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DEVELOPING-COUNTRY ACCESS TO DEVELOPED-COUNTRY MARKETS UNDER SELECTED ECOLABELLING PROGRAMMES

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FOREWORD

This report addresses developing country access to developed country markets under selected ecolabelling programmes. Its purpose is to enhance understanding of the perceived and actual difficulties faced by exporters in developing countries wishing to qualify for these programmes.

The report was drafted by Jane Earley, an independent consultant on international trade and environmental policy, and Laura Kneale Anderson, an international trade expert and independent writer. It has subsequently been revised, based on comments from Delegates to the OECD Joint Working Party on Trade and Environment.

The report is published under the responsibility of the Secretary-General.

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1. Introduction

The WTO Doha Development Agenda states that "international trade can play a major role in the promotion of economic development and the alleviation of poverty."[1] Enhanced market access and financed technical assistance for developing countries are important elements of this goal. Ecolabelling schemes — that is, labels that help consumers to identify environmentally preferable products — present both opportunities and challenges for developing-country exporters and are, thereby, part and parcel of the international trade, environment and development debate.

At the OECD Global Forum Workshop on Environmental Requirements and Market Access, held in New Delhi, India on 27-28 November 2002, (hereafter "the New Delhi workshop")[2] , participants discussed a series of case studies prepared by the OECD Secretariat (hereafter "the OECD case studies") examining environmental labelling requirements in regards to developing-country exports. Several developing-country participants expressed concerns that both voluntary and regulatory environmental labelling and certification programmes may not be taking local market conditions and capacities into account, which they perceived as a barrier to developed-country markets.

This paper seeks to enhance understanding of the perceived and actual difficulties faced by exporters in developing countries wishing to qualify for certain selected ecolabelling schemes. It is based on material drawn from the New Delhi workshop, including the OECD case studies, several of which examine environmental labelling, and a number of personal, telephone and internet interviews with a range of participants from both developed and developing countries. The ecolabelling programmes selected for this study were chosen on the basis of their application to products of export interest to developing countries, as well as the extent of their international acceptance by producers and consumers.

The first part of this study reviews various types of ecolabelling programmes, and assesses the opportunities they present. The second part examines five different ecolabelling programmes in depth. The third part identifies issues that may affect the ability of developing-country exporters to participate in ecolabelling schemes, and assesses how each of the selected programmes has dealt with these issues, as well as how developing-country producers and exporters have fared under each programme.

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1 World Trade Organization, Doha Ministerial Declaration, 20 November 2001, WT/MIN(01)/DEC/1

2 The website of the workshop, http://webdomino1.oecd.org/comnet/ech/tradeandenv.nsf, contains the OECD case studies referred to in this paper, as well as other documentation. The case studies are also published in OECD (2002), "The Development Dimension of Trade and Environment: Case studies of Environmental Requirements and Market Access", which can be found at http://www.oecd.org/findDocument/0,2350,en_2649_34183_1_1_1_1_37431,00.html

Several points are worth noting at the outset. First, while ecolabelling programs can be a useful tool for countries wishing to achieve sustainable development, it is beyond the scope of this paper to assess the environmental effectiveness of these programs. Second, this paper does not attempt to quantify the economic impacts of ecolabelling programs on developing countries. Given the number of variables that affect changes in trade flows between countries from one year to another, it is impossible to isolate trade flow changes due to ecolabelling programs without conducting a sophisticated econometric analysis – an operation which is also beyond the scope of this paper. Finally, it is important to note that the views expressed in this paper are solely those of the authors, and do not necessarily reflect the views of OECD members.

2. Ecolabelling programmes in context

The number of ecolabelling programmes has grown significantly over the past fifteen years. Ecolabelling programmes now exist in both developed and developing countries, cover a broad range of both agricultural and manufactured products, follow a variety of structural models, and offer a variety of market opportunities to developing countries.

Environmental labelling programmes[3] are so widespread, that it is difficult to locate comprehensive, up-to-date databases. Organisations that have conducted recent surveys of or issued reports on environmental labelling programmes include:

- **The WTO Committee on Trade and Environment:** The subject of ecolabelling has been under discussion in this committee since 1995. In June 2000, the committee issued a report on ecolabelling schemes. The report included a search of notifications under the WTO Agreement on Technical Barriers to Trade of technical regulations concerning environmental labelling and marking requirements. The search revealed that, between 1995 and 1999, WTO members had notified 85 different programmes. The report also included a review of recent literature on the market impact of ecolabels.[4]

- **The U.S. Environmental Protection Agency**: This agency conducted a study in 1998 which documented the wide range of environmental labelling practices around the world. The study provided detailed information on 59 environmental labelling programmes that were then either in existence or under development.[5]

- **The Global Ecolabelling Network:** This group, which is a non-profit association of third-party environmental performance labelling organisations founded in 1994, lists 25 different ecolabelling programmes on its website, as of September 2002.[6] These programmes, which do not include agricultural products, apply to 34 different countries.

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3 For purposes of this paper, the terms "ecolabelling" and "environmental labelling" are used interchangeably.

4 World Trade Organization, Committee on Trade and Environment, "Information Relevant to the Consideration of the Market Access Effects of Eco-labelling Schemes," 29 June 2000, WT/CTE/W/150.

5 U.S. Environmental Protection Agency (1998), "Environmental Labelling Issues, Policies and Practices Worldwide," EPA 742-R-98-009.

6 http://www.gen.gr.jp/product_list.html

In addition, a number of multilateral organisations have taken an interest in ongoing issues related to ecolabelling programmes. These organisations, which include the World Bank, UNCTAD and the FAO, have issued reports on various types or aspects of ecolabelling schemes.

2.1 Types of ecolabelling programmes

In reviewing the types of environmental labelling programmes currently in existence, it is useful, first, to distinguish those that are administered by governments. [7] Of these, one may distinguish between mandatory programmes (e.g., the U.S. Fuel Economy Information Programme for automobiles) and voluntary programmes (e.g., organic labelling programmes for agricultural products in the United States, Japan and the EU).

Non-governmental environmental labelling programmes are classified in three categories by the International Standards Organization (ISO), which has also released standards (14000 series) for their use:[8]

- **Type I labels** are defined as voluntary, multiple-criteria-based programmes, administered by third parties. Under these programmes, a license is awarded which authorises the use of an environmental label intended to indicate the environmental preferability of a product, based on life cycle considerations. These programmes provide a license to manufacturers to use a mark, owned by an independent body, on their products.

- **Type II labels** are self-declared environmental claims. Under the ISO's definition, these are environmental claims that are made, without independent third-party certification, by manufacturers, importers, distributors, retailers, or anyone else likely to benefit from such a claim.

- While there is no agreed ISO definition for **Type III labels**, these can be generally described as declarations of quantified environmental data relating to a product.

2.2 Characteristics of programmes selected

In selecting the programmes to be the focus of this study, the primary consideration was whether a particular programme seemed to present significant market opportunities for developing-country exporters. The question of market potential involves two factors: (1) the availability of a supply of the product from developing-country producers, and (2) the extent of consumer demand for the ecolabelled product.

Agriculture (as opposed to manufacturing)[9] constitutes the largest sector of the economy for 49 developing countries. Nevertheless, developments in world agricultural trade — ranging from high average tariffs for agricultural products in OECD countries to largely saturated developed-country markets — have

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7 It should be noted that the ISO, which concerns itself solely with privately-administered labelling programs, defines "ecolabels" as those meeting its definition of Category I labels, as described below. For purposes of this paper, however, the term "ecolabelling" refers to both government-run and privately-administered programs, unless otherwise indicated.

8 World Trade Organization, Committee on Trade and Environment (2002), "Progress in Environmental Management Systems Standardization"; Statement by the International Organization for Standardization at the Regular Session of the Committee on Trade and Environment of 8 October 2002, WT/CTE/GEN/1.

9 The statistics cited in paragraphs 15 and 16 are based on the FAO definition of agriculture, which includes fishery and forestry products.

led to a decline in the share of agricultural products in developing countries' overall exports from more than 65% in the early 1960s to barely more than 5% by 2000.

Notwithstanding the declining importance of agricultural exports for developing countries as a whole, many countries still rely heavily on agricultural exports for their foreign exchange earnings. In more than 40 developing countries, the proceeds from exports of a single agricultural commodity such as coffee, cocoa, or sugar account for more than 20% of total merchandise revenue and more than 50% of total agricultural export revenue.[10]

Moreover, trade in food, fishery and forestry products has attracted the attention of a number of international environmental groups, as the conditions of production for these products can have a wide range of environmental effects, ranging from biodiversity to pollution impacts. In several cases, concerns about diminishing supplies of certain natural resources have led business groups to work co-operatively with environmental organisations to develop agreed standards for sustainable harvesting and production methods. As a result of these various factors, all of the programmes that are the focus of this study involve food, fishery or forestry products. Four of the programmes involve food products. Of these, two involve commodities (i.e., coffee and fish).

On the demand side of the market equation, consumer acceptance of the ecolabelled product is a key factor in determining the extent of its success. In a 1999 study conducted by the CEC,[11] it was noted that there are three possible outcomes to the introduction of an ecolabelled product:

1. **Market Standard:** The ecolabel is widely accepted and becomes the standard in the marketplace. Labelling becomes the "price of entry" for the competition.

2. **Market Niche:** The ecolabel is viable, but not widely accepted. A profitable market niche for labelled goods develops.[12]

3. **Failure:** The ecolabel is not accepted by consumers, and fails.

A study by the U.N. Food and Agriculture Organization (FAO) asserts that restoring consumer confidence in environmental claims is a necessary ingredient to allow consumers' purchase decisions to reflect their environmental concerns. The study cites several U.S. studies that point to an increased scepticism by consumers regarding environmental claims on products.[13]

The Global Environmental Network observes that, without guiding standards and investigation by an independent third party, consumers may not be certain that the companies' assertions guarantee that each labelled product or service is an environmentally preferable alternative. This concern with credibility and

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10 Food and Agriculture Organization, FAO (2003), "World Agriculture: Towards 2015/2030, an FAO Perspective".

11 North American Commission for Environmental Cooperation (1999a), "Measuring Consumer Interest in Mexican Shade-Grown Coffee".

12 In this case, there may be two possibilities: the first is that a different ecolabel for the same product might be more widely accepted, while the second is that no ecolabel is likely to gain wide acceptance for this products.

13 Wessels., Cathy Roheim *et al.* (2001), "Product Certification and Ecolabelling for Fisheries Sustainability," FAO Technical Paper No. 422.

impartiality has led to the formation of both private and public organisations providing third-party labelling.[14]

The programmes selected, together with the case studies presented at the New Delhi Workshop, could be ranked on a continuum between exclusive government involvement and private-sector oversight. Such administrative considerations obviously play a major role in the degree of consumer confidence that programmes are able to engender. Of the programmes examined in this study, one (the USDA's organic labelling programme) is government-run, and four are subject to independent third-party certification. Participation is voluntary for all of the programmes.

3. Programme selection

In order to best illuminate the types of challenges that may face developing countries wishing to participate in ecolabelling programmes, as a first step this study sought to identify those programmes which seem to present the greatest market opportunities for developing-country producers. The programmes selected met two basic criteria:

- First, each programme applies to products of export interest to developing countries. As a corollary, each programme is international in scope, rather than focused on a single domestic market.

- Second, each programme enjoys some degree of credibility among consumers. As was noted in the previous section, in practice this means that each programme either encompasses some degree of governmental involvement, or includes third-party certification, following the ISO's Type I model of environmental labelling.

Additionally, world trade in each of the products treated by the programmes is large, and several of the sectors represented by each of the ecolabelling schemes have been identified as being of interest to developing countries in pending trade negotiations.

Accordingly, the following programmes were selected as the focus of this study:

- the Marine Stewardship Council's certification programme for sustainable fisheries;

- the Forest Stewardship Council's certification programme for sustainably managed forests;

- the International Federation of Organic Agriculture Movement's certification programme for organic agricultural products;

- the U.S. Government's organic labelling programme; and

- shade-grown coffee.

Each of these programmes is described in more detail below, together with a general description of its role in the market and among consumers, and an assessment of its potential to effect environmental change, However, before proceeding to the specifics of the programmes, a description of the market opportunities and limitations for ecolabelled products is in order.

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[14] www.gen.gr.jp

3.1 The labelling marketplace

In the view of the Global Ecolabelling Network, "the roots of ecolabelling can be found in growing global concern for environmental protection on the part of governments, businesses, and the public. As businesses have come to recognise that environmental concerns may be translated into a market advantage for certain products and services, various environmental declarations/claims/labels have emerged on products and with respect to services in the marketplace (e.g., natural, recyclable, eco-friendly, low energy, recycled content, etc.)."[15] It is, of course, this potential market advantage that has presented an opportunity for developing-country exporters.

