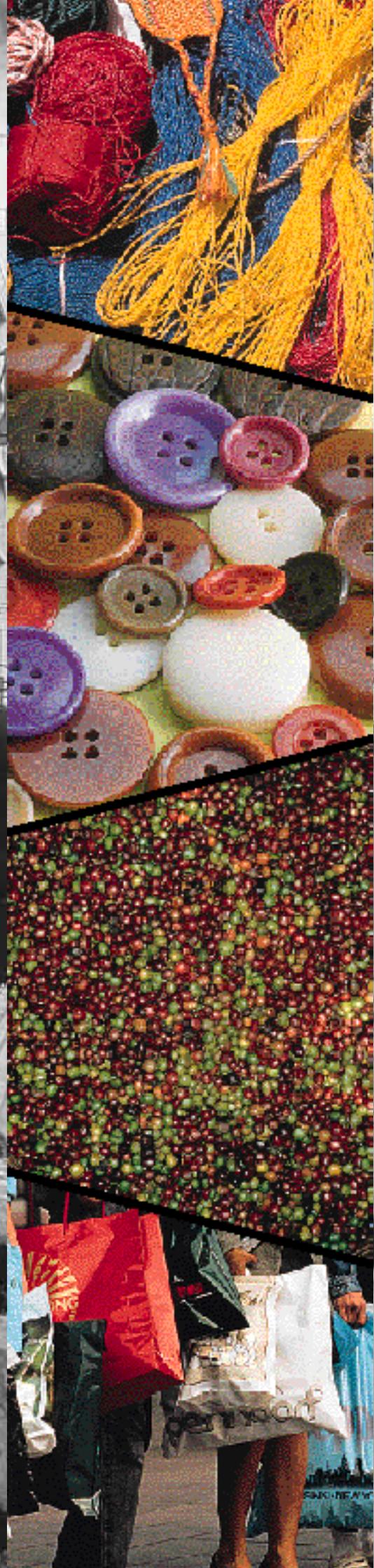


Changing Consumption
and Production Patterns

Unlocking Trade Opportunities

By the International Institute for Environment and
Development for the UN Department of Policy
Co-ordination and Sustainable Development



Changing Consumption
and Production Patterns

Unlocking Trade Opportunities

Case Studies of Export Success
from Developing Countries

Edited by Nick Robins and Sarah Roberts
of the International Institute for Environment and Development
for the UN Department of Policy Co-ordination
and Sustainable Development



**International
Institute for
Environment and
Development**



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Foreword

It is often easier to identify differences, than to identify common ground. One can also more easily see obstacles than opportunities. This must sound familiar to most of us, and something we encounter in our daily lives. However, progress can only be achieved with common ground while seizing opportunities. The Earth Summit in 1992 in Rio de Janeiro, Brazil, was such an opportunity where on the basis of a common objective, global sustainable development, an action programme for the 21st century was identified.

We are now in 1997, and while the world prepares for the Earth Summit +5, this book has, in the spirit of Rio, managed to identify common ground and an opportunity for developed and developing countries to advance the environment and development agenda. The idea is simple. The industrialised countries need to make their consumption and production patterns more sustainable. The developing countries need economic development to achieve similar levels of prosperity as the industrialised countries. Production processes and consumer lifestyles need to become more sustainable. One can not take place without the other.

Unlocking Trade Opportunities illustrates that environmental policy and awareness in developed countries can create export opportunities for developing countries. Export opportunities that are environmentally sound, create additional income, and strengthen the social fabric of communities. The case studies in this book illustrate, without trying to be comprehensive, that there are realistic opportunities to make the global environment and development agendas mutually supportive.

The book is an element in the implementation of the International Work Programme on Changing Consumption and Production Patterns, Chapter 4, Agenda 21, of the Commission on Sustainable Development. On the verge of the Earth Summit +5 it is a timely effort, and an important contribution to the international debate on changing consumption and production patterns. Five years after Rio it is even more important to seize every opportunity in the pursuit of sustainable development.

Nitin Desai
Under Secretary-General
United Nations

New York, May 1997

Executive Summary

***Unlocking Trade Opportunities* shows how developing country producers can benefit from rising environmental expectations in their export markets, particularly in the industrialised world. The report was commissioned by the United Nations Department for Policy Coordination and Sustainable Development as part of its implementation of the Agenda 21 action plan agreed at the 1992 Earth Summit. In Agenda 21, the governments of the world agreed that action had to be taken both to promote more sustainable patterns of consumption and production, and to make global goals for the environment, development and trade mutually reinforcing.**

The Case Studies

Century Textiles, which runs India's largest textile mill, has switched to environmentally-preferable dyes and earned a premium price and sales growth.

Fridge Master in Swaziland became Africa's first fridge maker to phase-out ozone depleting CFCs, boosting sales in South Africa.

Electrostar in Egypt is aiming to use its CFC phase-out programme to open up new export markets.

Jamaica has pioneered a new approach from government, business and local communities to 'green' the mass tourism sector and promote alternative tourism.

Campements Villageois in Senegal has enabled rural communities to gain from international tourism.

Coocafe, a consortium of coffee cooperatives in Costa Rica, benefited from fair trade arrangements, which provide a foundation for organic production.

Chile has expanded its production of organic fruit, driven by environmentally-conscious farmers and the prospects of export markets.

The Lango Co-operatives Union in Uganda has worked with the Swedish International Development Agency to make the transition to organic cotton.

SWIFT and ETT Enterprises in the Solomon Islands have encouraged local communities to adopt sustainable forest management and win new export markets.

The Tagua Initiative in Ecuador has generated both jobs and new incentives for

world, a small number of committed corporations are developing more eco-efficient production, and new ways of meeting customer requirements. Among consumers in industrialised countries, there is continued unease about the environmental impacts of their lifestyles. Although the long-term implications of this is uncertain, for developing country producers that can adapt to these requirements and start moving to anticipate trends, new trade opportunities are now emerging.

The Response

The report presents ten case studies (see Box opposite) where developing country enterprises and economies across the manufacturing, tourism, forest and agricultural sectors have turned tightening environmental regulations, new corporate practices and changes in consumer values to their advantage (Part 2 - The Case Studies).

The Lessons

Unlocking Trade Opportunities demonstrates what can be done in spite of often unfavourable conditions (Part 3 - Lessons and Ways Forward). None of the case studies is perfect, or represents a finished end-state which is wholly sustainable. But they do present initiatives where real improvements have been gained and where efforts are being made to continuously improve performance.

The case studies show that the trade opportunity is now a reality in key sectors. Exports that serve sustainable consumption and production are moving out of small, niche markets into the mainstream in terms of volumes and consumer acceptance. The size of this emerging market is still uncertain, but could be substantial. Already, developing countries earn an estimated US\$ 500 million premium from organic exports. The case studies also show that the benefits of higher social and environmental performance of exports are many and diverse, including economic gains (such as premium prices and increased sales), social benefits (such as job creation) and environmental improvements, as well as enhanced security through longer-term trading relations.

The Challenge

Much has happened since 1992 to take forward the goal of sustainable consumption and production (Part 1 - Introduction). Governments in the industrialised world have tightened product regulations and introduced new producer responsibilities for waste. Economic instruments are being used more, along with product information (such as eco-labelling). Public procurement policies are starting to incorporate environmental criteria and trade policies are being adjusted to support exports of sustainably produced goods from developing countries. In the business

The case studies also demonstrate that pioneering companies, non-governmental organisations, communities and co-operatives can make a difference, often ahead of regulation or customer demand. But they also show that partnership along the product chain is central to success for all producers, whether big or small, and that new commercial relationships are emerging as a result. Importantly, the case studies highlight that basic product quality and environmental sustainability can be combined, and also that sustainable products need not be more expensive than conventional brands. Nevertheless, in the initial stages, insufficient supply can lead to higher prices.

The issue of capacity was central to the case studies. Smaller enterprises need support to make the transition to better performance. This can come in the form of financial assistance and technical support along the product chain (e.g. through environment and development organisations), as well as from government agencies. The case studies underline the importance of independent certification of environmental performance for winning consumer confidence, whether for organic cotton, CFC-free fridges or sustainably sourced timber. Reducing the costs of certification for smaller producers can be achieved through group certification schemes and training local inspectors.

Lasting environmental improvements have to be rooted in solid social development, such as enhancing the skills base and job creation. In addition, local involvement is a prerequisite for success, and the case studies are testimony to the initiative of developing country producers.

The policy framework is also a critical determinant of success, both positively and negatively. The case studies highlight where trade barriers in the industrialised world constrain environmental improvement, and where perverse regulations and subsidies provide unfair advantages to polluting and resource intensive production and consumption. By contrast, a supportive policy framework in North and South can bring partners together and ease the transition process.

Ways Forward

Unlocking Trade Opportunities shows that the door is now opening for developing country producers to benefit from changing consumption and production. The challenge is now to broaden the number of developing country enterprises and economies that can turn this raw potential into practical financial, social and environmental gains. Key action points include:

- Collecting information and developing statistics to understand market trends in key sectors and services affected by sustainable consumption and production.
- Improving understanding of the crucial ingredients for successful partnerships between business, environment and development organisations and government agencies by drawing up good practice checklists.
- Targeting development assistance at developing country exporters who are trying to improve their performance, especially small and medium sized enterprises.
- Promoting independent verification of standards and codes of conduct. Retailers in industrialised countries have an important responsibility for providing accurate information to the final consumer.
- Stimulating greater convergence between the social and environmental dimensions of trade by sharing experience among leading businesses, environment, development and consumer organisations.
- Improving market access for developing country exports in industrialised country markets, particularly in the agricultural and textile sectors.
- Reviewing and removing regulations in industrialised countries that hinder access of sustainably produced exports from developing countries.
- Reforming subsidies in both developed and developing countries to create a level playing field for sustainable consumption and production.
- Developing guidelines in industrialised countries for transparency, consultation and the phasing in of proposed environmental regulations.

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Introduction



Why Unlocking Trade Opportunities?

In today's globalising world, export success is one of the major routes to economic progress for developing countries. But the conditions for success are changing as producers face rising environmental expectations in key export markets, resulting from tightening regulations, new corporate practices and changes in consumer values and lifestyles.

These new expectations reflect the growing recognition that current patterns of consumption and production, particularly in the richer, industrialised world, are environmentally unsustainable. As the world moves into the next century, profound changes in the ways in which goods and services are produced, traded and consumed could be required both to reduce the burden on the global environment and to ensure that a growing population has the resources to meet its needs.

The primary responsibility for taking the lead in making these changes lies with the industrialised economies of North America, Western Europe and East Asia. For developing country producers seeking to succeed in these markets, sustainable consumption and production presents a number of new and often complex challenges. For those that can adapt to these requirements and start moving to anticipate trends, there could be new opportunities to capture market share, generating financial, environmental and social benefits in the process. But although much has been written and said in the last five years on the real and theoretical linkages between environmental improvement and international trade, little has been written about those developing country producers that have actually managed to turn the drive towards sustainable consumption and production to their advantage.

Unlocking Trade Opportunities is an attempt to fill this gap by presenting a selection of ten case studies, where producers in

developing countries are already starting to benefit by exporting to environmentally conscious markets. It profiles cleaner production success stories in industry, community-based and environmentally-sensitive tourism and sustainably-produced and fairly-traded agricultural and forest products. The producers range from the largest textile mill in India to small-scale organic fruit farmers in Chile. The drivers of change are also diverse,



Changing conditions for export success

including domestic and international regulations, rising consumer awareness and new commercial relationships between producers, traders and retailers. The case studies also show in practical ways how the positive agenda set forward at the 1992 Earth Summit of making trade, environment and development mutually reinforcing can be achieved.

The report is in three parts. The rest of this introductory section sets the scene for the case studies by explaining the sustainable consumption and production agenda that emerged from the 1992 Earth Summit in Rio de Janeiro. It then highlights some of the notable policy, business and citizen innovations which are starting to exert influence on trade flows. The section closes with a review of the trade and

sustainable consumption policy debate since Rio.

The second section presents the ten case studies in four groups: manufacturing, tourism, agriculture and forestry.

The manufacturing cluster contains three case studies, examining how Century Textiles in India has profited from new environmental regulations in Germany (Case 1); how Fridge Master in Swaziland has phased out ozone-depleting chemicals and expanded sales in South Africa (Case 2); and how Electrostar in Egypt is aiming to use its phase out programme to enter new regional markets (Case 3). There are two tourism case studies looking at how in Jamaica, government, the private sector and local communities are working together to 'green' the mass tourism sector and promote alternative tourism (Case 4), and how the Campements Villageois programme in Senegal offers a practical way for rural communities to benefit from international tourism (Case 5).

The agricultural group includes three case studies, showing how the Cocafe

consortium of coffee co-operatives in Costa Rica has benefited from new 'fair trade' arrangements, providing a solid foundation for the transition to organic production (Case Study 6); how environmentally-conscious fruit farmers in Chile are adopting organic methods, and multiplying trade volumes (Case Study 7); and how the Lango Co-operative in Uganda has been supported by the Swedish aid agency, SIDA, to produce, certify and export organic cotton (Case Study 8). Finally, there are two forestry case studies examining how communities in the Solomon Islands have benefited from new markets for sustainably-produced timber (Case Study 9), and at how the Tagua Initiative in Ecuador has tackled acute poverty and created new incentives for rainforest conservation (Case Study 10).

The report closes with the lessons learned from the case studies, and the action needed from governments, business and environmental organisations to increase the number of producers in the developing world that can unlock the trade opportunity of changing consumption and production patterns.

What is Sustainable Consumption and Production?

STILL PICTURES



Unsustainable consumption

At the Earth Summit held in Rio de Janeiro during June 1992, the governments of the world recognised that *“the major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production,*

particularly in industrialised countries”. The Earth Summit highlighted the deep divide in consumption and pollution between developed and developing countries, whereby the 20 per cent of the world's population in the rich 'North' account for 50-90 per cent of consumption and pollution. To remedy this, the Agenda 21 action programme for sustainable development agreed at the Earth Summit called on industrialised countries to *“take the lead”* in making the shift towards

sustainable consumption and production patterns. Agenda 21 also called for a new balance to be struck to make international trade flows, development needs and environmental sustainability mutually reinforcing. The importance of making patterns of production, trade and consumption work together for sustainable development became even more prominent with the completion of the GATT Uruguay Round and the establishment of the new World Trade Organisation (WTO) in January 1995.

In the five years that have passed since Rio, much attention has been focused on trying to understand the implications of changing consumption and production patterns for the global economy. Essentially, sustainable consumption and production present two sides of the same coin. The emphasis of sustainable production is on the supply side of the equation, focusing on improving environmental performance in key economic sectors, such as agriculture, energy, industry, tourism and transport.



Sustainable consumption addresses the demand side, looking at how the goods and services required to meet basic needs and improve quality of life — such as food and health, shelter, clothing, leisure and mobility — can be delivered in ways that reduce the burden on the Earth's carrying capacity. Both sides are of course inextricably linked, and a life cycle perspective is required to pinpoint where action can best be taken along the product chain to reduce environmental damage to levels within the Earth's carrying capacity.

Traditionally, most efforts have been given to cleaning up the production process, particularly in industrialised countries. Now attention is shifting to finding new ways to change consumption so that the conventional links between meeting needs and improving the quality of life with pollution, resource use and waste can be broken. Doing this is of course highly complex, with many structural factors combining to make up the patterns of consumption, which then determine the choice and use of goods and services. Key factors include market dynamics, technological innovation, physical infrastructure, the regulatory framework and cultural values.

Despite the risk that 'sustainable consumption and production' could introduce a new layer of green jargon, the issue contains within it five critical themes for governments, business and civil society:

- Restructuring the Economy;
- Rethinking Core Ethical Values;
- Reforming the Policy Framework;
- Redirecting Business Opportunity;
- Renewing International Cooperation.

Restructuring the Economy

Given the current pressures being placed on the world's environment and the prospects of further expansion in both affluence and human numbers, there is a growing consensus in international policy circles that tough targets for environmental improvement will need to be achieved in the years ahead. Some even argue that reductions in resource use, energy consumption and pollution per unit of economic output of a factor of ten or more could be required in the rich countries over the next half century if all the world's citizens are to have a fair chance of meeting their needs. But there is also a new

optimism that changes of this magnitude are technologically feasible and economically viable.

Rethinking Core Ethical Values

Much of the sustainable consumption agenda has been driven by citizens and non-governmental environment, development and consumer organisations promoting more sustainable lifestyles. Indeed, for many, sustainable consumption is not a scientific or a technical question, but is first and foremost a question of values, requiring a new 'ethic of living sustainably'. Indeed, one of the striking features of the new sustainable consumption agenda is the emphasis on placing environmental sustainability within the wider context of ethical values and social equity.

For environmental organisations such as Friends of the Earth, this means designing strategies for sustainable consumption and production on the basis that each person should have equal access to the natural resources required to meet their needs. But it also means rooting changes in production patterns in the context of promoting local development and job creation.

Reforming the Policy Framework

The scale of change required means that action cannot be left up to market forces or voluntary efforts alone. Governments have a major responsibility for putting in place an assertive policy and regulatory framework that rewards producers and consumers whose actions contribute to long-term sustainability and penalises those that deplete natural capital. In particular, policy action to ensure that prices fully reflect social and environmental costs can provide a powerful incentive to promote more eco-efficient consumption and production. Furthermore, many policies designed in the past still subsidise unsustainable behaviour and hinder positive action. These perverse incentives need to be removed to create a level playing field for sustainable consumption and production. Governments can also help to stimulate innovation by ensuring that information on the life cycle environmental impacts of different goods and services is publicly available.

Redirecting Business Opportunity

An increasing number of businesses are viewing these changes in a positive light,

seeing new growth markets opening up. The *Harvard Business Review* in its January-February 1997 edition described the business implications of a sustainable world as “one of the biggest opportunities in the history of commerce”. For business, this means going beyond compliance with environmental regulations and engaging in pollution prevention in their factories, product stewardship for their goods and services and investing in the new generation of sustainable technologies.

Renewing International Cooperation

Shifting the global economy onto a sustainable path will require an unprecedented degree of international cooperation. The requirements of an open world trade system need to be carefully balanced with the imperatives of environmental sustainability and poverty reduction. Fair ways need to be found to share the use of global commons, such as

the climate system, among the countries of the world (see Box below). Transitional assistance is likely to be required to support developing countries in the move to sustainable consumption and production methods, providing a new role for development assistance agencies. Better processes for dialogue are essential to build trust and remove mutual misperceptions both between governments, but also between business and civil society. Despite the setbacks since Rio, there are some signs of hope. For example, the November 1996 Brasilia Workshop on Sustainable Consumption and Production Patterns co-hosted by the Governments of Brazil and Norway found a “commonality of interest” between developed and developing countries in pursuing sustainable consumption and production. Further convergence could come in the years ahead as the numbers of affluent consumers in the developing countries steadily rise.

Trade, Sustainable Consumption and the Environment

The creation of a global economy is taking place at a time when the ecological impacts of production and consumption are increasingly spilling over national frontiers. However, the world currently lacks a clear system for resolving the tensions that this creates. One thing is sure: sovereign nations alone cannot take decisions in the best interest of the global environment.

Recent disputes over trade and environment have exemplified this problem. Developing countries have strongly opposed efforts by developed countries to introduce new environmental regulations that seek to alter the ways in which exports are produced. Thus, in 1991, the USA banned imports of tuna and tuna products from Mexico on the grounds that the numbers of dolphin killed was far greater than by the US fish industry. But under international trade law such non-tariff barriers dealing with production processes are not allowed, and so a GATT dispute panel ruled against the USA. India and other developing nations have more recently challenged a similar US ban on shrimp imports that have been caught in ways that damage turtle populations. While on moral grounds, it is hard for any country to argue that it has the right to develop its economy on an unsustainable basis, there is a real fear in developing countries that new environmental regulations could be used as a way of reducing market access and increasing production costs, thereby harming their competitiveness. Developing countries also argue that trade measures are inherently unfair, as they can only be used by the economically powerful against the economically weak: what trade instrument can be used by Bangladesh or the Maldives to ensure that USA does not export products which have been produced with very high carbon emissions?

But shifts to more sustainable consumption and production patterns in the industrialised world could have positive trade impacts if:

- Synthetic materials are progressively replaced by natural products, such as jute, coir or natural rubber, where developing countries have a comparative advantage.
- Producers of sustainably produced goods and services receive higher prices for their products in the industrialised world.
- Developing countries are paid for their low per capita use of the world's environmental space: a system of tradeable emission rights for climate and other key resources could generate substantial revenues.
- The unvalued bioresources and associated knowledge of the developing world are given financial worth.

Internalising environmental costs into the prices of internationally traded products and valuing the global commons could help to generate greater acceptance in developing countries of the need to link trade, sustainable consumption and the environment. But internalising costs will not be without economic pain, and in some cases, developing countries could lose out. Another critical issue in a globalised economy is deciding who should have the authority both to internalise environmental costs and distribute the revenues. Simply using trade policy as a tool to achieve sustainable consumption and production will lead to considerable opposition.

Source: Agarwal & Narain, 1997

The New Wave of Policy, Business and Citizen Innovation



The five critical themes discussed above are already being expressed in a surge of innovation as policy makers, business and citizens try to interpret and implement the sustainable consumption and production agenda. Many of these actions have implications for international trade.

Policy Innovation

Industrialised country policy makers and regulators have been taking action in seven main areas with impacts for developing country producers:

- Product Regulation;
- Waste Legislation;
- Economic Instruments;
- Product Information;
- Public Procurement;
- Trade Policy;
- Development Assistance;

Product Regulation

Limiting and phasing out the use of toxic chemicals that have adverse health effects for consumers has remained a critical area of activity. A particular focus has been regulatory efforts to limit residues of pesticides and other chemicals. A prominent example has been Germany's ban on the import of textiles and other products treated with potentially damaging azo dyes (see Case Study 1).

Waste Legislation

Governments are now placing greater emphasis on the duties of corporations to reduce consumer wastes through the extended producer responsibility approach. For example, Germany's new Closed Substance Cycle and Waste Management Act, which came into force at the end of 1996, will mean that whoever produces, markets and consumes goods is now responsible for the avoidance, recycling, reuse and environmentally-sound disposal of waste. In the USA, President Clinton's Council on Sustainable Development has called for the extended producer responsibility approach to be used to identify strategic opportunities for pollution prevention and resource conservation at each stage of the product cycle.

Economic Instruments

Between 1989 and 1994, the number of economic instruments used for environmental policy purposes, such as taxes, charges, deposit-refund systems and tradeable permits, increased by 50 per cent in the OECD. These include a new landfill charge on waste in the UK, a new energy levy in the Netherlands and federal taxes on ozone depleting substances in the USA. These all aim to give incentives for more efficient, less polluting and less wasteful products. Looking ahead, it looks likely that governments will seek to make greater use of environmental taxes and charges, particularly as part of wider fiscal reform efforts to reduce the tax burden on employment and investment.

