

## **PART 3. BOLIVIA COCA CULTIVATION SURVEY**



## FACT SHEET – BOLIVIA COCA SURVEY FOR 2005

	2004	Variation on 2004	2005
Coca cultivation	27,700 ha	- 8 %	25,400 ha
<i>Of which in the Yungas of La Paz</i>	17,300 ha	+ 5 %	18,100 ha
<i>in Chapare</i>	10,100 ha	- 31 %	7,000 ha
<i>in Apolo</i>	300 ha	0%	300 ha
<i>Of which permitted by Bolivian law 1008</i>	12,000 ha		12,000 ha
<i>non-permitted by Bolivian law 1008</i>	15,700 ha	- 14%	13,400 ha
<i>Of which in national parks</i>	4,100 ha	-52 %	1,950 ha
Average annual sun-dried coca leaf yield			
in Chapare	2,764 kg/ha		2,764 kg/ha
in the Yungas outside traditional coca growing areas	1,798 kg/ha		1,798 kg/ha
in Apolo and the Yungas, traditional coca growing areas	936 kg/ha		936 kg/ha
Production of coca leaf	49,000 mt		42,000 mt
Maximum potential production of cocaine	107 mt	- 16 %	90 mt
in percent of global cocaine production	11%		10%
National weighted average farm-gate price of coca leaf (outside state market)	5.0 US\$/kg	- 14 %	4.3 US\$/kg
Chapare average farm-gate price of coca leaf	5.2 US\$/kg	- 27 %	4.1 US\$/kg
Total farm-gate value of coca leaf production	US\$ 240 million	- 25 %	US\$ 180 million
GDP	US\$ 8.1 <sup>1</sup> billion	+ 4.6%	US\$ 8.4 <sup>2</sup> billion
Farm-gate value of coca leaf production in percent of GDP	3.0 %		2.1 %
Value of agricultural sector	n.a.	n.a.	US\$ 1.5 billion
Farm-gate value of coca leaf production in percent of value of 2003 agricultural sector			12 %
Reported seizure of cocaine paste	8,189 kg	+ 14%	9,350 kg
Reported seizure of cocaine hydrochloride	531 kg	+ 145%	1,300 kg

<sup>1</sup> GDP of 2004 estimated from the 2003 GDP, and with a projected growth of 3.8% (source: INE)

<sup>2</sup> GDP of 2005 estimated from the 2004 GDP, and with a projected growth of 4.6% (source: IINAC)

## Abbreviations

Bs.	Bolivianos
CONALTID	Bolivian National Council for Fighting against Drugs
GIS	Geographical Information Systems
GPS	Global Positioning System
GCP	Ground Control Point
ICMP	UNODC Illicit Crop Monitoring Programme
UNODC	United Nations Office on Drugs and Crime
DIGECO	Bolivian National Direction of Coca Leaf Control
DIRECO	National Direction of Agricultural Re-conversion (up to 2005)
FELCN	Special Force against Drug Trafficking

The following organizations and individuals contributed to the implementation of the 2005 coca cultivation survey in Bolivia and to the preparation of the present report:

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As of 2006, the Bolivian Government used new denominations for some institutions. In this report, the former denomination is still used for the institutions that participated in the survey activities during year 2005.

The implementation of UNODC's Illicit Crop Monitoring Programme in the Andean countries and the Bolivia survey in 2005 was made possible thanks to financial contributions from the Governments of the United States of America, the United Kingdom, Spain, Italy, France and Austria.

This report and other ICMP survey reports can be downloaded from:

[www.unodc.org/unodc/en/crop\\_monitoring.html](http://www.unodc.org/unodc/en/crop_monitoring.html)

Pictures: UNODC BOL/F57 or otherwise indicated.

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*Sajta River in the Cochabamba Tropics*



*Coca cultivation on high slopes near the town of Coripata, Yungas of La Paz*



*The town of Shinahota, at the municipality of Tiraqué, Cochabamba Tropics*

## **1 INTRODUCTION**

The objectives of UNODC's Illicit Crop Monitoring Programme (ICMP) are to establish methodologies for the collection and analysis of data on illicit crops and to improve Governments' capacity to monitor illicit crops in the context of the strategy adopted by Member States at the General Assembly Special Session on Drugs in June 1998. ICMP is currently active in seven countries: Colombia, Peru, Bolivia, Afghanistan, Myanmar, Laos and Morocco.

The Bolivian Government and UNODC launched the project "Land use management and monitoring system in the Yungas of La Paz" in October 2001. Initially, the project focused only on the Yungas of La Paz, but since 2003 it has extended its scope to include the provision of estimates on coca cultivation at the national level. This report presents the project's findings and methodology for 2005.

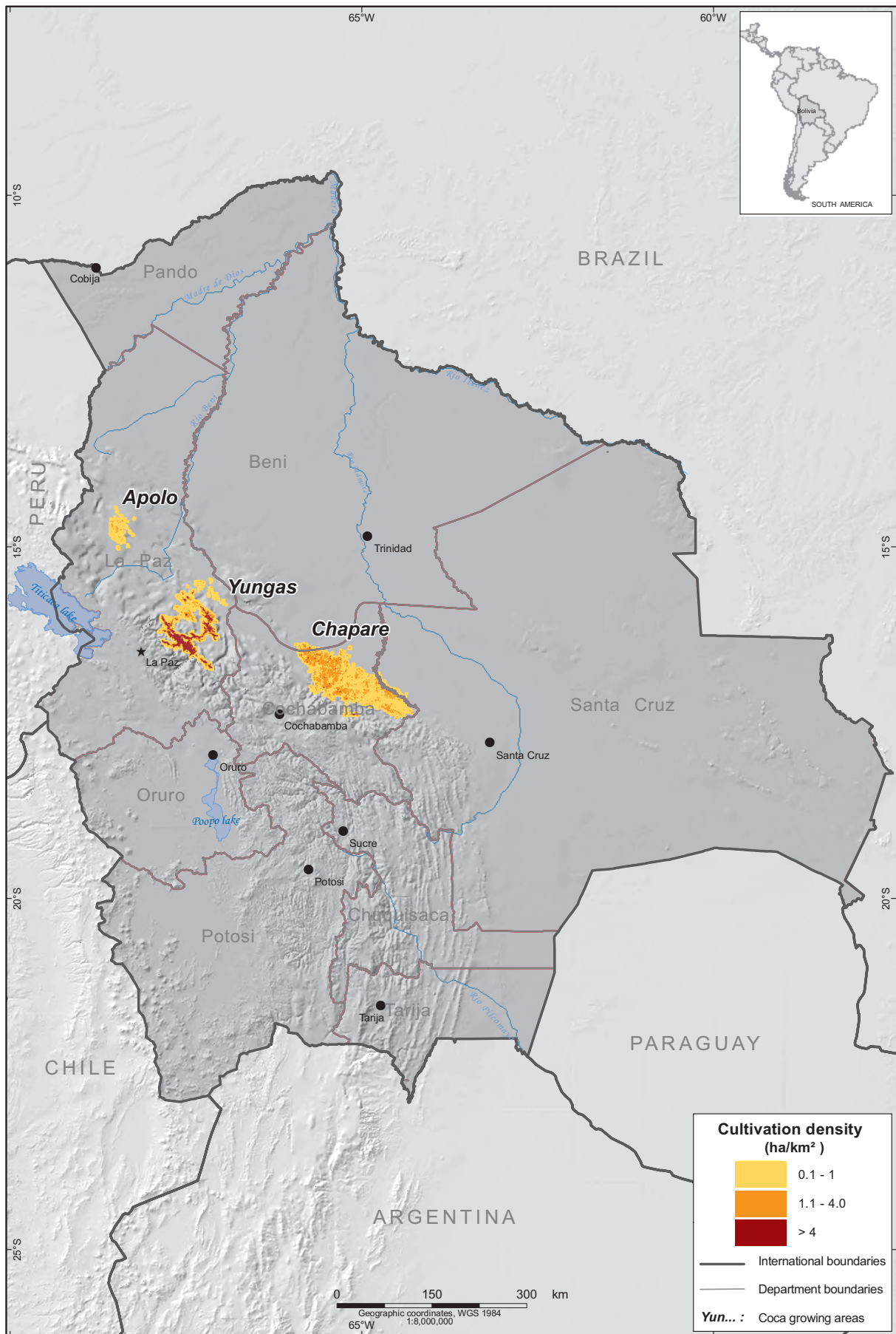
The project was implemented in 2005 in cooperation with the National Direction of Development, for the Coca Growing Regions, the Vice-Ministry of Coca and Integral Development. At the beginning of 2006, DIRECO was replaced by the new Direction of Development for the Coca Growing Regions. DIRECO provided logistical support during the implementation of ground activities, including the collection of a large number of ground control points, mainly in the Chapare area. The Bolivian National Government, through the National Council of Fight against Illicit Trafficking of Drugs (CONALTID) is also relying on the information provided by this project for planning and implementing its strategy for the fight against illicit drug trafficking.

Coca cultivation decreased significantly in Bolivia at the end of the 1990s, following a reduction of coca cultivation in the Chapare region. Bolivia is now the third largest coca producer worldwide, far behind Colombia and Peru. Coca cultivation is concentrated in the departments of La Paz (in the areas of the Yungas of La Paz and Apolo) and in the Chapare area (department of Cochabamba).

Bolivian Law 1008 ("Law on the Regime Applicable to Coca and Controlled Substances", 1988) permits up to 12,000 ha of traditional coca cultivation for traditional consumption and other legal uses. Most of this area is located in the Yungas of La Paz. In October 2004, the Bolivia Government also temporarily authorized the cultivation of 3,200 ha of coca in the Chapare region. Law No 1008 does not provide a precise definition of the geographic limits of the traditional coca growing areas, but the Bolivian Government is preparing a study which is intended to lead to legal delineations of the areas where coca for traditional use will be cultivated.

The National Government is also planning to develop a study to determine the licit national demand for coca leaf.

Map 1: Coca cultivation density, Bolivia, 2005



Source: Government of Bolivia - National monitoring system supported by UNODC  
The boundaries and names shown and the designation used on this map do not imply official endorsement or acceptance by the United Nations



## 2 FINDINGS

### 2.1 COCA CULTIVATION

In 2005, the total area under coca cultivation in Bolivia was estimated to be 25,400 ha, a decrease of 8% over last year's estimate of 27,700 ha. The decrease at the national level was due to the decrease in the Chapare region, where coca cultivation decreased by 31% between 2004 and 2005. The decrease in Chapare was attributed to the compliance of the farmers to the agreement of October 2004 between the Government and coca growers federation, limiting coca cultivation to 0.16 ha by family. Unlike what happened before the agreement, the eradication efforts that took place in 2005 in Chapare were not followed by replanting of the coca fields, thus resulting in a net decrease in coca cultivation in the region.