There are in essence two markets in which ecolabelled products compete; the market for the label and the market for the product, itself. The market for the label includes not only competition between programmes that make the same claim, but also competition between and among programmes making different claims for the same product. For instance, a farm-raised fish that could qualify for one of several competing labels indicating that it was produced under environmentally friendly conditions, could also qualify for an organic label, a fair trade label, a country-of-origin label, or a label indicating freshness or making health claims. The success of the programmes described below and their potential for increasing market access of developing countries depends as much on the label competition as on the competition for the product itself. This competition sometimes pits different kinds of environmental labels against others, and against other kinds of claims

The marketplace for claims of all sorts is becoming crowded. The potential marketing opportunities provided by ecolabelling programmes are tempered by their profusion, which many feel has led to some confusion and scepticism on the part of consumers. In fact, several respondents contacted for purposes of this study expressed the view that ecolabelling programmes have not lived up to their expectations, either in creating new markets or in commanding price premiums. In the opinion of one respondent, the success of organic labelling programmes in the United States has proven to be the exception, rather than the model, leading this individual to question the robustness of consumer demand for ecolabels, at least in the United States.[16]

The extent to which the proliferation of environmental labelling schemes is limiting their acceptance by consumers is echoed in two other studies, one published by the North American Commission for Environmental Cooperation (CEC), and the other issued by Consumers International, an NGO whose membership includes more than 260 consumer groups from over 112 developed and developing countries. The CEC's report notes that at least 25 important environmental labelling schemes are in place in the United States, covering around 310 different products, and concludes that the large number of choices has created a bewildering array of schemes for consumers, and led to the inability of one or two labels to carve out a dominant market niche.[17]

The Consumers International report compares consumer acceptance of ecolabels in the European and U.S. markets. After noting that many more ecolabelling schemes are in existence in the U.S. than in the European market, the report attributes greater consumer acceptance of ecolabels in Europe to two factors: (1) green public-procurement policies in the European Union, which have provided incentives for

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15 www.gen.gr.jp/eco.html.

16 A staff member of a U.S.-based non-government organisation.

17 North American Commission for Environmental Cooperation (1999b), "Supporting Green Markets: Environmental Labeling, Certification and Procurement Schemes in Canada, Mexico and the United States".

producers to use ecolabels, and (2) the credibility of third-party accreditation among European consumers, which has encouraged producers to pursue Type I environmental labels.[18]

Governments enter into this picture in two ways. The first is to provide label competition for the private sector. Many governments were among the first to recognise the benefits of environmental labelling, and started programmes that now successfully label many hundreds of products. Japan's Ecomark, for example, which was started in 1989, had by June 1997 issued 2031 awards in 69 product categories.[19] Germany's Blue Angel, The Nordic Council's Nordic Swan, Singapore's GreenLabel, Malaysia's Product Certification Program, and China's Ecolabeling program, are only a few of the government programmes worldwide that award labels to environmentally preferable products.

The second way in which governments enter into the ecolabelling picture is via public purchasing. The extent to which green public purchasing policies could compensate for market disadvantages posed by label profusion is an issue beyond the scope of this study, but green purchasing policies are becoming increasingly common in developed and developing economies, and have created demand, and even new markets, for many kinds of ecolabeled products. For example, Japan's public procurement policies have resulted in a Green Purchasing Network that now includes more than 152 products in 14 categories, and establishes requirements for green purchasing that will be mandatory for all of Japan's prefectures and cities.[20] Likewise, Taiwan reports recent green public procurement of over 10 million USD in goods and services[21], and similar programs are also underway in Hong Kong, Singapore, Korea, Thailand, India and China. Eastern Europe is also providing market opportunities for ecolabelled products, with operational programmes in Lithuania, the Czech Republic, Slovakia, Hungary, Croatia, and other countries in the region.

The market potential of such government programs for ecolabelled products from developing countries may be limited by two factors. First, much public procurement is not subject to the market access provisions of the WTO's Government Procurement Agreement. Second, of the many ecolabelled products of most potential export interest to developing countries appear to fall into the food, fisheries and forest products sectors. For the foreseeable future, it is likely that private sector retail demand for such products will far outstrip that of the public sector.

3.2 Context: The global market for food, fish and forest products

The problems for developing countries described in this study are not new. There are many factors that contribute to the difficulties experienced by developing countries in meeting the challenges posed by the costs and complexities of ecolabelling programmes. Those difficulties are compounded by the difficulties of competing in the global markets for food, fish, and forest products, which are characterised by increased industry concentration, and in the food sector by intensive penetration of developing country markets by global retailers, for the most part originating in developed countries.

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18 Office for Developed and Transition Economies, Consumers International (1999), "Green Labels: Consumer Interests and Transatlantic Trade Tensions in Ecolabelling".

19 U.S. Environmental Protection Agency (1998), op. cit.

20 Hiroyuuki Sato, "Public Green Purchasing in Japan", Green Purchasing Network, http://www.gpn.jp.

21 Yu, Ning (2002), "Government Green Procurement in Taiwan, ROC", presentation at the GEN Conference on "Environmental Labelling: International Issues, Challenges and Opportunities", Oct. 29-30, 2002, Taipei.

Increased industry concentration in production and retailing have characterised developed country markets for food and forest products for some time, but have only recently begun to affect those sectors in developing country markets, where multinational retailers have dramatically changed the way agricultural and forest products are produced and marketed. This trend is reflected in trade statistics showing that food, fish and forest products are among the most heavily traded products in the world, and that developing countries account for a very significant percentage of this trade.

The trend has also been described by Reardon, whose analysis shows that "supermarketisation" - or the retail share of supermarkets, has grown as much as 10% annually in some developing country markets. For instance, the supermarket share of the national retail market in Brazil increased from 30% in 1990 to 75% in 2000. These numbers are replicated in other Latin American economies, in Africa and in Asia, which Reardon describes as showing an even faster rate of supermarket penetration but at an earlier stage of concentration.

Such retailers not only change the way food, fish and forest products are sold, but also the way in which they are produced and distributed. Large retailers buy in huge volume, often locally for local markets. Reardon estimates that 3 of 10 pesos spent in Mexico on food are spent in Walmart, and that retailers in Latin America buy 2.5 times as much produce for sale in Latin America as is exported.[22] Large retailers favour producers that can meet their demands for high volume, often forcing consolidation or elimination of small and medium-sized suppliers.[23] Large retailers also buy from selected producers, sometimes creating their own purchasing and distribution systems that bypass traditional networks and leave many small producers by the wayside. Facilitating supply management forces suppliers to conform to specified production processes in contractual arrangements far in advance of the actual transfer of goods.

Finally, large retailers buy from those that can meet their standards, leaving other goods (and sometimes also unique, niche-market or traditional goods) to the local or traditional markets. Such standards range from those designed to facilitate rapid trans-boundary movement of perishable commodities, to those aimed at environmental and social goals.

What this means for developing country producers of food, fish and forest products is that 1) they must compete for their national markets, as well as for export markets, that 2) retailers – mostly from developed countries - wield awesome power, which is reflected in the standards they demand for procured products, and which in turn means that 3) retail labels can compete with ecolabels in many developing countries as well as developed country markets.

The retail market, particularly in developed countries, is replete with claims that retail standards educate consumers, enhance sustainable production and consumption, communicate environmental concerns, reduce environmental and social impacts, sustain the triple goals of social equity, economic prosperity and environmental integrity, and so on.[24] It is not the job of this paper to evaluate these claims or the effect of retailer labels on the environment, but rather to document their presence generally in the

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22 Thomas Reardon, "The Changing Face of Competitiveness and Standards; The Challenge to Farmers in Selling to Supermarkets in Their Own Backyards", presentation to the Conference by Chemonics International "New Roads to Sustainable Agriculture and Competitiveness: Making Standards Work for Developing Country Producers", http://marketstandards.chemonics.net/Conference.asp.

23 Reardon cites Tops in Thailand going from using 250 to using 60 suppliers, Ausumpal reducing from 330 members in 2000 to 30 in 2003, and 61,000 small dairy farmers in Brazil, "delisted" between 1996-2000.

24 Retail operations in developing countries and their environmental and social aspirations are described in "Shopping for a better world: sustainability and retailing" UNEP ISSN 0378-9993, Industry and Environment, Volume 26 No. 1, January-March 2003.

market for goods and services in which developing country producers must compete, and specifically in the markets for the ecolabelled goods addressed by this paper.

The relationship of retail standards to ecolabels put forward by private ecolabelling schemes varies considerably, but one element is clear: the market presence of both does not tend to make life simpler for developing country producers. Especially for small and medium-sized producers, dealing with the new retail power alignments is troublesome enough in the absence of retailer initiatives that select preferred products in advance by contracting, or as a result of supply-management objectives. The situation is much more complicated given the presence of competing ecolabelling schemes at both the national and international levels, some of which have been adopted as standards by retailers.

The net market effects are beyond the scope of this paper, but those who have studied them, such as Wessels, have posited that "given the influence of the voluntary purchasing decisions of large wholesale, retail and restaurant chains that control large market shares in large [fish] consuming and importing regions, particularly in Europe and North America, these schemes could effectively lead to reductions in the capacity of non-ecolabelled products to be exported to or simply sold within those markets."[25]

Another observer has concluded that there are too many ecolabels; standards in a dozen companies are likely to set the norm for the next 20 years, and those without a business model that functions well will disappear. The trend towards larger certified production and manufacturing units will make it harder for developing-country producers to capture any increased value in long market chains.[26]

On the other hand, the market for ecolabelled goods in some major markets and niche markets remains strong, particularly for organic fresh fruit and vegetables. Organic production, for instance, has increased exponentially in the last decade and interest has shown no sign of abating, although there is current overcapacity in some kinds of products.[27] There is no doubt that there is strong market potential for goods with ecolabels and other quality attributes.

4. Programme descriptions

4.1 The Marine Stewardship Council's Sustainable Fisheries Programme[28]

Fish and seafood products are among the most-widely traded commodities in the world.[29] Wild-caught fish commands a shrinking share of the global market, as aquaculture is assuming increasing importance in international trade, but remains a very important export for developing countries. The three

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25 Wessels, C., (2001), op. cit.

26 Clay, Jason; "Ecolabels, Where Are We Going," presentation to the Conference on "Ecolabels and the Greening of the Food Market", Gerald and Dorothy R. Friedman School of Nutrition Science and Policy at Tufts University, November 7-9, 2002, http://nutrition.tufts.edu/conferences/ecolabels/

27 Global organic sales for organic food and drink increased in 2002 by 10%, according to a study by Organic Monitor, an industry consulting group, but there is current overcapacity in a number of sectors in the European food market. Organic Monitor, www.organicmonitor.com, Research Publication #7001-40, "The Global Market for Organic Food and Drink."

28 The description of this programme builds on OECD (2002), case study on 'Private Certification of a Fishery as Sustainable".

29 FAO (2000), "The State of the World Fisheries and Aquaculture". This report estimates that 37% of global fisheries production enters international trade and about half of that comes from developing countries.

developed-country markets of greatest interest to developing-country fish producers are, in order of importance, Japan, the European Union and the United States. All three are net importers of fish products, and all maintain stringent food-safety requirements for imported fish and seafood products. All three also maintain fishing fleets in both domestic and international waters, as well as in various developing-country waters.

The wild-caught fish stock of greatest global economic importance is loosely categorised as groundfish, which constitutes the basis of most processed production. Hake, hoki, cod, and pollock all fall into this category. Most of this fish is caught in international and in developing-country waters. The world's largest single purchaser of groundfish is Unilever, which in 1996 stated its intention to purchase all of its fish from sustainably managed stocks by 2005.[30]

Fish stocks worldwide have been the subject of serious concern since the FAO estimated in 1996 that 60% of the world's wild-caught fish stocks were in serious need of more effective management.[31] Developing-country fisheries are particularly at risk since many developed-country fisheries are already exploited at full (or over-) capacity.

The Marine Stewardship Council (MSC), an independent, global, non-profit organisation based in London, was originally established in 1997 by Unilever and the World Wildlife Fund to address over-fishing. The stated mission of the MSC is "to safeguard the world's seafood supply by promoting the best environmental choice."[32]

The MSC has developed an environmental standard for sustainable fisheries and offers a product label to reward environmentally responsible fishery management and practices. The label is intended to assure consumers that the product has not contributed to the problem of over-fishing.

The MSC is funded primarily by charitable contributions (which include contributions from its founders), but in the future it may receive a greater proportion of its revenue from the use of its label through a profit-making subsidiary. This depends on how many businesses choose to use the label at retail level and how much volume of MSC-labelled products they can maintain. The MSC currently has a staff of 23, and is headed by a Chief Executive, who reports to a Board of Trustees. In addition, subsidiary bodies review the standard and its application and maintain the accreditation process.