Product Information

Considerable heat has been generated by the growth in environmental labelling schemes in the industrialised world, notably the European Union's eco-label scheme. For example, the EU's eco-label criteria for paper have been attacked by developing country exporters for placing too high a premium on recycled content and thereby making it almost impossible for them to gain the label for their products made from sustainably harvested wood. Elsewhere, positive steps are being taken to improve the access of developing country products to eco-labels. Building on its 20 year experience with the Blue Angel scheme, Germany's Federal Environmental Agency is now developing a new initiative to improve communication and cooperation with developing countries to produce goods with high environmental and social standards. In the USA, the Environmental Protection Agency operates the Energy Star programme, under which labels are awarded to producers of energy-efficient office equipment. Although the overwhelming majority of Energy Star Office Equipment Partners are based in industrialised countries, there are a number of developing country producers from China, India, Indonesia and Brazil that have reached the standard.

Public Procurement

Governments in North America, Europe and Japan are moving to integrate

environmental provisions into their purchasing programmes. Not only is public procurement a huge market sector, but public sector environmental requirements often set a benchmark for other institutional buyers. In October 1993, President Clinton issued an Executive Order on Federal Acquisition, Recycling and Waste Prevention to guide government agencies in the choice and purchase of environmentally preferable products. All federal government agencies are now also required to purchase Energy Star computers, monitors and printers.

The Dutch government plans to include an environmental clause into its general purchase terms and conditions, while in Japan, a 'Green Purchase Network' was established in 1996, comprising 400 companies, 100 governmental bodies and 100 private agencies.

Trade Policy

Trade policies are also being changed in the industrialised world to give positive encouragement to sustainably produced goods from developing countries. For example, when the European Union updated its Generalised System of Preferences agreement with Asian and Latin American countries in 1994, it included a special incentive arrangement to provide additional preferences to countries implementing international agreements on sustainable forestry management.

A number of multilateral environmental agreements, notably the Montreal Protocol to control ozone-depleting substances, also have trade provisions, which have been enforced by industrialised country regulations. Under the Clean Air Act, the US also introduced a package of measures to control the trade in ozone-depleting substances (ODS), including a requirement for the labelling of imports manufactured using substances harmful to the ozone layer. Partly in response to this measure, Singapore established the 'ODS-Free Process Verification Scheme' in 1993 to provide manufacturers with third-party proof that they were not using ozone-depleting substances in their processes: 23 companies have now been awarded the certificate.

Some governments are supplementing their formal trade policies with additional efforts to transfer information both on new

environmental regulations and on clean technology. This can help to overcome the lack of information, one of the principal barriers to developing country exporters responding effectively to changing market conditions. One notable example is the GREENBUSS database launched by the Dutch Centre for the Promotion of Imports from Developing Countries (CBI). GREENBUSS is accessible on-line via the Internet and is used by trade associations and export promotion agencies in developing countries to find the latest information on regulatory requirements throughout the European Union. The CBI along with its Danish equivalent, as well as the Norwegian and Swedish development assistance agencies has also published in 1996 a comprehensive *Eco-Trade Manual* listing the environmental challenges for exporters to Europe.

Development Assistance

Beyond the provision of regulatory and market information, development assistance agencies are supporting both sustainable production initiatives and efforts to promote trade in more sustainably produced goods and services. These range from the USAID supported Environmental Pollution Prevention Project (EP3), aimed at promoting the use of cleaner production practices in Chile, Ecuador, Egypt and Tunisia to the network of national cleaner production centres, supported by the UN Environment Programme (UNEP) and the UN Industrial Development Organisation (UNIDO) in Brazil, China, India, Mexico, Tanzania and Zimbabwe (as well as in the Czech and Slovak Republics).

Other donors are explicitly supporting trade in sustainably produced goods and services, such as assistance provided by Germany's GTZ agency under its Protrade programme for organic agriculture in almost 20 developing countries, as well as the Swedish International Development Agency's similar EPOPA programme (See Case Study 8).

Business Innovation in the Marketplace

In Europe, North America and East Asia, a small, committed group of companies have been experimenting with new ways of producing and selling goods and services, which create new market dynamics for developing country exporters and suppliers. The business innovations are:



- Eco-efficient Production;
- Eco-efficient Goods and Services;
- Linking Environmental and Ethical Objectives;
- Mainstreaming through Codes of Conduct and Standards.

Eco-efficient Production

Launched by the World Business Council for Sustainable Development (WBCSD), an industry association, at the Rio Earth Summit, the concept of 'eco-efficiency' provides a new vision for corporate practice, tailored to the "*delivery of competitively priced goods and services that satisfy human needs and bring quality of life, while progressively reducing ecological impacts and resource intensity throughout the life cycle*". In practical terms, this means addressing the entire life cycle of goods and services from design through to waste management; it involves creating increased value for customers through sustainable use of resources; it means procuring and requesting products and services with reduced environmental impact; and it involves making accurate environmental performance information available to customers. Leading international companies, such as Johnson & Johnson, Procter & Gamble, Swissair and Thorn-EMI, have now taken up this agenda.

Other international initiatives are also underway to stimulate a new vision of production among business. One is the Zero Emissions Research Initiative, launched in 1994 and based at the United Nations University in Tokyo. Its aim is to bring together research centres of excellence, key industrial policy makers and corporate leaders in an effort to eliminate all forms of waste from industrial processes, with a special focus on developing countries. One of its first achievements is the establishment of a new factory run by Namibia Breweries which shows that it is possible to have "*good beer, no chemicals, no pollution, more sales and more jobs*".

Taking eco-efficiency forward could give a huge stimulus to high value-added goods and services, which are more durable, efficient in materials and energy, with greater reliance on recycled materials rather than virgin inputs and perhaps produced closer to markets if transport costs rise substantially.

Eco-efficient Goods and Services

Businesses are also rethinking the way in which they deliver the services that their customers require, so that they are lighter on the environment. For the Chief Executive of Monsanto, Robert B. Shapiro, this means selling less 'stuff' and creating value by increasing the service and information component of what's

Ethical Sourcing Pioneers: Examples

Established 20 years ago, *Body Shop* has long been committed "*to the pursuit of social and environmental change*", including through a 'Trade Not Aid' programme launched in the late 1980s as a way of providing commercial opportunities for marginalised communities. There are now 23 partners in the recently revamped Trading with Communities in Need programme, accounting for 2.1 per cent of Body Shop International's total spending. Products include nut oil and bracelets from Brazil, baskets, jute accessories and cotton bags from Bangladesh, honey and beeswax from Zambia. Fair trade guidelines have been in operation since 1994, covering commercial viability, environmental sustainability, democratic issues and fair pricing. The programme was recently subject to an external 'social audit', which showed that Body Shop's partners had experienced social and economic gains from the relationship, but had also had frustrations (including unpredictable ordering and a high level of dependency on Body Shop). Body Shop is committed to continue to increase the proportion of their ingredients which are sourced through this programme.

Coop Suisse is Switzerland's second largest retailer, with an environmental programme stretching back 25 years, incorporating regular environmental auditing and life cycle analysis. In addition, it has introduced four new product lines for organic food (NATURA Plan), organic textiles (NATURA Line), cleaning products (OECO Plan) and fair trade coffee, honey, tea and chocolate (Cooperacion). The company has also decided that it will only sell products made from tropical timber which have been independently certified as coming from sustainable sources. See Case Study 8 for more details of the Natura Line initiative.

produced. At Rank Xerox, a similar vision has emerged of "*waste-free products manufactured in waste free factories*". For producers of durable products, this emphasis on what the customer needs has prompted some companies to explore the option of leasing rather than selling goods. For example, Interface, a commercial floor covering company in the USA has launched an innovative programme aimed at selling comfort rather than carpets. The customer leases the floor covering, and once it comes to the end of its useful life a new version is provided and the old material is recovered and reused.

Linking Environmental and Ethical Objectives

In some cases, environmental performance issues are being placed in a wider ethical framework. Examples include the US jeans manufacturer Levi Strauss, which has developed a Terms of Engagement with its potential business partners, which include environment, ethical, health and safety, legal, employment (including child

labour) and community development conditions. The Timberland footwear and accessories corporation also has a set of guiding principles for choosing business partners, incorporating human rights, environmental stewardship, community building, legal compliance, employment (including child labour) and health and safety criteria. Timberland carries out an annual review to measure consistency of its business relationships with its mission. Prominent examples in Europe include the cosmetics company Body Shop and Coop Suisse (see Box above).

Mainstreaming through Codes of Conduct and Standards

There are now moves to translate these pioneering initiatives into actions that change the way in which mainstream producers and retailers deal with their developing country suppliers. The last five years has also seen a range of regulatory, industry-driven and independent initiatives to develop environmental standards for

purchasing power for fisheries conservation. Critical to the credibility of these efforts is independent verification of performance data and marketing claims.

These environmentally-driven standards mirror parallel initiatives in the social sphere to try and raise standards and give workers a better deal. The 'fair trade' movement emerged in the 1960s and aims to pay a fair price to producers and build long term partnerships between producers, traders and retailers to improve the livelihood security of producers and enable long-term planning.

Today, the value of 'fair trade' between the developed and developing worlds stands at an estimated US\$ 300-500 million in retail sales per annum, a small proportion of overall trade flows, but often significant in key markets such as coffee (see Case Study 6). Such products have played a key role in raising awareness about the social impacts of purchasing decisions. Fair trade products are now moving into mainstream outlets, such as supermarkets, greatly increasing the potential for gaining market share. Other key initiatives include the Rugmark Foundation in India, which now issues 200,000 labels to certify high quality working conditions for rug producers and a code of practice negotiated between FIFA (the International Soccer Federation) and international trade unions to improve conditions in the production of footballs and sportswear.

Increasingly, the retail sector has been the focus of efforts to improve environmental and broader ethical performance. For example, in the UK, Christian Aid, a non-governmental development agency, recently launched its Global Supermarket Campaign to mobilise consumer pressure to improve the standards under which all goods are produced. The aim is for supermarkets to establish a set of ethical principles for trade, endorse a specific code of conduct — incorporating both social and environmental factors — and agree to independent monitoring of that code. So far, a number of the big supermarkets have entered into discussion on drawing up codes of conduct and are setting up pilot projects. Again, the critical issue that has emerged is the importance of independent verification of corporate performance.

These examples are matched by a wider convergence between the social and environmental dimensions of trade (see Box opposite).

Fair Trade, Green Trade: Towards Sustainable Trade?

Traditionally, efforts to improve the social and environmental quality of international trade largely moved in parallel. There are now encouraging signs of a convergence which point the way towards sustainable trade, which incorporates both high environmental and social performance. The organic sector is one prominent example, where the International Federation of Organic Agriculture Movements (IFOAM) has adopted guidelines for social rights and fair trade. Similarly, fair trade organisations are also increasingly incorporating environmental factors. For example, fair trade criteria for cut flowers being developed by Max Havelaar in Switzerland, will incorporate the traditional premium for producers to finance social initiatives, along with strict guidelines on the use of pesticides. Furthermore, ethical scrutiny of social issues can also lead to greater environmental awareness. Nike which has been under considerable pressure for several years to improve the conditions of workers who produce its shoes is now being targeted for its use of sulphur hexafluoride, the most powerful known greenhouse gas, in its pump-up shoes. It has now committed itself to developing an alternative.

The driving forces for this convergence include the recognition that producers in developing countries benefit in practical terms from more environmentally sound production methods, and the perception among consumers of fairly traded products that their purchases are also 'green' — and vice versa. The challenge is to develop standards and labelling procedures that incorporate both dimensions.

Source: MacGillivray and Lingayah, 1997

both production and products. The International Organisation for Standardisation's (ISO) new ISO 14000 series of standards for environmental management has been the focus of particular attention. In the forest sector, there are a number of standard-setting schemes, notably the Forest Stewardship Council (FSC). A more recent arrival is the Marine Stewardship Council, co-sponsored by Unilever and the World Wide Fund for Nature to harness consumer



Citizen Action and Trends

Much of the drive for sustainable consumption in the marketplace has come from a new combination of progressive business practice and new, more solutions-driven campaigning from environment and development organisations. There are also important trends emerging among consumers in North America, Europe and Japan, which suggest that while concern for the environment remains high, this is often matched by a sense of powerlessness and frustration.

The USA remains the trendsetter in terms of defining the world's global consumption aspirations. But among American citizens, there are now signs of widespread concern about the social and environmental consequences of an increasingly materialistic society. A study carried out for the Merck Foundation in 1995 found that over 80 per cent of people surveyed agreed that *"most of us buy and consume more than we need"* and that over 93 per cent agreed that *"the way we live produces too much waste"*. Americans also recognise their global responsibility with 60 per cent of people surveyed saying that the environment would be destroyed if everybody in China, India and Latin America consumed as much as they do. But Americans are also unsure about what to do, struggling to reconcile their condemnation of the consumption culture with their *"core belief in the freedom to live as we choose"*.

Yet, a significant minority appear to be attempting to rebalance work, consumption, the family and leisure by 'downshifting': 28 per cent of the survey said that they had voluntarily made changes in their life which resulted in making less money. Another response has been the Eco-Team programme launched by the Global Action Plan organisation. GAP argues that while environmental information has raised mainstream environmental awareness, it has not provided the tools for changing behaviour. The Eco-Team approach provides a structured programme to change household consumption habits, and has yielded important environmental and economic savings.

In Europe, there is also far greater realism about the potential of the 'green consumer'. The EU's regular

Eurobarometer survey shows that between 1992 and 1995 the number of people willing to buy an environmentally friendly product if it was more expensive dropped from 69 per cent to 58 per cent in Britain and from 75 per cent to 50 per cent in Germany. The proliferation of environmental claims and labels on products has also led to confusion and frustration: in Britain, 71 per cent of consumers are sceptical about the premiums charged for environmentally friendly products as well as the environmental claims themselves.

This does not mean that market advantages for environmentally friendly goods do not exist. Work in Germany suggest that

around 5-15 per cent of consumers are 'deep green' and will seek out goods that are more environmentally friendly and may pay a slightly higher price for them. Another 50 per cent will buy environmentally friendly goods if it is made easy through clear labelling and they are not more expensive than the alternatives. Yet, for around 40 per cent of consumers the environmental friendliness of a product will never be a factor in their purchasing decisions. New issues are also coming to the fore and converging with traditional 'green

consumer' concerns: a 1995 survey in the UK showed that 85 per cent of respondents considered fair trade to be an important issue when food shopping.

Japan's rapid transition to consumer affluence makes it a special role model for the emerging economies of Asia in the more uncertain shift from the 'mass consumption/mass disposal' lifestyle to one of sustainable consumption. A recent Consumer Awareness and Behaviour survey showed widespread evidence of personal responsibility for environmental change. While young Japanese have a stronger sense of the urgency of environmental issues, they are also less



Buying 'green' products

STILL PICTURES

INTRODUCTION

willing to bear the cost of resolving the problems. By contrast, those in middle age say they must do something, since they feel responsible for causing many of the problems. Importantly, women emerge as Japan's 'environmental leaders' particularly housewives over the age of 40, leading to calls for new ways for elderly women to pass on traditional values of not wasting things to coming generations.

The stress on values is also marked in the ECO ASIA initiative launched by the Government of Japan to draw up a long-term perspective for sustainable development for the Asia-Pacific region up to 2025. ECO ASIA found that there

was a common Asia-Pacific 'eco-consciousness', based on features such as frugal traditional lifestyles and a stress on coexistence with nature, which has often been threatened by the arrival of mass consumption. Even so, the patterns of consumption that have emerged are generally more energy efficient, with a more equitable and less excessive consumption than in Europe and North America. For the future, ECO ASIA called on each country to "*rediscover those elements in its traditional way of life that are suited to conserving the environment*" and to work together to develop the Asia-Pacific 'eco-consciousness'. ECO ASIA also recommended a series of environmental partnerships, technology joint ventures and policy exchanges.

The Sustainable Consumption Challenge for International Trade

The consequences of these and other changes in OECD consumption and production patterns on trade relations with developing countries are as yet uncertain. But it is clear that the primary impacts of industrialised countries moving towards more sustainable consumption and production will be on their own producers. Only 6.5 per cent of OECD consumption was met by imports from developing countries in 1996, although this is expected to increase to 14 per cent over the next decade. But the implications for developing country exporters could nevertheless be profound. Already as much as one-third of the value of Asian exports and about half the value of manufactured exports are in sectors where environmental requirements are emerging.

Over the long-term, implementing sustainable consumption and production could substantially extend the scope and degree to which environmental considerations determine both the volume and quality of exports from the developing world.

Unfortunately, the atmosphere surrounding international discussions of trade and the environment has not been conducive to exploring these long-term implications. Much of the debate has been polarised between two conflicting fears of

'environmental protectionism' and 'environmental dumping'. In developing countries, concerns have been expressed that green consumer preferences and rising standards in the industrialised world could constrain markets for their exports, particularly if imposed unilaterally and in ways that discriminated against production processes ('environmental protectionism'). Many developing country governments believe that 'covert protectionism' under the pretext of environmental considerations has actually grown in recent years. Set against this, concerns have also been raised mostly in the industrialised world about the negative environmental impacts of trade liberalisation, the risks of encouraging over-exploitation of natural resources for short-term gain, and a downward pressure on global standards ('environmental dumping'). Without the enforcement of environmental regulations, the production of goods for export markets can be accompanied by high human and environmental costs.

Less has been said about the positive impacts that changes in consumption and production patterns in developed countries could have for exports in developing countries of environmentally and socially preferable goods and services ('environmental opportunities') — the subject of this report. Organically grown food, reusable and recycled materials, biomass fuels, natural



fibres, sustainably harvested forest products are among the obvious examples of goods already made by developing countries that have environmental advantages. But the broad-based nature of sustainable consumption and production provides a potentially wider range of opportunity sectors, including advanced manufactured goods (such as electronics) and services (such as tourism).

Globally, a host of international organisations — notably the World Trade Organisation (WTO), the OECD, the UN Commission on Sustainable Development (CSD), the UN Environment Programme (UNEP) and the UN Conference on Trade and Development (UNCTAD) — have been working to understand the policy, legal and economic implications of trade and environment linkages.

With its mandate to encourage the implementation of both the sustainable consumption and trade agreements reached at Rio, the CSD is perhaps best placed to make the links. In 1995, it agreed a work programme on changing consumption and production patterns, which included the goal of “*assessing the impact on developing countries of changes in consumption and production in developed countries*”, looking both at export opportunities and adverse impacts on trade flows. Studies prepared by the UN secretariat for the CSD have found that the linkages are still unclear, with the long-term effects remaining highly speculative. Leading edge approaches under development to promote more eco-efficient goods and services — such as closing resource loops, dematerialisation and design for environment — are still limited in their spread within developed countries. However, if they became mainstream then a stabilisation or decline in demand for a wide range of raw materials could follow.

In parallel, the CSD has also held discussions on trade, environment and development, raising issues such as the competitiveness questions for developing country exporters complying with new environmental requirements and the impacts of eco-labelling.

While the CSD has acted as a forum for discussing the policy implications of sustainable consumption and trade, the WTO has focused more narrowly on the

trade impacts of environmental measures in the new Committee on Trade and Environment (CTE). Within the CTE, developing countries have expressed a range of concerns about the ways in which eco-label schemes could constrain market access for their exporters. The CTE has also looked at ways in which low-income, commodity-dependent developing countries could be encouraged to diversify into higher value-added and less environmentally damaging products, and the means by which exporters from developing countries can gain access to emerging market opportunities for environmental goods and services.

So far, the CTE has begun to lay out some of the contending concerns about the links between trade and environment. But one independent assessment of the WTO by the International Institute for Sustainable Development (IISD) concluded that “*the WTO has failed to recognize the central message of sustainable development — that the world’s economy and its environment are joined at the hip like Siamese twins*”. IISD recommended a series of reforms including a renewal of the Rio bargain (including increased market access and reduction of market distorting subsidies in developed countries) and greater transparency and scope for participation in the WTO.

Meanwhile, UNCTAD has carried out a comprehensive work programme on trade, environment and development, much of which deals with the sustainable consumption and production agenda. At an intergovernmental level, its Ad Hoc Working Group has worked on the issue of market opportunities for environmentally-friendly products and the links with eco-labelling, while its Standing Committee on Commodities has explored ways in which environmental costs can be incorporated into commodity prices, to better understand trade and environment linkages. UNCTAD has carried out a range of technical assistance activities, including a series of 19 country case studies. UNCTAD is also developing GREENTRADE, a computerised database of environmental product concerns and measures and has launched the BIOTRADE Initiative in collaboration with the Secretariat of the Convention of Biological Diversity. This aims to stimulate international markets for biological resources that will provide sustainable development opportunities and conservation incentives.

Ways Forward

Five years after the Earth Summit, there is a sense that international efforts to ensure that trade serves sustainable consumption and production need to move into a different gear. So far, many of the fears about the negative trade impacts of action for sustainable consumption and production have not been borne out in

In many ways, the move to sustainable consumption and production has only just begun. While the innovation in policy, business practice and citizen action described here is certainly promising, the evidence suggests that this trend will have to accelerate and deepen markedly over the coming

decades if the problems caused by today's unsustainable consumption and production patterns are to be resolved.

There is still a long way to go to internalise environmental costs into market prices. Much needs to be done to ensure that corporations become more responsible for the life cycle environmental impacts of the goods and services they sell. Consumers still lack the information and support they need to make informed choices about more sustainable lifestyles. Dialogue and cooperation between developed and developing countries could be improved substantially to reduce tensions and build

trust. But despite this, there are already signs that some developing country producers are able to rise to the challenge. The ten case studies presented in the next section show how a number of pioneers have moved forward to take advantage of new trade opportunities.



PANOS PICTURES

Moving trade forward: dock scene Sierra Leona

reality. Indeed, there appears to be an emerging gap between the often abstract focus of much policy discussion and the more pragmatic concerns of developing country producers focused on the realities of what is influencing their customers in the marketplace.

The Case Studies



Introduction to the Case Studies

The ten case studies collected here are designed to illustrate how positive linkages can be made between changing consumption and production patterns in the industrialised world and trade opportunities for developing country exporters. A number of considerations went into the choice of case studies:

- The need to illustrate the **diversity of sectors** that are now being influenced by moves towards sustainable consumption and production: for this reason, case studies were chosen from the manufacturing, tourism, agricultural and forestry sectors.
- The importance of showing the **variety of driving forces** behind the case studies. The report thus includes case studies driven by health and social, as well as environmental, concerns, along with those stimulated by national and international regulation, new market pressures, as well as by producers committed to environmental improvement.
- The importance of **making the links between consumption and production**. The case studies therefore describe the relations between the different actors along the product chain, such as

producers, traders, retailers, environment and development organisations, regulators and government agencies.

