in conjunction with other forest sector initiatives and policies.” *Id.* at 42.

likewise, could simplify the process of elaborating environmental impact studies for the certified timber businesses. Finally, it is proposed that, subsequent to being applied during a trial period, the standards of the FSC could perhaps be formally incorporated in the national environmental legislation and the corresponding regulation.⁸⁸

As explained earlier, the initial success of forest certification has led to a proliferation of highly diverse programs, a situation that may cause confusion for consumers. According to one study, due to the lack of harmonized standards and supervision, the majority of such initiatives are of limited credibility. In 1991, for instance, a survey was performed in the English timber market in which more than 600 forestry companies issuing declarations of sustainability were identified. Upon investigating in greater depth, however, only three companies were capable of corroborating that such assertions were actually based on credible criteria or processes. As a result, it is argued that "the need to establish a believable framework for the harmonization of wood certification programs is undeniable."⁸⁹

Another problem associated with the credibility of timber certification is the multiple ways in which a company may abuse the process. First, it is possible to defraud the programs by copying the symbol without authorization in countries where the applicable intellectual property laws are not adequately enforced. Second, although the eco-label license is granted to only one product, it is possible for a company to utilize the symbol for all of its products or for its advertising campaigns in general. Finally, there is a possibility that a company will change its productive process with the exclusive objective of applying for the certification and, once obtained, return to its former contaminat-

⁸⁸ WORLD WIDE FUND FOR NATURE, DISEÑO DE UNA ESTRATEGIA PARA LA PROMOCIÓN DE LA CERTIFICACIÓN ENTRE LAS EMPRESAS FORESTALES DE CHILE (1998). See Martin Von Mirbach, *Demanding Good Wood*, ALTERNATIVES J. 10 (1997). While incorporating timber certification in the national legislation may facilitate the administrative process, it may be a risky strategy due to potential complications with the World Trade Organization (WTO). Voluntary certification schemes promoted by independent entities like the FSC or the ISO fall outside the scope of the WTO. However, according to von Mirbach, "certification schemes may no longer be purely voluntary if they are referenced in legislation or if they become so widespread as to be considered normative . . ." *Id.*

⁸⁹ B. Cabarle & Ramos de Freits, *La búsqueda de credibilidad en el ámbito de la certificación de la madera*, UNASYLVA 25 (1995).

ing methods.⁹⁰ Although the FSC or ISO could initiate a legal action against a company for misusing the certifications in these ways, obtaining legal results is usually a lengthy process which in addition to the violation, can rapidly undermine the credibility of timber certification. Moreover, since timber certification is performed on a global level, seeking legal remedies (injunctions, compensation, etc.) in diverse legal systems is a complex endeavor.

The last problem concerning the validity of certification involves a specific accusation against the FSC and the economic forces that allegedly influence the environmental decisions made by this group. In 1995, a forestry company from the Netherlands was censured for having produced various commercials that were considered to be false publicity. The company, in particular, claimed to be the first Dutch tropical timber producer certified by the FSC for its plantations in Costa Rica, an affirmation that was supported by the World Wide Fund for Nature (WWF), the owner of five percent of such project. The respective complaint was formally placed before the FSC; however, it was argued that the FSC had not "appeared to react to this allegation, probably due the fear of exposing a particularly influential member of its board-of-directors: the WWF."⁹¹ Thus, the possibility for double-dealing must be kept in mind.

IX

Costs

The costs associated with the implementation of a certification system have also been classified as a negative aspect. Such costs may be divided in six main categories. First, there exist the costs at the production level which include both those necessary to comply with the established criteria and those required to develop information systems.⁹² In developing countries, due to factors like the complexity of the political and socioeconomic conditions, achieving the required levels may prove extremely ar-

⁹⁰ IAN MALCOM SCOTT, *EL ECO-ETIQUETADO* (1997).

⁹¹ JEAN-PIERRE KIEKENS, *ECO-CERTIFICATION: TENDENCIAS INTERNACIONALES Y IMPLICANCIAS FORESTALES Y COMERCIALES IX* (1997).

⁹² Markku Simula, *Trade and Sustainable Management of Renewable Natural Resources: The Case of Forests*, UNCTAD Seminar in Environment, Competitiveness and Trade - A Development Perspective (Jan. 18-19, 1996).

duous.⁹³ Second, certification involves the costs of the forest valuation which are estimated at between \$.30 and \$1.00 per acre in the tropical countries where national experts are readily available.⁹⁴ This price, of course, varies depending on the magnitude of the forest property examined.⁹⁵ Third, there exists the costs associated with authenticating the chain-of-custody. This chain may not have any gaps in its trajectory from the place of origin until the final stages of distribution, and must include two principal elements: physical evidence that the wood originated in a certified forest and a communication system that can be easily traced.⁹⁶ The cost of this verification is calculated at approximately one percent of the value of the product.⁹⁷ In addition to this cost, a timber producer must add the money necessary to segregate the certified wood from the non-certified wood once it arrives at its final destination.⁹⁸ Fifth, certification reduces timber company output by forcing companies to limit their harvest to meet the forest's annual rate of growth, and to lessen the damages inflicted to the standing wood. However, this decrease in output may be offset, in large part, "by the drop in the costs of exploitation and by the sales derived from better planning."⁹⁹ Finally, the opportunity costs must be figured since, in order to comply with the certification requirements, in many cases the companies are restricted from using the most profitable short-term production method: plantations.¹⁰⁰

⁹³ Christian Tietje, *Voluntary Eco-Labeling Programs and Questions of State Responsibility in the WTO/GATT Legal System*, 29 J. WORLD TRADE 123, 129 (1995). The author argues that, irrespective of their voluntary nature, certification programs raise problems of international trade law. For example, the main concern entails the fear that developing nations, notwithstanding sincere efforts to comply, will be incapable of meeting certain sets of national standards for product groups and, thus, will be excluded from ecological certifications in these markets. According to the author, due in part to national circumstances, the products from developing countries "without the eco-label [are] de facto discriminated against." *Id.*

⁹⁴ C. UPTON & S. BASS, *THE CERTIFICATION HANDBOOK* (1995).

⁹⁵ Vallejo, *supra* note 43. It is calculated that certification becomes considerably more economical when the property in question consists of more than 100 acres of highly productive forest. *Id.*

⁹⁶ V. VIVIAN, *CERTIFICATION OF FOREST PRODUCTS: ISSUES AND OPPORTUNITIES* (1996).

⁹⁷ I. Buechel & P. Hauselmann, *Feasibility Study: A Label of Sustainable Forest Management in Switzerland*, FOREST STEWARDSHIP COUNCIL (1995).

⁹⁸ *Id.*

⁹⁹ Baharuddin, *supra* note 18, at 23.

¹⁰⁰ Bermudo Rodríguez, et al., *Plantaciones: la justificación de un subsidio después de 1994*, ACTAS XIV - JORNADAS FORESTALES, 1992. The authors indicate

X

COMPLICATIONS WITH INTERNATIONAL TRADE

Regulating commercial exchanges between the member-states is the principal function of the General Agreement on Tariffs and Trade (GATT), a multilateral accord which contains various articles relevant to timber certification. For example, article I establishes the Most Favored Nation principle (MFN) and article III, for its part, defines the requirement of national treatment.¹⁰¹ According to the MFN principle, each member-state is required to extend identical treatment to all products which it imports, regardless of the country of origin. Article III, in turn, establishes that a nation may apply national standards to imported products; however, upon doing so, it may not place such products at an economic disadvantage.

While attempting to respect these fundamental principles of identical treatment and application of national standards, GATT contains certain exceptions that justify assorted restrictions. Article XX, for instance, stipulates that trade may be restrained when it is necessary to protect human, animal or vegetable life, or in order to conserve the natural resources, provided that such measures are applied in conjunction with restrictions to the national production or consumption. The utilization of such mechanisms cannot be done in a discriminatory or arbitrary manner, nor as a hidden barrier to international commerce.

