UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

Market Brief in the European Union

for selected natural ingredients derived from native species

Bertholletia excelsa

(Brazil nut, Castaña)

-Vegetable oil-

UNITED NATIONS

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This publication was developed in the context of the **UNCTAD / BioTrade Facilitation Programme**, funded by the Governments of the Netherlands and Switzerland.

Compiled for:

The United Nations Conference on Trade and Development (UNCTAD)
BioTrade Initiative / BioTrade Facilitation Programme (BTFP)

by

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January 2005
UNCTAD /DITC/TED/2005/tbc

PREFACE

The **BioTrade Initiative** is UNCTAD's programme that supports sustainable development through trade and investment in biological resources in line with the Convention on Biological Diversity. The specific objectives of the BioTrade Initiative are: (i) To assist developing countries in the formulation and implementation of National BioTrade Programmes; (ii) To assist Inter-Governmental Organizations in the formulation and implementation of Regional BioTrade Programmes; (iii) To provide inputs to international policy making processes related to trade and biodiversity; (iv) To carry out technical assistance on issues related to trade and investment related to biotrade.

The **BioTrade Facilitation Programme (BTFP)** for biodiversity products and services aims at assisting partners in developing countries on issues related to trade promotion of specific sectors, which have high value-adding potential and can generate local income by involving local and indigenous communities, while contributing to the biodiversity conservation. Priority product groups include edible plant products (e.g. fruits and nuts); food ingredients (e.g. natural colouring and flavouring materials); cosmetic and pharmaceutical ingredients (e.g. medicinal plants, essential, fatty and vegetable oils), fibres, latex, resins, gums and gum by-products.

The **BTFP** addresses specific developing countries' needs such as market information, market access strategies, development of methodological approaches, best-practices, as well as advocacy and participation in policy making processes (e.g. trade barriers, certifications, sustainable use, etc.). Selected countries from Latin America (the Andean and Amazonian regions), Africa (the eastern and southern regions) and Asia are currently part of the BTFP. The BTFP is an official partnership of the World Summit on Sustainable Development (WSSD), and counts with the financial support of the Governments of Switzerland and the Netherlands. The International Trade Centre (ITC), serves as the Programme's technical advisor. Other current BTPF partners include: BioTrade National programmes, PhytoTrade Africa, Programme Bolsa Amazonia, the Dutch Centre for the Promotion of Imports from Developing Countries (CBI), and the Swiss Import Promotion Programme (SIPPO).

This document is part of a series of market briefs on selected natural ingredients derived from native species in beneficiary countries of the **BTFP.** It is addressed to corporate executives, partners of the **BTFP**, officials of international and trade promotion agencies, representatives of nongovernmental organizations and researchers. The market brief seeks to provide balanced information and analysis of trade opportunities. Each study may be read by itself, independently of the others.

For further information please visit www.biotrade.org

This publication was financed by the UNCTAD BioTrade Facilitation Programme (BTFP), funded by the governments of the Netherlands and Switzerland.

Abstract

The market brief on *Bertholletia excelsa*, profiles the EU market for this native South American species and its derivatives, used as natural ingredients in the cosmetics (aromatherapy) and phytopharmaceutical industries. This document was developed within a series of market briefs on selected natural ingredients derived from native species in beneficiary countries of the BTFP.

The underlying market brief, on *Bertholletia excelsa*, is divided in eight sections. Sections 1 to 5 profile the EU market for *Bertholletia excelsa*. The brief starts with providing a description of the species including, botanical name, common names, trade names, HS codes, countries and regions of origin, methods of cultivation/harvesting, importance to the native biodiversity of the country of origin and traditional use. The major national markets within the EU for these products are highlighted and current trends are described. Furthermore, (statistical) market information on consumption, production and trade, and information on trade structure and opportunities for exporters is provided

Section 6 describes the requirements, which have to be fulfilled in order to get market access. It is of vital importance that exporters meet the requirements of the EU market in terms of product quality, packaging, labelling and social, health & safety and environmental standards. Section 7 provides indicative prices and price developments for the selected products differentiated by trade channel and value added as well prices of substitutes. It also provides sources of price information.

The final Section, describes marketing and sales promotion strategies as well as recommendations on different levels: supply chain management, promotion strategies and business-to-business opportunities. This chapter was validated through interviews with buyers, consumers, market experts and other relevant actors in the EU market

Keywords: *Bertholletia excelsa*, brazil nut, castaña, castanheiro do para, para-nut, creamnut, castaña-de-para, castaña-de-Brazil, natural ingredients, biodiversity, sustainable use, export, BioTrade Facilitation Programme, trade, market, information

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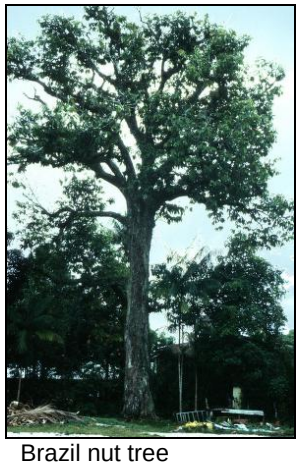
1. Species description and product definition

Family:	Lecythidaceae
Genus:	Bertholletia
Species:	excelsa
Common Names:	Brazil nut, castania, castanheiro do para, para-nut, creamnut, castaña-de-para, castaña-de-Brazil
Parts Used:	Nut, Seed Oil
INCI name[1]:	Bertholletia Excelsa Seed Oil
CAS#[2]:	160965-04-8 (Brazil nut oil)

Tree

The Brazil nut tree is enormous, frequently attaining the height of 40 to 50 meters or more, and it can reach ages of 500-800 years old. This tree is native in many northern parts of the South American continent, like Guiana, Bolivia, Venezuela, Brazil, Peru, Colombia and Ecuador. It forms large forests on the banks of the Amazons and Rio Negro, and likewise about Esmeraldas, on the Orinoco.


Brazil nut tree

The fruit is a large, round woody capsule or pod, about the size of a large grapefruit and weighing up to 2.2 kg. The fruit pods grow at the ends of thick branches, then ripen and fall from the tree from January to June, usually with a loud crashing sound as they fall 50 meters through the canopy like cannon balls. Inside each fruit pod, wedged in like orange segments, are 12 to 25 Brazil nuts, each within its own individual shell. Mature Brazil nut trees can produce approximately 300 or more of these fruit pods annually.

Brazil nut

The Brazil nut is, in fact, a seed rather than a nut, but popular usage continues to prevail. Nutritionally, Brazil nuts are an excellent source of selenium and a good source of magnesium and thiamine. They are 14% protein, 11% carbohydrates, and 67% fat[3]. The fat breakdown is roughly 25% saturated, 41% monounsaturated, and 34% polyunsaturated. The absolute saturated fat content of Brazil nuts is among the highest of all nuts, surpassing even macadamia nuts.

The proteins found in Brazil nuts are very high in sulfur-containing amino acids like cysteine (8%) and methionine (18%) and are also extremely rich in glutamine, glutamic acid, and arginine. The presence of these amino acids (chiefly methionine) enhances the absorption of selenium and other minerals in the nut.

Brazil nut oil

As with most nuts, the Brazil nut is rich in oils, variously reported at 65-70% of seed dry weight. Brazil nut oil is clear yellowish oil, which has a pleasant and sweet smell and taste. Brazil nut oil

[1] See Section 1.3.

[2] CAS registry numbers are unique numerical identifiers for chemical compounds, polymers, biological sequences and alloys. They are also referred to as CAS numbers or CAS RNs. Chemical Abstracts Service (CAS), a division of the American Chemical Society, assigns these identifiers to every chemical that has been described in the literature. CAS also maintains and sells a database of these chemicals, known as the CAS registry. About 23 million compounds have received a CAS number so far, with about 4,000 new ones being added each day. The intention is to make database searches more convenient, as chemicals often have many names. (CAS website: http://www.cas.org)

[3] FAO (1993) - "*Selected species and strategies to enhance income generation from Amazonian Forest*"

contains mainly palmitic, oleic and linoleic and alpha linolenic acids and small amounts of myristic and stearic acids and phytosterols.

The table below presents the fatty acid composition of the kernel fat, with the percentages of insaturation, a highly relevant summation in modern dietary theory.

Table 1-1 Fatty acid composition (%) of pressure extracted Brazil nut kernel fat

C14:0 myristic	C16:0 palmitic	C16:1 palmitoleic	C18:0 stearic	C18:1 oleic	C18:2 linoleic	C18:3 linolenic	% insaturation*
0.05	13.85	0.45	10.25	30.50	44.90	-	75.85
0.48	13.74	-	5.45	42.79	26.54	-	69.33

Sources:
ⓘ http://www.rain-tree.com/Brazilnu.htm
ⓘ http://en.wikipedia.org/wiki/Bertholletia_excelsa

1.1 Traditional and common use of Brazil nut oil

Traditional use

For centuries, the indigenous tribes of the rainforest have relied on Brazil nuts as an important and significant staple in their diet. It was so important, that the nuts have even been used as a trade commodity, much like money.

Indigenous tribes eat the nuts raw or grate them and mix them into gruels. In the Brazilian Amazon, the nuts are grated with the thorny stilt roots of Socratea palms into a white mush known as leite de castanha and then stirred into manioc flour. This food is a valuable source of calories, fat, and protein for much of the Amazon's rural and tribal peoples.