Figure 1. Coca cultivation in Bolivia, 1995 – 2005 (ha)

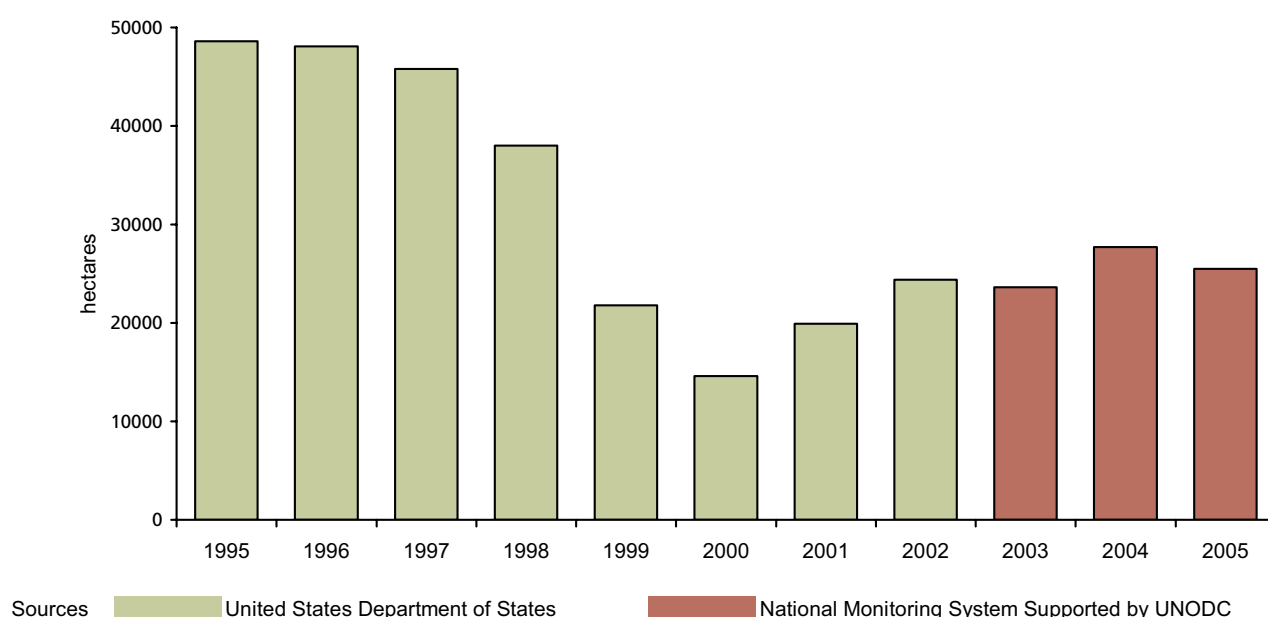


Table 1. Coca cultivation in Bolivia, 1995– 2005 (ha)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Rounded total	48,600	48,100	45,800	38,000	21,800	14,600	19,900	21,600	23,600	27,700	25,400

Sources      United States Department of State      National Monitoring System Supported by UNODC

At the global level, the decreases in Bolivia and Peru were offset by the increase in Colombia, and coca cultivation remained almost unchanged between 2004 and 2005. Coca cultivation in Bolivia represented 16% of the global coca cultivation in 2005, compared to 17% in 2004. Bolivia remained the third coca cultivator, behind Colombia and Peru.

Figure 2. Coca cultivation in the Andean region, 1995 – 2005 (ha)

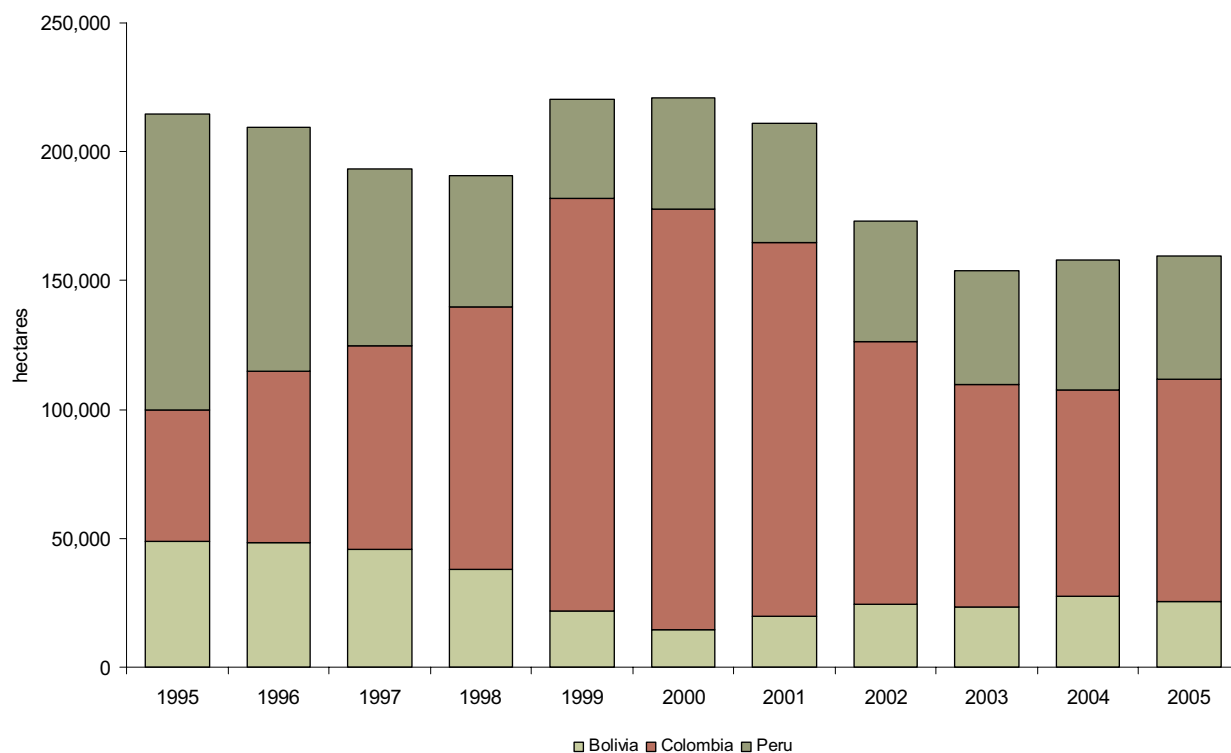


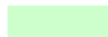
Table 2. Coca cultivation in the Andean region, 1995- 2005 (ha)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	% change 2004-2005
Bolivia	48,600	48,100	45,800	38,000	21,800	14,600	19,900	21,600	23,600	27,700	25,400	- 8 %
Peru	115,300	94,400	68,800	51,000	38,700	43,400	46,200	46,700	44,200	50,300	48,200	- 4 %
Colombia	50,900	67,200	79,400	101,800	160,100	163,300	144,800	102,000	86,000	80,000	86,000	+ 8 %
Total	214,800	209,700	194,000	190,800	220,600	221,300	210,900	170,300	153,800	158,000	159,600	+ 1 %

Sources

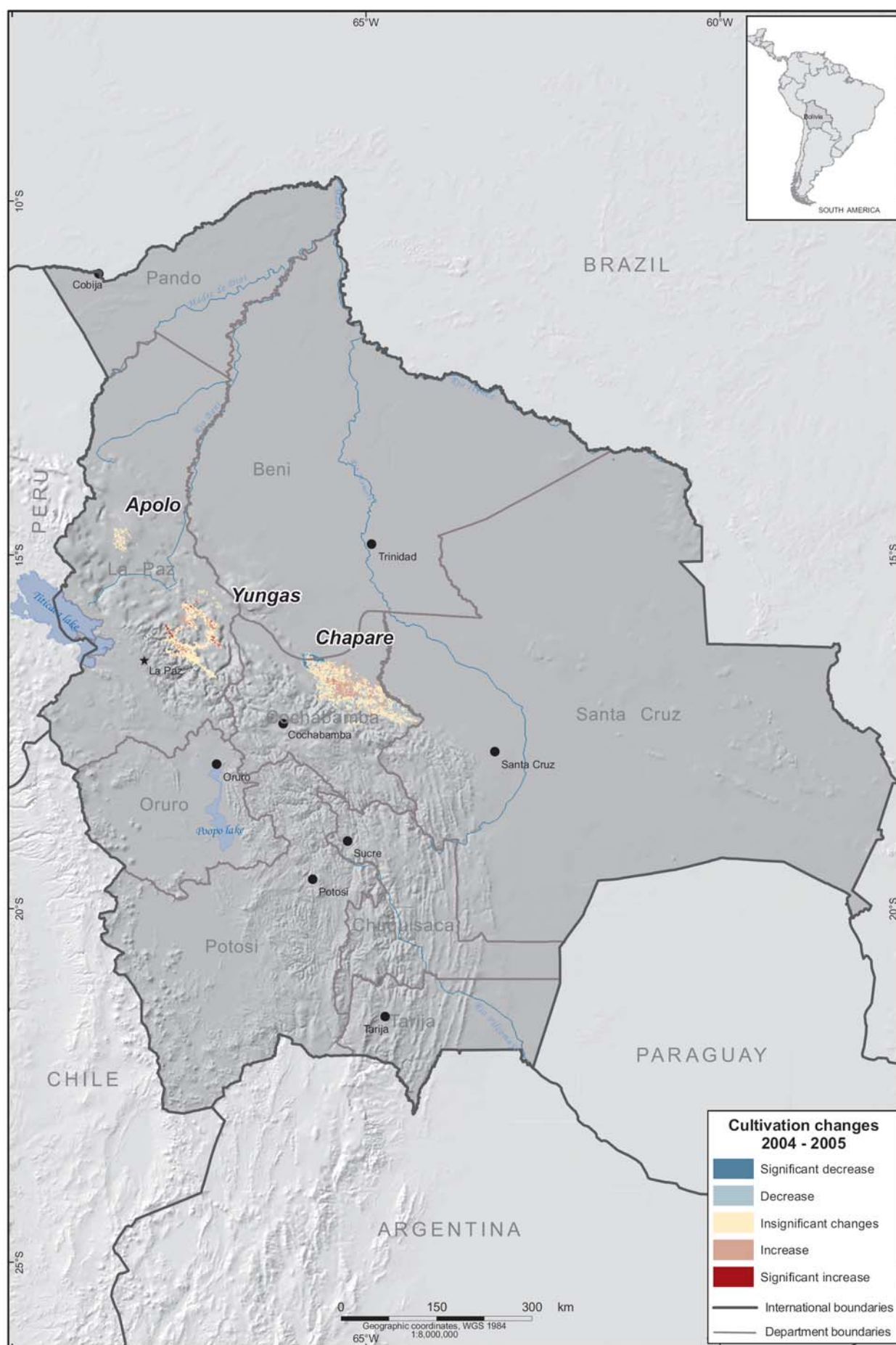


United States Department of States



National Monitoring Systems Supported by UNODC

Map 2: Coca cultivation change 2004-2005, Bolivia



Source: Government of Bolivia - National monitoring system supported by UNODC  
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## 2.2 REGIONAL ANALYSIS

The decrease in coca cultivation at the national level was entirely due to a decrease in coca cultivation in the Chapare region from 10,100 ha to 7,000 ha, or -31%, between 2004 and 2005. The decrease in Chapare was attributed to the compliance of the farmers to the agreement of October 2004 between the Government and coca growers federation, limiting coca cultivation to 0.16 ha by family. Unlike what happened before the agreement, the eradication efforts that took place in 2005 in Chapare were not followed by replanting of the coca fields, thus resulting in a net decrease in coca cultivation. This could be seen on the satellite image, as shown on figure 12. Coca cultivation in the Yungas increased by 5% between 2004 and 2005 to reach 18,100 ha, remaining the most important region for coca cultivation in Bolivia, accounting for 71% of the total cultivation in 2005.