- The need to reflect the **geographical spread** of pioneering initiatives. The case studies are thus drawn from Africa, Asia, Latin America, the Caribbean and the Pacific.

The purpose of the case studies is to learn lessons about the conditions for export success in a world moving towards sustainable consumption and production. The case studies are not intended to be models or blueprints for success. None of them is perfect, and all should be regarded as works in progress. Furthermore, these cases of success are not designed to show that all developing country producers can now seek out new trade opportunities. A number of often substantial policy and market constraints are identified in many of the case studies, which will need to be removed if wider progress is to be made. What the case studies do illustrate are significant approaches to resolving the challenges thrown up by changing regulations, corporate practice and consumer expectations, that could be valuable for others.



CENTURY TEXTILES



Manufactured Products

STILL PICTURES



Tourism

PANOS PICTURES



Agricultural Commodities

PANOS PICTURES



Forest Products

Manufactured Products



The Issue

Export success for many developing countries has long meant moving into higher value-added manufacturing sectors, such as textiles, consumer goods, electronics and automobiles. Manufactured exports from developing countries are now worth three times exports in traditional commodity sectors. However, as manufactured exports have grown beyond a certain level, they have been accompanied by rising environment stress. One response has been to toughen domestic regulations, and shift from a costly end of pipe approach to a preventive strategy based on cleaner production practices.

Another driver of change, however, has been rising regulatory requirements and customer expectations in key export markets, primarily within the OECD, but also increasingly in neighbouring countries and regions.

Product regulations set in industrialised countries have often forced the pace, effectively outlawing the use of certain toxic chemicals in key export sectors, such as leatherware and textiles.

For leather, tough controls on the highly polluting tanning process have contributed to a large cut in the number of tanneries in most industrialised countries, with exports from the developing world filling the gap. Although environmental standards set by developing countries can be similar to those in industrialised countries, they are often weakly enforced. This situation was transformed in 1990 when Germany banned leather imports which had been treated with pentachlorophenol (PCP), a widely used, but highly carcinogenic chemical preservative. Leather producers have subsequently faced a ban by a number of European countries on the use of certain azo dyes. Controls on azo dyes have also affected the textiles industry (See Case Study 1 below).

International environmental agreements have also prompted changes in production processes in developing countries.

Industrialised countries have been required to set tougher and faster compliance schedules, often prompting exporters in developing countries to pull up their performance to gain and sustain market share. This dynamic has certainly been at work in the case of the phase out of ozone depleting chemicals (See Case Studies 2 and 3 below).

Whether driven by regulations such as these, voluntary standards and codes of



Industrial growth has brought pollution

conduct or their own corporate environmental policies, importers in the industrialised world are now increasingly integrating environmental criteria into their general buying conditions. The ISO 14000 series of standards for environmental management has been the focus of particular attention. Based on earlier experience with the ISO 9000 series for quality management, expectations have been raised that the ISO 14001 standard for environmental management systems will become a condition for doing business globally, with developing country exporters seeing it as “an admission ticket to international markets”. Behind this pressure from importers in Europe and North America for clear evidence of a forward looking strategy from their suppliers lies the real and potential demand from final consumers for products they can trust to be environmentally sound.

Textiles

The life cycle environmental impacts of growing, processing and using textiles have been the subject of mounting regulatory and consumer concern over the past decade. The high health and environmental costs of traditional cotton cultivation, characterised by intensive use of chemical pesticides, has been one focus, prompting a trend towards organic cotton production (See Case Study 8).

But efforts have also been made to reduce resource consumption, pollution and health risks associated with the manufacturing stage of the textile chain. Textile production both consumes large amounts of water and generates considerable volumes of effluent. About 100 litres of water are used in the processing of one kilogrammes of textiles, while the bleaching, dyeing, sizing and finishing of textiles all result in large quantities of effluent, often involving highly toxic heavy metals. The chemical contamination of textiles can also be a threat to the health of both textile workers and consumers of 'close to skin' products such as clothing. For consumers, allergies can be triggered, while the use of carcinogenic substances in the processing of textiles has aroused suspicion, in particular the use of some azo dyes.

Introduced last century, azo dyes account for 70 per cent of dyes used today, and have been favoured by industry for their brilliance, fastness and cost effectiveness. However, growing concern that azo dyes may cause allergies or cancer has prompted regulatory and market-driven efforts to prevent their use. Both the German business community and consumers have been at the forefront of this shift, and in 1994 the German government introduced measures to prohibit the import of textiles containing certain azo dyes, which could release any of 20 harmful amines.

The introduction of these new import restrictions had direct repercussions for India's textiles industry, which accounts for nearly half of the country's exports to Germany. Today, nearly 300 large-scale composite mills operate in India, integrating all stages of production from

unfinished fabrics to ready-made garments. In principle, these mills have the capacity to adjust to new eco-standards. But there is a general apathy on the part of most of the big mills to spend money on investigating substitutes for banned substances. Potential adjustment difficulties are, however, more pronounced in the small-scale, decentralised sector, which dominates the Indian textile industry. Here, awareness of new standards required for export and also of potential alternatives is generally low. The sector also lacks technical know-how and, of course, financial resources. India's dyestuff manufacturers were also affected, since most dyes are produced locally.

India's government responded in two main ways to the German ban, tightening regulation and boosting capacity. First, it matched the German provisions, with the Ministry of Environment and Forests announcing in March 1995 that it was prohibiting the handling of 74 azo dyes throughout the country under the Environment (Protection) Act. This followed a study from an expert group under the Indian Council for Medical Research which concluded that there were sufficient domestic health reasons for banning the production of azo dyes, based on data from the International Agency for Research on Cancer. Imports of the dyes have also been restricted. The Ministry of Textiles focused its attention on strengthening the institutional capacity of the decentralised sector, helping it to adjust by providing information, setting up testing facilities and by providing technical assistance.

But the industry itself also took steps to meet or surpass these new requirements. Most exporters are used to working according to detailed specifications and samples given by their customers in Germany and other European countries. The best exporters are able to meet whatever is required in terms of design, fashion and quality, and see no reason why they should not be able to meet environmental requirements. One such company is Century Textiles.

Case Study 1: Century Textiles, India



Gaining new markets out of environmental performance

Background

Century Textiles and Industries Limited, Bombay, part of the B.K. Birla Group, was incorporated exactly 100 years ago in 1897. Today, Century is one of India's leading manufacturers, producing high quality cotton textiles and yarn, viscose and rayon, and involved in a range of other business activities. The company's textile unit is India's largest, producing 500,000 square metres of cotton cloth and 82,000 kilogrammes of cotton yarn each day. In 1996/7, annual turnover of the textile division reached US\$113 million, and the company employed 6,900 workers. Century is India's largest exporter of cotton textiles, exporting 75 per cent of its production to most of the OECD countries, as well as neighbouring Asian markets. Export earnings have multiplied more than a hundred fold since 1975, reaching US\$ 81 million in 1996-97.

Century believes that quality is the essence of its success. Its fabrics have been awarded 'A-1' status by the government inspecting agency, the highest grade which no other Indian mill has attained. Century is also accredited with the ISO 9002 quality system, and has introduced round the clock quality control in all departments from cotton bale to cloth bale, operating 172 quality circles to seek out new improvements. This focus on quality is supported by attention to human resource development and the continuous upgrading of its technological capacity, spending US\$ 70 million over the past 15 years on modernisation. In practical terms, these measures have resulted in a focus on timely delivery, quality inspection, zero-defect fabrics, careful packaging and close evaluation of customer feedback. These efforts have also earned Century a string of national and international export, quality and productivity awards.

Achievements and Challenges

Century's corporate culture has also proved to be a good foundation for improvements in resource use and pollution prevention, with Century gaining recognition for its energy conservation and pollution reduction achievements. Century had been alert to emerging environmental conditions in its

export markets since the ban on the use of PCP in India in 1991. Mahesh Sharma, Manager (Chemical Technology), and responsible for quality control and the environment argues that the "PCP ban was not much of a problem to Century", due to its careful quality control. From 1992, Century was able to put a stamp on its sale orders that its products did not contain any PCP. From 1993, however, the German ban on azo dyes began to require attention. In July 1994, Otto Aversano, one of Century's major clients in Germany, sent details of new requirements to guarantee environmental performance. Essentially, Century had to meet the independent Eco-Text standard for Ecologically Optimised Fabrics (EOF). (See Box).

Century Textiles was awarded the Eco-Text certification in January 1995, only months after the letter from Otto Aversano, making it the first textile unit in India to receive such certification. When asked how Century achieved certification in such a short time, Sharma explains "I had already been on the job since February of 1994, consulting the literature and looking for substitutes". The costs of certification itself were negligible, less than US\$ 2,000. But finding alternatives was not easy, and it involved ten crucial steps:

- identifying the dyestuff;
- reformulating the recipe;
- checking the quality;
- consulting with the marketing department;
- controlling costs;
- testing the amine for Eco-Text requirements in Germany and in India;
- making a changeover plan;
- retraining the mill workers;
- issuing new instructions to the purchasing department;
- updating quality control exercises.

Looking back, Sharma says, "I went through hell, but then there were dividends". First of all, the substitution exercise led to an optimisation of the dyeing recipe. According to R.K. Dalmia, Executive

Eco-Text

Eco-Text is an international research consortium in the field of textiles and the environment, established by the German Hohenstein Institute and the Austrian Textile Research Institute, supplemented by other similar bodies in Denmark, Sweden and Switzerland. To qualify for the EOF label, Eco-Text has drawn up a set of 17 environmental criteria and parameters for textiles, covering issues such as the use of carcinogenic and allergenic dyestuffs, as well as formaldehyde levels, the use of pesticides, recycling and disposal. Eco-Text assesses the quality of textiles and garments against these requirements, before awarding a certificate. Certification has to be renewed annually.

Green Jeans from India

In April 1995, Arvind Mills became the first denim manufacturer in India to gain the Ecologically Optimized Fabric (EOF) trademark, an Eco-Tex certification. Arvind exports nearly 75-80 per cent of its total denim production. As the USA and Europe are the biggest consumers of denim in the world, the EOF certification should facilitate the company's effort to win greater market penetration. The company will soon be embossing this exclusive environmental trademark on all its denim rolls, packing slips, and samples. Arvind plans to use its EOF label as its 'unique selling proposition' in export markets. Already, specialized environmental stores in Switzerland like Globus and Jumoli are planning to stock garments using Arvind's denim.

President at Century, there was a 10 to 15 per cent cost increase in most of the shades, but Sharma's efforts managed to yield a 20 to 30 per cent cost saving in two of the most popular colour shades. Overall, production costs increased only marginally to win the Eco-Tex certificate.

More importantly, certification brought several market advantages, according to Mr Dalmia. The marketing department could get an 8 to 10 per cent premium rate due to the Eco-Tex label and other factors, such as overall quality improvement. Additionally, the market widened by at least 10 per cent in the first year alone. Many new buyers from the US and the UK (who re-export to Germany) turned to Century due to the Eco-Tex certificate. Similar regulations have been introduced by other European countries, such as the Netherlands, and it is likely that the ban on the same azo dye will be adopted in the future throughout the European Union. Century is now exploring the next challenge of achieving ISO 14000 certification for its environmental management practices as a whole.

Lessons for the Future

Producers such as Century Textiles show that companies in the developing countries can gain export advantage from rising environmental expectations. Its success is built on an entrenched commitment to quality, responsiveness to customer requirements and a desire to anticipate new challenges. Its size also means that it has the capacity to invest in new technologies and the necessary research experimentation to constantly upgrade its processes to meet market and regulatory requirements. A number of other Indian producers have also managed

to achieve similar results (See Snapshot Boxes opposite and below).

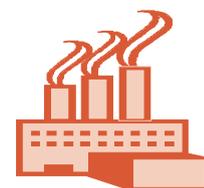
But only very few of India's textile companies are following a proactive strategy towards the environmental performance of their products. There are several reasons for this:

- The trend toward eco-products in the textile, clothing and leather sectors is still relatively recent and is seen by many producers as not reliable enough to justify large investments.
- Many environmentally-sound ingredients still have to be imported and are subject to import controls.
- It is difficult for a garment manufacturer to guarantee a 'chain of custody' through the different steps of the production chain which are often handled by different companies.
- Trade restrictions on textile exports also mean that investments in environmental upgrading might not pay off as long as the exporter faces the risk that he might not get the quota required under the Multifibre Arrangement and the bilateral agreement between India and the European Union.
- The small-scale sector, which makes up the bulk of the industry, lacks the capacity to respond effectively to external standards, due to lack of skills, information and resources.

Cleaner Textile Inputs

Dura-Tex Laboratories Pvt. Ltd., a leading Indian manufacturer of specialty chemicals for the textile industry, has launched a 'Green Label' range of environmentally enhanced processing chemicals, which have proved extremely popular among quality conscious textile processors. The new range has been tested by recognized laboratories, giving confidence to the increasing number of 100 per cent export-oriented textile units, who need to use environmentally sound inputs to meet international requirements.

Refrigerators



One issue that has affected numerous manufacturers of consumer durables is stratospheric ozone depletion. The depletion of the stratospheric ozone layer has been caused by a range of chemicals, notably chlorofluorocarbons (CFCs), commonly used as solvents, foam blowing agents, refrigerants and propellants in aerosols. Reduced ozone levels in the stratosphere mean that more ultraviolet radiation reaches the earth's surface, causing damage to human health and the food chain. International action has been taken to reverse this damage for more than a decade, starting with the Vienna Convention in 1985 and the 1989 Montreal Protocol, which regulate the production, import and export of ozone-depleting substances (ODS). Industrialised countries were required to phase out the production of CFCs by January 1996, while developing countries have until 2006. Schedules have also been set for other ozone-depleting substances, such as halons, methyl bromide and hydrochlorofluorocarbons (HCFCs), a first generation replacement for CFCs.

Critical to the success of these phase out efforts is the switch to ozone-safe technologies in the developing world, where rapid industrial growth and rising consumer affluence is boosting demand for products that have traditionally contained ozone-depleting substances. To assist this process, a Multilateral Fund, worth US\$537 million for 1991-1995 was set up to support developing countries.

In the developing world, the production of domestic fridges and freezers is largely for the home market. Refrigerators are bulky items and transportation costs can be high. In addition, consumer tastes and fridge design can vary widely between regions, so that most exports from developing countries are targeted at neighbouring countries within the region. The trade in refrigerators is now restricted by the Montreal Protocol, so that products containing ozone-depleting substances from non-signatories are now banned. Although there is little evidence of producers shifting location to get

around the restrictions on ozone-depleting chemicals, the illegal trade in CFCs has become a real problem.

Producing and using domestic refrigerators and freezers has traditionally involved ozone-depleting substances in two main ways: first, as a refrigerant for the cooling system; and second as a foam blowing agent. The global consensus that these should be replaced spurred a race to find the best alternative, which met criteria of environmental performance, technical feasibility, safety and affordability. Three main competing options have emerged:

- Hydrochlorofluorocarbons (HCFCs): Produced by the chemical industry as the first substitutes for CFCs, HCFCs still deplete the ozone layer, albeit at a much reduced rate, and also contribute to global warming. HCFCs are now classified as transitory substances.
- Hydrofluorocarbons (HFCs): Again, produced by the chemical industry, these gases do not deplete the ozone layer, but they do have a significant global warming potential. To date, HFCs have been the replacement chemicals of choice.
- Hydrocarbons (HCs): Hydrocarbons (such as propane and butane) have zero ozone-depleting potential, negligible global warming qualities, but are highly flammable. Hydrocarbons have started to enter the market since 1993. Around 10 per cent of fridges produced now use them as refrigerants, with much larger take-up in Europe, led by Germany.

But the switch is also important for developing country producers seeking to export to industrialised countries, where they now need to demonstrate that their products are CFC-free as a minimum condition for market success.



Removing CFC's from old fridges

STILL PICTURES

Case Study 2: Fridge Master, Swaziland

Background

Located in the lush green setting of the Matsapha Industrial Site in Swaziland, Master Fridge Ltd. (commonly known as Fridge Master) is the largest manufacturer of refrigeration products in southern Africa producing approximately 450,000 units of domestic refrigerators and freezers annually, employing 1,200 workers and with an annual turnover in 1996 of 290 million Rand (US\$ 65 million approx). Its main market is South Africa to which it exports almost 80 per cent of its output. Other markets apart from domestic sales in Swaziland include neighbouring countries like Mozambique, Zimbabwe and Botswana. A small percentage is also exported further afield to Mauritius, Malta, Dubai, Turkey and Russia.

Fridge Master was instrumental in Swaziland becoming a signatory to the Montreal Protocol in November 1992, and in March 1993, the company became the first manufacturer in Africa to make CFC-free products. It switched to the use of HFC134a as the refrigerant for the cooling system (to replace CFC12) and HCFC 141b (to replace CFC11) as the blowing agent in one of its factories. Since Fridge Master exports more than 70 per cent of its output, it was not eligible for technical or financial assistance from the Multilateral Fund. According to Roy Singh, the refrigeration engineer at Fridge Master, if the company had received assistance from the Montreal Protocol it may have been able to adopt the hydrocarbon option both for the blowing agent and the refrigerant. Although plans were underfoot to use the hydrocarbon, isobutane, as the refrigerant and cyclopentane as the blowing agent, they were dropped because of prohibitive technical costs in switching to isobutane.

Nevertheless, Peter Groome of Industrial Urethanes, a chemical supplier to Master Fridge Ltd, argues that “*HCFC141b was ideal for southern Africa at the time, in terms of price and accessibility, while the rest of the world made up its mind about the ideal replacements*”. The company will, however, phase out the use of HCFCs in 1997 and replace it with hydrocarbons (such as cyclopentane). Fridge Master will continue to use HFC 134a as the refrigerant.

Achievements and Challenges

The economic consequences of moving to CFC-free fridges have been impressive. The company incurred incremental operating costs of conversion in the range of 17 million Rand (US\$4 million approx) over an initial six month period, some 6 per cent of turnover. But this has been more than recovered in accelerated sales and the company has expanded considerably since it switched to ODS-free production. Fridge Master refrigerators are marketed through retail outlets under different brand names as well as directly under its own name. Its major retailer in South Africa, Hyperama, has been marketing fridges made by the company with labels that certify the product as being CFC-free. This ‘green strategy’ of the retail group and Fridge Master resulted in a trebling of sales to Hyperama in one year — from Rand 7 million in 1993 to Rand 20 million by the end of March 1994. In recognition of this achievement, Fridge Master earned the ‘Emerald Award’, Hyperama’s highest supplier award.

There have been social benefits too. As a rapidly expanding group, Master Fridge Ltd. provides employment and training to increasing number of Swazi workers, both at the managerial and shop floor level. The group has two training centres where every person directly working with hydrocarbons and chemicals is trained in-house and by external chemical manufacturers. CFC-free products are produced under better safety conditions due to the fact that cyclopentane has a high inflammability and requires meticulous handling. Safety measures such as fire extinguishers, sensors and detectors have been installed by the company at a cost of almost 1 million Rand (US \$0.2 million). Engineering skills have also been upgraded to deal with the new technologies. A factory clinic monitors health and safety conditions of workers.

In the next five years, the company is aiming for a 15 per cent growth rate to be achieved by capturing new markets and developing new product lines. To reach these targets, Fridge Master invests close to 4 per cent of its profits in R&D and sees



this as the only way to maintain its competitiveness in world markets. The company is placing a special emphasis on breaking into the environmentally-conscious European market and is focusing on reducing the energy consumption of its products, as a way of appealing to European consumers willing to pay a premium for energy efficiency. For Roy Singh, “consuming less energy is a right of the customer...but we [also] need to give them added value in terms of noise reduction”. Fridge Master also works with the Southern Africa Development Coordinating Committee (SADC), which is discussing the mandatory energy labelling of all refrigeration products sold in Southern Africa.

Another issue is the choice between HFCs and hydrocarbons as the refrigerant, where Fridge Master recognises that consumer expectations in Germany, for example, require the use of hydrocarbons. The company is currently working to understand consumer expectations in Germany and other European markets, and Singh is confident that “if the marketing signals are favourable at sufficient volumes, then we will move to isobutane as the refrigerant”. Thus, rather than being a barrier to exports, the high expectations of European consumers fits with Fridge Master’s ambition to tap new markets and continually add value to their products — where environmental factors are now fully integrated.

Case Study 3: Electrostar Refrigerators, Egypt

Background

Electrostar Refrigerators Manufacturing Co. (ELECTROSTAR) located in Giza, Cairo, is amongst the largest of nine manufacturers of domestic refrigerators and freezers in Egypt. It has an installed production capacity of 120,000 units per shift and employs close to 250 people. ELECTROSTAR caters mainly to the domestic market and currently exports only a small percentage of its units to neighboring countries in the Middle East.

In Egypt, the driving force for change has come from the government, which has adopted an ambitious ODS phase out strategy, aiming to stop production of CFC12 by 1998 and CFC 11 by 1999 (except for essential reasons), many years before the deadline for developing countries. As part of this strategy, Egypt has agreed a package of financial support from the Multilateral Fund to ease the transition process. The government has also introduced tax exemptions for all refrigerator producers using ozone friendly technology, established a monitoring system on all ODS entering Egypt. The government suspended industrial licenses for new activities using ODS from January 1995, and set manufacturing standards for new technologies, including safety regulations for hydrocarbons. The government’s Ozone Layer Protection Unit is also active in raising public awareness of the ozone issue as a way of accelerating the process of change.

Achievements and Challenges

Although the primary push has been regulatory, ELECTROSTAR also sees the ozone issue as a valuable opportunity to overhaul its production facilities and carve out new markets in the Middle East. The United Nations Industrial Development Organisation (UNIDO) is working with the company to eliminate all ODSs (see Box below). The company will convert to the use of HFC 134a as the refrigerant for the

Seeking new markets from CFC-free fridges

SNAPSHOT

Pursuing the Hydrocarbon Option

The commercial success of hydrocarbon refrigerators in Europe has led a number of developing countries, notably China and India, to pursue the hydrocarbon option, both for their own domestic production and for export to European markets. China accounts for half of developing country refrigerator production, and already 60 per cent of China’s fridges are made by companies using or engaged in acquiring hydrocarbon technology for foaming and refrigerants. This process has been driven by companies seeking external markets, and has been supported by international refrigerator manufacturers, such as Liebherr and Bosch, development agencies including Germany’s GTZ and the US EPA and Greenpeace. In India, the tripartite Ecofrig venture between the Governments of India, Germany and Switzerland, is supporting pilot studies of hydrocarbon technology, exchanging experience with German companies and research organisations and focusing on issues of high concern, such as flammability.

cooling system (to replace CFC12) and the hydrocarbon cyclopentane (to replace CFC11) as the blowing agent for the insulation foam. The conversion process is due for completion in June 1997. The substitution of CFCs has been accompanied by a substantial redesign of refrigerator models as well as conversion of plant

UNIDO'S Ozone Assistance Strategy

UNIDO has been working since 1993 to assist developing countries make the transition to ozone safe refrigeration technologies. When the first projects were formulated in 1993, proven hydrocarbon technologies for refrigerants and blowing agents were not commercially available. In 1994, UNIDO and companies receiving funds from the Multilateral Fund, such as ELECTROSTAR in Egypt, jointly decided to opt for HFC134a and cyclopentane on the basis of incremental costs and available technologies at the time. More recently, the Montreal Protocol has discouraged the use of HCFC 141b, but it accepts both HFC134a and hydrocarbons as suitable refrigerant replacements. The Protocol does provide an implicit incentive for hydrocarbons by allowing up to a 35 per cent increment on the investment cost for the higher costs associated with their introduction, but does not differentiate between a full hydrocarbon option and a partial one. Since technologies for the full hydrocarbon option for both refrigerant and foam blowing were not widely available until 1994, the partial option was considered practical, using HFCs as the refrigerant.