Despite years of debate, the relationship between forest certification and the commercial rules is still not completely re-

that although the activity of reforestation is profitable, it requires such a long period to generate such earnings that the private investor is commonly dissuaded. In general, "the investors reject the long-term project, preferring all of the activities which are lucrative in the short-term, even when the profit margin may be quite small." *Id.*

¹⁰¹ SILVIA CORIA, ET AL., *INTEGRACIÓN, DESARROLLO SUSTENTABLE Y MEDIO AMBIENTE 57* (Fundación Centro de Estudios Políticos y Administrativos, Argentina, ed., 1997). Upon concluding the Uruguay Round of GATT, the World Trade Organization (WTO) was created. This organization has undeniably taken environmental issues into consideration. In the preamble, for example, the parties recognize that their commercial relations should be carried out in such a manner as to permit the optimal use of the world's resources in accordance with the objective of sustainable development, seeking to protect and preserve the environment. The preamble specifies, moreover, that trade should be executed in a manner compatible with the respective necessities and concerns that exist in all countries with their varying levels of economic development. *Id.*

solved.¹⁰² On one hand, it is argued that, provided that the ISO and FSC programs are voluntary, they should survive GATT scrutiny for the following reasons. First, the label cannot constitute a hidden barrier to trade due to the fact that it has been openly accepted by various nations instead of being implemented unilaterally. Second, the criteria contained in the FSC are applicable to all forests and ecosystems, thereby not discriminating against one nation in particular. Third, if the certification criteria are developed through a process of sufficient transparency, the participation of all of the member-states which could potentially be negatively affected makes the program equitable. Finally, forest certification programs only attempt to inform the consumers about the compliance of the products and processes by using determined criteria and do not, by themselves, impede the importation of a particular product.¹⁰³

On the other hand, there are those who contend that, in spite of its voluntary nature, forest certification still violates GATT.¹⁰⁴ They allege that the efforts of the industrialized nations to pro-

¹⁰² World Forest Institute, *Feasibility Study Regarding Forest Product Certification in Oregon, Washington and British Columbia*, 1 (Aug. 1993) (unpublished study). Prior to the official introduction of the large forest certification initiatives, several businesses expressed their concern regarding possible conflicts in the international commercial scene. In this study, for instance, it was discovered that although forest certification programs would be voluntary and market-based, "the participants felt that certification would [eventually] become regulatory in nature," a situation that would cause conflicts with the GATT. *Id.*

¹⁰³ Forstbauer & Parker, *supra* note 38, at 165; *see also* Tietje, *supra* note 43, at 156. The author suggests that the potentially trade-harming effect of certification could be resolved in two different ways. First, the introduction of a GATT dispute settlement procedure in which the voluntary labeling programs are declared illegal is a possibility. However, since most of the developed countries and an increasing amount of developing nations have enacted similar programs recently, voluntary certification has become an important tool in environmental protection. According to Tietje, "[abolishing] this tool would . . . not only contradict the increasingly universal conviction of governments of the necessity of eco-labels, but would also mean a step back in the universal efforts to protect and preserve the global commons." *Id.* The more appropriate resolution, therefore, is international standardization. In the opinion of the author, it is probable that the adopted standards would reflect an acceptable balance between environmental concerns and free trade "which could constitute a refutable exclusion to the [current] GATT/WTO dispute settlement procedure." *Id.*

¹⁰⁴ ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (OECD), *ENVIRONMENTAL LABELING IN OECD COUNTRIES* (1991). According to this group, on the basis of a rigid interpretation of the WTO provisions, certification will always violate this international accord. In fact, the author explains, "the goal of [ecological certification] is to select only those products [which cause] less environmental impact than other products in their category." *Id.* From this perspective, all certifica-

mote the certification and the Environmental Management Systems reduces the competitiveness and market access of the developing countries.¹⁰⁵ In particular, four reasons for which the certification constitutes a non-tariff trade barrier for the poorer nations have been enumerated. First, due to the scarcity of information, many poor nations argue that they are unable to knowledgeably participate in the establishment and the implementation of the standards. Second, because of the lack of infrastructure, the local capability to evaluate in conformity with the standard is suspect, and thus the certifications granted to these nations perhaps will not be accepted by the world market. Third, because many poor nations lack technology, the high cost of purchasing the certification and supervisory equipment is restrictive. Finally, due to high adjustment costs these countries cannot afford the necessary technologies, investigations, evaluations, and monitoring tools necessary for proper implementation of the certification standards.¹⁰⁶ Possible solutions to avoid the discriminatory effects of timber certification exist but have not been applied.¹⁰⁷

Similarly, on the basis of an Austrian case, it is understood that laws imposed unilaterally by a particular nation are considered to be in violation of the commercial principles enumerated in GATT. In 1992, Austria promulgated a law requiring that the tropical wood products entering the country must contain a label declaring "made with tropical wood" or "containing tropical wood." As a result, Indonesia and Malaysia, supported by the

tion programs, by definition, intentionally discriminate; only in this manner can the best products be identified. *Id.*

¹⁰⁵ United Nations, Industrial Development Organization, Environment and Energy Branch, Environmental management Systems and Eco Labelling: Potential Adverse Effects on the Trade of Developing Countries (Apr. 1995).

¹⁰⁶ *Id.*

¹⁰⁷ Vivien Liu, Trade Aspects of Certification and Labeling, Australian Dept. of Primary Industries & Energy, International Conference on Certification and Labeling of Products from Sustainably Managed Forests, Session 6—Economic and Trade Aspects of Certification 1996 (last modified Oct. 1, 1996) <<http://www.dpie.gov.au/depie/converenca/icocal/papers/gover2.html>>. The author indicates that feasible solutions include: the harmonization of certification standards, mutual recognition of national programs, equivalency, transparency in the establishment of the criteria, and technical assistance. According to Liu, it would be beneficial to producers and the consumers if the initiatives could be harmonized to the greatest extent possible without diminishing the probability of reaching the environmental objectives or the capacity of the producers in distinct nations to compete on equitable terms in the international market. *Id.*

Association of Southeast Asian Nations (ASEAN), launched a complaint before GATT alleging that the Austrian law was inconsistent with the provisions of this trade agreement. Specifically, they argued that the Austrian program violated the MFN principle, demanding a label solely for the tropical wood and not for those "similar products" imported from the temperate forests. In addition to presenting the charges, ASEAN threatened to cancel \$1.8 billion dollars worth of contracts, establish an embargo against all Austrian products and exclude Austria from the International Tropical Timber Organization. In March 1993, although the case was not resolved by a GATT panel, Austria rescinded the controversial provisions. This case, according to trade experts, "leaves little doubt that sustainable forestry development, especially for tropical wood, may not be imposed unilaterally."¹⁰⁸

XI

THE DIMENSIONS OF THE MARKET FOR CERTIFIED WOOD

As previously explained, one of the advantages associated with certification is access to "green markets" which are composed of three principal groups: (1) the individual consumer, both foreign and Chilean, (2) the commercial buyers groups, and (3) the governmental clients. Notwithstanding the evidence already presented on this matter, it is argued that certification, as a market tool, will not have a major impact on the protection of the native forest for two main reasons. First, the international initiatives were inaugurated approximately three years ago, a very brief period in which to accurately determine the level of consumer interest. According to the skeptics, the supply and demand structure indicates that certified wood will have only marginal importance in the world market.¹⁰⁹ With regard to the demand, it is established that only certain market segments in particular countries have exhibited a receptive attitude toward

¹⁰⁸ FORSTBAUER & PARKER, *supra* note 38, at 178.

¹⁰⁹ Norman Boucher, *How to have your Wood and your Forest Too*, NAT'L WILDLIFE, Aug.-Sept. 1997, available at <<http://www.nwf.org/natlwild/1997/woodasf.html>> (visited Feb. 9, 2000). Despite the uncertainty related to the magnitude of the initial impact of certification, it is suggested that any contribution, however small, will still be beneficial. Lloyd Irland believes that "[e]ven if only . . . 10% of the total forest land is affected by this, [it] can't be bad." *Id.* Chip Chapman recognizes that it is "not the overall solution to our forest problems, but it's a good start." *Id.*

certified wood.¹¹⁰ Second, the effectiveness of certification in the nations with tropical forests has been questioned. Specifically, four factors tend to restrict the ability of certification to improve the Sustainable Forest Development. They include the minimal quantity of exported products, the growing importance of domestic markets, the dominance of markets in which environmental concern is minor, such as in Asian nations, and the limited political and public interest in applying the system.¹¹¹

XII

INTERNATIONAL TRADE IS NOT THE "REAL" CAUSE OF THE DEFORESTATION

It is argued that, due to its character as a market instrument, certification is incapable of solving the true causes of the destruction of the native forests. There is a broad consensus that numerous factors jointly contribute to the deterioration of the forests, including forest fires, local use of firewood, eradication of forests for agricultural purposes, and urban expansion and poverty.¹¹² In the case of Chile, one of the principal factors is forest fires since, according to studies performed by CONAF, "all of the forest fires in Chile are provoked by man, consciously or unconsciously, for which it is imperative to create a preventative culture."¹¹³

¹¹⁰ Jenn-Pierre Kiekens, *La certificación de la madera: una posición crítica*, 46 UNASYLVA 27 (1995).

