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Green Markets
Often a Lost Opportunity for Developing Countries

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Premises

CIPMA's work is based on the following founding premises: It is possible to achieve economic growth without sacrifi cing environmental conservation or efforts aimed at achieving social equity. Economic growth, social justice, and conservation do not converge spontaneously, but rather through the use of policies, laws and regulations that integrate the three components of sustainable development. The elaboration of effective environmental policies, laws and regulations requires an active citizen participation and public-private cooperation from the designing stage to the evaluation of results. Environmental problems are every citizen's responsibility, through their consumer habits and daily behaviour; industry's responsibility through their environmental management; and government's, through environmental and sectoral policy.

Objectives

Promote and contribute to a national dialogue on the formulation of environmental policies conducive to the integration of the country's economic, social and cultural development. Elaborate research that provides technical support to dialogue and fosters improvement and renovation of the political instruments for sustainable development. Facilitate collaboration among the diverse social actors in the search for environmental solutions based on consensus, including environmental confl ict prevention and resolution.

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Contents

I. Introduction

A great deal has been written about the new market for sustainable products, organic products, environmentally-friendly products and products with a positive social impact (fair trade). As this is a market driven primarily by the preferences of consumers in industrialized countries, producers in developing countries hoped that this could be a market in which they could enjoy significant participation.[1] The hypothesis was that the production of environmentally-friendly goods and the conquest of these new markets would benefit both the environment and economic growth, thus contributing to sustainable development in the developing world.

Successful examples of developing country exports in this market segment are, however, still scarce.[2] It appears that the variables for success identified in relation to these very few cases have not provided sufficient guidelines for the projects to be replicated, and obstacles to success have not been identified sufficiently clearly for a strategy for the future to be developed and implemented.

This study aims to analyze how the potential of green markets could be taken advantage of in order to develop future markets. Obstacles to the introduction of green production are identified and suggestions are made as to how these obstacles could be overcome so as to improve and create real opportunities in the future. Both the situation in the importing countries and the domestic context are analyzed.

Two product lines serve as case studies: certification of agricultural products (organic wine), and certification of forestry products (sustainable forest management). These are analyzed in the context of Chilean exports to the European Union (EU).

Two hypotheses are tested:

1. The existence of green industry "havens" in importing countries (the fact that green markets exist, but are reserved for home producers).
2. There is a lack of capacity to develop new green markets in Chile.

The first hypothesis examines issues of transparency, participation, training and information, certification costs and marketing channels, as well as the existence of subsidies. The basic question that underlies this hypothesis is whether there are market entry barriers or there is even explicit discrimination against green exports from third countries. The existence of market entry barriers in the form of complex marketing channels or lack of information on the market may pose problems for the exporters, however, these problems will have to be confronted by the exporters themselves, probably assisted by their governments or by some form of development assistance provided by the importing country.

The second hypothesis concentrates on aspects such as institutional and support structures and the technological adjustments that need to be made in the exporting country.

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[1] E.g., UNCTAD/DITC/TED/3 1999.

[2] In the Latin American region these include, e.g., certified flower production in Ecuador and Colombia, organic coffee in Costa Rica, and fair trade products from Nicaragua and El Salvador.

I.1 The evidence – the market for sustainable products

The oldest formal initiative along these lines, fair trade, dates from the early 1970s, however, during the last decade environmentally or ethically-centred trade has also been introduced to the market. Today, several thousands of organizations, producers, traders and alternative marketing companies are grouped under Fair Trade, Eco-Trade or Ethical Trade Associations.

Worldwide, fair trade sales in 2000 amounted to c. US$400 million: that is, about 0.01 per cent of global trade.[3] Traidcraft plc, a major British fair trade organization, had a turnover of approximately US$16 million a year. The fair trade sector has seen 10 per cent annual growth since the 1970s.[4]

Eco-labelling is found at national, regional and international levels. It may be third-party certified—public or private—or it may be based on self-declaration. Worldwide there is an ever growing number of schemes, especially schemes that are independently certified. Most frequently cited examples of eco-labelling schemes are the German Blue Angel, Nordic Swan, the EU label and Green Seal in the U.S. Networks have been set up in the recent past in order to coordinate and exchange information, however, in general these networks consist only of the most important independently certified schemes.[5] The range of eco-labelling schemes includes almost all conventional products but has traditionally focused on the agricultural market.

The global market for products deriving from organic agriculture was estimated at around US$20 billion in 2000. Growth rates lay between five and 40 per cent, depending on the country. In Europe and the US shares of organic produce in the overall market for agricultural products were between one and five per cent, with projections to reach eight to 12 per cent in 2005.[6] It is more difficult to keep track of products sold under integrated pest management labels: beyond individual items of information, for example that at Sainsbury's, an important supermarket chain in Great Britain, 49 per cent of imported crops are produced under Integrated Crop Management schemes, few overall data are available.

It is interesting to note that the major producing countries are not developing countries but the industrialized parts of the world, despite the developing countries' "natural" competitive advantage in the production of environmentally-friendly products,[7] given, for example, their very low and often total lack of use of chemicals in agricultural production. In none of the developing countries does the share of organic production in the total agricultural area exceed 0.5 per cent,[8] compared to between one and 18 per cent in the industrialized countries.

The two major international labelling schemes for sustainable forest management, the Forest Stewardship Council (FSC) and the Pan European Forest Certification (PEFC), had certified, respectively, 25 million and 37 million ha of sustainably managed forest by 2001.[9] Companies accounting for about 15 per cent of the U.K. wood market had, in 1999, only FSC-certified products in stock. Similar figures can be found in the various markets for forestry sub-products.

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[3] < http://www.fairtradefederation.com>.
[4] IIED Sustainable Markets Group (1999).
[5] E.g., the Global Ecolabel Network, <http://www.gen.gr>.
[6] ITC (1999) and H. Willer and M. Yussefi (2001).
[7] E.g., UNCTAD/DITC/TED/3 (1999.)
[8] With the exception of Argentina, where it amounts to 1.7 per cent.
[9] <http://www.fscoax.org> and <http://www.pefc.de>.

Specific cases of fair or environmentally-driven trade are numerous: they range from organic honey from Tanzania, fair trade coffee from the Andes, tagua nuts from Ecuador (sold as buttons in the international market and contributing to the management of areas of high biodiversity and extreme poverty), flowers from sustainable production in Columbia and citrus fruits from integrated pest management schemes in South Africa, to mention just a few.[10]

While the markets are still patchy, information about them is even patchier. What is clear from the figures is that the market for sustainable trade has displayed significant growth rates over the last decade, and in some sub-sectors sustainable trade has become quite sizeable. The overall market share of fair and eco-trade and certified and labelled products has not yet been quantified;[11] taken as a whole, however, it can be assumed that formally-declared sustainable trade still does not amount to more than a one-digit share of global trade. On the other hand, such trade has evolved to a large extent without policy support and has displayed significant growth rates, and its economic, social and/or environmental benefits are unquestionable. The potential contribution of sustainable trade to sustainability and the financing of sustainability is enormous.

In Chile various initiatives have been implemented in relation to the production and export of sustainable products. The certification of organic products was initiated several years ago when the Ministry of Agriculture began to develop a label, to be used nation-wide, which was finally launched in 2001. Chile has applied to the EU for inclusion in the list of organic producers that are granted equivalence status in the EU and can thus enter the European market with no further need for individual recognition. Another sector-specific initiative is the certification of sustainable forestry management (SFM), for which two different certification schemes have been implemented in Chile—the international Forest Stewardship Council (FSC) and the National Initiative for Forest Management Certification (CERTFOR). The first of these schemes was introduced several years ago and two companies have so far been certified, whereas the second has only recently been launched and is struggling to obtain the international recognition necessary for its exports.

Beyond the sector-specific initiatives there have also been some first attempts to address the question of sustainable production and the export of sustainable products in more integral contexts. The Region of Aysén, for example, has initiated a program for sustainable production. As the Minister for the Interior, José Miguel Insulza, wrote to the Director of the National Commission of the Environment in August 2001:

> "The idea is the creation of an instrument to give incentives for quality and clean production in Aysén as a pilot Region."

In the discussion that follows, the issues and aspects central to the promotion of exports in sustainable products in Chile, particularly organic agriculture and products from sustainable forestry, are described briefly:

- value chain management, certification schemes and marketing channels;
- access to information;
- industrialized-country government support; and
- policy management/domestic government support.

In Sections II and III these issues are analyzed in detail for each of the two product lines.

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[10] For a more detailed description of these cases see IIED Sustainable Markets Group (1999),

[11] However, organizations such as the Global Ecolabel Network, <http://www.gen.gr>, are trying to obtain better statistics.

I.2 The role of value chain management, certification schemes and marketing channels

Value chain analysis looks at the distribution of rents during the whole cycle of organization, conception, production, delivery and re-use or recycling of a product. Several studies have pointed out that, increasingly, the rents from export production in the developing world have accrued to market participants in industrialized countries.[12] They have also shown that although market access barriers in the form of tariffs on the products have declined, these barriers have centred around other areas of the value chain, including the design, development or marketing phases, as well as environmental requirements.[13]

The principal aim of fair trade organizations is to maximize the developing country producers' benefits, whereas in environmentally-driven or eco-trade benefit-sharing is not a key issue and sometimes is not an issue at all. Thus, in fair trade up to 40 per cent of the average retail price accrues to the producer,[14] a proportion that is substantially reduced in other forms of trade. The goodwill of consumers and marketing channels that exists towards developing country producers in fair trade does not exist in other trade channels, and producers involved in sustainable trade have to find ways to capture more of the rents. Developing country producers—and their governments, although mostly not in a position themselves to govern the value chain of a product, will have to begin to analyze the sources and distribution of the rents in the value chain, identify the benefits that they obtain by creating closer long-term collaboration with the predominant agents in the chain, and try to establish agreements that would allow the producers to enter gradually into certification schemes for their products and production methods. They will have to identify and lobby against explicit (and often implicit) market access barriers in the areas of marketing, development of the product[15] and certification procedures. They will also have to consider establishing a greater cost-effective presence in the major consumer countries, and will have to invest in new areas such as eco-design and establishing partnerships with industrialized-country businesses.[16]

Various authors[17] have provided evidence that conforming to criteria and certification processes can be costlier for developing country producers than for their counterparts in industrialized countries. Others have shown that labelling programs have negatively affected the exports of developing countries.[18]

Certification schemes have been developed that have not left room for country-specific differences in terms of absorption capacities or different environmental/social priorities, thus often discriminating against developing countries. The ever-increasing number of eco-labelling programs has contributed to a reduction of transparency, the confusion of the consumer and a reduction in credibility, especially the credibility of schemes devised by developing country producers.[19] Many of the certification schemes are directly or indirectly managed by the producers or producer associations.[20]

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[12] E.g., R. Kaplinsky (2000).
[13] For the Chilean case, see, e.g., N. Borregaard, K. Gauer and A. Llavero (1997).
[14] <http://www.fairtradefederation.com>.
[15] Regarding, e.g., the patenting regime.
[16] See first examples of conventional products in R. Kaplinsky (2000) and IIED Sustainable Markets Group (2000).
[17] E.g., K. E. Ewing and R. G. Tarasofsky (1997).
[18] E.g., U. Grote and S. Kirchhoff (2001) and the example of the label on fine paper in Norway cited therein.
[19] U. Grote and S. Kirchhoff (2001).
[20] E.g., the case of IFOAM, which has established the International Organic Accreditation Service, IOAS.

Marketing channels for environmentally-friendly products are often difficult to penetrate, given that these products are sold mostly by small-scale retailers. Each industrialized country has a different market structure for these products and, in many cases, the products in turn also differ to a great extent with regard to how they are marketed. In Germany, a recent study indicated that whereas between 65 and 75 per cent of the produce is marketed through alternative marketing channels, including direct sales as well as sales through shops specializing in organically or ecologically produced goods, only about 25 to 35 per cent of organic products are channelled through the conventional market, primarily supermarket chains.[21]

Bridging distances in the supply chain can help to provide a more equitable sharing of the economic rents involved, as well as providing more trust along the value chain—an essential element in the globalized market, especially considering that the consumers of environmentally-friendly products are often geographically far away for the producing countries. Concrete examples of how consumers and producers have been brought closer together are probably plentiful; the experiences will have to be shared and their replicability analyzed in each case. Recent examples include the conversion of an English town into the world's first Fair Trade Town, and the implementation of an Internet-based tracking system for the supply of Russian wood for a German publishing company's paper.

I.3 The role of information

Information is always key to the successful export and marketing of a product. In the market segment for sustainable products this is especially valid, given the complex marketing channels, the differences in requirements, the innumerable certification systems and the speed with which the market is evolving.

On the one hand, information has to be provided by an importing country that requires certain products to be labelled, that regulates voluntary labelling schemes, or that is a "host" country to absolutely voluntary, non-government regulated or controlled, certification schemes. The requirement for importing countries to provide information is laid down in articles II, IV, VI and IX of the Agreement on Technical Barriers to Trade (TBT), which concentrate on the need for access to information and participation in the process of technical Standard setting. Of course, these articles refer exclusively to binding Standards, or "technical regulations." However, another WTO rule that can be applied to the requirement to provide information is the Code of Good Practice for the Preparation, Adoption and Application of Standards—Annex 3 of the TBT Agreement. This code, which is applied to voluntary Standards, is not a binding instrument and simply provides general guidelines. As a result of this vague legal situation and these imprecise formulations, as well as a result of the unclear situation regarding production process measures (PPMs) in the rules of the WTO in general, there have been no noteworthy initiatives on behalf of the industrialized countries regarding capacity building or the systematic provision of information on certification and voluntary labelling schemes in their countries.

There have been a few international, rather half-hearted attempts to provide more comprehensive information systems.[22] One of the most enduring and tentatively comprehensive initiatives is probably the Greenbuss system. This system is run by the Dutch Centre for the Promotion of Imports from Developing Countries, CBI.[23] It was established in 1996 and

[21] M. Haccius, I. Lünzer and H. Willer (2001).
[22] One of these being UNCTAD's Greentrade system, which was initiated in 1996.

provides, *inter alia*, an overview of the environmental requirements relating to the exports of a large range of products from the developing world to the EU. It is updated periodically and is obtainable free of charge.

On the other hand, in the exporting countries there are government agencies in charge of the promotion of exports. In the Chilean case this is PROCHILE, an agency that is supported by the Ministry for Foreign Relations. Throughout the 1990s PROCHILE was involved in a variety of activities concerning environmental requirements and the dissemination of information about them. It organized workshops on the topic, subscribed to Greentrade and assumed an active role in informing the forestry sector about the introduction of the EU labelling scheme for paper towels and toilet paper. However, it lacked a clear strategy for addressing the issue of environmental requirements—and especially the associated information requirements—in a more systematic manner.

Finally, the exporters' associations very often also play a role in providing information on requirements to their members. For example, the agricultural exporters' association publishes information sheets on the sanitary and phytosanitary requirements that the exporters have to meet in the different export destinations, focussing on the maximum permitted application levels of the different agricultural chemicals. Again, however, this information focuses on obligatory requirements and only very sporadically, if at all, on voluntary requirements.

I.4 The role of industrialized-country government support

Much has been written about perverse subsidies, i.e., subsidies to support production that is environmentally harmful. Agricultural subsidies have been accused of having detrimental environmental effects by promoting intensive agricultural production at home, as well as having negative environmental effects on developing countries.[24]

The removal of agricultural subsidies thus constitutes one of the key elements of the strategies proposed to the World Summit on Sustainable Development, held in Johannesburg in September 2002.[25] However, a more ambiguous issue is the subsidies currently paid to the industrialized-country farmers who have implemented environmentally-friendly agricultural practices, including organic farming. The EU's budget for support to rural development and accompanying measures (including agri-environmental measures, early retirement, afforestation and compensatory allowances in Less Favoured Areas) amounts to an annual average of €4.3 billion for the period of 2000–2006. For agri-environmental measures (including organic farming)[26] it is estimated that no less than c. €26 billion will be spent over the same period; this figure includes European support as well as counterpart funding from the member states.[27] Support to organic farming practice is intended to encourage farmers to convert to or maintain organic farming techniques. Depending on the product and the geographic region, these subsidies may be very considerable and thus constitute a decisive element in international competition. If these subsidies are justified on the grounds of overall welfare, i.e., they constitute payments for positive environmental externalities, it is difficult to argue against them on an international level; this is, however, open to question. If this argument cannot be supported by

[23] < http://www.cbi.org>.
[24] E.g., N. Borregaard (1993).
[25] E.g., the UN High Panel on Finance for Development, <http://www.un.org/esa/ffd>.
[26] E.g., European Commission (2001).
[27] *Ibid*.

scientific evidence it enters into conflict with the EU's development commitments towards developing countries. A strategy would have to be developed in this case to provide some form of support to developing countries to enable them to develop these markets in an equitable manner. The European Commission (2001) itself has realized the potential distortionary character of the support measures, stating:

> "Given the existence of an identifiable market for organic products, the environmental schemes must be operated in a manner which avoids distortions of competition." (p.54)

I.5 The role of policy management

All the issues mentioned above relate to policy management. The reason for making a further, explicit mention of policy management is that various ministries and government agencies are involved, thus there is a need to coordinate a strategy between these different government agencies and, in turn, between the agencies and the private sector.

I.5.1 Foreign relations

Compared to the issues of the removal of agricultural subsidies, trade-related intellectual property, regulations on investment and even multilateral environmental agreements, the issue of trade in green or sustainable products has apparently been considered too trifling to merit much time and effort in trade negotiations.

However, given that this market is growing at a rapid rate and that there are many unresolved issues concerning Production and Process Measures (PPMs) and voluntary environmental requirements, developing-country governments would do well to dedicate time to discussing these issues at the domestic level in order to develop their positions in international negotiations and trade rounds.

Recent WTO agreements indicate that the environment and, more generally, sustainable development have taken their place on the WTO agenda and will be one of the key issues in the new trade round.[28] Among other specific issues mentioned, a commitment has been announced to discuss the question of eco-labelling.

In Chile, the Department of Sustainable Development, in the Ministry of Foreign Relations, is responsible for questions related to sustainable development and trade policy. This department would have to examine the trade-rules issues related to the promotion of sustainable exports.

The Ministry of Foreign Relations is also in charge of the Export Promotion Agency, PROCHILE. PROCHILE's mission is to promote Chilean exports, particularly of non-traditional items, and give assistance to Chilean companies going through the process of internationalization and positioning in external markets. The promotion of organic products accords with PROCHILE's remit: PROCHILE has been supporting this sector since 1995, when the potential of the organic market was discovered.

The first major task carried out by PROCHILE's Food Management Group in 1995 was the identification of a number of companies that were in a position to be able to export this type of

[28] ICTSD Doha Briefings.

product. Once the companies had been identified, the Organic Products Producers' and Exporters' Committee was created. The committee's first activity was to produce a catalogue detailing the different products available for export and distribute this to the external network. Subsequently the committee undertook activities to disseminate information on the subject by taking part in two International Seminars for Organic Products, in 1996 and 1999, participating in the Biofair in Costa Rica (1997) and in Biofach, the most important fair in this sector, in 2000 and 2001. At the Biofach fair in 2002, PROCHILE will present a stand in cooperation with five companies that are dedicated to organic production of wine, lamb, fruit, fresh produce and oil.

One of the principal problems that organic producers and exporters face is certification, consequently PROCHILE supported the arrival of Swedish experts on this subject in 1998. PROCHILE is currently working on a project that will see the main Chilean certification companies accredited with ISO 65.

Furthermore, with the Agricultural and Farming Service (Servicio Agrícola y Ganadero – SAG), PROCHILE supported the creation of an association to represent producers and exporters, which was formally created at the end of 1999. The Organic Agriculture Association of Chile (Agrupación de Agricultura Orgánica de Chile) unites people, institutions and companies involved in the development and promotion of organic agriculture in Chile.

I.5.2 Ministry of the Economy

The Ministry of the Economy is another important ministry in the Chilean government and key to the development of a coherent strategy to promote the production and export of sustainable goods. There are several government research and development programs that support the development and introduction of new technology into industry, supported by the Ministry of Economy. The Chilean Economic Development Agency (La Corporación de Fomento Productivo – CORFO) through Cooperative Promotion Projects (Proyectos Asociativos de Fomento – PROFO), offers financing in particular for medium-sized and small companies, helping them to manage their businesses more effectively, minimize environmental impact and improve productivity. During 2000, this organization financed a total of 28 environmental projects, 11 of which were related to organic agriculture and the adoption of ISO 14001 certification. Since January 1, 2001, CORFO has defined a line of finance for environmental projects, "Línea de Acción Medio Ambiental Fomento," which is made up of two instruments: technical assistance (the Technical Aid Fund (FAT), especially Clean Production and PAG PL) and co-financing for pre-investment.

The National Technology Center, INTEC, has set up a Clean Technology Center (Centro Nacional de Producción Limpia (CP+L)), whose objective is to match technological innovations with the demands of national companies in order to increase productivity and improve the environmental situation. The CP+L has a double role: on the one hand it has a public function in the way in which it disseminates information and, on the other hand, it has a private role offering companies technical assistance. However, the CP+L is oriented primarily toward industrial production rather than toward resource exploitation or agricultural or forestry management.

Fundación Chile is a national foundation dedicated to the exploration of new areas of production and export. Since 2000, Fundación Chile, together with other institutions such as CORMA (Chilean Forestry Corporation), CORFO (Chilean Economic Development Agency),

INFOR (The Forestry Institute) and CONAF (The National Forestry Commission), has been developing a certification system for sustainable forest management (CERTFOR). The objective is to develop a national Standard for sustainable forest management of plantations and native forest which is mutually recognized by international schemes such as FSC or PEFC.

Ministry of Agriculture: one of the many activities of the Ministry of Agriculture is the development of new agricultural export markets. In this context the Ministry is in charge of the development and implementation of labelling and certification systems for organic products. It is also responsible for various programs providing government assistance to small farming groups.

National Commission on Environment (CONAMA): one of CONAMA's functions is to propose environmental policies and finance the promulgation and application of current environmental laws.

In the following sections, all the aspects mentioned above are analyzed in the specific context of two sustainable product markets—organic wine (or "wine from organic grapes") and products from sustainably managed forests. The case studies make it possible to test the statements made above and complement or modify them, while at the same time providing the opportunity to develop concrete policy recommendations and marketing strategies. They can also serve as examples for other case studies for countries from within or outside the region.

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II. Organic agriculture

II.1 Organic wine in Chile[29]

This case study identifies the obstacles currently or potentially faced by producers in Chile trying to gain access to the international organic wine market, particularly that of the EU. The absence of an operative, internationally recognized Chilean certification system that includes organic wine is the first barrier identified at the domestic level. Obstacles are also identified regarding the certification process itself, conversion periods and access to the information needed to make appropriate production and commercialization decisions.

The export of organic wine is a new and promising activity in Chile, however, it must find a niche in a successful, globalized wine production industry that currently faces challenges regarding quality, identity and consolidation in the markets of the major developed countries.

Organic wine exports reflect a complex situation, involving at least three different groups of producers who have made the transition to organic production from very different circumstances in order to place their products on "green" markets abroad. This means that they are in different positions to make use of this new market and the obstacles that they face to gain access to it affect each of them in different ways. This study also emphasizes the particularities and differences of this specific area compared to the organic sector in general, nevertheless, all organic production would no doubt benefit from overcoming many of the obstacles identified.

II.1.2 The context and production of organic wine in Chile

This section examines the organic wine producers as a group, or more specifically as a product type, within the national wine-production sector and as players within the organic sector in general. It will become clear why the obstacles to expanding organic wine production and exportation do not affect all producers in the same way.

II.1.2.1 The Chilean wine-production sector

Wine production has been an important activity in Chile since the early days of the Spanish conquest. Grape varieties and production techniques that were introduced in those initial years are still in use today in the unirrigated zones of the Maule and Bío-Bío. Wine was being produced in Santiago and La Serena in 1556, and its increasing importance led Spain to pronounce restrictions and prohibitions on grape cultivation in order to protect exports of Spanish products to the colonies. Nevertheless, by the mid-eighteenth century Chile was the main wine producer on the continent, partly due to the fact that cultivated grape varieties were able to adapt well to the climate (Correa, 1938; Barría, 2000a).

In 1851, the arrival of the first "French strains" of grapes into the country triggered a second phase in Chilean wine production characterized by the development of the large, fine-wine producing vineyards that still exist today. Twenty years later, those vineyards began to export wines and participate relatively successfully in international competitions. The latter activity had

[29] This section was written by Juan Ladrón de Guevara. Rosa Herrera C. collaborated with data collection and Jaime Izquierdo and Alejandra Vergara acted as consultants.

important social connotations: for those who possessed the fortune needed to survive the first few years of high investment and unstable production, "being the owner of a vineyard was more than a business, it was an honourable title, since it gave one the right to figure in the great contests at international expositions" (Correa, *op. cit.*).

At the beginning of the twentieth century, the area of land under viticulture increased markedly as a result of the expansion of the fine-wine sector, yet a large number of traditional wine producers survived. Fine-wine exports expanded, reaching 5.5 million litres in 1930. This surge "was due to organization [of the producers], special facilities and bonuses awarded by the government and efforts of the exporters themselves, who understood the problem's importance well and knew how to make the most of the facilities offered under the new laws" (Correa, *op. cit.*). Advances in technology and research and support from the Foreign Office's Department of Trade and the Diplomatic and Consular Service further contributed to the industry's success. Considerable volumes of wine were exported to various European countries, competing with European producers.

From the 1930s onwards, vineyards were subject to strict plantation controls in order to avoid overproduction, improve quality and control alcoholism problems, therefore, from 1938 to 1974 there were almost no problems of overproduction, and viticulture was a "protected" sector with very good business prospects. However, at the same time Chilean viticulture suffered a period of relative decline compared to the industry's accelerated development in the U.S., South Africa and Australia from the 1960s onwards (Bobadilla, 2001).

In 1974, it was decreed that cultivation be liberalized and all restrictions on the industry were eliminated in line with the country's new economic policy. In the late 1970s, a rapid increase in the number of plantations, alongside yield improvements, led to saturation of the domestic market. Meanwhile, regulatory and tax measures (wine with an alcohol content of less than 11° was authorized for sale, and a 15 per cent surcharge was added to VAT), wine imports from Argentina and an aggressive expansion strategy for beer in the market led to a steep drop in profitability that continued until the beginning of the 1990s. Between 1980 and 1990 per capita consumption fell from 42.7 to 26 litres per annum and there was a significant reduction in the area of land under viticulture (Bobadilla, *op. cit.*).

During this crisis, the need arose to look for alternatives in the export markets, which were at that point dominated by European wine-producing countries. Foreign wine producers began to make investments in the country at this time, triggering the start of significant technological improvements in production (the use of stainless steel casks, for example). The result was an increase in the size and importance of the sector's exports within the domestic economy and ongoing improvements in product quality. A favourable exchange rate for Chile compared to Europe also helped this export strategy to enjoy rapid success since wines could be placed on the market with a very favourable price-quality relationship.

Success in exportation (total export value rose from US$10 million in 1985 to US$514 million in 1999) brought about widespread growth in fine-grape plantations intended for foreign markets. The large traditional vineyards largely spearheaded this new strategy but they were accompanied by the arrival of the so-called "emerging" or "boutique" vineyards, which penetrated the wine-production market with high levels of technology and a product almost entirely orientated toward export. Today over 20 per cent of exports come from this type of vineyard (Bobadilla, *op. cit.*).

II.1.2.1.1 Groups of producers within the current wine-production industry

According to Bobadilla (*op. cit.*), and for the purposes of this study, wine producers may be grouped into three main categories.

1. Large vineyards and traditional vineyards

This group of traditional vineyards characteristically produces a wide range of wines for an equally wide range of consumers in both domestic and foreign markets. These vineyards are generally very old, large and closely linked to important economic groups; they were pioneers in the birth and expansion of the export market. They have significant levels of production and sales and generally control a significant share of the domestic market. This category includes: Concha y Toro and Santa Emiliana, Santa Rita, San Pedro, Santa Carolina, Valdivieso, Tarapacá, Cousiño Macul, Undurraga, Carta Vieja, Errázuriz and Cánepa.

The large foreign vineyards such as Miguel Torres that have invested in Chile are also included in this category, as are vineyards such as Almaviva, Viña Caliterra, Domaine Oriental, Casa Lapostolle, Cuvée Mumm and Los Vascos, which have associated with Chilean vineyards to develop new projects,.

2. Small vineyards orientated towards exportation (or "emerging" vineyards)

These are numerous, young and smaller in size than the traditional vineyards and have developed a level of quality and individuality aimed at the fine-wine export market. They are very dynamic, with a high capacity for constant innovation. Many broke away from older wine producers to become independent, building hi-tech cellars and competing aggressively in the market. There are over 100 such vineyards, including, for example, Viña Porta, Casablanca, Morandé, Santa Ema, Portal del Alto and Tabontinaja.

Some very small family vineyards with limited production that generally produce very high quality wines are also included in this group, e.g., Antiyal, which produces a premium organic wine.[30]

Both the large and emerging vineyards lie in zones of very high quality soils, with irrigation and climates very suitable for viticulture. This characteristic is a fundamental advantage since it allows high yields of good quality wine grapes at a relatively low cost.

3. Vineyards of small-scale producers

Unlike the above-mentioned groups, this group represents the vast wine production sector growing common grapes (País and Italia), located mainly in the unirrigated zones in the Maule and Bío-Bío regions. This sector has suffered a sharp drop in production area over the last few decades and is less technologically advanced due to its having very limited capital, scarce access to financing and poor management and innovative capacities. These vineyards lie in unirrigated zones where there are often restrictive water and soil conditions (such as poor fertility or excessive slopes) that limit the growers' ability to convert to organic production. However, despite these difficulties, there are still almost 15,000 ha in cultivation, much of which lies in zones that have been managed traditionally over decades with little or no use of agrochemicals. This gives the

[30] The products of these vineyards are also known as "garage wine," (*Guía de Vinos de Chile*, 2002).

wine a special flavour and is also an advantage in converting vineyards to organic status (Barría, 2000b).[31] This production is aimed mainly at local markets for sale in the barrel and a significant proportion is estimated to be sold illicitly.

Associations of producers

There are two associations in Chile for the producers of export wine: "Viñas de Chile," which comprises mainly the large or traditional vineyards, and "Chile Vid," which groups together mainly emerging vineyards. These have come into existence "through the need to create a global concept in the commercial strategy of Chilean wine. These groups take responsibility for providing information and making Chilean wine feature in international markets" (Bobadilla, *op. cit.*) and attempting to create a generic image for the product.

There is also the "Corporación Chilena del Vino," "which aims to improve cooperation and competitiveness in companies at every production level."[32] One of its fundamental roles is to represent the sector on technical issues when dealing with governmental and private institutions. It publishes a magazine disseminating technical information and operates as a facilitator for the Corporación de Fomento (the public sector agency in charge of industrial development – CORFO) tools used to develop and promote the production, development and marketing of fine wine.

II.1.2.1.2 Sector figures, exports and trends

Sector figures

In 1997 there were 51,000 ha of varietal or fine strains of grapes intended for wine production in Chile, and over 20,000 ha of País or Rústica strains (INE, 1997). In 1999 the total area under cultivation increased to 85,000 ha and today it totals over 100,000 ha—a significant increase in surface area due to the industry's success. The area is distributed mostly between regions V and VIII, in both unirrigated and irrigated zones, and represents one per cent of the total agricultural land in these regions. Approximately 70 per cent of the surface area is planted with red grape strains: the strains most commonly cultivated are Cabernet Sauvignon, Merlot, Chardonnay, Sauvignon Blanc and País. The greater diversity of grape strains may also be seen to go hand in hand with the export boom, with increasingly significant introductions of new varieties such as Carmenere, Pinot Noir and Syrah. Table II.1 below shows the distribution according to size and geographical location of the wine-producing land holdings in Chile in 2000.

Table II.1: Distribution according to size and geographical location of the wine-producing land holdings in Chile in 2000 (Source: Bobadilla, 2001)

Region	Size of holdings (ha)			
	Less than 5	5–20	20 or more	Total
Aconcagua (V)	51	38	48	
Metropolitana and O'Higgins (VI)	363	459	322	
Maule (VII) and Bío-Bío (VIII)	9	1.3	.5	11

[31] The Chilean government recently signed a cooperative agreement with the Swiss government to promote organic agriculture, particularly organic wine production by small local producers in the Cauquenes zone in region VII. The Instituto de Desarrollo Agropecuario (Institute of Agricultural and Fishing Development – INDAP) encouraged conversion to organic methods by developing infrastructural and technical aid, *inter alia* (personal communication with Pablo Arriagada, responsible for organic agriculture within the Enterprise Development Department of INDAP).
[32] Corporación Chilena del Vino, <http://www.ccv.cl>.

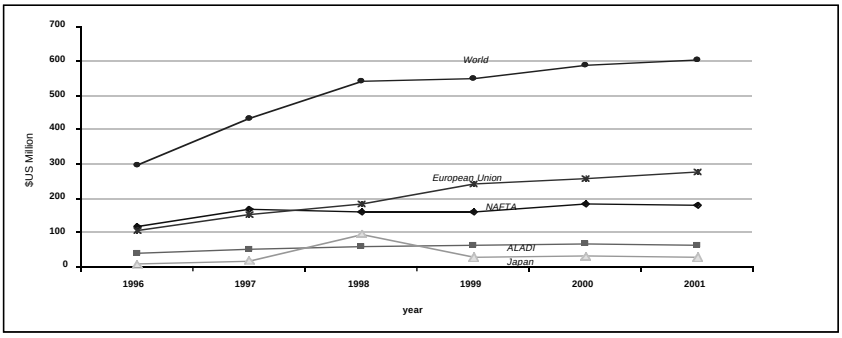
It is clear from the above table that the greatest concentration of small-scale producers (holdings of less than 5 ha) and the greatest concentration of unirrigated land are to be found in regions VII and VIII. [33]

In Maule there are also a large number of fine-wine producers (with holdings of over 20 ha), particularly in irrigated areas, and these holdings are spread relatively homogeneously among the small-scale holdings towards the north, up to the Metropolitan Region and the Casablanca valley in region V. Annex 1 shows the position of the main fine wine producers in detail according to their geographical location (in accordance with the classification of wine-producing zones established in the legislation regarding "denomination of origin"[34]).

Exports

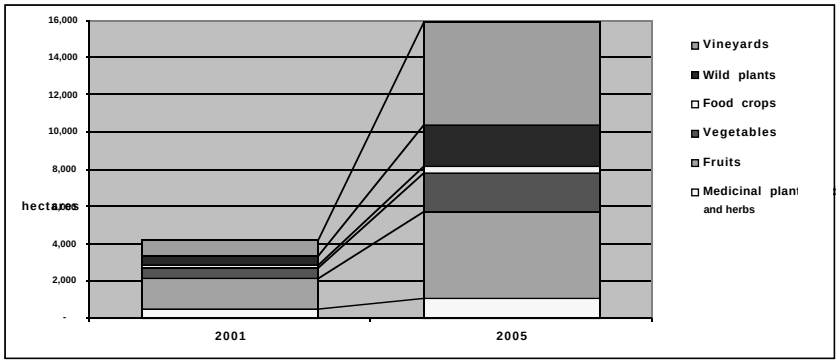
In 2002, the Foreign Office stated that wine plantations had greatly increased and were embracing more technology. This has led to increased production, with prices of wine with "denomination of origin" status remaining relatively stable at a level of close to US$2.8 FOB/litre in the last four years, recording a slight dip (0.7 per cent) in 2001.

Figure II.1: Evolution of wine exports to selected markets



Source: Chilean Foreign Office, 2002

Figure II.2: Composition of area under organic management in Chile in 2001 and projected for 2005



(Source Ceroni 2002)

[33] Translator's note: "Denomination of Origin" is a generic name given to a specific agricultural food product that meets certain requirements as to its origin, the way it is processed and its quality.
[34] Translator's note: "Denomination of Origin" is a generic name given to a specific agricultural food product that meets certain requirements as to its origin, quality and the way it is processed.