The empty seed pods, often called "monkey's pots", are used to carry around small smoky fires to discourage attacks of black flies, as cups to collect rubber latex from tapped trees, and as drinking cups. The husks of these seed pods have also been used in Brazilian folk medicine to brew into tea to treat stomach aches, and the tree bark is brewed into tea to treat liver ailments.


Brazil nut

The oil is extracted from the nuts and used by indigenous and rural people for cooking oil, lamps, soap, and livestock feed.

Global use

Brazil nut oil is mainly used as:

- a nutritive
- an antioxidant (for its selenium content)
- an emollient (oil is used for the skin and hair)

Today, Brazil nut oil is used in soaps, shampoos and hair conditioning/repair products. As a hair conditioner it brings shine, silkiness, malleability and softness to hair. It helps renew dry, lifeless hair and split-ends and allows hair to remain soft and silky. It provides stabilising detergent properties and helps clean the hair.

It can also be found in skin care products as it acts as a skin moisturiser. Brazil nut oil in skin creams helps keep skin soft and smooth. It helps lubricate and moisturize the skin, provides antioxidant benefits, helps prevents dryness and leaves skin soft, smooth and hydrated.

Ethnobotany uses

- Amazon region: for liver problems, stomach ache, and used as a food, emollient, soap, and insect repellent
- Venezuela: used as a food and as an insect repellent

1.2 Customs/statistical product classification

On January 1, 1988, a unified coding system was introduced to harmonise the trading classification systems used world-wide. This Harmonised Commodity Description System (HS) was developed by the World Customs Organisation (WCO). The system comprises about 5,000 commodity groups, each identified by a six-digit code. More than 179 countries and economies use the system as a basis for their Customs tariffs and for the collection of international trade statistics.

As the table below shows, Brazil nut oil falls under HS code 151590 "Other fixed veg oil, ref or not, nesoi, not chem modified".

Table 1-2 Overview HS classification codes for vegetable oils

HS code	Product description
1507	Soybean oil; its fractions, not chemically modified
1508	Peanut oil; its fractions, not chemically modified
1509	Olive oil; its fractions, not chemically modified
1510	Other oils from olives not chemically modified
1511	Palm oil; its fractions, not chemically modified
1512	Sunflower-seed, safflower or cottonseed oil, not chemically modified
1513	Coconut, palm kernel or babassu oil, not chemically modified
1514	Rapeseed, colza or mustard oil, not chemically modified
1515	Other fixed vegetable fats; oils, not chemically modified jojoba, linseed, castor, tung, sesame
151511	Linseed oil, crude, not chemically modified
151519	Linseed oil, refined, not chemically modified
151521	Corn (maize) oil, crude, not chemically modified
151529	Corn (maize) oil, refined; fractions, not modified
151530	Castor oil, whether/not refined, not chem modified
151540	Tung oil whether or not refined, not chem modified
151550	Sesame oil whether/not refined not chem modified
151560	Jojoba oil whether or not refined not chem modified
⇨ **151590**	**Other fixed veg oil, ref or not, nesoi, not chem modified**

1.3 Nomenclatures

As Brazil nut oil is also used as a cosmetic ingredient, it is interesting to look at the International Nomenclature Cosmetic Ingredients (INCI), which refers to the common nomenclature for labelling ingredients on the packaging of cosmetic ingredients, developed by the European Cosmetic Toiletry and Perfumery Association (Colipa).

An INCI name can cover several chemical entities. Assignment of an INCI Name is for cosmetic product ingredient identification purposes only, and does not indicate that the ingredient is safe for any particular use, or that the use of the substance as a cosmetic ingredient complies with the laws and regulations governing such use. Before exporting your ingredient, it is important to register it under an INCI name.

Brazil nut oil is listed in the INCI inventory as a solvent (substances which are added to cosmetic products to dissolve other components). INCI is the International Nomenclature of Cosmetic Ingredients, which provides internationally recognized names for cosmetic ingredients - e.g. 'aqua' for water

For further information about INCI or for details on how to register an ingredient on the INCI register please visit their websites.

Information:
ⓘ http://www.colipa.com (Colipa)
ⓘ http://pharmacos.eudra.org (General)
ⓘ http://ecb.jrc.it/esis/esis.php?PGM=ein&DEPUIS=autre (EINECS Information System)

2 Market characteristics of Brazil nut oil

In the European Union, Brazil nut oil is mainly used as a food and cosmetic ingredient. Brazil nut oil is a clear yellowish oil with a pleasant, sweet smell and taste. It is therefore sometimes used as a light oil for salad dressings. Competitiveness of Brazil nut oil in the food industry however is marginal, due to the extremely low price of soybean oil, despite the superior nutritional characteristics of Brazil nut.

Brazil nut oil is sometimes also applied in soaps, shampoos, and hair conditioning/repair products in South America. Also in the North American and European markets, Brazil nut oil is more and more found applied this way. Products containing Brazil nut oil are found, for instance, on the shelves of the Body Shop (a cosmetic chain, http://www.thebodyshop.com). The Body shop works closely together with its own Brazilian supplier, with whom they have a long-term relationship (AmazonCoop, a Community Trade supplier representing eight tribes in the Kayapo region.).

Brazil nut oil in skin creams helps lubricate and moisturize the skin, provides antioxidant benefits with its high selenium content, helps prevents dryness, and leaves skin soft, smooth, and hydrated. (Source: http://www.rain-tree.com/Brazilnu.htm)

Brazil nut oil is listed by the Cosmetic, Toiletry, and Fragrance Association (CTFA) as a botanical ingredient for cosmetics.

Since the Brazil nut has long been a common food, rather than an herbal remedy, it hasn't been the subject of any clinical research outside of that concerning its selenium content. Anyone using it "therapeutically" employs the nuts for their high content of natural selenium. Selenium is an essential trace mineral in the human body with antioxidant, anticancer, and cancer-preventative properties (especially, it seems, for prostate cancer).

A short description of the prospective market segments for Brazil nut oil is shown below.

Information:
ⓘ http://www.ctfa.org
ⓘ http://www.rain-tree.com/Brazilnu.htm

2.1 Food industry

The grocery industry is the main user of vegetable oils. Multinationals like Unilever, Nestle, Danone and United Biscuits, together with a host of national producers, use vegetable oils as ingredients for a wide range of food and non-food products.

The market for food ingredients for industrial use can generally be segmented according to major end-users:

- Ready-meals industry. The ready-meals industry is a significant end-user of ingredients (dried vegetables, processed fruit products like tomato puree, spices and herbs, natural gums, oils and fats).

- Soup industry. The soup industry is the largest end-user of dried vegetables. Preserved mushrooms are also used by this industry. The main products are packet soups (dried) including soup bases, instant soups (dried), canned soups and, to some extent, frozen soups.

- Breakfast cereal industry. The breakfast cereal industry uses nuts and dried fruits in its production of cereals, and muesli.

- Beverage industry. The beverage industry is a major user of flavours and colours.

- Other food industries. Several other food industries utilise ingredients in one way or another. These include the pet food, confectionery (candy and cereal bars), bakery and baby food industries.

The following table provides a notion of the application of selected vegetable oils in the food industry:

Table 2-1 Application of seleceted vegetable oils in the food industry

Product	Application
Palm oil	Margarine, ice-cream, confectionery, filled milk, salad oil, cooking, frying
Palm kernel oil	Confectionery, bakery, imitation dairy products
Olive oil	Salad oil, cooking, dietetic food, health food
Coconut oil	Cooking, margarine, shortenings confectionery, bakery, filled milk, coatings
Cocoa butter	Chocolate industry, confectionery, bakery, dairy products, coatings

According to a European importer, Brazil nut oil offers the best prospects as a luxury salad dressing.

2.1.1 Organic food ingredients

Organic food is a small but ever growing segment in the food sector. The EU retail market for organic food is estimated at € 2 billion and growing by about 15% per annum. The share of organic food is highest in Denmark and Austria, with 10% and 9.6% respectively. In Germany, The Netherlands, France and the United Kingdom the market share is around 2%.

Apart from the major vegetable oils like olive oil, palm oil, sunflower oil and soybean oil, a range of smaller types are available as organic oils like linseed oil, safflower oil, sesame oil, hazelnut oil and walnut oil. Due to the limited size of the market, these products are very suitable for small and medium-sized producers in developing countries. Brazil, Colombia and Sri Lanka, for instance, supply organic palm oil, palm kernel oil and coconut oil to the EU. The imports of organic oils are handled by specialised importers/distributors in the EU. They sell the different oils in bulk to the food processing industry or in consumer packing to specialised retail outlets.