¹¹¹ Jean-Pierre Kiekens, *Eco-Certificación: tendencias internacionales e implicaciones forestales y comerciales*, ENVIRONMENTAL STRATEGIES EUROPE (ESE) (1997). The author argues that it is unrealistic to expect eco-certification to significantly influence forest practices given the increasing importance of the domestic markets within the tropical countries and the supremacy of the consumer markets that are not interested in certified wood, facts that would considerably limit the potential contribution of this instrument. The author argues, moreover, that none of these regions (Asia, Latin America and Africa) depends significantly on consumer markets that are in a position to exercise a sizable demand for the certified wood. *Id.*

¹¹² Maricel Sequeria, *Certifying Sustainably Managed Forests*, INTER PRESS SERVICE, Dec. 9, 1997. The author indicates that the basic causes of the massive eradication of native forests are poverty, pressure from the populations that continually extend themselves into the rural zones, and the natural inequalities in the worldwide economic order that place the developing countries in a disadvantaged position. *Id.*

¹¹³ Ernesto T. Lagos, *A Chile lo están quemando*, CHILE FORESTAL, Dec. 1996, at 15. In conformity with the results of the National Prevention of Forest Fires Campaign of CONAF, the causes of the fires include: Outdoor activities (3%); Children playing with fire (8.8%); Agriculture labors (11.9%); Forest labors (12.7%); Intentional fires (15.6%); Transportation (24.3%); and Unidentified (19.2%). *Id.* See

Another primary cause of the destruction of the Chilean native forests is the use of firewood by those who live in the country. Currently, it is estimated that twenty-five percent of the energy needs of the nation are satisfied with firewood, a proportion that rises significantly in the rural areas. The majority of the firewood exploitation is done without considering the multiple uses of this resource or the environmental impacts of such actions. Therefore, it is argued that "a large part of the collection of firewood is done in an unsustainable manner, which, on the local level, leads to direct deforestation and, on a national level, to the degradation of this resource."¹¹⁴ Despite the disagreement regarding the precise degree to which the country persons are responsible for the excessive use of the firewood, it is asserted that if the principal causes are attributable to factors outside of the international timber trade, the premise upon which certification is founded is notably debilitated.¹¹⁵

According to the Food and Agriculture Organization of the United Nations (FAO), there are diverse viewpoints regarding the link between timber trade and the environment. At one extreme, some argue that market pressures are a major cause of damage to forests. At the other extreme, there are those who claim that international trade of forest products has absolutely

also Herbert Haltenhoff, *Estrategia de combate o modificación conductual?*, CHILE FORESTAL, Dec. 1997, at 22. The author suggests that currently in Chile two realities prevail. On one hand, there exists a concerned reality in which public awareness is absent because 85% of the urban population does not feel an imminent or direct threat, the citizens participate by delegation because the forests "only burn on television," and there is no true comprehension of the economic, ecological or social loss associated with forest fires. On the other hand, there exists the optimistic reality in which the forest fire problem may be remedied through the growing influence of the ecological message in the adolescents and the acceptance of environmental criteria in young adults. *Id.* at 22.

¹¹⁴ Christian Callieri, *Degradación y deforestación del bosque nativo por extracción de leña*, AMBIENTE Y DESARROLLO, Mar. 1996, at 43-45.

¹¹⁵ Rodolfo M. Contreras, *Leña del Árbol Caído*, CHILE FORESTAL, Aug. 1997, at 26. According to the author, the rural inhabitants do not represent a destructive force to the native forests, thus "the causes must be sought somewhere else." *Id.* It is indicated that the eradication of the forest is imputable to the extraction for industrial purposes and to supply the residential needs in urban areas. The author argues that the consumption of firewood by the rural population has not risen in recent years "because this is contrary to all logic." *Id.* He explains, for example, that there is a progressive emigration of the rural population toward the urban centers, and furthermore, new forms of energy such as electricity and liquid gas are now accessible in the rural zones. Therefore, the author alleges that it is impossible to conclude with any degree of accuracy that the consumption of firewood by the country people has led to the destruction of native forests. *Id.*

no effect on the environment. Based on the FAO's research, the truth lies somewhere in the middle:

[t]rade is not a dominant factor in environmental problems but neither is it blameless [T]rade policies and practices do have consequences for the environment; these can be both positive and negative and can be found at all stages from the forest to the final consumer—in the forest, during processing, in the distribution of the raw material and the products, and even after consumption itself.¹¹⁶

It is clear a comprehensive model must be developed to bring these areas into consort.

A. Limited Participation of Small Businesses

Certification programs are basically oriented toward large companies which possess considerable economic, technological, and human resources. Nevertheless, in developing countries, small businesses tend to play a significant role in exports. In Chile, for instance, there are some 2,100 registered small businesses that conduct commercial operations in the exterior.¹¹⁷ However, some argue that small businesses are incapable of complying with the requirements of this new instrument for the following reasons: (i) lack of access to information, technology and capital; (ii) economies-of-scale which make such investments unprofitable; (iii) limited physical space in which the certified products may be appropriately segregated; (iv) exorbitant costs of verification, inspection, etc., are often exorbitant for small companies in relation to larger companies; and (v) inferior and over-worked managerial staff insufficient to comply with the rigid standards of certification.¹¹⁸ At first glance, according to CONAF, it would appear attractive to opt for the exclusive use of the voluntary norms such as the FSC and ISO, alleging that the market will indicate the degree of environmental protection that the clients desire, both in the products and in the processes.

¹¹⁶ I.J. Bourke, *International Trade in Forest Products and the Environment* (visited Mar. 10, 2000) <<http://www.fao.org/waicent/faoinfo/forestry/unasyva/unasyva.htm>>.

¹¹⁷ Blanco, *supra* note 32, at 188.

¹¹⁸ H.G. Baharuddin, *Timber Certification and its Economic Implications* (1996) (presented at the International Conference on Certification and Labeling of Products from Sustainably Managed Forests (Australia)) (on file with author).

However, CONAF believes that this theory is flawed because it is unlikely that the small businesses are able to enter.¹¹⁹

While it is true that in Chile there exist a large number of small businesses, these play a minimal role in terms of total exports. Specifically, although the small business sector experienced a growth of approximately 28 percent from 1993 to 1998, this group still represents *only* 4.6 percent of the total Chilean exports. In contrast, five of the largest timber companies located in Chile which constitute more than 50 percent of wood exports have already implemented, or are in the process of implementing, a timber certification program.¹²⁰ As a result, the fact that the efforts to date to introduce timber certification in the small business sector have been inadequate does not substantially alter the overall effectiveness of these programs in Chile.¹²¹

B. The Omission of "Environmental Performance" in the ISO

An additional area of concern entails the definition of environmental goals. The text of the ISO explicitly excludes the concept of "environmental performance," focusing instead on the Environmental Management Systems (EMS) which evaluate the production process in terms of relative improvement.¹²² Thus, in order that the ISO achieve an appreciable result in terms of environmental protection, it is necessary that there exist pertinent regulations that provide a precise framework upon which the EMS may be based.¹²³ In accordance with the guidelines of the

¹¹⁹ CARLOS WEBER, CRITERIOS INTERNACIONALES DE SUSTENTABILIDAD PARA EL SECTOR FORESTAL 4-5 (Corporación Nacional Forestal (CONAF) 1997).

¹²⁰ See *infra* section IV.

