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## **Geographical Indications : review of seven case-studies world wide**

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### **ABSTRACT**

This report presents 7 case-studies of Geographical Indications in various parts of the world. Each case-study is presented according to a common template in order to highlight similarities and differences.

### **KEY WORDS**

Geographical Indications, typicality, supply chain, marketing challenges, social and environmental side effects.

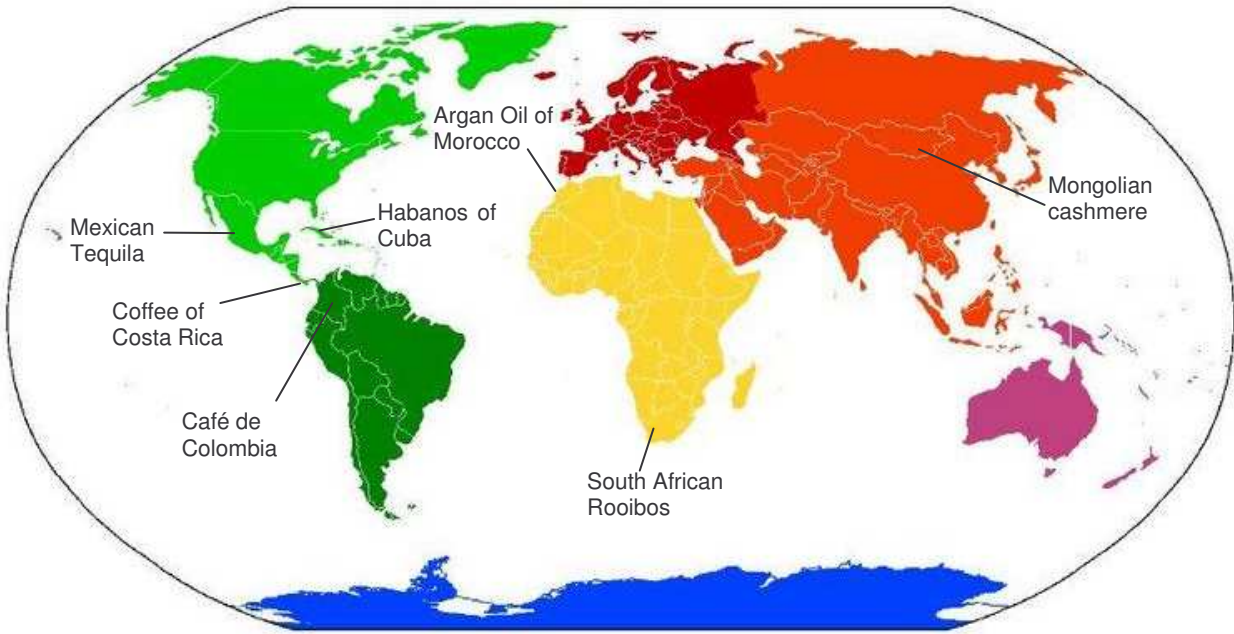
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# Geographical Indications : review of seven case-studies world wide



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## 1 Introduction

This report presents seven case studies. The objective is to highlight how large size GI initiatives in developing countries deal in practice with marketing issues, collective organisation, social and environmental effects, national legal frame, and protection on the international market.

Case studies have been selected according to the following methodology. Firstly, we have “filtered” case-studies according to following points:

1. Farmers and enterprises in a region have built up product reputation based on typicality / uniqueness linked to a territory. The product verify conditions to qualify as a GI,
2. The product in question is sold on the international market,

Secondly, case-studies that have different strategies for protection on the international market were chosen (“sorted”), in order to show different types of protection.

A broad overview over the case studies presented is given in table 1.

**Table 1: Short case studies description**

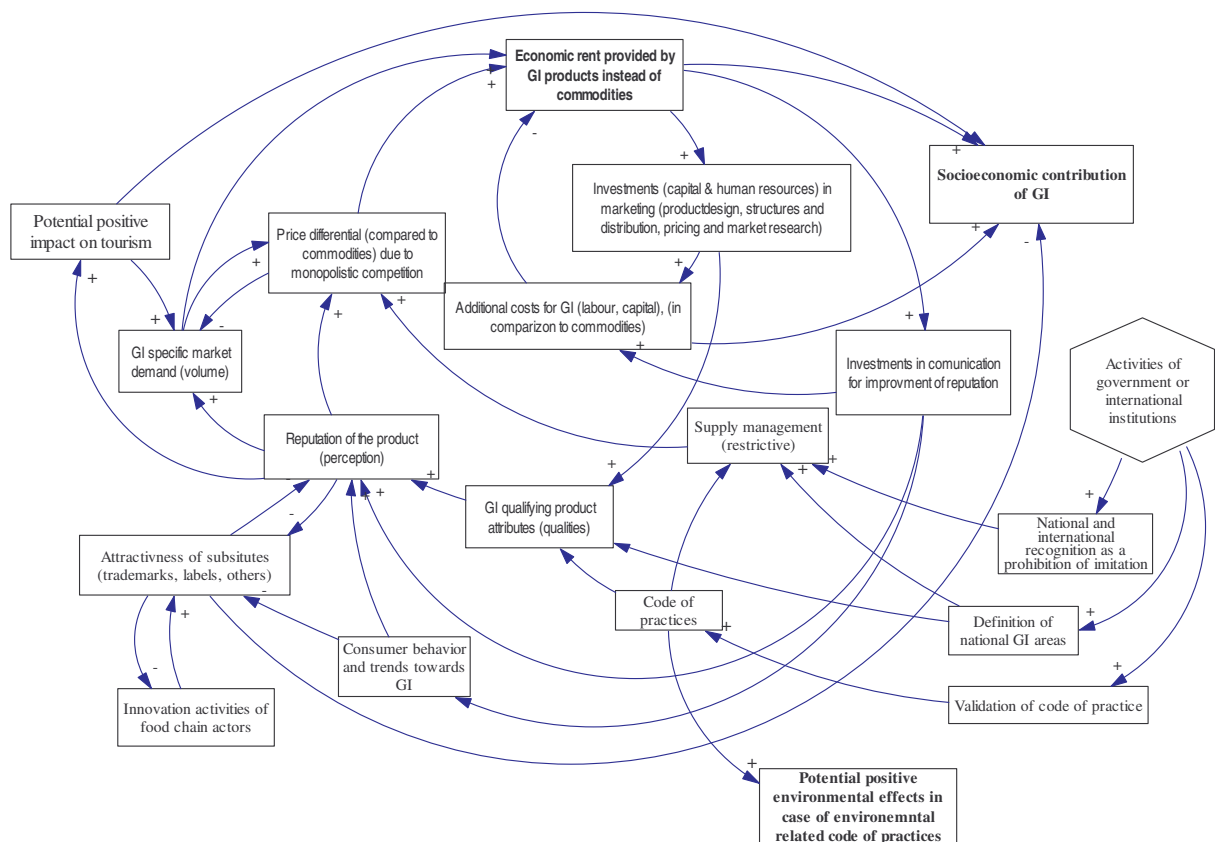
Country	Product	Export of total production	Registered as
Morocco	Argan Oil	67%	Trademark
Mongolia	Cashmere wool	50-90% (dependent on processing stage)	Certification mark Trademark
Colombia	Coffee of Colombia	90%	GI Trademark Certification mark
Costa Rica	Coffee	80%	Trademark
Cuba	Habano Cigars	90%	Trademark GI
South Africa	Rooibos tea	60%	Trademark
Mexico	Tequila	66%	GI

Source: own preparation

This report has gathered existing information on these case-studies (reports, presentations, articles, etc.), without new data collection. A bibliography will help the reader to identify the experts that may be consulted for further information.

Information about the case studies is structured in a systematic way in order to allow comparisons. Figure 1 presents the system dynamics of value creation and the socioeconomic and environmental contribution of GIs.

**Figure 1: Rent creation and the socioeconomic and environmental contribution of a GI**



Source: Prof. Dr. Bernard Lehmann<sup>1</sup>

Value creation comes from product differentiation and acknowledgement by consumers of this typical quality linked to a territory inside the region (residents, tourism) or outside. This “special” quality leads to extra costs. A written code of practices, elaborated by a demanding group, formalizes the GI operators’ authorized production processes. The government, when there is a national law, registers the GI, defined by the geographical area and the code of practices. Registration leads to protection rights at the national and international level. GIs may lead to positive social and environmental effects, even if economic value is their major objective.

For each case-study, we follow the following systematic approach. At first an overview is given about the conventional market system the product is traded in and how the country or supply chain already took action to overcome some potential shortcomings of this system. Secondly, the uniqueness of the product is specified and the marketing strategy behind the product promotion presented. Subsequent to the supply chain structure the existence of protection measurements in the national legislation and in international negotiations is shown. At the end the challenges for the concerning product on the market are described as well as social and environmental side-effects of the existing supply chain and/or impact of the GI system is striped.

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## **2 Argan Oil of Morocco**

Morocco is to date the only producer of argan oil in the world. The Souss Massa Draa region represents 86% of the total argan production of Morocco (Ouraiss, 2007a). In Souss Massa Draa, the yearly production quantity is 50 000 litres oil out of 800 000 hectare argan forest (Ouraiss, 2007b). Bouzemouri (2007) estimates the actual production quantity by about 100 000 litres argan oil per year that could be considerably increased.

About 4'000 tons representing one third of total production are domestically consumed, the rest of about 6'000 tons is exported.

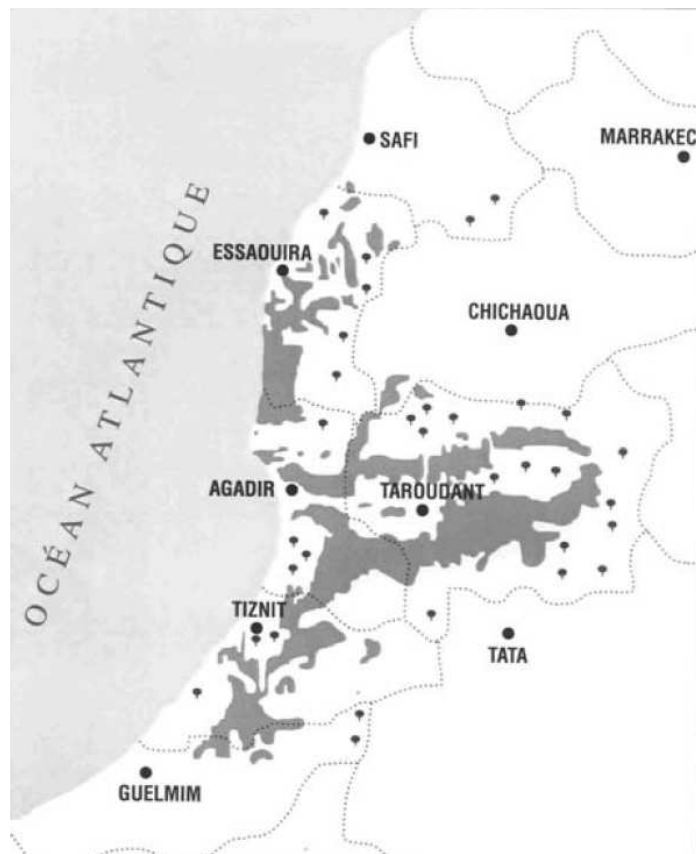
The main importing countries are the European Union (France, Netherlands, and Germany), North America and Israel. Prices for argan oil vary a lot as the oil can be used for a variety of food (argan oil from roasted kernels) and non-food products (oil from un-roasted kernels usually used for cosmetics or massage). The distribution is done by private firms or cooperatives mainly as finished product but also in bulk as ingredient for cosmetic products.

### **2.1 Uniqueness of Morocco's Argan oil**

The argan tree (*Argania spinosa*) belongs to the family of Sapotacea and can be traced back over more than two million years. Its unique, very deep and wide reaching root system allow it to make excellent use of the water in the soil and can channel extremely heavy rains below ground, thus raising the groundwater level. The fruit ripens year-round and in a good year a tree may bear up to three generations of blossoms and fruit at completely different stages of maturity at the same time. The argan tree can tolerate drought and temperature of over 50°C by going dormant (Nill et al., GTZ, 2006).

The argan tree grows in the broad basin of the Souss and Massa Rivers in south-west Morocco, a semi-arid to arid region known as the Arganeraie (Nill et al., GTZ, 2006). The area is in total 72 500 square kilometres which relates to 10% of the total national territory (Ouraiss, 2007b). The tree population covers a total area of approximately 800,000 hectares (see fig. 1). The density varies from 250 to under 40 trees per hectare, and the natural tree stocks in Morocco are estimated to be between 150-250 years old (Nill et al., GTZ, 2006). The UNESCO and the Moroccan State classified the Moroccan argan tree as Biosphere Reserve in 1998 (Origin-Gi.com). The Arganeraie region comprises 6 provinces: d'Essaouira 130 000ha, Agadir 37 000 ha, Chtouka-Ait Baha 90 000ha, Tiznit 140 000 ha, Taroudant 360 000ha and Inzeguane-Ait Melloul 13 000ha (Bouzemouri, 2007). 13% of the total regional BIP is earned through agriculture and provide employment for 17% (150 000) of the Souss Massa Draa population (Ouraiss, 2007b).

**Figure 1: Distribution of Argan Tree in Morocco**



Source: GTZ, 2006

The oil is taken out of the kernels. Typicity is verified with organoleptic tests, for food purposes. More recently, lab analysis has identified a very specific profile. It contains over 80% unsaturated fatty acids, Vitamin A, considerable quantities of tocopherol and a remarkable quantity of sterols. The oil can be used for food or for cosmetics or health purposes (Nill et al., GTZ, 2006). Its composition compared to other vegetable oils is unique (see tab. 1).

**Table 1: Percentage of acid fat in different vegetable oils**

	peanut	hazelnut	olive	sesam	sunflower	<b>Argan</b>
Oleic acid	48-66	66-83	55-83	37-42	15-25	<b>43-50</b>
Palmitic acid	8-13	5-9	8-14	8-11	8-13	<b>10-15</b>
Linoleic acid	14-28	8-25	3-14	39-47	50-62	<b>28-36</b>

Source: Guillaume et al., 2007

## 2.2 Marketing Strategy

Argan oil is a traditional product which used to be produced by hand by women and sold along the roads for the local market. It was used for food and cosmetics purposes by Moroccan women. The qualities of the argan oil were studied by Zoubida Charrouf, a Professor of Chemistry at the University of Rabat, as demand was growing on the international market.

Through the mid-1990s, the beforehand steadily growth of the domestic argan oil market slowed down and the non-traditional, high-value oil markets expanded dramatically in the late 1990s. Exporters quickly recognized that artisan argan oil extraction and marketing were ill-suited to higher value markets. Consumers in these new, higher-price markets expect a purer, higher quality oil and slicker packaging than do traditional argan oil consumers in the region. More sterile, mechanized extraction and more sophisticated marketing strategies were needed (Lybbert et al., 2002).

Most locals` inability to participate directly in high value argan oil markets and the barriers they face to indirect participation in argan fruit markets due to poor transportation infrastructure has motivated the creation of two kind of cooperatives: the non-mechanized sponsored by the GTZ association, and the mechanized cooperative established by Zoubida Charrouf with support from the European Union, Oxfam and the Japanese International Cooperative Agency, among others (Lybbert et al., 2002).

The success of this strategy is obvious. Regarding the artisan production chain, in 1999, GTZ was paying 8 Euro per liter of pure, high quality argan oil to its 27 members. The oil was tested, packaged and marketed as culinary oil in high-value domestic and international markets.

Lybbert et al. (2002) analyzed the participation in the Tidzi cooperative. To participate in the cooperative a membership fee of 5kg of argan nuts or 20 Euro must be paid. Cooperative members are paid 2.5 US\$ per kg of nuts cracked. On average, a woman can extract between 0.8-1.0 kg in a single 8 hour work day. This daily wage of approximately 2-2.5 US\$ is relatively low in comparison to the labor options that man face (3.5-4 US\$/ day), but it is very attractive to women since they have few or now labour work options. The cooperative sells a variety of final products, including cosmetic oil (3.5US\$/60ml), edible oil (12US\$/375ml), and amalo <sup>2</sup> (Lybbert et al., 2002).

Between 1996 and 2006 the price for one liter argan oil at the cooperative's gate increased from 35 DH (3.5 Euro) to 200 DH (20 Euro). 50% of the price of oil exports is transferred to the women, the rest used for the transportation, the functioning of the association and the commercialization. In 2006 the turnover of the cooperatives was 1 million euros (10 000 000 DH) (Charrouf, 2007).

On the international market specialty shops and internet vendors have sprung up, selling the oil for upwards of \$200/liter with claims that is the world's rarest and most expensive edible oil (Lybbert et al., 2002).

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<sup>2</sup> An almond-honey butter with argan oil base

### 2.3 The supply chain

Production is presently piloted by 100 cooperatives in different regions (see tab. 2). These cooperatives are bundled in one umbrella association, The Association National des Coopératives Arganières (ANCA) which promote the interest of the 100 cooperatives. The national association is subdivided into four economic interest groups (Agadir, Essaouira, Taroudant and Essaouira) and one cooperative union which are responsible for the promotion and the commerce of the argan oil (Charrouf, 2007). The industrials are also associated in the association des industrials (Ouraiss, 2007b).

**Table 2: Numbers of argan oil cooperatives in 2007**

Province	No. of cooperations
Agadir	21
Choutka Ait Baha	3
Essaouira	12
Inezgane Ait Melloul	3
Taroudante	25
Tiznit	27
Total	100

Source: Charrouf, 2007b

Two Argan oil value chains can be distinguished. The distinction is related to the techniques used for extracting the oil: hand-pressed or mechanically pressed (Nill et al., GTZ, 2006).

#### Hand-pressed Argan oil chain

Within the hand-pressed argan oil chain, *producers* are families who have usufruct rights for the argan trees and gather the fruits in the wild. The quantity fluctuates considerably depending on location and is ranging between 5-160 40 kg sacks per season. The gathering and following peeling process is made by women cooperatives counting 20-60 women per cooperative. In 2005, 30 cooperatives were recognized (Nill et al., GTZ, 2006).

The first *processing* step is the drying and storing of the gathered fruits. Afterwards the fruits are peeled and then broken up and the kernels are sorted, roasted and hand-pressed. For the production of one liter of oil 24 hours are needed with this method. In the treatment phase, the hand-pressed oil is decanted, filtered and bottled into plastic bottles. Producing argan oil is a highly work intensive process. Each argan tree gives an annual yield of between 10-30 kg of fruit. Around 38kg of fruit yield 2.6 kg of kernels which are required to produce one liter of argan oil (Nill et al., GTZ, 2006). A woman's maximum daily working 8 hours non-stop is 21 kg fruits or 1.5 kg of kernels (Nill et al., GTZ, 2006).

The *distribution* of hand-pressed argan oil is done by the women's cooperatives, the Union of Women's Cooperatives of the Arganeraie (UCFA). The part which is not self-consumed goes to the local market is ordered by urban end producers, grocers, informal street traders or sold

to small private companies in the tourist centers such as Agadir and Essaouira (Nill et al., GTZ, 2006).

The UCFA sells the hand-pressed argan oil on the domestic market in containers of 0.75 or 3.75 liters, for a price of 20 Euro per liter under the registered brand name “Tissaliwine”. The buyers are big commercial chains or retailers (Nill et al., GTZ, 2006). The UCFA work closely together with ARGAND`OR GmbH (see fig. 2), a German company founded by Engineer Mohamed El Karz, which provides strict quality control and bottles ARGAND`OR Argan oil in an USDA certified and ECOCERT inspected facility in Germany. ARGAND`OR of Germany is a socially responsible company, pays fair trade prices well above market and supports the UCFA cooperatives in development and education initiatives.

**Figure 2: Argan Oil Brand of ARGAND`OR**



Source: <http://www.worldartisansguild.com>

### Mechanically-pressed Argan oil chain

The *supply of raw material* for mechanically-pressed argan oil is provided by intermediate traders and wholesalers. To bypass these intermediaries, the Association Ibn-Al Beithar has been trying to build up a “Cooperative de Concassage” (Women`s Cooperatives for breaking open nuts). They want to link the argan-growing areas with the oil pressed of the semi-mechanised cooperatives which is also an important factor in terms of organic certification. To ensure the supply with argan fruits they buy also dried kernels from traders and wholesalers who work with a network of small buyers buying directly from the families (Nill et al., GTZ, 2006).

In this supply chain *processing* is mechanized. The mechanization of argan oil production began in the mid 1990s with simple shelling and roasting facilities driven by private enterprises in Casablanca, France, Switzerland as well as by researchers at the various Moroccan universities.

The mechanization increased the productivity enormous as a screw press can produce up to 50 liter of argan oil per day compared to hand-pressing method with a yield of 0.8-1.0 kg oil of one woman in a single 8 hour work day (Lybbert et al., 2004). For mechanical production 120 kg of kernels or 1720 kg dried fruits are required. About twice as much oil can be extracted from unroasted kernels using mechanical-pressing as by hand-pressing (Nill et al., GTZ, 2006).

The *distribution* of mechanically-pressed argan oil is done by women`s cooperatives selling the edible and cosmetic oil directly at the production site to international tourists or sells it in

Morocco via retailers and hotel and commercial chains. In 2004, the first four cooperatives formed the GIE Targanine and in 2005 two further semi-mechanized women's cooperatives were founded. These economic interested groups sell the oil products of the member cooperatives within Morocco and with the main target on the international market. Like the UCFA they assure quality and organic certification, and help entering new markets (Nill et al., GTZ, 2006).