Table 3. Coca cultivation estimates by region, 2002 – 2005 (ha)

Region	2002	2003	2004	2005	% change 2004-2005	% of 2005 total
Yungas of La Paz	13,800	16,200	17,300	18,100	5%	71%
Chapare	n.a.	7,300	10,100	7,000	-31%	28%
Apolo	n.a.	50	300	300	0%	1%
Country total		23,550	27,700	25,400	-8%	100%

Figure 3. Coca cultivation estimates by region, 2002 – 2005 (ha)

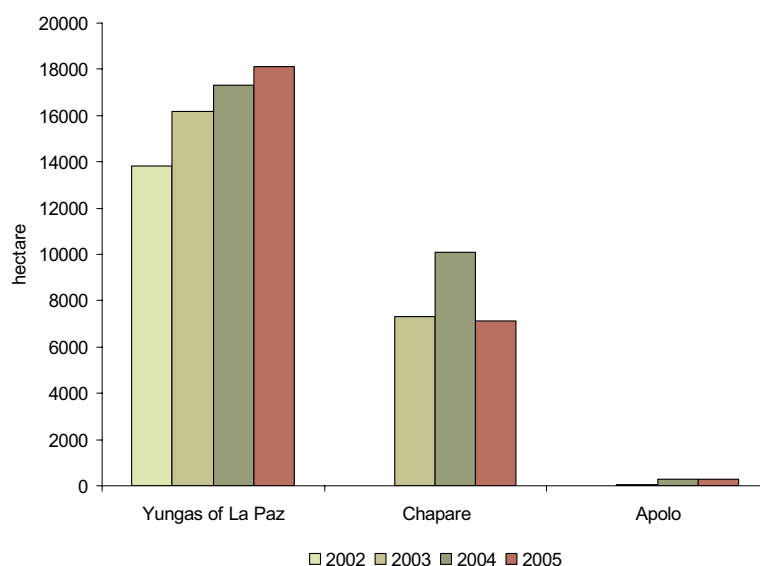
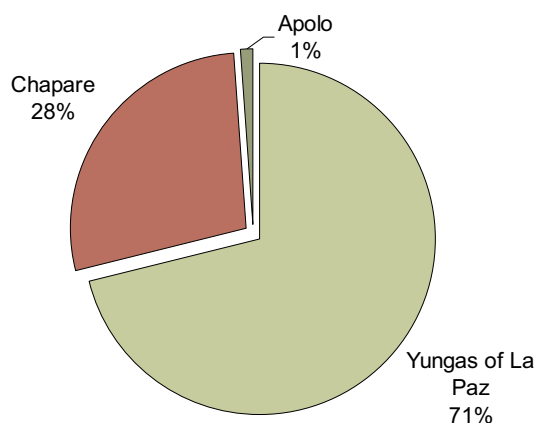
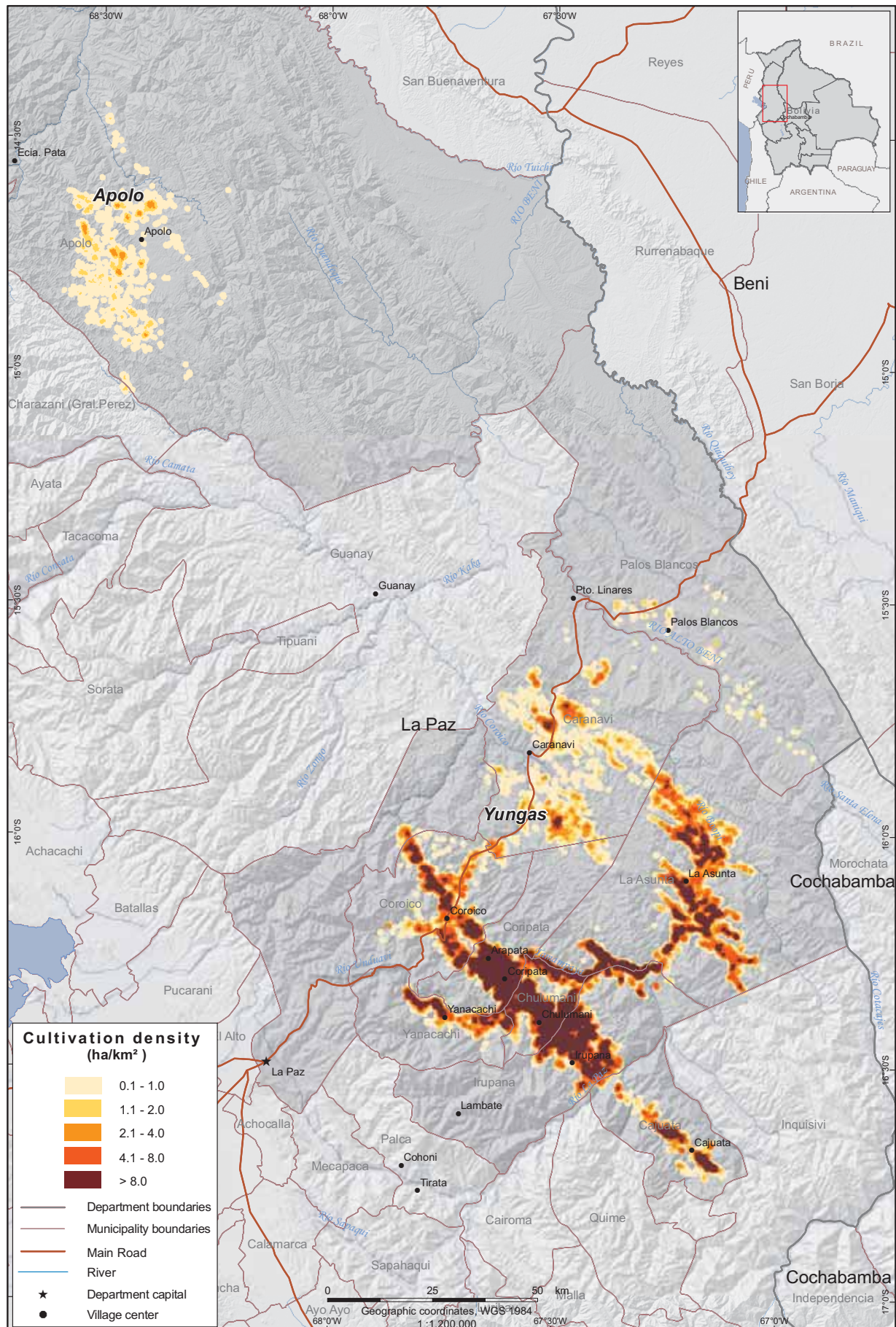


Figure 4. Distribution of coca cultivation in Bolivia by region, 2005





Map 3: Coca cultivation density, for the Yungas of La Paz and Apolo, Bolivia 2005



Source: Government of Bolivia - National monitoring system supported by UNODC  
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### 2.1.1 Coca cultivation in the Yungas of La Paz

The Yungas of La Paz, situated at about 150 km from the city of La Paz, is a region of uneven relief with steep slopes, turbulent rivers and elevations ranging from 300 to 4,000 meters above sea level. Significant climatic variations are observed even over short distances. Coca bush is predominantly cultivated on narrow terraces built on high gradient hills.



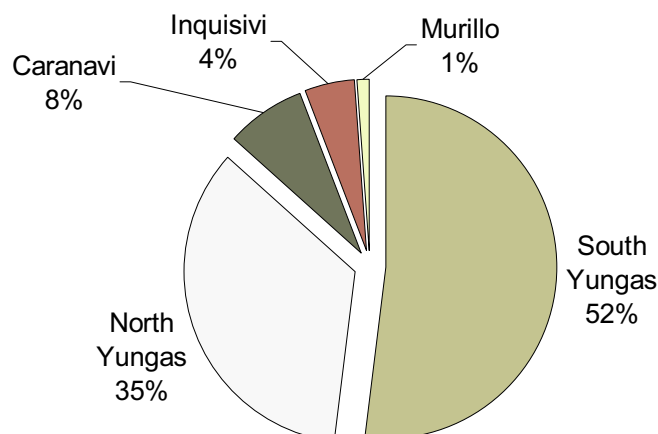
*Coca cultivation in the municipality of Caranavi*

The survey revealed 18,100 ha of coca cultivation in the Yungas of La Paz in 2005, representing an increase of 5% compared with the 17,300 ha found in 2004. Most of the cultivation continued to take place in the provinces of South Yungas and North Yungas, accounting respectively for 52% and 35% of the regional total. The largest annual increase (11%) was observed in Caranavi province, but this province only accounted for 8% of the regional total in 2005. It has been the third consecutive annual increase observed by the monitoring project in the Yungas of La Paz. Between 2002 and 2005 coca cultivation increased by 31% in this region.