¹²¹ Blanco, *supra* note 32, at 189. The author warns, nonetheless, that small businesses in Chile should not ignore this topic since "it is highly probable that as the larger companies become certified, they will also make environmental demands of their providers." *Id.*

¹²² *Id.* at 185. It is clarified in the introduction of the ISO 14000 that this document does not set absolute requirements regarding environmental performance, but rather it is limited to demanding compliance with the applicable legislation, both national and international, in order to achieve continual improvement. *Id.*

¹²³ *Id.* at 185-86. The authors warn that the ISO could encounter difficulties in two particular situations. First, in the States in which the environmental legislation, especially that related to the EMS, is weak. In the second place, the ISO could see its effectiveness diminished in areas with few regulations, such as in the free trade zones, where foreign investment is promoted through the elimination of certain norms. In these cases, "the requirement of the ISO to comply with the applicable regulations would be extremely limited." *Id.*

ISO, the businesses themselves are in charge of establishing such goals, an arrangement which eliminates the possibility of an evaluation of corporate behavior based on external standards. Consequently, it is argued that various products will be granted an ecological certification that, in reality, would probably not have been approved by international environmental organizations.¹²⁴ Furthermore, the concept of EMS is difficult to explain to consumers, thereby losing a portion of its effectiveness as a market instrument. It is suggested, in particular, that the purchasers, due to a lack of time and/or patience, prefer to base their decisions on clear, uniform labels.¹²⁵

C. The Use of Wood Substitutes Which Damage the Environment

One of the negative ramifications associated with wood certification is that, as a result of elevated prices and recommendations by numerous environmental NGOs, many consumers will buy substitute products made of plastic, aluminum, etc., which are more damaging to the environment.¹²⁶ In the opinion of forest

¹²⁴ B. Cabarle & A. Ramos de Freitas, *La búsqueda de credibilidad en el ámbito de la certificación de la madera*, 46 *Unasyva* 25 (1998). Numerous experts have underlined the need to establish greater credibility, harmonization, and enforcement of the programs in order to avoid confusion. *Id.*

¹²⁵ Joe Cascio, *Conformity Assessment for EMS and EL*, ISO WORKSHOP (June 12-13, 1995) (Geneva, Switzerland). In addition to the complications in communicating the premise of the ISO, experts of this organization have detected other problems. First, the national laws differ in each country, a reason for which, despite the declarations of compliance emitted by the businesses, there still exist distinct levels of environmental protection. Secondly, due to the disparity in the application of national laws, the author explains that the ISO inspectors encounter difficulties because "in many parts of the world, compliance with environmental laws is viewed as optional," and therefore the ISO representatives "will need considerable firmness and strength of character in order to keep the system honest and effective." *Id.*

¹²⁶ I.J. Bourke, *Notes for a Presentation at the International Symposium on Eco-Profile Labeling, ISO TC-207, Type III Labeling*, (Sept. 8, 1994) (Frankfurt, Germany) (on file with author); see also Patrick Moore, *Organizaciones ambientalistas y bosques: peligrosas contradicciones*, CHILE FORESTAL, Sept. 1997, at 20-24. With the goal of reducing wood consumption, some environmentalist groups have made recommendations that, according to Moore, are "anti-environmental." *Id.* First, in order to decrease the amount of paper made from wood, NGOs have suggested paper production with cotton, wheat fibers, etc. However, due to limited space, this would require planting these crops where trees are currently cultivated. From Moore's perspective, this "makes no sense [since] the NGOs' position is completely contradictory to its stance on biodiversity." *Id.* Second, striving to lessen the use of wood as a construction material, some NGOs have advocated the use of wood substitutes such as steel, cement, and plastic. All of these require a considerable amount of energy to produce and, consequently, utilize more fossil fuels and emit

companies, the greatest environmental concern with the eco-label is not its definition, but rather the disparity in its application to a variety of materials which are used indiscriminately. It is suggested that the environmental impacts of all wood substitutes should be evaluated based on the same criteria utilized in forest management; for example, a combination of renewability, energy consumption, production of carbon particles, etc.¹²⁷ From the foresters' perspective, if the goal of certification is truly a sustainable environment, it is necessary that all products and activities are evaluated on an equal basis.¹²⁸ Other forestry companies argue that the use of more prejudicial products by consumers is unavoidable with certification as it is currently implemented, and as a result, the key is to broaden the scope of the products evaluated.¹²⁹

D. The Postponement of Necessary Legislation

Finally, on the basis of the prior affirmation that forest certification could be an effective mechanism in combination with the legislation in force, it is argued that such an initiative, although it may appear insensible, is perhaps too good. It is suggested, specifically, that timber certification could produce negative effects for the national forest policy, leading to the postponement of indispensable state actions. As the argument goes, "[i]t is inappro-

large amounts of carbon dioxide. According to Moore, this idea is inconsistent with the NGOs' position on climate change. *Id.*

¹²⁷ Hernán Cortés, *EL DEBATE FORESTAL EN CHILE* (1996) (debate at Colegio de Ingenieros Forestales A.G., Chile) (on file with author). It is estimated that when the entire extraction, manufacture, and transportation process is examined, concrete and bricks consume three times more energy than wood; steel, seventeen times more; and aluminum, seventy times more. With regard to water consumption, the substitutes utilize at least fifty percent more than wood during the productive process. These statistics, the author argues, are not banal in a world where "all of the petroleum and electric energy have greater environmental and economic costs each day." *Id.*

¹²⁸ *La sustentabilidad va más allá de la madera*, CORMA, Oct. 1997, at 48.

¹²⁹ Wink Sutton, *Una posible estrategia en la certificación forestal*, LIGNUM, Dec. 1996, at 33. The author suggests that the appropriate solution would be to force the cement, metal, and plastic producers to submit themselves to a similar evaluation. In this manner, these industries will be obligated to demonstrate that their products are also derived from a sustainable and environmentally responsible source. Such an expansion of the analysis is necessary because, according to the author, "when it involves a non-wood product, an organization like the FSC is totally irrelevant—its process is only applicable to the forest sector. Consequently, we need to have an environmental certification process that is applicable to all products: wood, metals, cement, plastic, etc." *Id.*

appropriate to adopt voluntary instruments in many countries, particularly those which are non-industrialized, when this could cause the governments to postpone and possibly to completely forget about regulating the forestry sector, which is totally necessary.”¹³⁰

XIII

REASONS WHY FOREST CERTIFICATION WILL FUNCTION IN CHILE

The use of wood certification programs may play a significant role in diminishing both the direct and indirect effects of commercial exploitation of the native forests. For instance, in a nation like Chile in which it is arguable that neither the international accords concerning Sustainable Forest Development nor the pertinent national legislation has managed to adequately confront the situation, the introduction of a certification program as an additional complementary measure appears viable and perhaps necessary for various reasons.¹³¹

A. Chilean Timber Companies Have Already Initiated the Certification Process

It is presumed that such an initiative would be welcomed in the forestry sector without resistance given that various companies already recognize the importance of environmental management.¹³² The transcendence of environmental factors in modern business is observable in both Chilean companies and multinational enterprises that operate in the country.¹³³ In addition to

¹³⁰ J.P. Kiekens, *La certificación de la madera: una posición crítica*, 46 UNASYLVA 28 (1995).

¹³¹ Mary Kalin, *Recomendaciones ecológicas para el proyecto forestal Río Cóndor*, AMBIENTE Y DESARROLLO, Dec. 1995, at 78. Despite the relevant legislation, the author affirms that the majority of the Chilean forests have been burned, selectively cut, completely destroyed, or substituted by extensive commercial plantations of exotic species. There exists in Chile, therefore, “a growing and justified concern . . . for the future of the native forests.” *Id.*

¹³² Blanco, *supra* note 32, at 193. The first company to be granted the ISO certification was the Grupo Santa Fe whose principal motivations for implementing this certification included: market pressures; the necessity to establish uniform guidelines to publicly demonstrate environmental accomplishments; the interest in reducing production costs; and the consolidation of the organization in environmental terms. *Id.*

¹³³ Charles W. Thurston, *Chile's Industry Poised For Growth*, J. COM., Oct. 30, 1995, at 14A. The author indicates that one factor which could mitigate the environmental debate over the use of the native forests is the willingness of the timber

such recognition, as a result of having exported its forestry products to diverse foreign markets during an extended period, Chilean businesses are already "capable of adapting to situations, to distinct environmental requirements."¹³⁴ It is argued that the Chilean forest industry understands that in the present situation, environmental management constitutes a corporate priority and, therefore, corporate Chile has taken substantial measures to exhibit its ecological awareness.¹³⁵