Mechanically-pressed argan oil is sold by private companies under their own names or under brand names whereby the image of oil-producing women in the Arganeraie has found its way into commercial advertising, without these women having any share in the added value (Nill et al., GTZ, 2006).

The Targanine argan oil cooperative had revenues of over \$ 100 000 in 2000 with 60% of its sales over the internet, mostly to distributors in Europe and North America (Carrouf, personal communication to Lybbert et al., 2002).

The big private oil presses process part of the oil from unroasted kernels into cosmetic products and a smaller quantity into natural remedies. A further part of the oil is sold directly as Non-Food product and some of the private companies have their own shops in tourist areas. Other companies supply the retail trade, bigger commercial and hotel chains, as well as duty free shops and airlines. In spite of inadequate certification of the gathering areas, the private companies were given organic certification under EU Regulation No. 2092/91 (Nill et al., GTZ, 2006).

#### **2.4 GIs in the national law**

Until 2008, argan oil of Morocco was not registered as a GI. However the law project n° 25/06 « relatif aux signes distinctifs d'origine et de qualité des produits agricoles et des denrées alimentaires » has been voted in 2007 and offers the adequate legislative framework (Charrouf, 2007). In 2008, the first association producing argan oil under the new law was founded (l'AMIGHA: l'association pour une IG huile d'Argane) and in October 2008 the code of practice was finalized. It is expected that in January 2009 both, the association as well as the code of practice are justified by legislation. It is too early to know what will be the legal consequences of registration (better protection against usurpation, eventual registration in EU...).

#### **2.5 Challenges for Morocco's Argan oil**

One challenge of the argan oil production is to maintain a certain quality level. As Argan oil is expensive compared with other edible oils, domestic consumers are therefore households with high disposable income in bigger Moroccan cities. On the regional and national markets, the traditional and semi-mechanised cooperatives sell their edible oil in 250ml or 375ml bottles for 25-40 Euro per litre; cosmetic oil is sold in 60ml flacons for about 5 Euro. In contrast, the private companies sell their edible oil for about 20 Euro per litre and the cosmetic oil for around the half the price per flacon on the national market. This oil does not always have the same high quality since it is made from purchased kernels, whose origin cannot always adequately traced (Nill et al., GTZ, 2006). However, a code of practice was just recently established and may partly solve the problem of quality variations at least for certified argan oil.

On the international markets usurpation is a problem. Argan oil is mixed with other vegetable oils but sold as pure argan oil (Charrouf, 2007a). However, it was possible to find chemical identifiers for proving adulteration (Hilali& al., 2007). Other usurpation concerns the use of the term “Argane” for a parfum or for kernels processed into oil outside the area.

Beside the challenge to maintain a high quality level as well as the usurpation problems another serious problem for Morrocos Argan oil producers is the increasing interest in argan oil production of Spain and Israel. These countries started to import the kernels to produce oil as well as to cultivate the argan tree in their own countries.

## **2.6 Value distribution within the supply chain and social and environmental side effects**

The commercialization of argan oil is a highly profitable business and will lead to a general welfare increase of the Arganeraie citizens if a proper supply chain can be built up. The establishment of a GI might be a good way, to allow locals participate on the commercial success. However, a lot of work has to be done to avoid negative effects for the environment and poor households. The traditional argan oil extraction is quite labour intensive, and a GI based on these traditional production methods would increase job opportunities and income to the women. On the other hand the mechanical production will be necessary to satisfy the increasing international demand. The development of a collective driven action will need great efforts of local associations, government and international NGOs and a highly participating approach to ensure a fair distribution of the potential value-added and thereby not negatively affect the environment.

The Arganeraie region is currently threatened by strong environmental damages. The widespread agri-industrial farming of the Sous plain area, deforestation of large areas to clear space for building land, roads and other infrastructures, removal of firewood and timber, one-sided use of the tree to obtain fodder, and widescale felling by forestry and local authorities have lead to a drop in groundwater level, the depletion of flora and fauna and the weakening of their power to regenerate, and initial desertification. Since 1998 the region was recognized worldwide, through UNESCO, as the “Arganeraie Biosphere Reserve” (Nill et al., GTZ, 2006). The greatest threat to most of the argan forest is due to intensifying livestock browsing and grazing. Livestock numbers have increased substantially (Lybbert, 2000) and signs of overgrazing and overbrowsing, especially in the off-agdal season (see below) are everywhere in the argan forest (Lybbert et al., 2002).

One of the problems for environmental conservation in the Arganeraie is the current legal situation of land tenure and usufruct rights (see fig. 3). If forest conservation should be successful some legal changes might be necessary as the tenurial arrangements also shape locals` response to incentives (price incentive due to commercialization of argan oil) to protect trees. The distribution of *agdal* rights in the argan forest does not rely on official titling procedures and, in practice, is not always respected. Locals commonly cultivate barley, an important stable food, around the argan trees in their agdals partly as a public declaration of their agdal rights and partly because they haven` t other cultivable land available. Even if in the short-term barley cultivation secures tenure, in the long-run this hinders the natural regeneration of the argan tree and leaching soil nutrients. Lybbert et al. 2002 assumes that the desire to establish greater security over one`s agdal via barley cropping will presumably intensify as the value of argan fruit increase. But even if locals who seem willing to consider planting argan seedlings would only do so on their private plots as in the off-agdal season, locals are not permitted to exclude others from their *agdal* tracts, and seedlings are not able to

be protected against neighbours` grazing animals (goats or camels). Nonetheless, an increasing amount of locals started to construct permanent barriers around the *agdals*, with the result, that formerly open access forest is (even if not legally fixed) privatized. In the short-run this will preserve trees in the *agdal* plots but exerts pressure on the *azroug* lands. In the *azroug* areas a classic open access resource problem occurs: everyone has an incentive to exploit the tree but no one has an individual incentive to conserve it. In addition, the common property management have left *azroug* trees generally less productive and more degraded than *agdal* trees. The resource is overexploited and no incentive exists to conserve the forest, even if price increases with the commercialization of the oil. Lybbert et al. 2002 conceive that the market for *agdal* rights will become more liquid as the value of these assets increases. Relatively wealthy households are expected to benefit most from higher fruit values and incest in yet more *agdal* rights, leaving poor households with access only to increasingly degraded *azroug* forest. This again would further impact the degradation of the *azroug* trees as poor households would have strongly limited access to *agdal* rights and would need to survive from less efficient *azroug* trees.

**Figure 3: Dimensions of the argan forest tenure**

		Spatial Dimension		
		State Forest Land		Private Land
		<i>Agdal</i>	<i>Azroug</i>	
Temporal Dimension	Jan	Communal grazing and the exercise of other 'ancestral' rights.		Individually-exercised cultivation, grazing, etc.
	Feb			
	Mar			
	Apr			
	May	Individually-exercised harvest ( <i>agdal</i> ) rights.	Intensive communal grazing, etc.	
	Jun			
	Jul			
	Aug			
	Sep			
	Oct	Communal grazing and the exercise of other 'ancestral' rights.		
	Nov			
	Dec			

Source: Lybbert et al., 2002

Argan reforestation projects are plagued with exceptionally low success rates (Lybbert et al., 2002). This is due to several factors: a) the tree`s extensive root system extends deep into the soil at a remarkably young age, making transplanting difficult and rarely successful, b) Argan seedling appears extremely vulnerable to various fungi (Bani Aameur, 1997), c) the present value of seedlings is too low (no nuts for the first three years, labor-costs of tree establishment and tending, risk aversion on incurring sunk costs in the face of uncertainty (Chavas, 1994) to give in incentive to locals to plant new trees.

A survey by the authors in Lybbert et al. 2002 assessed, that locals prefer olive trees or carob trees that are as well biophysically-suited to the arid conditions of the argan forest. High density forest residents were practically the only ones to express a preference for argan trees.

No household in low density areas, where the forest is most threatened and where argan fruit prices have increased significantly, even mentioned the argan tree in response to an open-ended question. So, the authors conclude, that argan oil commercialization has prompted no spontaneous local reforestation, due most likely to the tree's slow-growing biology. This situation can potentially be solved by collective action within a GI supply chain. Lybbert et al. 2002 shows that due to the establishment of the associations, women now have an incentive to preserve existing trees to be able to deliver high quality nuts that otherwise would not be taken by the association.

However, the social and cultural context also affects the success of a potential GI establishment. According to the study of Lybbert et al. 2002 locals consider the argan tree "wild", and seem to have never invested much time or effort in tending argan trees. In contrast, domesticated olive and carob trees do capture the locals' attention and investment. Berbers' routine denial of responsibility for argan trees diminishes the likelihood of direct individual investment in them. If this tradition can be changed, and argan trees are valued higher, by a GI remains to be seen. Another problem surveyed by Lybbert et al. 2002 that may limit the success of a GI is the fact, that livestock are the most desired form of household wealth in the region. Relatively poor households typically invest in small ruminants such as goats and sheep whereas relatively wealthier households hold much of their wealth in larger livestock such as camels, mules and cattle. Given that non-farm options are scant and crop cultivation offers poor returns in the argan forest, livestock might continue to be the primary household investments. The carrying capacity of the system limits the ability to expand herd sizes without causing resource degradation. But in any case, when evaluating the effect of an argan oil GI one should not forget to evaluate the impact on the livestock owners.

## 2.7 Conclusion

Argan oil is an impressive success story. The product that was traditionally used by women and sold locally has become in a very few years a world wide famous product. Beyond this commercial success that has led to an increase of women's salaries, different positive side effects have been got such as new scientific knowledge on chemical properties of the oil, technical improvement of processing practices, and construction of a strong collective organization based on women' cooperatives and commercial groups.

The supply chain will have to face the challenge of increasing production without losing the artisan characteristics of the product. Mechanization of certain steps of processing, such as kernels crushing and oil extraction that were traditionally made by hand by women will have to be driven carefully in order to avoid a drift to lower quality. This technical innovation opens too the gender issue , extracting being until now a women activity.

Regarding environment aspects, the case-study highlights specific problems in countries with complex systems of land usage and ownership. When there is land tenure insecurity, long term projects such as argan trees plantation are difficult to realize.

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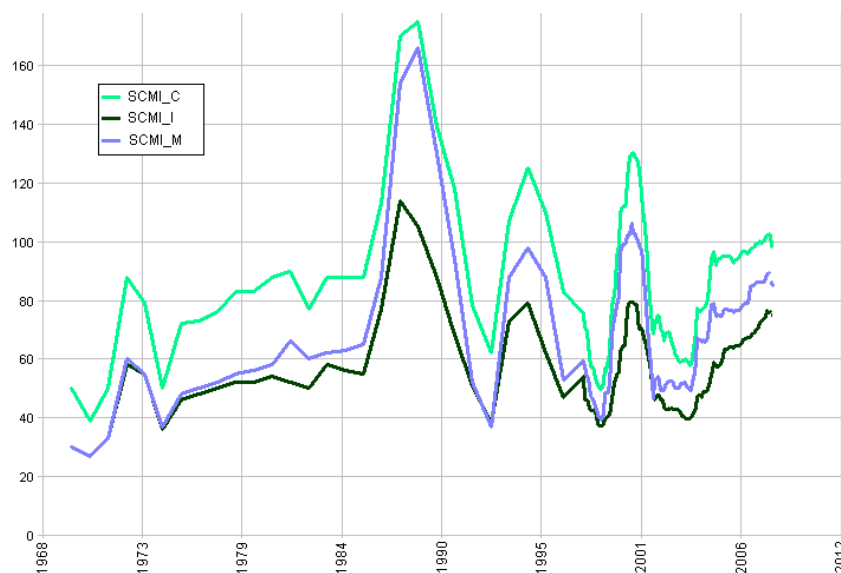
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### 3 Cashmere of Mongolia

With 15% market share Mongolia is the second largest cashmere producer of the world, followed by Iran, Afghanistan, South Africa, the United States, and Australia. China is with 75% market share the largest cashmere producer at the international market.

On the international market the price of raw cashmere has fluctuated widely as well as processed cashmere products such as de-haired cashmere and cashmere tops did. The reason is changing fashion, and fashion designers` preferences for white for pastel shades or grey cashmere for dark coloured garments from one year to the next (UNDP and UNIDO, 2002). The current market indicator provided by gschneider.com<sup>3</sup> (based on US\$) is 75 for Iran (SCMI\_I) and 100 for China (SCMI\_C). Mongolian cashmere (SCMI\_M) have currently an average value of 90 US\$ on the international market (see fig. 1).

**Figure 1: Differences in the prices indices between Mongolian (SCMI\_M), Iranian (SCMI\_I) and Chinese (SCMI\_C) dehaired cashmere 1970-2007**



Source: gschneider.com

Currently, raw cashmere and cashmere products are Mongolia's third largest export. It provides income and employment for over a third of the population (Lecraw et al., USAID, 2005). In 2001 91% of the raw cashmere was exported to China, the rest of 9% to Japan. Of the dehaired cashmere, 35% was exported to China, 22% to Italy, 15% to Japan, and 14% to England. High value cashmere tops were exported mainly to England (93%), Japan (16%) and Mexico (7%) (UNDP, 2002)

The value added chain for cashmere in Mongolia has five major stages: raw/greasy cashmere, scouring/dehairing, dieing/spinning, knitting or weaving. As it can be seen in tab. 1, most

<sup>3</sup> The Schneider Group has developed its own Market Indicators, based on specific ranges of types currently used by its customers (for further informations see <http://www.gschneider.com/indicators/index.php>).

cashmere is exported with the least value added possible: raw/greasy cashmere. The next largest export is dehaired cashmere, again with low value added. In the previous years, a substantial quantity of cashmere yarn has been exported. Production of yarns was also used as an input to further processing into knitted and woven textiles (Lecraw et al., USAID, 2005).

**Table 1: Mongolia's Production, Exports, Imports of cashmere by stage of production 2002-2004 (in tons)**

Stage	Production	Exports	Imports	Input to next stage of production
Raw/greasy cashmere	3200	1600	0	1600
Scouring/dehairing	800	616	0	184
Dieing/spinning	147	6	180	341
Knitting	312	303	0	0
Weaving	30	21	0	0

Source: Lecraw et al., USAID, 2005

According to the Mongolian Ministry of Industry and Trade Mongolian exported 2198.57 tons of unwashed and washed cashmere in 2007. In addition 1827.93 tons combed goat down, 15.53 tons of cashmere tops and 446330 units of knitted cashmere products were exported (see tab. 2).

**Table 2: Export quantity and value as average of 2007**

	Quantity (t)	Value (000 US\$)
Cashmere, unwashed & washed	2198.57	646556.7
Combed goat down	1827.93	116363.2
Cashmere tops	15.53	1006.2
Knitted cashmere goods	446330 (units)	14183.5

Source: Mongolian Ministry of Industry and Trade, 2008

### 3.1 Uniqueness of cashmere of Mongolia

Cashmere is one of the finest, softest, and warmest of all known animal fibres coming from the downy undercoat that grows on goats from midsummer to winter and is harvested from April to March (Tseelei, 2008). The quality of cashmere is measured by its diameter and the length of fibre and is strongly affected by climate (Tseelei, 2008). The characteristics of Mongolian cashmere are the result of the very harsh continental climate. The extremely cold and long winter make goats to grow longer and finer wool than anywhere in a moderate climate. Cashmere goat is kept by nomadic herders in all regions of Mongolia. However, the best quality is produced in the south west mountainous regions that have the coldest winters.

### 3.2 The supply chain

Cashmere goat is reared by nomadic herders. One third of the total population of Mongolia is engaged in herding cashmere goats. Cashmere is the most valuable raw material with a high selling price all over the year. In total 180 000 herder households producing an average of 5-100kg cashmere wool per family and year. Herders can sell their raw material to the Chinese, to Mongolian trade men or directly to Mongolian processing plants (Tseelei, 2008).

More than 100 specialized local trade men are engaged in the distribution of raw material. They sell raw cashmere to local or Chinese processing companies. Also processing companies employ agents on short term basis during harvesting seasons to ensure the supply with raw material (Tseelei, 2008).

The cashmere *processing* sector in Mongolia has seen significant exit over the eight years after the ban on exports was lifted in 1997 and the coincident fall in the world price of cashmere. Despite the reduction in capacity, substantial excess capacity still remains at every stage of processing as it is shown in table 3 (Lecraw et al., USAID, 2005).

The today existing main cashmere plants consists of vertically integrated companies, combining several operations from processing of raw material, to spinning, dyeing, garment manufacturing, and production of other knitted and woven products (UNDP and UNIDO, 2002). The biggest one is the state owned “Gobi” company processing 1/3 of total raw cashmere production. The second largest is the private company “Buyan” that has the capacity to process up to 200 tons of cashmere per year. “San Shiro” the third processing company is also private and has a capacity of 100 tons cashmere a year. Additional to garment production these companies together with two others also producing yarn (Tseelei, 2008).

The main *exporters* of Mongolians cashmere are joined in the Mongolian FiberMark Society and promote Mongolian cashmere in the global market place.

**Table 3: Production, capacity and capacity utilization in the value added chain**

	Cashmere Production	Capacity	Capacity utilization
Scouring	1298 tons	9417 tons	40%
Dehairing	806 tons	1910 tons	52%
Dieing/Spinning	147 tons	363 tons	42%
Knitting	866 000 pieces	3 479 000 pieces	77%
Weaving	79 000 meters	163 000 meters	52%

Source: Lecraw et al., USAID, 2005

### 3.3 Marketing strategy and protection on the international market

Cashmere processing companies protect their products with their own trademarks that are registered solely on the domestic market. With support of the USAID, the Mongolian cashmere processors have agreed and developed a certification mark (see fig. 2) which is now registered in the European Union, Australia, New Zealand and Mongolia. The registration in the United States is under process. The owner of the certification mark is the Mongolian Cashmere and Wool Association. Therefore four leading Mongolian Cashmere companies have joined together to promote Mongolian cashmere on the international market: Altai Cashmere with its trademark ALTAI cashmere & Silk operates in Italy, Belgium, Germany and Switzerland ([mongoliacashmere.org](http://mongoliacashmere.org); [altai-cashmere.com](http://altai-cashmere.com)). Gobi Corporation, the biggest manufacturer of cashmere products and The Mongolian Cashmere and Camel Wool Company. These companies joined together under the Mongolian FiberMark Society and promote Mongolian cashmere in the global market place. The Mongolian FiberMark Society established two brands: the white deposited brand labels products that contain 100% pure high quality Mongolian cashmere. The black deposited brand labels products that contain not less than 50% high quality Mongolian cashmere ([mongoliacashmere.org](http://mongoliacashmere.org)).

**Figure 2: 100% pure high quality Mongolian cashmere and 50% high quality Mongolian cashmere label**



Source: <http://mongoliacashmere.org/mark.html>

### 3.4 National law about GIs

The registration and enforcement of GIs in Mongolia is regulated by the Law of Mongolia on Trademarks and Geographical Indications. According to Article 3 of the Law the definition of geographical indication is: “geographical indication` means the geographical name of a country, region or locality which identifies as originating therein, where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin.” The International Property Office of Mongolia enforces the rights of GI users.

The “MGIL” logo (see fig. 3) is a certification mark and will be granted to GI registered products in Mongolia according to procedures laid down by the Law of Mongolia on trademarks and Geographical Indications. The purpose of the certification mark is to advertise broadly GI registered products and to inform/introduce specific characteristics for the differentiation from similar products using one loo for GI registered products all over Mongolia. A logo may also be developed specific to the product. The specific product logo often coexists with the logo from the Geographical Indication.

**Figure 3: Logo for a registered GI**



Source: Couillerot et al., 2009

### 3.5 Challenges for Mongolia’s Cashmere production

Based on its raw material resource, the country had invested heavily in the 1980s and built up significant technological capacity to process up to 1000 tons of final products and 2000 tons of semi processed products. The cashmere industry was running as one big state company. Livestock and processing industry was owned by the state and raw material supply, processing and marketing was vertically integrated under the centrally planned system (Tseelei, 2008).

In the wake of the transition period from centrally planned to a market economy, the cashmere industry has undergone fundamental changes. Livestock as well as processing units were given in private ownership (Tseelei, 2008). Since the market liberalization the cashmere industry is exposed to the Chinese competitive cashmere sector. Mongolians cashmere sector is neither competitive for raw cashmere as an input to the Chinese cashmere processing sector nor for Chinese-produced semi-processed and finished cashmere products on the world market (Lecraw et al., USAID, 2005).

About 50% of Mongolia’s production of raw cashmere is smuggled to China, giving actual total net exports of about \$97 million (Lecraw et al., USAID, 2005). If all the raw material produced in Mongolia would be processed in the country itself exports would be about \$206 million and employment in the processing industry would more than double to about seven thousands (Lecraw et al., USAID, 2005).

High production costs compared to China are a further problem of Mongolians cashmere industry (see tab. 4).

**Table 4: Comparative production costs in US\$ per kg**

Stage of process	China in US\$	Mongolia in US\$	Difference in %
Dehairing	2.5-3	4-5	62-100
Spinning	6-7	6.5-9.5	7-36
Knitting	2.5-3	4	25-37
Weaving	1.5-2	3	33-100

Source: Lecraw et al., USAID, 2005

In addition Chinese processors have a large protected domestic market in which they can sell lower quality pure cashmere products, with the lower quality portion of the Mongolian raw cashmere that they purchase, at high prices. Mongolian processors cannot access this market and the market in Mongolia is limited (Lecraw et al., USAID, 2005).