4.1.1 Qualification process

The MSC developed its standard for sustainable fishing on the basis of consultations with stakeholders world-wide, including the fishing industry, environmental organisations and others. The MSC's basic standard, "The Principles and Criteria for Sustainable Fishing," are based on three core issues: (1) whether the fish stock can maintain itself, (2) the impact of the fishery on the ecosystem, and (3) whether an adequate management system is in place.

Fisheries assessment is undertaken by independent certification bodies accredited by the MSC. Under this process, the managers of a fishery wishing to undergo certification choose a certification body from the MSC's approved list. The first step in the process is for the certification body to prepare a confidential

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30 OECD (2002), case study on "Private Certification of a Fishery as Sustainable".

31 FAO (1996), "The State of the World Fisheries and Aquaculture".

32 www.msc.org

pre-assessment report for the fishery's manager. The pre-assessment report indicates the likelihood of the fishery passing a full assessment review, and outlines the measures that may be necessary for the fishery to obtain approval and is based on qualitative information gathered through interviews with fisheries experts and stakeholders.

If the fishery decides to proceed with a full assessment, the certifier assembles an evaluation team, which drafts "Performance Indicators" and "Scoring Guideposts" to be used in evaluating the specific fishery. As a result, the Performance Indicators and scoring guideposts are different for each fishery and are meant to serve as a description of the specific points that need to be taken into account by the certifier for that fishery if it is to meet the MSC's objectives. Stakeholders are invited to comment on the draft Performance Indicators. Once finalised, each Performance Indicator is assigned a specific value. Using information submitted by the fishery, the evaluation team determines how well the fishery is performing under each Performance Indicator by evaluating the fishery against a set of "Scoring Guideposts." The Scoring Guideposts developed with each Performance Indicator establish levels that are used to evaluate the fishery's level of performance under that Indicator. If the evaluation team determines that the fishery meets the standards of each MSC Principle, it is certified. Certifications are valid for five years, and are reviewed annually.

Companies wishing to use the MSC product logo must also obtain a chain-of-custody certification that certifies to the traceability of MSC-labelled seafood, ensuring that it has been separated from non-certified product at every stage of production. Those companies may then purchase the right to use the MSC logo on their products. The fee for use of the logo depends on the size of the company and the volume of product it sells.

4.1.2 Performance of the programme

According to one MSC official, most of the interest in the MSC *label* to date has been in Western Europe and the U.K.[33] Interest in *certification*, however, has been expressed by both developed and developing-country fisheries.

Most of the fisheries initially certified under the MSC's programme were primarily of interest to European markets, and were not high-volume fisheries. MSC-labelled products have achieved some recognition in North America, but apart from Australia the MSC is unknown in the Asian market, and in Africa. Currently, the only MSC-labelled product of broad interest to the U.S. market is Alaskan salmon. The MSC is working to interest other fisheries in moving forward with certification, so that a broader range of product is available to consumers of fish and fish products, and to processors.

Another factor limiting the MSC's market penetration may be the lack of competition from other international seafood eco-labelling programmes. Although some regional fisheries management organisations (e.g., the International Convention for the Conservation of Atlantic Tunas, or ICCAT) have instituted certification schemes for fish legally caught pursuant to their management regimes, there is at present no other globally-oriented organisation with the announced objective of certifying a variety of sustainable marine fisheries.[34] The aquaculture sector is another matter, and several programmes are either

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33 Respondents indicate that there is little or no interest in Australia, which has one of the first MSC-certified fisheries (Western Australian Rock Lobster).

34 Other non-certification initiatives focused on sustainable seafood do exist, such as the "Business Guide to Sustainable Seafood" published by the Alliance for Environmental Innovation, a project of Environmental Defense, www.EnvironmentalDefense.org/Alliance.

planned or already in existence to certify various aquaculture products.[35] Likewise, the Marine Aquarium Council has initiated a certification programme for tropical and other fish used in the aquarium trade, based on the MSC model.[36]

The U.S. and other markets have also seen a number of different campaigns seeking consumer support for sustainably-harvested fishery products. There is also demand for organically-produced seafood, and retail demand for fresh and health-inspected seafood. Many retailers have their own standards and their own buying claims. However, it is possible that the markets for sustainable seafood may be primarily a non-retail one. Unilever, which buys a large percentage of the world's groundfish, has announced it is committed to purchasing of all of its fish from sustainably-managed sources by 2005. In addition to purchasing the MSC-certified fish, it will also develop standards for its suppliers that are not MSC-certified. Unilever reports that in 2002, it purchased over one third of its fish from sustainable sources, but only 6 percent were certified as such by the MSC.[37]

Nevertheless, MSC officials are optimistic that the market for MSC-labelled products will continue to grow steadily. Whole Foods, the largest outlet for natural foods in the United States, has committed to using MSC products in the United States, and is currently buying only MSC-labelled Alaskan salmon. In addition, the MSC believes that the Baja California spiny lobster fishery is likely to obtain certification by the summer of 2003, thereby making an additional MSC-labelled product available to American consumers.

To date, the MSC has not certified any non-groundfish fishery in a developing country, but MSC officials hope that developing-country participation in the MSC labelling programme will increase as recognition of the MSC label becomes more widespread. According to one MSC official, fisheries in Brazil, Peru, the Philippines and India, have all expressed interest in the MSC's programme. Others may be waiting to see whether the Mexican lobster fishery is able to obtain certification. Retailers report that they are eager to obtain products from developing countries that they can highlight, especially if they can be supplied in adequate volume to sustain marketing campaigns. However, as is discussed below, many respondents believe that the high cost of certification, the complexity of the MSC's fisheries management requirements, and other infrastructure problems may effectively preclude significant developing-country participation in the short term.

4.2 The Forest Stewardship Council's Certification Programme for sustainably-managed forests

Forest management practices have repercussions for a wide range of environmental concerns, including protection of watersheds, conservation of biodiversity, and the sequestration of carbon. As water becomes a more critical resource, the role of forests in watershed control, in rainfall interception and in controlling erosion will assume even greater importance. These concerns, together with illegal logging, rainforest destruction, clear-cutting and old-growth forest destruction, have become key issues for forestry initiatives since the 1992 UN Conference on Environment and Development (UNCED).

National and international NGOs have brought forestry issues to the forefront of public debate. Since UNCED, countries have attempted to make forestry policy more consistent with the concepts of

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35 The Global Aquaculture Alliance has recently initiated a global certification programme under the aegis of the Aquaculture Certification Council, www.aquaculturecertification.org.

36 www.aquariumcouncil.org

37 www.unilever.com.

sustainability and environmental soundness. The Ad Hoc Intergovernmental Panel on Forests, the Intergovernmental Forum on Forests, and the United Nations Forum on Forests have helped to articulate the policy, institutional, social, environmental and technological issues relating to forest management, although commitment to a legally binding mechanism for conserving and managing forests still remains elusive.[38] The International Tropical Timber Organization has also played a role in assisting the timber industry to address management and conservation initiatives.

The Forest Stewardship Council (FSC) is an international non-profit organisation. It was founded in 1993 in order to support environmentally appropriate, socially beneficial, and economically viable management of the world's forests. The FSC's members include representatives from environmental and social groups, the timber trade and forestry profession, indigenous people's organisations, community forest groups, and forest product certification organisations. Membership is open to all who are involved in forestry or forest products. The FSC is based in Oaxaca, Mexico, where it is run by an Executive Director and staff. It is controlled by an elected Board, which consists of individuals from industry, conservation groups, indigenous people's representatives, and others.

The FSC maintains a set of forest management standards. It accredits independent certification bodies to assess forest operations at the request of landowners. If the forest operations are found to be in conformity with the FSC's standards, a certificate is issued which enables the landowner to market his product as "certified wood," and to use the FSC logo.[39]

The FSC organisation essentially functions as the guarantor of the standard and the accreditation system; however, it has allowed national organisations to initiate programmes consistent with the logo and standards. The FSC has "franchised" its name to national and regional organisations that have initiated certification in regions around the world. FSC organisations currently exist in many countries including, among developing countries, Brazil, Indonesia, Malaysia and Thailand.

4.2.1 Qualification process

Forest management certification involves an on-the-ground assessment of a landowner's forestry practices by an interdisciplinary team of experts. The assessment evaluates the ecological, economic and social aspects of the operation, in accordance with the certification standards for the region. If the forest management meets the certification standards, then the operation may be certified. Products from forest operations certified using FSC-endorsed standards may carry the FSC label. FSC forest-management standards include such environmental considerations as minimising clear-cuts, reducing pesticide use, and protecting old-growth forests.

A forest deemed to be "well-managed" by the FSC is one that maintains the essential characteristics of a natural forest both before and after a timber harvest. FSC standards of well-managed forestry carefully balance ecosystem health with the amount of timber harvested from the forest. Invasive management techniques, like clear-cutting and biocide use, are minimised. Non-invasive management practices such as the maintenance of riparian buffer zones, balanced-age distribution, and integrated pest management are always preferred over invasive techniques.

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38 FAO (2003), op.cit. There is no consensus that such mechanisms are useful and necessary.

39 www.fscoax.org

The FSC standards are applied to forest management through a certification process. Under this system, the FSC authorises independent certification organisations to certify forests, which in turn use the FSC standards as a guideline to implement a forest-management plan.

Certification is voluntary, and occurs in the form of a contract between the landowner and a certifier accredited by the FSC. To become certified, the landowner must meet the following conditions: the landowner must have a contract with an accredited certifier; the landowner must have plans and other documents describing the property holdings and activities; the landowner must pledge to develop a planning document covering the entire land holding and meeting FSC standards, in accordance with the guidelines approved by the FSC's national representatives, or to complement existing documentation in order to bring it into line with the standards within five years; and the landowner must pledge to conduct an assessment of the nature conservational value of the property in accordance with FSC guidelines.

The certifier is responsible for ensuring that the landowner follows the FSC's standards by, among other things, making on-site inspections of the certified properties.

The FSC also contracts with certification bodies to conduct chain-of-custody certifications. The certification bodies help companies design systems to keep certified material separate from non-certified materials. The certifier then returns to the client's premises annually to review its progress with purchases and sales of certified products, as well as handling of certified wood in the production process.[40]

4.2.2 Performance of the programme

The FSC estimates that its certification programme currently covers more than 6% of the world's forests.[41] According to one study from November 2002, there are currently more than 31 million hectares of FSC-certified forests, controlled by over 450 companies operating in 56 countries. More than 2 500 product lines now carry the FSC chain-of-custody label. Over 700 enterprises have joined Forest and Trade Networks, a group committed to the production, promotion, and marketing of products certified according to the FSC scheme.[42]

Nevertheless, it is evident that the FSC has had more success in certifying forests in developed countries than in developing countries. As of August 2002, the FSC reported that it had certified over 24.6 million hectares in 306 sites in Europe, Canada, the United States in Japan, while it had certified only a little over five million hectares at 146 sites in the developing world.[43] This may be due in part to the fact that landowners in developed countries tend to be more knowledgeable about the FSC's programme, have more control over their resources, and are better able to meet the requirements of the FSC certification process.

It is also worth noting that there are some who question the robustness of consumer demand for ecolabelled wood products. According to one NGO official, while home-improvement stores in the United States generally seek assurances that the wood they purchase does not derive from illegal logging, they do not seem particularly interested in passing this information along to consumers. In the view of this

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40 www.fscus.org

41 www.fscoax.org

42 May, Peter H. (2002), "Forest Certification in Brazil: Trade and Environmental Enhancement," Consumers Choice Council.

43 www.certified-forests.org/data/global_table.htm

individual, consumers seem more interested in looking for price and quality than in seeking out certified wood products. An additional problem with the FSC certification system cited by this official is that labelling can become "messy" for downstream wood products. For instance, an FSC label on paper indicating that it comes from "17% certified forest land" does not present a compelling message to consumers.

The FSC also faces considerable competition in the marketplace with other labels. Between the Sustainable Forests Initiative, other labels and national programmes, producers have an incentive to certify to multiple labelling standards. Some intermediate purchasers also prefer to purchase from ISO-certified sources. The market for wood and forest products is also a tough one, characterised by oversupply and falling prices, and several respondents noted that, in the current marketing context, price premiums for labelled products would be unlikely. They also pointed out that retailers are not using the label in many places anyway, a source of frustration for the FSC because it must sustain consumer demand.

Moreover, the FSC's programme has not been without controversy. In November 2002, the Rainforest Foundation, a British environmental group, issued a report claiming to highlight flaws in the FSC's certification system. According to this report, the FSC's authorised auditors have a vested commercial interest in certifying timber companies, regardless of whether or not they actually comply with the FSC's strict requirements.[44] The FSC standards have also been criticised from an environmental perspective for blurring the distinction between plantation and natural forests, thereby potentially countenancing the clearing of natural forests for plantations.