In 2001, Chile exported US$601 million FOB in wine, with an increase of 2.5 per cent in 2000 and 6.8 per cent between 1999 and 2000. Wine is exported mainly to the EU (US$276 million FOB, or 46 per cent of the total), NAFTA countries (US$180 million FOB, 30 per cent) and ALADI (Latin American Integration Association) member countries (US$64.7 million FOB, 11 per cent). As well as being the main commercial partner in the wine market, the EU shows the greatest dynamism with regard to export value growth, with an average growth of close to 10 per cent per annum over the last six years (Ministerio de Relaciones Exteriores de Chile, 2002).

Future trends in the sector

The expansion in the wine sector in Chile is not unique and is occurring in the context of a world glut in which fine wines, mostly from the "New World" (California, Australia, South Africa, Argentina and Chile), have ousted inferior quality wines from Mediterranean countries. These wines owe their success to the emphasis placed on a new concept in which variety, new production and development technologies and a strong marketing strategy play a key role.[35]

In this context there lies a complex challenge for Chile: on the one hand, the large land areas planted over the last four years presage overproduction and a significant fall in prices paid to producers, and it is unclear whether it will be possible to place this production on the domestic or international markets. On the other hand, product competitiveness must be strengthened at an international level in order to improve the sector's position in ever more competitive markets.[36]

This situation has triggered a debate that aims to define a national strategy to guarantee the long-term expansion and sustainability of the industry. The main activities and proposals along these lines include: an aggressive marketing campaign that is already underway in major markets (US$1.5 million in 2002), led by "Wines of Chile," an institution created for this purpose by the two large producer-exporter associations;[37] the demands of some analysts that winegrowers control performance in order to produce quality rather than quantity; strengthening the depressed domestic market, in which consumption per capita is far below the levels experienced prior to the crisis of the 1980s; and, perhaps most importantly, consolidating high-quality wine production in order to improve and consolidate the perception of Chile as a producer in the international markets.[38]

This last option also corresponds to the natural evolution of demand, which increasingly prefers the better quality wines that can be achieved as producers become more experienced. This preference for higher quality means developing what is today termed "terroir": all the wine's potential arising from the characteristics of the zone and the vineyard producing it.[39]

Organic wine can find a home in this new concept of developing the quality and characteristics of a product that result from interaction with a specific ecosystem. This constitutes a new and interesting niche in the market, with more favourable prospects than those of the rest of the sector.[40]

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35 *Revista Vendimia*, (March–April 2001).
36 *Ibid*.
37 *Diario El Mercurio*, Special Edition on the Wine-Producing Industry, March 25, 2002.
38 Jaime Izquierdo, Economist and Columnist, < http://www.chilevinos.com> (personal communication).
39 *Ibid*.
40 J. Izquierdo, *op. cit*. and diverse publications (Revista La Cav, 2002; Diario El Mercurio , *op. cit*.) also confirm that organic wine is a promising niche in the market in the ever-more complex and competitive international context of wines.

II.1.2.2 Chilean organic agriculture

II.1.2.2.1 Participants

The history of organic agriculture in Chile is linked, to a large extent, to the search for technological options to support the development of poor rural families (*campesinos*). This occurred mainly through Non-governmental Organizations (NGOs) working without the support of the government at the end of the 1970s,[41] and the trend was fed by the experiences of Chileans returning from exile and some centres of technology receiving foreign support. Today these actors are largely grouped together under the Movimiento Agroecológico Chileno (Chilean Agro-Ecology Movement), MACH. This is a network of people and organizations created in 1990 to foster opportunities for thought and action to develop an agro-ecological proposal that responds to Chile's circumstances.[42] The creation of "Tierra Viva," a group of organic producers, is another pioneer initiative along these lines. Over a decade ago this group managed to set up the first market outlet for their products in the Metropolitan Region.[43]

In parallel with this movement, organic production has been developed for exports, mainly in the form of small fruits and medicinal herbs. The Agrupación de Agricultura Orgánica de Chile A.G. (Chilean Organic Agriculture Group), AAOCH, has attempted to bring together these two streams and promote organic agriculture from a more general perspective.[44]

At the national level, organic agriculture is taking on increasing importance in universities and research centres and it should be pointed out that a great deal of knowledge from a wide range of fields that was initially channelled into agriculture in general is today being used for organic agriculture.[45]

Nevertheless, most agricultural schools in the country still do not offer professorships in organic agriculture, and few academics work on the subject.[46]

II.1.2.2.2 Public policies

From the point of view of public policies, the first step towards fostering organic agriculture arose with the arrival of democracy at the beginning of the 1990s. Spokespersons from the Ministry of Agriculture recognized a solution to the *campesino* problem in this form of agriculture, but this idea did not prosper in any form of official policy. The issue resurfaced when the Servicio Agrícola y Ganadero (Agriculture and Livestock Service) began to draw up Chilean regulations through the INN (Instituto Nacional de Normalización, the Chilean Standards Body) in the late 1990s. The main policy objective is no longer *campesino* development, as it was at the start of the decade, but the development of new export markets.[47]

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[41] Scarlett Mathieu, Agricultural Scientist, organic agriculture consultant (personal communication).
[42] Patricio Yañez, Agricultural Scientist, President of the Movimiento Agroecológico Chileno (personal communication).
[43] S. Mathieu, *op. cit.*
[44] Claudia Fernández, Agricultural Scientist, General Manager of AAOCH (personal communication).
[45] For example, there are various projects relating to biological pest and disease control. Although this practice is not exclusive to organic agriculture, the sector benefits from the results; a similar case is the line of research into weed management and soil fertility. In the case of wine production, two projects stand out, aimed at isolating and producing native fermentation agents for wine fermentation commercially, one in the U. de Santiago and INIA Cauquenes and the other in the U. de Chile.
[46] In the case of organic wine, information was provided by two academic researchers working in organic wine production: Marc Zeisse, at the U. de Santiago, and Carlos Pino, at the U. Católica del Maule.
[47] Patricio Yañez, *op. cit.*

II.1.2.2.3 Figures

In 1999/2000 the production of organic wine in Chile involved c. 3,300 ha countrywide, shared between some 220 producers (Bañados and García, 2001). These producers are located between regions IV and X, with 84 per cent of producers concentrated in regions VI, VIII and X. Sixty-six per cent are small-scale holdings (fewer than 12 ha) and of this total 60 per cent are smaller than 2 ha. Almost all the producers have explored this technology to some extent in the last ten years (Rodríguez *et al.*, 1999).

According to Ceroni, President of AAOCH, in August 2001 a total of 4,268 ha was being farmed organically. Figure II.2 shows the breakdown of total surface area according to sector in 2001 together with projections for 2005. This figure does not include certified pastureland, which included 630,000 ha in Magallanes for organic beef production in 2002.[48]

Two points stand out: 1) AAOCH estimates a general trend that takes into account the incorporation of 2,500 ha annually into organic management, and 2) a sharp rise in the area of vineyards, estimated to increase from 850 ha in 2001 to 5,500 ha in 2005.

II.1.2.2.4 Markets

The domestic market for organic agricultural products is still in its infancy, with just a few producers selling to a small number of supermarkets and specialized shops or making direct home-deliveries. AAOCH's preliminary estimates for 2002 for the city of Santiago (approximately five million inhabitants) shows that the total value of transactions for 2001 was around US$0.5 million (Ceroni, 2002). This reflects the fact that most national consumers are unaware of the potential benefits to be gained from producing and consuming these products. This also explains why prices are very similar to those for conventional products and why there are only very small product niches available.[49] As a result, Chilean production and the future expansion of the market are orientated fundamentally towards exports (Bañados and García, 2001; Rodríguez *et al.*, 1999).

For 1999/2000 PROCHILE (the Chilean Export Promotion Agency, supported by the Foreign Office) estimated exports of around US$4 million FOB. From 1994/5 to 1999/2000 export volume and value grew by 30 per cent and 27 per cent respectively. Although fruit and vegetable cultivation showed a growth trend throughout that period, medicinal herbs and forestry products dropped significantly (Bañados and García, 2001). Export figures represented 0.26 per cent of Chile's total national agricultural exports in 2000 (STOAS ABC, 2001). AAOCH gives the values of organic agriculture exports in 1999/2000 in Table II.2. As can be seen, although there is a wide product range, most of the produce is sent to four main destination markets: the U.S., Europe, Japan and Canada. Europe shows a particularly high demand for fresh fruit and processed products.

From this brief description of the organic sector several weaknesses can be highlighted; principally the insufficiently-developed domestic markets and scarce research in the area. The

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[48] For further information on organic production in Magallanes, see, e.g., *Diario El Mercurio's Revista del Campo*, No. 1,346, April 29, 2002.

[49] This opinion is shared by S. Mathieu, *op. cit.*, and J. P. Infante, Organic Producer, Huertorganic Ltda. However, the latter states that there is growing interest in these products from supermarkets and that consumers prefer organic products to conventional products at the same price.

sector's strengths, by contrast, lie mainly in Chile's agro-ecological conditions (isolation, climate, low soil and water contamination) and the strong export orientation of the sector (Rodríguez *et al*., 1999).

II.1.2.3 Organic wine

Organic wine is the combination of organic grape production and organic fermentation; in Chile there are both "wines made from organic grapes" and "organic wines." Internationally, there is a lack of specific, unique regulations on the fermentation stage. This situation is explained partly by the fact that fermentation tends to be a clean process,[50] therefore, the changes to be made in the agricultural production system and the necessary segregation in the cellars of wine made with conventional grapes and that made with organic grapes[51] are the main concerns when converting a vineyard to organic production.

Table II.2: Organic agricultural products exported in 1999/2000 according to product and destination, in US$ FOB

Product	Europe	U.S.	Japan	Canada	Australia	Total
Fresh Vegetables						
Asparagus	95.800	947.538				1,043.338
Cucumbers		64.320				64.320
Pumpkins		337.728				337.728
Courgettes		16.530				16.530
Radishes		134.000				134.000
Fresh Fruit	**633.434**	**649.471**	**198.450**	**31.000**		**1,512.355**
Kiwis	431.550		198.450			630.000
Apples		72.800				
Table grapes	124.000					
Plums		4.000				
Raspberries	77.884	565.207				
Blackberries		4.152				
Blueberries		3.312				
Processed Products	**666.873**	**132.650**	**110.000**		**1.320**	**910.843**
Frozen Asparagus			110.000			110.000
Frozen Raspberries		85.000				85.000
Herbal Medicines	274.125	30.450				304.575
Rose Hips	132.251	10.000				142.251
Rose Hip Oil		7.200			1.320	8.520
Honey	251.372					251.372
Bee Products	9.125					9.125
Total	**1,396.107**	**2,282.237**	**308.450**	**31.000**	**1.320**	**4,019.114**

Source: Ceroni, 2002

[50] Two projects encouraged organic wine production in Chile in the early 1990s: Viña Lomas de 50 50 For further details on the conventional winemaking process see Annex II. In organic wine-making, natural fermentation agents are used in the fermentation process: egg white, gelatine and other natural substances for clarification, little or no sulphur dioxide as preservative, and tartaric acid to correct acidity (J. Izquierdo, op. cit.).
[51] Claudia Fernández, *op. cit*.

Cauquenes and Viña Carmen.[52] The former was born of the wish to explore new possibilities for wine producers using the País grape strain and, with little artificial support, to make use of the wine production tradition and ecological advantages in the Cauquenes area, in the Maule region (Barría, 2000a). The Carmen project arose fundamentally out of the interest of the company's oenologists and the influence of their commercial links with a North American company practising organic viticulture.[53]

There are c. 20 vineyards either producing certified organic grapes or in a period of transition to organic status[54] occupying the estimated 850 ha currently given over to organic wine production.[55] At the moment almost all land under organic management is in the hands of the large-scale producers or the emerging vineyards, therefore, in most cases fine grape strains are used to produce the "must" (grape juice). The only exception is the Lomas de Cauquenes vineyard.[56]

The production of organic wine for export occurs on holdings that are almost exclusively dedicated to wine grapes, as opposed to holdings with a variety of crops and rotations, which is the norm of this kind of agriculture.[57] This is a peculiarity of the organic wine-production sector and constitutes a weakness from a technical viewpoint since it can lead to dependence on a new range of "permitted" input products. It is the result of economies of scale, the origin of the producers, who have always been owners of monoculture vineyards, and the very characteristic of wine as a specialty product.

Schumacher[58] states that once the wine production technique is competently handled the conversion to organic production is not difficult, although it must be a gradual process. Technical challenges are related to producing good—rather than organic—wines. This statement correlates with the fact that organic wine producers were (or still are) traditional wine producers who have converted to organic management production methods, i.e., they are not new to the wine producing business.

The size of the individual holdings of organically managed vineyards ranges between approximately 3 and 200 ha.[59] In most of the larger businesses the organic share represents a significant, although not large, percentage of the total area of vineyard owned by the company. Investments fund the adaptation of a cellar for the exclusive production of organic wine, since this is a requirement of the regulations designed to minimize the possibility of confusion

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[52] It should be noted that in 1992, prior to these commercial initiatives, an organic wine was produced as an experiment in the Facultad de Agronomía of the U. de Chile using traditional grape strains (*Revista Chile Agrícola*, June 1993) (not in bibliography).

[53] M. Lecaros, Oenologist at Viña Carmen (personal interview).

[54] This information comes from P. Ceroni (2002) and is consistent with information from interviews carried out at vineyards and certification companies and with professionals from the sector as well as with secondary information reviewed (press cuttings).

[55] To obtain an idea of the importance of production at a global level, P. Köpfer and H. Willer (2001) indicate that about 86,000 ha were managed organically in Europe in 2000. They also highlight the existence of producer organizations in various countries and the fact that seven international conferences on organic viticulture have already been held, the most recent in Vancouver, Canada, together with the 14th IFOAM Congress.

[56] Information gathered from interviews and secondary sources (press cuttings). Six producers were interviewed in this study and general information (location, surface areas and strains) was obtained indirectly from a further 10 (through interviews with certification companies and press articles). The total number of vineyards identified with organic production (certified or in transition) reached 21. No organic wine projects were identified within the *campesino* agricultural sector, although initiatives for project development were found, such as the aforementioned INDAP project.

[57] Information from interviews with producers and certifiers.

[58] Organic producer from California, U.S. (personal communication).

[59] *Diario El Mercurio* (January 17, 2002) stated the case of Viña Santa Emiliana (belonging to Viña Concha y Toro), whose 200-ha holding in Rancagua, Region VI, is managed biodynamically (a form of organic agriculture).

between organic and traditional products. In contrast, the smaller businesses tend to be holdings on which organic production is an "experiment" by the owners, not so risky for those whose income derives mainly from other sources but who aspire to transform their personal projects into viable enterprises,[60] but riskier for those whose income depends entirely on the production of wine.[61]

Finally, it is worth highlighting the fact that the producers interviewed are generally healthy financially and have access to resources to undertake these kinds of projects, either with their own capital or with private bank loans.

II.1.3 Crucial aspects of organic wine production and exportation in Chile

This section sets out the main aspects of organic wine production that are crucial for the expansion and maintenance of its exportation to Europe. The national certification system is the main aspect analysed. Problems regarding information and costs associated with the conversion period and certification are also analysed, as these factors are crucial for emerging vineyards and small-scale producers. The latter also face restrictions regarding technology and product quality, and it is unclear whether organic production could overcome these obstacles, given the outlook for over-production and the general trend towards a preference for higher quality wines. Finally, Chilean public-sector support mechanisms to foster organic production are analyzed. Existing mechanisms are generic (available for any form of agriculture or management) with none dedicated exclusively to organic agriculture, but they have been used, at least to a limited extent, to develop this type of agriculture.

This analysis of obstacles and support mechanisms is based on information compiled from existing material, Web sites and interviews with producers, certification companies[62] and professionals linked to the issue, from both public and private backgrounds.

II.1.3.1 Organic certification in Chile

According to some authors (Bañados and García, 2001) differences in standards and certification systems could be the greatest non-tariff-related barrier for countries exporting organic produce, especially for developing countries, causing them to be denied access to organic markets in developed countries. This section demonstrates this statement to be valid for Chile, given the poor development of a national certification system. The existing official system, which is voluntary and only partially valid (applicable only to unprocessed products intended for export), has not worked.[63] Chile has requested EU recognition of this partial certification system so that she may be included in the list (of "third" countries that are granted direct access to the European organic market), and a decision is pending.[64]

Chilean exports to the EU and other relevant markets are currently dealt with and given authorization on a case-by-case basis at the time of import. All Chilean exports must have

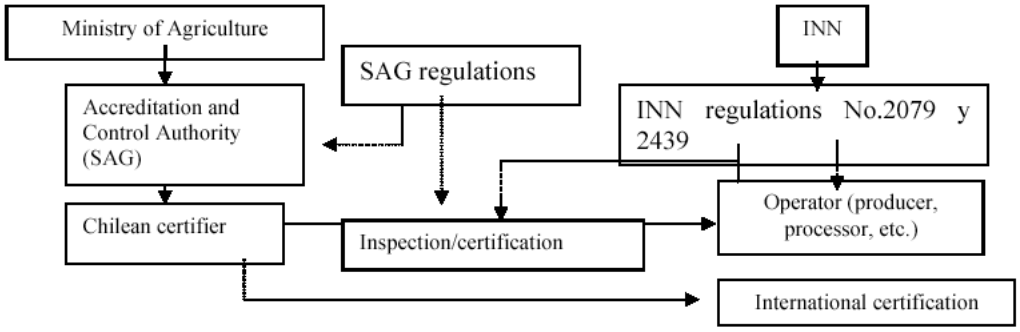
[60] E.g., the case of Viña Antiyal, cited in *Revista La Cav* and other publications.
[61] As shown, this latter group has been the most limited to date.
[62] Five of the six certification companies operating regularly in Chile were interviewed: Argencert, BCS ÖkoGarantie, IMO Chile, CCO and Agroeco Ltda.
[63] The limitations of the system reflect the fact they correspond to the authority held by the Ministry of Agriculture. Gonzalo Narea, Agricultural Scientist, Servicio Agrícola y Ganadero (personal communication).
[64] G. Narea, *op. cit*.

certificates issued by certification companies in the corresponding EU importing countries.[65] The Chilean government plays no role in this scheme: the system depends on the certification systems and decisions of the importing countries.[66]

II.1.3.1.1 System implemented by the Chilean government

In 2000 the Ministry of Agriculture took the first step towards establishing a national certification system; its structure and the parties involved are shown in Figure II.3 below. This system currently consists of a voluntary program, applicable only to unprocessed products intended for export. This limitation is due to the lack of an adequate legal framework: for example, the remit of the Ministry of Agriculture in relation to accreditation control is not clearly defined. Nevertheless, the intention is to move towards a compulsory system, to include processed products that will be applied to both export goods and goods for the domestic market. The Ministry prepared two initiatives outlining new laws to achieve this objective through two alternative routes. The first, the Law on Organic Agriculture, is a framework that requires further legislation in order for it to be put into practice. The second is a modification of the Organic Law of the Servicio Agrícola y Ganadero (SAG, an agency supported by the Ministry of Agriculture), giving it a specific remit to extend its authority to the missing areas. These initiatives are not yet official and have not been submitted to debate with other ministers or with parliament.[67]

Figure II.3: Proposed scheme for national certification system



Source: Pons and Malecot (2000)

The system does not function as a certification system within the private sector as this sector sees no advantages in participating. The SAG hopes for recognition from the EU and other relevant markets, in which case the export companies could access such markets with certificates issued by companies approved by the SAG rather than through the authorization mechanisms of the importing countries.[68]

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[65] This mechanism is also known as "revocation of importer's certificate." Importers request it for each product from the competent authority in their own country. Importers must assemble the necessary certification from the companies recognised by their markets.

[66] As the whole process for authorizing the import of a product into Europe takes place between the importer and the competent national authority, the Chilean government plays no role whatsoever, since the certification companies certifying the Chilean product in Chile must be approved by the competent authority in the country of import.

[67] G. Narea, *op. cit.*

[68] G. Narea, *op. cit.*

Zenteno[69] and Pons and Malecot (2000) state that the Chilean system still differs significantly from the European system, making it difficult for the country to be recognized for the third-country list.

Description of the main aspects of the proposed system

The role of the SAG is to approve the certifiers and to act to some extent as a controlling body. The SAG created the National Accreditation Service for Tertiaries (Sistema Nacional de Acreditación de Terceros), through Regulation Nos. 3142 and 3143 of September 29, 1998. These regulations established that this organization could delegate professional activities described in its plans and programs to third parties. Following this and based on the above, Ruling No. 425 of February 15, 2000 established an Organic Agriculture Development Programme which specifically set out the accreditation system for certification companies dealing with organic agriculture and the laws applying to them. This system is equivalent to ISO 65.

The Instituto Nacional de Normalización (INN) is also included in the system. This organization is responsible for formulating and modifying the Standards relating to organic agriculture.

The first Standard is NCH 2439/official 1999, which regulates the "production, processing, labelling and marketing of organically produced foodstuffs." Its objective is to establish the requisites for production, processing, labelling and marketing of this kind of foodstuff. It is applicable to unprocessed vegetable, animal, fish, bee and mushroom products, and processed vegetable, fish, bee and mushroom products wishing to obtain certification as organically produced products.

The NCH 2079/official 1999 Standard establishes "general criteria for the certification of production, processing, transport and storage systems for organic products." This specifies in particular the general criteria to be applied by a third party operating a certification system that could be recognized as competent and reliable. In this Standard, the term "certification body" refers to any organization operating a certification system for products indicated in regulation NCH 2439. The term "organic product" is used in its broadest sense and includes the processes and services provided by organic agriculture. This organic certification system can be applied to the organic production of raw materials, organic agricultural production (vegetables, fish, bee products and mushrooms), and processing, transport and storage.

II.1.3.1.2 "Functioning" system for exportation to the EU (via Article 11(6) of the CEE Regulations No. 2092/91)

The system described above cannot be used for exports to Europe since it has not gained recognition as an equivalent system, therefore, in practice, the producer makes use of internationally recognized Standards and certification awarded by private recognized and accredited organizations from the destination markets, i.e., mainly the EU, the U.S. and Japan. In this case the producer may import his or her products into the EU through import authorizations solicited by the importer, accompanied by the certificates issued by these accredited certification organizations.

[69] Virginia Zenteno, Agricultural Scientist, Chief Certifier of Chile Orgánico, CCO (personal communication).

Characteristics of the certification companies operating in Chile

This section explains the presence and dominance of foreign companies in the national certification market, particularly those from Switzerland, Germany and Argentina (the latter is on the third-country list of the EU). These companies are associated with local institutions, have their own inspection office in Chile or operate from abroad.

IMO Control, from Switzerland, entered into association with Fundación Chile to form IMO Chile, which is licensed to award certificates for the EU, Switzerland, Japan, Turkey and the U.S. It has awarded organic agriculture certification to 65 Chilean producers representing approximately 1,500 ha of agricultural land and 633,000 ha of pastureland in Magallanes.[70]

The German company, BCS Öko Garantie, is also represented in Chile (BCS Chile), with offices in the city of Chillán. It is licensed to inspect local production and issue certificates recognized in the EU, the U.S. and Japan. In Chile it inspects only organic agriculture and had awarded certificates to 110 producers and processors by 2002.[71]

ARGENCERT, from Argentina, recently established a two-man inspection office in Chile. Its inspectors previously travelled to Chile to carry out inspections.[72] It issues certificates for its own country and has also been recognized by the EU, since 1992, and by Washington State, U.S.[73]

Lastly, there are three companies, LACON (from Germany), ECOCERT International (from France) and Biocertificación (from Argentina) that do not have offices in Chile but whose inspectors travel to the country to award product certificates that are recognized in the EU (Narea and Valdivieso, 2002).

In addition to these foreign companies, there are three local companies in operation:

Certificadora Chile Orgánico, CCO, has been operating for over three years in the domestic market, certifying some 60 producers for the U.S. and Japan. It should be noted that PROCHILE offered support to help the company obtain accreditation approval from Europe, but the offer was turned down as it represented too large an investment, given the small domestic organic sector. The company is currently evaluating the possibility of co-certification with companies recognized by the EU and the U.S.[74]

PROA is the oldest Chilean certification company, certifying products for the U.S., Canada, Japan and Europe (it was operating in Europe until the European law equivalent to ISO 65 came into effect in 2000, impeding further recognition due to its accreditation demands) (Narea and Valdivieso, *op. cit.*).

Lastly, AGROECO Ltda. certifies for the domestic market and Europe, working with some 20 producers.[75]

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[70] Alejandra Vergara, Agricultural Scientist, IMO Chile (personal communication) and the company's information leaflet.
[71] Luis Meléndez, Inspector at BCS Öko Garantie (personal communication).
[72] Laura Montenegro, Director, Argencert (personal communication).
[73] Laura Montenegro, Director Argencert (personal communication).
[74] Virginia Zenteno, *op. cit.* (personal communication).
[75] Agustín Iriarte, Managing Director of Agroeco Ltda., (personal communication).

It should be noted that the cost of accreditation is very high for a company operating in only one market.[76] Foreign companies operating in Chile absorb this cost by distributing it among all their affiliates throughout the world.

II.1.3.1.3 Implications for and obstacles to exportation arising from the existing certification system

Non-applicability of the Chilean system to wine

As mentioned previously, in 2001 Chile applied to the EU for third-country status with the current certification system, thus requesting a form of limited recognition. From this viewpoint, the eventual recognition of the system in its current form would not represent any change for wine producers, since wine is not an unprocessed product. Therefore, wine would continue to enter the EU market through authorization from the importing countries, as it does today. In contrast, recognition from the EU would mean that certificates issued by SAG-approved companies in Chile (for relevant products) would be valid in Europe, leading to significantly lower transaction costs.

However, it should be remembered that the import authorization system is subject to review in the EU in 2005, and any changes will be made at its discretion. Third-country status for Chile would guarantee ongoing access to the European market.

Problems of competitiveness as a result of limited development of the domestic market

The Chilean system described has not focused on developing the domestic market, largely because the Ministry of Agriculture does not have the legal authority to oversee and approve the quality of food products within the country.

In general terms, the *Ley de Protección del Consumidor*[77] (Consumer Protection Law) regulates the use of labels or declarations on a product sold in Chile in two ways: with regard to consumer rights[78] and by means of established sanctions for deceptive publicity[79] (EMG Consultores, 2001). Any message transmitted regarding a product or service (including seals and self-declarations) is regulated on the basis of complaints from consumers, who must appeal to the justice system with proof that the product's publicity claims are false. In the case of organic products, voluntary Chilean and international regulations help to prove a false claim by defining precisely when a product is organic.[80]

Although this general system works for self-declaration of organic products, it is awkward to implement and requires active participation on the part of the consumer. This mechanism is largely unfamiliar to consumers and has failed to halt the proliferation of labels and inexact terminologies that give no guarantees to the consumer. Legislation regarding use of the term "organic" would be the definitive solution as it could then be used only after compliance with the regulations and certification from a competent body. Consumer-targeted information

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[76] Accreditation in the EU and IFOAM costs US$14,000/year per agency. This excludes the costs of compliance to be given accreditation in terms of infrastructure, registers, etc. (L. Montenegro, *op. cit.*, and Pons and Malecot (2000)).
[77] This law is overseen by the Servicio Nacional del Consumidor (National Consumers' Service), an agency of the Ministry of Economy.
[78] It is a consumer right that the information on goods and services offered be, *inter alia*, truthful regarding the relevant characteristics of the goods and services (art. 3 of the Consumer Protection Law).
[79] This point states that it is an offence to knowledgeably induce error or deceit with any kind of publicity message, regarding, *inter alia*, damage to the environment or quality of life (art. 28 of the Consumer Protection Law).
[80] A. Zúñiga, Agricultural Scientist, CONAMA (personal communication).

campaigns regarding the advantages of organic produce, applicable legislation and consumer rights are also important, as is the strengthening of organizations to oversee compliance with these rights.

Although the poor development of the domestic market also has other causes, such as the relatively low degree of consciousness on the part of national consumers, the fact that the certification system implemented by the state does not include organic produce for the domestic market impedes the growth of this market. The implications for the development of organic production and its export viability are significant. Normally, organic production focuses on both the domestic and foreign markets, both of which are required to make the business profitable and more competitive. This double focus is explained partly by the fact that products in the process of conversion to organic status are not generally accepted in foreign markets, so the domestic market is the natural place for them. Finally, the export market for organic products is, at times, saturated.

Lack of a fully operative competent authority

CCO is currently the only certification company operating in Chile to have requested recognition from the SAG[81] for the national certification system. As seen, the remainder of the certifiers have no link whatsoever with the Chilean government as they are supervised by accreditation organizations from the importing countries. There is currently no authority to sanction poor practice by certification companies operating in Chile (for example, carrying out inspections that do not conform to the law). This situation could eventually damage both the national certification market and the image of national production.[82]

Furthermore, according to Pons and Malecot (*op. cit.*) the national system for which Chile has requested recognition lacks a competent authority, i.e., a public body responsible for overseeing all the involved parties and the functioning of the system.[83] In their view, this also undermines Chile's aspiration to be recognized by the EU.

Greater costs and time delays for exports

For organic wine, the fact that the EU does not recognize Chile as an associate country means that the market must be accessed along a more complex, costly and time-consuming path, and from a disadvantageous position compared to that of exporters from countries recognized by the EU. The process is more time consuming because the importer must obtain authorization from an authority in his or her own country before the merchandise is transported.[84] Certificates issued by a certification company must accompany such authorization.

The increased cost is due to the fact that certification companies currently operating in the Chilean market for Europe bear the cost of accreditation by the EU. This situation does not

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[81] G. Narea, *op. cit.*
[82] V. Zenteno, *op. cit.*
[83] It is this authority that will have to, e.g., authorize the private control and certification body, oversee that body's control programme, implement sanctions, oversee objectivity, validate the interpretations of diverse certification committees (national and European coherence), arbitrate between different certifiers in the case of conflict regarding regulation implementation or application, and develop and adapt regulations according to the demands of professionals and researchers.
[84] According to PROCHILE (2001a), permits can take 3–6 months to be issued, and the control authorities reserve the right to request further information if they deem it necessary.

occur if the producer receives certification from a local company in the importing country. This can occur with countries competing with Chile, such as Argentina or Australia.[85]

II.1.3.1.4 Causes of the obstacles identified

There are many complex reasons for the virtual stagnation of the process of implementing a comprehensive system of organic agriculture certification in Chile, and these are the causes of the obstacles identified above.

Public sector attitudes

The government lacks the political will to implement a comprehensive, state-run system. This is due partly to the fact that very few producers practise organic agriculture and that the activity occupies little significant land within the Chilean agricultural sector as a whole.[86] Additionally, the agricultural sector in general, and specifically public agricultural bodies, have a poor grasp of the implications of this kind of agriculture and the specific policies needed to foster it. This is due, to a certain extent, to the fact that this issue is still not included in the formal education of professionals in the field.[87]

Furthermore, the government seems to regard organic production merely as one more specific area or technique within the wider concept of clean production. This explains why the focus has been placed on the issue of export certification rather than on promotion of an activity that requires profound changes in approach (for example, from "input-based" agriculture to "knowledge-based" agriculture) and that attributes other values to production, above and beyond the limited advantages of foreign currency, such as the positive effects on the holdings and countryside (reduced environmental impact on surrounding areas and fewer health risks for workers) and a higher quality food product for the whole population.[88]

The absence of a lobby, and priority on the public agenda

The trade unions and organizations promoting organic agriculture make up a very small part of the group of national institutions representing agriculture. The large organizations have not expressed an opinion publicly regarding the implementation of a system of certification and promotion of this form of agriculture; this could explain why the government places a low priority on setting up a system such as that proposed by its own experts.[89]

There is thus no clear lobby demanding that the authorities favour the issue over and above the many others currently on the agenda. Generally, the government acts in a reactive manner and so is sensitive to this kind of pressure as long as it represents a significant proportion of production or exports. A similar situation must be played out with the legislative powers if implementation of the system requires that the project has to go through legislative procedures.

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[85] According to F. Bahamonde, Agricultural Advisor for the EU, the export process via article 11(6), importer certification, requires "significant increase in export costs since producers must be certified by an official independent controlling body with regulation ISO 65 and the same manual and process as European controlling bodies." He cites an example in which the daily travel costs for an international inspection are almost four times higher than for a domestic inspection. The cost of the inspection and writing up of the report also increase two-fold.
[86] G. Narea, *op. cit.* and V. Zenteno, *op. cit*.
[87] S. Mathieu, *op. cit*.
[88] P. Yañez, *op. cit*.
[89] P. Yañez, *op. cit*. and V. Zenteno, *op. cit*.

The limitations of the public apparatus

Other difficulties relate to the existing limitations for producing cross-sectoral policies involving multiple institutions, as is the case here. At the very least, a certification system that relates to both domestic and foreign markets falls within the jurisdiction of the Ministries of Health, Economy and Agriculture and the Foreign Office.[90] A lack of clear channels of coordination could result in the initiatives' being ensnared in parliamentary procedures or within the directing body itself.

II.1.3.2 Conversion and certification costs

Both the technical literature[91] on the issue and interviews with vineyard owners and consultants indicate that in the first years of conversion to an organic production system there is usually some degree of reduction in performance and yield, especially if the land has been managed with a high level of agrochemical input. There is also consensus that production stabilizes in the medium term and becomes less vulnerable to pests and disease due to the greater balance that this technology lends to the system. This means that the limitations observed in the transition period and initial years tend to disappear.

Conversion costs

Conventional production involves significant use of agrochemicals, in particular pesticides. Generally, the use of these products increases significantly with the size of holding.[92] The workforce is another important factor in production, with each hectare of vineyard requiring 47 working days per year. This is a relatively high figure that does not differ significantly with holding size (Troncoso, 2001).

Although agrochemicals (synthetic pesticides and fungicides) are no longer used, when a traditional system is converted to organic production average costs per unit-holding usually increase significantly. This is due to a fall in productivity, an increase in the size of the workforce, and investments in technology to produce natural fertilizer and prevent or control weeds and disease.[93]

A fall in yield of as much as 30 per cent may occur, depending on the situation prior to conversion. Reducing productivity to improve wine quality is common in some vineyards,[94] and in these cases withholding synthetic fertilizers would have little or no effect.[95] Performance tends to stabilize in the medium term, when organic fertilizers gradually begin to release their nutrients into the soil and the eco-system of the soil regains its balance.[96]

The net increase in direct production costs, discounting savings from agrochemicals, is around 20 per cent, i.e., an increase from approximately US$850 to US$1,100 per ha/year. This is due primarily to the increase in the workforce necessary to control weeds, and also to an increase in

[90] The Foreign Office would be involved from the point of view of facilitating links with the countries with which agreements or recognition of the certification systems are being attempted.
[91] N. Lampkin (1998), G. Narea and C. Valdivieso (2002), etc.
[92] Fungicides represent 95 per cent of all agrochemicals used in a conventional vineyard. Using indices for agrochemical use corresponding to the total quantity of litres and kilogrammes applied by means of different formulations, Troncoso (2001) estimates an average of 114.5 units/ha, with fungicides responsible for 106 units/ha.
[93] Of the five vineyard owners who gave information on production costs, four indicated increases in production costs attributable to the causes stated.
[94] J. Izquierdo, *op. cit.*
[95] The producers interviewed stated that there was no effect on performance.
[96] N. Lampkin, *op. cit.* and S. Mathieu, *op. cit.*

other costs that are more difficult to calculate, such as compost production or some pest control techniques (traps, etc.), or the need to train workers.[97]

Finally, investment may be needed to make the new system viable. For example, compost production on the holding can be complex if the production area is extensive, since a large volume of dung is needed and this occupies a great deal of space and can be handled only with machinery. The absence of a mature market of certified input products for organic agriculture makes this a crucial factor in Chile (Narea and Valdivieso, *op. cit.*).