2.2 Cosmetic industry

The market for cosmetic ingredients can be divided into two main segments, the processing industry and the end-product manufacturers:

1. Processing industry

- Herbal extraction houses (extraction, evaporation, juicing, distillation, fermentation, purification, drying, blending, granulation, grinding)
- Milling operation (cutting, sifting, powdering, blending, packing)
- Essential oil distillers (associated with a herb farm or mobile distillation units)
- Farms (cultivation, drying, milling, sieving, density adjustment, distillation, extraction, juicing)
- Nut and seed oil producers (cold pressing, expeller pressing, CO2 super critical extraction, de-fatting, etherification, hydrogenation, refining, transisomerisation)
- Wholesale distributors with value-add capabilities (blending, milling, sieving, density adjustment, formulation, granulation, particle engineering, trituration, contract manufacturing)

2. End product manufacturers

- Natural cosmetic and cosmeceutical
  - Bath products
  - Aromatherapy bath products
  - Bath milks and oils

- Herbal baths (sacs, salts (with essential oils) or effervescent tablets)
- Shower and bath gels
- Soaps

- Beauty and personal care product manufacturers
  - Decorative (eye and facial makeup, nail polishes, lipsticks, tattoos)
  - Deodorants
  - Oral care (chewing sticks with essential oil, dental floss with essential oil, mouthwashes, herbal tooth gel and toothpaste)
  - Skin care (skin conditioners, gels, lotions and creams, masks, massage oils, moisturizers, toners)
  - Shaving products (shaving cream, after-shave lotion)
  - Suntan and sunscreen products

- Hair care product manufacturers
  - Hair colouring products
  - Hair growth products
  - Herbal shampoos, conditioners, oils, rinses
  - Styling gels

- Perfume and fragrance product manufacturers

- Wound healing, injury, pain relief drug, cosmetic product manufacturers
  - Herbal balms, distillates, gels, liniments, ointments, plasters, salves

In the European market, you can find Brazil nut oil in a wide variety of cosmetic products. The Body Shop for instance uses Brazil nut oil as an ingredient in amongst others crèmes, moisturizers, soaps, body butters, lip balms or massage oils.

3 Consumption patterns and trends

Today there is an increased global interest in vegetable oils, particularly those with exotic properties or that can be produced without degrading the environment. Palm oil (*Elaeis guineensis*), for example, which had been embraced by a number of personal care manufacturers, has begun to lose its appeal as they realize that most palm oil is produced from plantations that have been carved out of rainforests.

Another trend that can be recognised in the European market for processed vegetable oils and fats is the increasing demand for speciality products that can meet specific needs.

3.1 Food industry

The food and drink producing industry is of paramount importance for the economy of the European Union, since it uses huge amounts of food ingredients. The total EU output of the food and drink industry amounted to € 626 billion in 2001. The so-called 'various food products,' the meat industry, the beverage industry and the dairy industry are the four main food and drink sectors. France is the biggest producer of the first two while Germany and the United Kingdom respectively dominate the other two. Bakery, pastry, chocolate and confectionery products represent more than half the production value in the 'other foodstuffs' category.

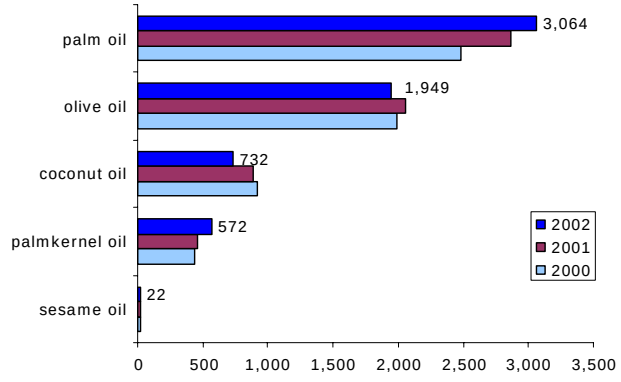
Table 3-1 Production in the food and drink industry in the EU,1998-2001 (in € billion)

Sector	1998	2001	+/-
Various food products[1]	134	163	+22%
Processed meat	102	126	+24%
Beverages	93	98	+5%
Dairy products	88	96	+9%
Animal feed	35	40	+14%
Processed fruit & vegetables	32	36	+13%
Flour & starch products	20	27	+35%
Oils & fats	29	25	-14%
Fish products	12	15	+25%
Total EU	**545**	**626**	**+15%**

[1]Including bakery, pastry, chocolate, confectionery products, which together account for more than half of the production of this category.
Source: CIAA (2003)

Among the vegetable oils, palm oil is, by far, the leading vegetable oil consumed by the EU food industry, followed by olive oil. The Netherlands, the UK and Germany are the leading EU markets for both palm oil and palm kernel oil, together accounting for more than half of total EU consumption. The Netherlands and Germany are also important markets for coconut oil, while sesame oil is an important ingredient in Germany and Greece. Olive oil is mostly consumed in Mediterranean countries, particularly in Italy, Spain and Greece, which together consumed about 85% of the total EU supply in 2003.

Table 3-2 Demand of main vegetable oils in the EU, 2000-2002 (in 1,000 tonnes)



Source: FAO (2004)

In general, vegetable oil demand in the EU has been quite stable over the last few years. Only in the case of palm oil, which is used mainly in the processing industry, a considerable growth can be observed.

Industries use vegetable oils as ingredients for a whole variety of food and non-food products, compound feed and industrial applications. In The Netherlands, more than ten companies refine vegetable oils. The main end products are soy oil, palm oil, cocoa fat and sunflower oil. Lecithin is an important semi-processed product. In 2002, about 1.7 million tonnes of vegetable and

animal fats and oils were put on the market. More than 80% is destined for human consumption. The market for these commodities is very competitive and large scale.

Important trends in this segment are:

- Health food
  European consumers have a strongly increased interest in a healthy life-style and, consequently, in the consumption of health food. Health food refers to food products, which are low in fat and have limited sugar and salt content; this includes functional foods, which have specific health-promoting properties and food products with added vitamins and minerals or bacteria supporting the intestinal function.

- Organic food
  Since European consumers have recently experienced several food scares, many people are concerned about the safety of food, as well as the effects of intensive farming on the countryside and on the environment in general. These factors, combined with the increasing awareness of the importance of diet and nutrition, have intensified interest in organic foods, which are grown according to principles laid down in Directive EC 2092/91

3.2 Cosmetic industry

No specific figures are available concerning the industrial demand for natural ingredients in the EU cosmetic industry. The production figures of the EU companies manufacturing the end-product can, however, be used to give an indication of the consumption of ingredients in the EU.

According to a recent study by Euromonitor, the global market for cosmetics and toiletries in 2002 was valued at € 201 billion, indicating an increase of 4.8% compared to 2001. Western Europe represents a massive share of over 31%of the global cosmetics and toiletries market. Spain, Portugal and Ireland were the most dynamic countries in the period reviewed. North America takes a close second place, with almost 25% of total global sales and saw the slowest growth in 2002. At 23% in 2003, the Asia Pacific regional share comes in third. Latin America sits in fourth place with a 9.3% global share and experienced the fastest growth, thanks to the stabilisation of some key economies. The rest of the world represents 12% of the global market. Eastern Europe is one of the fastest growing markets, with rising levels of disposable income among consumers.

In 2003, the West European market for cosmetic and toiletry products continued its upward momentum. The growth rate of 3.5% corresponding to € 58 billion retail sales prices was recorded as being slower than the 4.8% in 2000, but almost equivalent to the 3.6% of 2002. However, the increase in the cosmetics market in 2003 was higher than the growth rate of the gross domestic product for Western Europe (1%).

Table 3-3 World's Top-20 Beauty Companies, 2003

Company	**revenues** (€ billion)
1. L'Oreal	9.9
2. Procter and Gamble	7.5
3. Unilever	5.0
4. Shiseido	3.6
5. Estee Lauder Cos.	3.5
6. Avon Products	2.9
7. Johnson & Johnson	2.7
8. Beiersdorf	2.4
9. Wella	2.3
10. Alberto Culver	1.9
11. Kao Corporation	1.8
12. Limited Brands	1.7
13. Kanebo	1.7
14. Colgate-Palmolive	1.7
15. LVMH	1.5
16. Henkel	1.4
17. Boots	1.4
18. Coty	1.3
19. Revlon	1.1
20. Mary Kay Inc.	1.1

Source: WWD Beauty 100 (2003)

The EU is not just an important consumer of cosmetic products, the EU is also the world's largest producer of cosmetic products, with the USA and Japan following at a distance. The main EU producers are multinational companies like Unilever (The

Netherlands/UK), L'Oreal (France), Wella (Germany), Sanofi (France), and Beiersdorf (Germany). Many of them operate across a wide spectrum, being involved in other sectors such as pharmaceuticals, chemicals, food or household products.

The principal market drivers were: growing consumer concerns about health, a sense of well-being and looking good. Men's grooming products were a particular beneficiary of this trend. Older consumers were also mentioned as a core target group, many of who are increasingly affluent and keen to spend more on maintaining a youthful appearance. Other trends include interest in "natural", spa-at-home and detox products as people look for ways to feel good about themselves and escape from the stresses of everyday living.

3.2.1 Natural cosmetic products

Natural personal-care products accounted for € 2.1 billion in the 1997 global personal-care market. More recent figures are not available, but it is clear that since then this market has grown rapidly, by an estimated average annual growth of 8-25%. In contrast, the mainstream, largely synthetic or petrochemical ingredient-based market segment of this industry on average increases by 3-10%. Growth in the natural personal care and cosmetics market is global. For example, in South East Asia, several local manufacturers have successfully introduced new products with plant extracts like cucumber, apricot, ginseng, iris, and aloe, and are marketing brands in competition with overseas companies like the Body Shop.

The number of small and large companies entering the market of natural products is on the rise, and during the last few years, there has been a massive entry into this arena by the large mainstream manufacturers.

An important trend in this segment is:

- Natural products: There is increasing consumer sophistication and interest in all things natural. Consumers are calling, across sectors, for healthier and more natural products. Increased consumer sophistication and awareness of ingredients, performance and health benefits are changing the personal care and cosmetics industry. The trend is turning away from products that superficially enhance beauty but have no biological effect, to 'therapeutic' products so-called cosmeceuticals that might, for example, repair damaged tissues, smooth, protect from the sun, and moisturise. This has led to increased use of new, active ingredients, including natural products with defined constituents and specific biological effect.