The trade-off between cashmere quality and cashmere yield increases the competitive pressure on Mongolian cashmere production. As cashmere quality (measured in fiber diameter) increases, the average yield per goat declines. The price differential in both in Mongolia and on international markets based on quality differential is on the order of 15%. Compared to the reduction in yield by 24% due to quantity loss of high quality production herders do not react to quality increasing measurements. This circumstance not only lowers the quality of the raw material but the unsustainable herd size imposes substantial negative externalities in form of diversification (Lecraw et al., USAID, 2005).

### **3.6 Value distribution within the supply chain and social and environmental side-effects**

The importance of the cashmere industry to the Mongolian economy is enormous as income and employment is provided for over a third of the populations. However, as described above, the potential value of cashmere is not yet captured by the local industry because of several reasons (see above). The establishment of a GI in this state of development is a difficult task. Neither raw material producers are organized nor does the industry is strong enough to produce an appropriate quality of processed cashmere goods. The certification mark provides a good opportunity to signal the quality of Mongolian cashmere and implement a code of practice. This action should lead to improve reputation of Mongolian wool products and thus benefits the whole sector to a certain extend independent on being a user of the certification mark or not.

According to Tseelei et Reviron (2008) the uniqueness and the exclusive nature of the market for cashmere products invites and empowers Mongolian cashmere processors to create strategies to differentiate their products relative to its competitors which may result in sustainable competitive advantages and provide a foundation for a novel basis for rivalry relative to its competitors. Mongolian processors aim to focus on low volume target niche markets and customized production. The idea is to develop specific quality indicators with complementary environmental and social implications. Herders have an essential role to play in the implementation of these two complementary indicators.

However, to maintain and improve current employment in the cashmere sector a sustainable production is necessary. The increasing population of goats has become a major problem. The carrying capacity of pastures has exceeded by 60% and over-grazing is leading to desertification. Almost 30% of Mongolia`s territory is already endangered to become a desert. 1% of Mongolia is severely affected by desertification, 3% is considerably affected, and 21% is affected to a medium extent. As of today 80% of the pasture land is subject to degradation, loss and significant downturn in soil fertility and vegetation cover can be observed (Tseelei, 2008). The main reasons for the substantial increase of the goat population are the subsidies. Herders are very low taxed, have free medical care, free water services for their herds and fodder is subsidized (Lecraw et al., 2005). However a recent survey jas sh

### 3.7 Conclusion

The cashmere supply chain plays a significant role in the Mongolian economy. With annual production of over 3'000 tons, Mongolia is the second largest producer of cashmere after China in the world. Currently, raw cashmere and cashmere products are Mongolia's third largest export. It provides income and employment for a over a third of the population. However the commercial performance is not satisfying. The cashmere industry has difficulties to get access to raw greasy wool because of open competition with Chinese traders/ smugglers. The consequence of this competition for raw material is the high price paid to producers (around 24 \$ per kg). As of today, cashmere is the most valuable livestock-driven raw material for herders as it is sold for the highest price in the market year-round. Herders are currently enjoying the relatively high price of cashmere. But it could not last. If local processing companies can not increase their capacity utilization and continue to run loss in a few years to come, they will have to cease operations. A number of processing companies have already exited the industry. This will give Chinese buyers an opportunity to emerge as a monopoly power and may drop the price they pay to the herders.

A geographical indication expected benefits are firstly organisational innovation in order to create long term relationships between herders and the processing companies based on trust and information sharing. Technical improvements at the herders' level (goats combing practice is a crucial step for getting high quality processed wool) should increase value creation in the supply chain.

On the environmental aspects, pasture land degradation is presently a major threat in Mongolia. Herders are worried about this ecological disaster, because of the expected consequences on their activity in the future. A GI strong organisation may help to combine short term economic and long term environmental objectives.

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[www.altai-cashmere.com](http://www.altai-cashmere.com) (last accessed August 19<sup>th</sup> 2008)

## 4 Café de Colombia and coffee of Costa Rica

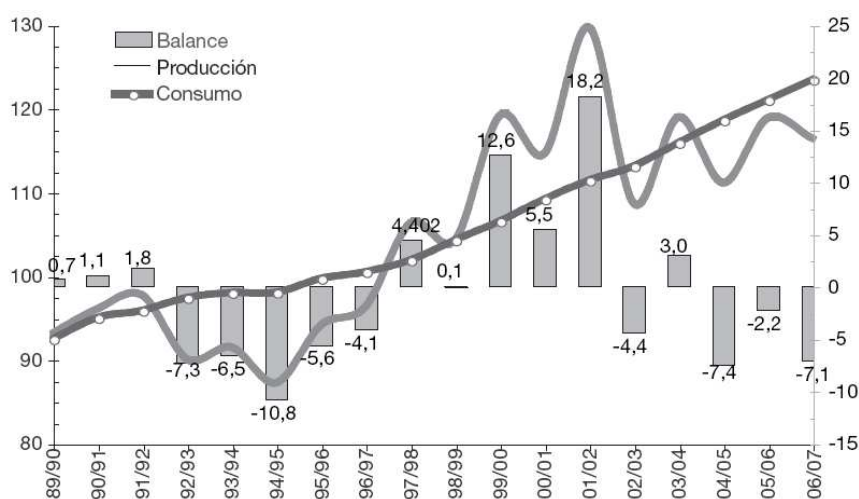
For a long time, green coffee was sold as a commodity on the world market and value was got after roasting and blending. Origin has become an important argument for coffees promotion in developed countries, at the consumer level and GIs are a tool for acknowledging differentiation coming from origin. For understanding this strategy, it is useful to give firstly an overview on the coffee world market. Secondly, we will present two different case-studies, regarding the choice of protection tools at the international level: café de Colombia and coffee of Costa Rica.

### 4.1 The world coffee market

More than 50 nations, almost all in the developing world, produce and export coffee. Somewhat less than two-thirds of the world's coffee production consists of Arabica, and more than one third consists of Robusta coffee (2006/08, production was respectively 62% or 80 millions 60-kg bags and 38% or 50 millions 60-kg bags). Latin America produces 85% of world Arabica production and 20% of Robusta production. Asia accounts for 5% of Arabica production and 60% of Robusta production. Africa accounts for the rest (FO Licht's International Coffee Report, March 2007 in: Rutten et al., 2007).

Coffee prices are highly volatile depending on the balance between world production and world consumption. In the early 1990s, the balance became negative, resulting in high increasing world market prices until the end of 1998. An Oversupply started in 1997 and led to a strong price decrease with its deepest point in 2002/03. Within the next years an increasing gap between producers and consumers prices was observed: while producers' prices decreased, consumers' prices increased. This phenomenon is called the "coffee paradox". However, a negative balance turned market prices up. They are now (2007/08) at the level of mid 1990s prices (see fig. 1).

**Figure 1: World wide balance of coffee production and consumption 1989/90-2006/07 (million of 60 kg-bags)**



Source: FNC, 2006

Around the long-term trend, coffee prices have always been very volatile. Arabica prices, for example, have moved between around 50 cents/lb and over 250 cent/lb. Even in a year with relatively stable prices, the difference between the years's lowest and the years's highest price is easily 20%. Similar volatility can be seen within a month and even, when observing futures market prices, within a day (Rutten et al., 2007).

Coffee producing countries have developed different strategies to deal with price volatility, thus market-based price risks. These strategies are highly important when investigating the possible side-effect of GIs in developing countries as they often already provide an organizational structure which supports the establishment of a GI. To investigate possible outcomes of GI protection this study will have a closer look on two different case studies, Colombia and Costa Rica.

These two case-studies differ by the protection tools. Café de Colombia is the first product to be registered as a GI (as PGI) in the European Union. We will see the conditions that were respected to get this registration. Guatemala, Indonesia and Ethiopia can be also regarded as leading actors in the coffee sector with respect to the establishment of GIs (Teuber, 2007).

## 4.2 Café de Colombia

Colombia is after Brazil and Vietnam the world's third largest producer and after Brazil the second-largest producer of Arabica coffee world wide (USDA, 2008). In 2007/08 Colombia had a market share of 14% of the world production of Arabica coffee (behind Brazil that produces the majority of world production with 30% in 2007/08).

Domestic consumption in Colombian is with a per capita consumption of 2.8 kg relatively low compared to other countries and is only 5% of total national coffee production. Thus, the export markets are more important in terms of income than the domestic market.

Colombia accounts for 12% of total coffee world exports, Brazil 31% and Vietnam 15.7% (Robusta) (USDA, 2008). The main export markets for Colombian coffee are the United States with 35%, Japan 14%, Germany 13%, Belgium 6% and Canada 5%, these 5 countries representing 73% of total Colombian coffee exports (Gomez, 2007). Production and exports are stable in volume but have benefit strongly from the world price increase since 2003 (see tab. 1).

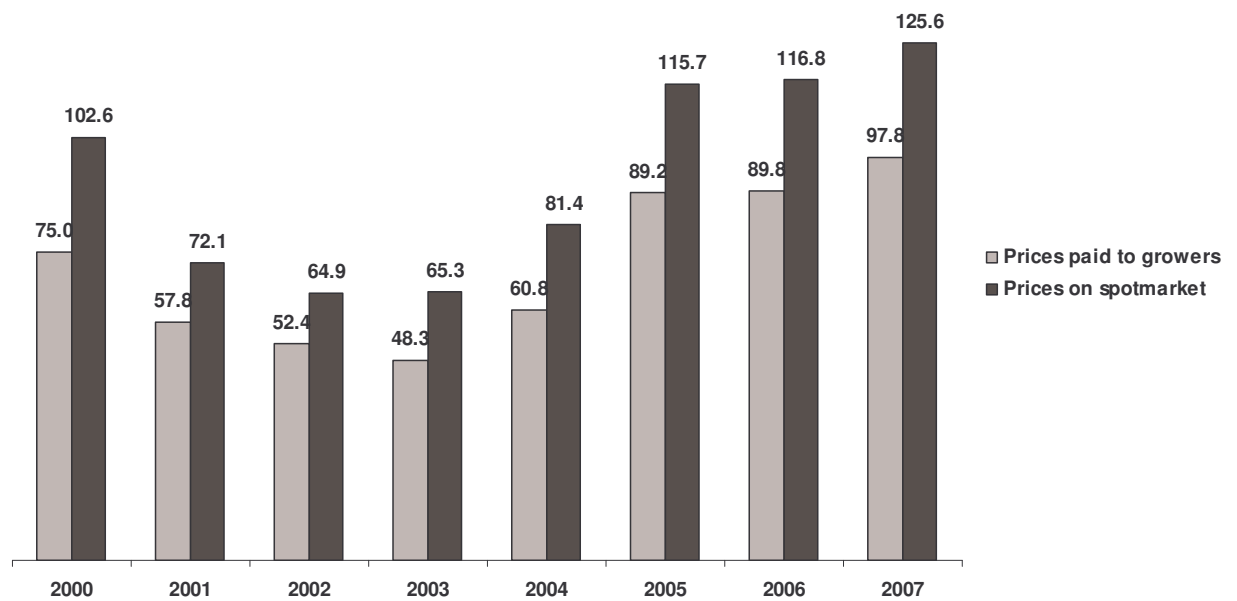
**Table 1: Production, export volumes and values of Colombian coffee 2000/01-2005/06**

	00/ 01	01/ 02	02/ 03	03/ 04	04/ 05	05/ 06
Production ( thousand 60 kg-bags)	10 519	11 950	11 712	11 053	11 430	11 952
Exports (thousand 60 kg-bags)	9 473	10 629	10 478	10 154	11 032	10 743
Value of Total Exports (mio US\$)	912	861	767	989	1 558	1 621
Exports of value added Café (thousand 60 kg-bags)	--	--	1 220	1 380	1 530	1 560

Source: Gomez, 2007; FNC, 2007

In 2001, the former stabilization policy was cancelled. The producer price was liberalized to fully reflect the highly volatile world market price (Giovannucci, 2002). The general average of growers` price proportion of spot market prices over the last 7 years (2000-2007) has been around 77%. However, this percentage depends significantly of the exporter and the number of intermediate traders (Giovannucci, 2002). In the same time the grower prices have increased from 75 US to 97.8 US cents per lb, which reflects the price increase on the spot market (see fig. 2).

**Figure 2: Growers and spotmarket prices for Colombian coffee 2000-2007 (US cents/lb)**



Source: ICO, undated

#### 4.2.1 Uniqueness of Café de Colombia

To qualify for a protected geographical indication in the European Union, uniqueness of the product is required. Café de Colombia was therefore defined as Arabica coffee produced out of maximal 6 different varieties with different characteristics and origin (Typica, Caturra, Colombia, Borbon, Maragogype and Tabi) produced in an altitude of 400 to 2500 meters above sea level in a limited production area. Out of the total coffee production area of 7.300.000 hectares (presenting 6.4% of the total area of Colombia) 12% (869.158 hectares) are defined as GI “Café de Colombia” area. The GI area includes 590 districts in the regions of Antioquia, Boyaca, Caldas, Cauca, Cundinamarca, Huila, Magdalena, Cesar, Guajira, Narino, Norte de Santander, Quindio, Risaralda, Santander, Tolima and Valle (see figure 2) (Gomez, 2007).

The geographical area denominated for Café de Colombia include all districts of the Central Coffee Belt (Antioquia, Caldas, Quindio, Risaralda, Tolima, Valle del Cauca as well as the rest of Colombia`s coffee belt (Boyaca, Cauca, Cesar, Cundinamarca, Huila, Guajira, Magdalena, Narino, Norte de Santander and Santander) (see fig. 3).

Even if in the rest of Colombia coffee is also grown this is done by only a small extend regarding number of farms.

Figure 3: Map of Colombia's political regions identify production regions



Source: [http://www.questconnect.org/images/m\\_colombia\\_politico.jpg](http://www.questconnect.org/images/m_colombia_politico.jpg)

The natural conditions specifying the product are (Gomez, 2007):

- a) The localization and the geographical zone, as Colombia includes tropical as well as mountain and cost zones which results in a variety of climate conditions and therefore cultivation zones.
- b) Two rainfall seasons per year providing a continuous production possibility with two growing cycles a year.
- c) The topographical factors providing uniqueness, as the Andean soils have a special texture due to volcanic basis and a high proportion of organic material.

In the “Council Regulation (EC) No 510/2006 on the protection of geographical indications and designations of origin for agricultural products and foodstuff” the description of “Café de Colombia” as PGI is given as follows:

“Café de Colombia” is that coffee grown in the Columbian Coffee Growing Area defined in the specifications which satisfies the export standards laid down by the National Committee of Coffee Growers and which, when processed, has the following characteristics: mild, clean up, of medium/high acidity and body and a full and pronounced aroma.

The methods of production are described, including the different processing stages production, harvesting, and hulling. Roasting must not necessarily be carried out in the geographical area but the process must bring out the intrinsic organoleptic qualities<sup>4</sup> of the green “Café de Colombia” (EC 2006/C 320/09).

The proof of origin and therefore the traceability of the products are carried out at several stages. Producers must be declared to the Sistema de Informacion Cafetero (SICA) to administrate the plantation. The parchment coffee and hulling is monitored by the “Guias de Transito” checking the purchases at the storage or hulling plants. The monitoring of the green coffee is also done by this legal entity. Exports are monitored by customs authorities and ALMACAFE, the organization entrusted to carry out checks by the National Federation of Coffee Growers. All exporters are registered by the Ministry for Foreign Trade Decisions. To guarantee high quality, roasted coffee is monitored inside and outside the country by various mechanisms (EC 2006/C 320/09).

The responsible inspection body for the quality checks of “Café de Colombia” is ALMACAFE. The Label to use for the Geographical Indication has the title: “P.G.I. CAFÉ DE COLOMBIA” (EC 2006/C 320/09) (see fig. 4 and fig. 5).

**Figure 4: Domestic D.O.**



Source: FEDECAFE

**Figure 5: P.G.I. in Europe**



Source: FNC 2008

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<sup>4</sup> Mild, clean up, of medium/high acidity and body and a full and pronounced aroma

#### 4.2.2 Marketing Strategy

In the last decades the major proportion of exports (98.7%) was green unprocessed coffee. It has changed more-and-more to exports of value added processed coffees. This is the result of the implementation of a specialty coffee program by the FNC (Gomez, 2007).

The specialty coffee program consists of 90 different programs and can be divided into three different categories: coffees of origin, soluble coffees and processed coffees. The main import markets for these specialty coffees are Japan and the U.S.A. followed by Belgium, Italy, the United Kingdom and Spain (Gomez, 2007). In total 10% of the world consumption is specialty coffee. Colombians exports of these specialty coffees are following a positive trend and have reached more than 758'000 60-kg bags in 2007, more than 70% compared to 2002. In 2007, exports of origin coffee decreased strongly (see tab. 2).

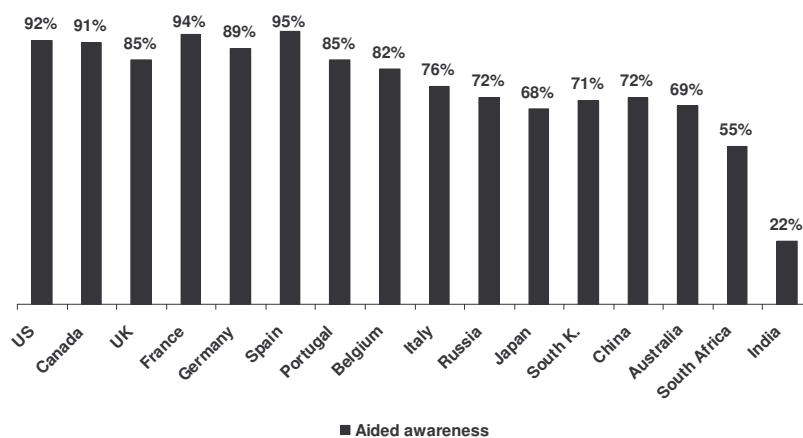
**Table 2: Exports of specialty coffee 2002-2007 (60 kg-bags)**

	Origin	Soluble	Processed	Total
2002	58.205	4.649	146.531	209.385
2003	103.527	3.133	436.264	542.923
2004	124.659	8.220	543.679	676.558
2005	104.691	43.149	468.178	616.018
2006	108.224	155.254	450.190	713.668
2007	85.337	277.751	395.343	758.430

Source: Gomez, 2007

Nowadays Colombian coffee is well known all over the world (see fig. 6). This is due to sophisticated marketing strategies of the FNC in the last decades including protection of Colombian coffee via trademark, certification mark and since 2007 through P.G.I in the European Union (Samper, 2007).

**Figure 6: Awareness of Colombia as Coffee-growing country**

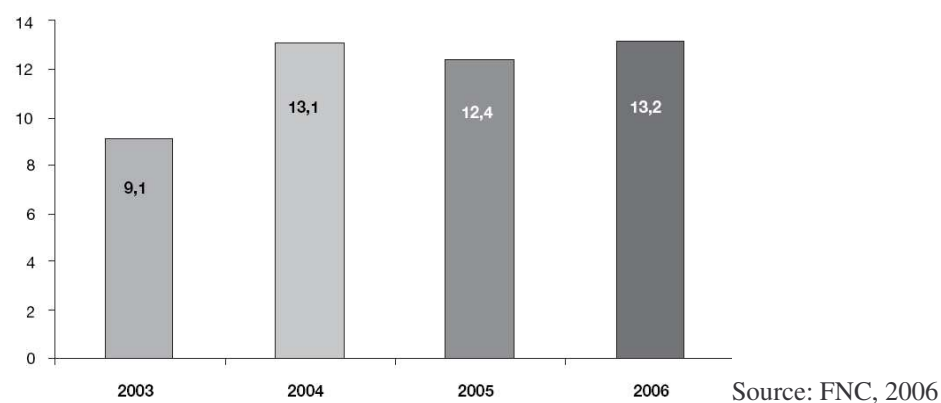


Source: FNC, 2007; Samper, 2007

The publicity programs of Juan Valdez and “100% Colombian Coffee” are part of a diversification strategy to increase the prices paid for Colombian coffee (Giovannucci, 2002). A study of Lozano (2002) could prove the hypothesis that the brand strategy pursued by the FNC’s Juan Valdez and “100% Colombian Coffee” had a positive and large effect on the green coffee premium. Deshpande et al. (2001) highlighted that the promotional campaigns have been highly effective and have also benefited the country’s image (In: Giovanucci, 2002).

With its trademark strategy the Federation could increase the mark up on average coffee prices a lot. According to the FNC 2006 the average value added for different “Specialty Coffees”, including origin, soluble and other processed coffees increased from 9.1 million USD in 2003 to 13.2 million USD in 2006 (see fig. 7).

**Figure 7: Value added of the specialty coffee program 2003-2006 (mio US\$)**



#### 4.2.3 The supply chain

*Coffee production* in Colombia is characterized by small-scale farmers who are often exclusively dependent of coffee for their income. In total approximately 520'000 producers are employed in the coffee sector of Colombia. 37% cultivate less than 1ha, 25% cultivate 1 to 3ha, 12% cultivate 3 to 5ha and 26% cultivate more than 5 ha. In average one producer has 4.9 family members. But only half of them have own acreage and the rest is employed as day worker. On small-scaled farms (up to 1ha) the productivity is higher than on the large-scale farms (more than 5 ha) and most of the small-scale farms are specialized in coffee production (see tab. 3). Thus, the dependency on their often small lots is very high even if the value of coffee exports for the Colombian economy is decreasing. In 1990, coffee production represented 17.6% of the total GDP of the agricultural sector and 2.8% of the national GDP. In 2007 the proportions decreased to 13.9% and 1.6% respectively.