*Table 4. Distribution of coca cultivation in the Yungas of La Paz, 2002-2005 (ha)*

Province	2002	2003	2004	2005	% change 2004-2005	% of 2005 total
South Yungas	7,182	8,356	8,867	9,395	6%	52%
North Yungas	5,187	5,914	6,166	6,257	1%	35%
Caranavi	491	889	1,248	1,381	11%	8%
Inquisivi	741	801	805	807	0%	4%
Murillo	151	210	217	223	3%	1%
Rounded total	13,800	16,200	17,300	18,100	5%	100%

*Figure 5. Distribution of coca cultivation in the Yungas of La Paz, 2005 (ha)*

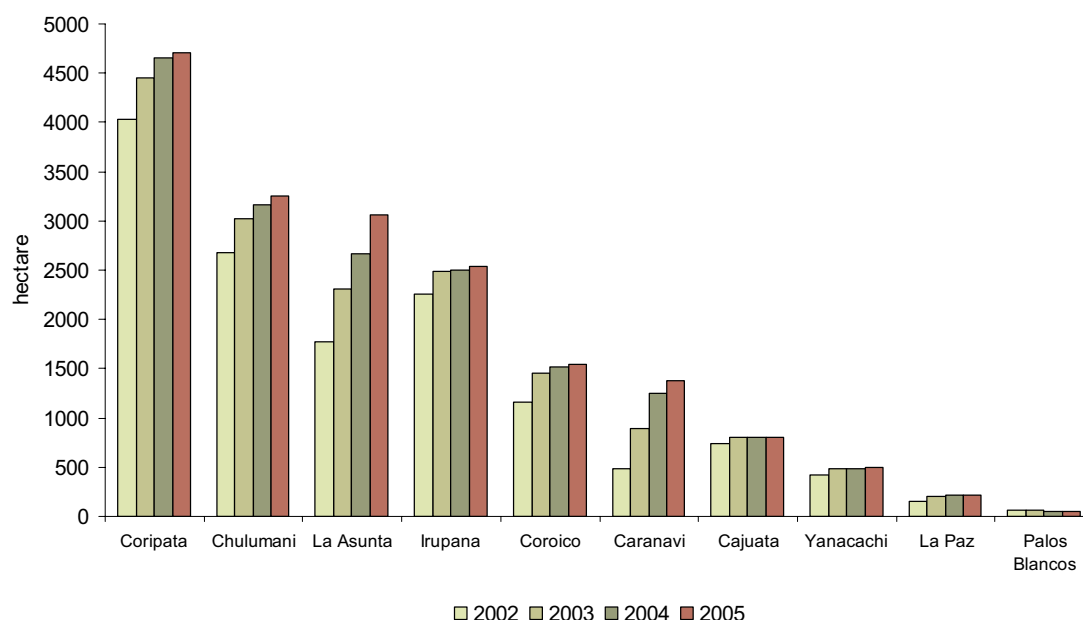


For the third year in a row, the municipality of La Asunta in South Yungas province, and the municipality of Caranavi - the only municipality of the province of Caranavi - registered the largest annual rate of increase in coca cultivation with respectively 15% and 11%. However, the municipality of Coripata in North Yungas province remained the most important centre of coca cultivation in the region of the Yungas of La Paz, with 4,708 ha in 2005 (or 26% of the regional total). Compared with 2004, coca cultivation increased in all municipalities, except in Palos Blancos, where a small decrease was observed.

Table 5. *Distribution of coca cultivation by municipality in the Yungas of La Paz, 2002-2005 ha)*

Province	Municipality	2002	2003	2004	2005	% change 2004-2005	% of 2005 total
North Yungas	Coripata	4,032	4,456	4,651	4,708	1%	26%
South Yungas	Chulumani	2,678	3,020	3,157	3,252	3%	18%
South Yungas	La Asunta	1,771	2,314	2,666	3,055	15%	17%
South Yungas	Irupana	2,253	2,481	2,502	2,544	2%	14%
North Yungas	Coroico	1,155	1,458	1,515	1,549	2%	9%
Caranavi	Caranavi	491	889	1248	1381	11%	8%
Inquisivi	Cajuata	741	801	805	807	0%	4%
South Yungas	Yanacachi	421	483	488	494	1%	3%
Murillo	La Paz	151	210	217	223	3%	1%
South Yungas	Palos Blancos	59	58	53	50	-6%	0%
<b>TOTAL</b>		<b>13,800</b>	<b>16,200</b>	<b>17,300</b>	<b>18,100</b>	<b>5%</b>	<b>100%</b>

Figure 6. *Distribution of coca cultivation by municipality in the Yungas of La Paz, 2002-2005 (ha)*



Bolivian Law 1008 ("Law on the Regime Applicable to Coca and Controlled Substances", 1988) permits up to 12,000 ha of traditional coca cultivation for traditional consumption and other legal uses. Most of this area is located in the Yungas of La Paz, although the law does not provide for a geographic delimitation of the traditional coca cultivation area. Most of the coca cultivation in the Yungas of La Paz is traded through the coca market, controlled by DIGECO, of Villa Fatima in La Paz-city.

There was neither forced nor voluntary eradication in the Yungas of La Paz, in 2005. During field missions, it was observed that there were new settlements in the Yungas of La Paz, mainly with



people coming from the Altiplano (La Paz, Potossi, Oruro, etc). These new settlements were established in previously not populated areas of La Asunta and Caranavi, and their primary agricultural activity was coca cultivation.

Although the project does not yet have updated data on coca leaf yield existed, for a couple of years now, it was noted during its field missions that farmers were using more sophisticated agricultural techniques in their coca fields, employing more fertilizers, pesticide and mechanical irrigation of their coca fields. In Caranavi new coca fields established at the expenses of the Primary Forest or coffee plantations, benefited from higher yields due to the richer soils.

*Figure 7. 3-D view near the town of La Asunta, the Yungas of La Paz, 2005*



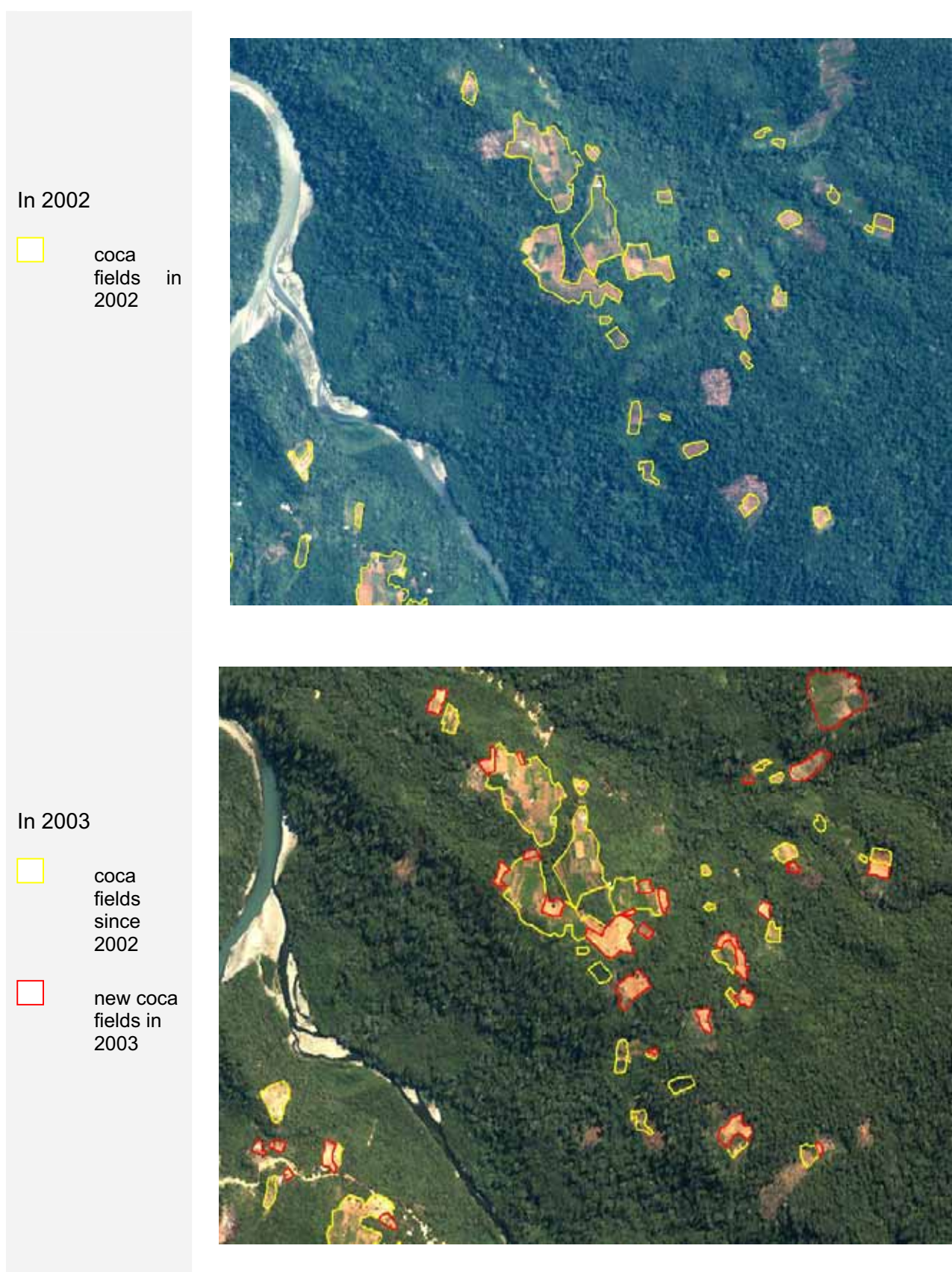
*Coca cultivation (red rectangle), in the municipality of La Asunta*



*Picture corresponding to the area within the red rectangle in the image above, showing coca fields in various stages of development (2005).*



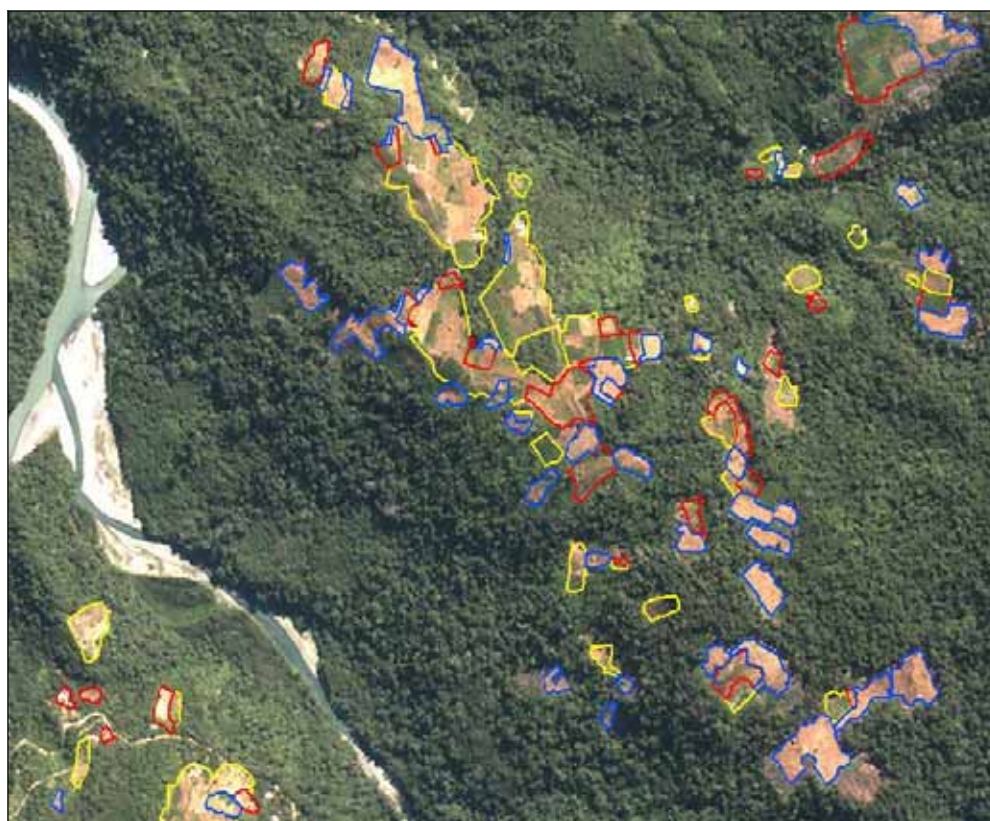
Figure 8. Example of annual coca cultivation in the locality of Siguni, Municipality of La Asunta, 2002-2005