In addition, Consumer's Union, a U.S.-based consumer organisation, has noted that the FSC label has varied in meaning since the programme began. For example, prior to February 2000, chip and fibre products had to contain at least 70% FSC-certified wood to qualify for the label. However, after February 2000, the minimum required content dropped to 30%. This standard will rise to 50% by 2005. This unexpected relaxation in the standards has been described by the FSC as a way to increase market involvement. Although it is common for standards to evolve, Consumer's Union is concerned that a drastic cut in standards decreases the meaning and clarity of the FSC label and can mislead consumers.[45]

4.3 The International Federation of Organic Agriculture Movements' Certification Programme for organic agricultural products

According to a recent FAO report, agricultural land under certified organic management in 2000 averaged 2.4% of total agricultural land in Western Europe, 1.7% in Australia, 0.25% in Canada, and 0.22% in the United States. In most developing countries, agricultural land reported under certified organic production is minimal. Nevertheless, on the demand side, promotion and marketing strategies of retailers and supermarkets in developed countries have created new market opportunities for organic agriculture. These market opportunities have created possible niche markets for developing-country exporters, particularly for suppliers of organic products that are not produced domestically (e.g., coffee, tea and tropical fruit), as well as off-season products and processed foods.[46]

The International Federation of Organic Agriculture Movements (IFOAM) was founded in 1972 as an umbrella organisation for the organic agriculture movement. It currently claims 750 member organisations

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44 www.rainforestfoundationuk.org

45 www.eco-labels.org

46 FAO (2003), op. cit.

and institutions in 100 countries around the world. IFOAM's fundamental decisions are taken at its general assemblies, where its World Board is also elected. Members organise themselves according to geographic regions or sector interests. The Federation's activities are also carried out in various committees, working groups and task forces.

IFOAM's "Organic Guarantee System" aims to unite the organic world through a common system of standards, verification, and market identity. The basis for the Organic Guarantee System is the IFOAM Norms. The IFOAM Norms are periodically revised and expanded by IFOAM in consultation with a broad group of members and other stakeholders. There are two components of the IFOAM Norms:

- the IFOAM Basic Standards for Organic Production and Processing, which seek to harmonise international organic standards, while allowing for national and regional adaptations; and

- the IFOAM Accreditation Programme, which is a service offered to certification bodies. IFOAM Accredited Certification Bodies must demonstrate compliance with IFOAM Norms.[47]

4.3.1 Qualification process

Unlike the MSC and the FSC, IFOAM does not accredit certifying bodies directly. Instead, IFOAM's accreditation programme is administered by the independent International Organic Accreditation Service (IOAS). In turn, products certified by IAOS-accredited certification bodies may display the IFOAM Seal. This mark is intended to ensure wholesalers, retailers and consumers that a product and its producer are organically certified within IFOAM's Organic Guarantee System. IFOAM seal use on products is implemented through a contract signed by an IFOAM-accredited certifying body and the International Organic Accreditation Service, and a corresponding contract between a certifying body and its certified partners.

The annual certification fee charged by IOAS varies, based on the certifier's annual income from inspection and certification activities, but is generally in the region of USD 4 000 to USD 6 000. Currently, 30 certification bodies are participating in the programme, of which 23 have achieved accreditation. Some of these certification bodies are from developing countries, including Brazil, Argentina, Thailand and the PRC.

One weakness of IFOAM's programme is that governments of some of the largest markets for organic agricultural products, including the EU and the United States, do not recognise IFOAM's standards officially as equivalent to their own national standards. Nevertheless, some EU member states unofficially recognise IFOAM certification as equivalent, and the IOAS will prepare reports on certification bodies for EU member state authorities. In Japan, IOAS accreditation is recognised as a threshold requirement, which makes a certifying body eligible to enter into a contract with Japan's official accreditation body. Under the U.S. organic agriculture programme, however, agricultural producers must either be directly certified by the U.S. Department of Agriculture (USDA), or be certified by a certification body that has been directly accredited by the USDA.

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[47] www.ifoam.org

4.3.2 Performance of the programme

UNCTAD estimates that major markets for organic products are growing at rates of 10-15% per year, but reports that tightening rules on the import of organic products, and the increasing preference in developed-country markets for local rather than imported production, are posing obstacles for would-be organic exporters in developing countries. UNCTAD has stated that developing-country exporters are faced with hundreds of different private-sector standards and frequently cumbersome government regulations and import procedures. Domestically, these problems are often compounded by other hurdles related to finance, infrastructure, transport, certification and lack of information on markets and organic production practices.[48]

IFOAM's success in the organic agriculture market has been limited by the fact, mentioned above, that the governments of key developed country markets do not recognise IFOAM's standards as equivalent to their own national standards. Nevertheless, national government regulation of organic ecolabels may promote further consumer acceptance of organic ecolabelling by limiting the proliferation of such labels and improving consumer confidence in organic claims. As markets for organic products continue to expand, IFOAM may be well positioned to promote international harmonisation efforts.

4.4 The U.S. Department of Agriculture's organic labelling programme

Certain national organic standards regulations — in particular, those of the EU, Japan and the United States — are so comprehensive, with provisions for supervising and accrediting certifiers, that they can be considered programmes of global reach. Therefore, for purposes of this study, it was felt that a more in-depth examination of at least one of these national programmes was warranted. The U.S. organic programme was chosen, since it is both the most recent, and the one affecting the largest potential international market for organic food products.

The current U.S. national standards have their roots in the late 1980s when, after an attempt to develop a consensus of production and certification standards, the U.S. organic industry petitioned Congress to draft the Organic Foods Production Act. The Act, which was enacted in 1990, established national standards governing the marketing of certain agricultural products as organically produced, and was meant to assure consumers that organically-produced products met a consistent standard. The Act directed the Secretary of Agriculture to develop national standards for organically grown products. To assist the Secretary in this task, the Act provided for the appointment of an independent, 14-member advisory body, the National Organic Standards Board (NOSB).

The NOSB, appointed in 1992, worked closely with the private organic farming community to develop standards that could be accepted by growers, retailers, certification bodies, and environmental groups. In 1994 it submitted its recommendations to the Secretary of Agriculture, which issued proposed regulations based on the NOSB's recommendations in April 1997. Following a lengthy period of public comment and revision, the USDA published its revised proposed rule in the *Federal Register* in March 2000. USDA announced its final regulations in December 2000, made the regulations effective in April 2001, and set a date of October 21, 2002 for organic producers and marketers to comply with the regulations.[49]

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48 UN Conference on Trade and Development (2002) , "Organic Agriculture: A Strategy for Survival in Developing Countries," Press Release, March 15, 2002.

49 OECD (2002), case study on "Regulating Organic Food Labels in the United States".

4.4.1 Qualification process

Under the Organic Foods Production Act, the USDA accredits certifying agents, who then certify that producers and handlers representing their products as organic have complied with USDA regulations. Applicants for accreditation must:

- employ personnel, including inspectors, who have sufficient experience and training in organic production and handling to carry out certification activities;
- demonstrate their ability to certify, maintain proper records, and establish adequate communications with producers, handlers, the public and USDA;
- prevent conflicts of interest and maintain strict confidentiality; and conduct annual performance appraisals of their inspectors and other personnel.

The USDA is required to review the certification programmes under which imported organic products are produced to ensure that they meet the requirements of the U.S. National Organic Programme. Certifying agents operating in foreign countries may apply for USDA accreditation. Foreign applicants are evaluated based on the same criteria as domestic certifying agents. In lieu of organic certification by a USDA-accredited certifying agent, imported agricultural products may be sold in the United States if they have been certified and recognised through: (1) a USDA recognition of conformity assessment; or (2) an equivalency determination.

Under the recognition of conformity assessment option, the USDA may determine that a foreign government is able to assess and accredit certifying agents as meeting the requirements of the USDA's National Organic Programme. Under the equivalency option, USDA will accept a foreign certifying agent's accreditation to certify organic production or handling operations if the foreign government authority that accredited the foreign certifying agency acted under an equivalency agreement negotiated between the United States and the foreign government.[50] This is important because it offers developing country exporters an opportunity to become certified in their home countries, as opposed to requiring them to be certified by a U.S. agent. USDA regulations specifically exclude the possibility of recognising certifying bodies accredited only by a private or non-governmental accreditation body, such as IFOAM.

4.4.2 Performance of the programme

As of April 2003, the USDA was working with six national governments to recognise their ability to assess and accredit certifying agents. None of these was a developing-country government. Equivalency determinations have been requested by four governments, of which only one (India) is from a developing country. As of April 2003, the USDA had directly accredited a total of 82 certifying agents, of which 31 were from foreign countries. Of those 31, eight were from developing countries, including three from Argentina, and one each from Bolivia, Brazil, Costa Rica, Peru and Turkey.[51] Currently, nine additional applications from certifying bodies located in developing countries are pending.

USDA's organic labelling program, while still new, has received high marks from a national consumer organisation, which has stated that the program meets virtually all of its standards for a good

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50 www.ams.usda.gov/nop.

51 www.ams.usda.gov/nop/CertifyingAgents/Accredited.html.

ecolabel. [52] It seems likely that this program, by reducing consumer confusion and increasing consumer confidence, will promote the growth of the market for organic products in the United States.[53]

4.5 Shade-grown coffee

As a point of comparison to the certification programmes detailed above, the scopes of which include a broad range of products, it is worthwhile examining an environmental labelling programme that focuses on one product of export interest to developing countries: coffee. Over 2/3 of current world coffee production is exported from Latin America and the Caribbean. It is primarily grown by families on small farms. In value, coffee is second only to petroleum as the most-important legal export commodity in the world. Revenues exceed USD 10 billion per year. It is the second-largest source of foreign exchange for developing countries around the world, and is particularly important for Latin America and the Caribbean, where it is the leading source of foreign exchange.

There are a number of different initiatives underway to improve social and environmental conditions in coffee production. Among these are three major types of certification initiatives, all designed to improve the sustainability of coffee production: fair trade, organic and shade-grown. Shade-grown coffee (coffee grown under forest cover) emerged to counter the biological effects of the rapid deforestation occurring as a result of the spread of commercial coffee plantations. Since the 1970s, coffee plantations traditionally grown under a variety of tree species have been increasingly converted to sun plantations. While this manner of cultivation produces substantially higher yields, these cannot be sustained for many years without intensive management, including chemical fertilisers and a range of insecticides, herbicides and fungicides. Moreover, studies have revealed that the diversity of migratory birds and other species plummets when coffee is converted from "shade to sun".

Concern for impacts on biodiversity, especially bird species, lead to the creation of the first shade-grown coffee certification in 1995. Shade-grown certification was developed in order to fill a gap within other certification initiatives: protection of biodiversity. Although most organic and fair-trade coffee is grown under a canopy, shade cover is not a monitored criterion under these programmes. During the last year, the major players in the shade-grown movement have come to a consensus around a common set of conservation principles. These principles are to be used as guidelines for the various certification initiatives, but do not include a proper accreditation system. The only shade-grown initiatives currently offering third-party certification are the Smithsonian Migratory Bird Centre's "Bird Friendly Coffee" programme, and the "Eco-OK" programme, operated by the Rainforest Alliance.[54]

4.5.1 Qualification process

The Rainforest Alliance certification process is managed by the Sustainable Agriculture Network (SAN), a network of like-minded, non-profit conservation organisations for which the Rainforest Alliance is the international secretariat. Farmers may request a preliminary site visit by SAN staff to determine what changes must be made to achieve certification. The next step in the process is an evaluation, which is an official visit by two or three SAN technicians. The SAN team prepares a report analysing the farm based

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52 Consumer's Union website at www.ecolabels.org.

53 The program has been credited with elevating the profile of organic products, allowing penetration into mainstream retailers and creating strong consumer demand.

54 www.cafeunidos.org.

on all certification criteria. Then, a committee of SAN representatives makes a determination, based on the evaluation report, of whether the farm is eligible for certification. Farms awarded certification receive written notice of approval and a certificate. To complete the certification process, the producer must enter into a contract with the Rainforest Alliance, and agree to meet guidelines for labelling certified product with the "Rainforest Alliance Certified" seal. Evaluation occurs once a year.

Preliminary site visits and evaluations are billed on a fee-for-service basis. Companies are also charged an annual certification fee, based on the size of their farm. This fee is paid to the Network partner responsible for the evaluation and monitoring of the farm.[55]

4.5.2 Performance of the programme

According to a 1999 study,[56] shade coffee production is feasible for small landholders and their families, who cannot afford the high volume of chemical inputs and hybrid seeds necessary for full-sun coffee production. By maintaining the forest cover, these small producers may also harvest other forest products, such as medicinal plants, fruits and firewood to supplement their incomes and provide for their survival needs.