1. *Forestal Mininco*

Motivated by both the global tendency demonstrated at the Earth Summit and the new eco-clients, the Chilean company, Forestal Mininco, recently introduced an environmental protection program. The first step consisted of creating the Environmental Management Department, which immediately defined the corporate environmental policy. Simultaneously, Mininco publicly declared that it would "respect the environmental legislation and conserve the natural resources, for which it was necessary to take preventative measures."¹³⁶ Furthermore, they published a brochure for the community as well as a manual of better forestry practices for its personnel. In order to evaluate the progress generated by these measures, Mininco created an internal environmental auditing commission which, among other things, performs periodic inspections in each major division of the company.¹³⁷

companies to implement certification. Forestal Trillium, a multinational operation, has already expressed its interest in applying the eco-label since arriving in Chile in 1992. *Id.*

¹³⁴ Leonel Sierralta, *Los impactos del comercio internacional sobre el medio ambiente y la economía en Chile: una visión desde el sector forestal*, CHILE ANTE EL NAFTA Y OTROS ACUERDOS COMERCIALES: UNA PERSPECTIVA AMBIENTAL 167 (1995). As an example of the adaptability of the forest companies in Chile, the author mentions that in the paper and pulp industry, hundreds of petitions regarding the environmental quality of Chilean exports to Europe are received monthly. According to the author, "the industry always adjusts itself." *Id.*

¹³⁵ Malman, *supra* note 30, at 45. In addition to the forestry companies, in Chile, many small and medium-sized businesses have perceived the need to adopt systems like the ISO. The author claims, specifically, that the growing environmental consciousness of the public has generated pressure for all the Chilean businesses to improve their environmental performance, "regardless of their size." *Id.* The government, for its part, has created an assistance program for the smaller businesses which is designed to facilitate the implementation of ecological initiatives such as the ISO and FSC. *Id.*

¹³⁶ *Gestión ambiental en empresas: una inversión necesaria*, LIGNUM, June 1997, at 27.

¹³⁷ *Id.* at 28.

2. *Forestal Bio-Bio*

This company underwent an audit in 1997 which detected certain weaknesses regarding the design of roads for forestry projects and certain extraction methods. Consequently, they constructed several permanent gutter systems and restricted the wood transport on unpaved roads during the rainy season, which had an impact on the structure and costs of the projects.¹³⁸ For 1998, Forestal Bio-Bio has announced that it will analyze the possibility of timber certification and of formal installation of an Environmental Management System.

3. *Forestal Millalemu*

As a result of a study done in 1995 which evaluated industry compliance with the forestry legislation in force, Forestal Millalemu became aware of the need to implement an Environmental Management System and to increase the frequency and depth of environmental auditing. Pondering these conclusions, the directors of Forestal Millalemu decided to introduce a plan entitled "Ecoeficiencia" and adopted the ISO.¹³⁹ Based on the manifestations of Pedro Infante, the director of the Ecoeficiencia group, they opted for the use of ISO "not due to pressure, but rather willingly since the company is interested in the possibility of gaining access to other international markets."¹⁴⁰

4. *Forestal Agrícola y Monteáguila*

Environmental efforts began in this company in 1990 with the publication of its "Environmental Guidelines for Forestry Principles." Two years later, the business proposed the goal of converting itself into a model which others desire to emulate; implementing measures such as the mass distribution of ecologi-

¹³⁸ *Id.* According to the director of Forestal Bio-Bio, Alvaro Aguirre, the cited modifications generated an average cost of \$.40 per cubic meter. *Id.*

¹³⁹ *Una preocupación forestal*, LIGNUM, Feb. 1997, at 14. This plan comprehends various stages such as the internalization of the eco-efficiency policy, incorporation of adequate techniques to minimize the alterations to the environment in each working condition, improvement of the quality of human resources in terms of ecological awareness, and assurance of a higher level of compliance with the legislation in effect. According to the director of the company, the actions taken constitute "an evident expression of the principles of sustainable development, a vision that involves economic competitiveness, ecological efficiency . . . employment security and social commitment." *Id.*

¹⁴⁰ *Gestión ambiental en empresas: una inversión necesaria*, LIGNUM, June 1997, at 29.

cal bulletins and contracting a study over the legal aspects of forestry and certification. According to the environmental superintendent of the company, these steps produced an evolution "beginning with the concept of avoiding unnecessary environmental damage and arriving at sustainable development."¹⁴¹ In 1994, the company elected to become certified with ISO, a step which gave them the opportunity to enter into environmentally sensitive markets.¹⁴²

5. *Forestal Chile S.A.*

As with the prior businesses, Forestal Chile orients its policies toward sustainable management of the forests, taking "the appropriate protection and conservation measures . . . in such a way as not to jeopardize the expectations of future generations."¹⁴³ Moreover, the company published a manual entitled "Norms of Better Forest Practices" with which it hopes to assure a reasonable use of these natural resources. In order to accomplish this goal, every member of the business participates in environmental activities since each person is responsible "directly or indirectly for the utilization of the natural resources through his/her decisions and actions."¹⁴⁴

In addition to the forestry companies that are already participating, on the basis of a 1998 Chilean study, others have manifested their interest in incorporating the concept of wood certification.¹⁴⁵ As with the companies which are by now involved in the process, the cited companies are highly aware of

¹⁴¹ *Id.* at 30.

¹⁴² *Desarrollo de buena fe*, CHILE FORESTAL, Aug. 1997, at 41. Notwithstanding the costs associated with the initial implementation of wood certification, the author indicates that the results are positive since affiliation with the ISO permits a company to "consolidate [and] strengthen its position in the market, especially those which are environmentally sensitive." *Id.*

¹⁴³ *Una preocupación forestal*, *supra* note 139, at 16.

¹⁴⁴ *Id.*

¹⁴⁵ OTERO, *supra* note 35. On the grounds of the study conducted in Chile in 1998 by WWF, the following businesses have expressed a certain degree of interest in implementing wood certification: (a) SOSUR: it has an interest in presenting the image of a business concerned about the environment; (b) Proyecto Boise Cascada: the directors of the company exhibit an interest in developing the illusion of corporate ecological concern, although they presently do not possess details regarding the certification process; (c) Maderas C6ndor: this company has announced its interest, yet not an urgency, in introducing timber certification; (d) Maderas Aysen: this business affirmed its high level of interest in this issue since, as primarily exporters of wood, they understand how certification can personally affect them; (e) Proyecto Bosque Modelo de Chilo6: this company presents an appreciable interest in wood

the importance that certification is likely to acquire in the near future.¹⁴⁶

B. The Chilean Government Is Willing to Take Environmental Measures

In spite of recurrent criticisms, as a result of formidable pressure both internationally and within the nation, the Chilean government has recently shown its willingness to take drastic measures to protect certain aspects of the environment.¹⁴⁷ With regard to the native forests, this governmental will is reflected in the certification project recently initiated by the National Forest Institute (INFOR).¹⁴⁸ According to this organization, the objective of the program is to create the level of technical and professional capacity necessary to facilitate the unrestricted access of the Chilean forest sector to the global timber products market. To reach this goal, INFOR is in the process of establishing a national certification procedure that would guarantee the consumers "that the products which they acquire and utilize originate in

certification due to, "on one hand, its international contacts and, on the other hand, the need to implement forestry projects with small producers." *Id.*

¹⁴⁶ Jorge Gayoso, *Un procedimiento de certificación para Chile*, CHILE FORESTAL, May 1997, at 39. According to Gayoso, the forestry companies recognize that environmental management is presently among the highest corporate priorities. This, he explains, is the result of "the need to maintain and expand their presence in those markets which are more exigent each day. Furthermore, they understand the benefit of spreading the message that their forests are managed . . . to contribute to the well-being of the present and future generations." *Id.*

¹⁴⁷ See, e.g., *Crearán plan público para descontaminar*, EL MERCURIO, June 1, 1998, at A1; *Impacto en bienes básicos tendría impuesto a bencina*, EL MERCURIO, June 4, 1998, at A1; *CONAMA refuta ilegalidad del nuevo plan de descontaminación*, EL MERCURIO, May 20, 1998, at C2; *Frontal acción legislativa contra esmog*, EL MERCURIO, May 21, 1998, at A1; *Rigen nuevas normas para descontaminar*, EL MERCURIO, June 7, 1998, at A1; *Definen acciones contra la polución*, *El Mercurio*, June 6, 1998, at C1. As corroborated in the cited articles, the government has recently introduced various plans in an attempt to protect the environment and, in particular, to diminish acoustic and air pollution. See also Sergio Gómez Núñez, *La ley sobre bases generales del medio ambiente*, REVISTA DE DERECHO, 1993, at 105 (Universidad Católica del Norte, Sede Coquimbo (Chile)). Although this opinion has been commonly refuted, Núñez suggests that the government is completely committed to protecting the environment since Chile, as a producer and exporter of raw materials, cannot maintain itself on the margin of this international trend. The author states, in particular, that "the government has shown a receptive attitude toward the environmental requirements and standards of the more developed countries and has sought to transform them into national regulations." *Id.*