The coffee producers are supported by the Sistema de Informacion Cafetera (SICA) providing technical support and is complemented with a federal Administracion de Fincas (AFIC) which gives support on farmers level. This system was established by the Federation to ensure the denomination of origen standards (Gomez, 2007).

**Table 3: Socio-economic characterization of coffee production in Colombia 2007**

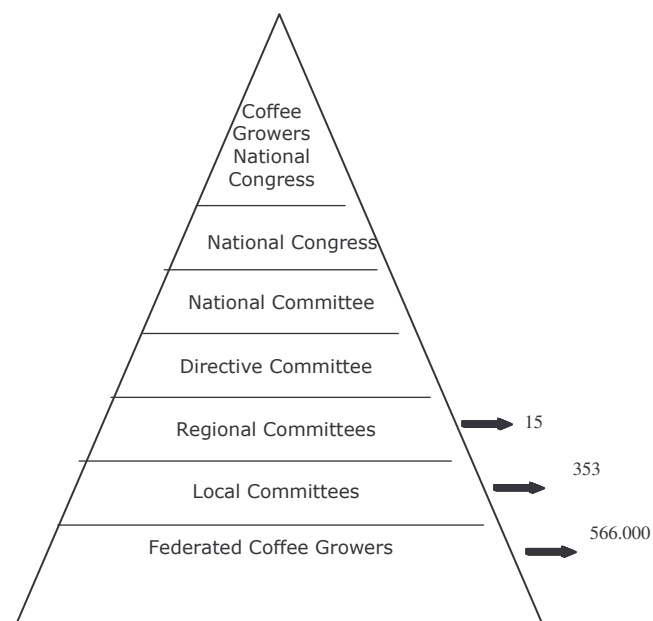
	< 1 ha	1.1 – 3 ha	3.1 – 5 ha	> 5.1 ha	Total
Number of producers	193.411	133.419	60.293	137.068	524.191
Family members per producer family	4.5	4.7	5.0	5.1	4.9
Residents (%)	35.1	60.9	66.9	64.3	53.0
Producers without other income possibilities (%)	41.4	52.6	60.5	65.8	52.8
Specialization in coffee (%)	84.1	54.6	41.6	18.1	24.0
Number of Lots in ownership	1.3	2.3	3.5	5.8	2.2
Productivity (arroba <sup>1</sup> /ha)	77.9	67.4	66.7	67.1	61.0

<sup>1</sup> measure of weight equivalent to 11, 502 kilograms

Source: Gomez, 2007

The coffee growers in Colombia are organized in the National Federation of Coffee Growers of Colombia (FNC) founded in 1927. The Federation was led by farmers themselves (not imposed by governmental or international organisations), counts now for more than 566 thousands producers (see fig. 8) in the coffee belt and endow every member with equal voting rights (one man one vote mechanism). Therefore one can characterize the Federation as democratic, collaborative and participative. All representatives, at all levels are coffee farmers.

**Figure 8: Organization of the National Federation of coffee Growers in Colombia**



Source: Samper, 2005

Several mechanisms were established by the Federation to stabilize growers' income and to fairly distribute the value of coffee exports to the farmers: for instance The National coffee fund to stabilize income, Cenicafé for farmers education, or Almacafé as quality control institution with storage functions.

The FNC buys from producers, processes the coffee, sells it to the domestic market, and acts as an exporter (in competition with private traders). Domestic price levels are protected through a stabilization fund, the National Coffee Fund, which is a regularly renewed contract between the administrator Federacafé and the producers. The fund operates at the level of exports, covering both FNC and private sector exporters. Financial resources accumulated during times of high world prices are used to support domestic prices when world prices are low (Rutten et al., 2007). According to the FNC (2008) the average price paid to Colombian coffee growers was 1.3 USD/pound in 2007. If the producer is registered for a Specialty Coffee Program a mark-up is paid to him when he delivers the coffee to the sales points (Gomez, 2007).

Farmers can choose if they want to sell their coffee to the FNC or to other existing traders (FNC, undated). When world market prices are low buyers sell their coffee more likely to the Federation as it pays all producers the same price. The coffee is stored in warehouses of Almacafé until the world coffee price increases again. When prices are high the Federation let private buyers buy more coffee from growers. In this way in 2006 98% of the price paid to the Federation was transferred to the producers (FNC, 2006).

Beside the FNC there are 38 coffee cooperatives in Colombia defending the interest of coffee producers in their communities or districts. These organizations were grown out of the FNC since 1959 and have mainly economic targets, like the buying and selling of café pergamino (bean partly or completely covered by its endocarp) or the exportation of milled coffee (Gomez 2007).

The *processing* of the raw coffee for consumption and distribution in export sector is mainly done by the Fabrica de Café Liofilizado (cafedecolombia.com), the shops of Juan Valdez and partly by some other social alliances whereby the FNC is involved in the every step of the supply chain. The coffee is milled for the national and international market and the milling company must be authorized by the Federation (Gomez, 2007).

*Quality controls* for exports are done by ALMACAFE (Almacenes Generales de Deposito de Café). Almacafé was founded 1965 by the FNC to undertake federation autonomous action for the coffee sector like logistics, product quality controls and operational activities on the domestic market. Since 2000 the Federation and Almacafé decided to work together in one system subdivided in four segments: Human Resources, Information technology, administration of goods and services and internal organization. The Federation distributes financial means from the National Fund to the coffee growers that are controlled for quality purposes by Almacafé. In this way the coffee quality is controlled in Colombia. For the exportation of milled coffee two documents are necessary guarantying the quality of the product and the legal existence of the exporter on the national market. For non-processed green coffee an additional license is necessary. A last quality control is done by the Colombian ALMACAFE at the domestic harbor which is a very unusual procedure in the coffee chain usually done by the importer (Gomez 2007).

The *distribution* on the international market is mainly done by the federation and private exporters. According to the FNC (undated) there are over 50 private shippers and 40 cooperatives operating in the Colombian coffee trade. On the national market, the supply chain is controlled, too. Roasters and coffee factories for soluble coffee also need a license

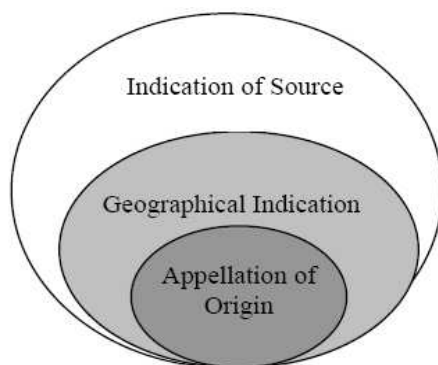
from the Federation. The Federation provides a license to foreign buyers allowing them using the mark “100% Café de Colombia”. These buyers need to submit continuously probes for quality control reasons. Buyers of coffee are 36 roasters in Colombia and other South American countries, 28 roasters of Central America, Mexico and the U.S. A. and Canada, 17 in Europe Oriental and Russia and the European Union, 17 in Asia and 2 in Australia and New Zealand (Gomez, 2007).

#### 4.2.4 GIs in national law

Countries belonging to the Andean Community such as Colombia distinguish indications of source and denomination of origin<sup>5</sup> as two legal concepts in the category of geographical indication (see fig. 9) (Teuber, 2007).

The Geographical Indications in the Andean Community are regulated in the Title XII of the decision 486, Common Regime on Industrial Property, and is in accordance with the protection parameters established by the TRIPS Agreement in the frame of WTO. This norm establishes the definition and the procedure for the obtaining of the protection of a geographical indication. It also establishes the regime on awarding the authorizations for the use and the norms related to the observing right. The appellation of origin of Café de Colombia was declared through the Resolution No. 4819 of March 4, 2005, by the Superintendencia de Industria y Comercio ([www.origenandino.com](http://www.origenandino.com)).

**Figure 9: Relationship between Indication of Source, GI and Appellation of Origin**



Source: Teuber, 2007

Colombia is one of the first countries apart from the European Union introducing a national GI system which is separated from the existing trademark law (Gomez, 2007). The process started in December 2004. The FNC presented to the Colombian government an application for the recognition of “Café de Colombia” as a Geographical Indication. In February 2005, the Colombian government ratified Café de Colombia as a “D.O.-G.I.”. In June 2005, “Café de Colombia” became the first product from a non-EU nation to apply for the Protected Geographical Indication recognition to the EU (Samper, 2007). The legal regulation that protects Geographical Indications in Colombia is Decision 486 of the Andean Community (see. Tab.4).

<sup>5</sup> In most cases appellation of origin and denomination of origin are interchangeable and just reflect a different translation. In Spanish versions of legal texts, the term “Denominacion de Origin” is found. In the English versions this term is either translated as “Denomination of Origin” or “Appellation of Origin” (Teuber 2007).

**Table 4: Intellectual Property System in Colombia**

country	Legal Regulation	Registered GIs (coffee)	Current Projects
Colombia	Decision 486 of the Andean Community, 2000: IOC and DO	Café de Colombia	Project “Los Cafés Especiales Colombianos”

Legend: DO = Denomination of Origin, IOC = Indication of Source

Source: Teuber, 2007

#### **4.2.5 GIs and other protection measurements in international negotiations**

The Decision 486 was set up to agree with the protection parameters established by the TRIPS Agreement in the frame of the WTO and Café de Colombia is the first foreign geographical indication that has requested to be registered in the European Union ([www.origenandino.com](http://www.origenandino.com)). Since September 12<sup>th</sup> 2007, Café de Colombia is registered as Protected Geographical Indication (PGI) in the European Union.

Besides this PGI, coffee of Colombia is protected by Community Trade Marks in the European Union: Café de Colombia (2001), 100% Café de Colombia (2004), Juan Valdez 100% Café de Colombia (2006). In all cases the owner is the FNC.

In the U.S.A. “Colombian” is protected by a Certification Mark (1981) and “Juan Valdez” as Trademark (1969/2005). In the former case the owner is the Republic of Colombia, in the latter the FNC (Teuber, 2007).

#### **4.2.6 Challenges for Colombia’s coffee market**

The aim of Colombia, as well as of other coffee producing countries, is to decommodify the coffee market through product differentiation. The commodity nature of coffee is the main cause of “the coffee paradox” with decreasing prices at production level and rising prices at consumption level (Galtier et al., 2008). Green coffee is traded over the future market and delivered in bulks. The downstream sector then mixes the coffees of different countries and sell them as blended product to consumers. Also Daviron and Ponte (2005) alluded that the economic value of coffee is not generated by the raw material (green coffee), but rather by the ways of combining different coffees in blend, of roasting them, of marketing them, and by the services offered in bars and coffee shops. Firms in downstream stages of the supply chain are able to satisfy the changing consumer needs and generate an added value without involving upstream firms (Galtier et al., 2008).

To decrease the risk of volatile spotmarket prices and generate value added on coffees many countries established so called “Specialty Coffee Programs”. Thereby, Specialty coffee is a

not well defined term including fair trade, organic, bird-friendly as well as so called single-origin coffee<sup>6</sup> or coffee with a geographical indication of origin (Teuber, 2007).

As shown above also Colombia developed Specialty Coffee Programs but the development of Colombia's brand reputation differs according to countries. In some markets Colombia's coffee continues to grow (U.S.A.), but in other markets, like commercial blends in Germany, it has lost market share. Given its loss of share in major blends, the quality arena is probably where it has its best competitive advantage. On the demand side of the market, roasters have shown a remarkable capacity to add value to raw material (green beans). In so doing, these actors have been able to create and develop a number of brands and capture value by targeting segmented and fragmented consumer markets. Thus, to secure value in changing world markets, it must not only address competition from other producers but also from other actors along the supply chain (Giovannucci, 2002). GIs might be a valuable differentiating option helping to benefit from its quality-oriented competitive advantage.

Even though Colombia managed to successfully differentiate its coffee as a higher quality alternative in the mass market for many years, this particular generic differentiator is increasingly less valid in today's competitive environment (Giovannucci 2002). Geographical Indications of Origin might be a valuable differentiating option helping to benefit from its quality-oriented competitive advantage.

#### **4.2.7 Value distribution within the supply chain and social and environmental side-effects**

Coffee is one of the most important export products of Colombia and rural households are highly dependent on it for their income. The social efforts of the FNC are very high, and together with governmental support they made considerable public investments in its growing regions. The FNC constructed more than 6000 schools that can teach approximately 360 000 children. In coffee growing regions there is greater availability of clean drinking water, utilities and basic sanitation. Even health services are better and have greater coverage than in non-coffee producing areas. The FNC investing resources provided by the coffee tax built 180 hospitals and over 200 health clinics in the coffee growing regions. Unfortunately, some of these investments are highly dependent on the financial situation of the FNC and some project had to be stopped (Giovannucci, 2002). With the R&D program -Cenicafé- the FNC established one of the world's leading research and development centres for coffee.

Coffee prices currently increase but the past has shown that Colombia, the inability or failure to diversify and/or add value has left commodity production as the primary source of income for many thousands of poor families. A coffee farmer audit finished in 2001 (Common Fund for Commodities et al., 2001) noted in order of importance the main problems mentioned by small coffee farmers: a) low coffee prices, b) lack of rural credit, c) commercialization problems, d) lack of community organization, and e) low coffee productivity. The inability to reinvest in their farms or their productivity leads to problems including: rural migration, reduced education and healthcare, and even unsustainable natural resource use with corresponding environmental problems. As profitability in coffee production decreases, field cultivation practices which demand labour and fertilizers decrease as well, affecting not only physical coffee quality but also its organoleptic quality (Giovannucci, 2002). In cooperation

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<sup>6</sup> Like the term specialty coffee the term single-origin is not precisely defined so that single-origin coffees can originate in one country, one region or even one estate or farm (Knox and Seldon Huffaker 1996 In: Teuber 2007).

with scientific staff and several experimental farms, ecological growing and production methods are developed and promoted and farmers are educated in and outside of agricultural colleges and schools (Gomez, 2007).

The FNC established several programs to improve the quality of Colombians coffee, including also programs that preserve the environment. In 2002 the Colombian government together with the FNC signed an agreement that provides almost two million dollars for thirteen projects to protect biodiversity found in Colombia's coffee-growing regions. For this project partnerships were established with the International Center of Tropical Agriculture (CIAT), the Federation's National Coffee Research Center (CENICAFE) and five national universities. CENICAFE was renowned for the development of clean technologies for sustainable coffee production (FNC Inc., 2002).

If the introduction of a Colombian coffee GI, thus the export of "Café de Colombia", is a success will be shown by the future. However, one must also be careful with conclusions that the differentiation strategy concerning the GI is successful in a time where overall coffee prices are steadily increasing. A sustainable economic impact due to a GI might be shown when coffee prices are decreasing again. The well established existing supply chain structure of the FNC was an advantage concerning the application of Colombia for the recognition of "Café de Colombia" as GI by the European Commission.

#### **4.2.8 Conclusion**

With its trademark strategy the Federation could increase the mark up on average coffee prices. Especially the "100% Colombia Coffee" and "Juan Valdez" brand is highly recognized by international consumers. According to the FNC (2006) the average value added for different "Specialty Coffees", including Origin, Soluble and other processed coffees increased from 9.1 million USD in 2003 to 13.2 million USD in 2006.

The reason why Colombia protected the term "Café de Colombia" in EU as GI (P.G.I.) was to avoid the attempts of third parties to misuse the good name of "Café de Colombia" (EC, 2006). The aim is to defend the economic value of an already established product, for which a reputation was already built up with a sophisticated marketing strategy using trademarks. As roasting does not necessarily need to be carried out in the geographical area "Café de Colombia" could not be protected as P.D.O.. However, if coffee beans would be roasted in Colombia this would create a high economic added value, irrespectively if the coffee is sold as GI coffee or not. As the Federation as collective producer organisation had already established a well organised supply chain (with quality ensured by Almacafé and rural development goals) the registration as P.G.I. in the EC took only one year. It can be estimated that with the existing supply chain structure the additional costs were relatively low to become registered as P.G.I. in the European Community.

The distribution of value to producers is one of the goals of the FNC. A lot effort was undertaken by the FNC to improve the quality of life for instance through educational programs and infrastructure projects. The protection of biodiversity in the coffee growing regions is also one aim of the FNC.

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### 4.3 Coffee of Costa Rica

We propose a second case-study because of a very different GI strategy.

Coffee production in Costa Rica started at the end of the 18<sup>th</sup> century in the Meseta Central (Central Valley) with perfect soil and climate conditions for coffee. In 1829 the commodity became the most important source for foreign exchange and was exported to Panama, Chile and in 1843 the first time to England (Gerz et al., 2006).

Today, Costa Rica is after Guatemala and Honduras the third-largest producer of Central America. In 2006/07 its production volume was approximately 1.6 million 60-kg bags (see tab. 1) which is 15% of the Colombian production in the same year and contributes with approximately 2% to total world production.

Domestic consumption is with in total 18% of total production higher than for instance in Colombia (ICAFFE) and the rest of 82% of Costa Rica’s coffee is exported. 95% of the Costa Rican coffee export is traded over the future market (ICAFFE, undated).

On total world exports Costa Rica contributes with 1.5%. The main export markets for Costa Rica are the U.S. with 52%, Germany with 11%, Belgium with 7%, Italy with 6% and Japan with 8% of total exports in 2006/07 (ICAFFE, undated).

**Table 1: Production, export volumes and values of Costa Rica coffee 2000/01-2006/07**

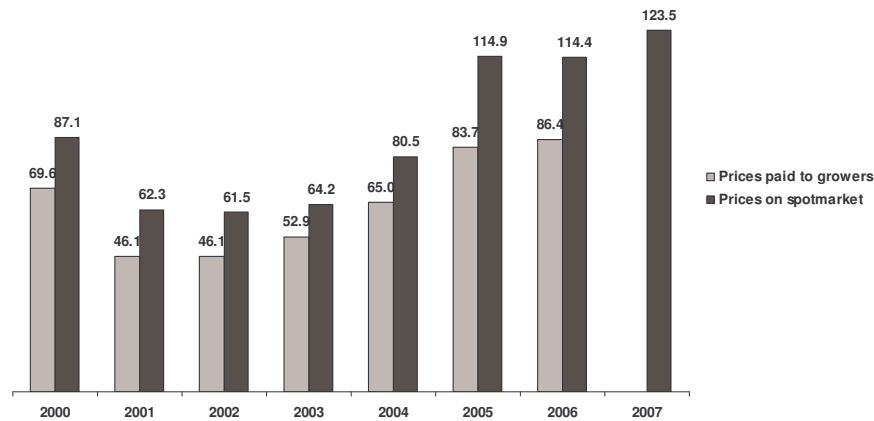
	2000	2001	2002	2003	2004	2005	2006
Production (thousand 60-kg bags) <sup>1</sup>	2 293	2 127	1 893	1783	1 887	1778	1 580
Exports (thousand 60-kg bags) <sup>1</sup>	1 965	2 018	1 784	1 702	1 424	1 480	1 310
Value of total exports (mio US\$) <sup>2</sup>	226	166	144	144	151	223	--
Price (US\$ per lb) <sup>1</sup>	0.87	0.62	0.61	0.64	0.80	1.14	1.14

Source: <sup>1</sup> ICO, undated, Price is that provided for other mild Arabica from ICO; <sup>2</sup> own calculation

Like in Colombia also in Costa Rica, the general average of growers` price proportion of spot market prices between 2000 and 2006 has been around 77%. In the same time the grower prices have increased from 69.6 US cents per lb to 86.4 US cents per lb and spotmarket prices from 87.1 to 123.5 US cents per lb (see fig. 1). Perhaps due to the pricing system, the higher prices on the spotmarket are the higher becomes the difference between sportmarket and

growers prices. Regarding the spotmarket prices Costa Rica and Colombias coffee are equally demanded by international consumers.

**Figure 1: Growers and spotmarket prices for Costa Rican coffee 2000-2007\* (US cents/lb)**



\* For 2007 prices paid to growers are not yet available - Source: ICO, undated

#### 4.3.1 Uniqueness of Costa Rica Coffee

The country's tropical rainy climate and volcanic slightly acidic soils are rich in organic matter and ideal for coffee growing. More than 70% of the coffee is produced in the mountains, at altitudes of 1000-1700 m and with temperatures averaging 17-23°C (Gerz et al., 2006). The Instituto del Café de Costa Rica (ICAFFE), a private company providing support such as quality controls and technological transfer, has classified the country into seven coffee-growing areas, differentiated upon altitude, soil and coffee flavour (strong, acid) (program "seven regions, seven coffees"): Tarrazu, Brunca, Orosi, Tres Rios, Turrialba, Valle Occidental, and Valle Central (ICAFFE, undated). Tarrazu is one of the most favourite coffees on the international market and well known for its quality. It is grown in the region Los Santos (see tab. 2 and fig. 2).

**Table 2: Defined coffee growing regions in Costa Rica**

	Rainfall (mm)	Rainfall (days)	Temperature (°C)	Altitude	sun hours	Humidity (%)	Brillo solar (%)
Tarrazu	2000	155	19	1200-1700	2150	84	44-54
Brunca	3750-4200	200	21.5	800-1200	1800	88	41.39
Orosi	2250	210	20.5	900-1200	1750	82	40
Tres Rios	2250	155	19	1200-1650	2150	84	44-54
Turrialba	3000	245	22	600-900	1640	87.5	37.5
Valle Occidental	2250	160	21.5	1000-1600	2200	81	48-52
Valle Central	3000	155	19	1200-1600	150	84	44-54

Source: ICAFFE, undated

**Figure 2: Map of Costa Ricans Coffee growing regions**



Source: SIGICAFE, undated

In 2001, the National Coffee Institute, ICAFE, launched the National Coffee Plan to improve the conditions in which coffee is produced, processed, and marketed. The fruits are manual picked and only ripe berries are selected, which allows the coffee to be more easily washed. Each of the 7 Costa Rican coffee regions signed a Quality Improvement Agreement in which the owners of the processing plants have committed to receive and process only ripe fruit, to guarantee better cup quality. The Costa Rican coffee sector only uses wet processing, in which the removal of the pulp is done the same day that it is harvested. The classification and cleaning after removing the pulp, is done before the fermenting process, with the idea of eliminating the remaining pulp and removing possible defective beans. The sun-dry method used in the Costa Rican process lasts 7 days. Mechanical drying is also used, which reduces the precise optimal drying time (12% humidity) to only 24 hours. Differential payments also form part of these measures taken to achieve quality.