The same study showed that there was a potential market demand for shade-grown coffee in North America. The study also found that consumers were willing to pay a modest price premium for such coffee.

As of April 2003, the Rainforest Alliance had certified 7 911 acres of coffee in eight countries: Colombia, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua and Panama.[57]

The Smithsonian's Bird Friendly Coffee programme is also growing. Fifteen farms in six countries — Brazil, Colombia, Costa Rica, Guatemala, Mexico and Peru — produce "Bird Friendly" certified coffee beans to sell to roasters in the United States and Canada. The growers (over 1 000) on these farms produce more than 3 million pounds of coffee on more than 6 000 acres of shaded farmland.[58]

While it is difficult to find data assessing the relative market presence of various ecolabelled coffees, a recent study[59] compared the participation rates of four ecolabelling programmes for coffee in Mexico. According to this study, "certified organic" coffee claimed the highest participation among Mexican producers, with a total of over 70 000 hectares of production and over 28 000 producers. These numbers correspond, respectively, to 2% of Mexico's coffee-cultivated area and 4% of its coffee producers. An estimated 10 200 hectares of land have been certified under the Fair Trade programme.

Participation in shade coffee programmes is still relatively small. The SMBC's "Bird Friendly" coffee programme has certified one estate farm and one co-operative farm, for a total of 650 hectares in Mexico. The Rainforest Alliance programme has certified one estate coffee producer, and is in the process of certifying four other producers.

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55 www.rainforest-alliance.org.

56 North American Commission for Environmental Cooperation (1999a), op. cit.

57 www.rainforest-alliance.org/programmes/cap/farm-list.pdf.

58 http://nationalzoo.si.edu/ConservationAndScience/MigratoryBirds/Coffee.

59 Boot , W. J. *et al*. (2003) , "Beneficial Impacts of Ecolabeled Mexican Coffee," Consumers' Choice Council.

While both production and consumer recognition of "shade-grown" coffee is still somewhat limited, a U.S. consumer organisation has recognised the Smithsonian's "bird-friendly" ecolabels as meaningful.[60] A study prepared for the North American Commission on Environmental Cooperation has suggested that one key to expanding both producer participation in and consumer acceptance of the shade-grown coffee label is obtaining agreement upon a mutually-acceptable definition of "shade-grown," as well as developing common certification criteria for this concept.[61]

However, shade-grown coffee has a lot of competition in the specialty coffee marketplace. In addition to organic programmes, food service providers such as Starbucks have created their own programmes. Starbuck's programme, for instance, combines "quality, social responsibility and environmental management standards to build a recognised brand with environment and social welfare benefits that customers appreciate."[62] Such "preferred supplier" programs may ultimately supplant single label attributes such as the shade-grown one used by these small programmes.[63]

5. Developing-country participation

5.1 Main issues related to developing-country participation

Two categories of issues may affect the ability of developing countries to participate in a particular ecolabelling programme: (1) those relating to the environmental standards of the programme and how they are applied, and (2) various procedural aspects of the programme. Procedural issues can include the costs of certification and related procedures, and infrastructural inadequacies that can make it difficult for developing countries to obtain certification, especially for small and medium enterprises. Programme complexity and lack of transparency can pose additional procedural barriers. This section examines issues related to both categories, using information from both the programmes described in Section II, above, and information from the case studies presented at the New Delhi workshop.

A fundamental conclusion that can be drawn from a review of these various issues is that differences in the substantive standards applied by ecolabelling programmes to products produced in developing, versus developed, countries, are important indicators of a tradeoff between the adaptability of programmes to local environmental and cultural conditions and a robust international environmental standard. However, a multiplicity of procedural issues, particularly those that reflect the complexity of environmental, resource and food-safety management in developed countries, seem to be more important as obstacles to developing-country access to ecolabelling programmes.

One point worth noting in examining the extent of developing-country participation in ecolabelling programmes is that the degree of local involvement in generating and applying a standard can be an important factor determining the eventual participation of developing-country producers in the programme. Of the programmes examined in detail here, each seems to approach the issue of local involvement slightly

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60 Consumer's Union website, at www.ecolabels.com.

61 TerraChoice Environmental Services (2000), "Environmental and Other Labeling of Coffee: the Role of Mutual Recognition."

62 Williams, M., "Making Standards Work for Developing Country Producers, presentation to the Conference by Chemonics International "New Roads to Sustainable Agriculture and Competitiveness: Making Standards Work for Developing Country Producers", http://marketstandards.chemonics.net/Conference.asp.

63 http://www.starbucks.com/aboutus/csr.asp.

differently. One programme uses certification applicants to keep the programme's managers informed of local stakeholder interests. The certifier can then involve stakeholders in relevant work to review indicators and scoring guidelines. Another programme depends on local interest to generate national groups capable of administering a programme to certify local holdings based on specific criteria related to the more general programme standards. A third programme depends on local certifiers to inform the programme about local organic production practices which can vary greatly from country to country and from region to region, but must conform to a norm at a very general level. Finally, one small programme is dependent on local growers to define and apply a narrow standard to their product, in order to achieve the programme's broad conservation goals most effectively. These examples, and others, highlight both the value of, and the variety of models for local participation.[64]

5.1.1 Standards

The most fundamental issue faced by those designing an ecolabelling programme is how to select the specific environmental standards that should apply to a product, in order to ensure that the broad conservation objectives of the programme are met in conveying to consumers a product with inherent environmental benefits. Section 3 of this paper described how the selected programmes choose the standards they apply. The process of standard selection can range from governmental legislation and rule-making, to arduous international negotiations among a programme's stakeholders, to a dependence on local decision-making.

This section examines the application of general programme standards – however selected – to very specific conditions across a range of environments. It is true in this context that, "the devil is in the details." A general standard can be rendered meaningless if it is altered to accommodate each unique local condition. However, if a standard is applied too inflexibly, the programme may fail to take into account local environmental conditions that could produce an environmentally preferable product. Moreover, if a standard is based exclusively on the environmental and technological priorities of the importing country,[65] it may require developing-country producers to meet standards that are either irrelevant or technologically inappropriate.[66]

None of the individuals interviewed for this study alleged that intentional discrimination in standards application was either practiced or condoned by any of the programmes under review, nor is there any written evidence of such discrimination. However, many of the programmes exhibit substantive differences in the ways in which they apply their standards to products from different countries.

One of the features common to most of the programmes included in this study is a reliance on certification, to some extent, to accomplish the programmes' major objectives. In practice, those developing a certification scheme must first establish a goal — for instance, certifying that a commodity is sustainably or organically harvested — and then determine which elements to evaluate in making a determination as to whether a producer meets that goal. Most certification schemes use indicators which

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64 In addition to the programmes selected for this study, the OECD case studies on "Mangrove Protection Initiatives and Farmed Shrimp", "Eco-Labels for Cut Flowers", and "Adapting Turtle-Excluder Devices to Local Conditions", OECD (2002), all point up the value of local participation in standards-setting.

65 The OECD case study on" The International Fruit Container Organization (IFCO) Returnable Packaging Initiative", OECD (2002), appears to describe one such programme.

66 In the OECD case study on "Adapting Turtle Excluder Devices to Local Conditions", OECD (2002), turtle conservation was ultimately accomplished by encouraging use of technology appropriate to local conditions.

are assigned a score. Certifiers in the field have only to assess a product or process according to the list of criteria that constitute the indicators, and give the product or process the appropriate score. However, there are many variables involved in each environmental certification and the selection of indicators and scoring can be very different from product to product.

For instance, in a fishery context, a particular species of fish targeted by a fishing industry can be fished using longlines or trawlers, by artisanal fishermen or factory ships, and using efficient, modern gear or more traditional equipment. Similarly, the species of fish under review may be part of a multi-species fishery, where a variety of fish are targeted, or may be located in waters where it is the only exploited species. The same species can exist in relatively pristine and previously unexploited waters, or in heavily trafficked waters where it has been fished for centuries. Consequently, the indicators that establish whether a fishery is sustainable will vary considerably from species to species, and from country to country, and the associated scores may vary from fishery to fishery. While the products under review may be similar, real substantive differences may exist in the environmental conditions under which they are harvested.

Taking another example from the fisheries sector, the Marine Stewardship Council's evaluation of pollock stocks in Alaska and the Bering Sea (a developed-country fishery) uses the following indicator set for stock assessment, which is one of the measurements against which sustainable harvest of the resource is made:

- there is a robust assessment of the stocks;
- assessment models are appropriate to the biology of the stock and the nature of the fishery;
- stock assessment methods are statically rigorous; and
- stock assessments explore sensitivities to assumptions, parameters and data and key sensitivities are taken into account in the harvest strategy.

The questions that the MSC proposes to ask about the same topic (i.e., stock assessment) in the case of the South African hake fishery are somewhat different, and are as follows:

- Are assessment models used?
- Does the assessment take into account major uncertainties in data and have those assumptions been evaluated?
- Are uncertainties and assumptions reflected in management advice?
- Does the assessment evaluate current stock status relative to reference points? Does the assessment include the consequences of current harvest strategies?

Apart from the obvious sophistication of the first set of indicators, and the somewhat cautious tone and much more basic concerns of the latter, it should be noted that these dual sets of criteria are being applied to essentially the same fish species. This species is purchased by the same buyers and used for the same purposes. Generally known as whitefish, this fish is usually processed and used as an ingredient in fish and chips, or in processed fish dishes. This example demonstrates that the MSC programme is, in fact, more accommodating, rather than less so, in applying its substantive standards to developing countries, particularly when the product is of particular interest to the programme.

This example of flexible standards application may perhaps have more implications for the integrity of the standard than for any possible discrimination against developing-country industries. Moreover, it should be noted that accommodations made by ecolabelling programmes to developing countries unable to replicate developed-country management infrastructure and programme design can cut both ways. Industries in developed countries that may be experiencing some of the problems more common to industries in developing ones (e.g., a history of poor management and little access to value-added markets) could legitimately complain that they are being held to higher standards than their counterparts. One commentator has observed that, "The challenge of attaining sustainability is not at all unique to developing countries. Many fisheries in developed countries are depleted and unlikely to achieve certification in the near future. In developing countries, there are many fisheries that are less developed or depleted and for which certification might be more easily achieved. Therefore, in terms of the state of a fish stock, some certification programmes may in fact favour fisheries in developing countries over those in some developed countries".[67]

This example also highlights the fact that every environmental labelling programme must make choices in how it applies its standards to local environmental conditions. These choices will place the programme on a spectrum, between an extreme degree of flexibility that could corrode the viability of the general standard, and an extreme degree of inflexibility that could exclude many potential products from recognition as environmentally preferable and forgo the potential market benefits of such products. Programmes that fall into the flexible range of this spectrum tend to provide for more local control. Programmes that fall into the inflexible range tend to be more centralised and generally, though not always, the central authority is in a developed country.

When programmes actively fail to recognise local environmental standards, local production is clearly placed at an economic disadvantage; however, there is little evidence that such programmes also contribute to increased market share or other benefits for producers in the country where the restrictive programme is based. To the contrary, one study described below posits that both the country maintaining the restrictions and the one attempting to export to that country will be harmed, resulting in a pressure to harmonise standards that ultimately will benefit both.

This study, as described by Wessels,[68] Nimon and Behgin[69] uses as a model trade in a textile between an industrialised Northern and a developing Southern country. In this model,

> "… ecolabelling involves production-process standards. The North imports conventional textile goods from the South and produces conventional textile goods, as well. It is also assumed that the North has a tariff in place on imports from the South. There are fixed costs of certification.
>
> The resulting analysis shows that a labelling programme in the North, without participation by the South, is detrimental to both Northern and Southern producers of conventional textiles. Consumers benefit from a larger choice set, but demand for conventional textiles, including imports, decreases. The presence of a specific tariff worsens the decline of imports of conventional textiles. Some of the negative impact on the Northern conventional textile industry can be mitigated by increases in the tariff. If the South also implements an ecolabel, the South's

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67 Wessels, C. (2001), op. cit.

68 Wessels, C. (2001), op. cit.

69 Nimon, W. and J. Beghin, (1999), "Eco-labels and International Trade in the Textile and Apparel Market," American Journal of Agricultural Economics.

producers of conventional textiles will be even worse off than before, but the South will regain market share in the aggregate.

This issue then becomes whether harmonisation of ecolabels and production-process standards would bring net benefits for both Northern and Southern producers. The analysis assumes that the quality of the ecolabelled good in the South is lower than the quality of the ecolabelled good in the North due to a lower marginal damage from pollution in the South's environmental quality indicators. Given that divergence in quality, if both the North and South have ecolabels, suppliers in the South would rather harmonise upward, as long as the increase in demand exceeds the loss caused by increasing marginal costs due to higher standards. Harmonising downward would benefit the South's conventional textiles industry. Upward harmonisation imposes further competitive discipline on the North's ecolabelling industry, thus benefiting consumers with lower prices."