Recently, however, the situation has changed, with increasing availability of hydrocarbon technology; so that commercial success is now more apparent. As a result, UNIDO has signed agreements with four companies in China and one in Argentina to assist them in converting to isobutane as the refrigerant.

processes and refrigeration services. The total cost of the conversion is estimated at nearly US\$3 million, about half of which will be reimbursed by the Multilateral Fund, with ELECTROSTAR paying the remainder. The company aims to recover these costs through a gradual increase in prices over a period of time. Rather than damaging its competitiveness, UNIDO's Tamas Grof reports that ELECTROSTAR should be able to achieve a growth of 10 per cent in domestic sales after the new product goes on the market. Both the Egyptian government and ELECTROSTAR also see export potential for the new ozone free products, but this has yet to be realised

Lessons for the Future

The changeover to ozone safe fridges is here to stay, irrespective of whether the market for the new product is the foreign or the domestic consumer, and irrespective of whether or not the producers receive assistance from the Multilateral Fund of the Montreal Protocol. Both case studies illustrate how companies can use this regulatory impetus to upgrade production performance and exploit new export opportunities, where consumers are willing to pay for higher environmental performance. Here, the approach to innovation is the critical success factor, particularly the way in which the company integrates environmental considerations and customer expectations into a process of continuous improvement. However, a company's capacity for innovation can be constrained by insufficient R&D resources, and restricted access to licences for best available environmental technologies.

It is also clear that a reactive replacement mentality to environmental problems may not be the optimal long-term solution; replacements may generate other environmental problems. In future international environmental negotiations, it could be wise to set aside a small percentage of funds for research into technology innovation.

Other examples exist of innovative solutions to cooling requirements with reduced environmental impacts (See Snapshot Box).

SNAPSHOT

Eco-efficient Cooling

Growing awareness of the life cycle impacts of consumer durables such as refrigerators above and beyond ozone depletion has prompted some designers to look for new ways of delivering what the consumer wants — cost effective cooling — while minimising the environmental burden. In Germany, the Wuppertal Institut has come up with the FRIA cooling concept. FRIA is a hybrid between a traditional larder and a modern refrigerator. It is a long-lasting product installed into the building, using circulating air for cooling, CFC-free insulating materials and requires at least 50 per cent less energy consumption than conventional fridges. In the USA, a consortium of 24 electric power utilities sponsored a competition for design and marketing of a super-efficient refrigerator, one that would be up to 50 per cent more energy-efficient than existing comparable models (and at least 25 per cent better than 1993 federal energy efficiency standards), and would be entirely CFC-free. The prize was US\$30 million, awarded on a winner-take-all basis. The Super-Efficient Refrigerator Program (SERP) contest was won by Whirlpool, with a refrigerator 30 per cent more efficient than the current government standard (1992).

But there are also moves within developing countries to raise the energy efficiency of products for domestic consumption. In India, for example, the Tata Energy Research Institute (TERI) in New Delhi and the US-based International Institute for Energy Conservation (IIEC) are working with the country's six major refrigerator makers to take advantage of the CFC phase out as an opportunity to improve their products' energy efficiency. TERI and IIEC are now developing an action plan for revising existing Bureau of Indian Standards (BIS) requirements for refrigerators and initiating an energy labelling scheme. Some energy utilities have also indicated their willingness to work with refrigerator manufacturers on demand-side management initiatives. A 30 per cent efficiency increase would be possible if all refrigerators adopted current best practice.

Tourism



The Issue

Tourism, an amalgam of service sectors from transport to hotels, guided tours to restaurants, is now the world's largest industry, accounting for over 10 per cent of world output and providing direct or indirect employment for well over 200 million people. International tourist arrivals grew by 3 per cent each year at the start of the 1990s, and are projected to grow at an annual 5 per cent until 2000. Currently, 15 of the top 20 tourism earning countries are in developed countries, who hold a 60 per cent market share of income between them. The five leading destinations in developing countries in terms of numbers of international arrivals — the Caribbean, China, Malaysia, Mexico and Turkey — have an income share of just over 11 per cent.

Many developing countries view tourism as a high potential sector for future foreign exchange earnings. But there is increasing awareness that tourism development has brought numerous social, economic and environmental costs.

Tourism can suffer from the same problems as other commodities, with low prices for operators in developing countries. Tourism can generate many environmental impacts linked to the location of tourism facilities (for example, in fragile coastal areas), the use of resources and generation of waste and the associated transport infrastructure.

There can also be social costs, with poorer communities excluded from the benefits, and local values and cultures challenged by tourists and tourism companies. There is increasing recognition that to be sustainable, tourism must take place as part of an integrated development approach, protect the environment and provide benefits to local communities which give them the incentive to invest in the future.

Tourism is also a highly dynamic and competitive sector. Countries and enterprises that wish to retain their markets must anticipate rather than react

to market trends. Amongst the major evident trends, are an increase in the importance of the environment and culture of a destination in attracting tourists and growing emphasis on quality, and not just price.

Making Tourism Sustainable

Although tourism can be highly diverse, two broad types can be distinguished: mass tourism and alternative tourism. Efforts are now being made to make both sustainable, and find new synergies between them (see Box below).

Mass tourism makes up the bulk of today's industry, characterised by all-in package holidays. Consumers buy on the basis of price and what the package offers them, rather than location. In recent years numerous guidelines and codes of conduct have been produced within the tourism industry to reduce environmental impacts. For example, the International Hotels Environmental Initiative, and regional groups such as the Caribbean Hotels Association, have produced guides on environmental management in large and medium-sized hotels. But it is still too early to tell whether these initiatives have been effective in promoting positive changes. Regular monitoring and independent verification of results remains rare.

Alongside the mass tourism sector is the alternative tourism sector, comprising a range of activities such as trekking/hiking, scuba diving, animal watching and cultural holidays. While mass tourism is essentially market-led, alternative tourism is asset-led, and attracts tourists through the specific and unique character of the areas they visit. The term 'eco-tourism' is often applied to the subset of alternative tourism based on animal watching and visits to National Parks and wilderness areas. In the alternative tourism sector, efforts to move towards sustainable practices have focused on the importance of ensuring that tourists adopt responsible environmental and social behaviour in the places they visit, such as Tourism Concern's Himalayan Trekking Code.

There is a general consensus that alternative tourism is growing at between 5 - 10 per cent per year, more than double the sector

Sustainable Tourism

The goal of sustainable tourism applies as much to mass tourism as alternative tourism. According to the World Tourism Organisation, "*sustainable tourism development meets the needs of present tourist and host regions while protecting and enhancing opportunity for the future. It is envisaged as leading to management of all resources in such a way that economic, social and aesthetic needs can be fulfilled, while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems.*"

Key requirements for putting this into practice include:

- carrying capacity studies;
- systems of effective planning and operating controls;
- long-term, local tourism management strategies and plans;
- cooperation from the tourism private sector;
- participation of local communities, and of tourists themselves.

Changing demand drives diversification

Case Study 4: Jamaica

Background

Tourism is Jamaica's largest foreign exchange earner, now outranking traditional sectors such as agriculture and mining, and representing 34 per cent of total export earnings in 1994, up from 17 per cent in 1980. Tourism is also the country's largest employer, with an estimated one in four of the island's jobs depending directly or indirectly on tourism. Around 90 per cent of Jamaica's tourism infrastructure is Jamaican-owned, although the proportion of the capital structure controlled by Jamaicans is slightly lower.

The Caribbean is known primarily as a 3S (sun, sea and sand) destination and exhibits many of the environmental and social impacts associated with mass tourism. In Jamaica, mass tourism to 'all-inclusive' hotel resorts along the north and west coasts is dominant. Although this depends ultimately on protection of the coral reefs and marine environment which attract most tourists to Jamaica, damage has occurred in the past.

Increasingly, visits to alternative tourism attractions are becoming an important feature for tourists holidaying in Jamaica's 'all-inclusive' hotels, or visiting on cruise ships. Alternative tourism in Jamaica is a mix of nature-based tourism, hiking, scuba diving, sports, and cultural tourism to heritage sites and music festivals. These forms of tourism also depend on protecting the integrity of Jamaica's environment and cultural identity.

average. The World Tourism Organisation estimates that a mass tourism:alternative tourism ratio of 90:10 is likely to be the maximum achievable. Although small in proportion, this market is huge in financial terms. One estimate in 1989 put the value of environmentally sensitive travel and eco-tourism world-wide at around US\$160 billion, excluding transport costs.

Furthermore, a large part of the alternative tourism resource is potentially located in developing countries. While only about 25 per cent of international tourism is to developing countries, these countries may attract a significantly higher proportion of alternative tourism.

Jamaica's tourism industry has become increasingly aware of the social and environmental issues that affect the quality of their tourism product. The country's 1995-96 State of the Environment report recognised that "*tourism-related activities often have severe environmental impacts, which could reduce Jamaica's ability to sustain its reputation as a tourist destination*" and stated that "*long-term environmental protection must become a priority of the sector.*" Social problems include the lack of spill-over of the economic benefits of tourism into wider society, as the 'all-inclusive' approach means that visitors spend little in the local economy during their stay.

The critical question for tourism in Jamaica is whether it can respond to changing trends in a highly global competitive market, as growing numbers of older tourists, family-orientated tourists, and seasoned travellers search for alternatives to conventional 'sun, sea and sand' vacations. Environmental and social aspects of destinations are increasingly important for marketing tourism to these groups.

These issues crystallised in May 1995, when a cross section of NGOs, private sector tourism companies, academics and government ministers and agencies convened a conference on Sustainable Tourism in Jamaica. The conference recognised the vital importance of a new approach that balanced mass and alternative tourism, as well as ensuring that tourism contributed more equitably to development across Jamaican society.

Jamaica's recently launched National Industrial Policy, reflects this new consensus across the island's tourism sector, and sets twin goals of diversifying the sector and moving to higher levels of value-added by the year 2000.

Achievements and Challenges

Action is now being taken on three fronts by the government, the private sector, communities and NGOs to realise these objectives:

- Establishing a supportive policy framework;
- Developing alternative tourism so that supply matches rising demand;
- Greening the mass tourism sector.

A Supportive Policy Framework

Diversifying Jamaican tourism with the alternative tourism sub-sector as a major part of this will require investment and coordination. Although the way diversification proceeds will ultimately be determined by market forces, the government is putting in place a policy framework that steers private investment towards the goals set out in the National Industry Policy.

The government is committed to a near-term infrastructure programme targeted toward the tourism industry to deal with problems of inadequate roads and sewerage infrastructure. In addition, the Natural Resources Conservation Authority (NRCA), which is responsible for licensing new tourism developments and ensuring that environmental impact assessments are carried out, is developing guidelines for appropriate and sustainable tourism development, in consultation with stakeholders.

Alongside this, the Tourism Product Development Company (TPDCo) is carrying out environmental reviews of hotels to establish current performance levels and, based on this, will set priorities for improvement and training. Environmental audits will follow once the reviews are complete, and will be compatible with ISO 9000, the International Standardisation's Organisation standard for quality management. TPDCo is also developing procedures for audits and environmental impact assessments to establish the carrying capacity for tourism in different areas. Mary Helen Reece of TPDCo says

"We are planning for eco-tourism and are also initiating an annual programme of Environmental Training Workshops for 120 private sector managers of hotels and attractions each year."

Finally, the Jamaican government agency responsible for attracting and assisting with inward investment, JAMPRO, is introducing incentives for tourist attractions and alternative tourism products, including the exemption of capital expenditure from General Consumption Tax (GCT). *"Our goal is to change the tourism product and the perception of that product"* explains Paul Smith, JAMPRO's Director for Tourism.

In the private sector, the Jamaica Hotel and Tourism Association has launched the Tourism Action Plan to stimulate quality improvement. Another promising private sector proposal is the establishment of an Endowment Fund, with contributions coming mainly from the private sector, to support development of alternative tourism in Jamaica.

Developing Alternative Tourism

There is agreement among key players in the Jamaican tourism industry that future development should follow a different path from the mass tourism of Jamaica's north and west coasts. Port Antonio on the east coast, and the central and south coast regions are regarded as being ideally suited to alternative tourism - tourism is fairly new to them, and as a result, tourism infrastructure is not fully in place. As Charles Swaby of Black River Safaris comments *"The alternative tourism product needs less development, and is also aimed at a slightly different market to that of the north coast."*

Black River Safaris, which operates boat trips to view crocodiles and birds through Jamaica's premier wetland, is an example of this in practice. The Black River is just one of Jamaica's alternative tourism attractions. Survival of this ecosystem and the river safaris it supports, provides the basis of an estimated 20,000 jobs in the tourism industry, directly or indirectly, from the tour guides, local hotels and restaurants, to bus drivers and operators who ferry cruise ship tourists from the north of the island to visit the Black River.

Proposals for nature-based tourism are also seen as an important part of plans for



protected area management and revenue generation, such as those being developed by the South Coast Conservation Foundation. Hiking and other tourist activities are already important in the Blue Mountain/John Crow Mountain National Park, which currently receives around 30,000 visitors a year, and where there is potential to increase visitor numbers considerably, through development of new trails, increased trail maintenance, and visitor management systems.

A critical issue is to ensure that the income from tourism will be able to offset the

integration of tourism with other local economic activities, and will be used to raise interest amongst potential investors.

The private sector is also moving to provide 'one-stop' shops for people who want an alternative tourism vacation tailored specifically to their requirements. One example is Countrystyle, which is building up networks of small hotels, attractions and other service providers, offering visitors an experience of a different side of Jamaica. Enterprises like Countrystyle not only help market Jamaica's diverse tourism resource, but also help integrate tourism firmly with other parts of the economy. "We've set up a system to organise community tourism facilities, and the people themselves produce the products for the tourist," says Diana MacIntyre-Pike, Countrystyle's Managing Director.

Greening Mass Tourism

Given the scale of existing mass tourism investments in Jamaica's coastal areas, greening this sector is of central importance. Pressure for this often comes directly from tourists who are concerned at the decline of coral reefs, who desire unpolluted sites for scuba diving, or who wish to have excellent water quality at bathing beaches.

The Caribbean Hotels Association (CHA) has produced an environment guide for hotel management as part of a programme to encourage improved environmental performance by its members, and particularly large hotels in the region. This programme covers all aspects of hotel operations, including energy use, water use, sewage disposal, and waste reduction. The Half-Moon Hotel at Montego Bay employs a full-time environmental officer, and as well as treating its own sewage, has established a recycling programme. It is one of four Caribbean hotels which have won the CHA's award for environmental performance.

In Montego Bay, tourism and much of the rest of the economy is entirely dependent on the marine environment and the bay's coral reef, which protects it against storms and stabilises the coast. As well as being commercially important for fishing, the reef is the source of the white sand which attracts so many tourists. If the coral is destroyed, so too is the tourism resource and the economy. To protect this asset, a

impact of increased visitor numbers, and the need for greater management in protected areas. As Pauline Stuart, who operates the Crystal Spring Lodge near Port Antonio and Maya Lodge in the Blue Mountains says "Alternative tourism must have a protective component so as not to destroy the resource on which it depends."

Elsewhere, local organisations, such as the Bluefields Community Peoples' Association (BCPA), representing a widely-dispersed community of about 7,000 people in the south-west of Jamaica, are also actively investigating the way tourism can be part of local social and economic development. Terry Williams of the BCPA explains "Bluefields will be discovered for tourism and developed. But it should serve the people not only the visitors. We want to stop tourism submerging local identity." A tourism masterplan is being developed based on what people in Bluefields want, and this should help set out some real possibilities for the community. The plan will be based on



Horsetrekking in Jamaica

Marine Park was set up in 1990 through the actions of scuba dive operators and hotel owners, concerned about threats to the coral reef and water quality. Fishing, boat anchorages and water sports are now restricted to zoned areas, and the park is an important catalyst for improved waste management and sewage treatment in the Montego bay area as a whole.

Similar concern has grown up in Negril, where the Negril Coral Reef Protection Society started by scuba dive operators, has built up strong community support. The Negril Chamber of Commerce has had a strong environmental focus from its outset, and is concerned that the area could become overdeveloped, and that such development would outstrip water supply and sewage treatment capacity in the town and its surroundings.



Case Study 5: Senegal

Background

Tourism has become Senegal's second source of foreign exchange after fishing and ahead of peanuts, the main agricultural resource. In 1995/96, Senegal received 390,000 tourists, and earned record net receipts of 78.7 billion CFA (approximately US\$15 million), up from 53 billion CFA in 1994. This boom in the tourist sector has resulted from devaluation of the CFA franc by 50 per cent during 1994. In response, the authorities have decided to make tourism a focal sector, with the aim of achieving 1.5 million tourists in 2000.

Alternative tourism, based around the country's rich culture and diverse wildlife will be central to achieving such goals. Already alternative tourism accounts for 22 per cent of all foreign tourist arrivals to Senegal. The Senegalese Government has long pursued policies to support alternative tourism, through its programme for *Tourisme Rurale Intégré*. Key features of this programme are:

- decentralisation of tourist activities;
- distribution of infrastructure between rural and urban areas;
- empowerment of local populations to become involved in the definition of local development programmes and in generating their own investment;
- reduction of migration of young people from rural to urban areas;
- revitalisation of rural habitats.

Achievements and Challenges

Campements Villageois are well-established examples of the *Tourisme Rurale Intégré* approach in practice. They offer a way for rural populations to gain from tourism, while safeguarding the fundamental values of their communities

and lifestyles. They appeal to a growing number of tourists from developed countries, and have inherently strong linkages into the local economy. The Campements represent around 10 per cent of the alternative tourism sector in Senegal.

Campements Villageois are based on autonomous initiatives by local populations, who plan, build, operate and manage them themselves. Campement staff are drawn from village residents and are changed each year, while major decisions are open to the whole village. A small department of the Ministry of Tourism is charged with coordination of tourism in Campements Villageois.

In terms of the financial benefits for local populations, the Campements are regarded as the most successful economic development project in rural Senegal. Between 1974 and the present day, a total of 400 bed spaces have been created in 19 Campements Villageois for a cost of around 75 million francs CFA (approximately US\$140,000) in investment by villages. These investments have generated revenues that have allowed villages to invest in construction of dispensaries, to set up fishing projects, or to open a metal working shop. Salaries for Campement staff are estimated at 19.5 CFA francs (approximately US\$37,000) annually, while receipts from tourists total around 74 million CFA francs (approximately US\$138,000) each year.

A number of private tourism developments are starting to adopt a similar approach to the Campements, using local materials in local architectural styles, and placing emphasis on an interaction with the local culture and environment. Private developments offer a wider range of activities, including wildlife trips, sport

Campements Villageois brings revenues to rural areas

Eco-tourism in Dominica

Eco-tourism opportunities in the Caribbean are constrained by limited land base, high density of population and extensive degradation. In addition, the Caribbean islands are not as biologically diverse as the mainland countries (eg Costa Rica, Belize) or as other isolated islands (eg Galapagos, Madagascar). Dominica used to be the poor relation of Caribbean Island destinations due to political instability, lack of infrastructure and unsuitability for 'sun, sea and sand' mass tourism owing to its physical geography - mountainous terrain, heavy forest cover, lack of white sand/turquoise sea beaches. In tune with the emergent environmental movement of the early 1980s, the Dominican government opted for a tourism industry based on small scale, nature-based tourism and the island is now marketed as "The Nature Island of the Caribbean". The number of tourist arrivals almost doubled from 22,000 in 1970 to 43,000 in 1990, some 50% of which attributed at least some significance to eco-tourism. Tourist accommodation facilities remain very much a domestic concern, almost all of Dominica's 17 hotels and 21 guest houses in 1994 were owned by Dominicans. Amongst these is the Papillote Wilderness Retreat which won third prize in the 1994 Islands Magazine eco-tourism awards.

hunting and fishing, and water sports, and a higher level of comfort for tourists than the Campements.

Despite these achievements, the Campement Villageois initiative still faces problems. As they are not part of an organised sector, there is a lack of legal structures to provide the basic framework for establishing and managing the Campements. The Ministry of Tourism is planning to set up a federation of Campements to improve both management and coordination of their activities. Key areas for support and training include management, hygiene and sanitation, and culinary skills. A further problem is that some of the Campements Villageois are remote, and the roads leading to them are poor. Government investment is needed to improve the local infrastructure for tourism.

Lessons for the Future

In a highly competitive and fast-moving international market, tourism in developing countries needs to adapt in the face of changing patterns of demand. These case studies have shown that the routes to successful and sustainable tourism include a supportive framework at the national level, mechanisms for integrated planning and land use, incentives for diversification and initiatives to raise and maintain quality. All these require new relationships, bringing together strategy makers with all parts of the tourism sector, big and small, mass and alternative, hotels, attractions, tour operators, and transport providers.

To make sustainable tourism and diversification strategies work,

governments need to have as strong a commitment to alternative tourism and environmental protection, as well as to effective coordinating mechanisms, as they have shown towards the mass tourism sector. For example, the siting of tourism facilities can have long-term environmental and economic consequences, and such challenges can only be satisfactorily resolved through strong integrated planning and involvement of local stakeholders. The keys to this are a proactive national tourism strategy, based on knowledge of natural and cultural resources, impact assessments that evaluate projects within the context of the whole region, and measures that ensure that tourism development remains within national and local plans.

Alternatives to conventional mass tourism clearly have an important role to play as part of a strategy for diversification, especially in developing countries. Alternative tourism products need less development and investment, and also can be focused towards differentiated, niche markets. This can provide countries with a competitive edge, based on their particular culture and environment, that contrasts with the uniformity of much of mass market tourism. Along with the diversification of tourism, it is also clear that links between tourism sub-sectors, and between tourism and the rest of the economy, need to be strengthened. Mass tourism and alternative tourism can complement each other, and are not exclusive. Both depend on protection of the environmental and cultural resources of destinations. These relationships can also help foster innovation and anticipation by the tourism sector as a whole in a rapidly moving global market.