4 Production

4.1 Production of vegetable oils

Oil seeds in general are mainly processed, by crushing or solvent extraction, into vegetable oil. Groundnuts form the major exception. The kernels are mainly used in snacks and confectionary, while the remainder is used as bird feed and for processing into peanut butter. Vegetable oils and fats constitute about 80% of total edible oils and fats production. They form major constituents of the food chain. Performance and use of vegetable oils is determined by the fatty-acid composition.

The major vegetable oils that are traded are:

Soybean oil
Soybean oil dominates the world trade in vegetable oils. This is due to favourable agronomic characteristics, reasonable returns to farmers and processors, the high quality edible oil and a plentiful and dependable supply of crop at competitive prices. The oil content in the bean is low: 17-19%.
Soybean oil is used as an ingredient for many food items (shortenings, mayonnaise, salad dressing, margarine, cooking oil) and industrial products (paints, varnishes, resins, plastics, inks). Depending on the end product, all the major oils can be used as a substitute for soybean oil.

Palm oil
Palm oil is the second largest source of vegetable oil in the world. It is the third most widely traded oil after soybean and rapeseed oil. It is used in many food items like margarine, ice cream, confectionery, filled milk and as cocoa-butter substitute. Due to its characteristics, palm oil is often blended with other oils in colder countries.
The principal trading centres are Kuala Lumpur, Rotterdam and London. The palm oil trade to the EU is governed by FOSFA trading rules and contracts (FOSFA 80 for crude, unbleached palm oil in bulk CIF, and FOSFA 81 for palm oil products in bulk CIF).

Rapeseed oil
Rapeseed oil is the third largest source of edible oil after soybean oil and palm oil and the second most widely traded oil in the world. It has a low saturated fat content of 6.8% and is primarily used as cooking oil and as an ingredient in shortenings and margarine. Rapeseed oil is widely produced in EU countries like France, Germany, UK, Belgium and The Netherlands and is heavily subsidised.
Trade contracts and specifications are governed by FOSFA.

Sunflower oil
Sunflower oil is the fourth largest source of vegetable oil. The increasing output is due to plant agronomic characteristics and an increasing demand for polyunsaturated oils. The high digestibility and high vitamin E content makes it popular oil in the health food sectors. Sunflower oil is mainly used in the following food products: margarine, salad oil and cooking oil, as it does not affect the natural flavours of foods cooked in it. Sunflower oil is widely produced in EU countries like France, Spain, Germany, Italy and The Netherlands.

Groundnut oil (peanut oil)
The smallest of the five leading annual oil-seed crops, groundnut oil is an important vegetable fat source in large producing and consuming countries (China, India). Due to the high domestic consumption, only 10% of groundnut oil is traded internationally. Refined groundnut oil is an excellent product for deep-frying and pan-frying and can be re-used many times over. The cosmetic industry uses groundnut oil in face and shaving creams and hair lotions. Lower quality and crude oils are used in soaps and detergents.

Coconut oil
Coconut oil is the second perennial crop after palm oil and a vital product for the economies of more than 100 countries. Apart from being a major foreign exchange earner, coconut oil supplies an important dietary component for human consumption. 80% of production takes place in Asia and the Pacific region. Coconut oil is subject to increasing competition from palm kernel oil, its closest

substitute. It has a high content of saturated fatty acids. The EU is an important producer and exporter of coconut oil produced from imported copra.

Palm kernel oil
Similar to coconut oil, palm kernel oil has a relatively small production. It is used as an ingredient in non-food (personal care products, detergents) and as a lauric oil in confectionery, bakery products and imitation dairy products. FOSFA 29 and 29A govern the trading rules and contracts in EU countries. Palm kernel oil has a high content of saturated fatty acids.

4.2 Production of Brazil nuts and Brazil nut oil

Brazil nuts entered world commerce in the late 18th century, introduced by Dutch traders during the period that they attempted to colonise the eastern Amazon and Maranhão. A prosperous trade developed soon after Brazil opened its ports to world trade in the late 19th century and Brazil nut has been an important item of trade since that period. Before this, it had been an essential subsistence product for the local Indians and later the colonists.

If we look at historical figures, the average Brazilian annual production was close to 40,000 tons but could be much larger if there was sufficient demand. In 1970, for instance, the production increased to about 104,000 tons. Nowadays, the monetary value of exporting Brazil nuts from the Amazon is second only to that of rubber. The USA alone imports more than 9 metric tons of Brazil nuts annually. Virtually all Brazil nut production comes from wild forest trees and wild-harvesting.

The trees grow very slowly, taking as long as 10 to 30 years before producing nuts, and they require a specific species of bee to pollinate the flowers. Both of these factors make the trees unsuitable and unprofitable for plantation cultivation.

The nuts require considerable care in handling, because they are highly susceptible to bruising, molding and insect infestations. Because of this, a relatively high proportion of nuts collected are later rejected by processing plants, which have traditionally been located in the major urban centres, hundreds of kilometres from the collection centres. As a result of molding, they may accumulate aflotoxins, which can cause the rejection of whole batches of nuts exported in-shell. Because the nuts are very rich in oils, they rancify easily and may absorb foreign flavours, losing their own.

It is estimated that nuts are harvested from 250,000-400,000 trees annually. Many trees, however, are inaccessible as they are situated in dense rainforests[4].

The latest estimated production of the major castañeros, unshelled in metric tonnes, is as follows[5]:

- Brazil: 7,800 mt
- Bolivia: 10,000 mt
- Peru: 2,200 mt
- Total: 20,000 mt

The bulk of production is exported, with less than approximately 3% used for domestic consumption. Accurate production figures are notoriously difficult to obtain and the trade relies on import statistics for both in-shell and kernels to give an indication of production trends. Trade calculations are usually based on 35% maximum yield of kernels to in-shell nuts.

Production of Brazil nut oil requires scalding, shelling, pressing, filtering and packaging. This technology is readily available and adaptable to 50 litre/hour for small communities using an

[4] Brucher, H. (1989) - "*Useful Plants of Neotropical Origin and Their Wild Relatives*".
[5] Natural Resources Institute (2000) - "*Economic Viability of Brazil Nut Trading in Peru*".

electrically driven screw press or to a larger scale for private companies. The oil is very readily oxidised, and thus must be enclosed in airtight containers or an anti-oxidant added.
The Body Shop has supported investment in Brazil nut oil expression in indigenous areas in Brazil, and the CNPT has developed viability studies for nut extraction and oil production for rubber tappers in Amapá, Brazil. Other efforts have been made along this line in Boca do Acre, but transport costs for oil were deemed prohibitive.

5 Trade Structure

Trading in vegetable oils is mostly based on either forward contracts (12 months) or spot contracts (3-4 months). Paris is the main exchange for rapeseed oil, Kuala Lumpur for palm oil and Chicago for soybean oil. Vegetable oils can also be exported unsold to, for instance, Rotterdam in The Netherlands. On arrival, the oil is stored in tanks until a buyer is found. In this case, the buyer purchases the vegetable oil 'ex tank'. Apart from palm oil, the other vegetable oils are usually shipped as 'crude' to the EU. Palm oil is often refined, bleached and deodorized in the exporting countries.

Forward trading on the major exchanges forms an important part in the buying and selling of vegetable oils. Developments on the Chicago exchange are leading indicators in the price setting of the different vegetable oils.

The following parties are involved in the import and distribution of vegetable oils in the EU:

1. **Shippers of crude and refined products**
   These are exporters in producing countries who produce and export crude and, in the case of palm oil, sometimes refined product to EU countries. It is also possible that shippers purchase from crude products producers to ship to EU countries.
2. **Traders in crude and refined products**
   Traders buy and sell crude and refined products (palm oil) for their own account and re-sell/re-export these to the processing industry.
3. **Brokers / Agent**
   Brokers are intermediaries in the buying and selling of orders on behalf of a customer. Their income consists of a commission on the price. They do not take title to the products, nor do the products physically pass through their hands. Brokers are well-informed sources in respect to market trends, price levels and availability. Due to concentration in the sector, the number of brokers is declining.
4. **Processors of crude and refined products**
   Processors (crushers and refiners) produce vegetable oils as ingredients for making a wide variety of end products in the grocery, compound feed and industrial sectors. Apart from processing, multinational companies like Cargill and ADM are also actively involved in trading. Due to increasing concentration and consolidation, large processors in the EU have direct contracts with suppliers in developing countries, thereby reducing the role of middlemen like brokers and traders.
   Traditional crushing and refining takes place at different locations, but the trend is to bring them closer together. Due to new technology, refiners can handle a variety of oils instead of just one.

After refining, the vegetable oil is bottled for human consumption (cooking oil) or shipped in bulk to the final processing industry. The latter uses the refined oil in a variety of grocery, compound feed and technical products.

Rotterdam is the main trading centre for the EU vegetable oils trade. From here it is distributed by vessel, inland barge or truck to storage facilities and customers. Rotterdam is strategically located to serve continental EU countries with perfect port and infrastructural capacities, a multi- language business community and a well-established trading community. London is the second EU port for the import of vegetable oils.

Which trade channel to choose?