In 2004

- coca fields since 2002
- coca fields since 2003
- new coca fields in 2004



In 2005

- coca fields since 2002
- coca fields since 2003
- new coca fields in 2004
- new coca fields in 2005

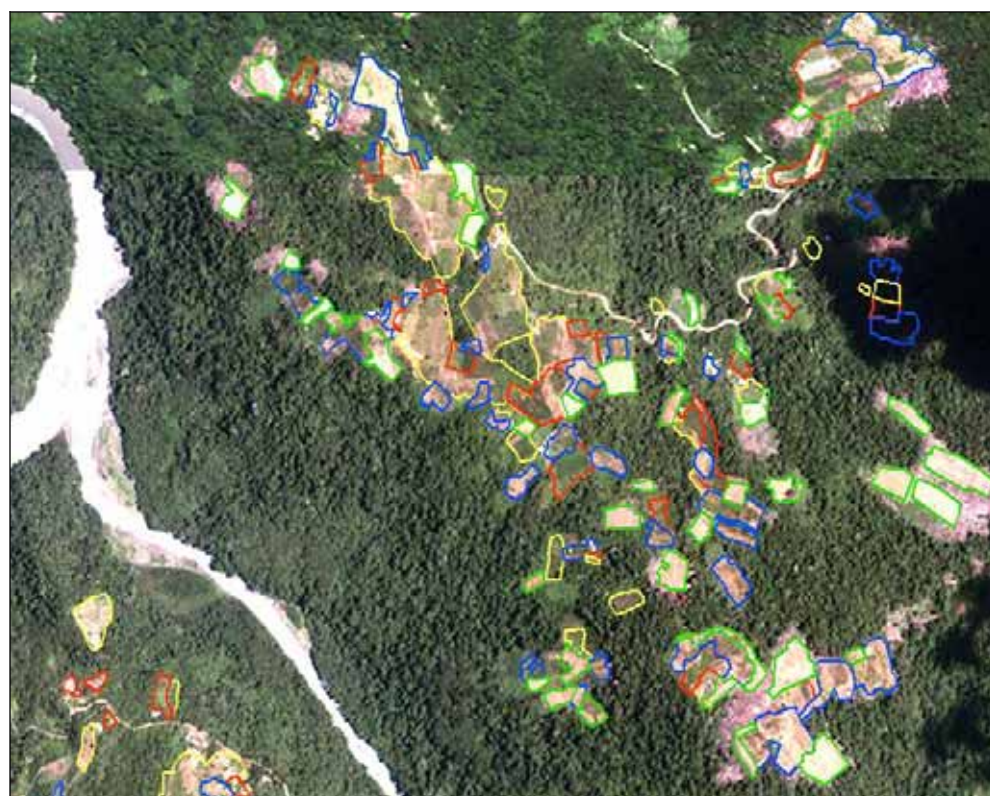




Figure 9. Coca cultivation techniques in the Yungas of La Paz

1. Burning of land and soil preparation: The burning of land often takes place during the dry season (May to August), but it can also happen until the month of December if the weather conditions are suitable.



2. Terraces construction: Most of the coca fields are established on wuachus (terraces) to avoid erosion and soil nutrients loss. This practice prolongs the life of the crop. The width of the terraces varies from forty-five centimetres to one meter, depending on the slope. The lines of furrows for coca cultivation are established transversally to the slope direction. This practice is widely used in traditional areas, while in the rest of the Yungas, terraces are not built.

The width and shape of the wuachus varies according to the slope and structure of the terrain.



3. Seedling and transplant: The coca seeds are obtained from plants of 5 years old or older. The seeds are settled in a seedling nursery of rich soil and abundant irrigation. They are protected from the sun for about 4-6 weeks before their transplantation to the field.

The seedling requires special care before transplantation to the coca field.



4. Young crop and first harvest: The small plants are carefully planted in the field, at a distance of 20 cm between each other. During the first few days, they are continuously irrigated. A new crop produces its first harvest usually 12 months after the transplantation, but there have been reports of fields harvested as soon as 8 months after transplantation thanks to the use of fertilizer.





In the Yungas of La Paz, harvest of coca fields is mainly done by women and children.

5. Maintenance: In the Yungas of La Paz, a phytosanitary treatment is applied to coca bushes using fertilizers, and pesticides. Irrigation is also widely used. Typically, the pesticides are applied to the bushes right after the harvest, in order to protect the crop from a variety of plagues, including larvae, fungus and ants. At 4-5 years old, the plant is totally pruned, leaving only the base of the trunk. This practice known as *pillu* greatly increases the yield of the crop starting from the next harvest, which is produced after 6-8 months. The life of a coca field is about 30 years old.



The intensive use of chemical pesticides, and foliar fertilizers may produce coca leaves which are not suitable for traditional consumption like *Akulliku* (mastication) and tea preparation.

The bottom picture show organic fertilizer being applied to coca plants 3 months after pruning.





Mechanical irrigation is widespread in coca fields.



Example of *pillu* (pruning) after 3 weeks the first leaves start to re-appear.



6. Drying and transport of the leaves: Drying is done carefully to protect the leaves and maintain their quality. After the harvest, the fresh coca leaves are stored for at least one night in the dark and after that spread for sun drying. In the traditional area, the leaves are spread over a special floor built of dark stones called “cachi”. The “cachi” accelerates considerably the time of drying. In other areas, the leaves are spread over agricultural nets. If the coca leaves are spread right after the harvest, they become damaged and their value reduces drastically. If rain comes over the drying coca leaves, or the farmer picks them up before complete drying, the leaves are also damaged.



Dried coca leaves packed and loaded being transported to the market



### 2.1.2 Coca cultivation in Apolo

Apolo is located at the northern part of the department of La Paz, on the eastern edge of the Andean mountain range. With relatively dry weather conditions and poor soils, coca fields in Apolo often have a low yield and are cultivated for only for about three to five years.

In 2004, DIRECO conducted a cadastral survey of coca cultivation in the Apolo region, measuring in situ all the coca fields located in the region. It revealed that coca cultivation reached 289 ha in 2004. A large proportion of coca cultivation was found in the southern part of the Apolo municipality and in a small part of the neighbouring municipality of Juan José Perez (also known as Charazani municipality) in the province of Bautista Saavedra. These areas were not surveyed by the monitoring project in 2003, and only 50 ha of coca cultivation was found. In 2004, the satellite coverage was expanded to include these areas and the 2004 survey revealed 273 ha of coca cultivation. In 2005, no imagery was acquired in the Apolo region. A field verification was undertaken in August 2005 and noted that there was some increase in coca cultivation, mainly in the southern part of the Province Franz Tamayo, while in other parts, the team observed abandoned coca field. These changes were considered as off setting each other and the estimate for the whole Apolo region remained at 300 ha.

Table 6. *Coca cultivation in Apolo region, 2003 and 2005 (ha)*

Province	Municipality	2003	2004	2005	% change 2004 – 2005
Franz Tamayo	Apolo	50	300	300	0%

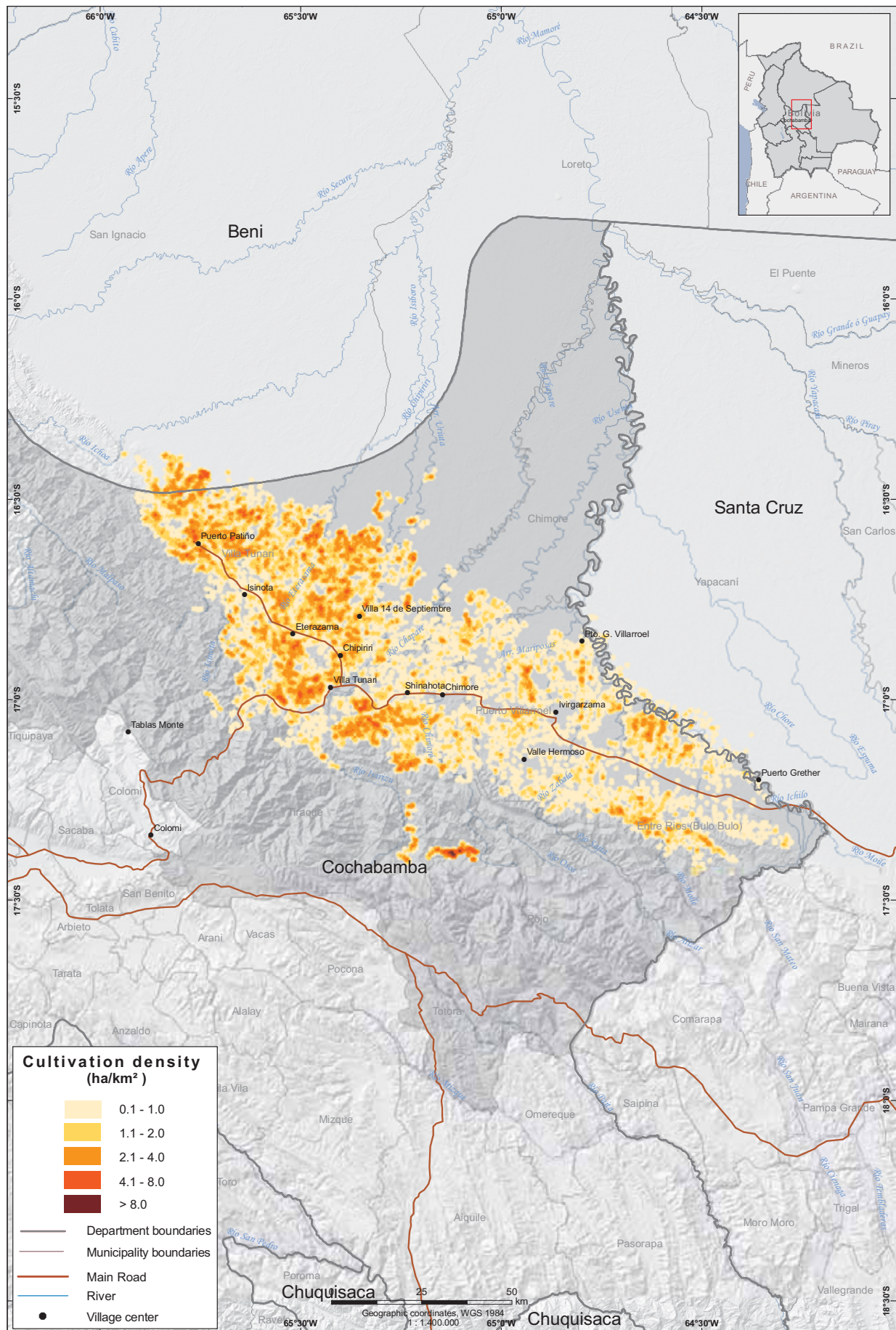
Coca cultivation in Apolo region is traditionally associated with cassava to take advantage of the same furrow for two different crops. The coca fields in Apolo are scattered and relatively small (about 200 m<sup>2</sup>) compared to coca fields found elsewhere in the country. Terraces are not used. The coca cultivation techniques and coca leaf sun drying are similar to techniques used in the Yungas area of La Paz.