Quality has always been a significant issue for tourism. The concept of quality has now expanded to include the effects of tourism developments on the wider environmental and social surroundings. A range of different environmental codes of conduct and management standards now cover many areas of tourism. To be both effective and credible, these standards need to be subject to some form of independent verification and public reporting. The precise form of this may depend on local circumstances, but should involve representatives of all parts of the tourism sector, as well as of local communities and government.

Agricultural Commodities



The Issue Agriculture has long been the mainstay of South-North trade flows. Between 1970 and 1994 exports of foodstuffs from developing countries increased more than sevenfold from US\$ 16 billion to US\$ 117 billion, accounting for 31 per cent of global trade in foodstuffs.

However, demand for primary commodities has lagged behind that of other products and there has been a long run decline in the real prices of many commodities such as coffee and cotton. This has very serious consequences for developing countries, who are far more dependent on exports of primary commodities than their Northern counterparts: the majority of developing countries rely on primary commodities for more than 50 per cent of their exports.

Commodity markets are also highly volatile and subject to intense speculation. For small producers this results in highly insecure livelihoods, facing bankruptcy when the price falls and reaping few of the benefits of higher prices, most of which go to intermediaries and traders.

As agriculture has intensified over the last few decades so too have the environmental impacts. Concern about problems such as soil erosion, pesticide contamination, soil and water pollution and reduction in wildlife has led to increasing interest in more sustainable agricultural production, both from producers concerned about their environment and working conditions and from consumers concerned about their health.

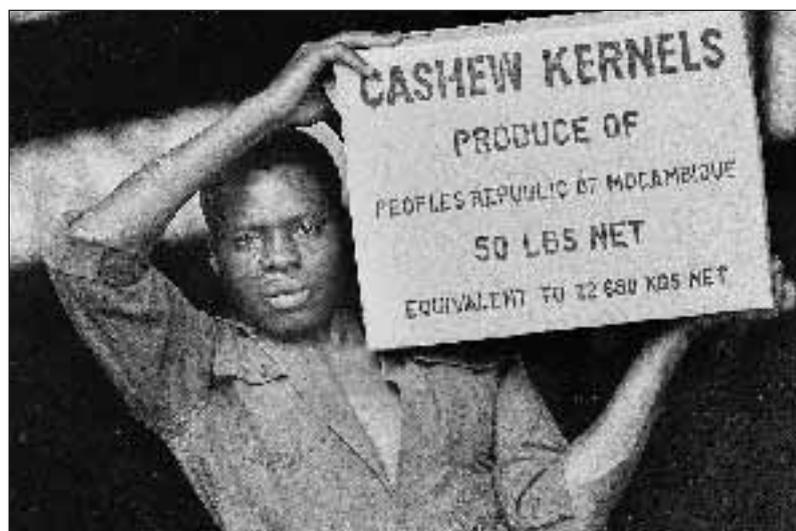
There are various forms of more sustainable and environmentally friendly agriculture, from techniques such as integrated pest management through to biodynamic agriculture which requires cultural as well as production changes. Although these differ in the extent of

Organic Agriculture

Organic agriculture is considered one of the most environmentally friendly forms of agricultural production. No synthetic external inputs are allowed. Instead farmers use natural methods of pest management such as intercropping and encouraging natural predators and aim to increase the long-term fertility of the soil through the use of organic fertilisers and appropriate cultivation methods. Many subsistence farmers are organic by default but to be able to label produce as organic (and receive any organic premium) requires assessment by a certification body affiliated to the International Federation of Organic Agriculture Movements (IFOAM). Organic is the only type of 'sustainable agriculture' which has an internationally recognised, independently assessed label. This is a key factor in its credibility, its success and in the payment of organic premiums of between 50 and 200 per cent.

changes that are required from intensive agricultural methods, most demand a reduction in the use of synthetic external inputs such as fertilisers and pesticides.

The following case studies look at three agricultural commodities whose producers have often received a raw deal, coffee, fruit and cotton. The cases illustrate how



Agriculture is a key component of South-North trade flows

producers have developed export opportunities on good terms, through working with fair trade organisations and/or improving the environmental sustainability of their production.

Coffee

Coffee is the most important traded commodity after oil and is the main export for a large number of developing countries, making up over 50 per cent of exports from some countries.

Three-quarters of all coffee produced world wide is exported, the majority from

many years but received a major boost with the development of recognisable fair trade marks, awarded for coffee which meet clear criteria (outlined in the Box). These were first established in 1988 by the Dutch ethical trading organisation the Max Havelaar Foundation and are now used by fair trade organisations such as Transfair and Fairtrade throughout the industrialised world.

These organisations identify and work with producer groups (currently around 250), promote the sales of fair trade coffee, monitor the coffee buyers and roasters and guarantee that labelled products meet the criteria. Importantly it is the ethical trading organisations, not the producers, who bear the costs of inspecting the producers and making sure that they meet the criteria.

In 1995 approximately 14.8 million kilogrammes of green coffee, 0.3 per cent of the market, were sold under fair trade conditions. Although around 10 per cent more expensive than other coffee, fair trade coffee has now captured 2-5 per cent of most industrialised coffee markets (see Graph) and is available in a high proportion of mainstream outlets, for example 90 per cent in the UK. The leading exporters of fair trade coffee are Mexico and Guatemala, followed by Costa Rica.

Criteria for Max Havelaar/ Transfair/Fair Trade Coffee

To be able to label coffee with the fair trade mark the coffee buyer or roaster must pay a licensing fee and meet the following criteria:

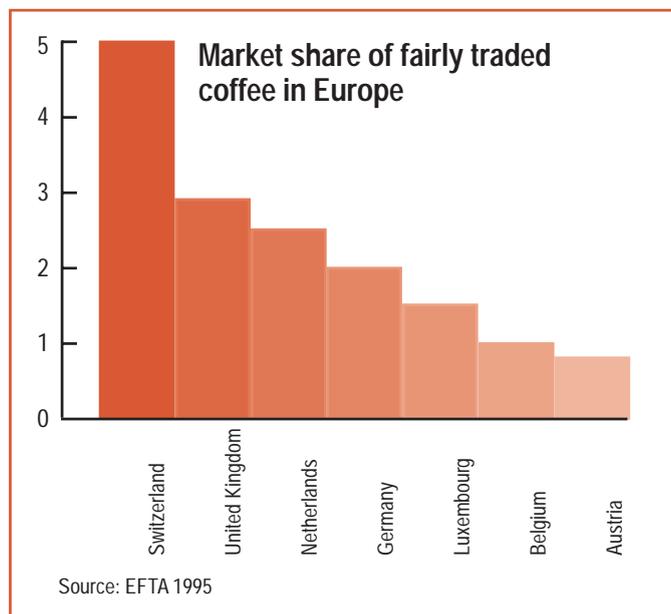
- Purchase all green coffee directly from producer organisations listed in the International Fair Trade Coffee Producers' register.
- Fix the purchasing price in accordance with the standard conditions of trade set by the fair trade organisation including a minimum price for the coffee. A premium of 5 cents per pound of coffee and 15 cents per pound for organic coffee must be paid if world prices are greater than the minimum prices set.
- Facilitate access for coffee producers at the beginning of the harvest to crop finance at Fair Trade conditions, at regular international interest rates for up to 60% of the value of the contracted coffee. The credit will be cancelled on shipment of the coffee. Contracts should be long term (one to ten years).
- Accept and facilitate external control on the compliance with these conditions.

To be listed on the Fair Trade Register, producers organisations must meet a number of criteria, including:

- Be independent and democratically controlled by its members, the majority of whom are small scale coffee producers.
- Be open to new members and ban any form of discrimination.
- Be committed to improving the quality of their coffee, diversification of production to reduce dependence on a single crop, social development and sustainable production techniques which respect ecosystems, use natural resources sustainably and minimise the use of chemical inputs.

family owned farms in developing countries to markets in developed countries. With a very volatile price and between 20 and 25 million people dependent on the income that they earn from its production, coffee is a prime target for fair trade. Indeed coffee, and to a lesser extent, other hot beverages, are the most successful fair trade products, excellent examples of what can be achieved by partnerships between producer organisations in developing countries and ethical trading organisations in developed countries.

Fair trade initiatives for coffee have existed for



Case Study 6: Coocafe, Costa Rica



Fair trade brings social and environmental security

Background

Coffee accounts for one-fifth of Costa Rica's exports, generating 28 per cent of total export earnings on average. Despite its high productivity, Costa Rica is just as subject to the volatility of the coffee markets as any other coffee producing nation. Coocafe (Consortio de Cooperativas de Caficultores de Guanacaste y Montes de Oro R.L.) was formed in 1988 in response to a financial crisis amongst coffee producers and provides marketing, economic and social support to eight co-operatives with a membership of 3,500.

Coocafe currently produces 3 per cent of Costa Rica's coffee production, 75 per cent of which is exported. Coocafe is listed in the International Fair Trade Coffee Register and all its exports are sold through fair trade organisations such as Fair Trade Organisatie in the Netherlands, GEPA in Germany and Twin Trading in the UK. The co-operatives initially received funding and technical advice from the German based Friedrich Ebert Stiftung (FES) who also funded an agricultural consultancy to provide them with advice on converting to organic production.

Achievements and Challenges

Coocafe's fair trade sales have grown rapidly, almost doubling from 1 million kilogrammes in 1991 to 1.9 million kilogrammes in 1996 and Coocafe beans are used in a variety of products including Cafedirect in the UK (see Box).

For producers, selling their coffee through fair trade

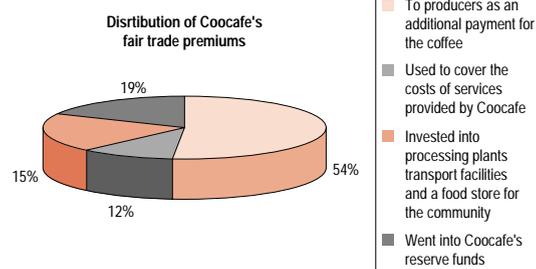
organisations has led to significant benefits. Not only is the price higher but their market is much more secure. This has made a substantial difference to co-operative member's lives. In 1995/96 the fair trade premium for the 2 million kilogrammes of coffee exported was US\$

267,428 in total, which was used to fund social projects including education

initiatives and women's development. One Coocafe co-operative purchased a private farm and distributed the land in an effort to stem rural-urban migration. The chart below shows how the typical

Cafedirect: an Instant Success

Cafedirect is a brand of fair trade coffee which is now sold in over 1,700 supermarkets in the UK. It was developed by a partnership of four trading organisations, Twin Trading, Oxfam Trading, Traidcraft plc and Equal Exchange with the aim of building an easily recognisable brand of fair trade coffee



which would be generally available through mainstream outlets and which consumers would find it easy to switch to. Sales have increased dramatically over the last five years and Cafedirect now has a 3 per cent market share by value for roast and ground coffee and 2 per cent of the instant market. It is the third best selling brand of coffee in Safeways, one of the UK's leading supermarket chains, despite being 10 per cent more expensive than its conventional competitors. 14 producer organisations in Mexico, Costa Rica, Peru, Nicaragua, the Dominican Republic, Uganda and Tanzania, supply the coffee which is blended to form Cafedirect. Prior to their involvement in Cafedirect many of these producers had sold their coffee at the farm gate or to nationally based traders of international corporations. In the last two years the number of people in coffee growing families involved with Cafedirect has risen from 200,000 to 460,000.

premium from Cafedirect sales has been used by Coocafe.

Fair trade has also brought environmental benefits. Ethical trading organisations

encourage the producers that they work with to improve the sustainability of their production and reduce the use of external inputs. In the case of Coocafe, the stability and extra income resulting from fair trade has enabled them to begin converting to

organic production. The first organic coffee will be available in 1998/99 and

"If it had not been for the fair trade buyers it is likely that we would have had to give up this business altogether. There are many coffee growers in this area who could not go on as the price they were paid was not enough to cover the cost of growing and preparing it". Miguel Molina Barrantes, Coocafe.



Ethically Traded Tea

The status of fair trade tea has less firm foundations than that of coffee. 60 per cent of tea is consumed in the country of origin and while small-scale producers make a significant contribution to tea production (in Sri Lanka, over half the tea is cultivated by small farmers), tea is more typically characterised by large-scale plantations and processing, often owned by multinational companies. 90 per cent of Northern trade is in the hands of seven multinational companies. Despite this, there are some 30 tea estates which are run along fair trade lines. GEPA, the German ethical trading organisation has the longest history in fairly trading tea, particularly from India and Sri Lanka, the two largest tea exporting countries. Largely due to its influence, approximately 3 per cent of the German tea market is fairly traded, compared to less than 1 per cent of the (£526 million, 112,000 tonnes) UK market. Ten years ago Stassen Natural Foods (SNF), a private Sri Lankan tea company started an organic tea project at the suggestion of GEPA. Zaki Alif, the SNF marketing director said *"When GEPA first came to us with the idea, the concept at first looked disturbing and risky to us."* However, work with the Sri Lankan Tea Research Institute overcame technical concerns and GEPA has purchased DM 14 million worth of organic tea from its partners in India and Sri Lanka. The income generated from the organic tea project has allowed investment in social development in the area, DM 350,000 in 1996/97, including funding of health care, creches, pre-schools and a community centre and housing project.

their entire production should be organic three years later. The decision was taken as part of a long term economic and marketing strategy and based on financial

"Producing coffee in this area is very difficult. Fair trade has helped us develop projects to keep producers in the area. Its trade has also helped us introduce measures to protect the environment which are expensive to implement and which one way or another will improve our standard of living." William Zuniga, Coocafe.



CAE/DIRECT

considerations (the premium for organic beans is 15 cents per pound) as well as environmental and health and safety reasons.

Similarly, initiatives with producers of other beverages, such as tea and cocoa which originally aimed to improve their economic and social conditions have also resulted in environmental benefits as these producers convert to organic production.

Lessons for the Future

The hot beverages market is the market which fair trade brands, particularly coffee, have penetrated most successfully. What seem like fairly small percentages of the market represent a significant success,

supermarkets routinely fight it out for such market shares and translate into large monetary values. A 1 per cent share of the European Union's food, drinks and tobacco market in 1993 was worth 4.6 billion ECU (US \$5.3 billion).

Trading under fair trade conditions has brought social and environmental benefits, increasing incomes and livelihood security for a large, and increasing, number of producers and their dependents. In many cases fair trade has been the catalyst for

converting to organic production.

Ethical trading organisations have been crucial to the development of fairly traded coffee, both supporting producers and providing a gateway to developed country markets. They have also played a key role in stimulating demand through raising consumer awareness and by working with each stage of the supply chain to provide a quality product to retailers. Awareness about social and environmental impacts of consumption is at an all time high in developed countries and interest in buying fairly traded and environmentally friendly and organic produce is increasing, particularly as these become available in mainstream outlets.

Ethically Traded Cocoa

El Ceibo is an umbrella organisation for 36 member co-operatives in Bolivia which was founded in 1997, with the aim of loosening the grip of middlemen and allowing members to take control of the marketing and processing of their cocoa. It became the first producer co-operative in the world to manufacture its own cocoa products. Its major link to the European fair trade movement is the Swiss ethical trading organisation, OS3 which buys 200 tonnes per year from El Ceibo, insuring it against the vagaries of the market. In 1987, El Ceibo began to convert to organic production. By 1995, two-thirds of its members were producing organic cocoa and in the near future its entire production should be organic.

Fruit



In recent years the fastest growth in traded foodstuffs has been in horticultural goods; fruits, vegetables and flowers. This is not surprising since, on average, they fetch three to four times the price of grain. However, concern about the impact of intensive horticultural cultivation, particularly pesticide contamination, has led to the development of a lively and growing organic sector in developing countries.

The development of this sector has been supported by increasing demand in developed country markets for organic food. In Japan this market (1 per cent of the total food market) is worth some US\$ 1 billion per year whilst the US market, valued at nearly US\$ 3 billion in 1995, is growing at over 20 per cent per year. The EU market was estimated at nearly 3 billion ECU (US \$3.5 billion) in 1993 with the German market (which currently accounts for over half of European organic sales) expected to reach DM 3-5 billion (US\$ 2-3 billion) within the next five years. Half of this market will be met by imports. Certain sectors are well on the way to becoming entirely organic; more than 50 per cent of the baby food sold in jars on the German market is organic and the leading baby food manufacturer there, with 1,000 employees and a turnover of DM 50 million (US \$30 million) is over halfway to using exclusively organic raw materials.

The original consumer outlets for organic food (farmer's markets, on-farm sales and mail-order) have been joined by health food stores and, more recently, by supermarkets. Over 70 per cent of Danish organic sales are now from supermarkets and the International Federation of Organic Agriculture Movements (IFOAM) states that *"Some serious market estimates expect that in years to come up to 20 per cent of the total Danish food market can be supplied with organic products"*. In Austria, where 10 per cent of agriculture is already organic, the sector is forging new relationships with multinationals. Large Japanese trading houses, such as Nissho Iwai and the Sumitomo Corporation, are also becoming interested in organic produce. As Tom Harding of AgriSystems International reports: *"Organics have grown out of their niche and taken on the status of a trend."*

According to the UK's Soil Association, consumer demand for organic food is at an all time high, driven by personal health concerns and food scares. As with other fast growing environmental markets, the interest in organic produce has led to a shortfall in supply. For the past eight years, the British company, Organic Farm Foods has been importing *"enormous quantities of organic fruit and vegetables from five continents"* to meet the 70 per cent gap between demand for organic produce in the UK and domestic supply. A significant and growing share of Northern organic markets are now available to Southern producers, providing they are growing the right products. In total, it is estimated that Northern consumers currently spend US\$ 500 million on organic produce from developing countries, *over and above* what they would pay for conventional foodstuffs.

The Organic Sector in Latin America

Mexico is one of the great developing country organic success stories, characterised by producer co-operatives and associations. Most of the 10,000 organic farms are small holdings covering just 15,000 hectares in total. The main product is coffee, but fruit (apples, coconuts, bananas), honey, sesame, corn, medicinal plants, potatoes, cocoa, avocados and cardamom are also produced organically. Total sales of organic goods, including exports, are estimated to be US\$ 500 million.

In recent years, Argentina has dramatically increased its organic production, with sales rising from US\$ 1.5 million in 1991/92 to a projected US\$ 20 million in 1995/96 from 150,000 certified hectares. The wide range of products includes beef, milk, cheese, chicken, olive oil, spices, cotton, raisins, dried plums, apples, pears, onions, sunflowers, cereals, maize, garlic, honey, berries, tea, juices, confectionery, textiles and *mate*. Argentinian fruit production has been particularly successful with 'difficult' (pest prone) produce like apples and pears. The Movimiento Argentino para la Producción Orgánica (MAPO) and the Instituto Argentino de Sanidad y Calidad Vegetal (IASCAV) have both proved to be effective unifying forces, enabling the country to tackle European red tape head on. By requesting equivalency status for its certification system, Argentina was the first developing country to obtain a place in the

EU provisional list and IASCAV believes that this gave Argentina a crucial early start in penetrating the European market. Argentina also has a healthy domestic consumer market, promoted by a 5,000-circulation magazine *Mundo Orgánico*.

In contrast, the organic sector is only just beginning to emerge in Chile. The case study below looks at the role of exports in the development of this sector, the achievements so far and the challenges that organic producers in Chile face.

Export demand drives organic growth

Case Study 7: The fruit sector in Chile

Background

Chile is an economic success story, fuelled largely by a massive increase in exports which now amount to some US\$ 16 billion per year. Fruit makes up one tenth of the total and is one of the most dynamic sectors with the value of exports rising sixteen fold between 1994 and 1997 and exceeding 150 million cases per year. Chile is now the largest exporter of fruit in developing countries sending a wide range of produce including table grapes, apples and pears, peaches, avocados, citrus fruits, berries and melons to North America (42 per cent),

farms, or parts of their farms, to organic production. The main driving force has been personal commitment to organic agriculture but few would contemplate the change unless they were confident that it was viable.

Chile itself only has a small market for organic produce. There are a few wholefood shops like Tierra Viva in the capital and some Chilean supermarket managers think that middle-class consumers may be willing to buy organic produce. This nascent market is unlikely to grow spontaneously, but increasing concern over pesticide residues, active support from government and NGOs could help to build regional demand. Until then businesses are content to rely on ready buyers and bigger mark-ups in developed countries where demand is growing rapidly.

Achievements and Challenges

The amount of organic produce exported from Chile has risen dramatically, from just 25 tonnes in 1992 to over 1,000 tonnes in 1995. There has also been a shift from relatively straightforward to more difficult (pest prone) produce: kiwi fruit has been a particular success, with asparagus and raspberries now becoming available, (see Box). Chile has also exported small quantities of dried organic apple and is researching pest and quality control for fresh apples and cherries. By the end of 1996, 19 farmers, with farms averaging between 100 and 200 hectares, and a co-operative of small producers had been certified, or were well into the process.

While the initial impetus for organic production came from individual farmers, the support that they have received along the chain has been crucial to the growth of the sector and the development of exports. FruSur, the main packing company in Chillán, provides valued extension advice to farmers on pest control and quality and ProChile, the state export agency has



STILL PICTURES

Fruit is one of Chile's most dynamic export sectors and organic exports are growing

Europe (35 per cent) and increasingly, Asia and the Pacific.

The environmental and social downside to this success is now becoming visible largely through the work of non-governmental organisations such as AGRA and the Instituto de Ecología Política (IEP), who have catalogued an alarming array of problems related to the use of chemical inputs, precarious labour conditions, rural poverty and the pollution and unsustainable use of soil and water.

Since the 1980s, a growing number of producers have begun to convert their



A Farmer's Conversion

Alejandro Jimenez owns a 110 hectare farm called Los Guindos in the central valley near Chillán. As well as growing traditional crops like beans and wheat, Jimenez is unusual among his neighbours for having five hectares each of asparagus and raspberries half-way through the conversion process to organic production. Initially, the response on the farm was *"El patrón está loco"* (the boss has gone mad), an understandable reaction when you consider that Los Guindos, like many farms in Chile, has no livestock to provide an on-farm source of organic fertiliser. Jimenez says he was motivated by three considerations: inescapable evidence of the contamination of the environment from conventional farming; the desire to produce healthy food; and better opportunities in the organic export market. *"I'll feel particularly good if organic production is kind to my pocket"*, he says two years later. Jimenez can expect the same price from the local processor FruSur for his raspberries for export as consumers pay for raspberries in the local market, an increase in income of around 20 per cent. With an eventual yield of up to 16 tonnes of raspberries a hectare, Jimenez can expect to make a good income from his raspberries, even after the heavy input and labour costs of fertilising, weeding, and harvesting.