In summary, in terms of obstacles to production conversion implies taking on higher costs,[98] however, the product is not easy to place on the market in its transitional period and obtains only the same price as conventional wine. This implies that in the initial years (for the three-year conversion period, at least) the financial situation is unfavourable; this tends to be the case regardless of vineyard size. In the largest vineyards the overall effect can be mitigated by means of a gradual introduction of organic production.

Certification costs[99]

Certification generally involves a set cost for each day of inspection, plus other fixed, proportionally less important charges. All the charge systems reflect the fact that the more complex the inspection (be it because of inadequate records of events for inspection, parallel production of conventional products, or a large area under organic production, *inter alia*), the higher the costs to be paid by the producer.

One day of inspection costs around US$500, and a holding will normally be visited for two days every year, especially in the case of wine producers, moreover the first certification tends to be more expensive because chemical analyses are carried out.

Sometimes a fixed incorporation cost is also charged, as a proportion of sales (less or equal to one per cent). Lastly, there is a charge for the certificate accompanying exports applying for entry into the European market.

In synthesis, certification costs for a producer usually fall between US$1,500 and US$2,500 a year, rising to US$4,000 a year if the vineyard is complex and produces grapes and wine.[100] These values may hardly be relevant if the certified vineyard has a large surface area: for example, with 50 ha the cost per hectare will be around US$50 a year, which implies about a five per cent increase in annual production costs. In contrast, if the vineyard has fewer than 10 ha the cost per hectare is about US$250 a year, a 25 per cent increase in production costs. Therefore, this cost becomes a limiting factor for the many small vineyards in Chile. Group certification[101] is an option for small-scale producers. This consists of issuing a certificate to a group of producers

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97 Miguel Elissat, Agricultural Scientist and organic fruit producer, in the conference "Organic Agriculture in Chile," Valdivia, March 2002; and Francisco Valenzuela, biodynamic producer, Curacaví valley (personal communication).

98 N. Lampkin (*op. cit.*) states that this conversion period can be handled in such a way that the effect on production is minimized. A conversion plan must be drawn up and significant technical support is needed. In this case the cost of the process can be minimized but the necessary technical support is scarce in Chile today.

99 This section is based mainly on results from surveys carried out in the certificating companies operating in Chile, consulted about the structure of their service fees.

100 Information given by certification companies and data from the vineyard owners interviewed were used to calculate these figures. Only data from vineyards certified by EU-recognized companies were used (four of the five vineyards with information on certification costs.) Certification costs of the only vineyard interviewed that is certified by a company not recognized by the EU were around US$1,500/year, for a relatively complex 7-ha holding.

101 There are some examples of this form of certification in Chile but in other areas, such as local honey production in Region X.

managed by a common body, which keeps the records, defines and supervises each holding's jobs, etc. This means that certification costs can be shared between several producers, significantly reducing the cost per hectare. Nevertheless, this requires a functioning organization able to guarantee to the inspector that each individual holding complies with the law.[102]

II.1.3.3 Access to information

Technical information

The technology required to produce a high quality wine under organic management is not simple and requires knowledge that is not easily accessible in Chile today. Some producers interviewed defined these as technological "challenges" rather than "barriers," emphasizing the high degree of professionalism and existing knowledge of technical aspects of cultivation. This aspect is important to bear in mind, since in other groups there is a tendency to see this form of agriculture as a "return to traditional methods,"[103] when in fact it is a method of production demanding a high degree of knowledge that must be adapted to the situation on each individual holding.

Most vineyards have converted part of their production to organic methods, tending to hire specialized advisers or place a knowledgeable professional in charge of the project (in the case of the largest vineyards). These are generally companies or individuals with valuable expertise in conventional wine production. In fact, the main advisers are also well-known oenologists who advise vineyards on conventional production.[104]

Some of the producers interviewed believe that good technical information does not exist in the country, while others insist that they are able to call directly on the expertise of domestic university professors. It was also stated that this situation is more serious for emerging vineyards, as they are more dependent upon information provided by third parties.

The role played by certification companies is also key, given that it is they that know which processes or products are permitted and which are not.[105] There is a shortage of high-level specialized training and networks transferring technology and information to their members (Narea and Valdivieso, *op. cit*.).

Legal and market information

As noted above, the certification company is the main and sometimes the sole vehicle transmitting legal or regulatory information to producers.[106]

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[102] A. Vergara, *op. cit*. (personal communication).
[103] E.g., the Rector of the Universidad Austral's speech, at the opening ceremony of the conference "Organic Agriculture in Chile" in Valdivia, in March 2002.
[104] In the large vineyards contacted, an oenologist is responsible for the organic projects and press information. Diverse publications from *Diario El Mercurio*, *Revista La Cav* magazine (April 2002), and L. Alcántara (2002) cite at least two oenologists who advise or have advised various organic projects in the country and abroad as well as advising vineyards in conventional production.
[105] A. Vergara, *op. cit*., V. Zenteno, *op. cit*., and three of the five producers who analysed the issue of information stated that inspectors were an important source of information, especially regarding regulations and the management aspects needed for certification.
[106] *Ibid*.

With regard to international markets, there is no systematic information in the country on the organic wine sector, apart from specific pilot studies,[107] e.g., to facilitate project evaluation work. Those currently exporting organic wine were previously exporters of conventional wines, and so have access to information from their own clients in the destination markets.[108]

The situation is complex for small-scale producers who try to gain access to the export market, although there have been some successful cases; all attempts have relied on support from the public sector.[109]

There is no association of organic wine producers, and existing associations of vineyard owners have not taken proper responsibility for market research or promotion or the technological and commercial requirements of organic production.[110] Information and the capacity to generate information is seen to be particularly crucial for the emerging vineyards interviewed, given the relatively high risks they take by moving into a new market, compared to the larger vineyards.

II.1.3.4 Support mechanisms

This section analyses the tools existing to support the production and export of organic wine. Existing tools that are not specifically for organic wine, or even organic agriculture, but have been used in these cases, are described first; the need to support the sector and develop specific tools to foster wine production and organic agriculture in general is then analysed. This need is expressed in interviews with producers and individuals in the field, in surveys with certifiers and in the national press and technical literature.

II.1.3.4.1 Existing support tools

There is a significant range of support tools for the agricultural sector in general. These tools are mostly funds to part-finance specific projects, consultations or activities within the general production and sales process. There is currently no specific support line for organic agriculture just as there is no strategic plan to foster it, therefore, the rationale underlying the support tools does not relate to the environmental and/or social benefits of organic agriculture, but to the arguments for support to agricultural production in general.

II.1.3.4.1.1 The Foundation for Innovation in Agriculture (Fundación para la Innovación en Agricultura or FIA)[111]

This foundation, which is supported by the Ministry of Agriculture, aims to promote the development of competitive advantages in the country's agricultural production system by fostering and stimulating innovation aimed at the following objectives: increasing sector quality, profitability and competitiveness; building up the sustainability of production processes; diversifying forestry, agricultural and fishing activities; and promoting associative agricultural management and connections with local agents.

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[107] For example, PROCHILE's studies and conferences on organic markets in the U.S., Great Britain and Holland, and studies carried out by the Corporación Eurochile or Lucas Kilcher's presentation in the conference "Organic Agriculture in Chile," Valdivia, March 2002.
[108] When interviewed, the producers mentioned that it is the foreign clients themselves who request organic wine.
[109] S. Mathieu, *op. cit.*
[110] The issue is not mentioned in the information published by the associations of vineyards.
[111] This section is based on information from G. Narea and C. Valdivieso, *op. cit.*, and the FIA Web site <http://www.fia.cl>, where there is a very detailed database of the projects awarded funding.

There are three FIA support tools relevant to this study: Innovation Projects, Technological Visits and Technological Consultancies.

Innovation Projects: Groups of producers, companies, research centres and individuals or legal entities can apply for these projects. Up to 70 per cent of the total project cost is financed, with a maximum of US$35,000 per annum.[112] There are four project categories: New project introduction,[113] Innovative production management,[114] Agro-industry[115] and Innovative agricultural management.[116]

This instrument has not been used to finance organic wine projects. Some projects of general interest to the sector do stand out, however, such as projects for biological control and the development of organic production organizations.[117]

Technological Visits: This tool contributes to learning about innovative technology both in Chile and abroad. FIA will fund up to 80 per cent of the visit costs up to a maximum of US$35,000 with a maximum stay of 20 days. Funding is intended for groups of between five and 15 people, made up of producers, businesspersons, researchers, professionals and technicians.

There are several examples of visits orientated towards organic production in general,[118] but none are specifically for wine production.

Technological Consultancies: This tool is used to part-finance the hiring of Chilean and/or foreign consultants in order to learn about innovative technology and then to disseminate and apply the technology in production processes. There is a maximum contribution of 70 per cent of the total up to a maximum of US$7,000 There is no information regarding the use of this tool for organic agriculture.

II.1.3.4.1.2 Corporation to Foster Production (Corporación de Fomento de la Producción or CORFO)[119]

This corporation is supported by the Ministry of Economy and aims to develop all sectors of the economy by funding a range of activities, including technological innovation and technical aid projects. The organization operates through agents distributed throughout the country or focusing on specific sectors.

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[112] Items to be financed are: machinery and equipment, incremental human resources, trips and transfers, input materials and supplies, services from third parties, transfer and dissemination activities and general or administration costs.
[113] This line covers the introduction of products from abroad or other zones of the country, native resource exploitation and new product development.
[114] This line finances the adoption of technological innovations that contribute to increasing product quality, productivity or the exploitation of profitability.
[115] The adoption of innovations generating products with higher added value or increasing the efficiency of industrialization processes is financed.
[116] Projects adopting associative forms of production and/or services increasing efficiency and broadening the offer of products and services are financed.
[117] FIA's projects include, e.g., "Production and utilization of *Trichoderma sp*. in the control of fungal diseases in the production system of organic fruit for export in the central zone of Chile," carried out by the Centro de Educación Tecnológica (CET), Huertos Orgánicos de Chile, Agrícola Sexta Frut S.A., Frutícola Viconto S.A. and Agrícola Greenwich (2000–2004,) and "Development of a commercial and productive organization of small-scale agricultural producers in organic agriculture," Cooperativa Campesina Chacay San Vicente Ltda. (1998–2001).
[118] "Technology capture of organic cultivation on the west coast of the United States" (June, 1998), "Conference on organic production and pest control in Cuba" (January, 1999), "Visit to productive and commercial reconversion experiences in the field of organic production and integrated management in two European countries: Holland and Germany" (September, 1999), and "Technological capture of organic agricultural production in Cuba" (December, 1999.)
[119] The information in this section was obtained from G. Narea and C. Valdivieso, *op. cit.*, and from the institution's Web site <http://www.corfo.cl>.

The main tools to be applied to the organic production sector are technological innovation projects (FONTEC), the Development and Innovation Fund (Fondo de Desarrollo e Innovación or FDI), the Technical Aid Funds (Fondos de Asistencia Técnica or FAT) and Cooperation Promotion Projects (Proyectos Asociativos de Fomento or PROFO).

FONTEC Line 1: Finances technological innovation projects with activities in research and the development of technology relating to products, processes and services. It also includes support to suppliers to provide technological strength to a production chain, thus facilitating the development of an innovative project. CORFO's contribution is 50 per cent funding of the project's cost. Individual companies or associations of companies are eligible.

FONTEC Line 3: Supports cooperative technology transfer projects to survey, disseminate, transfer or adjust production or management technologies for associated enterprises in order to contribute to the modernization of their production. CORFO funds 50 per cent of consultancies and 45 per cent of technological missions abroad, in which businesspersons, company directors, professionals and technicians may participate. Groups of five or more unrelated enterprises are eligible for the visits, or three or more enterprises in the case of hiring expert consultancies in specialized technologies and production processes at an international level.

Development and Innovation Fund, FDI: Competition fund for projects on innovative and technological change in strategic impact areas of economic and social development. The field of action is in new technology development and adaptation, technology dissemination and transfer to enterprises, and development of markets related to development of the innovative system. The projects to be presented must promote the quality of life of the population and have a high economic and social impact, particularly regarding their impact on the environment.

The funds are available for non-profit-making centres or institutions dedicated to research and technology transfer and technological enterprise consortia made up of three or more unconnected companies associated with one or more technological centres. The FDI finances the costs of operations, human resource administration, subcontracts and other requirements of project development.

Technical Aid Fund, FAT: This is a CORFO promotional tool to part-finance small and medium-sized enterprises in hiring the services of specialized consultants in areas such as finance, design, production processes, commercialization, strategic planning and marketing. The funding is used to incorporate management techniques into the operations of enterprises or new technologies into their production processes so that they can improve competitiveness.

There are both individual and collective options: the latter is for groups of at least three enterprises with compatible themes. Funding relates to a specific management field and is based on a diagnosis made by an operations agent. It is available for Chilean companies with annual net sales of between UF2,400 and UF100,000. These limits do not operate when the company participates in another CORFO promotion program or in Export Committees with PROCHILE funding.

Cooperative Promotion Projects, PROFO: These funds part-finance activities undertaken by an initial group of at least five goods or services production companies with a common approach to improving their competitiveness. They must be prepared to commit themselves to the implementation of a shared project that allows them to resolve management and marketing problems, which, on account of their size or nature, are better tackled as a group. It is open to

small or medium-sized enterprises, each with net annual sales of between UF2,400 and UF100,000 in the previous year.[120]

FONTEC has financed three organic wine production projects,[121] carried out, it should be noted, by the country's largest vineyards, Concha y Toro and Viña Carmen. A project for natural predator production received FDI funding.[122] PROFO projects have been applied to conventional wine production[123] and to projects in other areas of organic agriculture.[124]

II.1.3.4.1.3. General Office for Promotion of Exports (Dirección de Promoción de Exportaciones or PROCHILE)[125]

This body is supported by the Foreign Office, and its remit is the promotion of national exports, particularly non-traditional items; it supports the introduction of Chilean companies into the international arena. It has supported the organic sector since 1995, with the creation of the Organic Producers' and Exporters' Committee. This committee has drawn up catalogues of organic exports, held a range of conferences,[126] conducted market studies for various products[127] and supported the attendance of organic producers at international organic fairs.[128] It has also supported the certification process by developing studies, organizing visits by experts and working for the international accreditation of local certification companies. PROCHILE backed the creation of the Chilean Organic Agriculture Group (Agrupación de Agricultura Orgánica de Chile or AAOCH), an organization bringing together people, institutions and enterprises related to the sector.

In addition, PROCHILE has two programs to support the entry of Chilean companies into the international arena: one (INTERPAC) aimed at small-scale local *campesino* agriculture and the other (INTERPYME) aimed at small and medium-sized enterprises (SMEs). The objective is to increase the participation of these sectors in international trade by generating a change in their business culture so as to allow them a strategic and permanent position on foreign markets. The methodology is based on group work by the enterprises under the guidance of tutors accompanying the process; this takes the participants from self-assessment to the stage of entering the international arena by means of the development of strategies and action plans.

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120 Enterprises with net annual sales of under UF2,400 or over UF100,000 can participate if and when jointly they do not exceed 30 per cent of the total number of participating companies.

121 "Organic Wine Production," by Viña Concha y Toro S.A. (1998) in Region VII: total project cost: approx. US$200,000, total contributed by the Fund: US$70,000; "Design and development of a production system to obtain organic wine from Chardonnay and Pinot grape strains in the Casablanca valley" by Viña Concha y Toro S.A. (2000): total project cost: approx US$180,000, total contributed by the Fund: US$74,000; and "Organic grape production for wine" by Viña Carmen (1998): total project cost: US$220,000, total contributed by the Fund: US$68,000.

122 *Mass breeding of natural predators*, Quilamapu: INIA, 1997.

123 Two PROFO projects were identified with the mediation of the Corporación Chilena del Vino, <http://www.ccv.cl>, with a third project in the San Clemente zone, Region VII.

124 FONTEC "Production under technological conditions of natural agriculture and a semi-controlled atmosphere," by the Sociedad Agrícola e Industrial Ecoagro Natural Ltda. in 1994, and FONTEC "Organic cherry production," by Agrícola Arcahue Ltda. in 1997.

125 This section is based on the document by L. M. Hernández, "PROCHILE's work in the organic sector," G. Narea and C. Valdivieso, *op. cit.*, diverse documents collected from the institution's Web site, and M.L. Hernandez's presentation in the conference "Organic Agriculture in Chile," in Valdivia in March 2002.

126 E.g., the conferences "I and II International Conference of Organic Products" (1996 and 1999), "Organic Agriculture in Chile," in Valdivia, March 2002, and "The European Union market for Chilean Organic Products," in Santiago, December 2001.

127 "Study on commercial management of organic products in Europe," drawn up by the PROCHILE office in Holland, December 2001, < http://www.prochile.cl>, "Manual for export of Chilean organic products to Europe," drawn up by the PROCHILE office in London, November 2001, and "Analysis of conditions for commercialization of Chilean organic products in the market of the European Union," by EUROCHILE, 1999–2000.

128 E.g., participation in BioFair in Costa Rica in 1996 and 1997 and BioFach 2000, 2001 and 2002 (L. M. Hernández, *op. cit.*).

Producers from family *campesino* agriculture may participate in INTERPAC if they have the potential to produce and export fresh or processed agricultural or fishing products. The objective of INTERPYME is to promote and aid the entry of national SMEs into the international arena in order to increase their participation in foreign trade.

With these stages completed, the enterprises can apply to take part in the regular Agricultural Exports Promotion Fund (Fondo de promoción de exportaciones agrícolas) competition. The objective of this tool is to diversify export supply, increase the value added of goods and services and establish new products for export. It focuses on small-scale export companies and capacity from the regions and non-traditional or emerging products. It is a competition fund contributing up to 70 per cent of project costs. It finances market studies, exploratory missions, invitations to potential clients, commercial missions, participation in fairs, the production of promotional material etc. Some 20 projects linked to the organic sector were financed via this competition between 1999 and 2000.[129]

II.1.3.4.1.4 Agriculture and livestock service (Servicio Agrícola y Ganadero or SAG)[130]

The SAG manages two significant tools, the Health Patrimony Improvement Fund (Fondo de Mejoramiento del Patrimonio Sanitario) and the Degraded Soils Recuperation Programme (Programa para la Recuperación de Suelos Degradados). The former contributes to improving the condition of agricultural and fishing resources: it is an annual competition fund financing up to 70 per cent of project costs, with a maximum of US$106,000 year over a maximum project execution period of four years. Companies, associations of companies, research institutes and individuals or legal entities can all apply.

In the case of organic agriculture, Narea and Valdivieso cite three examples of projects that the Health Patrimony Improvement Fund has funded: “Establishment of an orchard and development of the technological package for the production of limona-strain apples,” in the Purranque area, Region X (1999); “Conversion of a Granny Smith apple orchard to the organic production system for the foreign market,” in the San Rafael commune, Region VII (1999); and “Organic honey production with internationally valid certification,” Region VIII (1999).

The Degraded Soils Recuperation Programme is a tool to promote soil recuperation with the objective of encouraging the improvement of land affected by erosion or poor fertility by means of practices established in the following specific programs: phosphate fertilization, calcareous matter, meadows, soil conservation[131] and soil rehabilitation.

In the soil conservation component, it should be noted that, as of 2002, additional points can be assigned by an organic production certification company to agricultural producers, either already certified as organic or in the transitional stage, if they comply with Chilean production law NCH 2439 and have a valid certification contract for the holding in their management plan.

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[129] E.g., “Exploration of new markets in Europe and North America for agricultural products from the Itata basin” by PROSUR (1999–2000), “Creation and development of a corporate image and trademark for the organic products produced by Huertos Quebrada Seca in the Metropolitan Region (1999–2000), “Exploration of the fresh organic berry and asparagus market in Europe and Scandinavia,” by Hortifrut (1999–2000), and “Promotion of fresh organic apples in the United States” by Huerto San Nicolás of Region VI (1999–2000).

[130] Chapter extract from G. Narea and C. Valdivieso, *op. cit*.

[131] Programme aimed at reducing or avoiding physical soil loss: a sum of 80 per cent of net costs is awarded. The addition of compost or cultivation of green composts can be financed within this sub-programme.

II.1.3.4.1.5 Institute of Agricultural and Fishing Development (Instituto de Desarrollo Agropecuario, or INDAP)[132]

This institution, which is supported by the Ministry of Agriculture, aims to promote and foster development and consolidation of local family *campesino* agriculture as a social and economic player in the country's rural character. It also seeks to transform these groups into valid and permanent players in the national economy, globally integrated with competitive production.

The INDAP applicant is defined in terms of, among other criteria, land area (equivalent of 12 irrigated ha), assets (US$106,000 maximum), family income mainly originating from agriculture, and the need for the family to work on the holding itself.

The institution has a wide range of support tools, notably financial services (credit with preferential tax rates and allowances) and advisory programs. Among the financial services available are short-term individual financing,[133] short-term financing for organizations,[134] long-term financing for organizations,[135] national project competitions[136] and a guarantee fund for small enterprises.[137]

The Technical Advice Services (Servicios de Asesorías Técnicas or SAT) are subsidies awarded to producers to hire technical advisers operating through producer groups. They include the local holdings technical advice service (Servicio de asesoría técnica predial local or SAL),[138] the technical advice service for start-up enterprises (Servicio de asesorías técnicas a pre-empresa),[139] the technical advice service for enterprises (Servicio de asesoría técnica a empresa),[140] and the enterprise management centre (Centro de gestión empresarial or CEGE).[141] There is no systematic information on how all these tools have been used to foster organic agriculture.

It should be pointed out that INDAP operates an incentives program for degraded soil recuperation similar to SAG's but applicable to users of its services. This does not include preferential treatment for organic agriculture.[142]

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[132] Information on INDAP tools came from G. Narea and C. Valdivieso, *op. cit.*, and P. Arriagada, responsible for organic production in INDAP's PRORUBRO programme (personal communication).
[133] Intended for annual input materials, such as seeds, fertilizers, workforce salaries, feed purchase, water rights payment, repairs or equipment hire. Total contributed, up to UF250, for a one-year period.
[134] To finance operations capital, for stocking, selection, processing and commercialization of agricultural and fishing products and to finance annual exploitation plans of the holdings themselves or their associates. Total according to need, for a one-year period.
[135] To finance forestry, agricultural and fishing investments, agro-industrial and marketing projects, and the purchase of machinery, equipment and draft animals, for a maximum 10-year period.
[136] Financing for innovative investment projects that improve profitability and competitiveness of the agricultural enterprise. Long-term credit to finance up to 75 per cent of investments, bonus of up to 15 per cent of investments, 5 per cent of investment total, to cover project creation and up to UF18 per family for hiring technical advice.
[137] Operates for organizations lacking sufficient financial guarantees to back credit requested from INDAP, to finance investment projects and the need for working capital, projects for irrigation, drainage, and production infrastructure or equipment. Total of up to UF3,000 for small enterprises and UF24,000 for organizations of small enterprises according to the law, for a maximum 10-year period.
[138] SAL's objective is to improve user competitiveness and income levels, giving them technological and economic advice for production and management on the holdings.
[139] Its objective is to foster and strengthen the business process through the incubation of associative enterprises of small-scale agricultural producers in order to develop them and their business management.
[140] Its objective is to develop capacities within the EAC to deliver tools that allow systematic progress towards the development of a highly competitive, private institutional structure adapted to market conditions.
[141] The objective is to improve competitiveness of the productive and organizational systems of small-scale agriculture by means of an expansion in farmers' capacities, competence and skills.
[142] G. Narea, *op. cit.*

Lastly, there is a program to integrate enterprises into networks according to their activities (PRORUBRO), which instituted an organic agriculture group in January 2002. This program offers associates information, market exploration, studies and connections with other public and private organizations, *inter alia*.

II.1.3.4.1.6 Support tools from other government institutions

Other public institutions have potentially useful instruments for organic agriculture: they include the BANCO ESTADO, which operates a seasonal credit system, and the Technical Cooperation System (Servicio de Cooperación Técnica or SERCOTEC), which operates similar programs to CORFO but aims at micro-enterprises.[143]

In the research field, the National Commission for Scientific and Technological Research (Comisión Nacional de Investigación Científica y Tecnológica or CONICYT) operates a Fund to Foster Scientific and Technological Development (Fondo de Fomento al Desarrollo Científico y Tecnológico or FONDEF) that has financed projects in the general viticulture field as well as in areas of organic agriculture. A project to search for native grape strains developed by the Universidad de Santiago stands out, alongside others on certification of grape strains and development of management software in wine-production enterprises. The Universidad Católica de Chile also has a project for bio-pesticide production and use.

II.1.3.4.2 Analysis of the need for support in the organic sector and particularly in wine production

According to the information given above, over 70 government-supported projects and initiatives have been carried out in the field of organic agriculture since 1995.[144] This figure is low compared to other areas and to the total number of projects the government backs annually in the agricultural sector, but it is significant considering the fact that only a few years ago organic production accounted for a mere 300 holdings.[145]

As seen in the descriptions of the tools available, these support initiatives have not been the result of a specific policy or strategy of promotion, rather they have largely been isolated initiatives.[146] A large proportion of these projects have had to compete with initiatives from other fields and the impacts and results are not necessarily comparable for evaluation.[147] Furthermore, documentation of the experiences gained from these projects has not been disseminated adequately, hence it is not easy to gain access to the results.[148] Whether the above-mentioned projects are used, amongst others, for the specific purpose of supporting organic agriculture depends on both the supporting institutions' guidelines and priorities, mainly at the level of the regional offices,[149] and the pressures exercised by other sub-sectors.[150]

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[143] It has, e.g., Associative Programmes, Supplier Programmes, a Technical Aid Fund (collective and individual), Pre-Investment Programmes and a Consultancy Development programme.
[144] G. Narea and C. Valdivieso, *op. cit.*, list 50 projects. This list omits various PROCHILE projects, such as studies, participation in organic fairs and support for certifiers or the AAOCH; it also omits the CORFO projects in organic wine mentioned in this document. If these projects are included, the total number of projects easily rises to over 70.
[145] P. Ceroni, President of AAOCH, at the conference "Organic Agriculture in Chile," Valdivia, March 2002.
[146] V. Zenteno, *op. cit.* The exception might be PROCHILE's work and that of INDAP with the PRORUBRO initiative.
[147] E.g., it is not surprising that the potential benefits of this kind of agriculture for the environment and human health do not tend to be incorporated in evaluations, as they are complex to evaluate and quantify.
[148] G. Narea, *op. cit*. One exception to this information deficit is access to the FIA's project database, which includes projects financed by them and other institutions, but it is not exhaustive. Only 25 organic agriculture projects are included.
[149] P. Arriagada, *op. cit.*
[150] G. Narea, *op. cit.*

It is interesting to note that even though some of the larger vineyards have received government support through CORFO or PROCHILE, and/or have collaborated with universities in research projects of interest to them, when interviewed, producers claimed to be unaware of the tools available and never to have used them. All the producers interviewed acknowledged some degree of ignorance in the matter.

Organic agriculture organizations, for their part, are making clear demands for the creation of a set of explicit and specific support tools.[151] There is also consensus amongst certifiers[152] that support through subsidies for both production during the conversion period and first year certification costs is a priority. The certifiers interviewed also back the idea of providing support for training the different actors involved, particularly producers and regulators, and of providing diverse forms of support during the commercialization phase. They also regard it as necessary to inform domestic consumers and improve domestic regulation.

Explicit support tools would have the following advantages: they could compensate specific, positive, non-product related environmental externalities; they are an incentive for producers to enter the field;[153] they focus on and improve awareness of the specific problems of all organic agriculture (certification, conversion, biological controls) and the specific problems of some particular crops (specific technologies); subsidies could be transitional instruments providing support exclusively during the conversion period; they could be provided within a more comprehensive strategy, covering aspects globally and in a logical sequence, for example, development of capacities, structure, the domestic market, etc.[154]

II.1.4 Conclusions

A number of important Chilean organic wine producers have gained access to the EU's market and are in good shape to continue doing so. The lack of a national certification system and the costs associated with certification are barriers, but they are not prohibitive. The producers interviewed believe that, in addition to these barriers, other challenges lie in technology (including the conversion period), cooperation amongst the producers, and access to market information. Existing large exporters have in general handed over the responsibility of certification to the certifiers and thus do not directly experience the complexities of the European organic market or Chile's lack of recognition as a third country by the EU.[155]

However, different types of producers coexist within the organic wine production sector, and the obstacles weigh differently on each. The greatest challenge for small-scale, traditional producers is to resolve product quality problems, to be able to take on the certification and information costs and to receive support in order to gain access to international markets. The barriers that emerging vineyards face are related to access to information, and promotion and globalization in the markets. The support tools analysed in the previous section could be used to overcome most of these problems.

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151 E.g., the opinion of the President of AAOCH at the conference "Organic Agriculture in Chile," Valdivia, March 2002.
152 The five certification companies interviewed coincided in giving highest priority to "production subsidies in the conversion period" and "certification subsidies in the first year of certification." There is also a clear tendency to give priority to producer and regulator training, promotion of domestic consumption through consumer information campaigns, adequate regulation, research and marketing support. In contrast, no priority was given to permanent certification subsidies and opinion was split regarding support on technological matters or market research development.
153 G. Narea, *op. cit.*
154 V. Zenteno, *op. cit.*, P. Yañez, *op. cit.*, S. Mathieu, *op. cit.*
155 These issues were not mentioned by the producers interviewed or the press information reviewed. Instead, opinion regarding obstacles and challenges centred on the other issues mentioned.

Although it has access to existing tools, as with all organic agricultural producers, the group would benefit from a coordinated government support program aimed at resolving obstacles regarding information, technology and certification in a comprehensive way. There are clear advantages to implementing a support program that includes the diverse governmental organizations and to adapting or creating specific new support tools for this kind of agriculture, bearing in mind the aim of developing a competitive and sustainable export sector.

The current status of Chile's certification system obliges Chilean producers to enter the European market via an import mechanism that is reviewed and modified at the discretion of the EU. Although organic wine exporters have opted for certification from companies approved by the import countries, this option is not chosen for its convenience but because it is the only alternative currently available in the absence of a comprehensive and internationally-recognized national certification system. Chile and the EU recently signed a free-trade agreement that offers more points of entry for cooperation on this issue.

Regarding domestic obstacles, the only way to make Chilean organic wine exports sustainable is through complete implementation of a national certification system that includes processed products and that can then be recognized by the EU.

For this issue to become a priority on the agenda, cooperation between the government and private sectors is essential.

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II.1.6 Annexes

II.1.6.1 Annex 1: Location of the main large and emerging vineyards according to wine-producing sub-regions and zones

Since 1996, new laws have been passed establishing the Denomination of Origin of wines and defining the usage of the term. The sub-regions set out in the Table II.3 below correspond to this denomination and the vineyards to be found in each of these zones are indicated.

Table II.3: Denomination of origin: sub-regions

Sub-region	Zone	Vineyards
Valle del Aconcagua		Errázuriz
Valle de Casablanca		Casablanca, Cuvée Mumm, Santa Emiliana, Veramonte, Villard Fine Wines, Vista Mar, William Cole
Valle del Maipo		Almaviva, Aquitania, Barón Philippe Rothschild, Cánepa, Carmen, Casa Rivas, Concha y Toro, Cousiño Macul, De Martino, Domaine Rabat, Doña Javiera, Huelquén, Manquehue, Portal del Alto, Quebrada de Macul, Santa Carolina, Santa Ema, Santa Inés de Martino, Santa Rita, Tarapacá, Terramater, Undurraga, William Févre
Valle de Rapel	Valle del Cachapoal	Anakena, Chateau Los Boldos, De Larose, Gracia, La Roncière, La Rosa, Morandé, Porta, Santa Mónica, Torreón de Paredes
	Valle de Colchagua	Bisquertt, Caliterra, Casa Lapostolle, Casa Silva, El Huique, La Posada, Los Vascos, Luis Felipe Edwards, MontGras, Pueblo Antiguo, Ravanal, Santa Laura, Santa Emiliana, Siegel, Viu Manent
Valle de Curicó		Aresti, Astaburuaga, Benítez, Cavas Schroeder y Hanke, Correa Albano, Echeverría, Inés Escobar, La Fortuna, Los Robles, Miguel Torres, Montes, Pirazzoli, Osvaldo Astaburuaga Correa, Río Claro, San Pedro, San Rafael, Torrealba, Valdivieso
Valle del Maule		Balduzzi, Calina, Carpe Diem, Carta Vieja, Conde del Maule, cono Sur, Cremaschi Furlotti, Domaine Oriental, El Aromo, Gillmore Estate, Hugo Casanova, J. Bouchon, Lomas de Cauquenes, Martinez salinas, Rucahue, Segú, Terranoble, Vergara.

Source: Guía de Vinos de Chile, 2002

II.1.6.2 Annex 2: Wine production processes

The white wine production process

The process begins when the grapes are unloaded into a press and the juice is extracted; this process lasts about three hours. Firstly, the "first drop must," the highest quality must, is drained from the grapes, then the "second drop must" is drained from pressing the skins and other solids. The musts can be fermented either individually or together, depending on the wine being produced. The process may continue by taking the must straight to fermentation or by first macerating the skins for 4–8 hours.

The next stage is fermentation of the must. First it is cooled to 12ºC and selected yeasts are introduced. It is then moved into stainless steel barrels, where all the sugar is converted into alcohol. Next it is transferred into another container and stabilized at a low temperature; bentonite (a kind of clay) and other compounds are used to precipitate suspended solids in the

must. Ascorbic acid, SO_2, is added and the pH may be adjusted, depending on the acidity. It is then transferred once again and filtered prior to bottling.

There are many possible variations in the process depending on the strain and condition of the grapes and the product to be obtained. For example, enzymes may be added to break down the grape skins during the maceration period prior to fermentation. Ascorbic acid is traditionally added to the wine as it reduces the oxygen content, thereby impeding oxygenising processes, and prevents undesired microbial growth. Yeasts are added to promote alcoholic fermentation because of the low level of yeast occurring naturally in the grapes.

The red wine production process

For red wine, after the grapes have been pressed the juice is fermented with the skins (fermentative maceration) in steel tanks for 12–20 days at between 20ºC and 27ºC. During this period the must is over-pumped (pumped from the bottom of the fermentation tank and poured over the head) three times a day, in order to facilitate transfer of the colour and compounds responsible for the astringent characteristics of red wine from the skins. Once the liquid is drained, the "first drop must" is obtained, which can either continue to complete fermentation for the finest wines or be combined with the pressed must.

A complete fermentation is then carried out without the pomace (the residue from pressing) but with yeast; it takes 20–30 days for the sugar to be converted into alcohol. The yeast is then extracted and malolactic fermentation occurs, lasting between 15 and 30 days, when the malic acid is transformed into lactic acid, reducing the acidity.

The result of this fermentation is a cloudy wine that is subjected to one or several rackings (transfer from one tank or container to another) in order to decant the wine and separate out the solids. The wine is then left to age in the same steel tanks or in wooden casks. In the latter case, the wood gives the wine certain compounds that modify and transform it with time. Lastly, the wine is clarified by adding substances that precipitate the solids still in suspension, after which it is bottled and taken to the cellars for aging. Ascorbic acid is also added to red wine in the production process for the same reasons as those described for white wine.

II.2 The EU and the market for organic products (specifically wine)

II.2.1 The market

An overview of the current market for organic products in Europe is provided in Wendt (2000), Willer and Yussefi (2001) and van der Grijp and den Hond (1999).