The northern part of Apolo is part of the Madidi National Park, the largest biosphere reserve in Bolivia. Only a few dispersed and small coca fields were found on the western side of the Madidi Park. In Apolo, coca cultivation is considered traditional according to law 1008. No eradication is undertaken in this area.



*A well maintained coca field on poor soil, August 2005.*

Map 4: Coca cultivation density for Chapare, Bolivia 2005



Source: Government of Bolivia - National monitoring system supported by UNODC  
The boundaries and names shown and the designation used on this map do not imply official endorsement or acceptance by the United Nations



### 2.1.3 Coca cultivation in Chapare

The Chapare region is situated in Cochabamba department, and the region is also referred to as the Cochabamba tropics, extending over the provinces of Chapare, Carrasco and Tiraque. In contrast to the Yungas of La Paz, Chapare region has moderate slopes and large rivers. Elevations vary from 300 to 2500 meters, with coca cultivated between 300 and 1000 meters. The highest mountains are located in the south and the country's large tropical savannas begin in the northern part of Chapare. Temperatures are tropical and the area records the highest precipitation levels in Bolivia.

In the nineties, the Chapare region held the largest amount of coca cultivation, but following sustained eradication efforts and alternative development programmes, cultivation decreased dramatically.

The 2005 survey found 7,000 ha of coca cultivation in Chapare, representing a decrease of 31% compared to the 10,100 ha found in 2004. The significant decrease is mainly due to an agreement signed between the coca farmers and the government in October 2004 establishing the temporary authorization for 3,200 ha of coca cultivation. Since the signature of this agreement, eradication took place in a more peaceful and efficient way. Mostly, coca farmers respected the agreement and eradicated fields were not replanted. This was noticeable on the satellite image as showed on figure 12. Between 2004 and 2005, coca cultivation decreased in all three provinces of Chapare, Carrasco and Tiraque of the Chapare region.

Table 7. *Distribution by province of coca cultivation in Chapare region, 2003-2005 (ha)*

Province	2003	2004	2005	% change 2004-2005	% of 2005 total
Chapare	4,250	5,844	4,094	-30%	58%
Carrasco	2,864	3,520	2,312	-34%	33%
Tiraque	214	723	605	-16%	9%
<b>Rounded Total</b>	<b>7,300</b>	<b>10,100</b>	<b>7,000</b>	<b>-31%</b>	<b>100%</b>

In the Chapare region, during 2005 and up to time of writing this report (June 2006), there were less demonstrations and road blockades than in 2004. The agreement authorizing 3,200 ha of coca in Chapare will be revised once the study quantifying the national demand for coca leaf will be concluded. These 3,200 ha of authorized coca cultivation are additional to the amount of 12,000 ha of coca cultivation authorized by Law 1008 which includes about 200 ha of coca cultivation in the Yungas de Vandiola.

Table 8. *Distribution by municipality of coca cultivation in Chapare region, 2003-2005 (ha)*

Province	Municipality	2003	2004	2005	% change 2004-2005	% of 2005 total
Chapare	Villa Tunari	4,250	5,841	4,094	-30%	58%
Carrasco	Entre Díos (former Pojo)	1,106	1,921	817	-57%	12%
Carrasco	Puerto Villarroel	1,394	821	818	0%	12%
Tiraque	Tiraque	214	724	605	-16%	9%
Carrasco	Chimore	250	525	432	-18%	6%
Carrasco	Totora	114	253	245	-3%	4%
<b>Rounded Total</b>		<b>7,300</b>	<b>10,100</b>	<b>7,000</b>	<b>-31%</b>	<b>100%</b>

The municipality of Villa Tunari continued to be the most important area of coca cultivation in the region, and represented 58% of the coca cultivation in Chapare in 2005, even though coca cultivation decreased by 30% in this municipality between 2004 and 2005. The municipality includes part of the Isiboro Secure National Park, which remained the national park with the highest level of coca cultivation in the country.

In the central area of the region of Cochabamba Tropics, around the municipality of Puerto Villarroel and Chimore, coca cultivation remained relatively low, and even decreased slightly between 2004 and 2005. This situation is mainly due to a combination of alternative development projects and eradication campaigns.

It should be noted that political boundaries are not properly defined between the departments of Cochabamba and Beni. For this reason, although some coca cultivation might actually be located in Beni Department, all the coca fields identified during the survey along the departmental border were counted as part of the municipality of Villa Tunari, in the Department of Cochabamba.

Figure 10. Distribution by municipality of coca cultivation in Chapare region, 2003 – 2005(ha)

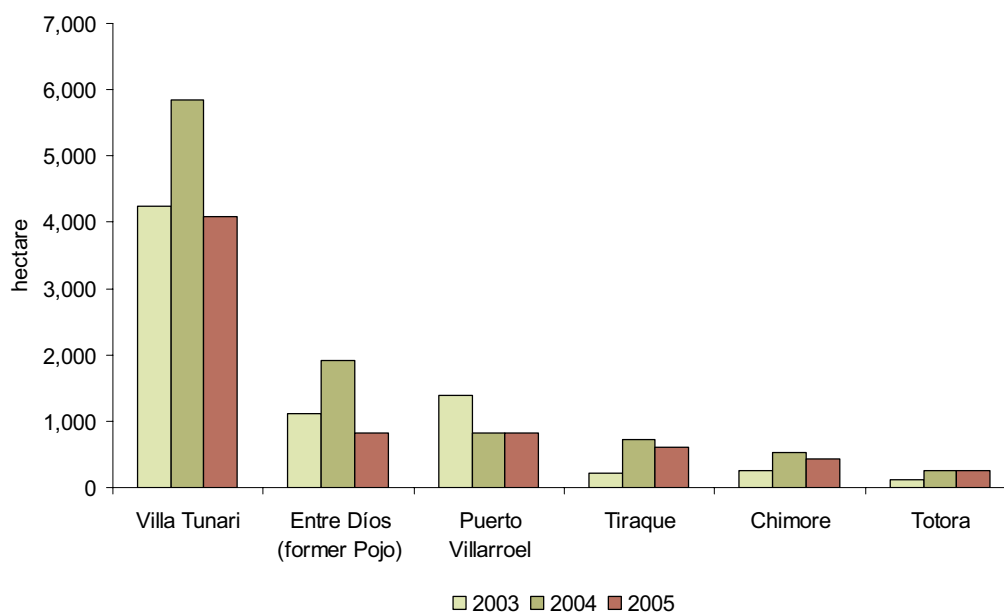


Figure 11. Distribution by municipality of coca cultivation in Chapare region, 2005 (ha)