Chile exports 20,000 tonnes of raspberries a year, mainly to the USA and Europe. Just two containers (40 tonnes) were organic in 1995, but Jimenez's crop alone, once established and certified, will treble this quantity. And with an average harvest rate of 25 kilogrammes a person a day, the raspberry patch is a major source of work on the farm compared to the traditional crops. The environmental benefits have been noticeable with a marked increase in wildlife. Future plans include expanding the asparagus beds to perhaps 20 hectares, and diversifying into other crops such as kiwis and cherries. So far, his neighbours have reacted cautiously. *"The main problem isn't the market - it's growing the stuff organically"*, says Jimenez. *"Once I've got everything going smoothly, then the other farmers will be impressed"*.

Source: Interview in December 1996.

ALEX MACGILLIVRAY



Alejandro Jimenez with his raspberries

sponsored seminars and brochures and encourages overseas representatives to investigate new markets. The domestic certification body PROA has been issuing certificates since 1990 and is affiliated to IFOAM, giving these international recognition and in 1996, Profo was set up to increase awareness and disseminate technical and commercial information among local farmers about organic production.

Developed country importers and wholesalers such as Organic Farm Foods, EOSTA in the Netherlands and the USA's CF Fresh have also played an important role, visiting Chilean producers and assisting them in product development and the certification process.

Shipping is a critical and costly part of the fruit supply chain. There are complex economic and geographical considerations even with just five major customers and three main products. According to Christian Stewart of the broker Comercial Fruticola SA in Santiago, fresh asparagus is fine for the USA or Europe but not for Japan because of the longer air freight times. Frozen organic produce is attractive logistically (and

environmentally) since it can be shipped rather than flown to all the main markets but the mark up is lower than on fresh produce.

Another major headache for organic exporters is the different regulations imposed by importing countries. Chile's organic kiwi fruit are accepted happily by Japan but the US Department of Agriculture requires their fumigation which destroys their organic status, along with the white spider which is the cause of concern.

Consumer confidence is essential in the development of environmentally sensitive markets and part of the success of organic agriculture is the relatively standardised certification system that has evolved. As IFOAM says *"A certification programme is absolutely necessary when organic products are sold to an anonymous market"*. However certification and accreditation are slow, laborious and costly processes and a particular challenge to small developing country producers.

A common solution is to form co-operatives to bring down the costs and to develop domestic certification systems. However, some costs remain as certification bodies

need to be internationally accredited by IFOAM. National legislation is required for full compliance with the European Union's Directive 2092/91, a hurdle that few developing countries, including Chile have managed to clear, even with otherwise sophisticated domestic arrangements.

While the environmental benefits of organic agriculture are significant there are still trade-offs. Many Chilean farms are not fully organic and cannot generate adequate on-farm fertiliser. Permitted off-farm fertilisers such as red guano may have to be transported large distances and cost considerably more than artificial fertilisers. Reliance on distant developed

workers. There are now a number of initiatives which aim to label fruit on both environmental and social criteria (see Box).

Lessons for the Future

The future looks promising for organic production in countries like Chile. Most producers and exporters are optimistic about prospects, farmers are expanding the acreage that is under organic production and Christian Stewart of Fruticola expects the organic share of his business to grow from around 2-3 per cent to 10 per cent of turnover. In many cases Southern producers are discovering that yields need not be lower than conventional ones, in contrast to the experience in Northern Europe.

Although conversion to organic has often been driven by the personal commitment of the producers there seems little prospect of a significant market for organic produce arising in developing countries in the next few years, so producers will remain dependent on demand in developed countries. This is at an all time high and continues to rise as increasing demand and availability reinforce each other. Much of the demand for particular products will continue to be met by developed country suppliers. However, there is likely to be increasing competition as more developing country suppliers come on stream who will also have to compete against developed country producers who have better access to the main markets and in some cases are supported by government subsidies.

Organic certification is a big advantage for producers, making their products recognisably environmentally friendly, resulting in the payment of a premium, however the process can be burdensome and costly and may be difficult for certain products. Therefore other credible labelling schemes, particularly those which combine environmental and social criteria such as the *oké* label for bananas (see Box) should also be considered.

Although premiums are crucial to see producers through the conversion process and the early years of certification, in the longer term organic producers can probably flourish on lower premiums, which will encourage domestic consumption. Long-term relationships between producers and retailers will also compensate.

Labelling on Environmental and Social Criteria: the Case of Less-Than-Organic Bananas

Organic agriculture is not always the most appropriate means of sustainable agriculture especially for pest prone fruits such as bananas produced in large plantation monocultures. Consequently, organic bananas have less than 1 per cent of the huge European and US market, resulting in a vicious circle of high prices, low consumer interest, lack of technical advances and economies of scale. Recently, a set of more achievable criteria were devised for 'greener' bananas, certified by the Rainforest Alliance and labelled ECO-OK. This label - also used for cocoa - promotes better-than-normal but less-than-organic produce. The scheme is sponsored by the largest banana producer, Chiquita. There have been predictable accusations about conflicts of interest, insufficiently high environmental guidelines and the absence of social standards. ECO-OK was not allowed as a trade mark in the European Union because legislation states that to use the word 'Eco' the product must be certified organic.

Learning from this experience, the Fair Trade Banana (*oké* banana) was launched in Europe in 1996 by the Max Havelaar Foundation. This scheme has both fair trade as well as environmental criteria, with growers receiving 40-70 per cent more for their fruit than through mainstream channels. Currently the bananas are only sold in the Netherlands, where they have 10 per cent of the market. The reasons for this success include a significant investment in producer support, consumer education and awareness-raising. In addition, the bananas are sold only through supermarkets at the same price as their conventional counterparts: traders have accepted reduced profits. There are also plans to launch fairly traded bananas in several major European markets over the next two years. Use of a reputable fair trade label has, perhaps, offered a way out of the less-than-organic impasse.

Source: Alistair Smith, *Banana Link*

country markets also creates significant transport impacts, particularly from air freight.

The social impacts are also uncertain. Without overt fair trade criteria, there is little reason for farmers to pass on premiums to field workers in the form of higher wages. On the other hand the lack of pesticides and the labour intensive nature of organic production translate into important health benefits and more dependable livelihoods for seasonal

Cotton



With nearly all of the world's population wearing some sort of cotton clothes every day, cotton is the most important natural fibre in the world. Predominantly grown by smallholders, its production and processing play an important role in the economies of many developing countries. But cotton is also associated with a high use of pesticides which can account for as much of 50 per cent of the total production cost. Impacts include soil and water pollution, effects on human health, loss of plant and wildlife diversity and increasing insect pest resistance which has become a serious threat to cotton production in many areas. The discovery of pesticide residues on some cotton clothes has also alarmed consumers.

Growing awareness about the impacts of intensive agriculture and increasing environmental concern led to a rise in interest in organic cotton during the 1980s. The early 1990s saw a surge in demand for organic cotton as large fashion houses

such as Esprit, GAP and Hennes & Mauritz tapped into the trend for more natural products and developed organic clothes lines. Sales of 'eco-clothes' rose from US\$ 20 million in 1992 to US\$ 80 million in 1996. However, as the trend faded, most of the fashion houses lost interest in organic cotton as quickly as they had gained it.

Although less than 1 per cent of the 19 million tonnes of cotton produced worldwide is currently organic, demand for organic cotton lint is growing in less trend-sensitive textile markets which should prove more sustainable. Some clothing companies are already blending organic with non-organic cotton, while companies such as Patagonia (see Box) have decided to use only organic cotton in their garments. Recent estimates put current sales of organic cotton at around 8,000 tonnes in North America, 5,000 tonnes in Europe and 2,000 tonnes in Japan.

SNAPSHOT

US Clothing Company Converts to Organic Cotton

Patagonia is a fast-growing outdoor clothing company, based in California which has taken an assertive stance on environmental and ethical issues since its foundation. The company started to introduce organic cotton for its products in 1991. Although the new products did not meet with much consumer interest, the company persevered, and in August 1994 the Board of Directors took the strategic decision to use only organic cotton, beginning with its Spring 1996 line. Rather than waiting for consumer demand, Patagonia judged that the negative environmental impacts associated with conventional cotton production warranted the change. According to Michael Brown, Head of Environmental Assessment at Patagonia, "Market research showed that relatively few customers bought our products purely for environmental reasons". The company had 18 months to convert approximately 80 products made by different suppliers in the USA, Asia and Europe.

One of Patagonia's partners in the initiative was a factory in Thailand, producing knit products, such as polo shirts. The Thai company had never used organic cotton before, but was "willing to try", says Brown. The transition to organic cotton production required a great deal of trial and error on the part of the mill, which eventually brought dividends. Brown argues that there have been rewards for both sides: "We've benefited from their sophistication and willingness to engage in development with us; they've developed expertise in organic cotton and other aspects of green textile production that may be marketable elsewhere". Patagonia reports buoyant sales of its organic lines. However, it believes they have sold well primarily for the traditional reasons why people were buying their products rather than the attraction of organic cotton. The firm hoped that other clothing manufacturers would follow its lead and convert their cotton lines to organic too. "But this has not happened" says Brown. Several major US sportswear manufacturers had organic cotton products in the past that failed in the marketplace, and are reluctant to try again. There is more interest, however, in Europe. The company has learned some important lessons from its experience with organic cotton. Yvon Chouinard, the company's founder, believes that Patagonia shows that "it is possible to apply our environmental principles and be successful". But environmental issues cannot be separated from providing high quality products, "Our customers wanted the value in our products that they had always sought from us: durability, performance, fit, timeless styling". For Chouinard, this suggests that "In environmental issues, corporations are out in front of consumer demand. Our challenge is to change customers perceptions of their purchase."

Case Study 8: Lango Co-operatives Union, Uganda

Background

Cotton is Uganda's second most important export crop after coffee, and almost all of the cotton is grown by smallholders who use few chemical inputs. In 1993, the Swedish International Development Agency (SIDA) identified the potential for Uganda to export certified organic cotton. The central and northern districts of Lira and Apac were identified as prime organic cotton producing regions, due to the presence of small black ants of the *Acantholepis* family which feed on cotton pests. The Lango Co-operatives Union was selected as the exporter for this area.

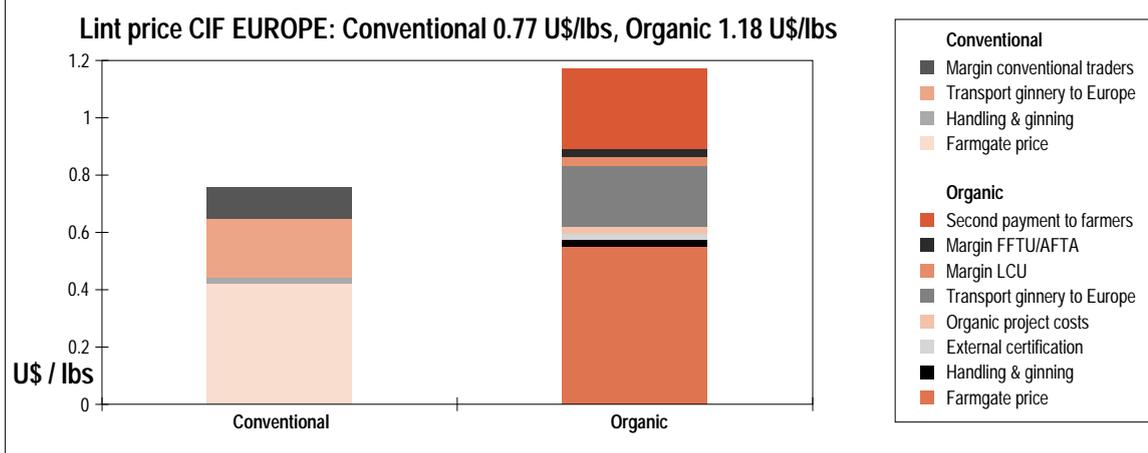
In 1995, SIDA set up the EPOPA programme specifically to develop the export of organic produce from Africa, thereby enabling countries to diversify their exports and improve the sustainability of their agriculture. EPOPA provides assistance in project organisation, research and extension, initial inspection and certification and in product marketing. The Lango project is supported by a budget from EPOPA of US\$ 45,000 per year.

The farmers in the project produce food crops for home consumption, cash crops for the domestic market such as sunflowers and soya beans as well as organic cotton and sesame for export. Yields are similar to those achieved before involvement in the project. The organic project operating costs amount to 2.5 per cent of the product value in Europe.

Achievements and Challenges

Three years after the project started 5,500 people are involved in organic cotton production and the co-operative employs three organic project staff and 12 extension workers, who also act as internal quality control inspectors. In 1996, 400 tonnes of organic cotton lint were exported to Europe and Asia, representing about 2 per cent of the entire Ugandan cotton harvest. Most is exported to Turkey, where it is blended with other organic cotton and manufactured into garments for sale in European high street shops, although some is manufactured into T-shirts specifically to sell to environmental groups and a small amount is used for bed linen. One of the companies that has bought organic cotton from Uganda is Patagonia (see Box).

Comparison of cost-building for conventional and organic cotton lint from Uganda, 1997 marketing season



The cost of organic fibre usually represents less than 10 per cent of the retail price of the garment. Therefore, a 20 per cent higher farmgate price for organic cotton results in a 2.5 per cent increase in retail price. A 30 per cent increase in (organic textile) processing costs result in a 8 per cent increase in retail price of a garment. If all other factors that make up the garment price (transport, distribution and margins) remain the same, organic textile products should theoretically only cost 10.5 per cent more than the same garment made from conventional cotton. Currently organic clothes are often over 50 per cent more expensive than their conventional counterparts due to the niche nature of the market which results in small volumes and high overheads. As organic cotton clothes become more mainstream, their retail price should fall due to economies of scale.

Source: UNCTAD/IFOAM study



Producers have benefited from the access to new international markets and the price fetched by organic cotton, currently 50 per cent above that of conventional cotton. The premium is particularly high at the moment because the price for conventional cotton, which fluctuates dramatically, is currently very low. Prices for organic goods are much steadier. On average the Lango farmers receive a 20 per cent better farmgate price.

The way that the prices are set along the chain has enabled all the players to receive a fair price whilst ensuring that the farmers receive the maximum benefit from the organic premium. Before any business is conducted, all the partners list their costs and claim a fixed margin based on open books. The Netherlands based, African Fair Trade Association (AFTA) which provides crop finance and arranges marketing for farmer organisations in a number of African countries then looks for the best possible price on the market. Any excess funds are paid out to the farmers as a second payment above the premium they already received on delivery of the product, or is used for a development fund.

Links between producers and EPOPA meant that the project was able to solve one of the major problems affecting Ugandan exporters, the refusal of banks to provide crop finance. The project received a loan at commercial rates through a joint venture of the Dutch government agency, DGIS and AFTA. EPOPA arranged for the risks of this loan to be covered by the HIVOS/Triodos Fund in the Netherlands which provides funding for environmental and social projects in developing countries.

Certification can be a laborious and costly process, especially for small producers. Currently it adds 1.7 per cent to the price of the cotton in Europe. But the implementation of an internal quality control system by the Lango co-operative has cut the certification burden. Furthermore it is the co-operative rather than individual farmers that are certified. The Swedish certifier KRAV is training local inspectors to take over from them, further reducing the cost of third party inspection and certification.

Converting to organic production has led to environmental benefits, such as the re-

introduction of animal husbandry in the area. SIDA is considering prolonging its support to the project to develop greater awareness of environmental issues beyond the immediate production system such as the sustainability of the forests and wildlife in the vicinity.

One of the major challenges that the project faces is to develop the management capacity of the Lango Co-operatives Union which has had to take on several new roles: employing extension workers, dealing directly with importers and implementing internal quality assurance.

Lessons for the Future

The project has brought benefits to a large number of producers in Uganda and is serving as an example for similar initiatives. In particular, the method for allocating a fair price to all the members of the supply chain demonstrates that producers, traders and retailers dealing with organic products can all receive decent margins.

There are no significant technical and socio-economic constraints to a more widespread introduction of organic cotton in developing countries particularly where farmers already practice low impact agriculture. The main stumbling blocks for small producers are getting certified and identifying export opportunities. Northern agencies assistance in identifying and developing markets, opening doors for finance and assisting with certification can make a crucial difference to the success of such initiatives.

Large producers generally have to make significant changes to their production systems to convert to organic and can face a large financial burden during the conversion process, having to wait up to two years before they can sell their products at premium prices if they have previously

SNAPSHOT

The Sekem Project in Egypt

This project was initiated in 1977 and 20 years later approximately 500 farmers participate in bio-dynamic farming in different parts of Egypt. As well as around 350 hectares of cotton they grow food crops, herbs and forage for their animals. The farmers are trained in workshops and advised individually by farm advisors. Enormous progress has been made in developing alternative pest controls. Presently only the pink bollworm needs to be controlled which is done with a sexual confusion pheromone. The cotton is certified by the international Demeter organisation and organic cotton yields are sometimes higher than those in conventional cultivation. The cotton is processed, dyed and manufactured into garments in Egypt itself. A range of baby clothes is marketed through a chain of department stores in Egypt and in drugstores in Germany. A line of high quality adult clothes is marketed in Germany by a postal order company.

The Maikaal Project in India

In 1992, Remei AG, a Swiss cotton trading company launched an organic cotton project with Maikaal Fibres, a spinning mill located in the state of Madhya Pradesh in India. The project covers 85 villages and in 1996, 550 hectares of organic cotton were cultivated. The organic quality of the project is certified by the Swiss Institut für Marktökologie, and the project provides extension services, credit at teed purchases and premium in 1995. to put the concept practice by organis-chain from pro-pressing commu-partners, respond-mand and answer-Remei believes that an ecologically and should not be ex-continuing support times of excessive Remei invoices



Examining the quality of organic cotton at the Remei laboratory

no interest, guaran-a 20 per cent price Remei has sought of partnership into ing a co-operative ducer to consumer, nication among the ing to consumer de- ing local problems. goods produced on socially sound basis pensive. To ensure to producers in price fluctuation, three items to its cli-ents: the price of the yarn; a development levy to finance an advisor for the project and a contri-bution towards a social fund. About 70 per cent of the cotton from the Maikaal project is sold through the Swiss Co-op retail chain, which in 1995, launched its Natura Line of organic clothes, with the long-term objective of having all of its cotton clothing produced with organic material by the year 2000. Importantly, the Co-op has kept the price of Natura Line organic clothes fixed at the level for conventional brands, despite the premium prices paid to the cotton growers. Any losses are covered by the Co-op's eco-fund. So far, the Natura Line has been particularly successful for women's clothing (especially underwear), selling almost 250,000 items in the six months be-tween September 1995 and February 1996. Turnover in organic cotton products is expected to exceed 10 million Swiss francs in 1997.

used chemicals on the land. This is an important bottleneck for the development of organic products in general but in developed countries where governments promote organic farming this is usually based on a conversion subsidy.

However, there are also examples of regulation hindering initiatives towards more sustainable production, because of the presence of obsolete regulations. For example in a number of countries there is still an obligation to treat cotton seed with persistent fungicides which is not allowed under organic criteria. Replacing these fungicides by biological preparations has to be done illegally. Organic producers were also disappointed when the EU eco-

label criteria for T-shirts and bed linen only stipulated that cotton should be low in pesticide residues, not necessarily organic.

Although the shift to organic in the past was driven by fashion, now the prospects for continued expansion seem more secure, as the companies that are switching are taking more of a longer-term strategic approach. As Mike Duke, Vice President of Merchandising at Dixie Yarn, one of the largest yarn companies in the USA says: *"I can see that one day all the cotton we use could be organic, and you don't have to be an environmentalist to think so. It is a no-brainer. We are going to have to stop putting chemicals into the earth. It may be 5, 10 or 25 years, but it will happen."*

Forest Products



The Issue

The forest products sector has long been a key focus of concerns about unsustainable production and environmental degradation. Since the late 1980s, there have been a number of high profile campaigns run on the use of the world's forests, focusing particularly on the problems caused by the logging of tropical rainforests and the loss of biodiversity. In response, environmentalists have often urged consumers in industrialised countries to reduce their consumption of wood based products and boycott tropical timber.

In recent years, the focus has changed significantly. Attention has moved away from boycotts of products that were deemed to be contributing to the destruction of key forests, towards the need to improve the management of all types of forest through the promotion of products that sustain forest resources and

support the livelihoods of forest dependent people.

Changing environmental concerns among consumers could have profound effects on the trade in forest products. Although only a small proportion of forest products enter international trade, this is a sector where changes in consumption patterns in export markets has the potential to help raise the standard of forest management and open up new opportunities for developing country producers. Tropical forests are key resources for a number of developing countries and tropical timber a crucial source of export earnings. Exports of certain non-timber forest products have provided large amounts of revenue for certain countries and the development of new markets for an increasing range of products can provide a means of sustaining local livelihoods, as well as an incentive to preserve forests.

Forest Certification Schemes

In the last few years, a number of different organisations have begun developing certification schemes which could be applied to forests. There are two main approaches at the international level, the Forest Stewardship Council's (FSC) principles and criteria and the application of the International Organisation for Standardisation's (ISO) general environmental management standard, ISO 14001, to forests. National and regional certification schemes are also under development in countries such as Indonesia and Malaysia and the Nordic countries and some trade associations have developed sets of criteria that their members must adhere to.

The FSC administers the only international standard specifically for forests. It is an independent non-profit organisation founded by representatives from the timber trade, certifiers and environmental and indigenous peoples organisations, which aims to ensure that forests of all types are managed in a way that is environmentally appropriate, socially beneficial and economically viable. It is the most well developed forest certification scheme and marks a major development in standard setting, in that the FSC principles and associated criteria, which form the basis for local and national standards, include both environmental issues such as the conservation of biodiversity and social issues such as respecting indigenous peoples rights and health and safety standards. Unlike fair trade marks however, the FSC label does not guarantee that producers are paid fair prices. The FSC is now looking at ways of incorporating certification of non-timber forest products (NTFPs) into the FSC system. Criteria for NTFPs such as brazil nuts are currently in the process of being developed.

In Europe, environmental campaigning is one factor in the recent decline in imports of tropical timber, as increasing numbers of public and private institutions develop procurement policies on timber. In the Netherlands, the largest importer of tropical timber in the EU, an estimated one-third of the timber trade has declared that it is prepared to dramatically reduce the use of tropical hardwoods from unsustainable sources. And it is not only timber that has come under scrutiny, other wood products such as paper are also under pressure to demonstrate their sustainability.

As the focus has moved away from bans, towards supporting those forests that are well managed, there has been an increasing need to identify products which come from such forests, resulting in the birth of a number of certification schemes (see Box opposite).