According to all these authors, organic farming developed very rapidly in the European member states during the last decade. On the supply side, the area of land under organic production grew by 30 per cent annually between 1986 and 1996. In 2001 there were about 3.7 million ha, representing about two per cent of total farm land, under organic management.[156] Official statistics, however, are available only until 1998, in which year the area of land under organic management was 2.9 million ha.[157]

It should be noted, however, that there are important differences between the different EU member states. Whereas in Austria almost 10 per cent of the agricultural land is organically farmed, in Ireland the sector share amounts to less than one per cent.[158] Van der Grijp and den Hond (1999) group the countries into four categories: the booming countries, Denmark, Italy and Finland, which have a high proportion of organic agriculture in their total area under agriculture and high growth rates; the stabilizing countries, Germany, Austria, Sweden, which have a high proportion of organic agriculture in their total area under agriculture and low growth rates; the high potential countries, Greece, Ireland, Norway, Portugal and Spain, which have a relatively low proportion of organic farming within their total agricultural production and high growth rates; and the backward countries, the Netherlands, France, Belgium, Luxembourg and the U.K., which have low proportions of organic farming in their total area under agriculture and low rates of growth.

Regarding the demand for organic food, although in general the market is still small it is expanding rapidly everywhere in Europe. Predictions for market shares of organic produce vary, but average around 5–10 per cent for 2005.[159] Sales of organic food almost tripled in value between 1990 and 1997. The absolute size of the market in 2000 was more than US$6 billion. In the EU, Germany is the largest market in absolute terms, but according to van den Grijp and den Hond (1999) in several European countries (Denmark, Switzerland, Sweden, Austria and Germany) the market for organic food can be considered mainstream, having passed the one per cent market share threshold.[160] Generally, the market is larger in the richer North European countries than in the South European countries, and in the 1990s the market grew fastest in Denmark and Sweden. Table II.4 below provides some figures on the market for organic food in the EU.

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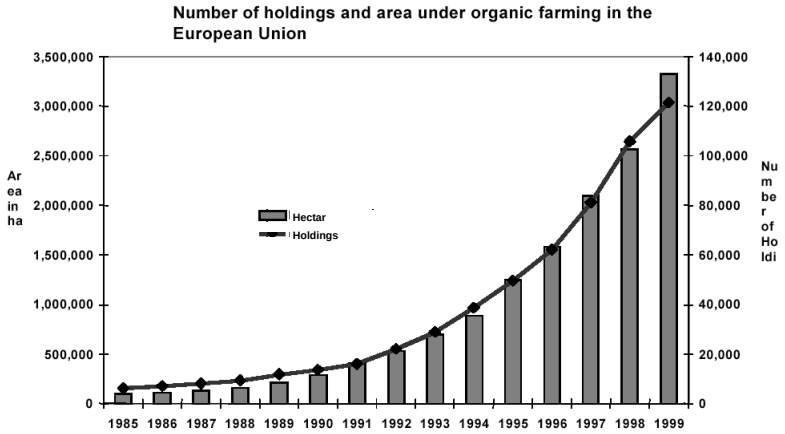
156 H. Willer (2000).
157 EC (2001).
158 On a worldwide scale this compares to 0.22 per cent in the US, 1.77 per cent in Argentina and a mere 0.02 per cent in Chile (H. Willer and M. Yussefi 2001).
159 H. Willer (2000) or L. R. Comber (1998).
160 Data from 1999; more European countries have since joined this group.

Table II.4: The European market for organic products in 1997 and estimate for 2000

Country	Retail Sales (US$ million)	Total Food Sales (%)	Expected Annual Growth (%)	Estimate 2000 (US$ million)
Germany	1,800	1.2	10	2,500
Italy	750	0.6	20	1,100
France	720	0.5	20–25	1,250
Belgium	620	–	–	–
Great Britain	450	0.4	25–30	900
Switzerland	350	2	20–30	700
Netherlands	350	1	15–20	600
Spain	320	–	–	–
Denmark	300	2.5	30–40	600
Finland	260	–	–	–
Austria	225	2	15	400
Sweden	110	0.6	30–40	400
Europe	6,255	–	–	8,450

Source: ITC, 1999

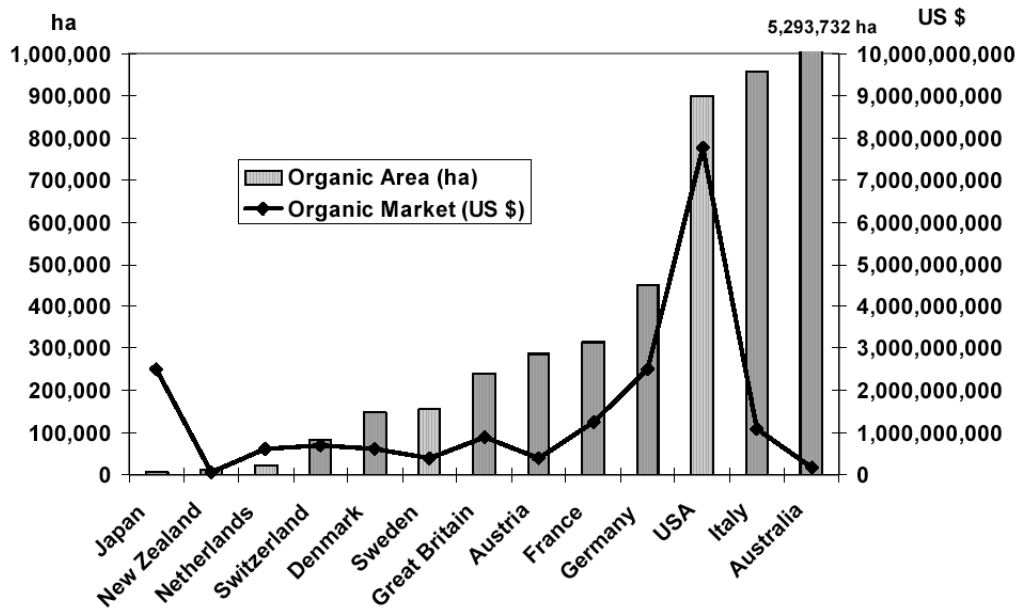
Figure II.4: Development of organic agriculture in Europe



Source: Lampkin, for 1999: SÖL-Survey; Graph: Markus Rippin, ZMP

Willer and Yussefi (2001) have compared the organic area and the size of the organic market in the major producing and consuming countries, identifying in general a correlation between the two, with the significant exceptions of Australia, Italy, France and Japan. The gap between production and consumption in Japan and Holland is a promising sign for future exports, just as the large area destined for organic production compared to the small domestic market size in Australia could warn Chilean exporters to avoid that market. These figures would have to be examined in detail for each product market in order to provide more specific indications.

Figure II.5: Organic area in relation to the organic market by country for the year 2000



Source: Yussefi, SÖL 2001

II.2.1.1 Organic viticulture

Organic viticulture started in the 1970s in Germany, France and Switzerland. In 1985 the first producer association was founded in Germany and other European countries subsequently followed suit.

Regarding the development of organic viticulture worldwide, Geier, Hofmann and Willer (2000) state:

> "In most wine growing countries organic viticulture is now becoming more and more important. In most non-European countries organic viticulture is still in an initial stage and the number of organic vineyards is still small. ..The organic producer associations in many countries do not have sufficient expertise about organic viticulture yet. Therefore, various specific organizations for commercial organic wine growers were formed recently in countries such as New Zealand, Australia and South Africa." (p.20)

There are very few data on the evolution and current size of the market for organic wine and organic viticulture. Willer and Zanoli (2000) produced the first figures on the status of organic viticulture in Europe. Table II.5 summarizes their findings.

Table II.5: Market size for organic wine in Europe

Country	Organic Vineyards (number)	Conventional Vineyards (number)	Organic Vineyards as a % of All Vineyards	Total Area under Organic Management (ha)	Organic Vineyards as a % of Organic Land
Austria	564	52,000	1.1	287,900	0.2
Czech Republic	25	13,000	0.2	71,620	0.04
France (1999)	10,213	917,000	1.1	316,000	3
Georgia	c. 100	85,000	0.1	–	
Germany (1999)	1,349	105,000	1.3	383,572	0.4
Greece (1998)	1,750	132,000	1.3	15,849	11
Hungary (1998)	350	131,000	0.3	34,500	1.0
Italy (1999)	c. 48,000–54,000	922,000	5.2–5.9	958,687	c. 5–5.6
Portugal (1999)	888	259,000	0.34	47,974	1.9
Spain (1999)	21,130	1,224,000	1.7	352,164	6.0
Switzerland (1999)	209	14,991	1.4	84,124	0.3
Turkey (1999)	1,989	567,000	0.4	–	7.8

Source: Table 1, Willer and Zanoli (2000)

It is interesting to note that organic viticulture has not developed to the same extent as organic agriculture relative to total conventional production. Reasons given by Geier, Hofmann and Willer (2000) for this slower growth are state support for integrated pest management, a still growing demand for conventional wine, and limited knowledge about organic viticulture (including pest management).[161] An additional point is the fact that organic wine is a specialty product and is thus marketed through specialized channels,[162] and authors such as Rousseau (1999) also mention the difficulty caused by the fact that the EU does not regulate organic wine production thus the labels cannot state "organic wine" but have to use the rather complicated terms "wine from organic grapes" or "wine from organic viticulture." However, even though the market is still comparatively small, Geier, Hofmann and Willer (2000) state:

> "....The outlook for organic wine production on a global level is positive. The market for organic wines is growing and a considerable expansion of organic vineyards and particularly the area under vines in the new world can be observed." (p.21)

Furthermore the market appears to have evolved in a highly dynamic manner in recent years. In the case of France, for example, Rousseau (1999) gives an annual growth rate of 30 per cent in the late 1990s.[163]

There are no official statistics available regarding the market of wine from organic production, however, authors such as Rousseau have emphasized that consumer demand for organic wines grew significantly during the 1990s. This author comes to the conclusion that, based on the

[161] In Europe several fungal diseases pose particular problems. Interspecific fungus-resistant hybrids could be used, but in some countries are permitted only for experimental purposes in organic production. Regulation of the limitation of the use of copper salts, so far the only fungicide permitted in organic agriculture, is pending.
[162] See section below on marketing.
[163] Regarding the latter, in Germany, for example, the German Association of Quality Wine Producers has entered into an associative agreement with the organic label organization, Naturland.

export figures for French wines, not only the North European but also the North American and the Japanese markets are rising rapidly. With regard to the French situation, Rousseau states:

> "A recent survey among supermarkets discovered that there is a real demand for organic wines in France and that the major limitation in satisfying this demand is the lack of production and the poor organization…The potential market for organic wines is an estimated 100 million bottles for both the French and export markets; that is three to four times current production." (p.2).

Both table wines and high quality wines may be produced organically.[164]

II.2.2 The policy

The reform of the Common Agricultural Policy (CAP) has stood at the centre of the EU's agricultural policy since 1999. EC (1999) provides a brief description of the content of the CAP reform. In three of the eight central elements of the reform the environment assumes a principal role: focus on quality, integration of environmental goals into the CAP, and the new rural development framework.[165]

This shift in policy is also reflected on the member-state level. In Germany, for example, the Ministry of Food, Consumers and Agriculture has made the shift towards quality instead of quantity its principal focus. In this shift ecological production is understood as the main pillar of quality production.

In many European countries there are official action plans to promote organic agriculture, providing concrete targets for the expansion of the sector:

The action plans have a very strong focus on the supply side. With this bias, support will be provided primarily to an expansion of production and the marketing channels rather than to an expansion of the consumption of organic products. With official action plans, government intervention in organic agriculture has become the norm. In this context government action is not confined only to promoting and supporting organic farming and the expansion of the organic market in general, but in several European countries it also implies the direct involvement of the public sector in the area of certification, assuming in some cases the task of certifier itself.

Beyond the official EU and member-state policies, there are many voices in the different European member countries that press for increased government support to promote organic agriculture. The participants of the recently held European Conference "Organic Food and Farming: Towards Partnership and Action in Europe," who included representatives from civil society and government, drew up a European Action Plan, proposing measures such as increased emphasis on government procurement and institutional purchases, new financial tools for promoting the development of organic business, an increase in financial support to organic farms, and information campaigns directed at European consumers.[166]

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[164] Regarding the latter, in Germany, for example, the German Association of Quality Wine Producers has entered into an associative agreement with the organic label organization, Naturland.
[165] The other five are: lower institutional prices, a fair standard of living for the farming community, strengthening the EU's international trade position, decentralizing management, and further simplification.
[166] See "Organic Food and Farming: Towards Partnerships and Action in Europe," conference organized by the Danish Ministry of Food, Agriculture and Fisheries, Copenhagen, May 11–12, 2001.

Table II.6: Action Plans in Europe

Country	Name of Program	Target year	Important Targets
Denmark	"Actionplan II[167]– Developments in organic farming" (February 1999)	2005	• 10% organic farmers • 20,000 ha more than in 1999 • Trebling of ecological production
France	"Plan Pluriannuel de Développement et la Promotion de l'Agriculture Biologique" (5-Year Plan 98–02)	2005	• France to be leading European producer • Conversion of 1 million ha and 25,000 farms by 2005
Niederlande/ Netherlands	"Plan von Aanpak biologische Landbouw 2001–2004"* (c. July 2000)	2005/2010	• 5% of land organic by 2005 • 10% of land organic by 2010
Norway	"Plan of Action for the Development of Organic Agriculture" (2000)	2009	• 10% of land organic
Sweden	"Aktionsplan 2000" (1995)/Action Plan 2000	2000	• 10% of land organic
Wales[168]	"Welsh Agrifood Action Plan for the Organic Sector" (March 1999)	2005	• 10% of land organic • Development of a national organic centre
Germany	Action Plan by Ministry of Food, Consumer and Agriculture	2001	• 20% of land organic by 2010

Source: Willer and Yussefi (2001), updated by the author according to official information (Source: <http://http://www.organic-europe.net, 2000>)

On a worldwide scale, organic farming is also receiving increasing support. The World Food Summit Plan of Action, for example, recognized the importance of "appropriate input technologies, farming techniques and other sustainable methods, such as organic farming, to assist farming operations to be profitable, with the goal of reducing environmental degradation, while creating financial resources within the farming operation."

On the basis of the market outlook and the policy trends, statements such as the following recur:

> "According to the ITC Organic Foods Report (1999), there are strong market opportunities for developing countries in most major markets, offering good prospects for suppliers of organic products that are not produced in Europe or North America, such as coffee, tea, cocoa, spices, tropical fruits, vegetables and citrus fruits. There are also very good prospects for foods that are produced in these countries themselves. These opportunities stem from the fact that rapidly growing demand in most markets cannot be met by local supply, at least in the short and medium term." (p.32, Willer and Yussefi, 2001)

The next sections are dedicated to a closer analysis of this type of statement.

[167] Note that the first Action Plan, drawn up in 1995, had a target of 15–20 per cent of all Danish farms converted to organic agriculture by 2000.
[168] For the U.K. as a whole, the private initiative Organic Target currently (2001) aims at obtaining government commitment to developing an action plan to ensure that 30 per cent of U.K. farmland will be organic in 2010.

II.2.3 Exporting to the EU

The possibility of developing a new market in a sustainable manner depends crucially on

- market access;
- the competitiveness of production; and
- the distribution of the benefits from production and exports.

All three factors comprise elements that have to be dealt with at the level of the importing country. Market access relates to both the tariff and non-tariff structures in the importing country; it relates also, in the widest sense, to such issues as marketing structures and access to information. Competitiveness elements at importing-country level may take the form of support policies or other policies that affect the competitiveness of the exporter in the market of the importing country. The distribution of benefits from production is, to a great extent, an outcome of the first two factors, but also includes the role of technology, the role of marketing structures and product design, and eventually the management of the product's value chain.

It is important to recognize the two-tiered nature of the support structure for production in the EU. Although producers have to face the burden of regulations at EU-level as well as at the domestic level, they also derive the benefits of a two-tiered support structure: i.e., in many cases the producer can obtain support from the EU as well as from his/her national government.

At EU-level the main area of support is the agricultural sector. The CAP price support scheme is well-known,[169] as are the economic, environmental and social effects of this scheme—even on third countries. For more than a decade there has been pressure on the EU to lower the price support and thus take a major step towards international trade liberalization. For several years there have been a variety of initiatives focusing on a restructuring of agricultural support.

The EU does not consist exclusively of the agricultural sector, although agriculture accounts for over half of its budget. There are 34 Directorate Generals, 17 of which are policy oriented, five providing general services, six dedicated to external relations and five to internal relations. The 17 policy-oriented Directorates each deal with their specific sectoral policies and are in charge of developing policies, programs and initiatives. Also, there are numerous research and support programs directed at promoting collaboration between EU member countries and providing assistance for countries acceding to the EU. These programs are often applicable to a whole range of sectors and topics.

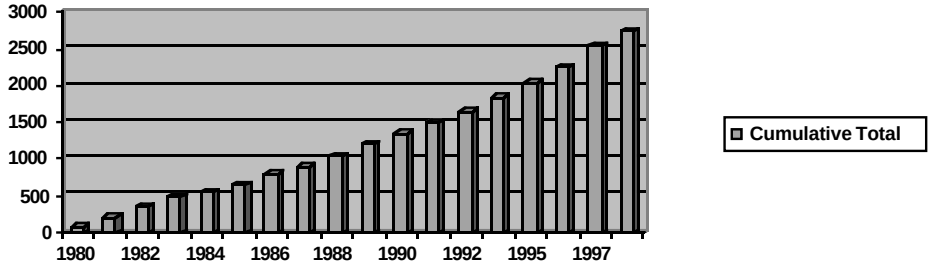
At the level of the individual governments, support programs are designed according to the political priorities currently prevailing.

II.2.3.1 Non-tariff barriers – marketing – information

The structure of barriers to accessing the European market has definitely shifted towards non-tariff barriers. By 1997 authors such as Felke (1997) had identified this trend, which showed a continuous decrease in tariff barriers compared to a continuous increase in non-tariff barriers since 1950. More recently, Henson *et al.* (2000) graphically illustrated the increase in notifications of technical measures to GATT/WTO:

[169] For a recent description see, e.g., European Commission (2001).

Figure II.6: Notifications of technical measures to Gatt/WTO, 1981–1998



Source: Henson et al. (2000), Fig. 1, from OECD (1997) and WTO

Thus developing countries and country groups have realized the importance of the non-tariff barriers. As COMESA stated recently at an international workshop:

> "Perhaps one of the greatest threats for COMESA countries' exports is barriers to trade in the area of Sanitary and Phytosanitary (SPS) measures and technical barriers to trade (TBT)." (p.1, COMESA, 2001)

In the organic sector non-tariff barriers additional to the sanitary and phytosanitary barriers that exist also for conventional products are primarily those that refer to the certification of organic products.

The statement made by Henson *et al.* (2000) in the context of SPS measures applies equally to certification schemes:

> "Technical standards and conformity assessment procedures are discriminatory if they impose greater production and/or compliance costs on importers than domestic producers. Even where equivalent requirements are imposed on domestic and imported supplies, however, these can act in a discriminatory manner if production and/or compliance costs are systematically greater for importers." (p.6)

As a participant in the discussion panel of http://www.organicts.com stated:

> "The biggest barrier (assuming the change is viable) for most farmers entering organics is the standards, inspection and paperwork associated with certification." (Dan Powell)

With regard to domestic certification, it should be ascertained whether certification in third countries is an even greater barrier.

Given that organic agriculture has a long history in Europe, today there are numerous well-known national certification schemes for organic agriculture in place.[170] These national certification schemes have a high rate of acceptance among consumers. At the same time, the International Federation of Organic Agriculture Movement (IFOAM) has a presence in the different countries and collaborates closely with the national organizations. More recently, the

[170] An overview of these schemes is provided in <http://www.organic-europe.net> and in Willer and Zanoli (2000).

national certification organizations and European governments have recognized that the market is saturated with labels for organic products and consumers are confused about certification. Thus there has been a trend towards harmonization and mutual recognition as well as cooperation amongst the certification schemes, a trend expressed in different ways:

1. The introduction, in 2001, of a Europe-wide label for organic products that can be obtained in parallel with the respective national certification scheme and can be displayed at the same time as the national label.
2. Cooperation between labelling schemes—adoption of similar criteria—adoption of schemes for enabling comparisons between schemes.
3. Nationally recognized labels have been introduced in several European countries. The first countries to do this were Austria and Denmark, and recently countries such as Germany have followed suit: the German Association for Ecologic Farming, AGÖL, and the Central Marketing Board, CMA, introduced a unified certification system, parallel to the existing individual schemes.

The existing three-tiered certification system (European, national and individual) has the following consequences for a third country producer:

- he has to obtain certification that is recognized by the EU,[171] by the respective national government,[172] and finally by the consumer who is confronted with numerous labels on the market;
- he has to be informed about all certification schemes as well as acceptance levels in the market—he has to make an informed choice as to which of the certification schemes is the most appropriate for his product;
- he has to assume the costs for certification.

As the first of these is extremely expensive in itself, it becomes even more of a challenge when the information requirements are taken into consideration, especially if the system to provide information on the organic products market is inadequate.[173] The next section analyses the current situation with regard to this latter point.

Regulation 2092/91 regulates organic farming in the EU. The rules refer to the method of production, labelling, processing, inspection and marketing of organic products within the EU and the import of organic products from non-member states. "Organic Agriculture – Guide to Community Regulations" (EC, 2001c) is a guide to Community rules on organic farming. It is important to note that Regulation 2092/91 does not preclude the application of the general rules applying to all products. The imports from third countries are subject to a system of equivalence.

> "In order to ascertain equivalence, the Commission makes a thorough investigation into the arrangements in the country concerned, examining not only the requirements imposed on production but also the measures applied to ensure effective control. Where rules are found to be equivalent, the third country is entered on the list of authorized countries, which means that organic products from that country can be imported and move freely within the European Union. A parallel scheme has been introduced, valid until 2005, to enable Member States to

[171] This is obligatory.
[172] The German proposal for a unified system under AGÖL is clear in stating that for importers equivalence has to be with AGÖL Standards, not only with EU Standards.
[173] E.g., Borregaard *et al.* (1997).

> issue import authorizations for consignments from third countries not included in the Community list drawn up by the Commission. It is up to the importer to prove that the imported products were obtained according to production rules equivalent to those laid down in Community legislation and were subject to inspection measures of equivalent effectiveness to the inspection measures imposed on Community products. The Member State notifies the Commission and the other Member States of the third countries and products for which it has issued an authorisation." (p.22, EC 2001c).

The procedure for obtaining equivalence status on the list is extremely lengthy. Chile applied in 2001 to be added to the list, and has had several official meetings with the EU officials in order to discuss the requirements and how to fulfill them. The Chilean mission to the EU states that its primary goal with regard to organic agriculture is to fulfill the EU requirements as soon as possible.

However, in April 2002 Chile was still not in the list. Understaffing at the EC level could be one explanation for this situation: there are only two professionals in charge of reviewing the numerous applications from third countries. However, as described in the section on the Chilean situation, there are problems at the Chilean domestic level with regard to formalizing the system regulating organic production.

There are other problems at EU level with the parallel scheme, especially with regard to notification by member states to the Commission and to other member states. As a result, a producer has to deal with different certification schemes in different EU countries or is confronted with lengthy procedures to obtain recognition of the certification in one member state by another member state. In 2005 these procedures are to be revised. Efforts are being made to review member-state regulations regarding the procedures for importing organic products so as to bring them closer together and make the system more transparent.[174] Currently, if the export country is not on the list, the producer has to obtain information on each member state's regulations regarding the import of organic products.

It will be interesting to see what the procedures are for considering third-country opinions when the EU regulation regarding the parallel scheme is revised; at the same time, the efforts towards harmonization at an international level will have to be followed carefully. In 1992 the International Federation of Organic Agriculture Movements (IFOAM) established the IFOAM Accreditation Programme (IAP) to provide international equivalency of organic quality claims. The IFOAM Accreditation Programme is managed by the International Organic Accreditation Service Inc. (IOAS) under a licensing agreement with IFOAM. The IOAS Board of Directors is appointed by IFOAM, and the program operates independently of IFOAM's other activities. In 2000 the first products with the "IFOAM-accredited" logo, which was presented at Biofach 1999, came on the market—an important step toward worldwide harmonization.

To date, however:

> "IOAS has no official recognition in the EU, despite IOAS's best endeavours, but several countries use it as their unofficial benchmark when assessing imports. So a certifier gaining IFOAM accreditation provides no guarantee of access to the EU, but it usually smooths the passage quite significantly."[175]

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[174] Danielle Tissot, DG Agriculture, October 2001 (personal communication).
[175] Francis Blake, Coordinator of EU-IFOAM Group, January 29, 2001 (personal communication).

The Commission on Sustainable Development, in its Eighth Session in May 2000, stated:

> "To facilitate trade in organic products, standards should be harmonized internationally as much as possible and equivalencies established." (p.19)

It seems that there is a long way to go before this recommendation is put into practice.

Although the general pattern of market barriers is very similar for the different products, for each product the issue of certification also contains specific elements. The following situation applies to wine:

Wine from organic vineyards is an organic specialty product. Primarily this implies that for wine there are specific marketing channels as well as specific certification schemes that might be different from or complementary to the existing organic certification schemes.

The wine-making process is not defined under EU regulation 2092/91, thus the term "organic wine" may not be used on the label, which in some countries may state "wine from organic viticulture" and in others "wine produced with organic grapes." Labelling schemes are numerous, each member state having a different label and slightly different requirements. Vaterlaus (2000) emphasized that the different labels confuse the consumer and a unified system is urgently required, at least at the national level.

Marketing channels are similar in the European countries in that the greatest share of the wine from organic production is marketed directly by the respective vineyard or the specialized organic wine growers' association.

The relationship between the organic growers and the conventional wine makers in marketing their products has varied from country to country, with successful interactions in wine tastings, for example. In some countries there have been contests that help promote organic wine. Key words in promoting organic wine are "low in sulphates" and "environmentally-friendly," although the latter is more relevant for the more ecologically oriented, northern European countries.

The situation in Germany

For a more concrete analysis it is useful to refer to a country case, taking Germany, the largest European market, as an example.

As Köpfer and Gehr (2000) stated:

> "Germany is one of the best markets for wine from organic production. This signifies on the one hand an opportunity, but on the other hand good markets are always well contested." (p.52)

Köpfer and Gehr (2000) assembled information on the area and number of vineyards certified by the different German certification systems for organic wine. Table II.7 reflects the situation at the beginning of 2000:

Table II.7: Organic viticulture in Germany, 1.1.2000

Certification System	Number of Farms	Area under Organic Viticulture (ha)
ECO VIN	874	194
Bioland ÖKOLOGISCHER LANDBAU	122	292
Naturland	17	124
Wein aus demeter Trauben	23	91
Gäa ÖKOLOGISCHER LANDBAU	2	11
Total	**358**	**1391**

Source: Köpfer and Gehr (2000), table 1, p.4; Originally compiled by: Stiftung Ökologie & Landbau, April 2001; Source: Uwe Hofmann und Stiftung Ökologie & Landbau

Ecovin is the most important of these systems, bringing together more than 200 members, i.e., about one per cent of all vineyards, and two thirds of the organic vineyards.

The Naturland wine label derives from an association between the Association of German Prime Quality Producers and the organic association, Naturland. Currently 14 companies with 220 ha of organic viticulture have obtained this certification label.[176]

It is important to note that these certification schemes work, according to their own perception, to stricter standards than the EU regulation.

The possibilities and importance of obtaining a German label

Most of the German labelling schemes do not operate for third-country producers. Naturland, Bioland and Ecovin currently have no third-country producers listed. Bioland states that its system is not open to certification by third-country producers, whereas Ecovin would carry out third-country certification. To carry the Ecovin label the producer has to pay a licence cost of about five to 7.5 cents per litre. Additional costs for the third-country producer would be

[176] See <http://www.vdp.de>.

incurred for the Gesellschaft für Ressourcenschutz, a German certification company with which Ecovin maintains contact, to evaluate the local certifier. Another scheme, Neuform, is generally open to products from third countries. The producers would have to enter into a contractual agreement with Neuform that might insist that the product be sold only in Neuform shops: certification and control are carried out through an internal procedure determined in the individual contracts.

However, according to expert opinion and one of the main German organic wine importers,[177] it is not necessary to obtain one of the German labels in order to market organic wine: i.e., EU certification is, in general, acceptable to wine importers. The large, specialized wine traders in Germany buy and market a wide range of organic wine labels, each one representing only a small percentage of total sales. They are open to the possibility of integrating more labels into their range of wines, stating that the main restriction lies on the supply side.[178] There are, however, no consumer studies on the acceptance of labels for certified wine. Also, as South African experts emphasized at the International Congress on Organic Viticulture in 2000:[179]

"The two main challenges facing the organic viticulture industry in South Africa are:

1. Research/Training and advice, and
2. Certification.

The lack of local certification results in inefficient regulations of standards and also the high costs involved in using overseas certification." (p.77, van der Merwe, 2000). In South Africa, wine from organic production has been certified by SKAL and the Soil Association.

II.2.3.2 Marketing channels

The marketing of organic products has, in many European countries, been identified as one of the key limiting factors to the expansion of organic farming. Support to marketing is provided by the private producer associations as well as by the state in the different EU member countries. As the country reports in Willer and Yussefi (2001) show, in Scandinavia and Central Europe, for example, the most important challenge in promoting organic farming is to increase the range of products, to enlarge existing marketing channels and to find new channels (e.g., supermarkets, box systems, canteens). Some countries, such as the Netherlands, have made the promotion of marketing through information campaigns and financial assistance to ecological producer associations the central element of their support programs to organic farming.[180] As Wendt (2000) states:

> "In Austria, the Agrarmarkt Austria, the national marketing board for agricultural products, provides around US$5 million to support the marketing of organic products. Intensive campaigns to promote the use of organic products, undertaken by the supermarkets and the organic producer associations, have led to a significant increase in the demand for organic products." (p.90)

In each of the European member countries, marketing channels for organic products are rather different. Whereas in Germany direct marketing and marketing via specialized shops dominated for many years, the organic sector in Great Britain, Denmark and Sweden concentrated on

[177] Interviews and questionnaire results in the context of this project.
[178] This opinion was held by all experts interviewed.
[179] South Africa can be considered a pioneer in developing-country organic wine exports. It was the first developing country to participate actively in the International Congress on Organic Viticulture.
[180] Wendt (2000).

supermarkets at a very early stage. Table II.8 is taken from Willer and Yussefi (2001), who have published an excellent summary on the marketing channels for organic products in Europe.

Table II.8: The importance of marketing channels (percentage share 1997/98)

Marketing Channel:	Retail Trade	Specialized Shops	Direct Marketing	Other
Country				
Portugal	91	1	3	5
Sweden	91	0	7	2
Denmark	90	2	8	0
Finland	89	5	5	1
U.K.	74	15	6	5
Austria	73	9	18	0
Switzerland	57	21	19	3
Norway	56	19	21	4
Luxembourg	40	28	28	4
France	38	46	16	0
Spain	29	49	22	0
Germany	26	46	19	9
Belgium	23	55	17	5
Italy	23	60	17	0
Czech Republic	15	0	3	82
Greece	5	65	30	0
Netherlands	2	96	1	1
Ireland	–	–	–	–

Source: Hamm, U. and J. Michelsen: "Die Vermarktung von Öko-Lebensmitteln in Europa." Ökologie & Landbau, Heft 113, 2000

It is interesting to note that from top to bottom the market shares reverse completely. It should be emphasized, however, that this table reflects the situation in 1997/1998, and the organic market is an extremely dynamic one. There have been important changes in recent years. Some authors have recently emphasized the increasing market share of supermarkets. Van der Grijp and den Hond (1999) carried out a more detailed analysis of this trend and came up with extremely interesting results: in all European countries in recent years multinationals such as Unilever, Nestlé, Del Monte and the Groupe Danone have begun to enter the market. The strategy has consisted of establishing a new product line from scratch, e.g., Maggi Bio by Nestlé, or taking over a specialized organic company, e.g., Bio Vivre by Groupe Danone. At the same time, the large supermarket chains have started to develop their own organic brands and have taken over very significant shares of the market in some products: examples include Delhaize in Belgium, FDB in Denmark, Carrefour in France, Tengelmann in Germany (the first supermarket chain to develop it own organic brand in 1985), Albert Heijn in the Netherlands, and Billa and Spar in Austria.

Offermann and Nieberg (2000) point out that,

> "…prices vary considerably between the different marketing channels, with prices realised via direct marketing to the consumer often being twice as high as those received from wholesalers." (p.38)

In the marketing studies available there is, however, no reference to the marketing of wine from organic production. As wine is a specialty product, the marketing channels differ from those for the other organic products: it is to be expected that specialty shops and direct contact with the consumer both play a more predominant role, especially when dealing with high quality wines. However, some of the major market trends, such as the increasing role of conventional supermarket chains, the arrival of global players, and the use of modern technology such as internet marketing, will also play a role in the market for wine from organic production. For example, Vaterlaus (2000) mentions the possibility of companies such as Fetzer or Mondavi entering the organic wine market in the near future.

Special mention should be made of the role of trade fairs: growing numbers of organic producers and products are present at the most important European food fares. For example, at the 1999 Salon International d'Alimentation in France of the 4,000 exhibitors 257 showed organic products.[181] More important for wine producers are probably wine tastings: Willer and Zanoli (2000) noted that at the end of the 1990s. "…organic wine producers have successfully taken part in conventional wine tastings, which has given a boost to the marketing of organic wine." (p.25)

At the Biofach, the most important fair for organic products worldwide, the presence of wine has become significant. At Biofach 2002, of the approximately 2000 exhibitors 181 offered organic wine.[182] These were mainly German, Italian, Austrian, Spanish and French exhibitors, with only a very few non-European exhibitors; however, of these few, there was one Chilean producer.

The situation in Germany

In Germany, as in other industrialized countries, the marketing of food is in the hands of several large supermarket chains. In 1997 the top 10 supermarket chains sold c. 83 per cent of all food products.[183] There is little information on the marketing of organic products: Oppermann (2001) estimates that about 50 per cent of organic products are marketed directly.

In a study carried out for the Central Marketing Agency for Agricultural Products, ZMP, Spahn (2000)[184] states that there is a lack of information, training and expertise on the marketing of organic products, especially with regard to marketing through supermarkets. The author estimates that, in 2000, c. 1.5–3 per cent of the turnover in the supermarket chains was in organic produce, with an expected increase to 6 per cent over the following two years.

One of the main arguments against buying organic produce on a permanent basis is the lack of availability. In Germany, according to the CMA,[185] the access/availability of organic produce is one of the main limitations to its acceptance amongst consumers. Ziebell (2000) points out that the number of shops selling organic products is still rather limited (2,600) compared to those selling conventional products (70,000).

There are no studies on the marketing of organic wine in Germany. However, according to expert estimates,[186] directly marketed organic wine has the largest share of the market, followed by specialized organic shops and by specialized organic wine shops. The share of the supermarket chains is still small, but can be expected to grow significantly.[187] The role of organic wine

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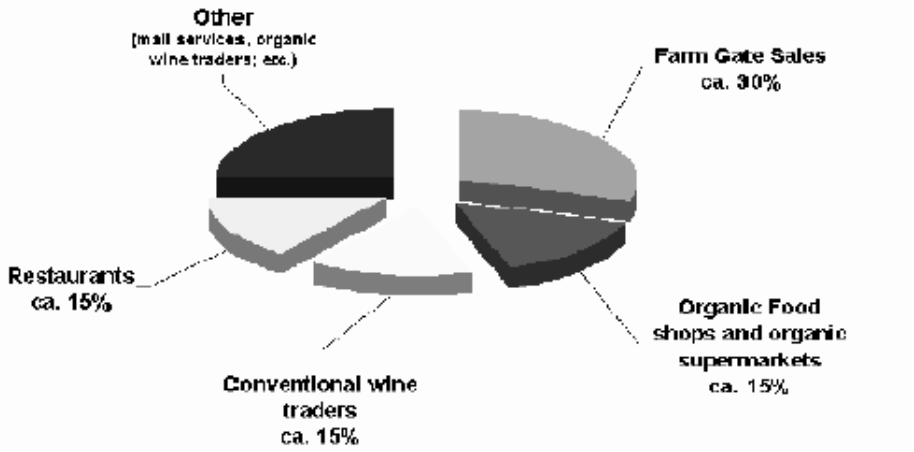
181 N. M. Van der Grijp and F. den Hond (1999).
182 This compares, e.g., to 99 exhibiting dried fruit and 179 exhibiting fruit and vegetables.
183 H. Spies-Wallbaum, C. Zepf and A.C. Bockelmann (2000).
184 Christoph Spahn, <http://www.biovermarktung.de>.
185 C. Ziebell (2000).
186 Paulin Köpfer, ECOVIN Bundesverband, December 2001(personal communication).
187 *Ibid.*

producer associations as a link between the producer and the supermarket has also been recognized as having the potential to become more import. Also, according to Köpfer and Willer (2001) specialized organic supermarkets have become, "...major players in the marketing of organic food. Munich's "Basic," for example, has more than 200 organic wines." (p.8). Restaurants are also an important outlet for organic wine.