¹⁴⁸ Alfredo Unda, *Alcance de los sistemas de certificación forestal y marco de referencia*, Forestry Sciences Department, Austral University of Chile, Nov. 29, 1997.

commercial forests under sustainable management and compatible with the conservation of the environment."¹⁴⁹

C. *The FSC Is Already Attempting to Introduce a Certification Program in Chile*

In addition to the efforts on behalf of the State, the Comité Nacional Pro Defensa de la Fauna y Flora (CODEFF) is attempting to establish a certification program in the private sector. According to this plan, CODEFF became the first affiliate of the FSC in Chile and presently a Work Group is being formed whose principal function is to dictate the standards which will serve "as a point of reference for forest landowners in implementing certification."¹⁵⁰ In precise terms, the program intends to establish a preliminary set of guidelines which subsequently will be tested under practical conditions in demonstrative units, thereby verifying their applicability in the regional and local contexts.¹⁵¹ These standards, according to the official itinerary, will be elaborated by the year 2000.¹⁵² Along with CODEFF's attempt to apply the FSC criteria, another international forest certifier, Smartwood, has established its presence in Chile. This second group, like CODEFF, intends to introduce forest certification as soon as possible given the favorable conditions that currently prevail in the country.¹⁵³

¹⁴⁹ Instituto Forestal, *Diseño de un procedimiento para la certificación del manejo forestal: regiones octava, décima y duodécima*, CHILE, Mar. 2, 1998. The authors indicate that, in Chile, there needs to be improvement in two principal areas: the minimization of environmental impacts and the evaluation of the forest Management Plans. Therefore, INFOR is attempting to create a national environmental label that would apply only to the forestry sector. The State scheme, however, would not be obligatory because the businesses would be free to choose between the distinct systems available the system which is most congruent with their interests. The estimated duration of the project is approximately 2.5 years and the specific objective, according to INFOR, is "to assure that the Chilean products are able to penetrate the international markets by complying with the requirement of sustainable forest management, thereby avoiding the loss of market-share." *Id.*

¹⁵⁰ CODEFF, *Iniciativas Internacionales*, Apr. 1998, at 4. It is hoped that this national initiative of the FSC will be inaugurated by the year 2000.

¹⁵¹ Hernández, *supra* note 16, at 23-24.

¹⁵² Franz Arnold, *Poderosa variable de mercado*, CHILE FORESTAL, June 1998, at 42. Arnold indicates that the growing environmental demands in the markets make it imperative that the Chilean businesses utilize certification. Therefore, it is hoped that the national FSC program will be capable of generating a framework of national certification standards within a two-year period. *Id.*

¹⁵³ *Smartwood en Chile: con licencia para certificar*, CHILE FORESTAL, June 1998, at 52-54. In the opinion of the directors of Smartwood, "the forestry sector of Chile has the capability to respond, the resources are productive and significant, and there

D. Certification Will Supplement the Existing Chilean Environmental Legislation

As a supplementary tool, a certification program tends to be easily incorporated in those countries where difficulties with the application of the national laws in particular sectors exist. As explained previously, in the case of Chile, the present legislation related to the protection of the native forests is inadequate. Thus, forest certification could play a transcendent role, especially while the national legal situation is being clarified.¹⁵⁴

E. There Is Public Support to Protect the Native Forests

In Chile, there exists a willingness to protect natural resources, an essential element for the successful implementation of a certification program.¹⁵⁵ Such a generalized disposition to protect, among other things, the native forests, has been demonstrated in three ways: (1) public surveys, (2) the participation in important environmental events such as Trillium's Río Cónдор project, and (3) the attempt to introduce a certification program in Chile for various years.

exists an interest on the international level for certified products from Chile. These conditions are very positive. Now, taking advantage of them is all that remains to be done." *Id.*

¹⁵⁴ See, e.g., CODEFF, *Urgen Políticas Para El Manijo Sustentable Del Bosque Nativa*, BOSQUES TEMPLADOS, Jan. 1998, at 2. On the basis of the National Survey of the Native Resources of Chile completed in 1997 by CONAF, the native forests are still submitted to destructive processes throughout the country, except in extremely inaccessible zones. While the plantations have experienced significant economic success thanks to the incentives included in Decree Law 701 of 1974, the native forests are deteriorating rapidly, a situation from which surges "the clear and urgent need to make more agile the legislative process in order to promulgate an adequate law as quickly as possible." *Id.* The authors argue that even though the cited law supposedly requires the responsible management and conservation of the native forest prior to substituting it, as a result of the highly flexible interpretation of these norms by the Chilean courts, there are many "partial and arbitrary applications [of the law] that are contradictory to the principal idea of restricting substitution." *Id.*

¹⁵⁵ Delmastro, *supra* note 8, at 30. According to Delmastro, notwithstanding all of the reasons for which the certification is viable in Chile, it is known that the successful functioning of such a program will require an effort by *all* of the Chilean society. In other words, "certifying the wood products implies arriving at the deepest roots of the forestry sector, including an adequate policy and legislation . . . a solid scientific base . . . and a national consensus regarding the principles that must reign with respect to the sustainable management of natural resources." *Id.*

1. *Public Surveys*

On the basis of various surveys performed in Chile during the last few years, environmental protection constitutes an issue of public concern. Specifically, in spite of recent governmental efforts to improve the protection in this area, surveys reveal certain general characteristics which are prevalent in the nation. First, since the reduction of air pollution in Santiago and the protection of natural resources (i.e., minerals and forests) occupy the top ranks in these polls, the high priority given to environmental issues is apparent.¹⁵⁶ Secondly, a strong concern for the seriousness of the environmental problems and a sense of urgency to solve them have also been noted. Moreover, a frustration regarding current environmental management is detected in three distinct actors: the population, the politicians, and the business sector.¹⁵⁷

2. *A Previous Program: "The Chilean Seal of Environmental Recognition"*

Even though the idea of introducing the concept of certification in the forestry sector is considered innovative, there have been prior national efforts that enjoyed considerable support. In 1992, for instance, a program entitled the Chilean Seal of Environmental Recognition, whose goal was to convert "the act of purchasing into a tool to defend the health of the planet," was presented.¹⁵⁸ In spite of the fact that the program never man-

¹⁵⁶ Sofía Torey, *La participación ciudadana en la evaluación de impactos ambientales*, AMBIENTE Y DESARROLLO, Mar. 1996, at 11-12. Unlike the results obtained in this survey, in the Scientific Encounter Over the Environment held in August 1995, it was suggested that there was a lack of environmental awareness in Chile at that time for two reasons. First, the environment was a fairly new topic in the public agenda and its presence in the press and in the political debate was still weak and sporadic. Secondly, the lack of ecological consciousness was attributable to the helplessness that the citizens perceived before political decisions, that is, "the common person did not believe that his/her actions would have an influence in governmental determinations." *Id.*

¹⁵⁷ *Reveló encuesta de CERC: insatisfacción ambiental*, CHILE FORESTAL, June 1996, at 12. On the basis of this survey performed by the Center of Studies of the Contemporary Reality, more than 67 percent of the total population of Chile think there is a "profound negative perception among the population about the management of environmental problems in Chile." *Id.*

¹⁵⁸ INSTITUTO CHILENO DE RECONOCIMIENTO AMBIENTAL, EL SELLO CHILENO DE RECONOCIMIENTO AMBIENTAL, 3 (Chile. 1992). Despite the fact that this initiative was never formally introduced for diverse reasons, the possibility of environmental certification grabbed the interest of the Chilean public. As proof of such

aged to officially function for multiple reasons, this does not undermine the high level of interest exhibited by the public in protecting the environment.¹⁵⁹