5.1.2 Procedures

Procedural obstacles are those most directly arising from the economic, as opposed to the environmental, conditions in developing countries. These may include cost, transparency, complexity, and infrastructure problems. All of these factors may play a role in disadvantaging developing countries wishing to participate in ecolabelling programmes. These problems are evident in the OECD case studies, and many of them also figured as elements in the interviews conducted for this study.

5.1.2.1 Costs of certification and chain-of-custody tracing

Initial certification costs can vary widely across programmes. A ballpark estimate for the cost to a small-to-mid-sized American company of initial certification to ISO 9000 or 14000 is about USD 250 000. This sum can make a significant dent in the operating budget of a firm. Type I (third-party) environmental certification is also not cheap. Costs of initial certification to the Marine Stewardship Council's standard can exceed USD 100 000 per fishery, and this includes only the primary certification.[70] There are also costs for re-certification, and of course for maintaining the programme in the recommended state. However, in many cases, much of the initial certification cost is borne by public and private-sector supporters of the programme, rather than by the fishery itself.[71] Respondents report that, while Forest Stewardship Council certification is not generally considered costly, the management measures required can be expensive. IFOAM certification has been estimated to cost USD 300-500 for a small operator in the United States, a not inconsiderable cost for such an entity. Costs are proportionate to the size of the business. Many organic producers in developing countries avoid single-entity certification costs by operating as co-operatives, thereby sharing the cost burden. Shade-grown coffee certification costs are not considered to be a problem at this stage, but the programme is still young.

Yet, because purchasers may choose a certified company over an uncertified one, failing to certify can mean failing to export. More significantly, certification to multiple programmes (as for organics) is often a significant market advantage, and is increasingly necessary in some markets. As is the case for some organic producers, some forest product companies are certified to multiple programmes because they do

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70 OECD (2002), case study on "Private Certification of a Fishery as Sustainable".

71 Certification of Alaskan Salmon was initially funded by the State of Alaska, and Unilever has directly or indirectly funded certification of several groundfish fisheries. But, since certification is done on the basis of a "fishery," defining which entities are included in this category can become a cost issue.

not want to be seen by potential customers as unresponsive to any of several (sometimes competing) initiatives.[72]

If there are no certifiers located in the producers' country, the costs of certification increase further. The OECD case studies amply confirm that certification, particularly in developing countries, can be very costly and difficult to obtain, partially due to the fact that the majority of certifiers for some programmes are still based in developed countries.

Certification itself is not the only cost. The Marine Stewardship Council advises potential certification candidates to undertake a pre-assessment study to determine the likely outcome of the certification process. Estimates run up to USD 20 000 for this service, depending on the complexity and size of the fishery.[73] Where there are no established indicators or scoring guidelines, programme participants may also need to work with the certifier on developing the certifying methodology, reviewing indicators and scoring methodology, and reviewing or otherwise contributing to the establishment of an appropriate process.

Most programmes that depend on retail labelling also require some kind of chain-of-custody certification. Chain-of-custody certification, tracing the product from its origins to the retail consumer, can also be costly, since it requires interaction with all points of processing and distribution. Additionally, implementing a chain-of-custody certification requires separating the processing, wholesale, distribution and inventory management of the product. Ideally, the retail establishment intending to use the logo pays for a chain-of-custody certification, but this is not always the case. Due to the number of actors involved in establishing a chain of custody, certification costs can run from USD 1 000 to over USD 5 000 per retailer.

A detailed summary of the procedures followed in a chain-of-custody certification for fishery products certified by the Marine Stewardship Council is provided below.[74]

According to the MSC, "With respect to fish catching and processing, chain of custody procedures are implemented at the key points of transfer (i.e. extraction from the sea, receipt on board, delivery to the dock, broker, wholesale dealer, processor, retailer)." A contractual agreement is established between the recipient body and the certification body stipulating standard compliance guidelines and ongoing monitoring guidelines. Precisely-established chain-of-custody procedures are implemented on a case-by-case basis. However, there are some basic requirements drawn up in the MSC documentation[75]. These include:

1. From the boat to the dock:
   a) All containers of fish must bear a tag identifying the fishery of origin.

   b) At the dock, all certified fish must be segregated and identified separately from non-certified fish.

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72 The Canadian province of British Columbia reports that 70% of B.C.'s annual harvest is either certified or meets ISO requirements. British Columbia Ministry of Forests (2003), Fact Sheet, www.growingtoghether.ca.

73 OECD (2002), case study, "Private Certification of a Fishery as Sustainable".

74 Wessels, C. (2001), op.cit.

75 Wessels, C. (2001), op.cit.

2. From the dock to the processor, wholesale dealer or retailer:
   a) Upon arrival at the processor, wholesale dealer or retailer, all certified fish must be segregated from non-certified fish.

   b) All certified fish must be segregated and identified during storage and shipment.

3. From the processor to the wholesale dealer or retailer:
   a) Only certified fish may be run in a single production shift, or the certification body must approve some other precautions that are taken to ensure continued segregation and identification of certified from non-certified fish (for processors).

   b) All certified fish must be segregated and identified during storage and shipment.

   c) Until and unless automated coding mechanisms are employed, only certified fish may be run within a single production shift (i.e., on a batch basis).

However, added cost elements for chain-of-custody certification may be less than they would otherwise be if certification of health and safety is also required. For fish and for other perishable products, many industry participants already use Hazard Analysis and Critical Control Point (HACCP) systems to ensure that health and safety risks are minimised. If these systems are already in place, chain-of-custody certification requires few additional conceptual elements but full product segregation and tracing to the source of supply are additional measures, which are expensive.

Record creation and retention for chain-of-custody certification can be very problematic in developing countries, particularly for small producers and processors. However, when it is undertaken it forms part of the value-added of a product for consumers who like assurance that the product claim has been verified.

Tracing to the source is particularly difficult for some sectors, such as the food and seafood products sector. Foods are perishable, and food ingredients from different sources are commonly commingled to ensure quality and achieve other product attributes.[76] They are also mixed in processing and sometimes even in transport. Because, tracing to the source can be exponentially more costly for industries that commingle products, as well as for processed products, the cost of product tracing is often not lightly undertaken.

Producers in both developed and developing countries are increasingly subject to product tracing as a function of developed-country retail purchasing and supply management. Costs of implementing these kinds of retailer requirements and regulations are higher for developing countries without extensive information technology infrastructure to create and maintain records and documentation. Because these requirements may be legally or effectively mandatory and may affect exports of agricultural and resource-based products across the board, developing countries are concerned that they will erode the added value of ecolabelled products provided by product tracing.

In addition to retail purchasing and supply management strategies executed in the private sector, requiring product tracing, new legislation in many countries intended to implement new international and regional commitments could further add to the burden of developing countries trying to preserve their ability to export ecolabelled and value-added food, forestry and agricultural products. National legislation intended to inform consumers of whether food and food products were processed with, or contain, genetic

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[76] Dairy and grain products are examples of products that are commonly commingled, but most processed products, including timber for furniture and composites, are also commingled.

modifications, may require labelling of specific content of a variety of foods, and thus de facto tracing of these foods to their origins. Some new labelling standards mandate genetically modified content thresholds that are so low (legislative proposals have ranged from 0.5 to 3 percent) that exports of even organic foods may require full documentation and traceability. Such documentation may be necessary to avoid requirements for testing to determine whether small amounts of genetically altered material might be present, or might have been present in processing. National legislation implementing the Cartagena Protocol may also require specific identification on cargo manifests of any genetic modification contained in the shipments of food or feed; another tracing issue for food and feed producers.

5.1.2.3 Infrastructure

Inadequate infrastructure is one of the primary difficulties many developing countries encounter when working to implement international ecolabelling schemes. The ecolabelling programmes studied in this paper and in some of the OECD case studies have certain assumptions in common, including:

- effective ownership and control of land or, in the marine context, an effectively enforced government-run fishery management programme;
- the ability to source necessary inputs and expertise;
- programmatic funding and consistency;
- access to certification expertise; and
- the ability to benefit from appropriate marketing initiatives.

Some of these elements either might not be present in developing countries, or might be inconsistently present. For instance, the Forest Stewardship Council would be hard-pressed to accept a certification of forest resources whose ownership is disputed, or where effective management is not present. The Marine Stewardship Council would likewise not be able to certify a fishery where effective fisheries management and enforcement are not present or not possible, as is the case in some developing countries where fishery resources are at risk.[77] In such cases, there may be price consequences. Wessels notes that, "without the support of governments, many private industries cannot reasonably be expected to become sufficiently organised to independently institute effective management schemes and achieve certifiable status. In cases where governments either fail to act (or act inappropriately) to manage fisheries, the fishing industry may be penalised due to lower sales prices in the absence of certification.[78]

Organic programme certifiers must also establish that the certified entity has effective control of the land or the crop. A producer cannot be said to have effective control over his crops, for instance, if nearby landowners can contaminate the crop with pesticides or some other non-organic input.

In some cases where adequate management and control are possible, other factors may hinder a producer's ability to implement the changes needed to maintain a certification. These factors can include lack of access to inputs (because of cost or availability), as well as services (i.e., management expertise).

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77 This has in fact been the case with two potential developing- country fisheries, one in Brazil and one in the Philippines. OECD (2002), case study on "Private Certification of a Fishery as Sustainable".

78 Wessels, C. (2002), op. cit.

Access to certification expertise can also be highly variable. Expertise in environmental certification is not common even in developed countries. Most large certifiers have firms in multiple developed-country markets, but expertise in developing countries is much less likely to be readily available. The U.S. organic programme, for instance, has so far accredited only eight certifiers in developing countries. Countries that maintain national ecolabelling programmes can help address this problem, but even in such cases there may not be enough certification expertise available to meet the needs of the international programmes.

Finally, the ability to benefit from appropriate marketing initiatives is always going to be an issue for producers located far from the ultimate consumer. The existence of marketing initiative can be a key element in determining the success or failure of an ecolabelling programme. An organic grower can be fully certified but have no market for his produce if retail support is lacking. Retail initiatives are not always paired with certification initiatives. This is probably the most important source of producer discontent with the programmes studied. In some cases the programme managers are confident it is sufficient if consumers have access to the labelled product, but producers do not feel that the product has been appropriately marketed, if at all.

Both the Forest Stewardship and Marine Stewardship programmes have encountered problems with purchasers who do not feel it necessary to go the final step and put the label on a product. Some purchasers have their own label and do not want to confuse consumers with multiple claims; others do not view the label as important for the success of the certification initiative. It may not matter to a processor that a consumer sees a label on the box if the company is able to validate its claim that the products are sustainably sourced. Marketing issues for retailers include volume and quality. Retailers may not want to invest in a consumer education campaign if they are not able to guarantee enough volume to recoup their costs, and they may prefer a label that substantiates a quality attribute other than an environmental claim that consumers find difficult to understand. In fact, many ecolabelled processes, such as ISO certification, operate as indices of best practices in supply management and product sourcing, rather than as sources of consumer information.

For suppliers in developing countries, marketing issues are important because they are not likely to participate in the marketing decisions, and therefore are somewhat insulated from the market signals relevant to their products. Since such suppliers are not generally negotiating with retailers or even intermediate processors, they are unlikely to be able to change product attributes to facilitate marketing and are unlikely to be able to increase or decrease volume on demand. Developing alternative local markets for ecolabelled goods would be a solution of sorts, but this is also not always possible or profitable.

5.1.2.4 Complexity

The complexity of ecolabelling programmes can be a problem for developing countries in three respects: first, standards may apply inappropriate substantive or procedural testing and verification parameters; second, they may require conditions of "compliance" that are impossible to meet under local environmental conditions; and third, they may require adherence to other requirements that are beyond the capability of most producers to meet. The difficulty in accessing research, management and certification expertise has been discussed above, as has the complexity of present and proposed records management and document retention procedures. All of these factors introduce new levels of complexity.

In addition to these elements, a common theme of the OECD case studies and the New Delhi workshop[79] was the emergence of new testing and verification protocols that allow detection of toxicity

[79] Jha, Veena (2001), "Environmental Requirements and International Trade", presentation at the New Delhi workshop.

and other undesirable product attributes which are beyond the ability of most developing-country research laboratories to replicate. This may be because new equipment and technology is expensive, or because trained staff and equipment are not available. Additionally, new limits for undesirable product attributes are being established in developed countries. These requirements do not affect most of the ecolabelling programmes studied here, since they are for the most part sanitary and phytosanitary requirements mandated by governments. But they are a major source of concern to developing countries urged to comply with ever more stringent standards for the benefit of consumers in developed countries. Moreover, some of the more stringent standards and verification requirements do not have much relevance for developing countries that often have different priorities.