Figure II.7 is an estimate by Köpfer and Willer (2001).

Figure II.7: Marketing channels for organic wines in Germany



The use of internet marketing and mail-order services, both direct from the producer and through specialized wine traders, has grown substantially. In addition to the internet sites of numerous producers, as well as the sites of the organic wine growers' associations, there are specialized sites for the online marketing of wine—examples are <http://www.ecowein.de, http://www.trade-organic-wine.com> or <http://www.bioweine.com> or general mail-order companies for organic products, such as <http://www.allesbio.de>. <http://www.ecowein.de> is one of the few Europe-based wine mail-order companies to offer wines from developing countries, especially South Africa.

There are also specialized Web sites that provide a marketplace for trade in organic produce, with special emphasis on developing-country exports. Examples include <http://www.organicts.com> and <http://www.green-tradenet.de>. However, these sites are sometimes a product of aid-financed projects and often lack continuity. The latter site, for example, was originally financed by the German government's PROTRADE program. After a dynamic start, with numerous producers (170) from developing countries offering their products through this medium—from Chile: lemon balm, peppermint and camomile—the service had to be discontinued due to a lack of funding. It was then converted into a consultancy business for imports from developing countries.

However, experts state that "still, the market for organic viticulture, in particular, is essentially based on personal contact."[188] This is reflected in the percentage of farm-gate sales, which is still very high.

[188] Schrot & Korn, *Bio Inside*, No.4 (1998).

Wine from organic production is very often not sold as such: high quality organic wine is very often sold as conventional wine, the high quality being the primary distinctive characteristic, and organic production only secondary. In the case of table wines, also, there may be situations in which the wine is not or cannot be sold as organic wine. For example, in Italy, according to Bazzocchi, Tellarini and Zanoli (2000), at the end of the 1990s about 75 per cent of the wine from organic production was not marketed as such, due to "...the particular economic conditions of organic viticulture and the dynamic development of the wine sector in general." This latter situation has also been described by other authors in relation to the organic products market in general. The sometimes significant increase in the supply of organic products has often been accompanied by an important and unwanted reduction in prices, and the marketing of organic products as conventional products. The inadequacy of marketing channels has been identified as the main reason for this situation

II.2.3.3 Information

The issue of information is closely linked to the questions of market access and marketing.

Efficient, easy and rapid access to information is important given that the market is developing so quickly, given the diversity and dynamic nature of the marketing channels, as shown above, and given the enormous distance between the producer and the market. General information on the market, regulations, trends and marketing channels is as important as specific information on certification procedures, certifying agencies and costs. These are relevant elements for a producer in a third country to decide whether to convert to organic production.

Several efforts have been made in the past, by international organizations and different EU member countries, to set up these types of information systems. Examples include Greentrade, by UNCTAD; Green Tradenet, by the German agency GTZ; and the Centre for the Promotion of Imports from Developing Countries (CBI), by the Dutch Ministry of Foreign Affairs. Although these systems have provided some information on the market for organic products, green markets and environmental requirements in conventional markets in general, there has not been enough continuity for them to be of real, practical assistance to the producer and exporter, and too little analysis and policy-oriented work has been undertaken for them to be, alternatively, a useful resource for the policy maker in this area.

In general these information systems comprise a marketplace, a database on certifiers, useful links and often a discussion panel. In order to be useful, all these elements would have to be updated and managed on a continuous basis.

The CBI is possibly the system that holds most information; it is updated continuously. It contains sections on the marketplace, market information, training, export promotion programs and an access guide for exports to the EU. Rather than concentrating on sustainable products, it holds information on environmental, social and health-related requirements for both conventional and sustainable products. For certain product groups it gives quite detailed information on these requirements and provides all of the above-mentioned services, however, neither wine in general nor organic wine in particular figure explicitly in the product range.

In the case of Green Tradenet, an Exporting Organic Products Handbook was developed, however, it was written in 1997 and has not been updated thus can be considered only a starting point for a developing-country exporter. The update of this type of manual could possibly provide more cost-effective assistance to the producer than a Web site-based information system that is not continuously updated.

General statistics on imports into the EU and the products that are traded should be available to the producer so that he/she can obtain an overall idea of the evolution of and the future outlook for the market. Currently there are no official EU-wide statistics available on the import and trade in organic products. In 2002, general figures on the production of organic products within the EU will be integrated into the EUROSTAT figures. The EU is working on statistics for imports of organic products, but is not yet in a position to provide them.[189]

On the Chilean side, there have also been efforts to support access to information on the market,[190] however, in their current form these efforts definitely cannot be considered to be a substantial contribution.

II.2.3.4 Support Structure

There are two different support systems in place for wine from organic production: one that applies to wine from both conventional and organic production, and one that applies to the promotion of organic agriculture. Although the focus here is on the latter, a few words on the general support structure and situation of wine in the EU, taking conventional production as a baseline, will help to explain the position of wine from organic production.

According to the Europeran Commission (EC) itself, the EU support structure, or Common Market Organization (CMO), for wine is "among the most complex and broadest within common agricultural policy."[191]

The Council Regulation on the CMO for wine, CR No.1493/1999, is a densely written, 85-page document.

Given that, in the past, Community intervention in the wine sector focussed primarily on reducing production potential, the main instruments of the CMO have been abandonment premiums and limits on new plantings. Price support measures have consisted of distillations, i.e., buying up different types of wine products for distillation at guaranteed minimum prices.[192] A reference price, i.e., a minimum price for imports, and high customs duties have in the past been effective instruments for protecting the European market from competitive imports. However, in 1995/1996 the Uruguay Round led to agreements on the suppression of this system of import protection, abolishing the reference price system and establishing a 20 per cent reduction in the customs duties, leading to an opening up of the European market and an increased exposure to imports from third countries. As the EC states:

> "It is now more difficult to improve market conditions and to support prices by a withdrawal mechanism of the surpluses quantities (distillation, ban on replanting and abandonment premia)."[193]

Referring to the future outlook and policies, the EC emphasizes the importance of improving the competitiveness of Community products, but also refers to the significance of socio-economic and environmental variables:

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189 Interview with DG Agriculture, October 2001.
190 These are discussed in Section II.2.
191 <http://http://www.europa.eu.int/comm/agriculture/publi/pac2000/wine/index_en.htm>.
192 For 1998, budget expenditure was approximately ECU830 million, compared to ECU970 million in 1997.
193 <http://http://www.europa.eu.int/comm/agriculture/publi/pac2000/wine/index_en.htm>.

> "Wine production plays an essential role in the socio-economic development of the regions involved, which often do not have other viable economic alternatives. Therefore, while there will be an inevitable relocation of some production towards areas where wine-growing is more profitable, the pure and simple abandonment of wine-growing in these dependent regions should be avoided. The maintenance of wine production in many traditional regions is, in addition, essential, not only to safeguard the landscape, but also to limit soil erosion in these regions. However, given that wine growing can also cause harmful effects, in particular through the intensive use of plant health products and of fertilisers, it is important to integrate vineyards into the agri-environmental programmes aimed at encouraging the introduction or maintenance of production methods compatible with environmental protection requirements and the maintenance of the countryside."[194]

It can be expected that, also in this market segment, agri-environmental programs will become an important instrument to support farming structures and production.

Agri-environmental measures are support measures to promote environmentally-friendly agricultural production in EU member states. Plankl (2000) basically described the three phases through which the agri-environmental measures have passed:

> Before 1992, agri-environmental measures did not constitute a separate program but there were individual, locally limited measures that very often were pilot in character and were justified on the basis of different EU regulations. The financial resources that producers could expect from the EU amounted to between €60/ha and €100/ha. Thus, in this first phase, the national programs were decisive in the promotion of environmentally-friendly agricultural practices. In 1992 Regulation 2078/92 led to a more integrated approach, with significantly increased financial backing. For the new agri-environmental measures program the EU put €0.9 billion annually at the disposal of the member states for the period 1993–1998. However, it is emphasized that, during that period, agri-environmental measures were regarded as an important set of flanking measures for the rebalancing of supply on the agricultural markets. Agenda 2000 launched a completely renovated approach to agricultural support, agri-environmental measures being an important part of this reform. The agri-environmental programs become obligatory elements of the larger package of support to rural development. Priority is attributed to the environmental goals of the program, which is putting an average annual amount of c. €2.3 billion at the disposal of member states.

Organic farming is part of the agri-environmental program, along with measures for nature protection, training in environmental practices, the maintenance of abandoned areas, extensification measures, genetic recuperation of threatened species and other elements. Agri-environmental measures can be combined, at least to some extent, depending on the context and the EU country. For example, in the case of vineyards, the support given to organic vineyards can be combined with erosion control measures—in Austria, for example, these latter provide an extra €150–500 per hectare.[195]

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[194] *Ibid.*
[195] Table 11.5.1 in N. Lampkin *et al.*, (2000).

It is interesting to note that the distribution among the member states of the EU budget for agri-environmental programs is very uneven. (Until 1997 Germany and Austria claimed almost half of the budget, with the other half allocated to the remaining EU member states.)[196] This unevenness is due to the fact that EU financing varies according to the size of the member state and its agricultural sector, as well as to the fact that EU funding for agri-environmental measures requires 50–75 per cent co-financing by the member states. This latter aspect conditions funding, especially to countries for which these environmental measures are a priority. Thus in Sweden, for example, there was an early commitment by the government to the promotion of organic farming, reflected in the explicit goal set in 1994 by the Swedish parliament to have 10 per cent of arable land cultivated organically by 2000, whereas countries such as France did not promote organic production, hence up to 1997 the organic payment signified less than a 1 per cent contribution to farm income.[197]

Like the sums distributed, the content of the agri-environmental programs also varies. Some measures, such as capacity building and training or measures for endangered species, are part of very few national programs. Measures to support organic farming are the only element that is part of the program in all member states, however, the amount allocated to such measures varies from country to country. In the Netherlands only two per cent of the overall budget for agri-environmental measures is allocated to organic farming, whereas in Italy and Denmark organic farming constitutes the core element of the program. In turn, there are significant differences between the countries in the ways in which they support organic farming: in the Netherlands support measures are dedicated primarily to marketing and the promotion of marketing of organic products, whereas in Germany the emphasis lies on production subsidies.[198]

Given these differences between countries it is useful to refer to a specific country case so as to understand how the agri-environmental measures and other complementary support measures to organic farming are implemented, especially for wine from organic production. The importance of the payments to organic farming in all EU countries was analyzed in greater detail by Offermann and Nieberg (2000), who stated that:

> "Based on the scarce information available on the share of payments in profits, and the economic results presented at the beginning, preliminary conclusions for the sample averages are that:
>
> - usually, the payments were on average necessary to ensure a profitability that was similar to the conventional reference group;
> - the payments are not always (notably in Great Britain) high enough to cover conversion-induced losses;
> - with payments amounting to 20 per cent of profits, the dependency of supported organic farms on the agri-environmental programmes and on the outcome of general EU budget discussions is quite high." (p.87)

The situation in Germany

The German country report on organic agriculture,[199] for example, states:

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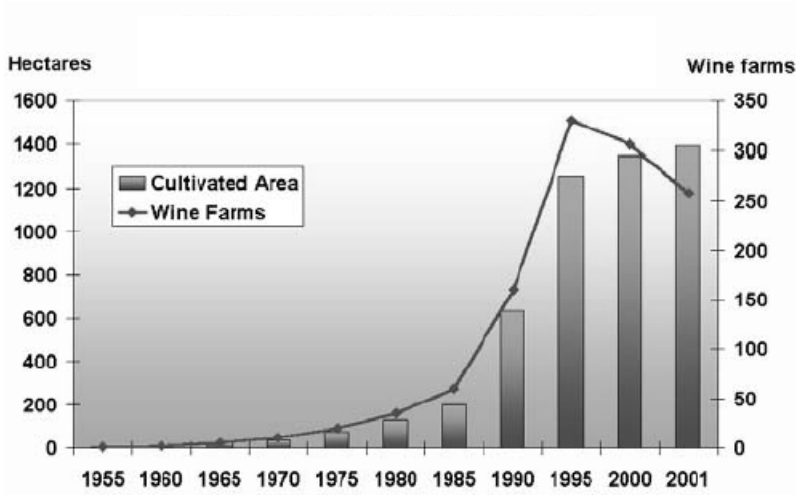
196 R. Plankl (2000).
197 The French programme, up to 1997, had only considered the cost of income foregone by converting to organic production in the first three years. No payments were made after the conversion period.
198 Wendt (2000).
199 P. Köpfer and H. Willer (2001).

> "As a consequence of the financial support (German government from 1989, EU from 1994) the number of organic farmers rose sharply at the end of the 1980s and the beginning of the 1990s."

In the case of viticulture this can be seen in Figure II.8.

Figure II.8: Development of organic viticulture in Germany (1.4.2001)



Source: Köpfer and Gehr (2000), Figure 1, p.4; original Source: Uwe Hofmann and Stiftung Ökologie & Landbau; compiled by: Eva Gehr, Stiftung Ökologie & Landbau, April 2001

The current rural development program of the EU (VO Nr. 1257/1999) has been translated in the case of Germany into a complex support structure for each year. For 2000/2001, support for organic farming of permanent crops varied from province to province and according to farming categories: in Sachsen and Rheinland-Pfalz, two typical wine producing provinces, financial assistance to organic grape production for wine was specified explicitly.

At the same time, Köpfer and Gehr (2000) emphasized:

> "Whereas the additional costs of producing organically can be considered negligible, the main reason for significantly higher per unit costs is the reduction of an average of 15–20 per cent in the output.[200] This results in about 30 per cent higher costs per liter of Eco-Wine compared to conventional production. The financial assistance programs (between Euro 500 and Euro 750 per ha per year) can cover these additional costs only to a very low extent." (p.51) [201]

Offermann and Nieberg (2000), on the basis of a literature review, also provide figures for the differences in yields between conventional and organic vineyards. In the case of Germany the yields of organic vineyards amounted to about 80 per cent of those of conventional vineyards, in the Italian case to 51–65 per cent, and in the Greek case to 70–100 per cent.

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[200] F. Offermann and H. Nieberg (2000) surveyed different studies on performance of yields in Germany, Greece and Italy, indicating a reduction of yields of 20, 0–30, and 35–49 per cent respectively.

[201] It should be noted that Germany is not an exception regarding the support given to organic viticulture. In Italy, for example, the support structure is similar, with subsidies ranging from €600 to 900 per ha and year. Thus, C. Bazzocchi, S. Tellarini and R. Zanoli (2000) stated that: "...the main reason for the fast development of organic viticulture (in Italy) is due to the fact that many Italian regions chose to apply EU regulation 2078/92, which grants subsidies for farms." (p.39)

Table II.9: Subsidies to organic agriculture in Europe

Province	Type of use	Subsidy		Inspection requirements, max. amounts, other stipulations
		Introduction DM/ha/year	Maintenance DM/ha/year	
Rheinland-Pfalz	Crops and vegetables	400*	300	Control according to VO (EWG) 2092/91; Max. amount per company and year 35.000 DM; a minimum of 5 per cent and a maximum of 10 per cent have to be ecological compensation areas; * in the first two years **in the first three years
	Viticulture	1.300 **	1.100	
	Ecological compensation areas	500	500	
Saxony	Crops	550*	450	Control according to VO (EWG) 2092/91; membership in the AGÖL is obligatory; * in the first two years **in the first three years
	Vegetables	800*	700	
	Fruits	1.500**	1.300	
	Viticulture	1.500**	1.300	

Source: translation of <http://www.soel.de/inhalte/oekolandbau/agrarpolitik_praemien.html>

Köpfer and Gehr (2000) emphasize that the difference between financial assistance to "good viticultural practice" and to organic production is far too small, and come to the conclusion that prices for wine from organic production have to be higher to cover the additional production costs.

There is no specification of what "very low extent" means, and there is no indication of what the production costs of conventional and/or organic grape cultivation for wine are.

According to an expert,[202] the average wine producer in Germany would have to have an income of about €7,000 per hectare in order to break even.[203]

Thus the direct financial support to wine from organic production represents roughly 10 per cent of production costs.[204] Offermann and Nieberg (2000) attempted to calculate the importance of compensation payments for organic farming in Europe for the different groups of farms (not specifying viticulture). For Germany, they obtained values of between 17 to 22 per cent for the importance of compensation payments to profits, depending on the type of farm, for the years 1995–1997. They concluded in their publication that, "…based on the scarce information available, preliminary conclusions for the sample averages are that:

- usually, the payments were on average necessary to ensure a profitability that was similar to the conventional reference group…
- with payments amounting to 20 per cent of profits, the dependency of supported organic farms on the agri-environmental programmes and on the outcome of general EU budget discussions is quite high." (p.87)

[202] Communication with Prof. Dr. Rolf Blaich, Universität Hohenheim.
[203] However, the same expert states that divergence may be up to three times this average, depending basically on whether production is carried out on steep or flat areas.
[204] This takes into account the fact that organic production causes a 30 per cent cost increase compared to conventional production.

Additionally, there is a complementary support structure that consists of:

- support for the marketing of organic products (under the Guidelines for the Promotion of the Marketing of Organically Produced Agricultural Products), e.g., subsidies granted to producer-based marketing organizations, for processing and the development of marketing concepts;
- financial support towards certification costs—depending on the province, support is provided towards certification. In Baden-Württemberg, for example, a farm can receive up to €200 of support; in Bavaria up to €400 are paid. Average certification costs amount to €100–500;[205]
- support to advisory services by producer associations (partly state-funded), state advisors, or producer groups—different advisory schemes are supported in the different provinces. Lampkin, Foster and Padel.(1999) summarized the support schemes of this type (Table 5.6.2.1). The total number of advisors supported at province level was c. 70 in 1997;
- support to research and training funded by the state or by the EU. Since about 1995 several German universities have offered master programs in organic farming, and some universities offer specialized programs for wine from organic production (see Oppermann (2001)). The U.K.'s Department for Environment, Food & Rural Affairs has reviewed European research on organic farming, listing six research studies specifically for organic viniculture: <http://www.adas.co.uk/organic/adasorgsearch.asp>. Furthermore the Forschungsinstitut für Biologischen Landbau (FiBL) in Switzerland lists all research projects in organic farming that receive or have received co-financing within the EU Research Programs CAMAR, AIR or FAIR; in 2001 there was a list of about 30 projects <http://www.organic-research.org/euprojects.html>. Lampkin, Foster and Padel (1999) summarized the situation in Germany as follows:

  "There are approximately 100 (research) projects currently underway. Because of responsibility for research at Universities and Landesforschungsanstalten lying with each province rather than at the federal level there is limited coordination and strategic planning at national level. Researchers that work in similar fields co-operate through personal initiative. One private foundation (SÖL) supports a bi-annual conference, which is organized at different locations and aims to facilitate exchange between the various researchers in the German speaking countries." (p.132)

- the creation of an Institute for Organic Agriculture at the National Science Institute for Agriculture; and
- a state-financed Web site dedicated to organic farming: http://www.agrar.de

Additionally, other financial payments through other EU programs on agri-environmental measures as well as through national, provincial or communal programs may be available. According to Lampkin, Foster and Padel. (1999), there is a great variety of provincial and communal programs to support organic agriculture, complementary to the agri-environmental measures of the EU. The province of the Saarland, for example, has implemented an income compensation scheme, paying compensation of between €500 and €2500 per family per year, the province of Hessen provides support through its regional development program, and various cities provide additional support to conversion, marketing and production.

[205] N. Lampkin, C. Foster and S. Padel (1999) describe support measures towards certification for all European countries. In Italy, for example, financial support towards the certification costs may cover up to 100 per cent of these costs (author's calculations based on information provided on p.322, *op. cit.*).

Finally, water companies have also started to implement support schemes as they have realized that this is a comparatively cheap way of reducing water pollution problems. For example, the water company in Leipzig contributed €140 per hectare per year during the conversion period.[206]

Infrastructure at the private level complements the public support structure:

- IFOAM;
- Conferences, publications, libraries, internet sources;
- Research institutes at the universities, specializing in organic production and even in organic wine production: at EU level, a European Commission (2001) document gives a list of Community and Commission-funded research and studies relevant to sustainable farming issues;
- Consultancy services specializing in organic production, also specifically in organic wine production; and
- Marketing agencies that have integrated organic agriculture into their activities: the main marketing board, CMA, is financed primarily through membership fees rather than through state support <http://www.absatzfonds.de>.

This multifaceted support structure, which it is difficult to quantify in monetary terms, offers significant support to organic producers and can be a deciding factor in the decision to convert to organic farming.

II.2.3.4.1 The justification for state support

Far from being condemned as dumping or unfair competition, state support for organic farming should be scrutinized for its social, environmental and economic justification. Only then can it be decided whether there is a case to be made against state support from a competition/overall welfare point of view. This has direct policy consequences, both for the Ministry of Agriculture and for the Ministry of Foreign Relations. A case of unfair competition would require the main focus of action to lie with the Ministry of Foreign Relations, whereas justification of state support would shift the action towards the Ministry of Agriculture, which would need to look into the domestic case for or against state support.

When the demand for production-linked environmental services is fully satisfied through profitable farming activity at zero additional costs and remunerated through market returns, there is no market failure (and thus no justification for state support).

However, in the case of organic farming there are additional costs, due both to a reduction in yields and to an increase in the costs of inputs. As described above, with regard to wine from organic production in Germany these additional costs amount to approximately 30 per cent per litre as compared to conventional production. Through the generally higher prices obtained for organic farming products there is indirect remuneration for the associated environmental services,[207] however, if these are services that are neither demanded nor appreciated by the consumer, but by other groups, and these are not reflected in any remuneration, then there is a case to be made for state support.

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[206] *Ibid*.

[207] There are no official estimates regarding the price premium for wine from organic production. In general, there are price premiums for organic products. These vary significantly, however, according to product and marketing channel. The literature (see e.g., N. Lampkin, C. Foster and S. Padel (1999), N. M. van der Grijp and F. den Hond (1999) or R. Oppermann (2001)) indicates that prices are from five to 300 per cent higher for organic products compared to their conventional counterparts. Highest prices are obtained when the products are marketed directly (see Table 4-7 in Offermann and Nieberg (2000)).

Köpfer and Gehr (2000) state:

> "From a welfare economic point of view organic wine production can be considered highly economic." (p.51), without clarifying how this conclusion was reached.

The environmental, social and health advantages of organic farming as opposed to conventional farming are well known and have been described in the literature. Köpfer and Gehr (2000) obviously make the assumption that these benefits outweigh the additional costs implied by the organic production.

Although there have been studies on the benefits of the agri-environmental programs, and European Commission (2001a) states, "the environmental benefits of organic farming, particularly compared with intensive conventional farming, are well documented," the benefits of the support measures provided to organic farming have neither been measured,[208] nor compared to the costs of the programs nor the additional cost of organic production.

Thus no overall conclusions can be drawn as to the efficiency of the level of state support, however, in general a certain level of state support seems justified given that organic farming provides a range of environmental and social benefits for which there is a demand, that organic farming implies additional costs, and that the additional environmental, social and health services cannot all be reflected in the relatively higher prices of organic products.[209] The point is that the level of this support would have to be set carefully, taking the foregoing arguments into account.

Support could, therefore, potentially be justified for non-product-related benefits. For EU member countries, Agenda 2000 implied that support to organic agriculture would become part of the overall Rural Development Policy program, emphasizing the potential contribution of agri-environmental measures towards the structural objective of promoting rural development.[210] Consumer prices certainly do not reflect the potential benefits of organic agriculture for this rural development objective, whereas with this change an analysis of the justification of state support becomes even more complex as there are not only environmental but also social objectives/benefits involved.

There is also the question of whether the situation is one of negative externalities associated with conventional agriculture, and there is thus a need to impose taxes or other forms of regulation to internalize the negative externalities, or whether it is a situation of positive externalities associated with organic agriculture. This discussion goes beyond the scope of the present study, but is certainly highly relevant for its policy and trade implications. On the basis of current discussions and literature, it may be assumed, very roughly, that it is a combination of the two.

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[208] EC (2001a) states. "In the case of organic programmes, the real effects on the environment should be tested on real farms participating in the scheme." (p.53).

[209] Surveys have shown that for the consumer of organic products the most important argument is the quality of the products and the positive health effects he/she expects from the consumption of organic products. The environmental effects play only a secondary role in the decision to buy organic products, and potential effects on the overall sustainable development of the countryside are not even mentioned in the consumer surveys. Meier-Ploeger *et al.* (1996), for example, carried out a survey in which 67 per cent of the consumers identified health reasons as the first argument for buying organic products, against only 10 per cent who identified ecological reasons for doing so.

[210] In the summary of the Agenda 2000 document is stated: "…the Council agreed the establishment of a strong new rural development pillar to the CAP with environmental respect at its centre…" (p.1) <http://www.europe.eu.int/comm/environment/agenda2000/agriculture.htm>.

What is clear is that in the EU there has been an emphasis on producer-oriented policies, neglecting the importance of the consumers' viewpoint. There are many ways to bring about a change in consumer attitudes, the first of which would be to raise awareness as to the non-product-related effects of organic agriculture, aiming at a potential market remuneration for these effects. The state might be interested if the consumer did not have all the information on the environmental, social and health effects or was historically biased towards conventional products and thus "locked in" to his/her consumption pattern. For example, Verschuur and Van Well (2001) studied the possibility of eliminating the VAT on organic products and analyzed the effects of this instrument as compared to pesticide and fertilizer levies and an increase of the EU budget for direct organic farming payments. They concluded: "The main advantages of a VAT tariff of 0 per cent compared to other instruments are that it impacts primarily on the demand side, while the other instruments impact on the supply side, at the risk of creating an oversupply of organic products." (p.33)

Without going deeper into this discussion, it is important to bear in mind that

1. the design of the system has consequences in terms of competition and its distortion,[211] and
2. direct subsidies are not the only way to support organic farming where it has been shown to be efficient to do so, and organic farming is not the only way to produce the desired environmental or social benefits.[212]

The EC (European Commission, 2001b) itself states that "...Given the existence of an identifiable market for organic products, the environmental schemes must be operated in a manner which avoids distortions of competition." (p.54)

A more questionable attitude is that reflected in the introduction to the document cited above (European Commission, 2001b):

> "Agri-environment programmes ask farmers to undertake environmental activities and pay any income losses and costs." (p.6)

This reflects an attitude that is not directed at looking for a justification from a welfare point of view. It also leaves open the question of the definition of "income losses and costs," raising, for example, the doubt whether or not the premium in prices would be taken into consideration. An orientation towards trying to value the external benefits and costs of different types of agriculture would imply more efficiency and thus less distortions of competition. The same document states, in the case of Italy, "Use of averages to set rates of premia tends to overcompensate less intensive farms and under-compensate the most intensive." (p.50). Authors such as Weiss (2001), who have analyzed the proposed reform of agricultural support with its shift towards increased support to organic farming, have also criticized the generic attitude of the EU, stating that there has to be clarity regarding the objectives of a support system and regarding the relative efficiency of different policy instruments.

In summary, there will have to be a careful analysis as to the welfare effects and the effects on competition of the measures in place. The EU will have to make a greater effort to assess the

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[211] How the use of average rates for premiums can create distortions—referring, for example, to the undercompensation of the conversion of very intensive farms, and the over-compensation of the conversion of less intensive farms—has been documented in European Commission (2001). However, examples have also shown that agri-environmental measures have entailed, in general, extremely high transaction costs, reaching 43 per cent in some cases (OECD 2000)).

[212] European Commission (2001) contains references to studies that could form the basis for designing an efficient support programme.

programs and put them on a footing with a sound economic, environmental and social justification. Third countries should also take a closer look at the EU's policy measures and their effects on competition.

II.2.3.5 Other potential barriers

According to Meier-Ploeger (1996) there is some degree of mistrust amongst consumers when confronted with organic products. In 1996 lack of seriousness was mentioned as the fourth argument for not buying organic produce (after high price, lack of availability and custom). This argument might weigh more heavily on third-country producers than on domestic producers and gives the domestic certification schemes an advantage compared to imports that do not carry one of the recognized domestic labels.

The regional argument has often been used as a response to globalization and is backed up by socio-economic as well as environmental arguments. There is a line of thought on ecological production that insists on the local/regional argument to support truly ecological consumption and production patterns. In Germany, for example, the Regional Ecological Food Production and Marketing Agency (RÖVEL) aims at locally-confined production and consumption so as to protect the environment and promote regional sustainability.[213] This line of thought, which takes no account of comparative and competitive advantages, is definitely counterproductive to imports of organic products from third countries. If there were a massive campaign on the positive environmental effects of organic farming (complementary to consumer perception of the health benefits of organic products), there might be a stronger push for the regional argument, given that the consumer most probably identifies closest with the environment in his/her region.

Wine is marketed both on the basis of varietal differences and protected origin. The trend has been, however, towards a greater consumer preference for varietal emphasis, Chardonnay and Cabernet being the two preferred varieties. It is unclear whether this trend will persist or whether issues of origin regain their importance and could thus be a barrier to some wine producing regions' entering specific markets. This argument holds for wine from both organic and conventional viticulture.

II.2.3.6 The support given by EU countries to organic production in Chile

At the date of this report, there are no cooperative projects between the EU and Chile on organic agriculture.[214] However, when analyzing the support given by the EU to European farmers, it is also important to examine the support provided by the EU and its member countries to organic farming in Chile.

The EU's policies on both sustainable development and development assistance should be recalled.

The EU clearly stated in its Strategy for Sustainable Development,[215] adopted on March 15, 2001:

> "The EU also has to support efforts by other parts of the world to put their societies on more sustainable paths, and play its full role in international organizations with an important contribution to make towards sustainable development."

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[213] U. Hille (2000).
[214] Official projects handled by the Agencia de Cooperación Internacional, AGCI.
[215] <http://www.europe.eu.int/comm/secretariat_general/index_en.htm>.

Furthermore the European Community's Development Policy - Statement by the Council and the Commission,[216] after re-confirming the objective of the EU's development policy, being support for sustainable economic, social and environmental development, emphasizes that Community support has to focus on certain key areas selected on the basis of their contribution towards reducing poverty and for which Community action provides added value. One of the six key areas identified is the link between trade and development. With regard to the latter, the document states, in part:

> "It is the task of the Community to ensure that development policies and trade and investment policies are complementary and mutually beneficial. …improved access is not enough. Other factors also need to be considered: supply and competitive constraints, the ability of the developing countries to benefit from the opening up of the market, enhanced cooperation in trade-linked areas, technology transfers, access to information and to world networks, investment promotion strategies and private sector development. Coverage of all these aspects calls for the appropriate level of support."

Similar policies are reflected at the level of the member states, not only by the Development Ministries but also by the sectoral ministries. For example, in her Declaration on the Future Agricultural Policy, the German Minister of Food, Consumption and Agriculture indicated, on February 8, 2001, after outlining the general orientation and objectives, that the Ministry intends to work together with the Ministry of Development to improve information on fair trade.[217]

II.2.4 Conclusions

From this analysis of the conditions that the Chilean exporter is confronting in the European market, the following conclusions may be drawn.

The certification system imposed by the EU presents significant problems for exporters. On the one hand, the process of application for inclusion in the third-country list is lengthy; on the other hand certification costs under the parallel scheme are considerably greater than they would be with a recognized domestic certification scheme. Furthermore, the parallel system has not worked as envisaged, especially regarding the notification of importers' certificates between different EU member states.

The system of standardization in Chile is such that it is not easy to adopt and implement these guidelines in the country. As seen in the analysis, the legal and institutional changes that are necessary in order to make these changes are significant.

This situation raises the question of whether or not it could be possible to modify the EU system in order to introduce a more gradual implementation in third countries. Just as the conversion period is recognized as an intermediate status, there could be recognition in the form of a distinct label for third countries that are in the (lengthy) process of being recognized by the EU. In any case, the importance of a well-functioning standardization system is evident if green markets are to be expanded in Chile.

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[216] <http://www.europa.eu.int/comm/development/lex/en/council20001110_en.htm>.
[217] Official projects handled by the Agencia de Cooperación Internacional, AGCI.

Beyond the problems inherent in the process of obtaining recognition in the EU, the exporter is also confronted with the existence of a multitude of different labels at the national level as well as the existence of a multitude of private labels. Progress on mutual recognition and, even better, harmonization, is urgently required.

The significant subsidies for EU producers can in no way be matched by Chilean support schemes. European organic vineyards receive, in addition to the subsidy received by conventional vineyards, a direct subsidy to production costs of about 10 per cent—a very rough estimate that can vary substantially for different vineyards. Further support schemes, including subsidies to certification, support to marketing, advisory services, research and training and other national, provincial or local incentive schemes may add to this percentage.

There is no clear justification for the level of state support. The agri-environment programs of the EU "ask farmers to undertake environmental activities and pay any income losses and costs," whereas there seems to be no clear understanding of why this should be. Given that there is a market for organic produce and significant competition, this situation raises questions regarding the trade implications. A certain level of state support seems justified given that organic farming provides a range of environmental and social benefits for which there is a demand, that organic farming involves additional costs, and that its additional environmental, social and health benefits cannot all be reflected in the relatively higher prices for organic products.[218] The point is that the level of this support would have to be set carefully, taking the foregoing arguments into consideration. Also, the use of other potential policy instruments to support organic farming that would be less distortive, such as the elimination of the VAT on organic products, will have to be analyzed.

Other barriers in the EU market, which are related to market issues but not to policy intervention, include the complex system of marketing organic products and the lack of information on the market, consumption and production statistics, trends, etc. The complex marketing system involves particular hardship for third-country exporters that do not have a commercial presence in the EU. As seen in the preceding section, in the case of Germany, one of the few countries for which estimates are available, it is estimated that only about 15 per cent of organic wine is marketed through conventional wine traders, compared to 30 per cent through farm-gate sales, 25 per cent through conventional supermarkets or specialized organic wine traders, 15 per cent through restaurants and 15 per cent through organic supermarkets or organic food shops. This presents challenges for an exporter who has been accustomed to the traditional outlets. Capacity building will be required to put the exporter in a position to cope with this challenge.

There have been various attempts to establish information systems on the organic market, some of which are directed especially at developing-country exporters, however, these systems tend to suffer from a lack of continuity and are very incomplete. The viability of implementing a more complete and permanent system will have to be analyzed.

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[218] Surveys have shown that for the consumer of organic products the most important argument is the quality of the products and the positive health effects he/she expects from the consumption of organic products. The environmental effects play only a secondary role in the decision to buy organic products, and potential effects on the overall sustainable development of the countryside are not even mentioned in the consumer surveys. Meier-Ploeger *et al.* (1996), for example, carried out a survey in which 67 per cent of the consumers identified health reasons as the first reason for buying organic products, against only 10 per cent who identified ecological reasons for doing so.

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III. Sustainable Forest Management

III.1 Introduction

Forest Management Certification is a relatively new concept that was developed during the 1990s. It reflects a collective global concern for environmental resources, in particular forest resources, which are considered to be the biodiversity reserves of our planet.

Although this is a relatively new concept, it has shown remarkable growth. In 1998, a mere 0.2 per cent of forestry goods in Europe held some level of forestry management certification, whereas, by the year 2000 this figure had increased to eight per cent (Geisse, 2001).

More than 90 per cent of Chile's forestry production is destined for export, 24 per cent of which is exported to European countries. Both the market importance of Chilean forestry exports and the rapid growth in demand for certified forestry goods are motivating Chilean forestry companies to opt for sustainable forestry management certification.