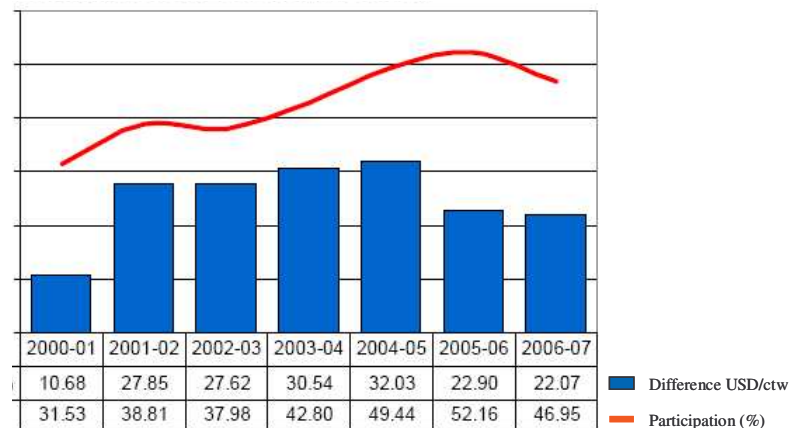
Registration, verification, control and follow-up of the commercialization process of the batch with unique characteristics were established in order to stimulate production, processing, and commercialization of the highest quality of coffee. The processing firms that participate are committed to receiving, processing, drying, storing, and marketing the bean completely separate from the others processed conventionally as well as paying for it with differential payments with prices superior to those of conventional coffee. The goal for Costa Rica's coffee growing sector is to continue improving bean sales while adhering to its strategy of "quality, not quantity", to always provide increasing value to the coffee and to increasingly provide the local market with quality coffee (ICAFE, undated).

### **4.3.2 Marketing Strategy**

Costa Rica coffee is promoted worldwide in various ways, like fairs and conferences. Within the country, promotion includes campaigns on radio, television and in the press (ICAFE, undated). In international quotation, coffee from Costa Rica is one of the most superior coffees. Examples for these coffees are "Primer Pergamino, Chorro Europeo, Strictly Hard Bean". The share of these coffees in total exports increased from 31.53% in the harvest 2000-

2001 to an average of 49.52% between 2004/05 and 2006/07. The price difference for these compared to other coffees was 10.68 US per cwt 2000/01 (20 US cents/kg), 32.03 US\$ per centner in 2004/05 (64 US cents/kg) and 22.07 US\$ in 2006/07 (44 US cents/kg) (see fig. 3).

**Figure 3: Exports of differentiated coffee\* (USD/cwt) and proportion (%) of harvest 2001/02 to 2006/07**



\*differentiated coffees include: Primer Pergamino, Chorro Europeo and Strictly Hard Bean

Source: ICAFE, 2007

There is only one fair-trade coffee cooperative in the country: COOCAFE. The cooperative represents 3'500 small-scale producers and is grouped into nine independent cooperatives throughout the country. In 1993-2000, an average of 53% of their production was sold on the fair trade market in the Netherlands, Germany and the United States; the remaining 47% of their sales went to the conventional market (Gerz et al., 2006).

Since October 2002 a special program was implemented by the coffee sector to improve quality, image and market position. The coffee supply is reduced due withholding 5% of producers' lower-quality coffee from the export market, thereby boosting consumption of higher-quality coffee in traditional and emerging markets. Minimum grades and maximum moistures content are fixed for exports. This program is conceived as a medium-term investment to raise prices for high-quality coffee in new market niches (ICAFE, undated; ICO, undated in Gerz et al., 2006).

### 4.3.3 The supply chain

The Costa Rican coffee supply chain is less centralized than the Colombian coffee supply chain. Every component in the chain- producer, miller, roaster, and exporter- has its own representative organ (UPANacional, Asociacion de Beneficidores, and the National Chamber of Coffee Processors and Roasters Association, Exporter representatives). The State has the supervision and control over the coffee supply chain through the Costa Rican Coffee Institute (ICAFE, undated). The Board of Directors is built up by representatives of the different sectors (producer, millers, roasters) and Law 2762 of 1961 guarantee fair representation from each sector (ICAFE, undated).

Costa Rica has a rather particular market system for coffee. Growers do not sell their coffee, but rather, deliver it to millers who are to process and sell it on their behalf; the revenue is shared. As part of the system, growers receive pre-financing, already months before delivery

of their coffee to the mills. Millers pay another part at delivery and the remainder after exports (Rutten et al., 2007).

The Costa Rican coffee sector covers 56'896 *producers* from which more than 90% are small-scale producers with less than 5ha of coffee (Gerz et al., 2006). Together they cultivate 44% of the total coffee growing area (ICAFFE, undated). Another 6% are medium-scale producers with an average acreage of 5-20 ha representing 21% of the total coffee growing area. The remaining 2% of coffee producers cultivate 35% of the total growing area and own more than 20ha (ICAFFE, undated).

Small-scale producers market their produce either through cooperatives or individually (Gerz et al., 2006). Small and Medium-scale producers are organized in the Union Nacional de Pequeños y Medianos Agricultores Costarricenses (UPANacional). The Union was created in 1981 has 19'000 members and 93 local divisions trough the country. It provides training for members and defends their interest (Gerz et al., 2006).

The 127 *receiving stations* are market places between producers and processors. They are located in the centre of each coffee growing area and are collecting the raw material from the growers and sell them to a competitive price to the processors (Gerz et al., 2006, ICAFFE 2008).

Most of the 51 *milling companies* registered by the Costa Rican Coffee Institute (ICAFFE) are privately-owned (the milling sector in Costa Rica is highly competitive), but the second largest milling group is in the hands of the Federation of Cooperatives of Coffee Growers. The milling companies receive raw material of coffee berry from the growers through the receiving stations and convert it into green coffee. They are responsible for receiving, processing, financing, and selling the coffee. In every coffee producing region in the country a coffee milling centre is located (ICAFFE, undated). The companies pay growers a minimum price and often use options in order to lock in their minimum sales prices: they can use this in order to offer a higher minimum price to producers and thus attract their patronage and to avoid the risk that if prices collapse, they are left with large losses. Options have thus been used quite widely since the early 1990s (Rutten et al., 2007). The milling companies support growers through technical advisory services and credits. Their profits are fixed by law at 9% of the profit from sales after deducting processing costs (Gerz et al., 2006).

A part of the milling companies is organized in the Asociacion de Beneficiadores de Café de Costa Rica which was formed in 2000 to promote relations between the private sector and cooperative processing firms. The aim is also to improve the competitiveness of members' products (Gerz et al., 2006).

The *roasting* sector is industrialized since 1920 and therefore is a consolidated industry including 51 companies (Gerz et al., 2006; ICAFFE, 2007). The roasting industry links the upstream industry (processors) with the downstream industry (exporters) (Gerz et al., 2006) and is responsible for the roasting and grinding process of the green coffee beans and any other industrial processing of the beans, as well as for the commercialization on a national level (ICAFFE, undated).

The National Chamber of Coffee Processors and Roasters Association (Asociacion Càmara Nacional de Procesadares y Tostadores de Café) promotes the development of roasting in Costa Rica. Its main role is in advocacy and protection of coffee prices and producers by

ensuring fair treatment by tax authorities. It supports the legal protection and regulation of the coffee industry, and advises the Coffee Institute on local market supplies (Gerz et al., 2006).

The *distribution* is done by 64 exporter companies (ICAFFE, 2007). The exporter’s main role is to prepare and provide quantities of coffee to importers and/or roasting companies that operate in the major coffee-consuming nations (ICAFFE, undated). In total 30 export firms are registered with the ICAFFE which are to 70% small enterprises (ICAFFE, undated).

Their profit is fixed by law at 2.5% of the transaction value (if the exporter buys the coffee and assumes the risk of market fluctuations), or 1.5% (if the exporter simply acts as middleman) (Gerz et al., 2006).

#### 4.3.4 GIs in national law

To date, Costa Rica has no registered GI for coffee but has included Geographical Indications and Denomination of origin in the Law on Marks and other Distinctive Signs (see tab. 3).

**Table 3: Intellectual Property System in Costa Rica**

Legal Regulation	Registered GIs (coffee)	Current projects
Law on Marks and other Distinctive Signs, 2000: GI and DO	None so far	ICAFFE has established the project “7 Regions, 7 Coffees”.

Source: Teuber, 2007

But various national regulations govern the coffee sector (Gerz et al., 2006):

- Law No. 19302-MAG (1989) forbids production of any other variety than Arabica coffee
- Law No. 2762 governs relations between producers, processors and exporters
- Law No. 7978 (promulgated 2000) covers marks and other distinctive quality signs
- Certification standards also exist for Costa Rican specialty coffee

One of the mechanisms currently being considered to reduce the pressure of the liberalized market is the promotion of distinctive quality signs, such as geographical indication (Granados and Alvarez 2002).

To identify important geographical regions, Costa Rica identified eight different growing regions, every region with an individual profile (ICAFFE, undated). Presently, these growing regions are still informal, but efforts are under way to formalize these regions through legal means (ibidem. In. Teuber, 2007). Costa Rica takes also part in the GEOCafé project, which has been developed by funding from the USAID Quality Coffee Program. Farms, cooperatives, and mills in participating countries are precisely mapped with GPS devices, and data are collected for each of these entities, ranging from geographic and climate farm conditions, socio-economic data, harvesting periods, certification issues, type of protective trees and methods of coffee processing. By using these data interactive online coffee maps

shall also form the basis for the establishment of appellation systems for coffee (GEOCafé Homepage In: Teuber 2007).

As to date no GI coffee exists in Costa Rica two possibilities are under discussion. One is a nationwide geographical indication for quality Costa Rican coffee. The other possibility is a local geographical indication, linked to a specific coffee-producing territory with established market reputation (Gerz et al., 2006).

#### **4.3.5 GIs and other protection measurements in international negotiations**

As Costa Rica exports 95% of its coffee in bulks over the future market the value added is captured by the downstream industry. Roasters sell coffees from Costa Rica with their own trademarks. A few examples of downstream roasters and sellers are Café Rey S.A., Café Britt S.A., Café Volio S.A. (ICAFE, undated).

#### **4.3.6 Challenges for Costa Rica's coffee market**

Besides the problem of highly volatile market prices due to imbalance of supply and demand, the Central American Free Trade Agreement with the USA contradicts the government ban on the imports and sale of foreign coffee into Costa Rica. Since then foreign coffees and multinational firms are entering the national market (Gerz et al., 2006).

#### **4.3.7 Environmental effects**

According to ICAFE (undated) the Costa Rican coffee plantations do not use insecticides. Instead underbrush control is done with a mix of chemicals and manual labour whereby the use of chemicals is carried out from plant to plant and not by air. It is also said, that Costa Rica is less intensive with respect to fertilization. The majority of Costa Rican coffee fields operate under intermittent shade, and the decomposition of leaves returns abundant organic matter to the soil.

To avoid any kind of water contamination due to the milling process, in 1992 the Costa Rican Coffee Institute, together with the Health Ministry, the Costa Rican Water and Sewer Service, and the National Electricity Service, drew up an Inter-institutional Agreement that outlined a program of industrial change in wet processing. The program costs the sector more than \$100 million dollars. In order to conserve soil, measures are taken that prevent erosion like surrounding it with sown land, sloped trenches, vegetative barriers, awnings, etc.

To provide consumers a constant quality the SEAL OF SUSTAINABLE COFFEE was created through the Executive Decree 30938 by the Ministry of Agriculture and Livestock, MAG. The Accredited Technical Management and the Register of Organic Agriculture of MAG certification and the Costa Rican Coffee Institute are in charge of the inspections. For coffee growers this service is free.

The National Commission on Organic Agriculture was created by law, which promotes crop production using the least amount of agrochemicals. The Costa Rican Coffee Institute, in 1996, agreed to register separately the production and sales of organic coffee in order to have control over this type of production and continue promoting its operation. Based on this, the Cooperation Agreement with the Association of Organic Agriculture was signed in order to develop joint research plans and share technology among producers interested in these types of crops.

#### 4.3.8 Conclusion

Prices paid for Costa Ricans coffee are in general higher than for most other coffees. Between 2001 and 2006 the export price for Costa Ricans coffee increased from 64.79 USD/46 kg bag to 122.23 USD/46 kg bag (ICO quotation). Whereas Costa Rica coffee prices were on rank five in 2001 (behind prices paid for coffee of Ethiopia, Kenya, Colombia and Mexico) in 2006 the highest prices were paid for Costa Rican coffee (followed by Colombia, Kenya, Nicaragua and Mexico).

Coffee producers are not included in every step of the supply chain but are protected against volatile market prices by legal mechanisms. Support schemes are also fixed legally and are mainly provided by the private industry. Every actor in the supply chain defend its own interest which results in a solution that is not solely targeting producers well being or the distribution of value to producers.

To increase the access to the international market with high quality products ICAFE (through which the State has the supervision and control over the coffee supply chain) has established the program “seven regions, seven coffees”. Within this program important coffee regions with an individual profile were identified. However, it is still under discussion if a GI should be nation or region wide.

Compared to Colombia and as a result of the existing supply chain structure, Costa Ricans coffee growers are less supported regarding socioeconomic aspects. However, to improve the environmental quality in coffee producing regions several programs and legislation were launched by the government. These programs increase the reputation on the international market with the aim to generate higher prices.

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#### 4.4 Comparison between Colombia and Costa Rica approach

Coffee of Colombia and coffee of Costa Rica have followed two different GI differentiation strategies. The objective is similar – to “de-commoditize” green coffee – in order to increase prices paid to producers. However they have chosen two different paths. Colombia has a very large size production of Arabica coffee (around 12 millions bags) and has selected a premium niche market. Out of 7 mio hectares, only 12% qualifies as GI. Costa Rica has a much smaller production (around 1.5 millions bags) and has decided to improve quality of the total production through a demanding code of practices (hand picking of ripe berries, wet processing...) . In international quotations (ICO), coffee of Costa Rica is the most superior coffee.

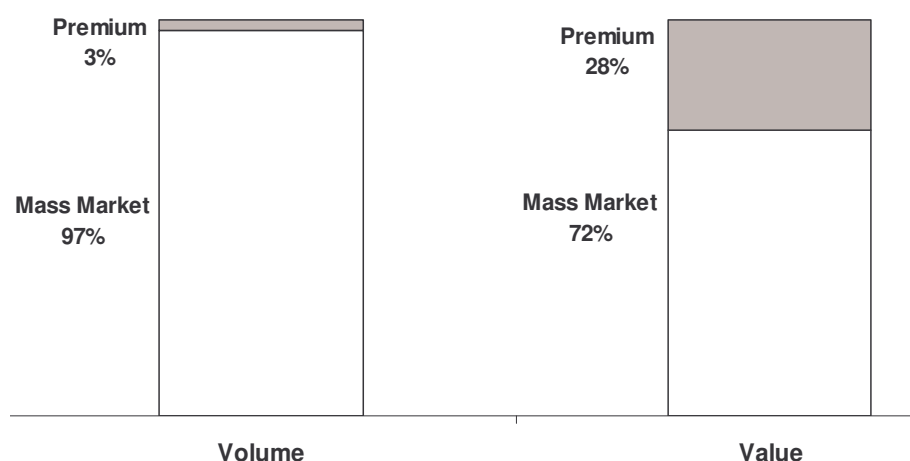
Supply chains are also very different. Colombia has developed a very strong democratic efficient organization (The National Federation of coffee growers- FNC) that pilots production and the institutional system. It has prepared and advocated with great success registration in EU (first foreign product to be registered). Costa Rica organization is more dominated by public authorities that control margins at different levels of the supply chain.

## 5 Habanos of Cuba

The global cigar market is estimated at roughly 15 billion units and is highly concentrated in geographic terms. More than 96% of all sales are recorded in Western Europe (Germany, France, Spain and the United Kingdom) and the United States, which account respectively for 55% and 41% of the market. Since the middle of the 1990s, these markets have registered slow volume growth and high value growth (altadis, undated).

Unlike the cigarette market, where global volume is still the major indicator of consumption trend, the cigar market can be analysed more precisely by examining component segments. A comparison of the top-of-the-line premium, hand-rolled Litigation cigar segment and the machine-rolled, mass-market segment shows a large gap between sales volumes and corresponding revenues (see fig. 1) (altadis, undated).

Figure 1: Worldwide cigar sales by segment 2006



*Premium Cigars include several Cuban Brands, namely Cohiba, H. Upmann, Hoyo de Monterrey, José Piedra, Montecristo, Partagas, Romeo y Juliety and Quintero as well as brands of the Dominican Republic like Santa Damiana, VegaFina, Don Diego, Flor de Copan, and Pleiades as well as the French cigar brands Longchamp and Gloria Cubana produced in Miami and the Dominican Republic.*

*The mass market includes brands like Antonio y Cleopatra, Baeckwoods, Ducados, Dutch Masters, Dux, Entrefinos, Farias, Fleur de Savane, Guantanamera, Havanitos, Ninas, Phillies, Picaduros and Tampa Nugget.*

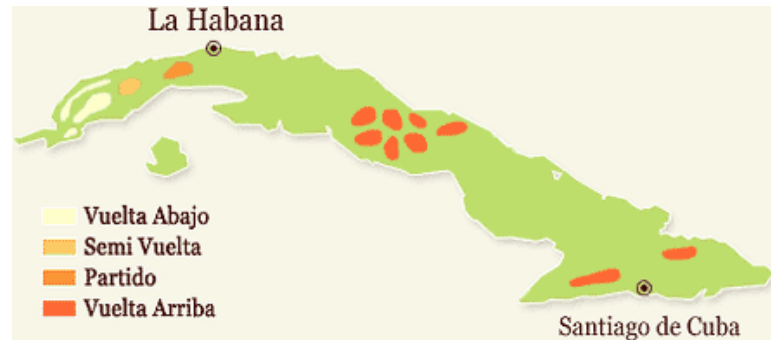
Source: altadis, undated

### 5.1 Uniqueness of Habanos

The uniqueness of Cuban Cigars is indicated by the natural growing conditions like soil characteristics and climate by the plant varieties of Cuban black tobacco and the human knowledge related to Cigar making and tobacco farming. The production itself is special as a Cuban Habano requires five different types of leaves. The inner part forms the long filler and consists of three leavers with three different characteristics: Ligeró for strength and flavor,

Seco for aroma and volado for good combustion. A fourth leaf secures and wraps the long filler leaves. Together they form the “Bunche”. The fifth leaves dresses the Habano and determines its appearance (Garrido de la Grana, 2007).

**Figure 2: Map of Tobacco growing areas for Habanos in Cuba**



Source: habanos.com, undated.

The region *Vuelta Abajo* (see fig. 2) is the main source of tobacco for Habanos and the only region that grows all five types of leaves that are needed for the production of Cuban cigars. Only a quarter of the tobacco-growing land enjoys the *Vegas Finas de Primera* status that is required for the growing of tobacco for Habanos. These are San Luis, a small town at the epicentre of Cuban tobacco culture, known for the growing of wrapper leaves for El Corojo Vega and Cuchillys de Barbacoa. The small town of San Juan y Martinez has a particular reputation for the cultivation of fillers and binders. The third growing area in this region is the province Pinar del Rio that embraces all of the important growing areas in the west of Cuba and has some of the finest land for growing Habano tobacco.

The *Semi Vuelta* is the second region in the western heartland of Cuban tobacco cultivation and another location for the cultivation of Habano wrapper leaves. The area employed is only one per cent of Semi Vuelta’s total tobacco-producing land. Most of Semi Vuelta’s tobacco is grown for other purposes.

The *Partido* is a historic group of tobacco-growing zones founded in the early 17th Century to the south east of Havana. Like Semi Vuelta, Partido specialises in the cultivation of wrapper leaves.

The *Vuelta Arriba* Region to the east embracing two widely separated tobacco-growing areas. The Remedios, which is Cuba’s largest and oldest tobacco producing area, and the source of all types of leaf for one particular Habano brand José L Piedra. The soil and climate have their own distinctive character, but methods of cultivation used here for Habano leaf are the same as in other regions. The other producing area in this region is *Oriente*.

## 5.2 The supply chain

The chain is dominated by Corporation Habanos SA, owned 50% by Cubatabaco, a Cuban governmental enterprise, and 50% by the French-Spanish company Altadis SA and is the leading actor in the world premium cigar segment (Garrido de la Grana, 2007). The firm has a portfolio of 32 active brands and more than 6’000 brands registered. Some of the most

internationally well-known Cuban brands include among others Montecristo, Cohiba, Romeo y Julieta and Partagas (see figure 1).

As leader in the Premium cigar segment, the firm holds a 30% share of international cigar premium sales and a 70% share on the domestic cigar market (Altadis, 2006). In 2007 the estimated annual sales were around 200 million US\$ where more than 90% is its global billing comes from its international activities (habanos.com, undated).