5.1.2.5 Transparency

Two aspects of transparency are relevant to ecolabelling programmes. The first is that required (for government administered programmes) by the WTO's SPS and TBT Agreements in the form of notification of new and proposed sanitary, phytosanitary and environmental requirements. The requirements for privately-administered programmes are addressed by the Code of Good Practice appended to the Agreement on Technical Barriers to Trade. The second aspect of transparency is the more general transparency obligation of the programmes themselves to their stakeholders in terms of the way they relate to them and their internal procedures.

WTO members are required to notify new government-administered standards requirements (i.e., sanitary and phytosanitary requirements and technical regulations in the case of the TBT Agreement) to the SPS and TBT Committees, respectively, and to provide an opportunity for interested parties to comment on proposed requirements. Article 4 of the TBT Agreement also requires governments to take reasonable measures related to standards developed by private bodies in their territories. Private sector programmes are covered by the Code of Good Practice. There has been no WTO dispute settlement relative to the Code or its provisions to date.[80]

Some WTO member governments have generally both notified new programmes and taken comments into account as required.[81] Some private-sector programmes have also been notified to the SPS and TBT committees by governments.[82] The TBT Code of Good Practice also requires governments to notify

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80 Labelling-related issues have arisen in 4 disputes: 1) *Measures concerning meat and meat products* (issue: whether labelling might not be an alternative to the prohibition imposed on the use of hormones. Labelling was not the measure in dispute; rather, during the proceedings of this case the question was posed whether labelling could not be a less trade-restrictive alternative for the action taken by the EC. However, this possibility was not explored further); 2) *Trade description of sardines* (issue: restriction of trade description "sardine" for the marketing of preserved sardines, excluding the 'Sardinops sagax' species); 3) *Trade description of scallops* (issue: restriction of trade description for the marketing of scallops in France, requiring Canadian scallops to be described as "petoncles"); 4) *Trade description of fresh, chilled and frozen beef* (issue: a new labelling regime applied only to foreign beef). The only WTO case involving a government-sponsored ecolabel was the Tuna-dolphin dispute litigated in the GATT in 1992. That Panel report was not adopted and thus has not become part of WTO jurisprudence. However, many of the issues raised by that case have continued to reverberate in the WTO in a negotiating and a dispute settlement context. Until these issues are resolved, discussion concerning labels of all kinds will most likely continue in the SPS and TBT committees, where notifications are the focal point.

81 As the OECD case study on "Ecolabels for Wood and Wood Products", OECD (2002), illustrates, some governments have appropriately notified draft legislation that would affect developing- country exports.

82 As noted in the OECD case study on "Ecolabels for Cut Flowers", OECD (2002), Colombia maintained at the WTO that "It is clear that if a private, recognised institution approves a document containing rules,

biannual work programmes and to publish proposed standards for public comment. The WTO has compiled a database on environmental measures notified under WTO Agreements.

Developing country concern about notification of private sector programme requirements likely stems from notification problems encountered in the context of government regulations. In some cases, developed countries have effectively required developing countries to change their own internal legislation and/or authorised procedures, making transparency a more complex issue than it might appear. In general, private-sector ecolabelling programmes have sought to follow procedures set forth in ISO Guide 65 and the TBT Code of Good Practice. These obligations require periodic review of the standards plus adherence to certain procedural requirements, including consultation with stakeholders and publication of the standard and certification procedures, together with publication of the names of available certifiers and varied information about the process of individual certification decisions. Following these procedures is perceived to be important to enhance the credibility of the programmes. The second kind of transparency, the general responsiveness of the ecolabelling programme to its stakeholders, has also raised problems. These problems include non-transparent or inconsistent internal procedures and lack of recognition by international standardising bodies. The internal procedures of the MSC, the FSC and IFOAM are generally well-known to the stakeholder communities that support them. But certification decisions are not always free from controversy, and some FSC and MSC certification rulings have been appealed using these organisations' internal procedures. For the most part, the administration of internal procedures (including appeals) have been viewed as adequate by stakeholders, although there have been complaints about procedural changes that were not notified in advance. Organisations that rate ecolabelling programmes also consider their internal procedures and decision-making structures, and some have found them to be less than transparent. .[83]Funding problems can also lead to inconsistency in internal procedures and non-transparency in the way the programme communicates with its stakeholders. Particularly for private-sector programmes that derive much of their funding from charitable contributions, this can be a problem. Programmes are often reluctant to communicate programmatic changes brought about by funding cutbacks.

With respect to accreditation, since some of these private-sector programmes were not generated by government-linked or WTO-referenced standardising bodies (Codex Alimentarius, the IPPC and the OIE are all referenced in the SPS Agreement), their accreditation of certifiers is not formally recognised or regulated by a credible national or international body.[84] However, several have together joined in the International Social and Environmental Accreditation and Labelling Alliance (ISEAL), a "formal association of the leading international voluntary standards, certification and accreditation programmes focused on social and environmental issues"[85] that has embarked on developing a Code of Best Practices for Voluntary Standard Setting Organisations. The draft Code is based on international norms for standard-setting (ISO Guide 59 and WTO TBT Annex 3), while incorporating criteria relevant to voluntary social and environmental standards. ISEAL sees the Code as a globally applicable tool that can be used to strengthen standard-setting procedures and to establish a minimum bar against which the credibility of social and environmental standards can be measured. It hopes it will represent an important step in evaluating the legitimacy of the range of social and environmental standards and codes that are emerging into the marketplace.

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guidelines or specifications on products or the related production processes and methods, intended for generalised and repeated albeit optional use, it is subject to the provisions of the Code."

83 Consumers Union rates ecolabels at http://www.ecolabels.org/.

84 IFOAM, however, is recognised by the ISO as a standardising body.

85 http://www.isealalliance.org/about/index.htm

5.2 How programmes are addressing the obstacles

5.2.1 Use of local environmental standards

As noted in Section II (C) above, many of the programmes have taken care to let local stakeholders assume responsibility for some of the parameters involved in certification. National programmes that do not have that option, such as the U.S. Organic programme, can offer mutual recognition or equivalence as a means of involving local and regional approaches. National programme efforts have been more fully described in the OECD case studies and presentations at the New Delhi workshop, and their findings will not be replicated here, but it is clear that mutual recognition and equivalence have fallen short in the context of national organic programmes to date.

Private-sector programmes have used varied approaches to local decision-making and participation. The MSC's methods of translating its Principles and Criteria into Performance Indicators for individual fisheries provides room for adjustments to take into account the particular circumstances of developing-country fisheries. MSC officials have indicated that the MSC's technical advisors are continuing to refine the MSC's methodology for applying MSC standards to regional conditions. The FSC uses local and regional groups to establish the parameters for local and national FSC certification, although the ultimate standards, and certifications, are reviewed against the FSC principles. IFOAM is almost entirely focused on local and regional organic processes, and much of its work is oriented in the other direction, as it is exploring how these might be harmonised across and within regions. Finally, the shade-grown coffee initiative uses local growers extensively to define how the parameters of the programme are being met. Without such input, the programme would be hard-put to realise its objectives.

5.2.2 Procedures

5.2.2.1 Cost

It has not escaped the notice of the programmes described above that costs can be prohibitive. Programmes that are actively working to address the cost issues are usually doing so in the context of improving developing-country access to their processes, since it is evident that developing country products can benefit in the market from ecolabelling.

In 2000, IFOAM initiated a four-year programme designed to improve the access of developing countries to its certification programme. Dubbed "I-GO" (for "growing organic"), the programme, among other activities, provides funding to enable developing-country representatives to participate in IFOAM committees.

Cost was cited by more than one MSC official as representing a potential issue for developing-country fisheries although, as one of these officials pointed out, cost can be an issue for fisheries in developed countries as well. The greatest obstacle related to cost is the level of detail required for the data/information and the associated uncertainty from fishery to fishery. It is hard to know whether to undertake a certification process if it is not clear what information is required at the outset. Even the pre-assessment stage does not provide this information. As has been noted previously, one factor that may increase costs is the distance certifiers must travel to conduct assessments. In the Western Hemisphere, for example, most MSC certifiers are based in the United States.

To address this issue, the MSC is working to match up funding sources with fisheries considering assessment. For instance, the MSC is exploring options for collaboration with corporations interested in investing in fisheries in developing countries. In mid-2002, a Sustainable Fisheries Fund was created, administered by the Resources Legacy Fund. This Fund dispenses grants and loans to "economically

challenged" fisheries, and is intended to provide a mechanism for donors wishing to fund fisheries assessment. The MSC is also working to establish relationships with international development agencies, such as the Netherlands Organization for International Development Co-operation.

5.2.2.2 Traceability

Traceability is also a cost element for developing countries, one that industries being certified to a standard undertake voluntarily in voluntary programmes if products are destined for marketing at the retail level. However, these costs (primarily consisting of specific identification of the products of primary producers and their processing methods, delivery of this information to intermediate distributor/purchasers and document retention) are not always incurred because of consumer requirements at retail level but because intermediaries also want to verify their source of supplies.

In many cases intermediate purchasers are unwilling or unlikely to pay a premium for a traceable product, since the product is not being marketed to consumers but to other processors who choose to make no product claims, or indeterminate ones of quality, freshness, sustainability, etc. The producer is then not rewarded with a price premium and tracing is not compensated. Many intermediaries wield considerable market power, and their tracing requirements are de facto mandatory.

As tracing systems, particularly for food products, also become legally mandatory for health and safety reasons, more developing country producers will be required to cope with tracing technology, but many will continue to find it difficult. (HACCP requirements which require an element of tracing are, for instance, a major source of trade tension in developing countries exporting seafood and fishery products.)

No programme in this study is currently investigating the difficulty of implementing traceability requirements for products originating in developing countries. Most continue to operate under the assumption that the market will reward product tracing if it is voluntarily undertaken.

5.2.2.3 Infrastructure

The programmes studied here have not generally tried to address the infrastructure issues discussed in the previous section, but they are aware of their implications. Much of the work on addressing these issues (i.e., effective management and enforcement, ability to source necessary inputs and expertise, programmatic funding and consistency, access to certification expertise, and ability to benefit from appropriate marketing initiatives) is proceeding under the aegis of international institutions and aid agencies. However, some of the programmes have also found ways to contribute to this work.

As previously noted, the MSC has been unable to certify fisheries for which adequate government-run fisheries management and enforcement does not exist, and the FSC cannot certify forests for which no effective management is in place. Illegal logging is a fact of life in many places where national FSC programmes exist. Broader efforts are underway internationally to address both illegal logging and illegal fishing.

The MSC is currently working with the World Wildlife Fund (WWF) on the cultural and social aspects of small-scale fisheries that may substitute for government management, as well as on ways to deal with the lack of data that is often a characteristic of such fisheries. The WWF community certification programme may be helpful in assisting small-scale fisheries in developing countries to achieve certification despite their lack of data and access to funding for certification costs. This programme, now with 15

projects, estimates that 94% of the world's fisheries are small-scale, accounting for half of the world's production for human consumption.[86] It is also working to develop a guide for certifiers involved with small-scale fisheries. For fisheries that have been less exploited, for instance, less data may be required for certification.

IFOAM is working to make sure that certification capability exists in the many areas in which it operates. Other programmes, like the Global Aquaculture Alliance, are similarly engaged. The USDA organics programme is also interested in ensuring certification expertise from those supplying the U.S. market and is working to accredit additional certifiers from developing countries.

Making sure that certified products are able to take advantage of marketing opportunities is often a difficult exercise for non-profit private-sector initiatives that derive their funding from charitable sources. In many cases, it is largely up to those funding the programme to provide money for marketing support, and many are understandably reluctant to spend money on advertising and marketing. The MSC has had success with marketing from sources connected to Unilever and the World Wildlife Fund for products in which they are interested, and some retailers (e.g., the U.S.-based retailer, Whole Foods, which specialises in niche products) have also picked up some of the marketing burden. The FSC has also had considerable support from retailers committed to purchasing FSC-labelled products.

Programmes with commitments from large-scale purchasers, like the FSC, should develop the capacity to follow up to ensure that adequate supplies of certified product are available in order to retain their major customers. This has reportedly been problematic for the FSC in the recent past.

Many programmes have difficulty following up certification activity with marketing expertise. In this context, the shade-grown coffee initiative is notable for the connection between certification and marketing. For programmes relying exclusively on certifiers to generate interest, making the connection to marketing is often a problem and retail expectations may remain unmet.

Finally, most of the programmes in this study are trying to ensure that they are internally consistent and well-funded, and that entities interested in certification have access to certifiers and expertise. The level of ambition for these objectives varies across the programmes, and the marketplace will decide which succeed and which fail. Additionally, most of the programmes are of relatively recent vintage, and it remains to be seen whether they will be effective in assisting entities in developing countries to maintain their certifications.