One of the determining factors that has made certification a major issue in the Chilean forestry sector was an announcement made by the distributing chain giant Home Depot in 1999 that within two years it would trade only with companies that complied with an internationally recognized forestry certification, demonstrating good environmental practice.

Despite this, progress in forestry certification has been slow. Those companies that have opted for certification have had to follow international certification schemes, such as FSC (Forest Stewardship Council) or ISO 14001. Over the past few years eight Chilean forestry companies, representing a total of 58 per cent of Chilean forestry plantations, have been awarded ISO 14001 certification, and just five companies have been granted FSC certification. These five companies manage a mere seven per cent of productive forests in Chile (See Table III.1).

Although international schemes have a number of important benefits such as enabling companies to maintain access to markets in countries with increasingly demanding environmental requirements, they also bring with them a number of drawbacks. For example, certain requirements may be imposed on the infrastructure of the exporting countries, other requirements may not reflect or be addressed by the conditions prevailing in the country, and high costs are involved since companies are obliged to bring in international experts. These are the main criticisms that Chilean companies and forestry authorities have voiced with regard to the FSC system. The main drawback with Environmental Management Standard ISO 14001 is that although it promotes sustainable forestry management amongst Chilean companies it does not offer a distinguishing label for the final product.

Table III.1: Certified Chilean forestry companies and areas managed

Company	Area Managed (ha)
ISO 14001	
Forestal Arauco (Bosques de Arauco)	585,000
Forestal Mininco (CMPC)	360,000
Forestal Millalemu	80,000
Bosques de Chile	18,000
Forestal Monteáguila	40,000
Forestal Quilpolemu (in process)	12,000
Bosques SA (in process)	12,000
Forestal Bio Bio (in process)	16,000
FSC	
Forestal Millalemu	80,000
Forestal Monte Aguila	40,000
Forestal Berango	2,000
Forestal Bio Bio	50,000
Forestal El Alamo	2,000

Source: CORMA

Given that Chile does not have a national certification scheme for Sustainable Forest Management (SFM), the arrival of the FSC system, alongside a growing need for a certification system that represents the reality of the Chilean forestry industry, has paved the way for two new initiatives that have emerged in Chile aiming to develop a national certification system. These are the National Standard for Forestry Certification (CERTFOR), which is being promoted by a public-private partnership, and the Chilean Independent Forestry Certification Initiative (ICEFI), which is the national program that was born alongside the FSC International certification scheme.

Given the current positioning of SFM in international markets, combined with the perceptions of the actors involved with regard to the credibility of and confidence in existing certification schemes, the following questions need to be addressed: What level of accessibility can a national certification scheme such as CERTFOR have in the European market? What are the advantages of adapting an international system, *a priori*, to create a national system such as ICEFI-FSC? Do these systems meet the "minimum requirements" of the European market? Are these "minimum requirements" sufficient to guarantee the sustainability of the Chilean forestry sector? How easy is it for Chilean manufacturers to adapt to international Standards? What obstacles do they encounter? What problems arise for the Chilean manufacturers (or other parties) if clear rules concerning certification requirements do not exist at an international level?

This section aims to answer these questions. In order to do this the first section will briefly analyze the trends in international trade and consumption of forestry goods, focusing particularly on Chile and the EU.

In the second section trends in SFM in the EU will be analyzed. In view of the fact that there is still no common policy on SFM certification in the EU, the focus of analysis will be on the European market, looking at the principal issues that exist in this debate. For example: What are the main factors that have encouraged the European market to opt for a system of forestry certification? What systems of certifications exist, and which are held in the highest regard?

Under what circumstances would national certification systems from developing countries be accepted in the EU? What are the minimum criteria for a credible and trustworthy certification system? What is the current situation with regard to the mutual recognition of Standards? What consequences could this have on Chilean certified forestry products?

The third section concentrates on an analysis of the key themes involved in SFM certification in Chile, and contains an analysis of the CERTFOR and FSC schemes. The following questions are addressed: What are the minimum requirements stipulated by the EU in the case of both systems? What are the costs involved in each of these systems? What is the importance of each system for the sustainability of the Chilean forestry sector? What are the implications with regard to market accessibility? Which market actors hold the power? Is there any help available in terms of accessibility to market information? What help has been given by the Chilean government and the EU to promote forestry certification? Is Chile prepared to implement a certification system adequately?

In the final section conclusions are offered and recommendations made based on the conclusions drawn.

At the end of the section there are three annexes. The first highlights some individual certification incentives developed by large European forestry organizations, the second is a detailed description of the national schemes: CertforChile and ICEFI, and the third details the requirements and procedures for mutual recognition schemes established by the Pan European Forest Certification (PEFC) and the approval process for regional and national FSC regulations.

The methodology that has been used to produce this report includes a bibliographical analysis and compilation of primary information that was collected through a series of interviews and surveys carried out with consumers and other institutions involved in forestry management in the EU. Interviews were also carried out with Chilean forestry companies and with the actors involved in each of the SFM certification processes currently being developed in Chile.

III.2 Trends in the trade and consumption of forestry products

In this section international trends in the forestry sector are briefly analyzed in terms of production, trade and consumption. The emphasis is on the forestry sector in the EU and Chile, which is the main focus of this report.

III.2.1 Global and EU forestry trade and consumption

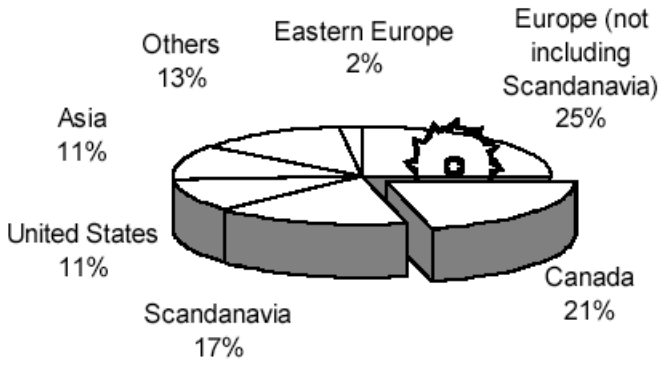
Global commerce in forestry products is the most important segment of the agricultural sector and second only to the trade in petroleum. According to the United Nations,[219] the total trade of forestry products reached 748 million m^3 in 1998, and is still growing. COFI (The Council of Forest Industries, 2001) revealed that on a global level forestry production had reached 3,600 million m^3 in 1999, a figure including both "soft woods" and "hard woods." Forty-seven per cent of this figure (1,700 million m^3) was represented by wood destined for use as fuel and 53 per cent (1,900 million m^3) for industrial usage. According to COFI statistics, the main countries or regions producing soft woods (1,100 million m^3 in 1999) are the U.S. (27 per cent), Europe (18 per cent) and Canada (14 per cent).

[219] Quoted in FAO (1998).

Since 1990 the volume of global exports has fluctuated greatly. According to the FAO, exports of lumber increased by 27 per cent between 1990 and 1998, reaching 113 million m^3, and wood chip, paper and cardboard exports grew by 38 per cent. Exports of timber grew by 60 per cent (49 million m^3) in the same period. Exports of wood pulp have not increased in volume (15 million tons), however, the volume of exports of industrial logs grew by four per cent to 85 million m^3 in 1998.

According to estimates by COFI (2001), global forestry exports grew to US$133,700 million in 1999, a figure somewhat lower than the figure of US$145,000 million for the total value of exports in 1995 reported by the FAO (2001). The main exporters were: Europe (24.8 per cent), Canada (21.2 per cent), Scandinavian countries (17 per cent), the U.S. (11.1 per cent) and Asia (11 per cent) (See Figure III.1).

Figure III.1: Global forestry exports, 1999



Source: COFI, 2001

A large proportion of the trade of forestry products is carried out intra-regionally, and developed countries represent 85 per cent of this total trade. Five countries account for more than half of total global exports and imports in this sector. North America and Europe are the most dominant in both imports and exports, and Asian countries are also important importers. According to Watkins (1999) the main importers of forestry products include the U.S., Japan, Germany, U.K., Italy, France, Norway, China and South Korea.

Table III.2 below shows per capita consumption of forestry products in different countries. These figures demonstrate that the leading countries in the consumption of forestry products are the U.S. and Canada, followed by Japan and European countries. The leading country in Europe is Germany.

Table III.2. Per capita consumption of forestry products, 1997

Region	Wood Chips ('000 m^3/person)	Timber ('000 m^3/person	Paper and Cardboard ('000 m^3/person)
Canada	564	148	220
U.S.	442	162	329
Europe (including Germany)	123	65	203
Germany	203	142	192
Japan	239	110	251

Source: COFI, 2001

The following section shows that although the developed countries mentioned above are the principal importers and consumers of forestry goods, their concerns for sustainable forest management vary greatly from country to country. For example, the market for sustainable forestry goods has grown considerably in the U.K., whereas there is practically no interest at all in countries such as South Korea and Japan (Watkins, 1999).

According to figures from FAOSTAT (FAO Statistical Database), forestry exports from the EU countries rose to US$56,291 million in 2000.[220] Major exporters included Finland (19.4 per cent), Sweden (17.7 per cent), Germany (17.7 per cent) and France (10.5 per cent) (See Table III.3). The main products being exported were lumber, logs, fibre panels and ply-wood.

The EU is clearly on its way to becoming an important region for forestry imports. According to FAOSTAT, the total value of imports (US$57,872 million) overtook that of exports (US$56,291 million) for the first time in 2000. Principal importers included Germany (18.6 per cent), the U.K. (15.6 per cent), France (13.6 per cent) and Italy (13.6 per cent).

Table III.3 European trade in forestry products, 2000

Country	Exports		Imports	
	Value (US$ million)	Participation (%)	Value (US$ million)	Participation (%)
Austria	4,280	7.6	2,644	4.6
Belgium	3,574	6.3	4,315	7.5
Denmark	422	0.7	1,726	3.0
Finland	10,948	19.4	902	1.6
France	5,908	10.5	7,894	13.6
Germany	9,950	17.7	10,777	18.6
Greece	71	0.1	620	1.1
Ireland	283	0.5	713	1.2
Italy	2,742	4.9	7,859	13.6
Luxemburg	182	0.3	142	0.2
Holland	2,653	4.7	4,335	7.5
Portugal	1,285	2.3	871	1.5
Spain	1,843	3.3	4,284	7.4
Sweden	9,957	17.7	1,776	3.1
U.K.	2,195	3.9	9,010	15.6
EU Total	**56,291**	**100.0**	**57,872**	**100.0**

Source: FAOSTAT

III.2.2 Trends in the Chilean forestry sector

Chile has a total of 16 million ha of forest, 13.5 per cent of which are forests managed specifically for the production of wood. The remaining, larger percentage comprises native forestlands, on both private and public land, at different levels of development; some of these forests are protected. Generally speaking, most are not used for commercial production.

220 This does not include exports within the paper and pulp industries.

According to The Forestry Institute (INFOR), the total area of land being used for forest plantations grew by 46 per cent to a total of 1,881 million ha between 1987 and 1997. Sixty-nine per cent of the 34 million m^3 of wood from Chile in 1999 was used for industrial purposes and 31 per cent for timber. Of this total, 72 per cent came from plantations and 28 per cent from native forest. Breaking this figure down further into wood used for industrial purposes, these figures are 87 per cent and 13 per cent, respectively. Furthermore, 63 per cent of firewood came from native forest and 37 per cent from plantations. The principal industrial uses of wood are lumber (41.5 per cent), chemical wood pulp (28.4 per cent) and wood chips (15.4 per cent) (Katz, 2000).

Chile exports 90 per cent of all forestry produce and it is Chile's second largest export after copper (accounting for 13 per cent). In 2000 the value of forestry exports reached US$2,333 million, representing a 187 per cent increase over 1990 figures. Nevertheless, these exports represent only one per cent of total exports of such products on a global level. Some forestry products, however, e.g., pulp and fibre boards, account for up to five per cent. In fact, wood pulp is the largest forestry product exported from Chile, accounting for 46.9 per cent of the total value in 2000. Other secondary products that are also important include: mouldings, strips, doors and windows (22 per cent), paper and cardboard (11 per cent), lumber (8 per cent), wood chips (5.7 per cent), boards and veneer (5.2 per cent) and wood pieces (1.5 per cent).

Table III.4 below shows the destinations of Chilean forestry exports. Asia was the most important destination in 2000, representing 34 per cent of total exports, however, this is lower than in 1995, when exports to Asia represented 45 per cent. Europe and North America both represent 24 per cent of exports and other countries in South America 17 per cent. Chilean forestry exports to Europe reached US$565 million in 2000, demonstrating the incredible dynamism seen in this industry over the last decade. In fact, there was a 105 per cent increase in export value between 1990 and 2000. The most important European importers of Chilean forestry exports were Belgium, Italy and Spain, representing 23 per cent, 16 per cent and four per cent (respectively) of the total exports to Europe.

Table III.4: Chilean exports by destination country

Country	Exports		Imports	
	1998 (US$ million)	1999 (US$ million)	2000 (US$ million)	Participation (%)
U.S.	358.0	489.8	466.6	19.7
Japan	253.3	273.3	302.2	12.8
South Korea	48.0	109.3	178.1	7.5
Argentina	85.7	102.8	152.8	6.5
China	130.9	98.9	144.9	6.1
Belgium	122.4	92.7	130.0	5.5
Taiwan	65.4	90.4	90.3	3.8
Italy	96.3	83.1	88.8	3.8
Peru	46.8	64.1	78.5	3.3
Brazil	39.4	46.1	71.7	3.0
Others	414.3	515.1	661.3	28.0
Total	**1,660.5**	**1,970.7**	**2,365.2**	**100**

Source: CORMA

III.3 Sustainable forest management trends in the EU

The history behind forestry certification can be traced back to the 1980s when a number of NGOs (in developed countries) decided to boycott the use of "old growth" woods and woods from tropical forests. During the Rio Summit in 1992, it was agreed that SFM should be promoted and, as a result, the Forest Stewardship Council (FSC) system was created in 1993, through cooperative agreement between WWF and Unilever, followed in 1995 by the Environmental Management Certification ISO 14001. At the same time, key actors involved in or linked to the forestry industry began to incorporate SFM into their environmental policies, and national certification schemes were developed at a European level. In 1999, following the creation of the FSC system, the Pan European system, PEFC, was created with the objective of standardizing the various certification initiatives being developed in Europe.

As seen in Table III.5, by 1999, six of the eight European countries mentioned here showed a preference for certified forestry products of some kind.

Table III.5: Demands for certified products in Europe, 1999

Country	Demand for Certified Forestry Products
Austria, France	No
Norway	Local demand from furniture trade for furniture made from tropical wood
Belgium	Not from consumers, but from traders
Holland	Yes
Denmark	Local demand low but an important demand in the furniture and recycled wood and paper industries
Germany	Still no consumer demand, but trade demand due to pressure from NGOs
U.K.	Demand at public administration level and by retailers as a result of WWF 95+

Taking into account the significant increase in demand for certified goods—0.2% in 1998 rising to 8% in 2000—it is fair to assume that the majority of countries today are in favour, to some extent, of certified products.

Source: PEFC Report, Seminar 1999

According to Simula (2001), buyers' groups such as the Buyers' Groups of the Global Forest Trade Network represent an important pressure in a number of countries since they have made agreements to buy only certified products, however, this has not always been possible because there is often a lack of supply. On the one hand this represents a real opportunity for developing economies to position their products in the market, while on the other hand it is not clear

whether consumer groups are prepared to accept products certified under developing countries' national certification schemes.

From a supply viewpoint, in 2001 the total area certified surpassed 82 million ha on a global level, implying a significant increase in certified areas, which include 10 per cent of the world's productive forests (2 per cent of the world's total forest area). Sixty per cent of these certified areas are in the EU, the two main schemes in operation being PEFC and FSC (45 per cent and 29 per cent of the certified areas at a global level). These international schemes in turn promote the development of national schemes that must comply with certain minimum requirements, hence an opportunity exists for developing countries such as Chile to develop their own certification schemes and in turn promote their export industry.

At an EU institutional level, however, even though SFM certification is gaining increasing momentum, there are, as yet, no clear official directives. Thus, the analysis of requirements for the SFM certification process must be focused on the market: How does the EU market view the SFM system? What criteria must a certification system include to be recognized as such? What examples are there of recognition of the national systems of developing countries? Is there a bias towards international systems? With regard to mutual recognition of schemes, what level of cooperation exists between the main certification systems? What lessons can be learned from the export industry in Chile? Before answering these questions, the following section looks at the current political situation in Europe in relation to forestry certification.

III.3.1 EU policy and forestry certification

Simula (2001) provides in-depth information on how this subject is being studied at the EU level. In the EU's Fifth Environment Action Program (EAP) in 1999 the importance of policies aligned with consumer products and market mechanisms that benefit the environment were underlined. In the Sixth EAP, in 2001, five priority areas for strategic action were identified: these included a closer relationship with the market, which would include environmental issues in all areas from the use of soils to administrative decisions, which in turn is directly related to the certification process. In the EU's "Biodiversity Action Plan for the Conservation of Natural Resources" (published by the Commission on March 27, 2001) the use of eco-labels and eco-audits as tools was recognized as a means of helping to reverse the tendency for biological diversity to be lost.

There are other EU policies that may be related to forestry certification:

- The EU forestry strategy (Council Resolution (1999/C 56/01)) identifies a number of important elements necessary for a common forestry policy; amongst these are the certification of forestry management as a market instrument that will help increase environmental awareness and consumer conscience with regard to the environmental quality of SFM and help promote the use of environmentally-friendly wood and forest products. Apparently this is feasible if it can be shown that the products originate in sustainably managed forests. That said, the strategy does not include a definition of what is meant by "sustainably managed forests."
- The EU's General System of Preferences (GSP) contains a clause to reduce the tariffs on products coming from countries that demonstrate that they "effectively comply with domestic legislation that incorporates internationally recognized standards and directives for SFM and provide information on whichever certification system they use in that country." However, once again there is no information provided with

respect to what level of SFM is acceptable, nor on the tools to verify it, rendering the clause eventually ineffective.

- Other regulations refer to EU eco-labels for paper products, particularly with regard to their material composition, and Environmental Management and Community Eco-Management and Audit Systems (EMAS) and their application to forestry organizations.
- There are also regulations that relate to public supply policies as an area offering great potential for the "greening" of the market. In order that this occurs, references should be made in contracts to the technical specification of eco-labels, and SFM labels should be identified as an important sector of eco-labels.

Although none of these policies is mandatory for SFM certification system requirements, they do point towards a real need within the EU to find a common and suitable definition for SFM within Community policies. It is quite feasible that this will occur in the medium term. Furthermore, some governments have established a number of obligations for government procurement in relation to certified products. For example, according to Simula (2001), the U.K. government has a policy that requires that as far as possible government bodies are supplied only with sustainably produced wood. The government has established the criteria that these products must meet in order to prove that they have been produced under the international principles of SFM. Other European governments, such as Denmark, are also beginning to take similar steps.

On the other hand, it is somewhat of a coincidence that voluntary certification systems used as means to promote trade in SFM forest products are less likely to be questioned than are obligatory systems. This factor could actually discourage a possible trade policy at EU level. This said, the lack of an EU institutional-level Standard for SFM certification leads to the conclusion that from this point of view, at least for the time being, that there are no official barriers for developing countries' SFM forestry exports

Nevertheless, the need to develop obligatory or regulated criteria implies that forestry exports from developing countries that wish to gain entry to, or maintain presence in, the European markets must comply with the rules and regulations already operational in this region. The next section discusses the level of forestry certification at a European market level and how this has become an indispensable tool. It will also look at the existence or absence of trade and customs barriers to these exports and the debate on a clear definition of the minimum criteria required for a credible and acceptable system of SFM. It is assumed that in order to arrive at some sort of policy level, it is necessary to consider what credible certification entails according to the market.

III.3.2 Analysis of the EU market with relation to SFM

In their document "Wood procurement policy: An analysis of critical issues and stakeholders," Bull *et al*. (2001) establish that there is a strict relationship between certification and the environmental policies of forestry companies, and they study the factors behind the adoption of these environmental policies. According to their publication, from the outset the most important factor leading European and North American companies to adopt environmental policies was the pressure exerted upon them by the NGOs. The companies' main incentive was to avoid possible negative publicity (e.g., a boycott or demonstrations outside their shops) and in fact by adhering to good environmental practice it was possible that they would receive positive publicity and recognition as an organization committed to environmental sustainability. In this context, it is also important to refer to the role of buyers' groups linked to certification systems,

such as the WWF 95+ Group, which are directly associated with the FSC scheme (<http://www.wwf-uk.org/95group.htm>). The group's long-term objective is to achieve significant volumes of certified wood. The WWF 95+ Group established that the most acceptable type of certification was one that was audited by a third party and that adhered to globally recognized Standards that included continuity and labelling. This basically implied the use of FSC as an acceptable system by the group.

In addition to the WWF 95+ Group, another important consumer group is the Euro Co-op (European Community of Consumer Co-operatives). While there is no common policy as such for wooden products, the common position held with regard to schemes of "eco-labelling" is credible. This organization uses the FSC system as an example of a scheme that offers credible sustainable principles. Yet there are problems associated with there being only one organization offering a certification system—for example, issues of power and competence that are linked to the monopoly of an industry. The creation of another similar organization would not necessarily rid the market of this problem.

In these examples, the pressure to adopt a certification system with clearly defined criteria comes more from the final consumers and companies at the end of the product chain than from those at the beginning of the chain. Klement (2001) also stresses the fact that the general improvement of production chain processes was started by companies working in the final consumer market, such as editing houses or construction stores.

According to Bull *et al*. (2001) another factor that has influenced the adoption of environmental polices amongst forestry companies has been the strategies employed by investment groups. For example, there are certain groups of investors that do not invest in the forestry sector because of the environmental controversy that surrounds this industry. There are also those investors who, before investing funds, seek detailed social information on the organization, consulting databases such as <http://www.socialfunds.com> or <http://www.socialinvest.org>. This encourages many forestry companies to improve their behaviour towards the environment so as not to be excluded from the investors' portfolios. The WWF 95+ Group not only includes forestry consumer organizations but also those that invest in forestry companies, for example the U.K. company, Friends, Ivory & Shine. This company administers some £35,000 million; in 2001 it became the first investment organization to form an association with the WWF 95+ Group, undertaking a commitment to invest only in companies that demonstrate certified SFM in conformity with the demands made by the consumer group. Friends, Ivory & Shine committed itself to encouraging those companies in which it has already invested to alter their company policies to include SFM.

This leads to the fact that, according to Bull *et al*. (2001), there is a third factor to be considered in influencing companies to adopt environmental policies. Basically those investment companies that adopt a social and environmental conscience use their influence in an almost activist way to urge reform amongst the companies in which they invest. Examples include the decisions of the Education Fund of America and Trillium Asset Management against Home Depot in 1999 for the sales of wood products that were made from old-growth forests. Home Depot could not resist the pressure and in August 1999 announced its new environmental policy. Once again the case of WWF 95+ Group and Friends, Ivory and Shine may be mentioned as a relevant case study.

On the other hand, Bull *et al*. (2001) establish that certification is, in fact, the most commonly used tool in the environmental policies of companies tied to the forestry industry. The authors analyze the environmental policies of almost 60 North American and European organizations

linked to this sector: wood retailers, non-wood retailers, forestry organizations, forest management organizations and consumer groups, and conclude that certification is the most commonly used tool in their environmental policies. This was substantiated by a number of interviews, carried out for the present report, with large forestry companies and industrial groups linked to this sector in the EU. Many companies pointed out that although at the outset SFM certification was taken on board to improve the company image, to avoid possible boycotts by environmental groups or to find a niche in the market, it has now become an industry Standard and is today an essential requisite for the industry. The Confederation of European Paper Industry (CEPI) points out that just as ISO 14001 has become a Standard for the forestry industry the same will happen with SFM, and in the same way the driving force will be basic market access rather than access to niche markets. Neckermann Versand AG, Euro Papier states that "certification has become standard for large companies and is no longer a way to boost your image."

Therefore, the debate that surrounds SFM in the EU is not whether or not certification should be pursued, but what the minimum requirements are that a credible and acceptable SFM system must adhere to.

III.3.2.1 Minimum criteria under the SFM certification system in the EU

Table III.6 shows a brief summary of the most commonly established requirements in environmental policies by those companies interviewed by Bull *et al.* (2001). This information is complemented by further details collected through surveys, carried out for this project, with important forestry companies and forestry organizations in the EU.

Table III.6 The most common requirements for environmental policies in the European forestry sector

Institution	Common Requirement
Retail Organizations	• FSC • Sustainable Forest Management, ecological or similar unless they have been certified by the FSC • Certified by an independent third party
Forestry Products Industry	It is very difficult to establish a common Standard. Nevertheless, international systems, namely PEFC, are in high demand, followed by FSC. European national systems are also accepted. SFM certification requirements: • Consensual • Participatory • Certified by an independent third party. • Meets international criteria • Complies with international Standards Supports a mutual recognition of Standards
Forest Owners	• SFM • Supports international systems (forest owners) such as FSC and PEFC and also accepts national schemes • Supports a mutual recognition of Standards

Source: Originally designed by Bull et al. (2001) but adapted based on information gained through interviews and surveys with forestry companies and associations in the EU conducted for this study

By analyzing the information produced by Bull *et al*. (2001), company reports and interview results, a marked preference for international certification schemes such as FSC and PEFC can be identified at a European level. The information also shows that FSC is accepted by NGOs and some buyers, and that PEFC has been taken on board by a number of institutions, especially those linked to the industrial and governmental sectors. For example, in its environmental editorial manual (*Handbook on Magazines and the Environment*), the Federation of European Magazine Publishers (FAEP) encourages paper manufacturers to demand "examples of sustainable forestry, preferably certified by an international scheme and by an independent third party." Otto Versand, a leader in furniture sales, confirms that the majority of its purchases are certified by FSC. Another example is Axel Springer Verlag, the largest publisher in Germany, which buys products certified by PEFC and FSC schemes or by national systems recognized by PEFC.

It should be noted that both programs, PEFC and FSC, promote the development of national schemes. In the case of FSC, these schemes must fit into the framework of the principles and criteria as set out by FSC International, whereas the PEFC scheme promotes national initiatives that are "credible and acceptable," meeting certain prerequisites established by the system.

Therefore, one of the main issues in this debate in Europe, amongst the large companies, NGOs and the associations that are linked in some way with this sector, is centred around the minimum requirements that any credible certification scheme should have.[221] It should also be noted that discussion on this subject has begun at government level. According to Simula (2001), governments are putting additional pressure on the debate surrounding minimum criteria. As discussed in the previous section on the institutional analysis of the EU, some national governments such as that of the U.K. have already begun to establish policies with regard to SFM requirements for forestry products.

Companies and organizations linked to the forestry sector are also beginning to insist upon minimum requirements. For example, Presse-Druckerzeugnisse und Ökologie, an association that represents European printing houses and German paper manufacturers, editing houses and forestry organizations, is insisting on the adoption of a forestry certification system that meets certain basic requirements. These requirements are basically the fulfillment of SFM, including the inclusion of all stakeholders in a voluntary and transparent process, certification by an independent third party and cost effectiveness. Similarly the German paper manufacturer Haindl,[222] although showing a preference for the PEFC system, is open to the purchase of wood certified under different certification schemes, as long as the schemes comply with certain essential criteria such as being consensual, participatory, focused on forestry management and internationally recognized.

Another good example is that of Otto Versand, which in addition to supporting the FSC and PEFC schemes has shown a readiness to make purchases certified under other schemes so long as they have "good criteria," which include being consensus-based, focused on avoiding deforestation and promoting issues such as the protection of forest workers. Otto Versand states that when constructing its policies these schemes should take international criteria and prevailing principles as well as the stakeholders of the respective country into consideration. Similarly, the

[221] To date the emphasis for consumers and retailers has been linked more to the source of the wood, i.e., whether it comes from tropical forests, ancient forests or virgin forests.
[222] Recently taken over by the paper manufacturer, Finlandia UPM-Kymmene.

Axel Springer Verlag has demonstrated a willingness to use products certified under other schemes so long as they have been recognized by FSC or PEFC and are proven consensual and participatory schemes.

One of the key elements identified in the debate on the credibility of certification systems is that any given scheme should be created by means of general consensus and as a participatory arrangement. This means that participation in the scheme should be equally balanced, involving all the relevant actors in the forestry sector, as a means of building confidence and ensuring transparency between all involved parties. Simula (2001) underlines the importance of involving the relevant actors in the process in order to reach a high level of agreement before any decisions are taken.

Other issues linked with the credibility of SFM include references to the technical content of the Standards, their operation, the chain of custody and labelling. Additionally, it is crucial that the system has a certification body and an independent auditor, which as far as possible bases its functions within an international arena of evaluation bodies. This is another key element that must be considered.

There is also a tendency amongst some of the larger companies to develop their own "in-house" certification initiatives: IKEA, for example, which created a regulated monitoring model for wood products. Similarly, UPM Kymmene, together with the Axel Springer Verlag, created a certification tool for their imports of Russian forest products. Both cases are described in Annex 2.

III.3.2.2 Mutual recognition of certification schemes

In addition to the debate surrounding the definition of essential criteria for a credible certification scheme, there is a secondary debate at the European level (and generally speaking on a global level) which is focused on the possibilities for cooperation between the different schemes. Mutual recognition of certification schemes is seen as the solution to problems that have arisen with the proliferation of national schemes in the market place in the past few years. Each scheme has developed its own label or mark of quality, making it difficult for manufacturers, buyers and consumers to establish which system is trustworthy and which is not. According to CEPI the proliferation of so many national and international certification schemes may produce confusion amongst the consumers and reduce the benefits of certification.

The Sociedade Brasileira de Silvicultura (2001) believes that there are currently more than 30 different forestry certification systems in operation on a global level, many of which cooperate little if at all. This means that retailers and consumers are faced with an enormous array of Standards that claim different origins and levels of quality and create much confusion for all concerned. This can have repercussions on the credibility of certification, which may cause serious reactions in terms of discrediting all certification schemes, removing support and giving preference to national schemes, thus creating complications regarding exporting countries' access to those markets.

In response to this situation and in order to improve cooperation between schemes, a number of initiatives have been put forward to promote mutual recognition of Standards. For example, CEPI has developed the Comparative Matrix of Forest Certification Schemes (latest version dated November 2001). This matrix identifies and compares 50 different certification schemes, including FSC and PEFC, distinct national initiatives in the EU and initiatives from other regions of the world. The objective is to provide a tool for comparison between the many

differing schemes in operation, using commonly accepted principles for credibility. By establishing this tool, CEPI has introduced the subject of mutual recognition of Standards into the international arena. The IFIR (Forest Industry Round Table), for instance, is an informal international network comprising forestry companies and associations from 12 countries that is studying mutual recognition of credible Standards from a global point of view. In October 2001, IFIR presented a protocol on the mutual recognition between FSC and the Sustainable Forest Initiative of the American Forest & Paper Association (SFI), <www2.merid/comparision.org>. In this protocol the IFIR working group defines mutual recognition as "a reciprocal and non discriminatory agreement under which a given certification system recognizes and acknowledges another certification system as having the same or equivalent intention, product and/or process for the identification of fundamental elements."

Nevertheless, the sheer quantity of actors involved and the very fact that a conclusion has not yet been reached on what the minimum criteria for a certification system should be implies that mutual recognition is far from a reality. And although larger forestry companies and associations in the EU have insisted on mutual recognition, there has been a great deal of resistance to this suggestion amongst the NGOs. This polarity is also reflected amongst the major international certification systems. On the one hand the PEFC maintains that the huge increase in different systems and logos is causing confusion for the final consumer therefore, it is important to promote a mutual recognition of credible and trustworthy Standards, whereas, on the other hand, the FSC system recognizes only those schemes that adhere to the principles and criteria within its defined framework.

By way of concluding this section, it can be seen that there is wide acceptance of international systems such as FSC and PEFC, which leads to the conclusion that those countries exporting products under these certification schemes will not encounter problems accessing markets. The discussion of mutual recognition of certification schemes suggests that this is still a weak point in international certification. The difficulties that developing countries may face when entering developed markets, especially the EU market, may derive also from the validity of their national schemes that rely on the recognition of international schemes, namely FSC or PEFC.

It is interesting to point out that, to date, the PEFC has recognized only schemes from European countries and only recently acknowledged two non-European schemes from other developed countries, namely SFI from the U.S. and the Canadian Standard Association (CSA) from Canada. The FSC, for its part, has approved only five national Standards, four from developed countries (Canada, the U.K., Germany and Belgium) and just one from a developing nation (Bolivia).

The proliferation of national certification schemes may also hinder the positioning of exports in these markets, since the confusion it produces at the consumer level may render the whole certification system invalid.

From this analysis it may be concluded that the following opportunities for Chile to access the EU market with certified forestry exports are:

- The current system, whereby exports are certified under an internationally recognized system familiar in this market (FSC or ISO 14001 are currently available);
- The adaptation of an international system, i.e., FSC International, by a Chilean organization; and
- The development of a national certification scheme that would be validated by an international certification program in the EU, PEFC and/or FSC.

III.4 The key issues in sustainable forest management certification in Chile

As concluded in the previous section, with regard to Sustainable Forest Management the only current feasible option for Chilean forestry companies exporting to the EU is the Forest Stewardship Council (FSC). This system operates on the basis of the application of a generic Standard, since a national version has not yet been developed. In the near future the implementation of the Chilean certification system, CertforChile, will provide forestry companies with a second option. This system will be integrated into the PEFC by means of mutual recognition. According to the Director of CertforChile, the system will come into operation on March 31, 2003.

The subsequent analysis concentrates on:

a. Perspectives on certification initiatives currently being developed in Chile, and their acceptance in the European market; and
b. The contribution that these initiatives are making to SFM in Chilean forests.

III.4.1 Perspectives on SFM certification initiatives currently being developed in Chile

Given that reference was made to the FSC International system in the introduction, no further analysis will be made in this section. The main priority focuses on two initiatives currently being developed: CertforChile[223] and ICEFI.[224] In particular, the analysis will centre on issues related to the credibility of the Standards that these certification systems impose and their consequent value and acceptance in the marketplace:

a. Credibility;
b. Administration of key issues in the international context;
c. Associated costs of each system; and
d. Mutual recognition between initiatives.

III.4.1.1 Credibility of Certification Systems

Credibility is a basic requirement of any given certification system. It is achieved as a result of a combination of factors, including technical quality, relating to a set of principles and criteria, and a transparent, participatory and independent development process during both the preparation and implementation of the Standard in question. As mentioned in the previous section, it is essential to remember the importance that participation and transparency play in the credibility of a certification system, especially bearing in mind the demands of the EU marketplace.

Participation

Participation is an important element in the discussion on credibility. It plays an important role in the balance of economic, ecological and social interests. None of these aspects takes priority over any other and thus it is possible to arrive at an adequate consensual level in the decision making process.

[223] Annex 2 describes the CERTFOR system in detail. The existing Standard corresponds to forestry plantation certification.
[224] Annex 2 describes the ICEFI system in detail. Note that there are no current Standards for forestry plantations and the Standard for native forests is currently at the draft stage. Comparisons made in this section refer to FSC International.

In this respect, CertforChile has come under fire, attracting criticism because of what is considered to be a lack of participation in its development process by NGOs. When questioned about the consequences this may have on the credibility of the CertforChile system, Leonel Sierralta, Executive Secretary of the Council of Certfor, maintained that the basis of any given Standard varies from country to country due to, for example, the differences in political systems and the level of democratic development. He emphasized that in some countries NGOs have attained a high level of civil society representation, whereas in others advanced norms, regulations and sustainable management Standards have been established by legislative and executive bodies and other elected political authorities who represent the public interest in environmental issues. Finally, there is a third group of countries that have entrusted credibility and decision making in finding a consensual approach to issues such as the creation of a certification system to nationally and internationally recognized members of the scientific community. However, regardless of which option is adopted by the country, he emphasized, nothing should prevent the participation and influence of NGOs in this process.