With the 1989 collapse of the centrally planned economies of Eastern Europe and the 1991 dissolution of the Soviet Union, Cuba lost its major markets and its primary source of foreign assistance. By 1994, agricultural production had fallen 54% from 1989 levels. Particularly hard hit was tobacco. Continuing shortages of inputs and energy have restricted recovery. The Cuban Government responded to this economic crisis with a major program of reforms. In order to increase tobacco production, it has encouraged growth in the industry by turning state farms into co-operatives and by giving land to farming families. Today, 18'000 private farms account for the majority of the crop and some technological advances have changed production methods (including irrigation). A major challenge is presently hurricanes repetition (4 in 2008) that damage plantations.

The *farmers* are cultivating the plant and cure the hand-picked leaves. The leaves are sold to the Empresa de Acopio y Beneficio del Tabaco, the organization for the gathering and improvement of tobacco. The cured leaves are separated and go to the Sorting House for the first fermentation.

For *processing*, Habanos several steps are necessary. In the Sorting House, the first fermentation of filler and binder leaves take place and the fermented leaves are separated after size, colour and texture.

Afterwards the leaves go to the Stripping House where the second fermentation takes place. Another separating process follows, distinguishes the leaves in ligero, seco and volado that define the characteristic of the inner part of the Habano.

In the Warehouse the different types of leaves are packaged and prepared for the factory.

Habana is the location of the most famous Habano factories . Here the cigars are made by hand under strict quality controls. As soon as the factory's future production schedule for brands and sizes is known, the Ligador or Master Blender draws up a list of all the tabaccos he will need to make them. The ratio of each type of leave for the different cigar brands is assembled by the blending department in batches issued to the cigar rollers. The quality control in the factory is done by different institutions. The Torcedores or Cigar makers are organized in brigads of 30-40, supervised by a top-grade Torcedor who checks their working techniques and the cigar length, shape, girth, appearance and weight. The Torcedors are all paid on piecework and the cigars are rejected if strict tolerances are not met. In addition, three or four times per month cigars from each Torcedor are taken apart to verify their internal construction. The latest quality control technique is a machine that checks the draw for the bunch by suction. It was first introduced at the end of 2001 and is now widely used. Every factory has its team of cigar tasters- the Catadores- who meet every day to smoke sample cigars and score them according to a six-point quality checklist: how well they draw, how well they burn, aroma, flavour, strength and overall quality. When a factory first takes on the production of a particular Habon brand, a team from the National Commission for Tasting checks the work (habanos.com, undated).

The *distribution* of Habanos on the national market is done by the distributors of the Habanos SA. Since the US import embargo against Cuba the most important trading partner for Cubans cigars is Europe. The Habanos SA works together with 23 European distributors, 19 American distributors (South and Central America and 1 Canadian distributor), 6 Asian & Far East distributors and 5 Africa & Middle East distributors (Habanos SA). Additionally the firm has a network of franchises with more than 120 sales outlets throughout the world. More than 90% of its global billing comes from its international activity (habanos.com, undated).

### 5.3 Marketing strategy and Intellectual Property Protection

According to the period of creation trademarks of Habanos SA can be classified in two groups: the Pre-Revolution trademarks (Montecristo, Partagas, Romeo y Julieta, H. Upmann, Por Larranaga, Hoyo de Monterrey etc.) and the Post-Revolution trademarks (Cohiba, Cuaba, Trinidad, Vegas Robaina, San Cristobal de La Habana etc.).

According to the importance in different markets a second classification scheme was implemented, differentiating between global, multilocal, local and niche market trademarks (see tab. 1). Global trademarks are present all over the world, multilocal trademarks can be found in most countries, local trademarks are found in just a few countries and niche trademarks were created just recently and treated in a special way to increase their reputation to become them to well known trademarks. For instance, “Trinidad” is a name of a Cuban city and declared by the UNESCO as world heritage, Cuaba is the name of a Cuban tree and San Cristobal de La Habana is the country's capital name. Therefore, niche market products are strongly linked to the geographical origin –the country Cuba- but the aim is to increase the recognition by trademark protection.

**Table 1: Habanos trademarks**

Category	Brand
Global trademarks	Cohiba, Montecristo, Romeo&Julieta, Partagas, Hoyo de Monterrey, H. Upmann, José L. Piedra
Multilocal trademarks	Bolivar, Fonseca, Guantanamera, H. Upmann, Punch, Vegas Robaina, Quintero
Local trademarks	Por Larrañaga, Cabanas, Belinda, Sancho Panza, Los Status De Luxe, Troya, La Gloria Cubana, J. Cano, Quai D'Orsay, Juan Lopez, Rafael Gonzales, Vegueros, Diplomaticos, Ramon Allones, San Luis Rey, Gispert
Niche trademarks	Trinidad, Cuaba, San Cristobal de La Habana

Source: Garrido de la Grana, 2007

Habanos SA drives a dual Marketing strategy, based on trademark and certification mark protection as well as on denomination of origin. To date, Cuba has protected 55 appellations of origin, 62 trademarks and 2 certification marks (see tab. 2).

**Table 2: The different protection tools for the term “Habanos”**

	appellation of Origin	trademark	certification mark
Registrations	26 countries (25 members of Lisbon, Dominican Republic)	35	
Applications	29 (27 EU, Uruguay, Ecuador)	27 (Members OAMI)	2 (USA, Canada)
Total	55	62	2

Source: Garrido de la Grana, 2007

The creation of an appellation of origin was a long process and grew together with the trademark strategy. It is said that the origin of the geographical name “Habana” is linked to the port of Havana, from which the cigars were shipped for export. But until the early 20<sup>th</sup> century, the term “Habano” was used for the design and advertising of cigar trademarks all over the world. Especially in Spanish-speaking countries the term was used to indicate high quality cigars. Thus, the term “Habano” has achieved recognition on its own merit, rather than as the name for a region, locality or country. In the early 20th century, the Cuban authorities became aware of this problem that the term “Habano” might become generic and measures were taken to protect Cubans cigars. These measurements include national legislations like the National Warranty Seal of Origin law of 1912, protecting products from Cuba and the National Commission of Advertising and the Defense of Habanos Cigars from 1927. To protect Cubans cigars on the international level several bilateral agreements were signed, among them with France and Germany. In addition the Lisbon Agreement was signed for 18 appellation of origin, including Cuba, Habana, Habanos, Vuelta Agabjo, San Luis, San Juan y Martinez, Vuelta Arriba, Remedios, El Corojo and Cuchillas de Barbacoa (Garrido de la Grana, 2007).

Signing the Lisbon Agreement was a key to protect Cubans cigars on the international market but several law suits followed as the protection was not sufficient. The Lisbon Agreement at least implied respect and recognition even in non-member countries. Since 1981 lawsuits were brought in Europe, among them law suits in France, Belgium, Germany and Spain to defend the original Cubans cigars against imitations (Garrido de la Grana, 2007).

Along with the lawsuits, a marketing strategy based on geographical origin was drawn up in the 80s to support and complement the efforts to obtain legal protection. The first step was to establish a communication strategy based on the Habano appellation of origin. As a second step starting in 1991 it was decided to unify the various versions of the logo and design for Habano that existed in other languages and to use just one: Habanos. From then on, Habanos logo has the same image all over the world. The process of transition, including the elimination of the word “cigar” and to use the Spanish term “Habanos”, took up to ten years. In 1993 a stick with the Habanos Appellation of Origin was created in order to include it in all the packaging of the products (Garrido de la Grana, 2007).

The Habano Cuban cigar trademark printed on the boxes of brand names is the guarantee that these cigars are backed by the Habano Denomination of Origin Protection. This is a guarantee of quality and origin that is awarded to only the best cigars manufactured in Cuba under the

strictest quality control measures, with the best leaves selected from the island's tobacco regions (habanos.com, undated).



The Habano Denomination of Origin may be applied to all cigars in which 100 per cent of the tobacco used has been grown in Cuba. Likewise, it is an essential requirement that all cigars manufactured in Cuba are subjected to numerous quality control checks, both during the agricultural and curing process, as well as during all stages of manufacturing in the factory (habanos.com, undated).

#### **5.4 Challenges for Habanos**

Due to the notoriety of Cubans trademarks all over the world, there are many infringements, including registration requests and use in some countries. The international most attacked trademark is Cohiba. Many courts and patent offices have recognized that this trademark is well known, and, in many cases, they have declared it as a renowned trademark. Consumers are often confused and cheated due to similar words or similar designs. Another problem for the Cuban cigars trademarks is the marketing of counterfeited products (Garrido de al Grana, 2007).

#### **5.5 Conclusion**

Habanos cigars are one of the most famous GI in the world and has a long history of origin labelled product. As leader in the premium cigar segment, Corporation Habanos SA holds a 30% share of the international premium cigars sales.

Habanos cigars are one of the most usurpated GI products in the world and have deployed different tools for protection: to date, 15 “Appellation of origin”, 62 trade marks and 2 certification marks.

It is difficult to get information on the internal organisation of the supply chain or on production practices in a country which faced a very severe economic crisis in the 1990’s and is nowadays enduring repeting climate problems.

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## 6 Rooibos tea of South Africa

Rooibos tea is competing on the world tea market with green teas as well as with herbal teas and benefits from the favourable trend for these products in developed countries. The following section presents the evolution of the tea world market and is followed by the presentation of the case-study.

### 6.1 The world tea market

Tea is grown in 36 tropical and semi-tropical countries. The seven largest producing countries- China, India, Kenya, Sri Lanka, Turkey, Indonesia and Vietnam- account for 86% of world production in 2006 (see table. 1). The world main exporters are Sri Lanka, China, Kenya, India and Vietnam accounting for 77% of total world exports. The main importers of tea are the EC (15), Russia, UK, Pakistan and the U.S. importing 56% of total world imports (FAO, 2008).

There are two major types of tea, black and green. Black tea accounts for around 75% of global production and over 90% of the market in Western countries. Black tea results from leaves that are fully oxidized, while green tea leaves are steamed, rolled and dried without any oxidation. Most green tea is grown in China and is gaining popularity in the West, partly for health reasons (Agritrade, 2008). Between 1996 and 2006, green tea production increased by 4.7% per year and exports by 14.1% per year. The export growth rate for black tea was 1.5% per year between 1996 and 2006 (FAO, 2008).

**Table 1: World tea (black and green) production and exports 2006**

	Production (000 t)	Production (%)	Exports (000 t)	Exports (%)
China	1047.4	28.7	286.6	18.5
India	945.3	25.9	218.7	14.1
Kenya	313.0	8.6	272.0	17.5
Sri Lanka	312.0	8.6	314.9	20.3
Turkey	200.1	5.5	k.A	k.A.
Indonesia	187.9	5.2	95.3	6.1
Vietnam	133.0	3.6	105.6	6.8

Source: FAO, 2008

Tea is sold through auctions or in private deals, increasingly on-line. Unlike coffee or cacao, there is no futures market for tea. Several tea auctions can be found in India (Calcutta; Guwahati; Cochin; Coonoor) and Africa (Kenya, Uganda, Tanzania and Malawi). Indonesia has also a tea auction and Dubai is building up the Dubai Tea Trading Center (DTTC) which

is expected to be in high competition to Kenyas tea auction in Mombasa (teauction.com, undated; DTTC, undated). On-line tea auctions bids can be submitted at any time and the sale process is not geographical confined. Transaction cycle times and the stages in handling are reduced. Also teas need not be transported to warehouses as inspections can be done using samples couriered to buyers from the plantations. Although the auction system seems to approximate a fair market in which prices are determined solely by the interplay of supply and demand, the system does not always work well for small-scale producers. Auction prices vary considerably with both the quality and quantity of tea on offer, and the demand for tea at any given time. Another problem is the evidence of collusion among brokers to influence prices. Such collusions would tend to reduce the price at which producers could sell tea at the auctions, and would also affect process on direct sales. In 2005 the situation was deemed so bad the Kenyan National Chamber of Commerce called for the elimination of tea auctions (FAO, 2008).

As tea is traded on auctions there is no single world price for tea, but rather differing prices at different auctions. The price trend until recently has been downward. FAO indicator price for tea shows that tea prices are slowly increasing since 2002 (see tab. 2) but a longer term analysis indicates that after taking inflation into account, the real price of tea has dropped substantially. World Bank figures suggest that between 1970 and 2000, tea price fell by 44% in real terms.

**Table 2: Composite tea prices in USD per kg 2000-2007**

	Composite prices (US\$/kg)	Annual growth rate
2000	1.8	
2001	1.56	-13.3
2002	1.48	-5.1
2003	1.52	2.7
2004	1.66	9.2
2005	1.64	-1.2
2006	1.83	11.6
2007	1.95	6.6

Source: FAO, 2008

The tea industry is highly concentrated. The big tea companies have a presence at almost all stages of the journey of tea from tea bush to tea bag or packet. The companies buy their tea at an early stage of production, and usually carry out the high-value-added blending and

packaging (which account for 80% of the retail price), at facilities in the EU and other Western countries.

Beside herbal tea, green tea is one of the closest substitute to Rooibos tea (Biénabe et al., 2007). Rooibos is as well as green tea a functional hot beverage. It is desired mainly because of its health benefits and its flavor. It contains no caffeine, has very little tannin, is high in antioxidants, and is a proven anticarcinogen. Rooibos is often used to bathe babies and children who suffer from allergic skin conditions or makes a thirst-quencher and sport drink, because of its mineral content of iron, potassium, zinc, and sodium (USDA, 2006). The demand for rooibos increased for its functional attributes and as South Africa is the only producer with a limited production area one would have thought that the gap between demand and supply would increase within the following years. However, nowadays rooibos producer face the problem of overproduction and within the last three to four years the price decreased substantially. Thus, rooibos production faces similar problems concerning a positive supply-demand-balance as teas traded over the conventional market.

Rooibos represents about 0.3% of total world tea sales and about 10% of the herbal tea market and the natural health product market (Biénabe et al., 2007). South Africa is the only producer of Rooibos providing income and employment to more than 5'000 people. In 2004 the turnover in the rooibos industry was estimated at 22.5 million Euro (Gerz et al., 2006).

On average about 12 000 tons of Rooibos are produced in South Africa with a national consumption of 4'500 to 5'000 tons (SARC, 2008)<sup>7</sup>. Thus, 60% of the production is exported the rest of 40% is consumed domestically. South Africans` rooibos production area reached about 37'000 ha in 2005 and an increase in production is expected (USDA, 2006).

## 6.2 Uniqueness of Rooibos

Rooibos is a legume and part of the genus *Aspalathus* (Wilson, 2005). Rooibos Tea (*Aspalathus linearis*, Fabaceae) is a shrub of half a meter to two meters in height with bright green, needle-shaped leaves which turn a rich reddish-brown colour upon fermentation and occurs in different ecotypes: the domesticated or "Nortier" cultivar, which is planted by producers, and secondly, a range of "wild" or naturally occurring ecotypes (Nel et al., 2007).

Rooibos is unique to the Cape floral kingdom, known locally as the fynbos, which has the distinction of being both the smallest of the world's six floral kingdoms, and the only one, occurring entirely within the borders of a single country (Editors Inc., 2002). Fynbos constitutes the main land cover in the Cape floristic region, which has the densest known concentration of plant diversity in the world (Cowling et al., 1997). Rooibos grows exclusively in the Northern and Western Cape province of South Africa, specifically in a small area 200 km north of Cape Town, the Cedarberg Mountain region and around Clanwilliam and Citrusdal (see fig. 1). The Cedarberg area is a rocky range with a Mediterranean climate (Cowling et al., 1997). The uniqueness of the production area of rooibos is defined by its rainy winters (while the rest of South Africa generally has rain in summer) and dry summers, the altitude, the acidic and the coarse sandy soil (Gerz et al., 2006).

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<sup>7</sup> 2007 has been an outstanding year for South Africa`s Rooibos plantations, with a record-braking 15 000 tons of Rooibos harvested (Rooibos Ltd. 2008)

Originally, the term “rooibos” was locally used but nowadays, due to sophisticated marketing strategies different terms exist, especially at the German market. The tea is said to have certain health giving properties- it is caffeine free and contains compounds which act as anti-oxidants (Nel et al., 2007).

**Figure 1: Rooibos production area**



Source: Leclercq, 2007

Up to date, the industry is in the process of finalizing the specifications and has therefore agreed upon for different specification areas, namely a) the delimitation of the area, b) the production practices, c) the harvesting standards and d) the processing procedure (Troskie, 2007).

#### Delimitation of the area

- a) It must be an area with winter rainfalls
- b) The substrate must be a derivative of Table Mountain Sandstones
- c) It must be deep, well drained sandy soils
- d) The ph of the soil must be below 7
- e) It must be in the Fynbos biome

#### Production practices

- a) Production must take place in the delimited area
- b) Biodiversity standards are being developed
- c) It must be produced under dryland conditions
- d) Irrigation is allowed on the condition that no irrigation takes place within the two month prior or during harvesting

#### Harvesting standards

- a) It must be annually harvested

- b) At least 20% of the leaves must be retained

Processing standards (Troskie, 2007; Biénabe et al., 2008)

- a) It must be delivered to the tea court within 72 hours
- b) The green material must be cut to 1-10 mm
- c) Silage must be placed in row-like heaps
- d) It must be placed in a specified manner in the sun and wetted to 60% moisture content
- e) The leaves must be bruised for fermentation
- f) No catalysts may be added to the product in order to facilitate fermentation
- g) The fermentation process must take between 12-16 hours to achieve the specific Odour and colour
- h) Following the fermentation the product must be spread in the sun (1000qm/ton) for drying below 10% moisture
- i) It must be dried in the sun to a moisture content of less than 10% at packed like this
- j) It must be stored in a cool, dry place
- k) All health regulations of the Tea court must be adhered to, like bacteria-steam sterilization
- l) The tea court itself must be in the delimited area

### 6.3 The supply chain

The *production* of Rooibos involves about 400-450 farmers (Biénabe et al., 2008). Two types of producers can be distinguished in the South African rooibos production. Small-scale farmers and underprivileged communities produce around 2% of the total output and still produce wild rooibos (Gerz et al., 2006). They grow rooibos on plots ranging from 0.2 up to 18ha (EMG, 2006). The majority are large-scale farmers with up to 1'500 or 2'000 ha (or even up to 5000 ha) (EMG, 2006) producing 98% of the whole output (Leclercq, 2007).

Even though rooibos cultivation practices have evolved considerably, processing still relies on traditional methods, which trace back to the Khoisan people, except that methods nowadays are more mechanized and refined. The rooibos plant is first harvested 18 months after planting. It is then harvested annually during the summer by cutting the branches 50 cm above the ground. Though manual picking is still largely dominant, 30% is harvested mechanically. The harvested rooibos is bound into bundles and taken to the first stage processing unit, the tea court, (Gerz et al., 2006) in most cases on the farms.

Rooibos second stage *processing* (namely sterilisation) is highly concentrated and dominated by 8 large companies that collect either wet or dry (after first stage processing), transform and sell the rooibos to the intermediaries (Leclercq, 2007) and are mainly located in the Cedarberg production zone (Gerz et al., 2006).

Rooibos Ltd. is the dominant role player of the South African industry channelling about 75% of the production in total. Some 200 producers retain the majority of the company's shares and are its main suppliers through a fixed annual price system. The company arose from the state owned Rooibos Tea Control Board, which was created in 1954 to organize the production and the marketing of rooibos. Until 1990s, this organization voluntarily dismantled and its assets were shared amount the producers who founded the Rooibos Ltd. The company has an own brand but it is mainly selling tea in bulk which is then marketed under downstream players brands (Gerz et al., 2006).

Rooibos Ltd. dominates the domestic market with a market share of 90-95% in particular through its long term contract with Freshpak brand that is part of the national brands group. Processing companies like Rooibos Ltd. relies mainly on large scale producers and only 1-3% of their suppliers are small-scale producers. On the international level Rooibos Ltd. holds a market share of 50-60% (rooibosltd.co.za, undated) and the distribution is mainly controlled by German brokers (Biénabe et al., 2008). For exports a wide range of products and trademarks, as well as various labels, are present (Gerz et al., 2006). The trademarks are usually owned by the traders (rooibosltd.co.za).

Production volume increased steadily within the last two decades. Whereas in 1995 the production volume was about 4200 tons, it raises to 6500 tons in 2000 up to 9700 tons in 2005 (Biénabe et al., 2007). As one of the main importers of rooibos in the 1990s, Germany is still South Africa's major export destination for Rooibos tea (USDA, 2006; Troskie et al., 2008). Nowadays, the main of 30 importing countries are Germany and the Netherlands, the United States, Japan, China and various other European countries, especially the United Kingdom as well as Belgium (see also tab. 3) (SARC, 2008). In 2004, the Turnover in the rooibos industry was estimated at about 22.5 million Euro with an approximate production of 10 000 tons (Gerz et al., 2006).

**Table 3: The main importers of South African Rooibos 2003**

Country	Imports ('000 tons)	Imports (%)
Germany	4 782	74.1
Netherlands	666	10.3
Japan	438	6.8
U.K.	188	2.9
USA	141	2.2
Australia	38	0.6
Bulgaria	35	0.5
Korea	32	0.5
Others	133	2.1
Total Exports South Africa	6 453	100

Source: Butler, 2005

The *quality control* is done by the Perishable Products Export Control Board (PPECB) of South Africa that ensures that all exported Rooibos products pass a plant health and safety inspection and are certified to be free of bacteria and impurities (SARC, 2008).