5.2.2.4 Complexity

The effort to address the multiplicity and complexity of certification requirements is being most directly addressed by IFOAM. IFOAM officials cited as the major barrier to developed-country participation in organic labelling programmes the plethora of different organic standards that they face. This issue was also highlighted by an IFOAM certifier located in a developing country, who noted that certifiers must get accredited by, and become familiar with, different certification requirements for organic products under various developed-country programmes. This individual described the process as "extremely expensive and exhausting."

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[86] Lopuch, Merideth, presentation to Conference on "Ecolabels and the Greening of the Food Market", Gerald and Dorothy R. Friedman School of Nutrition Science and Policy, at Tufts University, November 7-9, 2002, http://nutrition.tufts.edu/conferences/ecolabels/.

In order to address this issue, IFOAM, along with UNCTAD and the FAO, sponsored a conference in February 2002 to discuss international harmonisation and equivalence in organic agriculture. The meeting resulted in the creation of an International Task Force on Harmonisation and Equivalence in Organic Agriculture, is attempting to facilitate international trade in and developing-country access to international markets for organic agricultural products.[87] More specifically, the Task Force will review existing organic agricultural standards, regulations and conformity assessment systems and formulate proposals on opportunities for standards harmonisation, mechanisms for establishing equivalence of standards, mechanisms for achieving mutual recognition between public and private systems, and measures to facilitate developing-country access to organic markets.[88]

Nevertheless, it must be noted that harmonisation and mutual recognition efforts are often costly and time-consuming, and are not always successful. In many areas, an international platform does not yet exist to promote resolution of difficulties arising from national differences.

5.2.2.5 Transparency

Most of the programmes studied here take the need for transparency seriously. They each have websites and take care to publish relevant information about their operations. They are all engaged in marketing their programmes in some sense, and they are all interested in developing countries. Several participate in international standardising activity.

Transparency is also important to all of the programmes in a marketing context. Transparency to producers and consumers is an issue for all of the programmes because they are competitors in an information/ecolabelling marketplace. If producers knew which labels were more remunerative, they could adjust their production accordingly - or at least if market signals were perfect. But there is little information on whether price premiums are actually available to producers participating in any of these programmes, and this is precisely the kind of information that developing country producers need to know before investing time and resources in efforts to comply with the certification schemes. There is ample evidence that some are very much worth the effort.

Consumers are also in need of information about labels. Survey and rating information is provided by consumer organisations such as the U.S.-based Consumers' Union's site.[89] Information about ecolabels is likewise available from many reputable consumer organisations in other countries. Private sector ecolabels serve a unique function since they are credited with performing a public function (offering initiatives to environmental improvement or conservation) while operating in a private sector, sometimes a profit-making capacity. As such they are also creatures of the marketplace, and their rise and fall can be documented much like stocks or the fortunes of telecom companies. This study did not unearth a market index for ecolabels, but it did discover evidence that they are proliferating, likely beyond the capacity of a crowded marketplace to support.[90]

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87 http://r0.unctad.org/trade_env/index.htm.

88 UNCTAD (2002), op. cit.

89 www.ecolabels.org.

90 Clay, J. (2002), op. cit.

6. Challenges for the future

6.1 Environmental effectiveness

This report explicitly does not attempt to measure the environmental effectiveness of the schemes covered above; however, a couple of observations about this issue are in order. First, these schemes will not continue to attract interest in either developed or developing countries unless they are also perceived as being environmentally effective. In the case of food products, this is a judgement usually premised on an analysis of their effects in the country of production, as opposed to the country of use, or consumption. The actual environmental effect of a particular ecolabelling program will usually be difficult to determine, unless compliance requires a marked departure from prior practices. The proliferation of programmes would also make this effort a complex one.

It is possible that initial introduction of the concept of ecolabelling in some industries has caused considerable change in some of the negative environmental practices that led to the creation of the ecolabel, even among those not participating in the programme. Particularly when ecolabelling programmes are part of development efforts, they could have a large role in setting development priorities and changing industry practices, and could therefore act as incentives to better environmental performance. The programmes studied here all have in common their desire to establish benchmarks for environmentally superior or sensitive production processes. To the extent that these become the norm they can be presumed to have beneficial environmental effects.

6.2 Harmonisation and equivalence processes

Most of the programmes on which this study has focused, and most of those described in the OECD case studies, would like to use credible and well-recognised international standards as a basis for certification if they are not already using them. But they also recognise the trade-off between rigorous international standards and those that respect local environmental conditions and priorities. In addition to the work the programmes themselves are doing to resolve some of the obstacles to developing-country participation, other efforts are underway both within sectors and across programmes. Much important work involves harmonisation of standards.

This report can only begin to describe the efforts of the many organisations involved in efforts to harmonise ecolabels and the standards on which they are based. Such work is being undertaken globally, by individual programmes such as Japan's Ecomark, by the North American Commission on Environmental Cooperation, by the International Social and Environmental Accreditation and Labelling Alliance, by the Global Ecolabeling Network, and by many others.

In addition to the programmatic work described above, efforts are also underway to enhance the role of developing countries in the Codex Alimentarius. A trust fund has been created to fund participation of developing countries, and there has been increased attention in the context of the Codex Evaluation to enhancing developing-country participation. The Codex Committee on Food Import and Export Certification Systems has also approved an Equivalence document that has been presented to the Codex Commission in July 2003. This should give developed and developing countries alike an internationally recognised basis on which to base decisions of equivalence. Other programmes are also considering an enhanced role in international harmonisation efforts. The Global Ecolabelling Network, already engaged in harmonisation work, is considered a good candidate for such a role.

Sectorally, as referenced above, the FAO will soon begin work on fishery-specific guidelines for sustainable fisheries. These can then be used as a basis to certify local fisheries in developing countries.

The programme will be important to those fisheries that may have difficulty with the costs of MSC certification and access to certifiers.

The Codex Alimentarius has also been active in the area of organic standards, where its Committee on Food Labelling recently finalised work on standards and criteria for organic food production.[91] It is notable that the criteria, which are intended as guidance for national and local authorities, are predicated on the expertise of voluntary programme experts (such as those associated with IFOAM).

However, harmonisation and mutual recognition have their downsides. It is preferable that standards not proliferate in the first place, rather than to try to harmonise them once they have constituencies and promoters. Standards harmonisation, equivalence and mutual recognition of conformity assessment all take significant investment in their respective processes over a sometimes long period of time, a cost element that developing countries in particular are loathed to incur.

6.3 Other benchmarks and processes

No report on the developing country access to developed country markets using ecolabelling would be complete without reference to alternatives other than ecolabelling that might make sense in the marketing context of the products referenced above. These include ISO environmental management standards, national quality assurance schemes, and corporate sustainability reporting that includes both environmental and social performance to benchmarks set forth by companies or by other organisations.

The ISO has only recently begun to take on management standards that target agricultural production. As such, they are newcomers to the field. But ISO environmental management standards have become commonplace in business-to-business purchasing decisions, and are one of the hallmarks of supply-chain management. In addition to the ISO schemes in the 9,000 and 14,000 series referenced here, there are plans to release soon an ISO standard for applying HACCP in agricultural production. This could supplement and otherwise contribute to several of the schemes discussed above.

In several of the sectors covered by this report, national quality assurance schemes have been considered and adopted by some countries. Many of these seek to improve on mandated health and safety schemes. To the extent that these impose enforceable or certifiable standards on producers, they are also an alternative to the kinds of ecolabelling programmes discussed here.

Finally, corporate sustainability reporting has lately been advocated as a means by which a corporation can meet its obligations – social, environmental and other – and can be certified by a third party as having done so. However, at this point there are multiple corporate responsibility systems and none has emerged as the clear choice, so the prospect of substituting corporate responsibility reporting for participation in ecolabelling schemes does not come with the attributes of simplicity and cost-effectiveness that would appeal to many in the business community.

6.4 Final remarks

The ecolabelling programs described in this paper offer potentially significant market opportunities to developing country suppliers. As has been noted above, food, fish and forest products are among the most

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[91] Codex Alimentarius Commission (2003), Twenty-sixth Session, Rome, 30 June – 7 July, 2003, at www.codexalimentarius.net.

heavily traded products in the world, and developing country suppliers account for an important share of exports of these products. At the same time, ecolabelling programmes require their participants to undertake additional costs not borne by producers of competing, non-ecolabelled products. These costs can include higher-cost production methods, certification fees, and additional documentation requirements. In order to offset these costs and make participation an attractive option, ecolabelling programmes must offer producers access to a proven consumer market for their products, preferably at premium prices.

With the exception of organic food products, the ecolabelling programmes described in this paper are all still working to build consumer awareness of and confidence in their labels. Among the issues with which the programmes must grapple in developing consumer interest are: communication of the label's meaning, consumer confusion as a result of competition from other labelling programs, and (in the case of forest products) the application of the label to downstream products.

In the case of organic food products, the government involvement in labelling programs in the United States, Europe and Japan has undoubtedly limited label confusion and improved consumer confidence. Partially as a result, markets for organic food products in these regions are projected to continue to grow at a healthy rate. The primary issue for organic ecolabelling programs will be how to promote equivalence and harmonise differing national standards. As has been discussed above, harmonisation efforts are underway in a number of different forums.

Unfortunately, it is virtually impossible to provide a quantitative assessment of the extent of developing country participation in ecolabelling programs, since most trade data does not distinguish between ecolabelled and non-ecolabelled products. Moreover, given the number of variables that affect changes in trade flows between countries from one year to another, it is impossible to isolate trade flow changes due to ecolabelling programs without conducting a sophisticated econometric analysis – an operation which is also beyond the scope of this paper. Finally, for most, if not all, of the programmes described in this paper, it is still too early to assess effects on developing country exporters, since the programmes are still working to build their markets.

This paper has reviewed a number of factors that may make it more difficult for developing country producers to meet the requirements of ecolabelling programs than their competitors in developed countries. On balance, a variety of procedural issues seem to be more important than standards-related issues as obstacles to developing-country access to ecolabelling programs. Nevertheless, developing country producers have successfully participated in ecolabelling programs, and one of the programs described in this paper (i.e., shade-grown coffee) is specifically aimed at producers in developing countries. Moreover, all of the ecolabelling programs described in this paper are making efforts to improve the participation of developing country producers. Such outreach efforts, when combined with international efforts to harmonise standards and establish equivalence arrangements under certain labelling programs, should eventually improve developing country access to the markets targeted by these programs.

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Chemonics International
Conservation International
Consumers Choice Council
Forest Stewardship Council
Food and Agriculture Organization of the United Nations
Global Ecolabelling Network
Independent Certifier, Argentina
International Federation of Organic Agriculture Movements (IFOAM)
International Social and Environmental Accreditation and Labelling (ISEAL) Alliance
Marine Stewardship Council

North American Commission on Environmental Cooperation
Rainforest Alliance
Scientific Certification Systems
UN Conference on Trade and Development (UNCTAD)
U.S. Department of Agriculture, Foreign Agricultural Service
Wholefoods, Inc.
World Trade Organization
World Wildlife Fund for Nature

List of Websites

Aquaculture Certification Council, www.aquaculturecertification.org

Café Unidos, An Information Clearing-House for Sustainable Coffee, www.cafeunidos.org

Consumers Choice Council, www.consumerscouncil.org

The Consumers Union Guide to Environmental Ecolabels, www.ecolabels.org

Environmental Defense, www.environmentaldefense.org

The Forest Stewardship Council, www.fscoax.org

The Forest Stewardship Council United States, www.fscus.org

Gerald and Dorothy R. Friedman School of Nutrition Science and Policy at Tufts University,

http://nutrition.tufts.edu/pdf/conferences/ecolabels/lopuch.pdf

The Global Ecolabelling Network, www.gen.gr.jp

The Global Aquaculture Alliance, www.GAAlliance.org

International Federation of Organic Agriculture Movements, www.ifoam.org

The International Social and Environmental Accreditation and Labelling Alliance (ISEAL),

http://www.isealalliance.org/

Information on Certified Forests Endorsed by the Forest Stewardship Council, www.certified-forests.org

Marine Aquarium Council, www.aquariumcouncil.org

The Marine Stewardship Council, www.msc.org

The National Organic Programme, United States Department of Agriculture, www.ams.usda.gov/nop

The Rainforest Alliance, www.rainforest-alliance.org

The Rainforest Foundation, www.rainforestfoundationuk.org

Scientific Certification Systems, www.scs.com

SGS, www.SGS.com

Smithsonian National Zoological Park, Migratory Bird Center, http://nationalzoo.si.edu/ConservationAndScience/MigratoryBirds/Coffee

The United Nations Trade and Development Organization, www.unctad.org

The World Trade Organization, www.wto.org

The World Wildlife Fund for Nature, www.worldwildlife.org