Given the national political context and historical background of conflicts focused on the forestry sector in Chile, Fundación Chile, the organization in charge of the Executive Secretariat of CERTFOR, saw in the scientific community, more than in other sector, the credibility and independence to be able to ensure wide participation. The Executive Committee consists mainly of members of the scientific community, including natural and social science specialists. Five of its seven members work in university research centres and NGOs, one represents Fundación Chile and the seventh member is an industry representative.

Just as credibility and public recognition of the CERTFOR Committee participatory process is of the utmost importance, public participation in the development of the Standard, both by individuals and different interest groups, is crucial. Public participation began during the preparation of the first draft Standard for plantations, with an impressive launch that called for continued participation during the entire process, via the Internet. Two public hearings, open to all interested parties, were also held within a short period of time. As a result of this participatory process, second and third drafts of the Standard were produced and just 18 months after the process has been initiated a final version of the Standard was approved by the committee.

Participation in the ICEFI initiative, in compliance with procedures established by FSC International, began at an early stage in the Standard's development process. FSC has three chambers representing environmental, economic and social interests, each of which has an equal voice in the decision-making process. Together these chambers hold public hearings in which the structure of the Standard, its norms and guidelines are formulated. Once the Technical Committee has finished its role in the procedure, the draft versions are made available to general public consultation. It should be noted that, at the time of writing this report, ICEFI had not yet been approved as an official representative of FSC International and therefore, any certification granted in Chile under this Standard would be granted under the generic FSC International Standard.

Independence

A second issue involved in the credibility debate is that of independence. The independent nature of both certification systems has been analyzed on two levels: origin of funding and the ability of each system to be able to conduct independent audits, without external pressures.

CertforChile is financed by two organizations: the EU and the Corporación de Fomento (CORFO) Development and Innovation Fund (Fondo de Desarrollo e Innovación – FDI). The

EU contributed the resources required for the initial research into the development of SFM criteria and indicators in Chile, carried out by the Forestry Institute (Instituto Forestal – INFOR) in 1998. Later, in 2000, the project was taken over by Fundación Chile. Financial support was provided by the FDI of CORFO and additionally by individual company contributions (professional and experts' time and provision of facilities to carry out field visits). The CertforChile initiative was born out of this project.

In an interview in the context of this paper, Leonel Sierralta, the Coordinator of the CertforChile Technical Council, stated that the export industries are more than aware of the importance that factors such as credibility play in the design of a national Standard of certification for an industry exporting to international markets, in particular Europe. Credibility is, he asserted, an essential criterion in the official approval and acceptance of a national system by other multinational certification systems. According to Sierralta, it therefore, comes as no surprise that both the export companies and CORFO (a state organization) have taken particular care not to interfere with the independence of the Standard. CORFO, in fact, refrained from participating as a member of the Executive Committee, and the export companies accepted representation by a spokesperson recommended by other committee members.

Similarly, once the CERTFOR Plantations Standard[225] was operational a private and non-profit making corporation was set up, charged with administering the certification system and accreditation of certifiers, training auditors and updating the Standard. The Board of Directors of this organization is made up of the same members as the Executive Committee who approved the Standard.

FSC International, on the other hand, promotes the development of national Standards that comply with their generic principles and criteria. Thus, when FSC arrived in Chile in 1997, the Committee for Flora and Fauna (Comité Pro Defensa de la Fauna y Flora – CODEFF) put forward a proposal to develop a national version of the FSC International Standard. This function and the subsequent development and revision of the standard, allowing the transformation of an international Standard to a national one, later passed to ICEFI, which included individuals from organizations other than CODEFF.

ICEFI is financed mainly by CODEFF and FSC International and additionally receives funds from private businesses, NGOs and syndicates that are involved in the scheme (source: Hernán Verscheure, Coordinator of ICEFI, personal interview). At the time of writing this report, ICEFI had not yet been ratified as an official representative of FSC in Chile by the International Board of Directors.

Transparency

The credibility of a certification system and its acceptance in the market are also dependent on transparency. Transparency refers both to access to information related to the Standard and to the existence of clearly established certification procedures and includes adequate mechanisms to facilitate appeals and reports. On this issue, it is worth noting that both initiatives have clear, public procedures that are easily accessible on the Internet. The ICEFI group follows procedures established by FSC International, and CertforChile has developed documentation that is compatible with internationally recognized systems.

[225] The standard that currently exists is for plantation forests. These represent about 9 per cent of all Chilean forestry exports.

III.4.1.2 Management of sensitive issues in a national and international context

It is also relevant to analyze how, in addition to fulfilling the minimum criteria of the European market, each of the initiatives has dealt with some of the more sensitive issues involved in the national and international discussion on sustainability in the forestry sector. Likewise, the question of whether or not the market's minimum criteria are sufficient or relevant in order to ensure sustainability in the Chilean forestry sector must be addressed.

There are three sensitive (non-technical) issues that may have a positive or negative effect on the standard. These are: replacement of native forests with plantations, relations with indigenous peoples and Genetically Modified Organisms (GMOs).

a.) Replacement of native forests with plantations

In a historical context, Chile has been no different from other countries in terms of the gradual replacement of native forests over time. In fact, the trend for large-scale conversion of forest for farming in Chile has been similar to that in other countries. Forest fires are also responsible for a large part of the loss of forested areas; for example, more than 100,000 ha of native forest in Region XI were destroyed by fire at the beginning of the last century. The National Forestry Commission (CONAF) suggests that the felling of native forest for firewood constitutes the single most important factor in the deterioration of native forests, not its replacement with other crops or plantations.

Chile has also witnessed the replacement of native forests with plantations. Estimates vary widely regarding the proportion converted: e.g., INFOR, the National Forestry Institute, indicated in a study of 1994[226] a mere two to three per cent conversion as a national average for the period between 1962 and 1990, whereas Lara and Veblen (1993) calculated that approximately four per cent and 18 per cent of forests in Regions VII and VIII were converted between 1978 and 1987. A third study undertaken by INFOR (1998) showed 15.2 per cent of forests in Regions VII and VIII converted between 1962 and 1990. Another study, by Emanuelli (1997), commissioned by CONAF, analyzed the period 1985 to 1994 and obtained a figure of 140,007 ha of forest converted to plantations nationwide; this figure represents 63 per cent of the total native forest destruction in that period. Current information from CONAF suggests that in the last ten years the main factor is no longer the replacement of native forests but their destruction by the felling of trees for firewood. Whatever the figures are, however, it is certain is that opinion surrounding the issue of replacement of native forests with plantations is very much a public issue, therefore, both CertforChile and FSC ensured that their respective certification programs took measures to curb this trend by including clearly defined rules and regulations on forest conversion in their Standards.

Principle 10 of the FSC Standard states that, "Plantations established in areas converted from natural forests post-November 1994 shall not normally qualify for certification. Certification may be allowed in circumstances where sufficient evidence is submitted to the certification body that the manager/owner is not responsible directly or indirectly for such conversion."

CertforChile, the second example, does not allow the conversion of natural vegetation or of native forests for plantations and furthermore imposes an obligation on managers to define management objectives for those forests with a high environmental value. Principle 2 states that: "Forestry resources should be planned and managed in such a way that the environmental value

[226] A. Unda and F. Ravera (1994).

of native ecosystems within FMUs (Forestry Management Units) are protected and that negative impacts on biodiversity are kept to a minimum." CERTFOR criteria prohibit "creation of plantations on lands which contain native forests and/or vegetation of a high environmental value." Native forests are understood to include commercially productive forests and forested areas that are part of natural corridors. The Standard's definition of vegetation with a high environmental value includes the following descriptions:

- Habitats at a regional, national or global level, which contain significant quantities of biodiversity concentrations (e.g., endemics, protected species, animal refuges etc.) and/or pristine forests or those with very low human intervention and national heritage species.
- Forested areas that contain rare or threatened species or species in danger of extinction.
- Forested areas that provide basic natural services in critical situations (e.g., protection of valleys, control of erosion of fragile soils, etc.).
- Forested areas that are fundamental to satisfying the basic needs of local communities (e.g., subsistence, health) or critical in terms of their traditional cultural identity.
- Areas of outstanding natural beauty or geological interest.

b.) Indigenous people

Issues relating to indigenous people in forestry management are relevant at both national and international levels and, as such, constitute a fundamental element of certification schemes. A particularly interesting example highlighting this issue was the case of the Pan European (PEFC) scheme, which was heavily criticized by the NGO sector for its inadequate resolution of indigenous problems, particularly the rights of the Sami reindeer farmers in Finland.[227]

In Chile, the issues surrounding indigenous groups are particularly relevant given that there are a number of ethnic groups who have claims over land rights in areas of forestry plantation activity. Conflicts between indigenous groups and certain forestry companies are frequently cause for national concern and discussion. As a result of this, CertforChile has included a clause on this problematic issue. Principle 6 states: "Forest Managers shall respect legal and documented agreements, commitments and rights. They shall also take traditional knowledge of land and resource use and management of indigenous people into consideration."

Principle 3 of the FSC system also establishes that: "The legal and customary rights of indigenous people to own, use and manage their land, territories, and resources shall be recognized and respected."

c.) GMOs

The use of GMOs is one of the least clearly understood issues in the international market for forestry goods. An analysis of available literature, interviews and sustainability reports does not yield any conclusive evidence on the attitudes towards this issue. Given that there is insufficient scientific research available on the issue, the forestry sector has not yet felt itself to be in a position to address the topic with clarity. GMOs have also been considered by some to have little relevance in the forestry sector compared to the agricultural sector, in which there are more direct links to human health.

[227] For further information on this topic refer to <http://www.greenpeace.es>.

The FSC system explicitly prohibits the use of GMOs in the forestry sector, and this applies directly to the work carried out by the ICEFI initiative. CertforChile has a somewhat different position on the issue: it does not prohibit the use of GMOs on an operational level if the application for their usage is accompanied by all the relevant documentation, covering, *inter alia*, a risk analysis. This documentation is evaluated case by case by an independent academic entity. These specifications are laid out in Criteria 1.7 of the CertforChile standard.

According to Eduardo Morales, Coordinator of the initiative that led to the establishment of Certfor, there was a lively discussion around this subject in the Technical Committee as well as in Certfor's Council. Agreement was finally reached that the use of GMOs for trade purposes will not be relevant to the Chilean forestry industry for at least another 10 years. It was estimated that as such, an *a priori* prohibition of GMOs would have little or no beneficial effect and could, in fact, have a negative effect, whereby national research on the topic would be discouraged, clearly an undesirable effect since it is with this very information and research that the industry hopes to be able to obtain answers and reach conclusions on the risks that GMOs present for forestry plantations. These results should assist in the five-yearly revisions planned within the Standard's program. These revisions are designed to include modifications to the standard's contents and incorporate new findings and information. Recommendations for alterations to the standard with regard to the GMOs issue are not ruled out.

The Council further states that "discouraging experimental research on the use of GMOs, at a time when European and North American countries are very much involved in this area of investigation, will only serve to increase the gap between Chile and these countries in research and development terms."

According to the authors' information, during the process of incorporating CertforChile into the Pan European System no objections were raised with respect to the way in which the GMO topic was addressed. Nevertheless, there may be a certain level of negative response to this subject by some segments of the European market.

III.4.1.3 Mutual recognition

Mutual recognition emerged in recent years as a response to the worldwide multiplication of forest certification systems. It refers to establishing equivalent and comparable certification processes and requirements (principles and criteria) between two or more standards.

Mutual recognition for a national Standard, such as CertforChile, with other international standards such as the PEFC, CSA or Sustainable Forest Bureau (U.S.), is essential since it will enable CertforChile to maintain and expand its participation in European and North American markets over the long term.

For this reason, CertforChile took into consideration the fact that from the outset the Standard should be designed in keeping with the characteristics of international Standards. This applies to the development and technical processes as well as to the principles and criteria that it lays down; this process allowed CertforChile to make valuable contacts that permitted it in turn to arrive at a set of certification principles. The process was managed by the Executive Committee.

Thus, from the outset, the Executive Committee established a cooperative agreement with the FSC system. Initially, contact was made via the ICEFI group, although later in the process CertforChile opened a series of direct dialogues with the FSC International Board of Directors.

The main objective of this process was to create an information exchange and at the same time maintain regular contact in preparation for an eventual mutual recognition between the schemes. The first of these meetings was a one-day event that took place with the FSC Board of Directors in their headquarters in Oaxaca, Mexico, with the participation of both CertforChile and the ICEFI group. The last meeting in the series was held with the notable participation of the President of FSC International, Heiko Liedecker, in which all parties reiterated their commitment to a continuation in the dialogue process.

In a personal interview, the CertforChile Executive Secretary, Eduardo Morales, explained that the meetings that had taken place with the PEFC system concluded on November 22, 2002 with the official approval of CertforChile by the PEFC Executive Committee. As a result of this approval, the endorsement process for the formal recognition of this standard has now begun. According to a personal communication with PEFC representatives, this process takes an average of six months to complete. Annex 3[228] documents the Pan European mutual recognition procedures that CertforChile must follow and comply with.

For its part, FSC International is considered to be one of the most important certification systems worldwide, with an estimated 12,000 products carrying its label in the marketplace. It would be easy to assume, therefore, that mutual agreement may not be such a key issue for FSC. Nevertheless, since FSC promotes the development of national Standards within the framework of FSC International Principles and Criteria, acceptance and acknowledgement of its national counterparts is essential. Thus when FSC arrived in Chile CODEFF put forward a proposal to develop a national version of the FSC International Standard. This function and the subsequent development and revision of the Standard later passed to ICEFI with the collaboration of individuals from other organizations. Once the Standard is ratified, ICEFI will have a high level of autonomy in the development of the certification process in Chile.

III.4.2 Costs involved in the certification process

Another important issue to be addressed in the study of forestry certification is the costs involved with each system, an issue which, in fact, constitutes one of the greatest barriers to companies wishing to gain access to certification schemes. It should be noted from the outset that it is quite difficult to arrive at an accurate estimate for the costs associated with each system, given that at the national level there is little or no supporting information available for many of the factors involved. These include: auditing costs, monitoring frequency, level of requirements of the scheme, etc. Nevertheless, this report attempts to provide some estimates using referential values.

Certification costs are made up of a variable component which equates to the costs involved in a change of management practice and production processes in order to fulfill the Standard´s requirements and a fixed cost which corresponds to certification audits. These costs may be expressed as an area or volume unit.

In the case of ICEFI, costs were analyzed based on literature available on the FSC International scheme. The analysis of this information demonstrates the sheer variation in total system costs, in terms of both fixed auditing costs and the variable costs associated with land usage changes or the adoption of SFM practices. This variation may be attributed mainly to the differences in the rates charged by the certifying bodies and to the size of the forested area to be certified.

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[228] In Chapter 5 of the Annex, reference is made to the "Pan European Forest Certification Framework Common Elements and Requirements," see <http://www.pefc.org>.

By way of reference, certification costs involved in the FSC International scheme for a medium-sized company (3,000–20,000 ha), may be as high as US$5,700 for the pre-audit visit and up to US$14,500 for the main audit. For forestry companies with more than 20,000 ha of forested land, this cost increases to US$10,000 and US$21,000 respectively (source: Berty van Hensbergen, personal communication); therefore, those companies with large-scale operations incur a higher total certification cost, but with a lower cost per hectare.

Information about the costs associated with the audits carried out on Chilean companies certified by the FSC system is available only from Colin (2001). This publication shows the large variation in costs between companies. The author establishes that costs vary between 0.8 US$/ha and 1.8US$/ha, concluding that there is no "standard cost" associated with the FSC certification system and that, in fact, costs depend on the particular situation being assessed.

In the case of the CertforChile system, there is still no information available with regard to the costs involved since the system is not yet operational. Given the similarities with FSC requirements, however, it may be assumed that costs will be similar to those mentioned above. Nevertheless, unlike ICEFI, CertforChile insists that certifiers and auditors have a national presence, and it is quite probable, therefore, that CerforChile would incur a lower auditing cost.

In a personal interview discussing the costs involved in the implementation of Standards in forestry operations, Eduardo Morales, Executive Secretary of CerforChile, stated that the "Auditors' Manual" recognizes that the demands of sustainable forestry relate to the scale and intensity of forestry operations. For this reason the variable cost should be lower for smaller estates seeking certification.

Finally it is important to point out that both CertforChile and FSC consider group certification as a means to significantly reduce certification costs, although to date there are no figures available on this subject. Furthermore FSC are acknowledged as providing donations and subsidized services to forestry companies and reduced cost inspection services for small forestry companies.

III.4.3 The contribution of certification to sustainable forest management of Chilean forests

Over the last two years, CertforChile's and ICEFI's development experiences have been such that national, state-level, coordinated actions and policies to promote forest management have become virtually obsolete. Moreover state organizations such as CONAF readily accept and welcome the voluntary environmental certification trends, which have allowed them to redirect their own activities towards conservation functions, which generally lack funding.

The development of national certification systems has generated processes that contribute to the development of state policies working towards SFM. These have come about as a result of:

a) The debate on the current situation of forests and the stakeholders' needs and demands: the development of certification systems has opened up the arena for discussion and raised the national consciousness on subjects relating to sustainability.
b) The establishment and improvement of contact between different stakeholders, inspiring mutual confidence.

c) The acknowledgement of problems common to all stakeholders and of gaps in information and research that must be filled. Some aspects that previously went unheard are now being incorporated into common management practices. In just one year it is clear that an increased number of forestry companies have participated in the CerforChile process.
d) The improved participation of professionals throughout Chile, facilitated by regional working groups (e.g., CerforChile has worked with plantation, tree nursery and *lenga* (*Nothofagus pumilo*, native to Southern Chile) forest working groups, and similarly ICEFI supports a Plantations Committee and a Native Forest Committee.
e) Demonstration that it is possible to manage forests in a sustainable manner: certified companies represent a positive image of what SFM means in Chile.

III.5 Conclusions and recommendations

- For developing countries that opt for a valid SFM certification system there is a real opportunity for certified forestry goods to access the EU market.
- There is also an opportunity for the development of national certification schemes so long as they incorporate the minimum requirements set out by the international market and are recognized by a valid international scheme.
- The lack of an institutionalized approach to SFM at a European level has not presented severe problems for developing nations' export businesses.
- On the other hand, SFM certification is a subject very much in the political debate in the EU, and the publication of a general ruling on this subject effective for the medium to long term appears to be imminent. With this in mind it is important that those managing the national schemes currently being developed pay attention to this situation and participate wherever they can in the debate.
- The certification systems currently being developed in Chile—ICEFI and CertforChile—meet the three essential certification criteria: independence, participation and transparency, which ensure that certification Standards have international credibility.
- NGOs, the state and Chilean companies are fully aware of the importance of credibility of the certification systems. It is understood that credibility is a fundamental requirement in the maintenance and diversification of forestry exports to the European market.
- The state regards forest certification as a self-regulatory tool for the industry, implying a lower control cost and allowing the freeing of resources for other activities such as conservation.
- The professional, technical and scientific capacity to meet the necessary technical levels required by an international SFM Standard exist in Chile, however, technical and scientific information is still somewhat lacking in specialized areas.
- Having developed a national Standard for plantations, CertforChile saw the need to seek international recognition from other SFM Standards.
- At an international level, there is little progress with regard to the harmonization and/or mutual recognition of certification schemes.
- Given the lack of progress, it is in the interest of the general public, including companies, civil society and NGOs, to have more than one SFM certification option available in Chile.

- CertforChile has concentrated its efforts and interests on mutual recognition and approval by international SFM systems such as PEFC and FSC because of their important presence in European and North American markets.
- The coexistence of two strong certification systems at an international level has not prevented parallel dialogues from taking place between the Boards of Directors of both these systems and the CertforChile initiative to discuss the possibility of mutual recognition.
- Based on the albeit small amount of information available on the costs involved in each certification system, the following conclusions may be drawn:
  - The audit costs for CertforChile are likely to be similar to those of ICEFI-FSC.
  - For small-scale forestry companies it is difficult to predict which system is more economically viable. CertforChile has a tiered system according to the size of the company but there is insufficient information available on this system and its associated costs.
  - Both Standards have a group certification scheme that may be more accessible and economically viable for smaller forestry companies.
  - From an administrative point of view, it is likely that smaller companies will find the CertforChile system more accommodating since it operates a cost/size mechanism for sustainable forest units.
- Finally, with regard to existing market information, there appears to be a lack of information on the current status of the market coming from NGOs, governments and the industrial sector. Because of this and given the cost of generating such information, the creation of an international institution that would take care of the provision of such information for all the actors involved, ensuring transparency throughout the system, is strongly recommended.

III.6 Annexes

III.6.1 Annex 1: two case studies

III.6.1.1 Case study 1: tracing Russian wood imports

Since the 1950s the Finnish company, UPM-Kymmene Forest, has been importing 3–4 million m3 of wood annually, a figure equivalent to 15 per cent of the company's total needs. The majority of this imported wood (85 per cent) comes from Russia. Since Russia has no Sustainable Forest Management Certification scheme, UPM-Kymmene insists on a declaration of origin for all wood products imported. This is a process that validates the information submitted by the original suppliers.

As a result, in 1996 UPM-Kymmene initiated a certification program for Russian wood imports (AS and UPM, 2001). Otto Versand and the Axel Springer Verlag participated in the new scheme, which was supported by Greenpeace Russia, the Russian State Forest Administration and an independent certification body, Det Norske Veritas (DNV). Transparency in the program is ensured using a special page on the UPM-Kymmene Web site, which contains information on the entire chain from the original tree through to the final paper product. The Web page also publishes buyers' guides and policies, suppliers' practices, and measures applied by UPM to trace the origin of wood products. The Web site additionally provides profiles of Russian forests and lists a series of links to sites of interest, related to Russian forests.

The system comprises three basic elements:

a. A declaration of origin for each and every supplier contract. This information is stored in a database that contains information on all supplier contracts and details of wood deliveries, all of which is complemented by a GIS (Geographic Information System) mapping system;
b. An audit process to verify the declarations of origin by checking site visits to suppliers etc; and
c. Leaflets with photos providing additional information on harvesting methods and environmental management techniques used.

III.6.1.2 The IKEA staircase model – solid wood

Wood represents the highest proportion (70 per cent) of primary materials used by the furniture retailer IKEA in the manufacture of its products. Wood is considered to be an excellent material from an environmental point of view: it is natural, recyclable and, furthermore, if forests are managed in a sustainable manner it can also be considered as renewable. For this reason, IKEA's long-term objective is that all wood used should come from SFM-certified forests that have been approved by an independent entity such as FSC or equivalent.

Aware that forests in certain parts of the world are under threat and that certification is a gradual process, IKEA has developed a similar certification method known as "The Staircase Model Approach." This is an effective, academic process that allows a gradual insistence on higher environmental Standards from solid wood suppliers. The model has four entry levels depending on the level of fulfillment of SFM Standards.

Level 1:

The first level in the staircase model represents entry level for a potential supplier of solid wood products. At level 1 the wood should not come from intact natural forest or high conservation value forests unless it has been certified as coming from a well managed source by an independent body recognized by IKEA, such as FSC or equivalent.

Level 2:

This level represents the minimum requirements that IKEA suppliers must meet as from September 1, 2000. New suppliers not fulfilling the minimum requirements must have an action plan showing how compliance will be met within three months. At Level 2 all solid wood must meet the following requirements:

- The origin of the solid wood must be known. The supplier must be able to state the region within a country from which the wood originates.
- The solid wood must be produced in compliance with national and regional forest legislation and other applicable laws.
- The solid wood must not originate from protected areas (national parks, nature reserves, forest reserves etc.) unless independently certified as originating from well managed sources, i.e., forests certified according to a "Level 4 standard" recognized by IKEA or felled in accordance with management standards for the protected area.
- The solid wood must not originate from plantations established post-November 1994 that replaced native forests.
- High-value tropical tree species (e.g., Teak, Meranti, Rosewood, Mahogany etc.) must be certified according to a "Level 4 standard." Currently, the only high-value tropical tree species used by IKEA is FSC-certified Teak.

Level 3:

This level, more commonly known as "4Wood," is a Standard developed and maintained by IKEA. The forest management system is audited using a Standard that includes indicators that detail the transition from level 2 to level 4. The indicators are adapted to specific conditions in the different regions where the wood is produced. The FSC Standard, be it regional or generic, is used as a base for selecting indicators for "4Wood." Existing certification systems and corresponding Standards are compared with 4Wood. Standards that are viewed as equal to 4Wood are referred to as "4Wood equivalent."

Level 4:

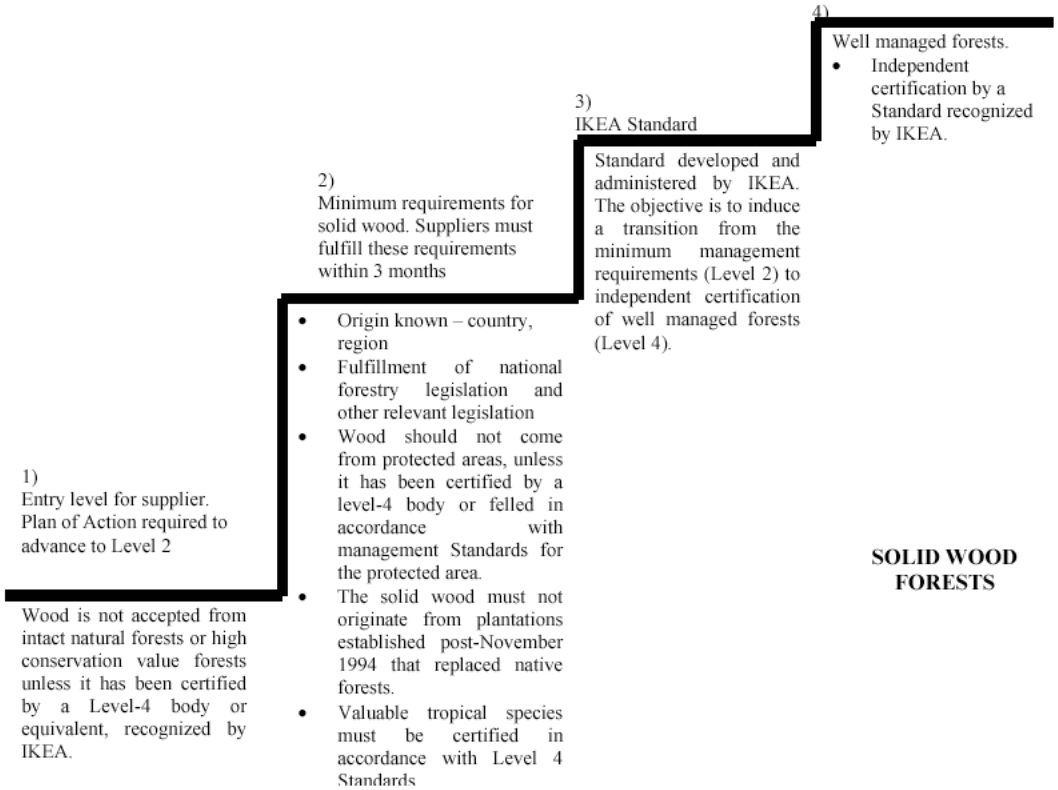
Level 4 refers to forests that are managed in accordance with an official SFM Standard. The Standard must include established performance levels developed cooperatively by a group of environmental, economic and social stakeholders and certified by an independent third party. Currently, FSC is the only Level 4 Standard recognized by IKEA.

IKEA continuously monitors and evaluates the progress of the staircase model, adapting it to the suppliers and the industry.

Forest Tracking System

IKEA has developed a Forest Tracking System to ensure that solid woods can be traced at all stages of the supply chain. The system consists of a questionnaire that all solid wood suppliers must complete. The objective of this questionnaire is to clarify the origins of the wood supplied in accordance with the four levels of the Staircase Model.

Staircase model process



III.6.2 Annex 2: Chilean sustainable forest management certification initiatives

III.6.2.1 National Forest Certification Standard (CertforChile)

Origin and institutions involved

The Forestry Institute (Instituto Forestal – INFOR) began to research the idea of developing a national Standard for Sustainable Forest Management in Chile in 1997, with EU funds and the Development and Innovation Fund (FDI) from the Corporación de Fomento (CORFO). Nevertheless, it was not until the year 2000 that Fundación Chile, using funds from FDI under CORFO, formally began the initiative, creating concrete partnerships with INFOR and the Chilean Forestry Corporation (CORMA). Fundación Chile acts as the Secretariat, charged with the management and organization of the system, whereas INFOR is responsible for the technical function and co-management. This set up also allows different representatives to participate in

the scheme, for example: the National Commission on Environment (CONAMA), the National Forestry Commission (CONAF), Centro de Investigacion y Planificacion del Medio Ambiente (CIPMA), NGOs that are orientated towards environmental policy and individual academics and scientists.

Funding

Seventy-five per cent of CERTFOR's funds come from FDI through CORFO ($130 million), 24 per cent from private companies (personnel, site visit costs, funding for pilot schemes etc.) and 1 per cent directly from Fundación Chile.

Objective and main characteristics

Certfor's main objective is to develop a certification system that ensures an adequate level of forestry management in line with the current national situation and that adheres to a set of international requirements involved in the concept of sustainability. The Montreal Process is used as a benchmark for this system.

The initiative's first objective is to develop a national Standard for SFM for *Radiata* Pine and eucalyptus plantations and for native *lenga* and renewable *Nothofagus* forests. The Standard will be endorsed by an international seal of approval. It will be important to take into account the design and general set up of the certification systems with which this corresponds and the requirements of the accreditation protocols of recognized independent certifiers.

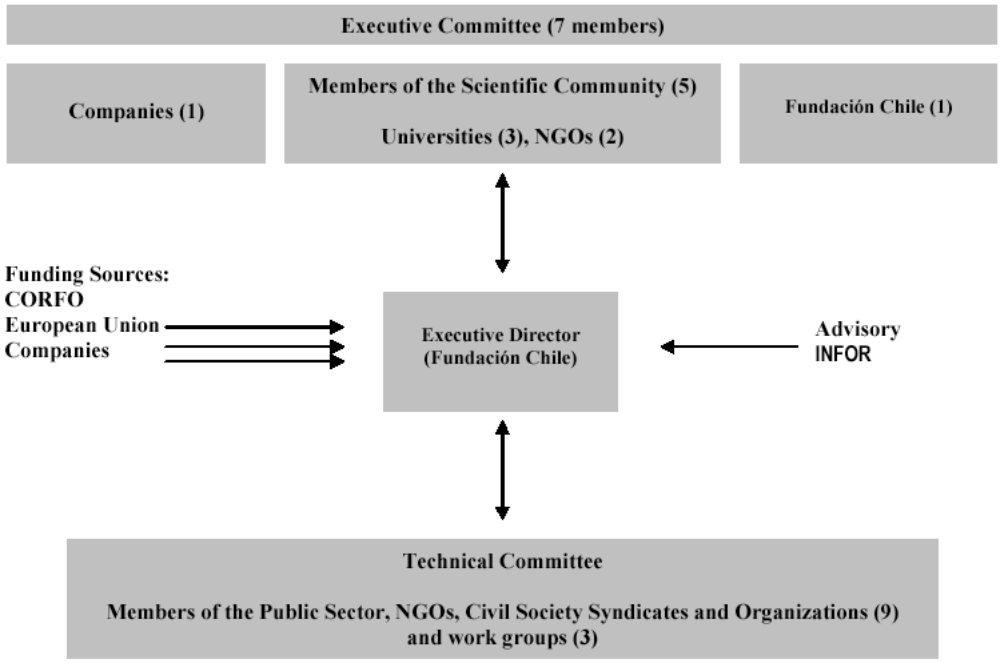
Program structure and operations

This initiative is organized on two levels: first an Executive Committee, which is responsible for establishing the principles and criteria of the Standard, and second a Technical Committee, responsible for the technical specifications of the principles and criteria.

Both groups are made up of representatives from different sectors of society so as to incorporate all viewpoints into the principles of the Standard (economic, environmental and social) (See Figure III.1). There is 1:6 industrial representation on the Executive Committee and 1:8 on the Technical Committee. The remainder of the seats are distributed amongst the public sector, NGOs, civil society syndicates and organizations. Additionally, there is a Technical Working Group which is responsible for the technical design of the standard's indicators, which are then put forward for approval by the Executive Committee.

Initially linked to Fundación Chile, CERTFOR recently became an autonomous body with the status of a non-profit, independent corporation created to administer the Standard, revising and updating the principles, criteria and indicators. This entity will also maintain international links and serve as an accreditation body, evaluating the certification bodies annually. It will also be responsible for training the auditors, coordinating activities with the National Institute for Normalization (Instituto Nacional de Normalización, INN) and maintaining international agreements with other Standards. The Directorate of the corporation was formed by the members of the former Executive Committee.

Figure III.1: Certfor organizational structure



The following requirements have been established *a priori* for those organizations seeking official approval:

- National presence;
- Affiliated to the International Accreditation Forum (IAF); and
- Fulfillment of the general provisions of the ISO 61 Guide.

This definition implies that the organizations participating in the project will have to decide amongst themselves which will assume the role of the accreditation body. Alternatively they may decide to opt for a model that will involve the use of an independent, subsidiary organization to initiate the proceedings and, once the corporation is operational, hand over the responsibilities for the process.

Structure of standard

The Plantation Standard has a hierarchical structure consisting of nine main principles: long-term planning and objectives, biodiversity and natural ecosystems, safeguarding productivity, protection of water and soils, local communities, indigenous people and traditional knowledge, forestry workers and workers' relations, international laws and agreements, observation and control. Furthermore there are 43 criteria relating to compliance within these nine principles and 179 verification indicators for the criteria.

Additionally, an "Auditors' Manual" has been produced, which sets out the procedures for the operational application of the Standard.

Moving forward

The Plantation Standard, which will be used for at least the next four–five years, was approved in March 2002 by the Executive Committee. It was developed with the help of the Technical Working Groups, international consultants and regular meetings that took place with the Executive and Technical Committees, in which each and every element of the Standard was revised. The principles, criteria and indicators for the Plantation Standard were put through pilot tests with three companies, Forestal Mininco, Bosques Arauco and Bosques de Chile, in order to establish the scope of their application. The tests lasted 10 days and included company visits by a team of auditors made up of one internationally accredited expert accompanied by a CERTFOR (Fundación Chile–INFOR-FDI) representative and local experts on the specifications of the standard. The Native Forest Standard is still in its early stages and a first draft is expected by the end of 2002.

According to CERTFOR's Executive Secretary, Eduardo Morales, in a personal interview, the scheme that will be adopted to achieve international recognition of the Chilean initiative will fit into the framework of the ISO 62 Guide accreditation procedures. He also mentioned that several meetings have already been held between the different schemes (FSC, PEFC and SFI) with a view to reaching a decision on mutual recognition.

Involvement of civil society and dissemination of information

Once the pilot tests had been carried out and a first draft of the Plantations Standard had been produced by the Executive Committee, a public consultation process began. The first draft of the Standard was discussed at a one-day workshop in October 2001. Over 60 professionals and academics and representatives from NGOs, companies, international organizations, study centres, workers' organizations and the public sector attended. Prior to the workshop, representatives had received a copy of the draft Standard and were invited to make comments. The comments and opinions that came out of the workshop were then incorporated into the documentation, thus creating a second draft which in turn was put forward to a second public workshop in January 2002. There were 35 representatives from different sectors of the forestry industry at the second workshop. At the end of January 2002 a final draft of the Plantations Standard was presented; it was approved by the Executive Committee in March 2002.

CERTFOR has its own web page (<http://www.certfor.cl>), which regularly publishes updates on the advances being made with this initiative.

III.6.2.2 Chilean initiative for independent forestry certification (ICEFI)

Origin and institutions involved

In 1997 the Chilean NGO, CODEFF, developed a proposal that would promote the development of a national forestry certification initiative within the framework of the principles and criteria of FSC International. In 1998 CODEFF created an FSC working group with the aim of developing a national process to generate a series of SFM Standards. This initiative involved some 45 organizations, representing a wide range of sectors.