Most of the small-scale farmers are members of two cooperatives that produce rooibos for the fair trade and organic market (Leclercq, 2007), the Heiveld Cooperative and the Wupperthal Rooibos Association (Gerz et al., 2006). These small processing enterprises contract out the sterilization stage (Gerz et al., 2006) but are engaged in the marketing.

#### The Heiveld Cooperative

With the support of the NGO Environmental Monitoring Group and the Northern Cape Department of Agriculture, the Heiveld Cooperative was founded in 2000. The cooperative was the first organization to market sustainably harvested wild rooibos requires farmers to follow a code of sustainable harvesting practices. The products, certified by the EU (public standard), Naturland (private standard) and by the Fair Trade Labelling Organization (FLO), are sold as organic and fair trade on the international market (Gerz et al. 2006). During 2005/06, 42 farmer members produced 36 tonnes of organic rooibos achieving a financial turnover of R 1.5 million (Nel et al. 2007)

#### The Wupperthal Rooibos Associations

This Association is an isolated rural community in the Cedarberg Mountains and was created 1998 with 40 members. In 2005 the association counted 170 small-scale farmer members. The association is assisted by the development agencies, especially the NGO Agribusiness in Sustainable Natural African Plant Production (ASNAPP). The Rutgers University has helped them set good agricultural practice, good field harvesting practices and good manufacturing practices. In 2005 the Association received full organic certification. The output has averaged 80 tons a year but with a high variation dependent on climate conditions (Gerz et al. 2006). At present, 10 tonnes are harvested from wild plants and over 70 tonnes from plantations. Individual farmers produce between 200 kg and 2 tones, employing up to eight laborers, ensuring significant employment benefits in the local community (Nel et al. 2007).

### 6.4 Marketing Strategy

Marketing for Rooibos is based on private firms branding. According to a Rooibos tea drinking study conducted by the South African Advertising Research Foundation,

In South Africa 7.076 million (23% of total population) of the adult population are Rooibos drinkers. Of the total Rooibos drinkers, 39% are light drinkers, 34% are medium drinkers, and 27% are heavy drinkers. Branding played an important role towards consumer demands. Freshpak Rooibos was the most popular (26.3%), followed by Joko (23.3%), Eleven O'clock (18.7%), and 14.1% shared by Glen, Laager, Vital, Southhalls, Twinings and Phendula tips respectively (Business day, April 5, 2006 In: USDA, 2006).

The producer price for commercial Rooibos for the export market is 2.9 US\$ (1.9 Euro) per kg. The consumer price on the domestic market is 10.5 US\$ per kg (6.6 Euro/kg) and on the export market 22.5 US\$ per kg (14.6 Euro/kg). The Rooibos is in general profitable for the producers. With the export growth and the recent dry years at farmer gates have become more attractive. Expansion is at least partly due to wheat and potatoes producers modifying their farming systems to include rooibos production (Biénabe et al., 2007).

On the fair trade market two companies are operating: The Wupperthal association and the Heiveld cooperation. Members of the Wupperthal association earn 1.8 Euros per kg if the tea is sold on the domestic market but virtual everything is sold at the international market. Exported as fair trade the same quantity can be sold for 2.5 Euros per kg plus a premium of

10% of the domestic price level for Rooibos tea (EZA, undated). The fair trade premium is 0.5 Euro/kg (Nel et al., 2007).

The income of members of the Heiveld cooperative could increase their earnings from 1 Euro per kg in 2001 to 2 Euros per kg in 2003 to 2.5 Euro per kg in 2004. The cooperative's minimum wage for tea planters and harvesters is almost the double the legislated minimum for the area. In 2003, the cooperative made a profit of 19 624 Euro of which 13'737 was distributed to members on the basis of the amount of business each had done via the cooperative. The rest (5'887 Euro) was shared equally among the less advantaged members (EMG, 2006; de los Santos, 2005 In: Gerz et al., 2006).

In March 2005, the Heiveld cooperative was exploring the possibility of increasing its revenue by working directly through independent agents in Europe, a project which is now running. Respondents commented that, Fairtrade buyers pay 2 Euro per kg (23R/kg), whereas independent agents in Europe could pay up to 4 Euro per kg (44R/kg). Commercial rooibos by comparison sells for 1.2 Euro per kg (R14/kg) in world markets. Due to the overproduction and price decrease the prices paid by independent Europe agents is less nowadays, but still higher than rooibos sold over the conventional market.

## **6.5 GIs in national law**

In South Africa only wine and spirits are protected by the Wine of Origin Scheme which has to date 22 regulations including also delimitation of the Geographic areas. This scheme is an absolute access (Troskie, 2007) which can be seen by the increase of 1382% over the period between 1985 and 2006 of wine certified under this scheme (SAWIS, 2007). The system allows the co-existence of trademarks and GIs. Concerning the GI the producer can decide to produce Estate Wine of Origin sourcing all grapes from one specific estate or decide to have Wine of Origin from bigger elimination and source the grapes from a number of farms. This is possible since the System makes provision for (Troskie, 2007):

- a) 3 Geographical units
- b) 5 Production areas
- c) 21 Districts
- d) 56 Wards
- e) 129 Estates
- f) Single vineyards

For non-alcoholic products the current legal framework only provides for the protection of GIs as collective trademarks. But South Africa regards the word rooibos as a national good, so it cannot nationally be registered as trademark (Gerz et al., 2006). To benefit from an international geographical indication as provided for by the WTO Agreement on TRIPS, South African must first establish a national law about non wines and spirits GIs and prove that rooibos is protected at the national level.

## **6.6 GIs and other protection measurements in international negotiations**

The legal framework for rooibos currently relies on the trademark regime. A multitude of private and collective trademarks exist, owned mainly by the traders (Gerz et al. 2006). Examples for trademarks are: Freshpak Rooibos, Joko, Eleven O'clock. Glen, Laager, Vital, Southhalls, Twinings and Phendula, Clantee, Ou Huis, Annique, Perfect Rooibos Baby tea (Downes et al., 1999; USDA, 2006). In European countries Rooibos is also traded as fair trade, organic or as "wild rooibos" (Gerz et al., 2006).

## **6.7 Challenges for South Africa's Rooibos tea**

The European export market has a special role in fair trade and organic certified products (Gerz et al., 2006) but the major problem is that about 95% of the product is currently exported in bulk and it follows a significant opportunity for down-stream value adding exists (Troskie, 2007; Biénabe et al., 2008). The weak position at the international market is one of the most serious challenges South African Rooibos producers face. At the international level, the market power is in the hand of German traders that can easily dictate prices especially for conventional bulk exports.

There exists evidence that Rooibos trade marks are usurped being used for packaging and selling other teas or blended teas. Teas with very low proportion of actual rooibos or mainly sticks are labelled and marketed as Rooibos (Biénabe et al., 2007). Between 1993 and 2003 the export market grew by 742% and usurpation was the main driving force for the Rooibos GI initiative (Biénabe et al., 2008). As international demand growth is phenomenal, it is expected that other countries start producing rooibos. This is especially a problem as the rooibos plant might be adaptable (at least in some regions for instance in Australia) and could thrive outside its natural habitat (Gerz et al., 2006).

Rooibos tea is marketed under several trademarks with and without the term “rooibos” in the name. However, companies (at least in the United States) are not allowed to protect the term “Rooibos” which is the result of a ten year legal fight of Rooibos Ltd.:

For several years Rooibos Ltd. was involved in a Law suit dealing with the problem of trademark protection of a generic term “rooibos” to retrieve the right to sell the companies products under the name rooibos in the United States. In 1994, Forever Young (Pty) Limited, registered the name “rooibos” in the USA and numerous other countries, in an attempt to restrict the use of “rooibos” to those willing to do business with Forever Young. In 2001, Forever Young assigned the registration of “rooibos” to Virginia Burke-Watkins of Dallas, Texas. By restricting the use of the name “rooibos” to only those companies prepared to enter into a business relationship with Burke-Watkins, great hardship was caused not only to many independent US tea manufacturers and US retailers but also to the Rooibos Ltd.. Many companies, who used rooibos individually or in formulations, had to create alternative names such as Red Tea and Red Bush, leading to great confusion in the minds of tea drinkers. After ten years and nearly 1 million USD in legal fees, Rooibos Ltd. has reached a settlement agreement with Burke-Watkins and Forever Young (Pty) Limited over the rights to the use of the generic term “rooibos”. Under the terms of the settlement agreement, the latter two parties have voluntarily and unconditionally agreed to cancellation of their registration of the word “rooibos” in the USA and various other countries (christiecomm.com). Nowadays, the term “rooibos” alone can not be protected as trademark but in combination with other words the trademark registration is still possible. One example how rooibos tea is protected under the trademarks protection scheme are the trademarks of the US company Redtea that protect rooibos as trademark under “Pure Red Tea”, Ruby Red Tea”, “Real Red Tea”, “Organic Red Tea”, and “South African Red Tea”. Another example is the Red Bush Tea Company, a UK importer, protects its rooibos under the trademarks “African Rooibos Tea” and African Red Bush Tea”.

## **6.8 Value distribution within the supply chain and social and environmental effects**

Rooibos is a product generating a high value on the international market. Several trademarks are used to signal rooibos products like natural flavor, flavored, fair trade or organic teas, ice

teas and cosmetic products. An increasing interest can also be observed in non fermented “green Rooibos” that is said to contain more antioxidants than his fermented “red” counterpart.

Regarding rooibos tea offers of German retail companies, high price differentials exist between natural and flavored rooibos teas (see table XX). In general flavored non organic teas are priced higher than natural teas but high variances comparing different companies exist. Some companies sell their natural rooibos for 11 Euro per kg more than others, and for flavored teas price differences of more than 28 Euro per kg can be observed. Natural rooibos tea is offered for between 15.90 and 27 Euro per kg, flavored teas are offered for between 20.30 and 48 Euro per kg and organic teas are offered for prices exceeding 40 Euro per kg up to 60 Euro per kg if the tea is an organic and flavored tea (see table xx).

All prices in table 5 below are prices of German retailers for loose tea in 1 kg bags including value added tax and excluding transport. These data should only give an idea about prices that can be generated in one of the most important export markets for rooibos tea. Comparing retailer/importer prices with producer prices (2.20 Euro per kg<sup>8</sup>) one can identify a price approximately ten times higher which is (even if not corrected for transportation costs) a lot for not labeled loose tea. For cosmetic products one can even expect higher price differences.

**Table 5: Rooibos prices of a sample of tea retailers on the German market**

Company	product	Quantity (loose)	Price in Euro (incl. VAT, excl. transport)
Tee Kontor	Natural Red and Green Rooibos	1000 g	25 - 27
	Flavored Red and Green Rooibos	1000 g	27.5 - 29.5
Tee Schatzkammer	Natural Organic Red Rooibos	1000 g	40
	Natural Organic Green Rooibos	1000 g	44
	Flavored Rooibos	1000 g	40 - 48
	Flavored Organic Rooibos	1000 g	42 - 60
Weltecke	Natural Rooibos	1000 g	20.40
	Flavored Rooibos	1000 g	21.24 - 22.21
Tee Berger	Flavored Rooibos	1000 g	18 - 26
Tee Gschwender	Natural Rooibos	1000 g	26.35
	Flavored Rooibos	1000 g	30.17 - 36.55
Tee-Express	Natural Rooibos	1000 g	15.90
	Flavored Rooibos	1000 g	20.30 – 22.90

Source: websites of the different companies (access august 5<sup>th</sup> 2008)

As most of the tea is exported in bulk, even for the main exporter, the Rooibos Ltd., it is impossible to capture the added-value. According to Biénabe et al. 2007 the export of new and differentiated products using a labeling strategy, as well as the use of by-products would

<sup>8</sup> Price information was taken from the SinerGi Databcard that was dated April 16th 2007 with an average price of USD 2.90 per kg rooibos. This amount was transferred to Euros with the exchange rate of April 5<sup>th</sup> 2007 of the Amtsblatt der Europäischen Union (2007/C78/04)

be an opportunity for the rooibos industry to capture some value added. The strength of rooibos is that the product is well known as a South African product (Biénabe et al., 2007). If it would be possible to fairly distribute the value-added between the different supply chain actors a differentiation strategy would benefit the whole region. This is, because the region where Rooibos grows is typically characterized by communities with limited opportunity for economic growth and formal employment, often resulting in few inhabitants being economically active (Grant, 2005). Being a labour-intensive industry, the increase and distribution of added-value in these regions would increase income and provide job opportunities.

However, also some difficulties would have to be overcome before/with the introduction of a GI. To date, South African companies have very little success with exported products in retail-packed format. A clear challenge would be to ensure better control over the rooibos quality and to combine the GI and the biodiversity conservation strategy, as rooibos is being produced in and attached to a highly biodiverse area (Biénabe et al., 2007). As most rooibos producers are not smallholders, but are large scale producers and the processing sector is also highly concentrated, large players have a powerful market position as well as the financial means to make the investments needed to capture benefits from commercial rooibos markets (Gerz et al., 2006). Thus, further important considerations are to foster collective and even territorial dynamics at the level of the rooibos production area that could support the needs for inclusiveness and rural development in a context marked by some isolation of the small-scale farmers' communities from the rest of the industry, but also by strong competition among processors (Biénabe et al., 2007). One example of such a collective organization with territorial dynamics is the "Rooibos heritage route" developed by small-scale producers, a project that was supported by the government and NGOs.

Concerning environmental effects, the increasing demand raises the issue of sustainable practices. An increase in hectares under cultivation is required and it has been predicted that an increase in production over the medium term would mainly be driven by increased geographical spread, rather than through improved cultivation techniques. Concerns have been raised over the impact of land clearing in the fynbos areas on biodiversity. Further concerns over sustainability arise in areas such as Wupperthal where there is limited land available for cultivation as the community is situated in a natural reserve. Despite the potentially negative impact that improved market access and demand for Rooibos may have on sustainability, a geographical indication may actually improve sustainability by regulating production practices in the code of practice. To maintain good reputation, care should be taken that the large scale commercialization of Rooibos does not become associated with harmful environmental practices. To avoid such harmful environmental effects and maintain reputation, production standards are just in negotiation. In addition, maintaining environmental sustainability would open the possibility to promote tourism in the region and bring further economic benefit to the community (Grant, 2005).

## 6.9 Conclusion

Rooibos is an impressive commercial success. Production volume increased steadily within the last two decades. Whereas in 1995 the production volume was about 4'200 tons, it raises to 6'500 tons in 2000 up to 9'700 tons in 2005 (Biénabe et al., 2007). As one of the main importers of rooibos in the 1990s, Germany is still South Africa's major export destination for Rooibos tea with 75 % of export sales (USDA, 2006; Troskie et al., 2008).

The product uniqueness comes from a very specific ecosystem that leads to clear limits of the production geographical area. However, the supply chain has a low negotiation power. About 95% of the product is currently exported in bulk. At the international level, the market power is in the hand of German traders that can easily dictate prices especially for conventional bulk exports. The price paid to the producers in South Africa is very low compared to prices paid for bulk products in Germany.

On environmental aspects, the major challenge is over exploitation of natural resources due to a growing demand.

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[www.teauction.com](http://www.teauction.com)

EZA (undated): Europäisches Zentrum für Arbeitnehmerfragen [www.eza.ch](http://www.eza.ch) (link: [http://www.eza.cc/WLP/partner\\_info/1~S%C3%BCdafrika~Wupperthal\\_Rooibus\\_Farmers\\_Cooperative~Bio-Rotbuschtee.pdf](http://www.eza.cc/WLP/partner_info/1~S%C3%BCdafrika~Wupperthal_Rooibus_Farmers_Cooperative~Bio-Rotbuschtee.pdf) (last accessed 20<sup>th</sup> August 2008)

## 7 Tequila of Mexico

According to Anda (1995) the most accepted definition for tequila is: “A typical Mexican alcoholic beverage obtained through fermentation, distillation and rectification of must by sugar extraction of the hearts of blue agave (*Agave tequilana* Weber) which is allowed to mix up with a maximum of 49% with other kinds of sugar.” (Macias Macias, 2001). Beside Tequila also other distilled agave products exist, like mezcal, which is made out of green agave, a variety that is prohibited for the production of tequila.

The overall production volume of Tequila increased in the last two decades from 104.3 million litres in 1995 to 156.5 litres in 2000, and 284.23 million litres in 2006, with an increase of more than 60% in the entire period, due mainly to the production growth of “Tequila 100%” (see tab. 1).

**Table 1: Evolution of Tequila production between 1995 and 2007**

in million litres	total	Tequila 100%	Tequila mixto
1995	104.3	15.6	88.7
2007	284.2	135.7	148.5

Source: CRT 2008

Due to a range of unfavourable conditions, starting with the abundance of agave production due to low prices in the mid-1990 and an early winter frost in 1997 and a fungal infection in the 1999 the agave industry experienced its most devastating shortage between 1999 and 2003 (Gonzales, 2002). On the domestic market, 2003 and part of 2004 have been difficult times for the tequila industry. Tequila production process was depressed due to an excess of production and to the increase of alternative lower price rival beverages, such as mescal (El Economista, 2005). Especially the Tequila 100% production is sensitive against times of shortages. With an agave shortage expected in the next years the share of Tequila 100% will again be less than the half of the entire production. The year 2007 might be the beginning of the natural shortage cycle in agave production as the Tequila 100% production decreased by 7%. The consumption instead grew enormous in 2006 to 2007 with 90% (CRT, undated).

The consumption of both types of Tequila increased from 278 700 tons in 1995 to 615 000 tons in 2000 to 1 055 000 tons in 2007 which is an increase of almost 380%. Especially Tequila 100% show a strong increase in this time period and the former lower production of Tequila 100% now almost doubled the consumption of Tequila mixto. Tequila 100% increased from 75.3 million tons in 1995 to 186.9 million tons in 2000 to 686.4 million tons in 2007 which is a growth of 900%. In the same time period Tequila mixto shows a lower growth of only 180% (CRT, undated).

In 2006, 66% of total tequila production was exported, 44% sold on the domestic market. The main export markets are the USA, Japan and Europe. Between 1995 and 2007 the export of the total volume of Tequila more than doubled from 64.5 to 135.1 million liter (measured in 40% alc. Vol.). This is an increase of approximately 67%. The share of Tequila 100% of total

Tequila exports increased from 2% to 25% between 1995 and 2007. In 2004 the market of Tequila is valued by approximately 1 billion US\$ (12 billion peso) (Infosel News, 2004)<sup>9</sup>.

**Table 2: Exportation of Mexico's Tequila 1995-2007**

year	Export				
	Tequila 100%		Tequila mixto		Total
	Million liter	% of total exports	Million liters	% of total exports	Million liters
1995	1.1	1.7	63.4	98.3	64.5
1996	2	2.7	73.2	97.3	75.2
1997	3.3	3.9	81	96.1	84.3
1998	5	5.8	81.5	94.2	86.5
1999	7.2	7.4	90.1	92.6	97.3
2000	8.1	8.2	90.7	91.8	98.8
2001	7	9.3	68.6	90.7	75.6
2002	8	9.1	80	90.9	88.0
2003	11.8	11.6	89.8	88.4	101.6
2004	15	13.8	93.4	86.2	108.4
2005	21	17.9	96	82.1	117.0
2006	26.9	19.2	113.1	80.8	140.0
2007	34	25.2	101.1	74.8	135.1

Source: CRT, undated

To summarize, the market development of Tequila between 1995 and 2007 (see also tab. 2) presents the following main features:

- Overall tequila production increased especially Tequila 100%
- Exports increased in total value, also due to an increase in bottle exports.
- Share of other countries than the United States in exports increased.

## 7.1 Uniqueness of Mexican Tequila

Under the Norma Oficial Mexicana NOM 006 SCFI of 1993 two different types of tequila can be distinguished. The Tequila mixto 49-51 with a proportion of 51% blue agave sugar and 49% of other sugar and the tequila 100%. They are distinguishable by their etiquette that indicates the latter one with “tequila” and the former one with “tequila 100%” (Macias

<sup>9</sup> The same source (Infosel News March 2004) talks about an industry with a market share of 38.9% instead of 30% mentioned by partners of the SinerGi project

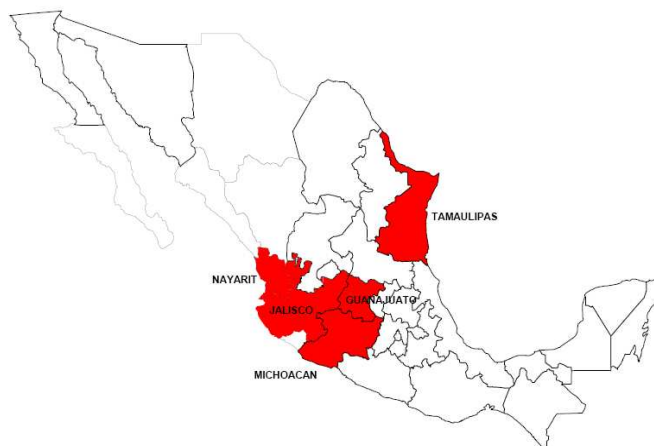
Macias, 2001). However, the agave sugar share of Tequila mixto is the current end of distillery companies' impact on national law. Due to their pressure driven by agave shortage and increasing demand the proportion of agave sugar was reduced from formerly 100 to 70% in 1964 and to 49% in 1970 (van der Meulen et al., 2007). In 2000, a proposal by tequila companies to reduce agave sugar content to 30% was not accepted by the government in order to protect the reputation of the product and avoid conflicts with farmers (van der Meulen et al., 2007).

The amount of ingredients to soften the flavor of tequila should not be more than 1% of the total weight of tequila before bottled. Ingredients may be Caramel color, Natural extract of oak and encina, Glycerin and Sugar syrup (Linck, 2007). Tequila is classified in four types: White Tequila, Young or Gold Tequila, Rested Tequila and Aged Tequila (Linck, 2007).