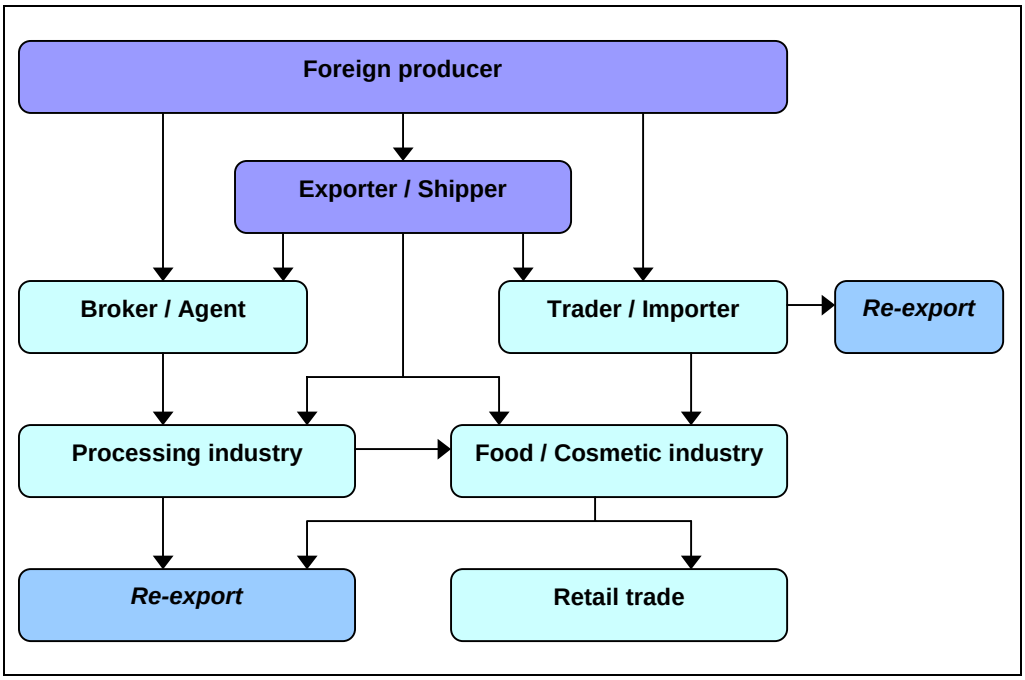
For exporters of smaller vegetable oils, brokers and traders appear to be the most suitable distribution channels. They have intimate knowledge of the vegetable oils markets in the EU. Based on market requirements, they source their products worldwide. As Rotterdam is the most important trading centre in the EU, many traders and brokers are based in The Netherlands.

Some leading industrial end-users have their own purchasing department, and major oil producers may be tempted to sell directly to industrial users, in order to get be paid a better price for their oils. Nevertheless, traders and brokers still fulfil important functions:

- purchase of oils throughout the world or from specific geographic areas
- analysis and quality control
- rectification of the oil to fit the commercial standards
- blending
- sale to users

Developing-country exporters of organically grown products can get themselves listed as suppliers on websites like www.green-tradenet.de and www.greentrade.net. These are websites are market places where suppliers and buyers of organic products come together. Suppliers can specify their offer and company name.

Table 5-1 Distribution chain for vegetable oils



Major firms involved

Companies from all over the world constitute the vegetable oil industry. Among nine biggest vegetable oil companies three are from the EU. However, the origin of the company could be misleading because all these companies have multinational business transactions over the world both in terms of production and trade. It is worth noting that these companies produce not only vegetable oils but also other food products. For example, Unilever Group produces bakery products, ice cream, dairy products, savoury snacks, ready meals, soups, pasta, canned, frozen, and dried food. (Euromonitor)

Table 5-2 Global company shares of oils and fats, 2000

Company name	Origin	Percent
Unilever group	UK / The Netherlands	16.8%
Montedison SPA	Italy	3.1%
Nisshin Oil Mills Ltd	Japan	2.3%
Bunge International Ltd	USA	2.1%
Raisio Gropu	Finland	1.9%
ConAgra Inc	USA	1.8%
Ajinomot Co Inc	Japan	1.4%
Cargill Inc	USA	1.3%
Others		61.8%

Source: Euromonitor

In terms of market share Unilever Group (Netherlands) is the biggest vegetable oil firm. Its sales account for almost 17% of the total market. By and large these nine firms make about 38% of the whole vegetable oil market. The market shares of these biggest companies are summarised in the table below.

Note that all companies listed in this table mainly trade bulk oils. Nevertheless, some of these companies have set up product development departments which sometimes are interested in novelties that have the potential to become bulk products.

The companies that offer the best opportunities for exporters of non-bulk specialty oils are mostly the smaller to medium-sized companies. Exporters have to consider that several hundreds of this type of companies are active in Europe. The initial step of finding a suitable business partner who is interested in developing the product together with you therefore depends for a large part on just starting to contact a large number of potentially interesting companies to make a first selection.

Most EU importers have a website, where interested parties can find more information on the field in which these importers are active. Besides websites of respective companies, the cosmetic suppliers' guide (www.cosmeticsbusiness.com) and Europages (www.europages.com) are other good sources for finding contact details and information on the activities of importers.

The site www.ingridnet.com is a marketing instrument for companies supplying ingredients. The database includes contact details of 10,000 ingredient suppliers and is used by the food, cosmetic and pharmaceutical industries to source ingredients.

Information:
ⓘ http://www.green-tradenet.de
ⓘ http://www.greentrade.net
ⓘ http://www.cosmeticsbusiness.com
ⓘ http://www.europages.com
ⓘ http://www.ingridnet.com

6 Market Access

When exporting Brazil nut oil to the European Union, exporters will have to meet several requirements that are either laid down by the government or industry itself. It is very important that legislative requirements (i.e. product legislation) in the EU are taken into account. As Brazil nut oil is both used in the food and cosmetic industry, specific requirements of those two industries are discussed.

6.1 Legal requirements

6.1.1 All industries

CITES

Known as CITES, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, entered into force on 1 July 1975 and now has a membership of 160 countries. These countries act by banning commercial international trade in an agreed list of endangered species (including plants) and by regulating and monitoring trade in others, which might become endangered.

More than 230 medicinal plants species have been added to CITES appendices. Under this listing, commercial trade is permissible, provided specimens of listed species are legally harvested without detriment to wild populations, and valid CITES documentation is obtained prior to shipping.

At the moment, *Bertholletia excelsa* is not listed as one of the species that is controlled by CITES regulation.

For up-to-date information on species included in CITES Appendix I and II, please refer to:
ⓘ http://www.cites.org

REACH

Under REACH, which now under consideration by the EU Parliament and Council, enterprises that manufacture or import more than one tonne of a chemical substance per year would be required to register it in a central database. REACH would furthermore give greater responsibility to industry, to manage the risks from chemicals and to provide users in the supply chain with safety information on the substances. During the period of consideration from 2004 until implementation in 2006, different preparatory actions will take place to allow for immediate implementation when it enters into force. REACH has influence on the desirability of introducing new ingredients for cosmetics and food industries as they have greater responsibility for the entire supply chain. For exporters of Brazil nut oil, it is important to stay well informed on the developments concerning REACH.

The New Chemicals Legislation - REACH:
ⓘ http://www.europa.eu.int/comm/enterprise/chemicals/chempol/whitepaper/reach.htm

6.1.2 Cosmetic industry

EU product legislation on environmental and consumer health and safety issues is compulsory and, therefore, of utmost importance. Cosmetic ingredients have to comply with several legal EU requirements on safety, marketing and Good Manufacturing Practices.

Cosmetics Directive 76/768/EEC

The leading legislation determining access to the EU is laid down in Directive 76/768/EEC. The Cosmetic Directive indicates:

- which substances are not allowed in cosmetic products;

- which substances are allowed in cosmetic products up to pre-specified limits and conditions;
- which colorants are exclusively allowed in certain applications in cosmetics;
- which preservatives are exclusively allowed in cosmetics.

Since 1997, cosmetic manufacturers have been under the obligation to hold product information dossiers for all their products, containing the following information:

- the qualitative and quantitative composition of the product;
- the physico-chemical and micro-biological specifications of the raw materials and the finished product, and the purity and microbiological criteria of the cosmetic product;
- the method of manufacture, which must comply with the Good Manufacturing Practices (GMP);
- an assessment of the safety for human health of the finished product; to that end, the manufacturer shall take into consideration the general toxicological profile of the ingredient, its chemical structure and its level of exposure;
- the name and address of the qualified person(s) responsible for the safety assessment;
- existing data on undesirable effects on human health resulting from the use of the cosmetic product;
- proof of the effect claimed for the cosmetic product, where justified by the nature of the effect or of the product.

Please refer to the following websites for more detailed information:
ⓘ http://pharmacos.eudra.org/F3/home.html (EU Cosmetics Directive)

Directive System of Information for Dangerous Substances 91/155/EEC
Directives 67/548/EEC and 99/45/EC require producers of dangerous chemicals to provide industrial and professional users with detailed health, safety and environmental information and advice about their products in the form of safety data sheets. Directive 91/155/EEC, as amended by Directives 93/112/EEC and Directive 2001/58/EC, sets out the requirements for the information that should be included in a safety data sheet. The main purpose of safety data sheets is to enable employers to determine whether any hazardous chemicals are present in the workplace, and to assess whether there is any risk to the health and safety of workers and/or to the environment arising from their use. Directive 98/24/EC (which is the responsibility of DG Employment) sets out employers' responsibilities in detail.

For more information on Directive 91/155/EEC, please refer to:
ⓘ http://europa.eu.int/comm/enterprise/chemicals/legislation/sds.htm

6.1.3 Food industry

HACCP
The Hazard Analysis Critical Control Point (HACCP) system focuses on hygiene procedures in food production processes throughout the production and transport chain (e.g. transport of refrigerated goods is also covered by HACCP). The aim is to improve the guarantee for food safety through process monitoring, rather than by checking the end product.