F. Chile Intends To Integrate Itself in World Trade

Being a nation anxious to incorporate itself at continually higher levels in the global market, Chile is acutely aware of the certification trends in various fields. The use of eco-labels, and the notable influence of these in the markets of the industrialized nations, has spread to a wide variety of products.¹⁶⁰ The fact that in the advanced countries the economy is oriented toward ecological criteria requires that the developing nations also take measures to adopt similar practices, a pressure that will manifest itself in international commercial relations.¹⁶¹ In other words, conscious of the ecological tendencies at a global level, various

interest, the authors cite the fact that the first seminar for the program was attended by 44 governmental representatives, 88 business persons, 17 investigators, 28 ecologists and 14 consumers. *Id.*

¹⁵⁹ ECONOMIC COMMISSION OF THE UNITED NATIONS FOR LATIN AMERICA AND THE CARIBBEAN (CEPAL), *EL SELLO DE RECONOCIMIENTO AMBIENTAL EN CHILE* vi-vii (June 1993). During the seminar, several speakers warned that in Chile, due to national consumption habits, a certification program may not have a sizable impact. There existed "a suspicion that [the Chilean] society, too characterized by a pattern of consumption which favors the superfluous, is not compatible with the idea of sustainable environmental development. The protection of the environment requires profound changes in lifestyles and in consumption models. Lamentably, in Chile, foolish products tend to . . . hypnotize the consumer." *Id.*

¹⁶⁰ See, e.g., J. HILOWITZ, *LABELING CHILD LABOR PRODUCTS: SIX LABELING INITIATIVES THAT TARGET CHILD LABOR*, (International Labor Organization (ILO)) (1997) (a certification program named "Rugmark" that is dedicated to monitoring the production of hand-sewn rugs in India and Pakistan has been introduced); Maggie Jackson, *Reebok to Label Soccer Balls Made Without Child Labor*, ASSOCIATED PRESS, Nov. 19, 1996 (with the goal of eradicating child labor in the sports equipment industry, various companies have voluntarily placed labels on their products); *The Foulball Campaign*, THIRD WORLD TRAVELER, Dec. 10, 1997 (exploitation of children in the fabrication of footballs is avoided thanks in large part to the collaboration of the Federation of International Football Associations (FIFA)).

¹⁶¹ IMME SCHOLZ, *REQUERIMIENTOS AMBIENTALES A PRODUCTOS DE CONSUMO EN ALEMANIA Y SUS EFECTOS SOBRE LAS EXPORTACIONES DE LOS PAÍSES EN DESARROLLO III* (Instituto Alemán de Desarrollo 1993). Scholz suggests that this pressure can be perceived in four commercial aspects which would entail challenges for developing countries: (1) the application of high environmental standards to imported products and the broadening of ecological requirements will complicate market access in many areas, (2) the discrepancies between the levels of environmental protection in distinct countries will create competitive disadvantages for the affected industries which, in turn, will be obligated to increase their production expenses, (3) the environmental measures will constitute part of future international accords of relevance, and (4) ecological modernization will contribute to promoting the devel-

sectors of the Chilean economy will be obligated to incorporate diverse environmental measures in order to maintain their presence in foreign markets.¹⁶² With regard to the forestry sector, on the basis of recent trade patterns, it is suggested that wood certification, in effect, may be transformed into a prerequisite to maintain access and/or a leadership position in world markets.¹⁶³ According to one national expert in Chile, certification is a high priority issue from various perspectives: "Globally, [certification] is related to maintaining the image of a forestry nation that Chile has earned in worldwide commerce, [thus] it is inconsistent to visualize future forestry development dissociated from certification, despite the voluntary character of this mechanism."¹⁶⁴ Although in certain countries certification may not have a substantial effect, because the amount of wood in the international markets is minimal, the Chilean case is distinct for various reasons.¹⁶⁵ First, it is calculated that approximately seventy-five per-

opment of new technologies that make environmental protection and productive processes compatible. *Id.*

¹⁶² Ian Malcolm Scott, *El eco-etiquetado*, EUROCHILE, May 1997, at 15. Scott argues that many believe that it is impossible to introduce a certification program in Chile due to, among other things, the socio-economic characteristics of the population. However, claims Scott, instead of considering the cost of implementing a national certification scheme or adhering to a pre-established international plan, Chile should think of the cost that *not* participating would have for the country, especially in the forest sector. It is maintained that "although a large part of the Chilean wood exports are based on renewable sources, in the foreign markets there exists a negative image of the Chilean forest products. Articles about the exploitation of Lenga and other species in southern Chile have discouraged potential importers." *Id.*

¹⁶³ Schmidt, *supra* note 77, at 1. Schmidt indicates that the most advanced proposals in this sector involve seals of environmental quality which would guarantee the consumer that the product was derived from an area of sustainable exploitation. Although until now precise measures have been few and the trade of natural forest products appears to prosper without considerable obstacles, "the governments will find themselves obligated to take measures soon, pressured by the seriousness of the problem and by the political importance given to this issue by the public." Schmidt, *supra* note 77, at 1. See also OTERO, *supra* note 35. According to Otero, wood certification is "a growing global process which Chile may not ignore if it wants to have a leadership role among timber producers in the southern hemisphere." OTERO, *supra* note 35, at 1.

¹⁶⁴ Leal, *supra* note 22, at 19.

¹⁶⁵ Kiekens, *supra* note 82. It is estimated that only 18 percent of the total wood harvested enters international commerce where ecological certification could possibly achieve the desired results. Tropical wood, for its part, is used almost exclusively within the country of origin for heating and cooking purposes. Thus, several authors have sustained that the problem of the destruction of native forests "constitutes an issue outside the scope of international trade." Kiekens, *supra* note 82.

cent of Chilean wood production is exported.¹⁶⁶ Second, two of Chile's top export markets, Europe and the United States, have relatively high environmental standards for wood products.¹⁶⁷ In addition, with the recent signing of the Chile-Canada Free Trade Agreement, more Chilean wood products will be sold in Canada, another country known for its strict environmental regulations.¹⁶⁸ Finally, certification will be effective in protecting the native forests because in the near future Chile will be forced to increase the amount of natural forest products in the world market.¹⁶⁹ According to the predictions of one expert, "Chile's future as a maker of forest products will depend on its ability to increase the range and sophistication of its exports."¹⁷⁰

CONCLUSION

The Chilean Natural Resources and Environment Commission describes well what is necessary for the certification program to work:

¹⁶⁶ Imme Scholz, Instituto Alemán de Desarrollo (IAD), Medio ambiente y competitividad: el caso del sector exportador chileno 2 (1994). Scholz contends that the existing and emerging environmental requirements for both products and processes around the world have generated a pressure on Chile to adjust. This hypothesis, explains Scholz, is based on three principal suppositions: (1) environmental exigencies will continue to increase in conformity with the pattern established during the last five years, (2) Chile will maintain its tendency to export, and (3) the consumer, upon choosing products, will be increasingly influenced by environmental criteria as opposed to evaluating solely price and quality. *Id.*

¹⁶⁷ Ricardo Merino, *Balance de exportaciones forestales en 1997: crece el valor agregado*, CHILE FORESTAL, Apr. 1998, at 42-45. Although Japan still represents Chile's largest export market receiving 20% of the total wood products, the United States and Europe are near equivalents, annually purchasing 18% and 19% respectively. Moreover, as a result of the recent Asian economic crisis, the Chilean forest sector predicts that a sizable amount of products will be redirected to the American, Canadian and European markets which will undoubtedly exercise increased environmental pressure over the Chilean producers. *Id.*

¹⁶⁸ *Canada to Negotiate Pact with Chile to Ease NAFTA Accession*, BNA INTERNATIONAL TRADE DAILY, Jan. 4, 1996.