An important point of Tequila as denominacion de origen is, that the raw material does not need to originate from the designated geographical area. The uniqueness of the GI product consists only of the distillation process (Linck, 2007). However, the area of protection of tequila by the national law is the entire restrict Jalisco, 29 communities of Michoacan, 6 communities of Guanajuato and 7 of Nayarit and 10 of the restrict Tamaulipas (see figure XX) (Macias Macias, 2001). The area of production has a size about 200 square kilometer and the climate vary between semi arid and template with an altitude higher than 10 000 m (Linck, 2007). The preferable altitude for blue agave is 1500 meters above sea level with soil conditions favorable volcanic, loamy, permeable and abundant in derivative elements of basalt and enriched in iron. The precipitation is close to one meter per year and the semidry climate has constant temperatures varying around 20° C.

Also the production area was enlarged during the last decades. The restrict Jalisco was the primary production area of blue agave and is still today it the principle producer of blue agave (see fig. 1) (Macias Macias, 2001). By the same reasons mentioned above the plantation area was enlarged by the government.

**Figure 1: Production area of Blue Agave protected by the GI for Mexican Tequila**



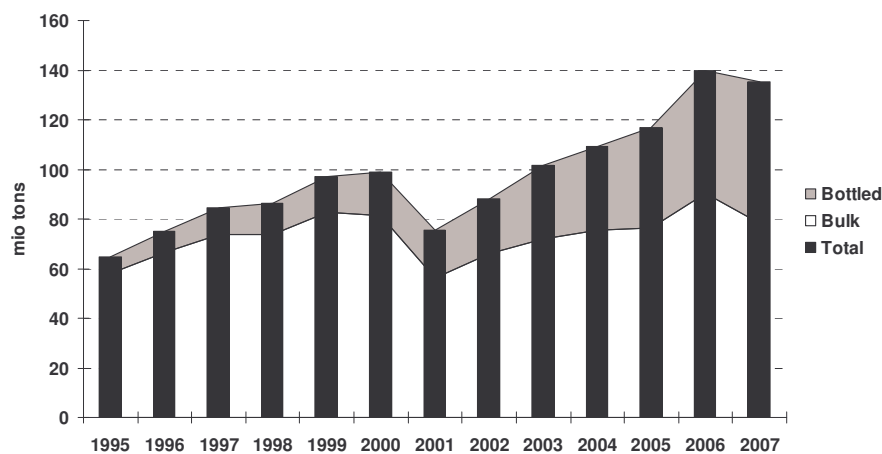
Source: Macias Macias, 2001

## 7.2 Marketing Strategy

The United States is with 74.7% of total exports in 2007 still the primary importer of Tequila (CRT, undated). The market share of the European Union is about 14% and other countries count for about 11% of total Tequila exports (CRT, undated). Tequila is becoming increasingly popular in European and Asian countries as well, and the CRT recently opened an office in Brussels to protect its interests in Europe (van der Meulen et al., 2007).

Tequila is exported in bulk or bottled. The export of bottled Tequila doubled between 1995 and 2007. Bulk increased by about 30% (see fig. 2). This development might show an increase in differentiation of the final product as well as the modification of the norm for the production of tequila was modified in 2006<sup>10</sup>.

Figure 2: Tequila exports in bulk and bottled 1995-2007



Source: CRT, undated

Van der Meulen et al. (2007) estimate that differentiation of the final product has increased. The 2006 modifications of the norm for the production of tequila added a new category of tequila, “extra.anejo”, which has matured for a minimum of three years. The new norm also allowed for the production of flavoured tequilas. Thus, Tequila can be found in many price categories. On average a consumer pays 20 USD for one litres tequila blanco. In bars mostly the cheaper tequila mixto is used but on the US market, tequila is also sold for 400 US\$ a bottle or 100 USD a shot. Some examples showing the differentiation process in the Tequila industry are the following:

Tequila Cazadores, a leading company in Mexico had already started to redefine its marketing strategy introducing a new low price product, “4 vientros”, to compete with tequilas in a different niche and with other spirit beverages such as mezcal. Another important company, Bacardi, announced a change in its portfolio of product to start depending less on tequila as it had in the past (El Economista, 2005). During the first quarter of 2004, sales of mezcal grew by 41%. According to a VP of Tequila Cazadores, this impressive growth could be attributed to low prices and distribution of mezcal in stores like WalMart (Infosel News, 2004).

<sup>10</sup> See further descriptions about the norm in section 6.7.2 GIs in national law

### 7.3 The supply chain

Precise data on the numbers of blue *agave farmers* are not available. The CNIT (2006 In: van der Meulen et al., 2007) estimates that in 2006, 12 000 agave farmers, 11 200 day labourers (in particular planting and harvesting), and about 3 400 field workers (employed by tequila companies) were associated with the production of agave. But this estimate is very rough. The data on the acreage of blue agave planted are also rough estimates. According to the CRT, 160 million hectares plants were involved in 2006, of which only 35.5% are registered (Coelho, 2007 In: van der Meulen et al. 2007). The law of 2006 prescribes that all blue agave plantations destined to tequila production must be registered, but not all farmers do so, for fear of taxes, because of disinterest, or because they aren't aware of the new rule. Beside farmers switch between agave and other crops also the industry switches in production (van der Meulen et al., 2007).

Since the land reform of 1992, farmers have several options to rent or sell the land (van der Meulen et al., 2007):

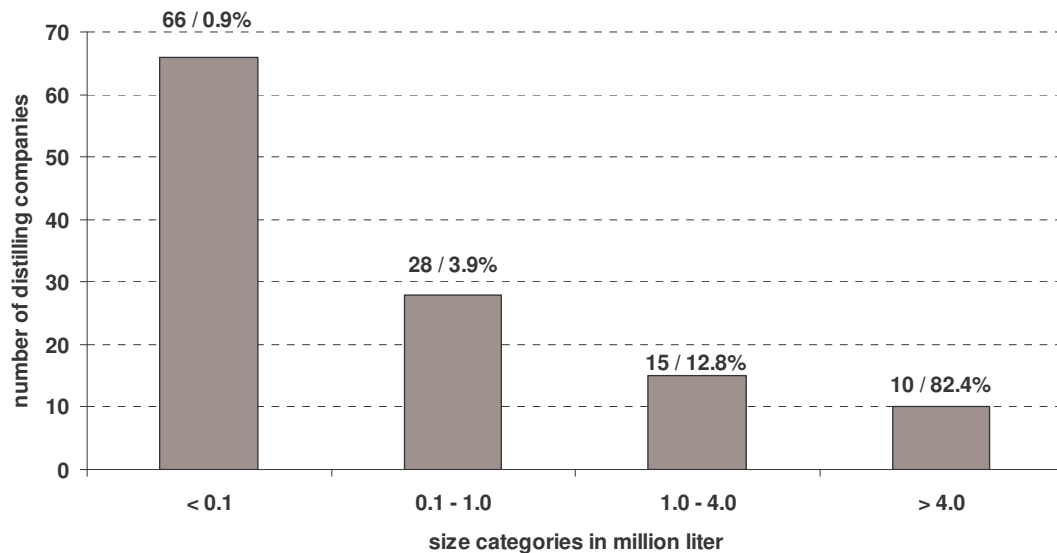
- Rent their land for a couple of years to a tequila company, that organizes all farm work itself (reverse leasing); this is done mostly by small farmers
- Grow and sell agave on their own account, as “agaveros libres”
- Have a sharecropping arrangement in which the tequila company provides for the inputs and the yield is shared
- Have a contract with a distilling company to deliver the harvest at a certain time at a certain price; this is only available to larger farmers and has become rare

The size of farms varies from less than 1 hectare to 300 hectares, which is the official maximum established by Mexican law since 1992. This means that a distillery of a certain dimension cannot be directly self-sufficient and must source most of its agave from farmers (Coelho, 2007; Coelho and Castillo-Giron, 2007 In: van der Meulen et al. 2007). The largest Tequila companies, Cuervo, sources mainly through reverse leasing, Herradura sources mainly through share-cropping contracts, and Sauza sources mainly through supply contracts, only providing the farmers with technical support (Ibid.) According to Bowen and Valenzuela (2006 In: van der Meulen et al., 2007), the trend in the industry is toward more reverse leasing arrangements, and tequila companies buying their own, to assure a more stable supply of agave (van der Meulen et al., 2007).

Distilleries *process* agave to the Tequila leads to its unique characteristics. Most of the 120 distilleries are located in the central part of the state of Jalisco (CRT, 2007). Three distilleries are located outside Jalisco: Tequilera Corralejo in Penjamo, State of Guanajuato and La Gonzalena in the State of Tamaulipas. By law, a distillery that makes tequila cannot produce any other alcoholic beverages. Instead of using the name tequila, distillers have the alternative of producing generic “destillados de agave” or “licores de agave” which are not subject to the legal requirements. Some registered distillers also sell part of their product without the label “tequila”, on the informal market, to local consumers or local shops. In addition, some small distilleries, particular in peripheral areas are not registered, either because they do not want to pay taxes or because the CRT fees are too high (van der Meulen et al., 2007).

In many cases of premium tequilas distilleries are by companies bringing in their own labourers, experts and often also their own agave (Chadwick, 2007 In: van der Meulen et al., 2007). Some farmers develop their own “maquila” in times of agave overproduction but are withdrawn when prices become higher again. The multiple uses of distilleries and the switching of companies between different distilleries obscure the exact place of origin of the tequila. The advantage is the high flexibility of the industry to react on market changes.

**Figure 3: Numbers of tequila distilleries by size category, and estimated shares in total tequila production<sup>11</sup>**



Source: van der Meulen et al., 2007

The *distribution* is done by a concentrated industry composed of distilleries and pure retailers (see fig. 3). The large companies originate from families that owned large haciendas in the nineteenth century (van der Meulen et al., 2007):

- Jose Cuervo is the largest producer with a production volume of 6.6 million liter nine-liter cases of tequila in 2006. This is a third of overall tequila production. In 2005 this company covered 35% of the domestic market and has a share of 38.1% in the USA export market. The company is a bulk exporter (mainly in the USA) which is foreign-owned and 80-90% self-sufficient in supply of agave, through share-cropping arrangements and some contracting. The company is active in developing new market like flavoured tequilas.
- Sauza is the second-largest tequila producer in Mexico. This company produces 15% of all tequila volume in 1999. In 2006 it had a share of 17% of the domestic market and 13.7% of the sales in the USA tequila market in 2005.

<sup>11</sup> The relative share of each size category in total tequila production (241.3 million liters in 2006) has been estimated by supposing that production capacity is reversely proportional to the numbers of distilleries. Thus the distilleries in the first size category would produce about 35 000 liters on average, in the second size category about 350 000 and in the third size category about 2.2 million liters on average. The category of largest distilleries accounts for the remaining volume (van der Meulen et al., 2007).

- Herradura is with 19% in 2006 strong in the national market but with 8% less strong on export markets. In 1999 it produced 8.5% of overall tequila production. Until 2006 the company was family-owned and was then bought out by Brown-Forman. It is 80-90% self-sufficient in supply of agave, through share-cropping arrangements and some contracting. Its reputation is based mainly on the production of high quality tequila 100%.
- Patron has a share of 10.8% in 2006 on the export market

Although the absolute size of these firms increased multinational companies are taking part of their market share. This is the result of a merger process where multinational firms (partly) buying national firms or distilleries.

#### **7.4 GIs in national law**

The tequila sector in Mexico is one of the oldest GI systems outside of Europe, and has been protected as a national “denominacion de origen” since 1974 where it was published in the Federal Registrar. In 1993 the Consejo Regulador del Tequila, A.C. (CRT) was created, which is (with the help of the laboratorio de la Cámara Regional de la Industria Tequilera) the governmental certification authority for tequila (van der Meulen et al., 2007).

In 2006 the norm of production of Tequila was modified and a new category of tequila was added: extra-anejo, which has matured for a minimum of three years. The new norm also allowed for the production of flavored tequilas.

The Mexican GIs are owned by the Mexican state and are included in the jurisdiction of the Mexican Institute of Industrial Property (IMPI) which was primarily established to protect and regulate patents and trademarks. Even if a norm for production of GI products is established by the Mexican government<sup>12</sup> no formal structure or system of checks exists. The norm is agreed upon by different parties, including the government, tequila companies, CRT, IMPI and the Distilled Spirits Council of the United States. The requirements relate to production, bottling, labelling and selling of tequila, as well as specifications and procedures for the authorized firms and organizations (van der Meulen et al., 2007). Legislation has been strongly influenced by the larger actors in the distilling sector which can be seen by the enlargement of the production area or by reduction of the minimum agave sugar within the legislation process.

#### **7.5 GIs and other protection measurements in international negotiations**

The definitions used in the official Mexican norm were conform to the definition used in the Lisbon Agreement and in 1977 tequila was registered as intellectual property at the WIPO (World Intellectual Property Organization) in Geneva.

In 1994 the North American Free Trade Agreement (NAFTA) between Mexico and the USA and Canada were implemented both nations recognized the “denominacion de origen” tequila. In 1997 also the European Union recognized the “denominacion de origen” tequila.

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<sup>12</sup> Published by the Dirreccion General de Normas of the Ministry of Economic Affairs

## 7.6 Challenges for Mexican Tequila

The initial aim of the Mexican government to introduce GIs was to protect Mexican products from foreign-produced imitations and improve the access to market (van der Meulen et al., 2007; Linck, 2007). Nowadays, it also serves to avoid imitation from other regions within Mexico and preserve a certain standards of quality. The Mexican government is engaged in getting countries in Asia, Africa, and Latin America to recognize the GI for tequila. South Africa is a large producer and exporter of pseudo-tequilas, in particular of the brand “Hacienda” (van der Meulen et al., 2007).

The closest substitute of Tequila on the world market is whiskey. Other relevant competitive products are mescal, gin, cognac and vodka (Linck, 2007). On this market (including all products mentioned as substitute/competitive) Tequila has a market share of about 30% (Linck, 2007).

## 7.7 Value distribution within the supply chain and social and environmental effects

The tequila sector has shown to be economically viable and is seen by the local population as bringing job opportunities, value-added agriculture, and tourism. Strong points of the tequila sector are: a) the increasing international demand for tequilas (both cheap and expensive versions), b) the growing number of foreign countries that recognize geographical indication tequila as intellectual Mexican, and c) the steady increase of the percentage of bottled tequila adding economic value to the production area. The tourist sector is a clear example of the economic spin-off generated by the tequila industry. The large distilleries have set up museums and tourist tours, such as the Tequila Express, a train that goes from Guadalajara to Tequila.

However, the tequila industry faces also several weaknesses. The major weaknesses of the tequila industry are the cycles of shortage and surplus of agave. During a period of surplus, agave prices fall so low that farmers do not have the necessary or the incentive to begin planting agave and neglect to monitor their agave plantations and use less fertilizer, which often leads to pests and diseases. During a period of shortage, agave prices become artificially high, which incites new producers to enter the agave market and encourages existing producers to expand their agave plantations, leading to a surplus cycle. After a period with high prices in 2006 the agave price has fallen again, to below the costs of production, and is expected to stay at his level for several more years. The result will be that many farmers are left with no income at all. The smaller farmers and distillers are particularly affected, because they are less likely to have good supply contracts, less financial buffer and less capacity to mobilize governmental support. This situation comes with the risk, that the largest players in the industry get too dominant and push the sector in the direction of bulk, pursuing economies of scale, instead of (distinctive) quality (van der Meulen et al., 2007).

A second major economic weakness for the sector is the tequila GI legislation. The delimitation of the GI production area is very rough and large and also includes areas with no tequila and blue agave tradition, or which lack the optimal soil and climate characteristics. Gradually, production of agave is extending to those areas. Sales of bulks are still permitted even if bottling within the GI area would yield addition added-value and employment opportunities for the GI region. The possibility for adding aromas or flavours to the tequila is an element that threatens the *terroir* image of tequila and it might be the same in the case of Tequila mixto (instead of 100% Tequila). The fourth legal weaknesses are technical-administrative requirements in the GI law executive that make it difficult for new, small

distillers to enter the market and limit the dynamics and innovativeness of the sector (van der Meulen et al., 2007).

Even if economic wealth was created by tequila production and has contributed to the general welfare of the population, this is not true for all social categories and not for the entire GI production area. Especially small farmers have difficulties to participate and profit from blue agave production. Large tequila companies obtain 80-90% of their agave need through contracts with relatively large or well-off farmers and by reverse leasing of land from small farmers. Thus, small and independent farmers are eliminated from the production process and the supply chain altogether. Poorer farmers are less likely to have a guaranteed buyer for their agave, meaning that the economic effects of the surplus period also hit them harder. In general, agave farmers are poorly (or not at all) organized and have not much bargaining power vis-à-vis the tequila companies. Much of the value-added in the tequila supply chain goes to the 120 distillers and to foreign bottling and distributing companies. The lack of organization is likely due to a combination of many factors: the large size of the GI region, which pits different sub-regions against each other and makes it difficult for farmers to organize, the lack of education, the tradition of corruption within the agave producers' associations, and the lack of collective vision nor traditions within broader Mexican culture (Bowen, 2006; Bowen and Valenzuela, 2006 In: van der Meulen et al., 2007). Beside the agave farmers small distilleries face high entry barriers which is an effect of the tequila legislation and joint regulation, such as costs of compulsory chemical analysis, registration fees, member fees and several quality requirements. The standardization risks to reduce diversity and to favour large players, and the ultra-modern tequila companies are keen to profit from the traditional image in which small-scale producers are displayed (van der Meulen et al., 2007).

The traditional rural landscape is being turned into pure production areas with little variation through the increase of large agave plantations which can be considered as a loss of cultural heritage and will have negative effects for the local population. Moreover, the industrialization of the landscape can have adverse effects on the region's attractiveness for tourists and to the reputation of tequila as a quality product. Due to this process traditional cultivation practices disappear (like intercropping agave with corn or beans, organic fertilization, and others) especially because tequila firms increasingly obtain their agave through their own plantations and through contract arrangements that specify the practices that farmers are required to use (Bowen and Valenzuela 2006 In: van der Meulen et al., 2007). In addition, there is a loss of mescalera tradition of green agave distilled in areas outside the tequila valley as green agaves are substituted against blue agave. Two cases illustrated by van der Meulen et al., 2007 show the loss of economic potential for the GI area as a whole.

Most likely because of the shift from traditional, labour-intensive cultivation practices to more chemical-intensive practices, incidences of disease and pest infestation have actually increased over the last twenty years (Valenzuela, 2005; Bowen and Valenzuela, 2006 In: van der Meulen et al., 2007). In addition, farmers' rate of application of fertilizers vary significantly according to the price of agave, and in the last twenty years, application rates have decline overall leading to the long-term risk of soil depletion and erosion (Valenzuela, 2005; Bowen and Valenzuela, 2006 In: van der Meulen et al., 2007). As only one variety (Agave tequila Weber (blue agave)) out of nine varieties of agave used in the production of tequila at the end of the 19<sup>th</sup> century is permitted by the official norms, the GI for tequila has actually contributed to a reduction of biodiversity in tequila's region of origin. The genetic

homogeneity of the blue agave plant, cultivated in monoculture and propagated asexually, increases the region's susceptibility to a large-scale outbreak of disease or pest infestation (Bowen and Valenzuela, 2006 In: van der Meulen et al., 2007). The use of modern cloning techniques has further increased the risk of diseases and plagues in blue agave (van der Meulen et al., 2007).

## 7.8 Conclusion

Tequila is a commercial success. Exports have doubled in 6 years and the part of bottled tequila has increased.

The major challenge is supply in blue agave whose market has long being characterized by production irregularity and volume recurrent shortages. These market disorders of the raw material market have led to increasing vertical integration of blue agave farming by processors, using different mechanisms.

The supply chain is dominated by processors and the negotiation power of independent farmers is decreasing very fast.

On the environmental aspects, farming practices are becoming more intensive. Different authors highlight opacity and probably poor environmental performance within the agave plantations controlled by processing companies.

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## 8 Conclusion

This review of case-studies highlights the economic success of GIs products in very different countries in the world, and for very different food and non food products. Anyway a certain size of production and export sales seems necessary to justify the costs of a GI collective construction and monitoring.

The case-study analysis identifies strong regularities in the GI systems.

- All products are genuine GIs that verify the two conditions of the TRIPS agreement: typicality and uniqueness linked to a territory ; reputation among consumers, mainly on the export markets in developed countries. These products response to some consumer specific needs, which leads to willingness to pay.
- A collective organization to monitor the GI has been observed for all case-studies. The GI system coordinates entrepreneurs and small size farmers. A good coordination between partners seems to be a key factor of success to get expected economic benefits of GIs, which come from marketing strategy, promotion and protection.
- The GI alliances in developing countries are pragmatic and combine GIs and certification marks in order to protect their valuable names against low cost copiers and big industrial companies.

Some other questions are more discussed:

- Registration may lead to value creation but does not guarantee value distribution to producers. Most products are processed and processors have a key position in the supply chain. The collective organization design is a crucial step for defining the producers' role and value share.
- Most GI products have the potential to get social and environmental positive effects but this is not guaranteed by the registration process. Commercial purposes are the engine of a GI. Anyway the common code of practices may be a tool for guaranteeing non economic objectives.

These results are encouraging but invite to study carefully the construction of new GIs. This opens a large field of expertise in developing countries in order to avoid unrealistic expectations and increase positive economic, social and environmental effects.