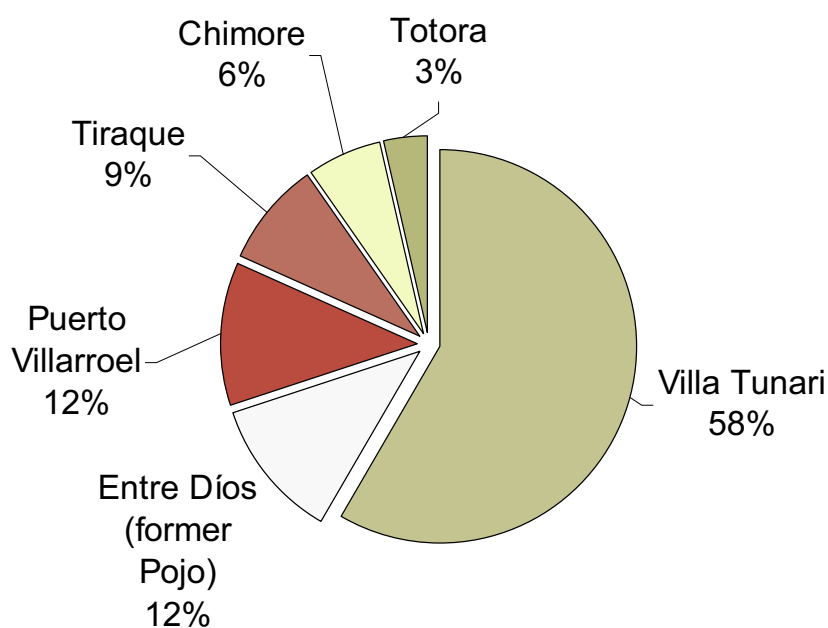
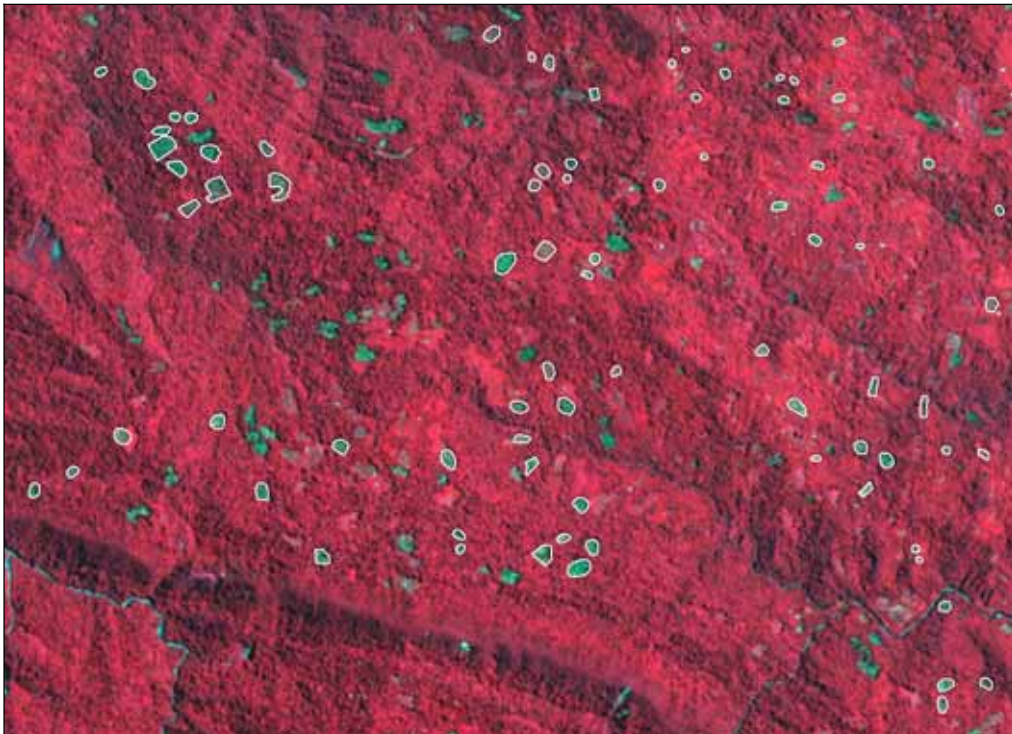
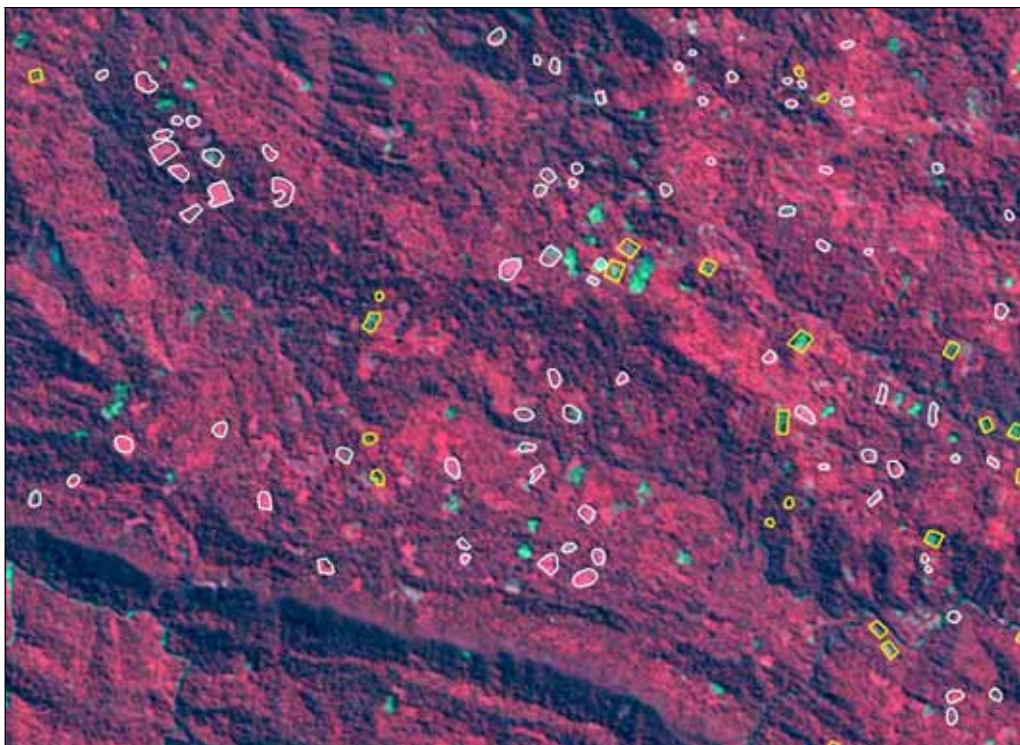


Figure 12. Coca cultivation encroaching primary forest



Satellite image taken in 2004 (Spot false color): coca fields bordered in white.



The same area as above, from a satellite image taken in 2005 (SPOT 5 , false color): eradicated coca cultivation delineated with white lines and existent coca cultivation in 2005 is delineated with yellow lines



Contrary to the situation of the Yungas of La Paz where there was no eradication, eradication of coca cultivation was intense in the Chapare region in 2005. For this reason, farmers often interspersed or associated coca bushes with other crops, or hid their coca fields under tree canopy to avoid detection and eradication. However, with the agreement between the coca farmers and the government to authorize 3,200 ha of coca cultivation, it was observed during field missions that farmers tended not to hide their coca fields any longer, or intersperse them with other crops, and most coca fields were found now free of association with other crops. This was evidenced in the satellite images as seen on figure 12.

It is generally accepted that coca cultivation is done with much more care in Yungas than in Chapare, and the techniques of cultivation differ from the ones used in Yungas. For example, the seedbeds in Chapare are usually not covered.



*The picture shows encircled in red a seedling prepared for further transplantation to a coca field*

Since the terrain is flat, there is no need to build terraces. The coca bushes in Chapare are bigger than in Yungas. The pruning practice does not exist. This could be due to the intensive eradication, resulting in most of the coca fields being younger than four years old, and thus don't need pruning.



*Coca field free of association or coverage*



Association with other crops or coca cultivated under canopy were less common in 2005 than in the past. However, they were still present in some areas of Chapare.



*Coca under canopy*



*Coca associated with yucca*

The coca leaves are also sun dried on bare floor before commercialization, but not with the same care as in the Yungas. According to FELCN, part of the production is marketed outside the region;



other part is used for local consumption (chewing and medicines). However, FELCN believed that an important portion of the coca leaves are used locally for cocaine manufacturing.

The life of a coca field in Chapare, under normal conditions is on average 30 years. Isolated, scattered old plants of big dimensions have been observed, still yielding substantial quantity of coca leaves. Fertilizers and pesticides are also widely used in the Chapare.



*The picture shows an aerial view of a coca field, burned land to implement a new crop and sun-drying of coca leaves*



*Sun-drying of coca leaves, Chapare, 2005*



### 2.3 COCA YIELD AND PRODUCTION

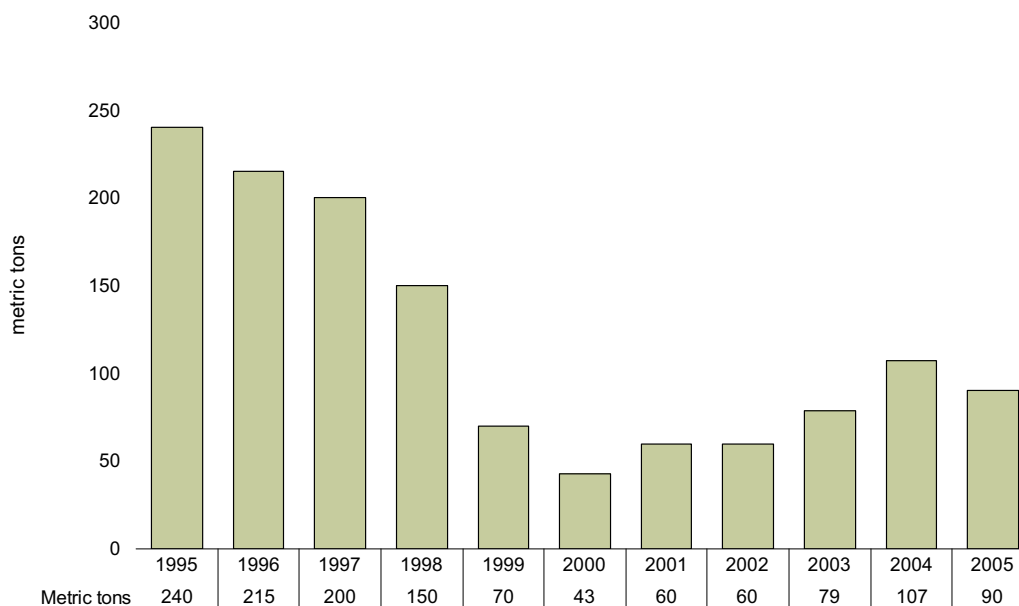
In December 2005, UNODC started a new coca yield study in the Yungas of La Paz. The field work was implemented through an agreement with Carmen Pampa University. The survey relied on a sample of 74 fields randomly selected among six strata. The strata were defined based mainly on altitude and slope ranges. The sample was designed by the statistician of the UNODC Illicit Crop Monitoring Programme. The methodology relied on weighing fresh and sun-dried coca leaves from a sample of harvest. The study aims to establish an average annual yield. It is therefore necessary to weigh all the harvests that can take place during the year. For this reason, the survey results will only be available in 2006, and will be used to estimate coca leaf production for next year survey.

In the absence of detailed study on coca leaf conducted jointly the Government and UNODC, coca leaf production in Bolivia was estimated from yield estimates previously used by UNODC, notably in the World Drug Report. Sun-dried coca leaf production in Bolivia was thus estimated at 42,000 metric tons. From that total, 30,900 metric tons could be available for illicit activities, potentially producing about 90 metric tons of cocaine in 2005. This corresponded to a decrease of 16% compared to last year potential cocaine production of 107 metric tons.

It should be noted that this estimate represented the potential coca leaf production. Due to lack of data on the issue, it does not take into account the likely proportion of coca leaf from Chapare region destined for local consumption of coca leaf (chewing and medicinal preparation). A better estimate should be available when the study on the local demand of coca leaf has been concluded.

The decrease in cocaine production can be attributed to the decrease in coca cultivation in the Chapare region (-31%).

Figure 13. Cocaine production in Bolivia 1994 - 2005 (in metric ton)



Source: UNODC World Drug Report 2006

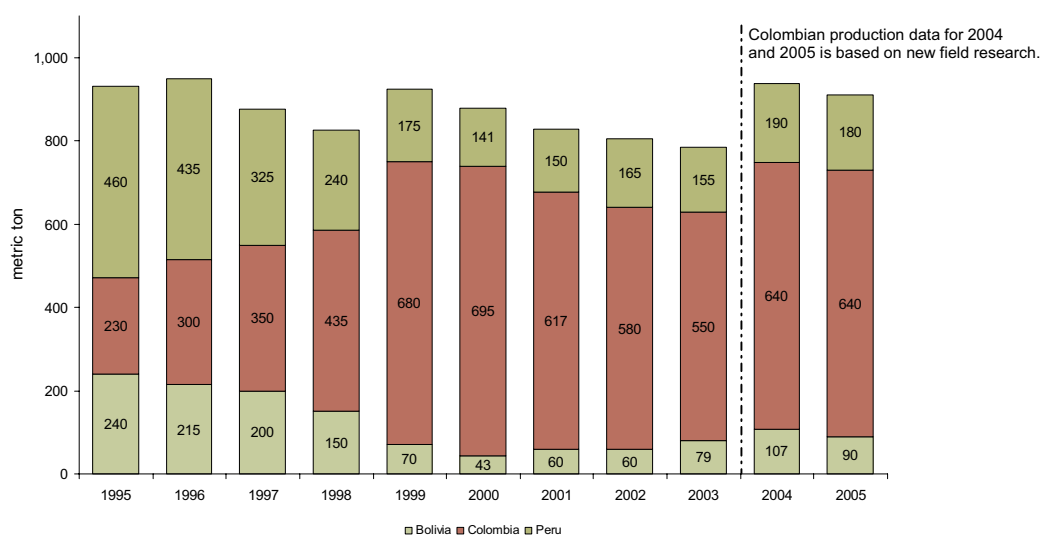
In 2005, potential cocaine production in Bolivia accounted for 10% of the global potential cocaine production of 910 metric tons. This was a slightly lower percentage than in 2004 when potential cocaine production in Bolivia represented about 11% of the global potential cocaine production.