The HACCP system is applicable to companies that process, treat, pack, transport, distribute or trade foodstuffs. EU legislation on food hygiene is based on this system. At present the legislation as laid down in Directive 93/43/EEC applies to producers within the EU, although European importers may in turn require it from their non-EU producers.
In addition, a new Regulation (EC) 852/2004 has been passed that will enforce the same requirements for food imported into the EU as for food produced within the EU. The applications under the new Regulation will come into force on 1 January 2006 at the earliest.

6.2 Quality standards

Because of the different end-products, each buyer has specific quality requirements for the products that are used in their production process.

6.2.1 All industries

FSC's Brazil Nut Standards

The Forest Stewardship Council (FSC) is an independent, not for profit, non-government organisation, that provides standard setting, trademark assurance and accreditation services for companies and organisations interested in responsible forestry.

FSC National Initiatives programme has been drafting specific standards for Non-Timber Forest Products (NTFPs). In Bolivia, Peru and Brazil, regional programmes for improved management of Brazil nut forests have been carried out. As a result, certification standards for Brazil nuts were developed and endorsed by the forest stewardship council. It was the first FSC standard for a non-timber forest product.

Information:
ⓘ http://www.fsc.org
ⓘ http://www.amazonconservation.org/home/brazilnuts.html
ⓘ http://www2.gtz.de/forest_certification/download/ST5s.pdf (= document describing the standard)

ISO9000
The ISO 9000 standards provide a framework for standardising procedures and working methods, not only with regard to quality control but also to the entire organisation. This means that quality, health, safety and environmental management programmes become strongly interwoven with the overall ISO management plan. ISO 9000 does not specifically address product safety and quality, but it is a guarantee that you always do things the same way. One has to bear in mind that the decision to become ISO 9000 certified means a firm commitment, which will draw on the company's human and financial resources and which unavoidably will continuously add procedures and paper work. Nevertheless, manufacturers, which have obtained an ISO 9000 series certificate, possess an important asset. The certification may be a vital factor in the selection process applied by trade partners in Europe.

Information:
ⓘ http://www.iso.org

6.2.2 Cosmetic industry

The quality standards to which cosmetic ingredients have to comply are generally very high. They are characterised by Technical Data Sheet (TDS), Material Safety Data Sheet (MSDS, ISO 11014-1:1994) and by the requirements for INCI, EINECS or ELINCS.

A range of bodies monitors product quality and trading procedures and draws up specifications for natural ingredients for cosmetics. The most widely recognised standards are those set by the International Organisation for Standardisation (ISO).
It is advisable that producers of cosmetic ingredients implement the procedures and processes of GMP, with a view to obtaining GMP certification in the future. However, obtaining GMP certification depends in first instance on the requirements of the importer and the benefits should be considered against costs and time of the implementation.

Moreover, with the increasing emphasis on environmental aspects and traceability of raw materials, it is recommended that exporters understand and implement the practices of GACP. GACP stands for Good Agricultural and Collection Practices for medicinal plants.

In the EU, chemical substances traded have to be listed on the EINECS-list (European Inventory of Existing Commercial Chemical Substances) or ELINCS-list (European List of Notified Chemical Substances). Although Brazil nut oil has a CAS number, it is not registered in the EINECS or ELINCS lists.

Concerning listing, the following steps need to be taken: After having determined the product is not listed and thus is a 'new substance', the importer has to submit a document of notification to the competent authority to placing the substance or preparation on the market.

Then, the manufacturer or importer has to submit obligatory information on the substance to the European Chemicals Bureau. The extent of this information and the timeframe depend on the quantity and type of substance.

Useful websites are:
ⓘ http://www.who.int (GMP and GACP)
ⓘ http://ecb.jrc.it/new-chemicals/ (registration of new chemicals)

6.2.3 Food industry

In 2002, regulation EC 178/2002 has been adopted, laying down the general principles and requirements of food legislation, establishing the European Food Safety Authority and laying down procedures in matters of food safety. The regulation is commonly known as the General Food Law, and also includes provisions on the traceability of food.

The core aspects of the General Food Law will take force in January 2005. In spite of efforts to harmonise national food laws, exporters should realise that differences still exist between EU member states until the General Food Law becomes effective in 2005. Their products should therefore continue to comply with the legislation of the separate EU member states.

The market access for food ingredients for industrial use is regulated through the EU basic regulation EC 1035/72, which stems from the Common Agricultural Policy to protect EU agricultural produce, producers and consumers.

General rules for food hygiene are laid down in the Directive 93/43/EEC. Hygiene is defined as all measures to ensure safety and wholesomeness of foodstuffs. The new regulation states explicitly that foodstuffs cannot be placed on the EU market if they are unsafe. This was, at least implicitly, already regulated through national food law, but now there is an EU-wide explicit regulation. Moreover, the regulation stipulates that it is necessary to establish a comprehensive system of traceability within food businesses.

Industry and trade in the EU are obliged to have full command and information on the whole food chain. For each step, the origin (supplier, date and batch of production) of all raw materials that were used should be documented. This means that also exporters overseas have to be able to inform their buyer on the origin of their product. Companies dealing with organic products are already common with such administrative requirements.

Organic food
EU standards for organic food production and labelling are laid down in Council Regulation (EEC) 2092/91. This regulation and subsequent amendments establish the main principles for organic production at farm level and the rules that must be followed for the processing, sale and import of organic products from third (non-EU) countries. Exporters who want to export organic products

should be aware that the grower and processing industry, as well as the exporter himself have to be inspected and certified by an internationally accredited certifying body.

The EKO quality label is the label in The Netherlands that guarantees the organic origin and quality of agricultural products and food products. The organisation SKAL is the holder of the officially registered EKO quality symbol. Internationally, SKAL is a member of IFOAM (International Federation of Organic Agriculture Movements). It provides services in the field of inspection and certification, both nationally and internationally, acting as an independent third party. Other important EU inspection organisations operating internationally include BCS and Naturland (Germany), Ecocert (Germany, France, Belgium, and Italy) the Soil Association (United Kingdom) and KRAV (Sweden).

Novel food
Regulation (EC) 258/97 on Novel Foods and Novel Food Ingredients sets out rules for authorisation and labelling of GM food products and other categories of novel foods. This Directive indicates that food products, which have not been legally on the market in one or more of the EU member states before 1997, are not allowed to be introduced in the market before going through an (expensive) procedure, in which should be demonstrated that they are safe.

Codex Alimentarius
The Codex Alimentarius Commission was created in 1963 by FAO and WHO to develop food standards, guidelines and related texts such as codes of practice under the Joint FAO/WHO Food Standards Programme. The main purposes of this Programme are protecting health of the consumers and ensuring fair trade practices in the food trade, and promoting coordination of all food standards work undertaken by international governmental and non-governmental organizations.

The Codex Alimentarius, or the food code, has become the seminal global reference point for consumers, food producers and processors, national food control agencies and the international food trade. The Codex Alimentarius system presents a unique opportunity for countries to join the international community in formulating and harmonizing food standards and ensuring their global implementation.

Useful websites:
- ⓘ http://www.europa.eu.int/eur-lex/en/search.html (integral text of the directives and regulations mentioned)
- ⓘ http://europa.eu.int/comm/food/plant/protection/pesticides/index_en.htm (EU pesticide residue legislation)
- ⓘ http://www.useu.be/agri/pesticides.html (EU regulations on pesticides and other contaminants)
- ⓘ http://www.codexalimentarius.net (Codex Alimentarius)
- ⓘ http://www.ifoam.org (International Federation of Organic Agriculture Movement)

6.3 Environmental issues

Environmental aspects of products have become a major issue in Europe in recent periods. Depending on the product group in question, environmental aspects may play a vital role in preparing for exports to the European market. Besides governmental actions (legislation and regulation), a strong consumer movement is noticeable in most EU member countries. Therefore, manufacturers have to view their products and production processes not just by looking at traditional aspects like price, quality, customer demands and standards, but also at the environmental aspects.

Issues such as (environmental) Life Cycle Assessment (LCA) of products, Cleaner Production (CP) have all become important tools for companies to improve on the environmental performance of their products and production processes.

Ecolabelling procedures are purely aimed at the products and indicate that the product with a label has a reduced impact on the environment. If a producer wants to indicate to external parties that he is producing in an environmentally sound way, then he can comply voluntarily with standards like ISO 14001.

6.4 Social issues

Social issues are becoming increasingly important in international trade. Social issues concern both general labour conditions, such as minimum wage and maximum working hours as well as health and safety of the employees.

European trading partners more and more request a minimum of social requirements from their suppliers in developing countries. This is done through social or ethical trading requirements, suppliers' declarations, social responsibility and social accountability schemes.

ILO
Just as every citizen of the world, employees should be respected according to basic human rights. In order to formulate definition to employee's rights, the ILO (international labour organisation) is the UN specialized agency which seeks the promotion of social justice and internationally recognized human and labour rights. The ILO has installed Conventions and Recommendations setting minimum standards of basic labour rights.

The ILO Conventions are dealing with issues like: minimum wage, minimum age of workers, non-discrimination, freedom of labour organisation etc. ILO conventions are internationally accepted and provide an excellent source of information and guidance for companies.