¹⁶⁹ Roger Clapp, *Creating Competitive Advantage: Forest Policy as Industrial Policy in Chile*, ECON. GEOGRAPHY, July 1995, at 273. Clapp explains that plantation forestry is not a "rarefied art" since the species are well-known and the cultivation techniques are straightforward. Due to the fact that the Chilean government started investing in plantations decades ago, this country has traditionally enjoyed an advantage in international markets. Nevertheless, "[t]he advantages of timing are transitory and future exporters of raw lumber may [face] many low-cost competitors . . . because the technology of plantation forestry is so easily adopted." *Id.* As a result, Clapp argues that Chile will soon be forced to diversify, thereby increasing the amount of products from the native forests which are exported. *Id.*

¹⁷⁰ *Id.*

If the political parties, civil and business organizations, and universities do not seriously incorporate the environmental dimension . . . and coordinate themselves to do so efficiently; if the State does not continue to generate policies, legislation and institutions; if legitimate and efficient mechanisms of dispute resolution are not soon developed; if the society in its totality does not establish realistic avenues of participation; [then] each decision made regarding development projects, policies or programs will cause a disorienting conflict that will waste the best energies of the State and societal leaders in a permanent green war.¹⁷¹

This quote makes it clear that the need to improve environmental management in Chile is urgent, particularly management concerning the protection of native forests. Although the exact statistics are debatable, it is undeniable that, due to a combination of factors, the natural forests in Chile have been, and continue to be, destroyed and replaced at an alarming rate. Notwithstanding the short-term economic benefits, such eradication will cause multiple negative ramifications to the environment. In order to mitigate this ecological damage, Chile has allegedly attempted to introduce Sustainable Forest Development (SFD), a concept that strives to assure a rational utilization of the forests. SFD takes into account three components simultaneously: economy, society, and environment.¹⁷² At both the national and international level there appears to exist a consensus that, as a result of the mass destruction of the natural forests which is presently occurring, the implementation of SFD is imperative.

¹⁷¹ COMISIÓN DE RECURSOS NATURALES Y MEDIO AMBIENTE, DESAFÍOS A LA INSTITUCIONALIDAD Y A LAS POLÍTICAS AMBIENTALES 36-37 (1997).

¹⁷² Enrique Pérez Silva, *Bases constitucionales del derecho del medio ambiente*, REVISTA DEL ABOGADO, Nov. 1996, at 30. In this article, the concept of sustainable development is defined as "a process designed to satisfy both the present and future needs of society [which was] founded on the principles of equity, conservation and protection of the environment. In other words, it deals with protecting not only the well-being of the present generations, but also the future ones . . . by leaving a stock of aggregated capital (productive, human and natural)." *Id.* See also Jorge Valenzuela, *Bosques: hacia dónde va el debate?*, DIPLOMACIA, Jan./Mar. 1998, at 18. Based on the results of the application of the environmental obligations assumed by Chile in recent years, the validity of the governmental desire to implement SFD, especially relating to the native forests, is seriously questionable. However, Chilean diplomatic leaders continue to publicly support their forest policy: "Chile is in the process of creating a rich and extensive forest legislation principally designed to protect the forests from indiscriminate cutting and to promote sustainable management, since the forests are one of the main sources of revenue for our country." *Id.*

According to numerous experts, the ideal solution would be the introduction of a legally-binding international convention since, just as in the case of Chile, national initiatives around the globe have not managed to significantly detain the destruction of the native forests.¹⁷³ The formation of an accord of this nature, however, appears improbable in the near future due to diverse factors, including: the weaknesses associated with the implementation of an instrument of public international law,¹⁷⁴ the fear of interfering with the efforts which have already been initiated,¹⁷⁵

¹⁷³ INTER-AMERICAN DEVELOPMENT BANK LATIN AMERICAN AND CARIBBEAN COMMISSION ON DEVELOPMENT AND ENVIRONMENT, *OUR OWN AGENDA*, 81-87 (1992). This text suggests that the implementation of an international accord would not only alleviate tensions that have become unbearable, but it would also facilitate a new era of global prosperity. Therefore, it is argued that there is no time to waste and that it is imperative to adopt multinational agreements in an attempt to resolve certain environmental situations, like deforestation, that have become uncontrollable. *Id.* See also Elliot B. Staffin, *Trade Barrier or Trade Boon? A Critical Evaluation of Environmental Labeling and Its Role in the "Greening" of World Trade*, 21 COLUM. J. ENVTL. L. 205, 272-73 (1996). In the opinion of Staffin, due to the limitations of ecological certification, in the long run deforestation may only be effectively solved within the framework of an international treaty. See also Paul Stanton Kibel, *Reconstructing the Marketplace: The International Timber Trade and Forest Production*, 5 N.Y.U. ENVTL. L.J. 735 (1996). Kibel argues that an international instrument is required, albeit a treaty or a type of Forest GATT. According to the latter theory, the existing multilateral commercial instruments may be modified in order to create effective impediments to the destruction of the native forests, explicitly authorizing the following: (i) national and international incentives to increase the competitiveness of wood substitutes; (ii) restrictions on forest exploitation; (iii) promotion of forest certification; (iv) regional and national regulations which are more rigid than those on the international level; and (v) requirements that wood products must include a certain percentage of recycled components. *Id.*

¹⁷⁴ Naomi Roht-Arriaza, *Shifting the Point of Regulation: The International Organization for Standardization and Global Lawmaking on Trade and the Environment*, 22 *ECOLOGY L.Q.* 479, 481-85 (1995). According to Roht-Arriaza, the public international law system is often characterized by prolonged delays in negotiations, weak substantive obligations, inadequate enforcement, economic pledges that never materialize and ineffective sanctions, even when the violations of the accord are flagrant. It is mentioned, furthermore, that an international treaty requires that the signatory States promulgate national norms to comply with the acquired obligations. However, explains the author, even supposing that the political will to implement such a treaty exists, a lack of economic resources, appropriately trained personnel and/or limited administrative capabilities tend to thwart the functioning of the instrument. As a result, it is argued that the use of public international law is an "anachronism." *Id.*

¹⁷⁵ Steve Swanson, *Forest Treaty Out On A Limb at Earth Summit*, CHICAGO TRIBUNE, June 26, 1997. The United States, Brazil, and Australia are opposed to an international forest treaty since, according to these nations, additional negotiations would only serve to impede the efforts to eliminate destructive forestry practices that are already under way. *Id.* See also, Cheryl Hogue, *Environmentalists Working to Stop Creation of Global Treaty on Forests*, BNA NATIONAL ENVTL. DAILY, Feb.

the breadth of the topic of the protection of native forests,¹⁷⁶ and the unwillingness of many developing countries to obligate themselves.¹⁷⁷ As a result of the ineffectiveness of the mechanisms introduced until now, the improbability of the promulgation of a legally-binding international forest convention in the near future, and the urgency of the problem of the destruction of the native forests, the implementation of a timber certification program in Chile constitutes a pragmatic, albeit perhaps second-best, solution. As with all measures, forest certification has certain limitations. However, in view of the prevailing circumstances in the present, particularly the weaknesses detected in the Chilean national legislation, certification represents an appropriate instrument to counteract the massive eradication of the natural forests.

3, 1997; *Reject Idea of Global Forest Convention, Environmentalists Tell World Governments*, BNA NATIONAL ENVTL. DAILY, Feb. 11, 1997. In these articles, three arguments are made against the implementation of an international accord of this type: (1) that the countries would attempt to exploit the forests as rapidly as possible before such a global accord with rigid rules is dictated; (2) that an international treaty would lead to the use of "the lowest common denominator," and (3) that a treaty would interfere with the forest certification efforts which have already been initiated on the national, regional and international level. *Id.*

¹⁷⁶ Neil Byron, *The Advantages and Disadvantages of a Legally-Binding Global Forest Convention*, EUROPEAN FOREST INSTITUTE NEWS, Aug. 1997. It is argued that the protection of native forests concerns numerous topics such as human rights, the environment, international trade, etc. Thus, in the opinion of Byron, it is not recommendable to negotiate just one treaty which would incorporate all of the diverse topics simultaneously. *Id.*

¹⁷⁷ Ibrahim F. Shihata, *Implementation, Enforcement, and Compliance with International Environmental Agreements—Practical Suggestions in the Light of the World Bank's Experience*, 9 GEO. INT'L ENVTL. L. REV. 37, 40-41 (1996). See also Matthew B. Royer, *Halting Neotropical Deforestation: Do the Forest Principles Have What It Takes?*, 6 DUKE ENVTL. L. & POL'Y F. 105, 106 (1996). The developing countries (the "South") do not agree with the advanced nations (the "North") regarding the exploitation of native forests. According to Shihata and Royer, the South views with notable suspicion internationalization of forestry issues by the North for several reasons. First, the South is committed to development, and a forest treaty would appear to undermine certain models of economic and industrial progress. Second, after having had their forest resources exploited by the North during the colonial period, the South considers the current interest of the North in protecting the ecology merely another form of exploitation. Finally, the South judges the North's concern for environmental protection as hypocritical since, after having exploited and damaged its own environment in the name of progress for decades, now the North attempts to characterize the South as a particularly culpable environmental villain.