Funding

ICEFI is funded by the institutions involved in its establishment, i.e., private companies, NGOs and syndicates, and in particular CODEFF and FSC. Eighty-five per cent of the FSC funding

comes from contributions made by private foundations and the remaining 15 per cent from membership and accreditation quotas. Funds from private foundations may also be considered as an indirect source of assistance for FSC activities, i.e., environmental and social NGOs that support the FSC.

Objectives and main characteristics

ICEFI's principal objective is the development of a Standard for native forests and plantations using the FSC principles and criteria. It aims to evaluate the application and promotion of the FSC forest certification process systematically. It also aims to ensure adequate development of the certification processes and act as a mediator between the FSC Secretariat, certification bodies, forestry companies and members of the general public.

Program structure and operations

The main objective of ICEFI is to define national certification Standards under FSC principles, by 2002. In order to achieve this goal, ICEFI defined a methodology that incorporated all sectors involved in the forestry industry to ensure that environmental, social and economic interests were represented. The development of the standard is carried out by two technical committees, the Native Forest Technical Committee (Comité Técnico Bosque Nativo, CTBN) and the Plantations Technical Committee (Comité Técnico Plantaciones, CTPL). These committees are made up of representatives of organizations associated with the forestry sector, which are divided into three Chambers (social, environmental and economic). Each Chamber has a Board of Directors, elected every two years, made up of four representatives, each of which has an equal vote in the decision making process. In addition to this there is a Marketing Sub-committee (CTPC).

Like FSC International, once officially approved by FSC International ICEFI will authorize the use of a label that certifies that the product has been produced in accordance with SFM principles throughout the entire chain of custody. The FSC logo may be applied only to those products in the chain of custody that have been checked and audited (and this is monitored on an annual basis).

Although ICEFI is currently linked to CODEFF, it is hoped that in the future a body will be created that will evaluate the role of the standard every five years. It will also provide information on the national and international state of the certification system and on the subject of conflict resolution.

ICEFI also created a Marketing Sub-committee, linked to the CTPC, which will enable access to market information and promote the economic benefits associated with certification. This Sub-committee, along with the FSC Secretariat and consumer groups associated with the WWF, has made contact with companies that are interested in buying certified goods from native forests and plantations in Chile. By January 2002, the Sub-committee had already established contacts with a number of Belgian companies and was awaiting information from the other 15 consumer groups that buy FSC-certified wood.

FSC International will also be the accreditation body, and certification companies already accredited by FSC will be used.

Structure of standard

There is still no final draft for the ICEFI Standard. Nevertheless, looking at FSC International as a comparison, it can be seen that the standard has a hierarchical structure, with 10 general principles (No. 10 is specifically related to plantations but also states that plantations must comply with the other nine principles) and 56 criteria related to the other nine principles. Furthermore, it sets out a number of indicators for each criterion. These principles and criteria are applicable at an international level, whereas the indicators and verification tools are designed specifically for the particular country or region. Since ICEFI has two different Standards, the Native Forest Standard and the Plantations Standard, it is important to note that the Native Forest Standard is made up of the first nine FSC principles and the Plantations Standard contains all 10.

Moving forward

The Native Forest Standard proposal is now in its final revision stage. It is hoped that once this has been integrated with the CTBN proposal in mid-2002 a draft version will be ready for submission for public consultation with the various interest groups, outside ICEFI.

The Plantation Standard, on the other hand, is still at a more preliminary stage, whereby indicators are being discussed for the harmonization process with the CTBN proposal. Once this has taken place it can be submitted to a public consultation towards the end of 2002.

The involvement of civil society and dissemination of information

The methodology used by the FSC to create the standard and, similarly, in the generation of the ICEFI Standard is a participatory process in itself. Meetings are organized with the representatives of each Chamber, and these are open to the general public. In these meetings the structure of the Standard, its norms and directives are discussed and created. Once the Technical Committee has finished its role in the process, the draft is submitted to a public consultation.

Additionally, ICEFI has a Marketing Sub-committee whose objective is to publicize FSC certification at a local level. In a special workshop, communication strategies were established for a promotional campaign that will be carried out over the next two years. At this workshop specialists from Chilean NGOs that support ICEFI met to discuss the development of these strategies and action plans.

As a result, a number of tools, such as brochures, folders, workshops and seminars, have been designed to help with the dissemination of information. Since October 2001, ICEFI has been producing a monthly electronic bulletin in which news is published about this initiative, including advances made with the draft Standard and information about the institutions involved. Information on the different stages of the certification process is also available from the FSC Certification Information Center, which is run by CODEFF. Further information is also available from the ICEFI web page (<http://www.icefi.cl>).

III.6.3 Annex 3

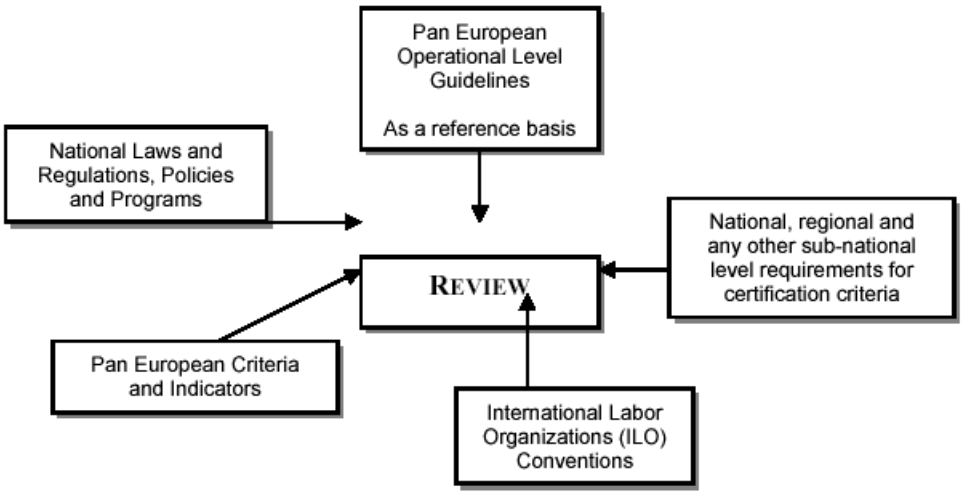
III.6.3.1 Guidelines on PEFC standard setting and procedures for endorsement of PEFC certification schemes

Guidelines on PEFC Standard setting

The underlying Elements for Developing Certification Criteria for national, regional or other sub- national levels are the following:

- Pan European Criteria (PEFC): The certification criteria used in the PEFC are based on the six Pan European Criteria for Sustainable Forest Management as a common framework (see Annex 2).
- Pan European Indicators (PEI): The Pan European Process has identified a set of 27 quantitative and descriptive indicators for national monitoring and reporting (see Annex 3). The individual countries are free to elaborate further on these indicators at a national level.
- Pan European Operational Level Guidelines (PEOLG): The Pan European Operational Level Guidelines will form the benchmark when national and regional certification criteria are developed (see Annex 4).
- Laws and regulations: national laws, programs and policies must be respected.
- International Labor Organization (ILO) Conventions: All relevant International Labor Organization (ILO) Conventions ratified by the country in question shall be respected in the implementation of SFM. In addition, the core ILO Conventions[229] shall be respected in the implementation of SFM. The ILO Code of Practice on Safety and Health in Forestry Work is recognized as a helpful document that should be taken into account when developing national and regional certification criteria.

Figure III.2 Basis for forest certification criteria



[229] The core ILO Conventions are as follows: No. 29: Forced Labor; No. 87: Freedom of Associations and Protection of the Right to Organize, 1948; No. 98: Right to Organize and Collective Bargaining, 1949; No. 100: Equal Remuneration, 1951; No.105: Abolition of Forced Labor, 1957; No.111: Discrimination (Employment and Occupation), 1958; No. 138: Minimum Age for Admission to Employment, 1973.

Development process at national, regional or sub-national level

- A Forum (e.g., working group, committee, council) shall be created at which relevant parties interested in the process are invited to participate (e.g., forest owners, forest industry, NGOs, retailers, trade unions, etc.).
- The steps to be taken during the development process are as follows:
  - assessment of the relevance of SFM elements;
  - interpretation of SFM elements in national situations;
  - definition of SFM elements.
- Transparency: During the preparation of certification criteria by the Forum, draft documents should be made available to any interested parties who request them.
- A pilot study could be a useful mechanism in the development of the process.
- Consensus: A consensus shall be the objective, but not a precondition, in order to decide upon the certification criteria.
- Consultative Process: A reasonable amount of time must be provided to allow consultation on the final draft certification criteria, prior to a final decision's being made.
- The certification criteria will be reviewed periodically in the light of new scientific knowledge and to enable continuous improvement.
- This process shall be adhered to as and when certification criteria are reviewed.

Procedures for endorsement of PEFC certification schemes

PEFC minimum requirements

A national, regional or any other sub-national forest certification scheme must be endorsed by the PEFC Council; the procedures for this have taken into consideration ISO Guides 61 and 62.

- The submission of a certification scheme with completed checklist (available from the Secretariat) to the PEFCC Secretariat must be accompanied by a written request from the national PEFC member (or other owner of a scheme) for the scheme to be assessed and approved formally. The submission must be on paper and also in electronic format to allow it to be posted on the official PEFCC Web page. This will allow for public comments.
- The scheme must be forwarded to the Board of Directors, who will appoint an independent consultancy, or consultants, on a case-by-case basis to assess whether the scheme conforms to the requirements of PEFCC. Where it is not possible to find an appropriate independent consultancy, an independent group of experts may be appointed who must have the relevant competencies required to assess the scheme against the PEFCC criteria. In either case, the assessors should be from countries other than that of the applicants, and should not have any vested interest in the application.
- Copies of the scheme (including checklist) must also be sent to each national PEFC governing body (PEFCC members) with written comments. At the same time copies will be sent to independent consultants or independent groups of experts within a target time of three weeks. The scheme (with completed checklist) will also be posted on the official PEFCC web page.
- The independent consultants may discuss any necessary minor alterations directly with the applicant so that changes can be made.
- The independent consultants will be required to prepare a report for the Board of

Directors, within a target completion time of five weeks, so that a decision can be made on the conformity of certification scheme as per Article 6 of the PEFCC Statutes. A copy of the report will also be sent to the applicant.

- In cases where the Board of Directors find that a certification scheme conforms to the standard, a recommendation to approve the scheme will be made to the General Assembly. A postal ballot will be organized, and General Assembly delegates, who are authorized to vote on behalf of the national PEFC Governing Bodies (PEFCC members), have three weeks in which to respond.
- In a case where the Board of Directors finds that a certification scheme does not conform to the Standard, the applicant is informed. The applicant may then either revise the scheme and apply again or appeal against the Board of Directors' decision and have the General Assembly reconsider the scheme at its next meeting
- If there is a majority vote in favour of a scheme via the postal ballot, the scheme will be deemed approved by PEFCC and permitted to use the PEFC logo in accordance with the rules of the PEFCC. This will be announced on the official PEFCC Web page. If the vote is negative, the applicant may appeal to have the scheme reconsidered at the next General Assembly.
- The Board of Directors may also choose to have an application discussed at the next General Assembly.
- Minor alterations to an approved scheme need to be submitted to the PEFCC so they can be assessed to ensure that they continue to comply with PEFCC requirements. The Board of Directors is empowered to approve minor alterations on behalf of the General Assembly provided these have been deemed compliant with the requirements of PEFCC by an independent consultant, as before. Major alterations need to be approved by the General Assembly, as before.
- Each applicant is responsible for meeting the costs incurred during the assessment process.
- The PEFCC must ensure that the scheme meets its technical requirements. As the scheme will need to be implemented by certification bodies accredited by a national accreditation service, it is up to the applicant to ensure that the scheme is capable of meeting all of its requirements.

Compatibility of certification criteria with Pan European Criteria

The forest certification scheme will apply the Pan European Criteria for SFM as a common framework and the Pan European Operational Level Guidelines (OLG) will form the benchmark for the development of the standard.

The criteria used by the national certification system must be compatible with the Pan European Criteria for SFM adopted by the Third Pan European Ministerial Conference on the Protection of Forests in Europe, held in Lisbon, 2–4 June 1998 (the Pan European Criteria were previously often referred to as the "Helsinki Criteria").

Compatibility means that the six Pan European Criteria are applied satisfactorily. An adequate description has to be provided that explains how the Pan European Indicators and the Pan European OLG have been used as a reference basis for the definition of the national certification criteria. This information must be attached to applications made by national schemes in order to facilitate assessment by PEFCC.

Development of certification criteria

The development process of the Standard shall respect the following. A description of the development process must be attached to applications made by national schemes in order to facilitate the assessment by the PEFCC.

Level of forest certification application

The appropriate geographic level for criteria development and application is, by and large, the choice of the applicant wishing to obtain a forest certification. The following levels or combinations are possible: regional certification; group certification; individual certification.

Certification procedures

The requirements for the auditing and certification procedures of PEFC are based mainly on EN 45011 (General requirements for bodies operating product certification systems), EN 45012 (General requirements for bodies operating assessment and certification/registration of quality systems) and EN 30011-2 (Qualification criteria for quality system auditors). The procedures of participating certification schemes are documented and provided to the applicants and certified suppliers. The documentation also contains a description of the rights of the applicants.

Standard EN 45012 specifies the general criteria for certification bodies operating environmental management systems applicable to certifiers of forest management. Other nationally accredited bodies that have the proven competence, the required impartiality and adequate management systems to carry out forest management certification may also be recognized as competent bodies, comparable to those accredited to EN 45012 or 45011.

Standard EN 45011 specifies the general criteria for certification bodies, in particular, quality management certification applicable to certifiers of chain-of-custody forest products. Other nationally accredited bodies that have the proven competence, the required impartiality and adequate management systems to carry out forest management certification may also be recognized as competent bodies, comparable to those accredited to EN 45012 or 45011.

Standard EN 30011–2 specifies qualification criteria for environmental auditors. It is a guide that should be used to support the application of environmental management systems and environmental auditing. The minimum requirements are set in order that audits are carried out effectively and uniformly.

III.6.3.2 Summary of regional and national standards endorsement process (FSC)

Working Group responsibilities

- The Working Group must ensure that the Standard fulfills all the requirements detailed in section 12.3, Preparation of Regional Forest Stewardship Standards. The Working Group must also explicitly endorse the Standard.
- The documentation submitted by the Working Group must include a copy of the Standard and a document describing the process by which it was developed. The applicant should also include a list of individuals and organizations willing to provide written support for the Standard.

- The Standard document must (a) be presented in a structure that follows the 10 FSC Principles, (b) be implementable for certification evaluations in the forest sector, without further interpretation or development, and (c) specify what is meant by "major failures" of the FSC Principles and Criteria, at the level of each individual principle. The detailed information for (c) may be included in an accompanying document. Note that these requirements apply to all Standards endorsed after January 1, 1999.
- The Standard's development process document must, in particular, address the following requirements:
  - Consultative process: the document must address the elements detailed under section 12.3.1 Regional Standard Drafting Requirements and Recommendations;
  - Harmonization: the document must satisfy the FSC Board of Directors that the Standard proposed is compatible with that of similar and/or neighbouring regions. Discrepancies must be justified on the basis of differing ecological, social or economic conditions. The Working Group must submit (a) a list of existing regional, national and local Standards that were analyzed and (b) the feedback on the Standards obtained by the Working Group/Standard-writing Group from other appropriate Working Groups. Note, the FSC generally expects that Standards will be harmonized in an upwards rather than downwards manner;
  - Technical requirements: the steps taken to develop the Standard, the desirable attributes of Standard and the provision for revision of the Standard, must be described.
- The draft Standard and supporting documents may be submitted to the Secretariat at any time. The Secretariat will work with the Working Group to try to fulfill all requirements.

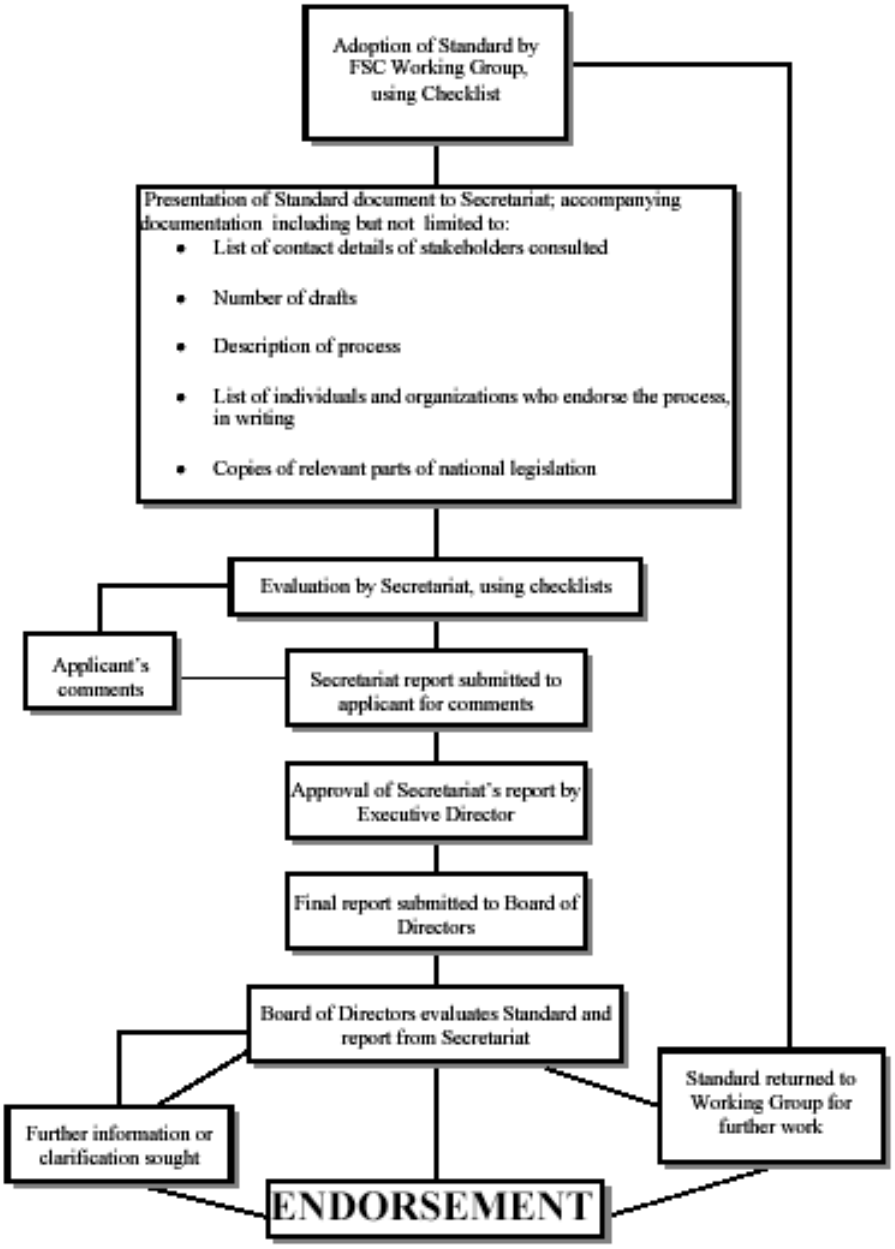
FSC Secretariat

- The FSC Secretariat evaluates the submitted Standard and documents and prepares an evaluation report.
- The FSC Secretariat uses the *FSC Generic Regional Forest Stewardship Standard Evaluation Report* in preparing the evaluation report.
- The Secretariat consults directly with national initiatives in neighbouring countries and in similar eco-regions, to confirm the level of harmonization achieved.
- The Secretariat submits the completed checklist to the applicant for comment before the evaluation report is finalized.
- There is a six-week maximum deadline for completing all requirements. In order to ensure a strong and positive recommendation to the Board, this whole process should be completed six weeks before the next board meeting, to allow time for preparation, translation and distribution of documents well in advance of the meeting.
- The following documents should be submitted to the FSC Board of Directors at least two weeks before the board meeting: the Standard being submitted for endorsement; the Secretariat's report on all the documents submitted by the Working Group; the completed checklists. The full set of documents submitted by the Working Group will be made available to individual board members who request them and will also be available for reference during the board meeting.

FSC Board of Directors

- The FSC Board of Directors makes the final decision on the endorsement of the submitted Standard.
- The FSC Board of Directors may request further information or clarification. The Standard may also be returned to the Working Group for further work, if the Board of Directors feels that it does not meet the FSC requirements.

Figure III.3: Standard endorsement process



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IV. Organic certification and forestry labels in the WTO

IV.1 The WTO attitude towards market access

The Uruguay Round led to the establishment of the Agreement on Technical Barriers to Trade (TBT), related to products, and the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS). With these two agreements, member states aimed to strengthen international rules governing regulations and Standards in order to minimize their use for protectionist measures and create a level playing field. The system regulating organic agriculture in the EU falls under the TBT.

The regulation of Production and Process Measures (PPMs) in the form of voluntary private Standards such as the FSC is still a pending issue at WTO, even though many aspects related to products, obligatory requirements and international Standards are very similar to those related to private voluntary schemes. The World Bank and the IMF (2001), for example, state:

> "A source of concern regarding standards is the capacity of poor countries to meet increasingly complex health and technical standards which they play little part in developing." (p.30)

This is clearly an issue that is also applicable similarly to eco-labels and private voluntary schemes.

The economic effects of product-related regulatory measures in developing countries are becoming increasingly well documented, whereas there is hardly any evidence on the effects of PPMs and/or private voluntary measures. Also, in the case of the disputes over product-related TBT or SPS, only six of the 27 cases brought to the WTO Dispute Settlement Mechanism by the end of 2000 had been filed by developing countries, demonstrating the limited capacity of developing countries to identify effects and deal with them in trade negotiations.

The only written framework addressing voluntary Standards within the WTO is provided by the TBT Code of Good Practice on the development and implementation of voluntary Standards, in Annex 3 of the TBT. The applicability and the scope of this code have, however, been under discussion not only in the WTO's Committee on Trade and Environment but also in the TBT Committee.[230] In the First Triennial Review of the Operation and Implementation of the Agreement on TBT (G/TBT/5 - 19 November 1998) the transparency of and the compliance with the Code of Good Practice were criticized. In the Second Triennial Review there is a very marginal mention of eco-labelling schemes:

> "48. The Committee noted that concerns regarding labeling were frequently raised in the Committee meetings, during discussions on the implementation and operation of the Agreement. In this regard, the Committee reiterated the importance of any such requirements being consistent with the disciplines of the Agreement, and in particular stressed that they should not become disguised restrictions on trade." (p.10)

[230] Regarding the extent to which it covers PPM issues.

On the other hand, it has to be emphasized that the list for organic imports is a rather exceptional type of mutual recognition or equivalency agreement as envisaged by the TBT and the SPS. It has been extremely difficult to establish any progress in the area of mutual recognition and equivalency agreements. In fact, only the recently agreed equivalency agreement under the SPS is a promising step forward, although it has not yet been put into practice. The third-country list is extremely innovative and effectively constitutes a type of equivalency agreement, even though formally it is very different.

The TBT refers to communication and information requirements in several of its articles and these are, in fact, one of the core aspects in the TBT agreement. However, the question is whether abiding by these requirements, which the EU did, effectively, in the case of its organic regulation, is sufficient to establish fair competition in the products affected by the respective regulations. Participation by third countries at the development stage of the regulation would, in effect, be a more committed way of establishing non-discriminatory regulations.

IV.2 The WTO and environmental goods and services

The WTO negotiations launched at Doha include the topic of liberalization of the environmental goods and services markets. There is currently no WTO definition of what constitutes an "environmental good." "Environmental services" are defined according to the General Agreement on Trade in Services (GATS), specifically the List of Classification of Services, W/120.

Different countries or groups of countries are developing proposals that will define environmental goods and services. The OECD (2001)—one of the predominant contributors to these discussions—includes a definition of environmental goods in its proposal for products from organic agriculture, as well as certified forestry products. However, it does not go into any detail regarding the certification schemes that would be recognized, nor does it explain a mechanism for mutual recognition, harmonization or equivalency agreements.

The implication of the inclusion of the two product lines in the definition of environmental goods and services would lead to an eventual liberalization of the market, i.e., first and foremost, a reduction of the existing tariffs for these products.

IV.3 The WTO attitude towards subsidies

The Uruguay Round of trade negotiations extended disciplines to domestic support policies and direct export subsidies under the Agreement on Subsidies and Countervailing Measures. The World Bank and the IMF (2001) state:

> "...a key aspect of the Uruguay Round agreement is the distinction between domestic policies that distort trade and those that do not—the distinction between the "amber box" for policies deemed to have the largest effect on production and trade, and the "green box" for policies that have minimal effects on trade."

The latter were exempt from reduction requirements, whereas for the others the member countries committed to a reduction of ceilings for total support by 20 per cent over the period 1995–2000. After the agreement was signed, according to the World Bank and the IMF (2001) there was some re-orientation of support away from amber box measures towards green box measures.

The results of the last WTO Ministerial Meeting at Doha, and the indications for the new trade round, can be regarded as a continuation of the policy, which aims generally at a reduction of subsidies but permits the use of subsidies to promote positive environmental externalities, and promotes the adaptation of existing facilities to new environmental requirements.[231] No significant changes are expected. To date, no appeals have been filed against green box measures.

Considering that organic agriculture has an officially regulated product range, despite its voluntary character, the current level of EU subsidies to organic agriculture could involve legal action in the future.

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[231] Up to 20 per cent of the cost of adaptation would be considered a non-actionable subsidy.

V. Conclusions

In this report two examples of Chilean exports of sustainable products were analyzed in terms of why there has not been a clearer trend towards an expansion in the export of such products to the EU market.

So what can be concluded regarding the initial hypotheses that were analyzed in this report, using information gathered from the two detailed case studies on exports of sustainable products?

1. Open and hidden green industry "havens" (the fact that green markets exist, but are reserved for home producers) in importing countries.
2. Is there a lack of capacity to develop new green markets in the exporting country?

In very general terms the preceding sections have provided arguments that could be used to support, in the case of organic viticulture, both hypotheses. In the case of products from sustainably managed forests the hypotheses, overall, would have to be refuted. It should be remembered that this situation is very much reflected in the information on the production and export data on the two product groups:[232] organic agriculture represents 0.02 per cent of the Chilean agricultural production, and exports do not amount to more than 0.03 per cent of total exports, whereas certified sustainable forestry production represents 8 per cent of total productive forests. These numbers are equivalent to 1–18 per cent of agricultural land under organic production in most countries around the world, and 10 per cent of total productive forests worldwide.

The main arguments and conclusions are presented below.

V.1 The existence of green industry havens

In the organic products market the argument for this hypothesis is supported by:

- A certification scheme that is difficult to penetrate (the national certification scheme has to comply with the EU regulations; in practice, certification must be obtained individually in each EU country);
- Uncertainty regarding the future of the certification procedures for imports to the EU;
- The existence of significant subsidies for organic producers in the EU;
- A complex system of marketing channels;
- The existence of a wide range of private and/or national certification schemes, parallel to the EU scheme;[233] and
- The lack of systematic market information.

This is significant for organic agriculture, where more entry barriers are present, and the organic product is in direct competition with home producers. A strong internal market in these products has evolved in the EU and, as described in Section II, producer associations are directly involved in the certification and/or marketing of the final product.

In the market for products from sustainably managed forests, the issue is centred around supply-chain management (rather than green industry havens), involving the following factors:

[232] See Sections II and III of this report.
[233] Although for wine, this does not seem to represent a significant hurdle. It is not clear whether the final consumer gives preference to national certification schemes.

- preference given to international certification schemes
  - the additional costs that this implies
  - the acceptance of national certification schemes remains at the discretion of the international certification systems;
- the question of delays and geographical distance between the end-consumer and the provider of the raw material
  - the lack of market information that this implies.

It is important to remember that the nature of the two cases discussed and their certification systems is quite different—one, organic agriculture, is regulated by official authorities; the other, sustainable forestry management, is voluntary and unregulated. The possibility of regulating forestry certification in a manner similar to that for organic agriculture raises concerns, however, given the dissimilar nature of this market, the outcome is likely to be somewhat different. It would be a mistake to conclude from this report that the regulation of voluntary certification is prejudicial to the exports of developing countries, rather it is a problem of how to include the perspectives of developing countries, especially when writing WTO rules and EU regulations.

From these case studies, several (potential) pros and cons of a voluntary unregulated or a regulated system may be deduced:

Table V.1: Pros and cons of regulated vs. voluntary unregulated systems

	Regulated system	**Voluntary unregulated system**
PRO	• Institutionalization of support system at national and international level • Clear rules • Commitment by public authorities and, thus, potential inclusion in cooperative schemes	• More agile system, avoids bureaucracy • Market decides who enters fastest, greater efficiency
CON	• Slowness of bureaucracy • Lobbying, national interests	• Discretionality • Unclear system of control

V.2 The WTO's rules and role

WTO rules should foster trade in sustainable products and aim at a liberalization of these markets as far as possible, while providing an adequate legal framework to safeguard against the potential social and environmental impacts of liberalization. Effectively, WTO measures should help to increase the potential of the pros and reduce the effects of the cons shown in the table above. However, the WTO has, to a certain degree, sat on the sidelines of this discussion, at least regarding voluntary unregulated schemes. Unlike official regulations that fall under the TBT, a small number of rules regulating voluntary Standards are listed in the Code of Good Practice for the Preparation, Adoption and Application of Standards by Standardizing Bodies, detailed in Annex 3 to the TBT. This code is clearly directed at the respective national standardizing bodies, representing ISO. There is no mention whatsoever of those voluntary certification schemes that do not fall under the domain of the standardization bodies. In the 30-page second Triennial Review of the operation and implementation of the TBT,[234] voluntary certification schemes that do not fall under the domain of standardization bodies are mentioned only in paragraph G "Other Elements":

[234] WTO (2000).

> "48. The Committee noted that concerns regarding labelling were frequently raised in the Committee meetings, during discussions on the implementation and operation of the Agreement. In this regard, the Committee reiterated the importance of any such requirements being consistent with the disciplines of the Agreement, and in particular stressed that they should not become disguised restrictions on trade." (p.10)

Other WTO bodies that are involved in the trade of sustainable products, as discussed in Section IV, include the Committee on Trade and Environment and sectoral committees such as the Committee on Agriculture. These groups have to meet in order to coordinate the discussion on trade in sustainable products.

V.3 Problems in the domestic market

Similar to the situation in the export market, problems at a domestic level generally revolve around organic agriculture. These problems relate to the following aspects:

- no clear strategy regarding organic agriculture;
- no specific government support;
- lack of a functioning certification system;
- weak association amongst producers;
- lack of strong internal market;
- lack of market information; and
- lack of technical capacity.

Most forestry sector products are exported, therefore, the export market is the predominant element to be considered, and product certification for the export market does not involve the same internal/external market divisions seen for organic products.

Nevertheless, there are a number of elements that are influencing and hampering the process of forestry certification at the domestic level:

- conflicts between NGOs and companies on matters related to the sustainability of the forestry sector;
- lack of information on the international market; and
- lack of a systematic approach by the government towards forestry certification.

V.4 Recommendations

Concerted action that goes beyond action by public or private institutions, business associations, well-intended civil servants, active NGOs, or even beyond a country at international level is required in order to address the obstacles identified.

An overall strategy that would involve all relevant actors and stakeholders should include the following elements:

- support for the creation of a Sustainable Trade and Innovation Centre[235] as proposed by International Institute for Environment and Development (2000) to ensure the availability of market information and analysis;

[235] "Sustainable" should be understood by the two following definitions: sustainable products and sustainable centre, the latter proving to be the stumbling block for many of the previously mentioned initiatives.

- a call for clear rules on equivalence and/or mutual recognition, especially involving important schemes such as IFOAM and the EU system for organic agriculture and FSC and PEFC in sustainable forestry; and, at the same time,
- an insistence on the importance of national procedures to create certification schemes;
- insistence on including specific eco-labelling schemes in the TBT Code of Good Practice on the Elaboration and Implementation of Standards, possibly calling for an independent body to oversee implementation of the code;
- the inclusion of discussions on subsidies for environmental goods in the WTO, aiming for *quid pro quo*, i.e., technical assistance and market information for acceptance of subsidy programs;
- an analysis of the consequences of the inclusion of organic agriculture and sustainable forestry products in the classification of environmental goods at a WTO level;
- an awareness of the negotiating strategy of the industrialized countries, especially the EU, and the arguments and actors behind it;[236] and
- the fostering of regional cooperation and information exchange.[237]

The lowering of tariffs for organic agriculture and sustainable forestry products could be an interesting way to promote the production and export of sustainable products. As mentioned in Section III, forestry products from sustainably managed forests are included in the EU's Generalized System of Preferences, already implying a reduction in tariffs. With regard to wine, current tariffs for conventional wine amount to around US$20 per hectolitre. A reduction in tariffs for organic wine could establish a competitive advantage over conventional wine exports, however, the recently signed EU-Chile Association Agreement[238] envisages a reciprocal zero tariff system for both forestry products and wine, with a schedule of four years for this reduction.

At the domestic level, the following recommendations have been made:

- develop a discussion around "sustainable trade," the opportunities that this offers and the state support required to promote it;
- design coherent, systematic strategies for each of the sustainable products involved;
- commit to the full implementation of a certification system for organic agriculture, and provide technical assistance to the accreditation procedures in the forestry sector. The creation of the legal framework is not enough to implement certification. As Von Moltke (2002) observed:

  "Independent, effective institutions for the development of technical regulations and to undertake conformity assessment are a matter of great importance for any country that wishes to participate in the lucrative segment of international trade that is defined by such standards." (p.17)

Furthermore, the institutions referred to are not exclusively the standardization bodies but all other institutions involved in the certification and accreditation procedures.

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[236] The preceding sections have shed some light on this aspect. Documents such as AGOL (2000) provide an overview of the positions of the different stakeholders in the case of organic agriculture. It is clear that the push will be on an extension of the green box measures, an emphasis on supporting local markets, and taking the view of considering the support measures as "payments" for environmental services, rather than "subsidies."

[237] More advanced countries such as Argentina or Costa Rica can provide useful experiences to other countries in the region that have more recently initiated their programs. See, e.g., UNCTAD and UNEP´s CBTF initiative, <http://www.cbtf.org>. The Costa Rican case has also been presented at WTO level (Trade and Environment Committee, WT/CTE/W/202, October 8, 2001).

[238] E.g., < http://www.direcon.cl>.

Specific recommendations include:

Organic agriculture:

- focus technical assistance on marketing as well as technology;
- provide financial assistance to certification during the conversion period;
- call for the participation of third countries in the re-definition of EU access for organic products in 2005;
- explore possibilities to include EU cooperation on the promotion of organic agriculture in the EU-Chile Cooperation Agreement.

Forestry sector:

- work on a better understanding of supply chains, bringing end-clients and raw material providers closer together;
- foster information exchange and cooperation between the two national certification systems.

Looking at these recommendations it becomes clear that there has to be commitment or coordinated action on behalf of the following entities:

- The Ministry of External Relations, in particular PROCHILE, the Department of Trade and Sustainable Development, the Directory of Multilateral and Bilateral Agreements and Negotiations, and the International Cooperation Agency;
- CONAMA, in particular the International Cooperation and International Relations Department;
- The Ministry of Agriculture, in particular SAG (Agriculture and Farming Service) and CONAF (National Forestry Commission);
- The Ministry of Economy, in particular those services that are related to the promotion of production (CORFO).

There is no quick or easy way to ensure that the "opportunities for developing countries for trading sustainable products" identified by FAO, UNCTAD, ITC or so many others materialize. Nevertheless, the sustainable products market is clearly a market experiencing great expansion that has undisputable potential, therefore, taking that next step towards initiating a more coordinated management plan for sustainable products undoubtedly seems to be a worthy challenge.

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