SA8000
SA8000 is one of the most well-known voluntary global standards to ensure social accountability. SA8000 includes standards in the form of a "Code of Conduct" which define what is considered social accountability as well as requirements for a management system which ensures the implementation of these standards in business policy.

The standards included in SA8000 are based on conventions of the International Labour Organisation (ILO) and other human rights conventions. By means of independent verification companies can be certified according to SA8000.

Useful website:
ⓘ ILO and SA8000: http://www.ilo.org

6.5 Requirements for packaging, marking and labelling

The EU Commission and the International Maritime Organisation (IMO) in London issue packaging requirements for crude and (semi) processed products. Directive 96/3 EU regulates the sea transport in bulk of liquid oil and fats in respect to food hygiene standards. As vegetable oil is transported in tanks, labelling and marking do not apply. The Maritime Safety Division of IMO has advised that animal and vegetable oils and fats are, to some extent, a flammable product. For that reason, oils and fats transported by ships are classified under class 4.2 of the International Maritime Dangerous Goods Code (IMDG).

It is recommended that exporters in developing countries comply with "IMO Guidelines for the Packing of Cargo in Freight Containers and Vehicles". These guidelines also include marking and labelling regulations, which can be obtained directly from IMO in London.

But keep in mind that there are many ways of packaging (cosmetic and food) ingredients, depending on the product, the buyer and the legislation. The exporter should reach an agreement with the

importer as to which package to use. Products are sometimes repackaged by intermediate traders.

In general, legal requirements for raw materials specify that the following aspects must be indicated on the label:

- of which material it is; and
- from which batch the material comes.

Further, it is highly recommendable to include the following aspects on the label:

- name and address of the producer/exporter;
- net weight; and
- recommended storage conditions.

Oils and fats are generally transported in iron drums. The overall trend in Europe is towards facilitating re-use and recycling of packaging through incentives. In order to harmonise the different forms of legislation, the EU has issued a directive for packaging and packaging materials (Directive 94/62/EC) in which minimum standards are regulated. Maximum concentrations of lead, cadmium, mercury and chromium allowed in packaging are: 250 ppm and 100 ppm after 30 June 2001.

Suitable packing materials for Brazil nut oil are coated steel drums, dark plastic containers and dark glass. Not suitable is direct contact with iron, bronze and coppers.

Most of the time, packaging policy does not affect 'foreign' manufacturers because importers will be held responsible for the packaging. However, sensible marketing requires taking the obligations for the importer into consideration. That means that packaging materials should be limited and re-useable or recyclable. Otherwise, the importer will be confronted with additional costs, thus reducing the competitiveness of the exporter.

Information
ⓘ http://www.intracen.org/ep (International Trade Centre)
ⓘ http://www.europa.eu.int/comm/food/fs/fl/fl_index_en.html (food labelling)

6.6 Tariffs and quotas

Tariffs on raw materials are generally low, in particular for ingredients like Brazil nut oil originating in developing countries. In order to support exports from developing countries, the EU operates the Generalised System of Preferences (GSP). Under the GSP scheme of the EU, imports from a number of developing countries are admitted at a reduced tariff and imports from a group of least developed countries at a zero tariff.

No import quotas apply to the imports of vegetable oils into the EU. So, exporters of Brazil nut oil from Peru pay a 0% import tariff rate. No quota applies.

A "Form A" or "EUR I form" has to be provided, in case a general tariff is applicable and the exporter from a developing country wants to take advantage of the GSP tariff.

Information
ⓘ http://www.europa.eu.int/comm/taxation_customs/dds/en/tarhome.htm

7 Prices

7.1 Price developments

In case of much traded vegetable oils, price information is readily available. The Chicago Board of Trade, for instance, is the most important market for soybeans and oilseeds. Prices formed at this exchange largely influence prices for other crude oils and fats worldwide. Paris is the main exchange for rapeseed oil, while Kuala Lumpur is the main exchange for palm oil.

Different vegetable oils and fats can be used as substitutes; this of course has a major impact on price settings.

If we look at price developments, we can note that the OECD[6] expects slightly increasing prices for vegetable oils on the long term, i.e. for the period until 2013. According to this OECD report, the upward price development would be mainly the result of increasing demand which can not fully be matched by the increasing supply. Note that these predictions in the first place apply to bulk vegetable oils.

Table 7-1 Price developments of coconut and palm kernel oil, 2002-2004(in € / mt)

	Annual averages			Quarterly averages				
			Jan-Aug	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun
Commodity	**2002**	**2003**	**2004**	**2003**	**2003**	**2003**	**2004**	**2004**
Coconut oil	316	350	498	330	323	396	478	527
Palm kernel oil	312	344	483	315	308	401	464	518

Exchange rate of October 2004 (1 US$ = 0.75 €)
Source: Worldbank Pinksheets, 2004

In most cases, exporters will have to follow market prices. However, in case of most specialty products like Brazil nut oil, there is no real 'world market price'. If negotiations start with a prospective buyer, it could be the case that also the buyer does not have adequate information concerning the price of the products. In those cases, you will have to set your own export price depending on your production costs, exporting costs, etc. and in some cases on local market prices. Other factors that should be kept in mind when setting your export price are the sales volumes and the margins of eventual intermediaries.

In the end, it is important to set the price in such a way that it is profitable for both you and your customer.

The overview below can give some insight in the prices paid for Brazil nut oil on the European market:

Table 7-2 Prices of Brazil nut oil in the EU

Company: Codina (France) Product: Cold-pressed Brazil nut oil in metal drum Level: Wholesale Note: price is ex-works USA	180kg drum	US$13.60 per kg	€ 10.46 per kg
	23kg drum	US$ 14.75 per kg	€ 11.35 per kg
Company: Worldwide Aromatiques (United Kingdom) Product: Cold-pressed Brazil nut oil in bottle Level: Wholesale / retail	10ml	UK£ 1.55	€ 2.26
	30ml	UK£ 3.16	€ 4.61
	100ml	UK£ 7.10	€ 10.37
	250ml	UK£ 14.98	€ 21.87
	1 litre	UK£ 55.50	€ 81.03
	5 litre	UK£ 260.00	€ 380.00
Company: Healing Strands (Ireland)	100ml	US$ 9.43	€ 7.25

[6] OECD Agricultural Outlook 2004-2013 (2004)

Product: Cold-pressed Brazil nut oil in bottle for wholesalers Level: Wholesale	200ml	US$ 18.26	€ 14.04
	1kg	US$ 85.50	€ 65.77
	5kg	US$ 367.35	€ 282.58
	10 kg	US$ 687.00	€ 528.46
Company: Lembas (United Kingdom) Product: Cold-pressed Brazil nut oil for salad dressing (Organic) Level: Retail	1.5 litre (6 bottles of 250ml)	UK£ 16.15	€ 23.58

7.2 Sources of price information

Brokers and traders form the main source of price information, as they are in daily touch with the major trading centres around the world.

Two specialised trade magazines, 'Oil World' and 'The Public Ledger's Commodity Week' provide price information on vegetable oils on a weekly basis. Note however, that this information is mainly on major products. Specific price information on Brazil nut oil is lacking.

At the website libertynatural.com, an importer of botanical ingredients, you can find price information of various vegetable oils, both bulk and specialty.

Information
ⓘ http://www.oilworld.biz
ⓘ http://www.public-ledger.com
ⓘ http://www.libertynatural.com

8 Marketing strategies/prospects and sales promotion

8.1 Marketing and sales promotion strategies

Exporting Brazil nut oil to the European market starts with distinguishing different markets and market segments and identifying the most interesting to target. In the case of Brazil nut oil, we found that prospects lie particularly in the food and cosmetic industries offer the best opportunities.

To be able to supply your products to these markets, it is critical that you satisfy the following requirements:

Critical requirements for supplying the selected markets:
(for information on these issues, please refer to Section 6)

General
☑ CITES
☑ REACH
☑ Technical Data Sheets (TDS)

Food industry:
☑ HACCP

Cosmetic industry:
☑ Cosmetics Directive
☑ Dangerous Substance Directive
☑ Material Safety Data Sheets (MSDS)
☑ EINECS and ELINCS

Compliance with the above mentioned requirements gives you a 'license to supply' the European market. However, you will need to compete with other suppliers and substitutes of your product.

We found that Brazil nut oil is not completely new to the European market. Most importers recognise the name of the product and the product can be found as a cosmetic product in retail shops like the Body Shop.

Value addition
It is therefore critical that you verify if there are any other possibilities to add value to the product in order to make the product more interesting for buyers in the European market to give you that competitive edge you will need to get a foothold on the European market.

Adding value to your products starts at your own factory. In fact, you are already a couple of steps on the way. Not just supplying raw materials like Brazil nuts but a processed product like Brazil nut oil that has gone through a number of processing steps already means you added value to the product. Having your business processes (planning, cost-calculation, purchasing, etc.) organised is another major determinant of the quality of your export product and whether you prove a successful supplier to the European customer. In Section 6, we explained the role of quality systems like ISO in this field.

During our interviews with importers and sector specialists we identified a number of other options to add value to your product. Below you will find an overview of these opportunities to improve your competitive position. Check if you are able to comply with these options:

Options for increasing your competitive edge:

☑ **Product documentation**

- When looking for new European business partners, it is of the utmost importance that the exporter is able to show proper and detailed product documentation (technical datasheets). The exporter should be able to demonstrate, by means of test results of an independent laboratory, the unique properties of the vegetable oil on offer. It is important to consider the fact that one of the first things an importer will ask is more detailed product information. It is crucial that the exporter has this kind of information readily available.