Timber

The development of forest certification schemes marks a significant shift in efforts to improve forest management, relying on the market to act as a lever for change. The FSC was born out of non-governmental organisation's disillusionment with the failure of regulation to improve forest management. These organisations are now playing new roles, acting to influence both the supply of certified wood, by persuading forest managers to meet the required standards, and the demand for certified wood. One development which is having increasing impact on demand, is the formation of buyers groups, representing organisations who have committed themselves to only purchasing timber from well managed forests.

Buyers groups have now been established in 14 countries around the world and the UK group, which was the first to be set up in 1991 with the support of the World

Wide Fund for Nature (WWF) now has 75 members. These include most of the big Do-It-Yourself (DIY) stores and major supermarket chains, accounting for around 10 per cent of the wood products sold in the UK. They are committed to stop using suppliers who cannot demonstrate that their forests are well managed and increasing the proportion of products that they sell which are FSC certified. They will delist suppliers with whom they fail to agree an action plan for improvement.

So far, much of the forest area which has been certified has been large, rich concessions. However this case study illustrates how small producers in the Solomon Islands have used the European market for certified wood to provide them with a decent livelihood from the sustainable management of their forest resources, thereby enabling them to resist pressure to sell the logging rights to outside companies only interested in one-off logging.

Sustainable timber production benefits forests and communities

Case Study 9: SWIFT and ETT in the Solomon Islands

Background

The export of timber is key to the economy of the Solomon Islands, accounting for 42 per cent of total exports and 16 per cent of GDP. However, unless harvesting levels (currently estimated to be more than double the sustainable rate) are substantially reduced, this important resource could be depleted within 15 years. There is increasing pressure on the remaining productive forests, as Asian companies, facing high demand and decreasing supply in domestic markets, seek new sources of timber. The incentives that they offer communities (or to a number of key people in the community) for the right to log their land are difficult to refuse in a country with few employment options and services, despite

widespread awareness of the negative effects of unsustainable logging.

Since 1993, a number of organisations have begun working with communities to develop alternative means to generate long term livelihoods from their forest resources. SWIFT (Solomon Western Islands Fair Trade), initiated by the United Church with the aim of mitigating the "environmentally disastrous effects of logging companies" and the timber trader RAD Enterprises, now called the Solomon Islands Ecotimber Trust (ETT), are both using the interest in sustainable timber in Europe to pay

producers a price that will generate a decent livelihood over the long term.

SWIFT and ETT assist producer groups to



GOOS VANDER VEEN

Solomon Islands, ship being loaded with timber



develop a management plan, offer training in aspects of sustainable forest management, facilitate the certification process, purchase timber and sell it to 'eco-markets' in Europe, mainly in the Netherlands. Both are committed to the Forest Stewardship Council and aim that all the groups that they work with will eventually be certified.

The two organisations have different marketing strategies. ETT is selling its timber through Ecologische Handels Maatschappij B.V. (EHM), a Dutch commercial organisation specifically set up to trade in timber from well managed sources, including Plan Piloto Forestal (see Snapshot Box opposite). They are selling the timber at market rates in order to develop the market for certified wood. SWIFT have set up their own timber trading company in the Netherlands and will forego an order if they cannot get a premium price for the wood, feeling that it is in their interest to develop a premium for sustainable timber. The small number of players involved in the supply chain means that a higher proportion of the final price goes directly to the producers.

Achievements and Challenges

There has been enormous interest from producers in the Solomons in being involved with ETT and SWIFT. SWIFT now works with 300 producer groups, covering 50,000 hectares of forest and has purchased 2,500m³ of timber (1400 trees) generating US\$ 750,000 for local producers. The price that producers receive per tree through the schemes is about 40 times higher than that offered by the logging companies and should result in producers being able to generate a decent income in both the short and long term.

So far, only a small proportion of the groups working with SWIFT and ETT have been certified. The cost is a key factor in this. Currently, all FSC accredited certifiers are based in developed countries and although developing country certifiers are in the process of being accredited and most certifiers have charitable rates, the cost of certification is still way beyond most small producers. The certification of a number of groups working with ETT was supported by members of the Dutch timber trade, who had an interest in seeing how the certification and chain of custody process

worked and the extent of demand for certified timber in the Netherlands. Another way to reduce costs is group certification which SWIFT has just achieved. In this case, the umbrella organisation is certified and is then required to make sure that their members meet the required standards.

Although the FSC aims to be as flexible as possible without diluting the standards,

SNAPSHOT

Gaining Market Advantage Through Certification

PIQRO Laminated Flooring Company was set up by the Mexican government in 1989. Its metamorphosis from an unprofitable state owned company serving the regional flooring market to a profitable exporter of high quality certified flooring to the US market illustrates the potential benefits of strongly marketing the sustainable nature of products. When the government sold PIQRO off in the early 1990s, the new owners saw exports as the key to their future success and hired a manager who had experience in international markets. As PIQRO is located near to the Plan Piloto Forestal, a community forestry project, part of which has been FSC certified, the company began sourcing their wood from there and exporting the first certified tropical hardwood flooring to the USA. This was sold through a number of independent distributors including one specialising in certified products. After a few months of marketing, the PIQRO products were picked up by a national store because of their certification and then attracted the attention of a number of large flooring distributors, including International Hardwood Flooring (IHF), the largest tropical flooring importer in the USA. IHF, which was seeking to differentiate its position in the market, negotiated to buy and distribute all PIQRO's export grade products. In exchange for this exclusivity IHF is investing in PIQRO to enable it to meet world standards, essentially becoming a strategic partner in PIQRO.

Source: Crossley et al 1996

they can be difficult for some groups to understand and comply with even if they are managing their resources sustainably. For example, the requirement for a management plan and a signed policy statement can be quite alien for producers with little experience of documenting forest management. Organisations who can help producer groups through the certification process are therefore a very important component in the sustainable timber chain. The accreditation of local certifiers should also help to increase accessibility to the certification process.

Developing the market for sustainable timber is proving to be complex. Even though the Netherlands has one of the most well developed ethical markets in the world, this has not guaranteed easy sales for sustainable timber from the Solomons.

As it is still relatively early days for certification, certified timber tends to be supplied in small volumes and at long intervals, making it a risky venture. So far

most has been traded through ethical trading organisations who have developed alternative supply chains to the established timber trade. The tree species that are being exported from the Solomons are unfamiliar to most Dutch buyers, so the traders have had to invest in proving and publicising the properties and

SNAPSHOT

Creating Sustainable Livelihoods Through Export of Environmentally Friendly Paper

TARA paper is an initiative of Development Alternatives in India, an organisation which aims to bring together social, environmental and technological knowledge to generate sustainable livelihoods through decentralised production systems. The first paper unit was set up in 1988 in South Delhi and a second plant with a capacity of 180 tonnes per annum was established in Orchha, a rural area of Madhya Pradesh in 1996. The unit now employs about 100 people the majority of whom are trainees from nearby villages who are selected on the basis of their commitment to the job and their need for income. Most are women and literacy training and childcare facilities are provided on site. The paper is made by hand without use of toxic chemicals, from locally available raw materials, mainly recycled paper and non-wood fibres and dried in the open air and the waste water is recycled.

About 50 tonnes of paper were produced in 1996, including stationery and printing paper, packaging and industrial applications such as filters for cars and coasters for the hotel industry. TARA are hoping to increase their output to 250 tonnes in 1997, once the new plant becomes fully operational. Three-quarters of their paper is exported, some directly by TARA, the rest via other Indian exporters, mainly to European markets. Development Alternatives believe that their commitment to the environment in their production processes gives them a significant market advantage. The development of an efficient small scale plant allows them to cope with small orders with ease, unlike most other paper companies.

qualities of their products to convince customers that it is worth trying a different type of wood. Continuity of supply has also been a major headache for traders of sustainable timber.

It is clear that if sustainable timber is to compete with established supplies it has to meet all the usual requirements such as strength, density, colour, availability and price as well as being sustainable. As Flip van Helden, author of a report for ICCO, a church agency which is supporting the

Solomon Island producers argues *“Sustainable timber is a beautiful concept but we cannot sell a concept only, we are selling a product.”*

Lessons for the Future

Although they have faced some tough times, the importers of sustainable timber from the Solomons seem to have learned some valuable lessons from their experience. The strategies that they have developed, such as concentrating on a few species and developing a flexible relationship with large customers, such as DIY stores, combined with increased supply and awareness of sustainable timber, should improve their profitability.

It is still early days for certified wood with both supply and demand developing. At this stage it is not clear how far certification will succeed in its aim to act as a lever for improvements in forest management across the board. However the development of the demand side through initiatives such as buyers groups could provide the breakthrough since the lack of general availability is often the biggest barrier to increasing sales of ethical products.

The greater the demand for sustainable timber, the greater the incentive there is for producers to manage their forests sustainably and prove it by being certified. This will benefit the environment but not necessarily small certified timber producers since this is likely to lead to competition from large forest owners, many of whom are currently weighing up the costs and benefits of certification. Although FSC certification requires forest managers to consider certain social issues such as the right to negotiate and indigenous peoples rights, it does not necessarily guarantee that producers and workers receive a fair income. One way of dealing with this might be to issue an additional certificate based on fair trade criteria (see case study 7) for wood that comes from forests where both the environment and a decent livelihood for the producers are sustained, or an integrated certificate which meets both FSC and fair trade criteria.

Non-timber Forest Products



International trade in non-timber forest products (NTFPs) has been increasing rapidly over the last two decades and around 150 NTFPs are now important in world trade. Roughly three-quarters of this trade is from developing to developed countries, with the bulk coming from South America and Asia and a small proportion from Africa. The value of trade in key NTFPs is shown in the Table opposite. Markets for these products face very different prospects and tend to fluctuate. Currently, developed country markets for traditional products such as fibres (e.g. rattan and coir) and resins are declining in the face of synthetic substitutes, whilst markets for food and health products are increasing.

Product	Value of Trade US\$ (million)
Natural rubber	4,185.8
Plants used in pharmacy	689.9
Nuts	593.1
Fibres	421.0
Ginseng roots	389.3
Natural honey	268.2
Mushrooms and truffles	210.7
Spices	175.7

Source: De Beer and McDermott 1993

Numerous initiatives have been started in the last few years which aim to generate income for developing country producers through the export of a whole range of non-timber forest products (e.g. foods, vines for fibres, furniture and baskets, oils

for personal care products and plant extracts for pharmaceuticals etc). However, many of these are still in the early stages of development. The case study below examines a project which has been running for over six years, providing incentives for forest conservation by supporting sustainable livelihoods for local communities through the export of the ivory-like nut of the tagua palm (*Phytelephas Aequatorialis*).

Case Study 10: The Tagua Initiative, Ecuador

Background

For over 100 years, the tagua nut has been used as a raw material for button making, but demand has declined in recent decades in the face of plastic substitutes. Rising interest in natural products and supporting livelihoods of forest dependent people has provided a new lease of life for the tagua trade and benefitted forest conservation.

The Tagua Initiative is a joint venture between the communities of the Comuna Rio Santiago-Cayapas area, Conservation International (CI) - a US based NGO whose mission is to conserve biodiversity - and the Foundation for Socio-Environmental Training, Research and Development (CIDESA) an Ecuadorean NGO. The Initiative is situated near the Cotacachi Cayapas Reserve in Ecuador, a protected area of high biodiversity but extreme poverty. Set up in 1990, the Initiative links rural harvesters of tagua nuts with various national and international markets and aims to create incentives for conservation by promoting income generating activities based on the

sustainable harvest of tagua nuts and other biodiversity products. Tagua palms grow naturally in the area and the nuts are sustainably harvested by local people.

CIDESA undertakes a range of development activities with local communities, provides technical assistance and training for local enterprises and field support and marketing assistance for local and national markets. CI provides institutional development support to CIDESA, marketing and product development assistance for regional and international markets, technical assistance in conservation areas and enterprise



Tagua palms in Northwest Ecuador

CONSERVATION INTERNATIONAL

Trade in buttons supports local livelihoods and conserves biodiversity

development and access to financing for the enterprises. The Tagua Initiative aims to be self financing. Producers have access to credit facilities through the Initiative and pay for the services that they receive from the NGOs.

The main markets for tagua are in buttons and crafts, while other uses for tagua products include whole nuts for wood working, abrasives for industrial purposes and as an ivory substitute in jewellery. CI and CIDESA have helped local people develop facilities to dry and peel the nuts before shipping, increasing their value and reducing transport costs. By working with local enterprise and existing manufacturers and distributors of buttons who understand the market, they have managed to link producers to local, national and international markets. CI then puts garment manufacturers in touch with button distributors who could provide them with Tagua Initiative buttons.

CI also links producers of crafts and hand carved buttons directly to purchasers around the world. Hand carved buttons are a very small proportion of Tagua Initiative buttons but they sell for about eight times the price of a standard tagua button and 85 per cent of the wholesale price goes directly to the producer compared to less than 25 per cent of the wholesale disc price for a standard commercial button blank.

As a raw material, tagua is more expensive than plastic but as supply has increased and lower cost processing and manufacturing techniques have been used, the cost of tagua buttons has decreased dramatically from US\$ 16 to around US\$ 7 per gross of standard button size. The finished buttons are now only slightly more expensive than plastic. This cost is passed onto the garment manufacturer who is usually willing to pay for the style and quality since buttons make up a very small proportion of the overall cost of the garment.

Achievements and Challenges

Since 1990, over 70 million buttons, with a wholesale value of over US\$ 5 million have been sold through the Tagua Initiative which has 32 per cent of the Ecuadorean tagua market and around 60 per cent of the North American tagua button market. 1,000 jobs have been sustained through the Initiative and a further 1,800 created and the Initiative is being extended to other sites in Latin America. Producers in the Initiative generally receive an above average rate for their nuts. By licensing distributors of Tagua Initiative buttons and materials, CI has captured a 5 per cent premium from wholesale button sales that is returned to the Initiative for conservation work and

SNAPSHOT

Innovative Partnerships for Sustainable Consumption and Production

Conserving biodiversity through personal care products. In 1994, CI formed an innovative partnership with Croda Inc, a major supplier of specialty ingredients to the personal care industry. Croda purchases products such as brazil nut oil and allspice extract from CI and is developing a new line of personal care ingredients, Renewable Rainforest Resources, which it is marketing with CI's support. For Croda, who saw market opportunities in natural products, this was a unique opportunity for it to link up with a viable conservation enterprise and boost its environmental credentials, whilst the partnership offered CI access to the lucrative personal care industry. To date the partnership has consisted mainly of a lengthy R&D phase to test new ingredients and products. But both partners expect sales of Croda-CI products to increase substantially.

Sustainable nuts. CI provided financial support to CANDELA, a Peruvian ethical trading organisation, to purchase a Brazil nut processing factory and then worked to develop the North American market for the nuts. In 1995, 55 tons of Brazil nuts were exported to buyers such as the Hard Rock Cafe and Ben and Jerry's ice cream. In an effort to reach the mass market, CI arranged for Subway, the largest sandwich fast food chain in the world, to source the nuts for their cookies from CANDELA. In the first month, 2.5 million cookies were sold through more than 9,000 outlets across the USA, generating orders for 30,000 pounds of nuts. For both Ben and Jerry's and Subway this arrangement is a means of sourcing ethically, although Ben and Jerry's does not cite the source of its nuts on its products. CANDELA has a competitive pricing structure over the long term but sets minimum and maximum prices to mitigate the risks associated with a volatile economy and extreme market fluctuations. CANDELA and CI are currently examining processing nuts at special collection centres in the forest in order to add more value at the source and are working to encourage more companies to source directly from producers and co-operatives.



marketing activities. To date, this has resulted in more than US\$ 300,000 which has been reinvested in local enterprises and community development activities related to conservation objectives.

Tagua buttons are now used by over 60 major garment manufacturers across the world, including GAP, Banana Republic, DKNY, Jones New York Apparel and J. Crew. In many cases the companies are unaware that they are purchasing their buttons through the Tagua Initiative, due to the number of manufacturers used in the production of finished products and the decentralised sourcing system. In fact many choose them purely on fashion trends, quality and price, without any consideration of their social and ecological advantages. Around one-fifth of companies have decided to use Tagua Initiative buttons for ethical reasons but less than 5 per cent of the market reveal their use of tagua buttons to their customers, so the vast majority of final consumers are unaware of the nature and source of their buttons.

As well as working with tagua nuts, CI has developed enterprises based on products from trees, palms and nuts from Colombia, Peru, Guatemala and the Solomon Islands, as illustrated by the Snapshot Box.

Lessons for the Future

The Tagua Initiative has been very successful at stimulating effective and diverse distribution networks and developing the national and international market for tagua products. One of the key factors in the project's success has been the relationships formed between very different organisations, building on and complementing each others strengths and experience. The project has recognised from the beginning that social and economic development is essential if

conservation goals are to be achieved and the involvement of both CIDESA and CI has been crucial in developing a project which has the potential to meet social, environmental and economic goals.

Neither NGO has the resources or the expertise to market products competitively so their relationships with



Sorting tagua nuts for processing in Manta, Ecuador

local businesses in Ecuador and with the button manufacturers and distributors have been crucial to the Initiative's success. By working with distributors, who were happy to add a high quality line to their range, CI and CIDESA did not have to burden themselves with business details and negotiations, leaving that to the industry participants for whom this is part of everyday operations.

Being fashion driven, the button market is unpredictable but button sales from the Tagua Initiative seem well placed to be sustained. Tagua buttons already made up a small proportion of the button market before the Initiative was started and the vast majority of buttons that are sourced through the Initiative are purchased purely on their merits as buttons. Corporate environmental concern can help stimulate demand for the product but is not necessarily a deciding factor in the sales of Tagua Initiative buttons. By



Tagua buttons

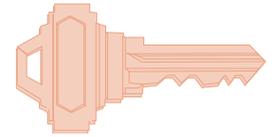
targeting wholesale distributors and working with a range of companies around the world, the Initiative has avoided being sidelined in niche markets and reduced the risk associated with dependence on a small number of purchasers.

The involvement of industry participants greatly improved the viability of the project, by helping to diversify and enhance the tagua products and playing a crucial role in quality control. Although the manufacture of buttons is similar for tagua and plastic and the same machine can be used for both, manufacturers need to be aware of the variations and limitations of using tagua. In the early

years, inadequate testing of the tagua buttons led to some costly mistakes for both retailers and distributors. Today, the use of tagua buttons is based on experience and extensive testing.

Despite the success of the Initiative, CI's efforts to conserve the biodiversity of the area are threatened by external policies which influence land tenure and management, such as construction of new roads into the area which is leading to an influx of new settlers. The Tagua Initiative has demonstrated that an integrated conservation approach including policy, research, monitoring and evaluation and local opportunities is necessary to conserve biodiversity.

Lessons and Ways Forward



In spite of often unfavourable conditions, the 10 case studies collected here demonstrate that pioneering producers are already taking advantage of the new trade opportunities driven by more sustainable consumption and production patterns in their export markets.

Success has not been limited to traditional agricultural and natural resource sectors, but extends into areas as diverse as manufacturing and tourism. Small agricultural co-operatives and large private sector enterprises have equally been able to move ahead. New relationships have been developed between producers, their clients, environment and development organisations and governments. The drivers for change have been varied, including health, social and environmental concerns, reflected both in regulatory requirements as well as consumer expectations.

But while the case studies were chosen for the positive stories that could be told, they are by no means perfect. None represent a finished end-state, which is wholly sustainable. All are works in progress, where efforts are being made to continuously improve performance. The case studies also show that realising this potential is not always easy or straightforward, and that there are a number of often substantial policy and business constraints to be dealt with along the way. Although the pioneering initiatives collected here represent only a small proportion of international trade, their success indicates the start of a more serious and potentially powerful trend. Future efforts should thus be focused on learning the practical lessons of success and targeting policy and market action towards removing barriers to change and enhancing further innovation.

Lessons

The trade opportunity is now a reality

The case studies clearly demonstrate that the trade opportunity is now a reality in key sectors. Furthermore, goods and services that contribute to sustainable production and consumption are starting to move out of small, niche markets into the mainstream in terms of volumes, brand profile and consumer awareness (for example, organic agriculture). Growth rates also appear to be high, often surpassing conventional competitors, as in the case of alternative tourism. In a fast-moving and increasingly competitive global marketplace, raising the social and environmental performance of their exports could now be a way for developing country producers to differentiate their product and add value.

Market size is still uncertain

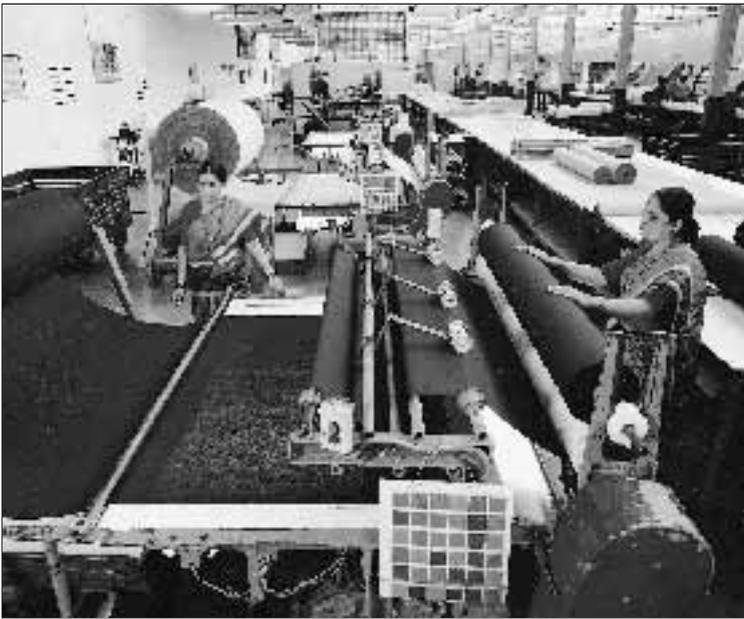
The relative novelty of sustainable consumption and production means that it is still impossible to develop a clear sense

of the economic scale of the trend underway. There are no accurate statistics available of the value of forestry that is managed sustainably, or the proportion of industry that routinely applies cleaner production approaches, for example. But there are glimpses that suggest that the market size could already be substantial, such as the estimate that environmentally-sensitive tourism is worth at least US\$ 160 billion. The value to developing countries is also considerable, as shown by the US\$ 500 million premium paid by developed countries for organic produce from the developing countries. Trade that serves sustainable consumption and production not only rewards individual producers, but also has the potential to generate substantial export revenues for developing countries.

▶ Action Point 1

The lack of a statistical base means that the full policy and business significance of sustainable production and consumption

"Organics have grown out of their niche and taken on the status of a trend"
Tom Harding
AgriSystems
International



The trade opportunity is now a reality

"I went through hell, but then there were dividends"

Mahesh Sharma,
Manager (Chemical
Technology),
Century Textiles

is probably underestimated. Governments and international agencies could help to remedy this by gathering data and developing statistics on the market size and dynamics for key sectors and services, which could then be integrated into broader efforts to develop indicators to measure progress towards sustainability.