☑ **Organic certification**

- Although still a small segment, the market for organic ingredients is expected to keep on growing in the coming years. Growers, crushers and exporters in developing countries can distinguish themselves from the mainstream products by offering organic oils and fats to EU importers; they can have their fields and crushing facilities certified by a EU certifying organisations.
- This is particularly important for small specialty products like Brazil nut oil. Smaller quantities can be more easily marketed in the organic market than in the regular market, where larger quantities are required by traders.

☑ **Quality systems**

- Suppliers who have the quality systems like HACCP and ISO in place have a major competitive advantage, as these certifications provide guarantees on quality assurance and food safety.

☑ **Highlighting product properties**

- Exporters should keep in mind that Brazil nut oil is a fairly expensive oil and therefore has to distinguish itself from other oils, for instance by highlighting its properties (see Chapter 1). The pleasant sweet and nutty smell of Brazil nut oil can be one of the reasons that it is very interesting for application in cosmetic products.

☑ **Niche marketing**

- Although Brazil nut oil is not a new product to the EU market, it should still be considered a specialty good. Most importers and end users are not familiar with the product. Furthermore, due to the relative high production costs of the oil, Brazil nut oil is not able to compete directly with the main products like palm oil and palm kernel oil.
- Nevertheless, opportunities exist for this kind of specialty products if the producer is able to show the added value of the oil. The exporter should point out the specific properties of the oil which makes it interesting for the end user to pay the higher price.

☑ **Integrated chain control & traceability**

- Tracking and tracing of oils and fats for application in food products is increasingly required by food processors in the EU. Suppliers in developing countries who have a system of tracing and tracking, supported by documentation have a competitive advantage in dealing with EU importers.

☑ **Language and communication**

- When dealing with European importers, English is the most frequently used language. Although most European trade partners will not be native speakers themselves, the vast majority speaks English fluently. In almost all cases, foreign language skills, particularly English, are essential when entering the European market. For Latin American companies, an exception of course is the competitive advantage they have if communicating with Spanish importers.
- All documentation (company profiles, technical data sheets, etc.) should be made available in English.
- It is advisable to commence with some communication measures which only require a small amount of planning and co-ordinating. A company brochure (including photos of production sites and produce) can be useful for promoting new contacts and sales.

Annexes

Annex 1: Sources of price information

Agra Europe Ltd.
Publisher of 'The Public Ledger'
E-mail: marketing@public-ledger.com
Internet: www.public-ledger.com

FAO
Food and Agriculture Organisation (Publisher of 'Monthly Bulletin of Statistics', 'Commodity and Market Review', and 'Food Outlook')
E-mail: FAO-HQ@fao.org
Internet: www.fao.org

COSSMA
Health and Beauty Business Media GmbH
E-mail: juergen.volpp@health-and-beauty.com
Internet: www.cossma.com

ITC
International Trade Centre (Publisher of 'MNS Medicinal Plants & Extracts')
E-mail: mns@intracen.org
Internet: www.intracen.org

ISTA Mielke & Co.
Publisher of 'Oil World'
E-mail: info@oilworld.de
Internet: www.oilworld.de

Annex 2: Trade associations

Colipa
The European Cosmetic Toiletry and Perfumery Association
E-mail: colipa@colipa.be
Internet: www.colipa.com

FOSFA
Federation of Oils, Seeds & Fats Associations
E-mail: contact@fosfa.org
Internet: www.fosfa.org

CTFA
Cosmetic, Toiletry, and Fragrance Association
Internet: www.ctfa.org

IFEAT
International Federation of Essential Oils and Aroma Trades
E-mail: secretariat@ifeat.org
Internet: www.ifeat.org

IKW
German Cosmetic, Toiletry, Perfumery and Detergent Association
E-mail: info@ikw.org
Internet: www.ikw.org

Annex 3: Trade fair organisers

BioFach
Certified organic products
E-mail: info@biofach.de
Internet: www.biofach.de

FI Europe
Food Ingredients
E-mail: fi@cmpinformation.com
Internet: www.fi-events.com

IN-COSMETICS
Cosmetic ingredients
Internet: www.in-cosmetics.com

Natural Products Europe
Internet: www.expoeurope.com

SANA
Exhibition of Health Food, Health and Environment
E-mail: info@sana.it
Internet: www.sana.it

Annex 4: Standards organisations

INTERNATIONAL

World Health Organization (WHO)
E-mail: info@who.int
Internet: http://www.who.org/

International Standardisation Institute (ISO)
E-mail: central@iso.org
Internet: www.iso.org

UN/ECE
Trade Division - Agricultural Standards Unit
E-mail: info.ece@unece.org
Internet: www.unece.org

Joint FAO/WHO Food Standards Programme
Codex Aimentarius Commission ESN Division
E-mail: fao-hq@fao.org
Internet: www.fao.org

EUROPEAN UNION

CEN
European Committee of Standardization
E-mail: infodesk@cenorm.be
Internet: www.cenorm.be

Comité Européen de Normalisation (CEN)
European Normalisation Committee
E-mail: infodesk@cenorm.be
Internet: www.cenorm.be

SGS European Quality Certification Institute E.E.S.V.
E-mail: sgs.nl@sgs.com
Internet: www.sgs.nl

FRANCE

AFNOR
French Association of Normalisation
E-mail: communication@afnor.fr
Internet: www.afnor.fr

GERMANY

DIN
German Institute for Standardisation
E-mail: zentrale@dincertco.de
Internet: www.din.de

THE NETHERLANDS

NEN
Netherlands Institute of Normalisation
E-mail: info@nen.nl
Internet: www.nen.nl

UNITED KINGDOM

BSI
British Standards Institution
E-mail: cservices@bsi-global.com
Internet: www.bsi-global.com

ITALY

Ente Nazionale Italiano di Unificazione (UNI)
Italian Standardisation Entity
E-mail: uni@uni.com
Internet: www.unicei.it

Annex 5 Trade press

Parfums Cosmétiques Actualités
Société d'expansion Technique et Economique
Phone: +33 1 40 61 20 00
Fax: +33 1 40 61 20 01
Internet: www.parfums-cosmetiques.presse.fr

COSSMA
Health and Beauty Business Media GmbH & Co KG
Contents: Up-to-date editorial approach news from the areas of perfumery and cosmetics, aerosol and spray technology and marketing and marketing surveys.
Frequency: 12 times a year
Language: English and German
E-mail: dorothea.michaelis@health-and-beauty.com
Internet: www.cossma.com

SÖFW Journal
E-mail: simons@sofw.com
Internet: www.sofw.com

EUROCOSMETICS
Contents: C&T serves research laboratories throughout the world with the latest information on cosmetic formulations, new technologies, ingredients and testing. Cosmetics & Toiletries magazine is the first-read industry magazine for everyone developing new formulations and creating product concepts.
Frequency: 12 times a year
Language: English
E-mail: info@eurocosmetics-magazine.com
Internet: www.eurocosmetics-magazine.com

GCI Global Cosmetic Industry
Contents: Sister publication of Eurocosmetics, serves the business and marketing needs of the cosmetic industry.
Frequency: 12 times a year
Language: English, but GCI Latin America published in Spanish, serves Mexico, Central America and South America.

World Directory Cosmetics Industry
E-mail: info@teknoscienze.com
Internet: www.teknoscienze.com

International Journal Of Cosmetic Science
Blackwell Science Ltd
E-mail: journals.cs@blacksci.co.uk
Internet: www.blackwell-science.com

Soap, Perfumery & Cosmetics
Wilmington Publishing
E-mail: ndawes@wilmington.co.uk
Internet: www.spc-magazine.com

C&T - Cosmetic & Toiletries
E-mail: customerservice@allured.com
Internet: http://www.cosmeticsandtoiletries.com

Happi Magazine
Rodman Publishers
Contents: Covering soaps, detergents, cosmetics & toiletries, waxes and polishes, insecticides, aerosols and related chemical specialties, HAPPI is published for people involved in the personal care, household, industrial and institutional fields.
Frequency: 12 times a year
Language: English, but on the Internet site there is a separate link to Happi Latin America (with Spanish and Portuguese publications) and Happi China.
E-mail: rodmanpub@aol.com
Internet: www.happi.com

Annex 6: Other useful addresses

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
E-mail: cites@unep.ch
Internet: www.cites.org

FI Data Services
Internet: www.ingridnet.com

GTZ Deutsche Gesellschaft für Technische Zusammenarbeit GmbH
Internet: www.gtz.de

International Chamber of Commerce
E-mail: webmster@iccwbo.org
Internet: www.iccwbo.org

Netherlands Association for Phytotherapy
E-mail: nvf@fyto.nl
Internet: www.fyto.nl

Skal
(Internationally operating organisation, inspecting and certifying sustainable agricultural production methods and products)
E-mail: info@skal.com
Internet: www.skal.nl

Traffic Europe
(Joint wildlife trade monitoring programme of WWF and IUCN)
E-mail: traffic@trafficint.org
Internet: www.traffic.org

International Council for Medicinal And Aromatic Plants
E-mail: info@icmap.org
Internet: www.icmap.org

European Advisory Services (EAS)
Avisory company specialising in European and international food and nutrition policy (incl. herbal supplements).
E-mail: info@eas.be
Internet: www.eas.be

Earthscan Publication Ltd.
E-mail: earthinfo@earthscan.co.uk
Internet: www.earthscan.co.uk