The benefits are many and diverse

The case studies show that the benefits of improving social and environmental performance of exports come in many forms:

- **Economic:** Producers have gained from premium prices (eg Century, Coocafe, Lango and SWIFT), rising volumes (eg Fridge Master and Tagua Initiative) and sometimes a combination of the two. While premiums appear important to stimulate initial investments, they are not always necessary once an initiative is up and running.
- **Social:** Some of the social benefits are a direct spin-off of financial success, with communities receiving extra income for vital projects (eg Coocafe and Tagua Initiative). In other cases, the benefits come in the form of improved health and safety, job creation and employment security.
- **Environmental:** Gaining environmental benefits was often the starting point in many of the cases, and all have contributed to improving environmental sustainability. More

importantly, it is clear that successful producers do not stand still when a particular environmental problem is resolved; they look ahead to anticipate emerging trends (eg Century, Fridge Master).

- **Security:** Increased security about long-term prospects has often been among the most important benefit for producers, particularly small-scale operators. For example, partnerships with fair trading organisations were vital to provide the stability needed for Coocafe to invest in organic production.

Pioneers can make a difference

Pioneering companies, non-governmental organisations, communities and co-operatives can make a real difference, often ahead of regulations or consumer demand. Success has come from a combination of long-term commitment and the development of the necessary capacity to make the transition. Although regulations have been the prompt for action, for example in the manufacturing case studies, markets determined the outcomes in terms of the ways in which the producers turned new requirements into commercial benefit. In other instances, such as the forestry cases, environment and development organisations took the lead, moving beyond a campaigning stance to working with producers to raise standards and secure export markets. Government agencies have also smoothed the process of change through carefully targeted investments, as in the Lango organic cotton case and the phase-out of CFCs at Electrostar.

No-one can do it on their own

Rather than looking at the different actors in isolation, what has proved to be central to success has been the development of new partnerships along the product chain. In all the cases, the producer was supported by a range of other organisations. Even in the case of Century, the largest mill in India, a close working relationship with its clients in Germany was essential for the rapid transition to Eco-Text certification; the links with retailers in export markets was also vital for Fridge Master. In other cases, new commercial relationships have been crucial, particularly the intervention of environment and development

intermediaries in the coffee, cotton, timber and tagua cases. One of the striking feature of the Tagua Initiative has been the care with which robust relationships have been made along the chain from producers in Ecuador to fashion-houses in North America.

► Action Point 2

Understanding of the crucial ingredients for successful international partnerships for sustainable consumption and production could be improved still further. In key sectors, business (both producers and clients), environment and development organisations along with government agencies could work together to draw up good practice checklists for building partnerships that raise the performance of developing country suppliers. Key issues would include consultation, capacity building and linking environmental improvement with social development.

Combining quality and sustainability

The case studies show that producers and consumers have matured considerably since the 'green consumer' phase of the late 1980s. There is less emphasis on marketing, and more on demonstrating and sustaining improvements in actual performance over time. Furthermore, the case studies highlight the central importance of combining basic product quality with sustainability. Across the case studies, the product is no different — and is often better — in quality terms than conventional alternatives (eg textiles, tagua buttons, organic cotton). Importantly, many users of tagua buttons buy on the basis of quality not environmental image. There is thus no need to accept a lifestyle shift to lower quality goods to consume sustainably.

Nothing is free, but sustainability need not be confined to luxury markets

All the cases required investments of financial resources and time to get going. But often the outlays were small, and recouped through the combination of better prices and higher volumes. Even in the cases where producers gain an explicit premium for their goods (eg cotton, coffee, textiles), this need not lead to excessive prices to the final consumer,

as production costs make up such a small proportion of the final price. This means that sustainable products should not just be something for upper income groups.

Filling the supply gap

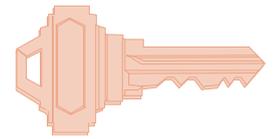
But in the early stages, environmentally- and socially-preferable products are often more expensive than conventional goods because of low volumes and high overheads. Guaranteeing regular supply of a consistent quality can be a major headache for importers and retailers committed to sustainable trade. In part this is a question that can only be resolved through increases in overall supply, generating economies of scale and thus lower prices and more security. But the actors along the product chain can also take action. The timber case study showed how importers had learned some valuable lessons, such as limiting their exposure, developing flexible relations with large customers, as well as building up the necessary production and human capacity to expand supply from the Solomon Islands.

Overcoming capacity constraints

While large-scale and well-resourced firms such as Century Textiles and Fridge Master were able to absorb the conversion costs, this is not the case for many small and medium sized enterprises, who lack the necessary technological, managerial and financial resources as well as market information and practical access. The case studies showed that these capacity constraints could be overcome through financial assistance and support both along the product chain and from government agencies. For example, the Lango case study demonstrated how small quantities of development assistance can achieve high leverage in the transition phase.

► Action Point 3

Development assistance agencies can play an important role by providing transitional financial and technical support to strengthen environmental capacities in developing country export sectors. This should be targeted particularly at small and medium sized enterprises. Multilateral environmental agreements could also reinforce the provisions for increased funding for practical capacity strengthening efforts among developing country producers,



"Sustainable timber is a beautiful concept, but we cannot sell a concept only. We are selling a product"
Flip van Helden

focusing on the needs of smaller enterprises in the areas of technology transfer, innovation and certification. Business clients of developing country producers could also help the capacity strengthening process by providing long-term agreements, facilitating the certification process (as in the Century case study) and providing financial credit for suppliers.

Consumers need performance guarantees

One of the downsides of the 'green consumer' movement was the explosion of often misleading claims, breeding frustration and cynicism. In some cases, eco-labelling schemes have filled the gap. But very few developing country producers have yet been awarded eco-labels in key export markets. Central to nearly all the case studies is the importance of clear standards and independently verified performance to guarantee that any marketing claims can be substantiated. This is true of Century (Eco-Text certification), Fridge Master (CFC-free certification), Lango and Chilean fruit producers (organic certification) and SWIFT and ETT (Forest Stewardship Council certification). Furthermore, the strength of most of these schemes lies in the involvement of developing country producers in setting the standards, so that they reflect their needs and concerns. But the problem of scale also constrains the take-up of certification by small producers. The case studies point to two main ways around this: organising group certification through local co-operatives and training local inspectors to reduce fees.

▶ Action Point 4

Governments in industrialised countries can uphold the consumer's 'right to know' the life cycle environmental performance of products and insist on independent verification of environmental standards. Development assistance could also be usefully targeted at establishing group certification schemes and training local certifiers. Retailers (such as supermarkets) and other clients of developing country producers also have a responsibility for providing accurate information to the final consumer, and could follow the example of leading corporations that have adopted codes of conduct for sourcing products from developing countries. Again, the

credibility of these codes is substantially enhanced through independent monitoring. Furthermore, if developing country suppliers cannot meet criteria, a joint action plan should be drawn up and only if these changes are not implemented within an agreed timeframe should alternative suppliers be sought. Finally the involvement of developing country producers could be much improved in the setting of performance criteria for international standards and corporate codes of conduct.

Linking environmental improvement and social development

If the shift to sustainable production is to be lasting in the long-term, it needs to be rooted in solid social development. In the Century and Fridge Master case studies, strong emphasis is given to human resource development and training. In the Tagua, SWIFT and ETT examples, not only have new jobs been created, but these livelihoods are based on the prospect of long-term business. For Coocafe, fair trade has provided the foundations for the costly and risky shift to organic production. Traditionally, efforts to raise the social and environmental performance of goods traded from developing countries have followed parallel tracks. The case studies show that this need not be the case, and that there are strong synergies between the two concerns. Efforts to raise environmental performance should thus incorporate the need to tackle social issues as an integral part.

▶ Action Point 5

Greater convergence could be stimulated by business along with environment, development and consumer organisations sharing their experience of improving the social and environmental dimensions of trade.

Local involvement is a prerequisite

Not only must environmental improvement be rooted in robust social conditions, but it must be driven by the producers themselves. The case studies are testimony to the initiative and resourcefulness of developing country producers, something often underestimated by those in the North. The case studies highlight an openness to



change and a willingness to experiment with new production methods and trading relations. Even where the stimulus came from changes in export markets, success was determined by the active involvement of local producers in developing the appropriate response, whether it the Bluefields Community in Jamaica, the Campements Villageois in Senegal or Fridge Master in Swaziland. Often the impression is given that new standards in industrialised countries can simply be imposed on international suppliers. The case studies show that careful phasing-in, capacity strengthening and strong local input can deliver long-term benefits for all partners.

Tackling trade barriers and protectionism

Conventional trade barriers in the industrialised world can often constrain improvements in environmental performance. The case studies showed how restrictive agricultural policies in Europe blocked the trade of organic products such as raspberries from Chile. The Multi-Fibre Agreement also limits the willingness of textile producers in India to invest in clean production. But, trade restrictions in developing countries can also provide an impediment, by limiting access to cleaner technologies and inputs.

▶ Action Point 6

Governments in the developed world could improve market access, particularly for sustainably produced goods and services from developing countries. Particular targets are the agricultural and textile sectors.

Removing perverse regulations and subsidies

In addition to trade restrictions, unnecessarily bureaucratic or indeed discriminatory regulations in industrialised country markets can also hinder access. Examples include the bureaucracy facing organic producers seeking to export to the European Union market, and the fumigation requirements for imported organic produce in the USA, which destroy their organic status. The textiles case study also shows the need for better dialogue and lead times to allow developing countries to adjust to new

regulatory requirements. Furthermore in both North and South, some subsidies continue to support unsustainable production practices, putting producers seeking to improve environmental performance at a competitive disadvantage.

▶ Action Point 7

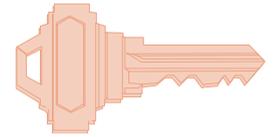
Governments in the industrialised world could review existing product regulations and remove unnecessary measures which constrain sustainably produced goods and services. Governments in both North and South could also reform agriculture, energy and other subsidies to remove perverse incentives for pollution and resource depletion and thus create a more level playing field for sustainable consumption and production.

Building a supportive policy framework

Positive policy choices can also make a difference not only to the emergence of pioneers, but also to their diffusion and spread. Developing country governments can develop strategic frameworks which support the diversification of investments in the direction of sustainability (such as tourism in Jamaica) and assist the process of transition in sectors affected by changes in export market expectations (eg textiles in India). But they could perhaps do more to integrate environmental factors into mainstream export promotion campaigns. Governments in the industrialised world also have important responsibilities, not only to provide transitional support through development assistance, but also to make their policy processes more transparent to developing country producers.

▶ Action Point 8

Governments in industrialised countries could now develop clear guidelines for transparency, consultation and transitional phasing for proposed environmental regulations. Governments in developing countries could also introduce and enforce environmental legislation which provides producers with a firm foundation for accessing export markets, and seek out opportunities for integrating environmental factors in official export promotion strategies.



"If it wasn't for fair trade, the producers would have disappeared. Fair trade also helped us introduce measures to protect the environment which are expensive, but which will improve our standard of living"
William Zuniga,
Coo cafe.

Ways Forward

Historically, the conventional approach to changing consumption and production patterns in industrialised countries was reactive and often negative, with policy characterised by product bans and consumer action focused on boycotts. Little

clients, citizen groups and government agencies. It accepts the need for the time and support for developing country producers to make the transition to higher standards. It involves taking a positive stance, seeking out opportunities for using

the marketplace as an arena for promoting innovation in environmental performance. By extension, it is an essentially voluntary approach, relying less on regulation and more on market dynamics. But this partnership approach still requires public sector investment in the skills and technologies required to enable developing country producers to adapt to new environmental requirements, as well as policy action to remove perverse regulations and subsidies and introduce positive incentives. The case studies in this report illustrate how this partnership approach works in practice in a range of different sectors and regions.

Unlocking Trade Opportunities shows what can be done and gives a sense of possibility for other developing countries and producers. But it is important to recognise that these cases do not yet represent the norm.

Furthermore, trade is by no means the only strategy for promoting sustainable consumption and production between developed and developing countries. Most environmental problems in developing countries are not amenable to trade-based strategies. Only a small proportion of tropical timber, for example, enters international trade; most is consumed locally as firewood. Here, tightening domestic environmental regulations, improving corporate and governmental accountability and strengthening environmental capacities in the public, private and civil sectors are critical to success. Furthermore, there are aspects of moves to sustainable consumption and production in the North that may not bring positive benefits to the South, such as a possible shift away from material- and transport-intensive products.



STILL PICTURES
The sustainable consumer of the future?

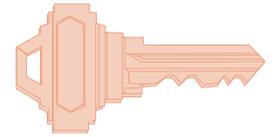
thought went into the trade implications for developing countries, and the result was often protectionist measures, such as the US ban on tuna imports from Mexico. A new approach is now emerging, based on the recognition among some leading industrialised country governments, businesses, as well as environment and development organisations of the need to shift from the unilateral imposition of social and environmental preferences to a partnership approach. There is also a growing awareness among some developing countries of the positive spin-offs this could bring.

This partnership approach recognises the critical importance of forging new trading relationships between producers, their

Where the trade potential is particularly promising is in those sectors of developing country economies open to international markets and trends. These are set to grow as the pace of globalisation, driven by trade and investment flows, accelerates. Shaping these global trends so that they contribute to achieving sustainable consumption and production is a fundamental challenge for the world trade system in the years ahead. But the case studies provide pointers of the ways in which this agenda can be taken forward:

- Moving from a reactive response to individual problems as they arise to a culture of innovation that encompasses life cycle environmental responsibility.
- Strengthening the emerging partnerships in the marketplace between producers, their clients, retailers, environment and development organisations and government agencies.
- Extending the scope of independent monitoring and verification of standards, codes of conduct and marketing claims.
- Creating a level playing field by removing perverse subsidies and internalising environmental costs into the prices of internationally-traded goods.
- Supporting the transition to higher standards among small and medium sized enterprises in developing countries.
- Accelerating the convergence between the social and environmental dimensions of sustainable trade.
- Exploring the domestic trade potential of sustainable consumption and production within the developing world.

Taken together, the case studies present pathways down which the world trade system could move to multiply the trade opportunities of sustainable consumption and production. This report has demonstrated that the door is opening. The challenge is now to broaden the number of developing country enterprises and economies that can turn this raw potential into practical financial, social and environmental benefits.



Sources

Introduction

- A. Agarwal & S. Narain, Trade, Sustainable Consumption and the Environment, Centre for Science and Environment, India, 1996.
- J. Blauert & S. Zadek, Mediating Sustainability: From Practice to Policy for Sustainable Agriculture and Rural Development in Latin America, Casell Academic, London, 1997.
- Body Shop, Social Statement 1995, Littlehampton 1996.
- CBI, DIPO, NORAD & Sida, Eco Trade Manual, February 1996.
- Christian Aid, The Global Supermarket: Britain's Biggest Shops and Food from the Third World, London, October 1996.
- Co-op, Rapport sur l'Environnement 1995, Bern.
- CREM, Impacts of Dutch Environmental Product Policies on Developing Countries, Amsterdam, May 1996.
- Environment Agency - Government of Japan, Search for Environmentally Friendly Lifestyle, Tokyo, 1994.
- Environment Agency - Government of Japan, ECO ASIA Long-Term Perspective Project, Tokyo, 1997.
- European Environment Agency, Environmental Taxes: Implementation and Environmental Effectiveness, Copenhagen, 1996.
- Factor 10 Club, The Carnoules Declaration, Wuppertal Institut, Germany, October 1994.
- Friends of the Earth Europe, Towards a Sustainable Europe, Brussels, Belgium, 1995.
- Friends of the Earth Netherlands, Sustainable Consumption: A Global Perspective, Amsterdam, 1996.
- C. Fussler, Driving Eco Innovation, Pitman Publishing, London, 1996.
- S.L. Hart, Beyond Greening: Strategies for a Sustainable World, Harvard Business Review, January-February 1997.
- IIED, Towards a Sustainable Paper Cycle Report, International Institute for Environment and Development, London, 1996.
- IISD, The World Trade Organization and Sustainable Development: An Independent Assessment, International Institute for Sustainable Development, Winnipeg, 1996.
- M. Jansen, Influences upon Sustainable Product Development in the Developing World, UNEP-SPDRP, Amsterdam, 1995.
- M. Linz, Sustainable Economy: Implications for the South, Wuppertal Institut, 1995.
- A. MacGillivray & S. Lingayah, Snapshots of Sustainability, New Economics Foundation, London, 1996.
- J. Margretta, Growth Through Global Sustainability, Harvard Business Review, January-February 1997.
- Merck Family Fund, Yearning for Balance, Takoma Park, July 1995.
- Ministry of Environment, Oslo Symposium on Sustainable Consumption, Oslo, 1994.
- Ministry of Environment, Oslo Ministerial Roundtable, Conference on Sustainable Production and Consumption, Oslo, February 1995.
- National Institute for Environmental Studies & Sumitomo-Life Research Institute, Consumers' Awareness and Behaviour Concerning Global Environmental Problems, March 1996.
- OECD, Reconciling Trade, Environment and Development Policies, Paris, 1996.
- J. Parikh, Consumption Patterns: Driving Force of Environmental Stress, Indira Gandhi Institute of Development, Bombay, 1991.
- President's Council on Sustainable Development, Sustainable America: A New Consensus for Prosperity, Opportunity and a Healthy Environment, Washington D.C., February 1996.
- Protrade, The Export of Products Originating from Organic Cultivation, Eschborn, March 1994.
- UNCED, Agenda 21, New York, 1992.
- UNCSD, Report of the 3rd Session, New York, 1995.
- UNCSD, Changing Consumption and Production Patterns, Report of the Secretary General, 1996.
- UNCTAD, Reducing the Environmental Stress of Consumption Without Affecting Consumer Satisfaction, August 1994.
- UNCTAD, UNCTAD Activities on Trade, Environment and Development, Geneva, September 1996.
- UNCTAD, Trade and Development Report 1996, Geneva 1996.
- UNCTAD, Trade and Environment: Concrete Progress Achieved and Some Outstanding Issues, Geneva, February 1997.
- R. Vossenaar & V. Jha, Environmental Policy and International Competitiveness: An Asian Development Perspective, Asia Conference on Trade and the Environment, 1995.
- WBCSD, Sustainable Production and Consumption: A Business Perspective, World Business Council for Sustainable Development, Geneva, 1996.

World Trade Organisation, Report of the WTO Committee on Trade and Environment, Geneva, November 1996.

ZERI, ZERI home page, www.zeri.org, Zero Emissions Research Institute, Tokyo, 1997.

Manufactured Products

European Fair Trade Association, EFTA Yearbook 1995, Maastricht, 1995.

German Development Institute, Ecological Product Standards and Requirements as a New Challenge for Developing Countries' Industries and Exports, Berlin, 1994.

UNCTAD, ISO 140001: International Environmental Management Systems, Geneva, 1996.

Tourism

Smith & Jenner, The Tourism Industry and the Environment, Economist Intelligence Unit Special Report, 1992.

Pattullo, Last Resorts: The Cost of Tourism in the Caribbean, Cassell, London, 1996.

World Trade Organisation, Global Tourism Forecasts to the Year 2000 and Beyond, 1994.

World Travel and Tourism Council, Progress and Priorities, 1996.

Agricultural Products

Biofair: International Organic Market Report, Camara de Comercio de Costa Rica, November 1996.

Cafedirect, Direct Newsletter, Issue 3, London, 1997.

EFTA, European Fair Trade Association Yearbook, Maastricht, 1995.

Eurostat, Europe in Figures, Luxembourg, 1995.

GEPA, 10 Years of GEPA Tea from Fair Trade, Press Release, November 1996.

R.Q. Martinez & S. van Hauwermeiren, The Tiger Without a Jungle: Environmental Consequences of the Economic Transformation of Chile, Institute of Political Ecology, April 1996.

University of Chile, Produccion y Comercializacion de Productos Organicos: Seminario Internacional, Ministry of Agriculture and Prochile, May 1996.

National Consumer Council, Shades of Green: Consumers Attitudes to Green Shopping, London, December 1996.

OS3, Cocoa Products from El Ceibo/ Bolivia, Producer Description, Orpund, Switzerland, April 1996.

Pesticides Trust, The Organic Cotton Textbook, London, forthcoming.

O.B. Segura & J. Reynolds, Environmental Impact of Coffee Production and Processing in El Salvador and Costa Rica, UNCTAD, Geneva, 1993.

UNCTAD, Recent Trends on the World Coffee Market, Geneva, October 1995.

UNCTAD, Organic Production in Developing Countries: Potential for Trade, Environmental Improvement and Social Development, Geneva, July 1996.

World Bank, Cotton Production Prospects for the Next Decade, Technical Paper #287, 1995.

Forest Products

J. De Beer & M. McDermott, Non-Timber Forest Products in South-East Asia, Netherlands Committee of IUCN, the Netherlands, 1993.

R. Calero & R. Frank, Case Study: The Tagua Initiative, Ecuador. Partnerships in Practice, Department of Environment, UK, 1995.

R. Crossley *et al.* Innovative Financing for Sustainable Forestry. UNDP, 1996.

Cutter Information Corporation, Case Study: Conservation International's Tagua Project. Business and the Environment, 1993.

ICCO, Report on the Consultative Meeting on Eco-Timber. ICCO, the Netherlands, 1997.

Judd, Certification - Controversy, Reality and Quality Forest Management. SGS Forestry, Kuala Lumpur 1996.

M. Mansley *et al.* The Demand for Certified Wood Products. Delphi International, UK, 1996.

J.A.P. de Oliveira, Evaluation of the Conservation Impacts of Tagua Initiative on the Comuna Rio Santiago-Cayapas in Northwestern Ecuador, Conservation International, 1996.

H.B. Pederson, Ivory Nuts, Fruits and Thatch: Use and Management of *Phytelephas Aequatorialis* (Palmae) in Ecuador, 1992.

J.V. Runk, Integrating Conservation and Development: Monitoring the Ecological Impacts of Tagua Extraction, Duke University, 1995.

Simula & Baharuddin, Timber Certification in Transition. ITTO 1996 Vol 6 No. 4. 1996.

SGS Forestry, Certification Reports on RAD Enterprises (ETT) and the Chain of Custody, SGS, Oxford, various years.

UNEP, Case Study: Conservation International and CIDESIA. Developing Markets for Biodiversity Products, 1994.

C. Upton & S. Bass, The Forest Certification Handbook, Earthscan, London, 1995.

F. van Helden, Issues in the Production and Marketing of Sustainable Timber from Community Based Projects in Papua New Guinea and the Solomon Islands. ICCO, Zeist, 1997.

WWF, The Full Story: The WWF 1995 Group. World Wide Fund for Nature-UK, Godalming, 1996.

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