Table 9. Potential cocaine production in the Andean region 1995 - 2005 (in mt)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	% change 2004-2005	% of 2005 total
Bolivia	240	215	200	150	70	43	60	60	79	107	90	-16%	10%
Peru	460	435	325	240	175	141	150	165	155	190	180	-5%	20%
Colombia	230	300	350	435	680	695	617	580	550	640	640	0%	70%
Total	930	950	875	825	925	879	827	805	784	937	910	-3%	100%

Source: UNODC World Drug Report 2006

Figure 14. Potential cocaine production in the Andean region 1995 - 2005 (in mt)



## 2.4 COCA PRICES AND TRADING

In Bolivia, sun-dried coca leaf trade is regulated by DIGECO that controls the quantity and prices of coca leaf traded in two markets: The market of Villa Fatima in La Paz-city and the market of Sacaba in Cochabamba department, close to Cochabamba city.

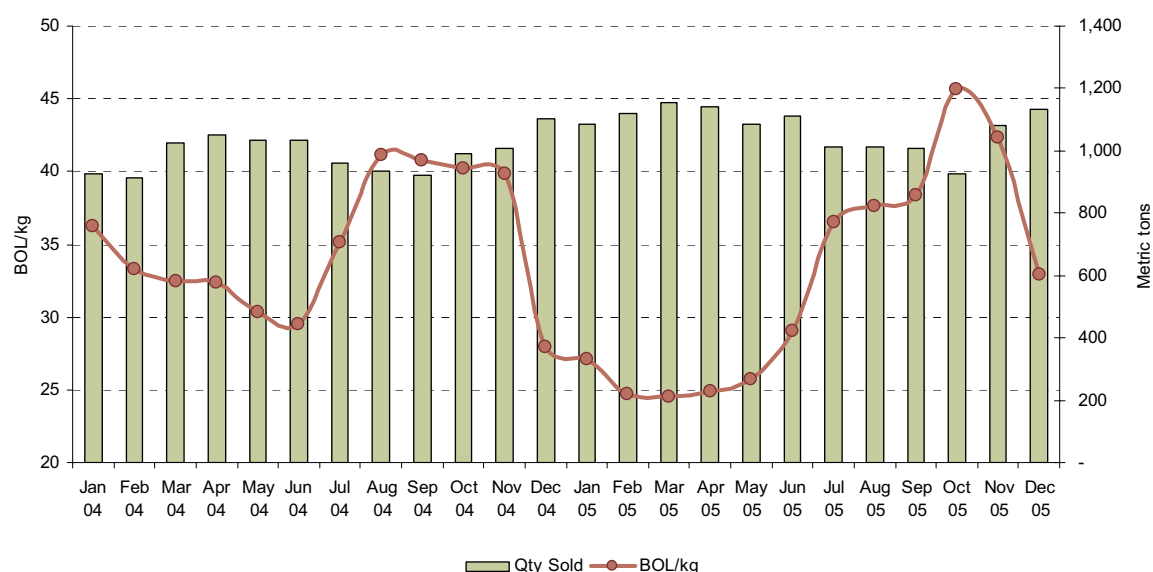
Of the 12,872 metric tons of coca leaves that fell under the control of DIGECO in 2005, the largest amount, 12,718 metric tons or 99%, was traded in Villa Fatima, and the remaining 154 metric tons in Sacaba. Prices of coca leaves in Villa Fatima market were also slightly higher than in Sacaba market, with respective annual averages of 32 Boliviano/kg (US\$ 4.0/kg) and 31 Boliviano/kg (US\$ 3.90/kg). The annual average weighted price for coca leaves on these two markets was 32 Boliviano/kg (US\$ 4.0/kg) in 2005.

Table 10. *Reported monthly price of coca leaf marketed through DIGECO in 2005*

	Chapare: Sacaba market		La Paz: Villa Fatima market		Weighted average	
Month	Bs./kg	Quantity sold	Bs./kg	Quantity sold	Bs./kg	US\$/kg
		metric tons		Metric tons		
January	29	20	27	1,066	27	3,4
February	28	7	25	1,114	25	3,1
March	29	11	25	1,141	25	3,0
April	26	8	25	1,132	25	3,1
May	26	10	26	1,075	26	3,2
June	30	6	29	1,106	29	3,6
July	34	19	37	995	37	4,5
August	35	11	38	999	38	4,7
September	36	9	38	998	38	4,8
October	36	26	46	902	46	5,7
November	37	16	42	1,067	42	5,2
December	31	9	33	1,123	33	4,1
	31	154	32	12,718	32	4,0

Source: DIGECO

Figure 15. *Monthly coca leaf price in DIGECO markets and coca production*



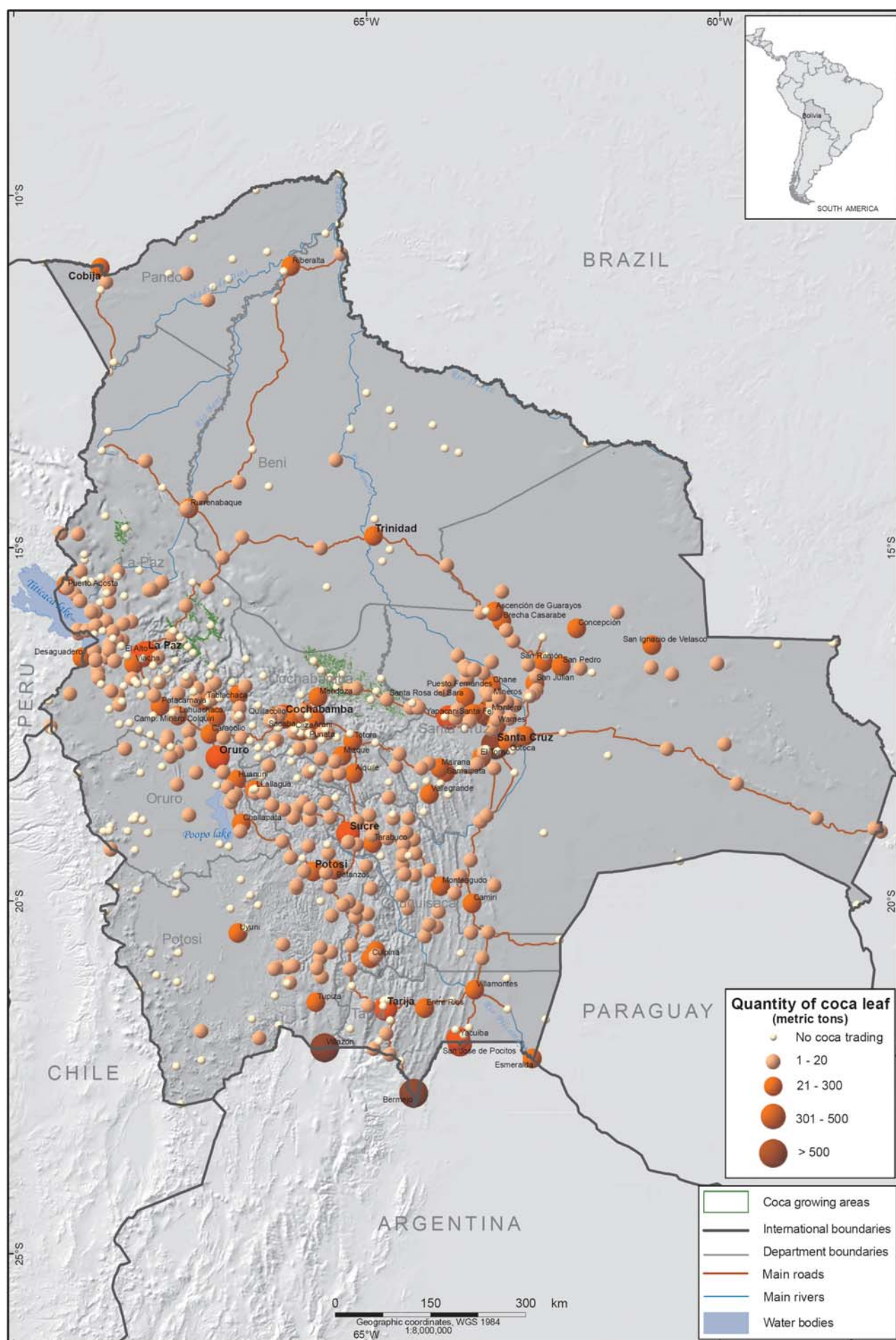
Each trader is authorized by DIGECO to trade up to 500 pounds (227 kg) of dry coca leaf per month. DIGECO's authorization specifies where the coca leave are bought (Villa Fatima or Sacaba) and the point of final destination for its retailing. Coca is retailed in packages of maximum 15 pounds (6.8 kg).

The following map shows the distribution of traded coca leaves throughout the country according to the DIGECO registry. As in 2004, in 2005, most of the coca leaves ended up in Santa Cruz department, followed by the departments of Tarija, La Paz and Potosi. In Santa Cruz, coca leaves are supplied mostly for the workers of large scale industrial farms of soy beans and sugar canes who use to chew it. Coca chewing is also widespread among miners of the departments of La Paz, Potosi and Oruro. Although not documented, it is likely that an increasing quantity of coca leaves traded in the southern of the country is smuggled to neighbouring Argentina.

The total value of the coca leaves traded through the control of DIGECO amounted to 418 millions Bolivianos or US\$ 51.6 millions in 2005

Between 2004 and 2005, the volume of trade increased by 8% (from 11,907 mt to 12,872 mt), while the average annual prices decreased by 8% (from Bs. 35/kg to Bs. 32/kg). This market responded to the law of supply and demand: when quantity available for trade increase, prices tend to decrease. Farm-gate prices of dry coca leaf have been collected in Chapare on a monthly basis by DIRECO since 1990 and by the UNODC monitoring project in the Yungas of La Paz since 2004. Average annual prices for coca leaf were higher in the Yungas of La Paz with 37 Boliviano/kg (US\$4.7/kg) than in the Chapare with 33 Boliviano/kg (US\$ 4.1/kg).

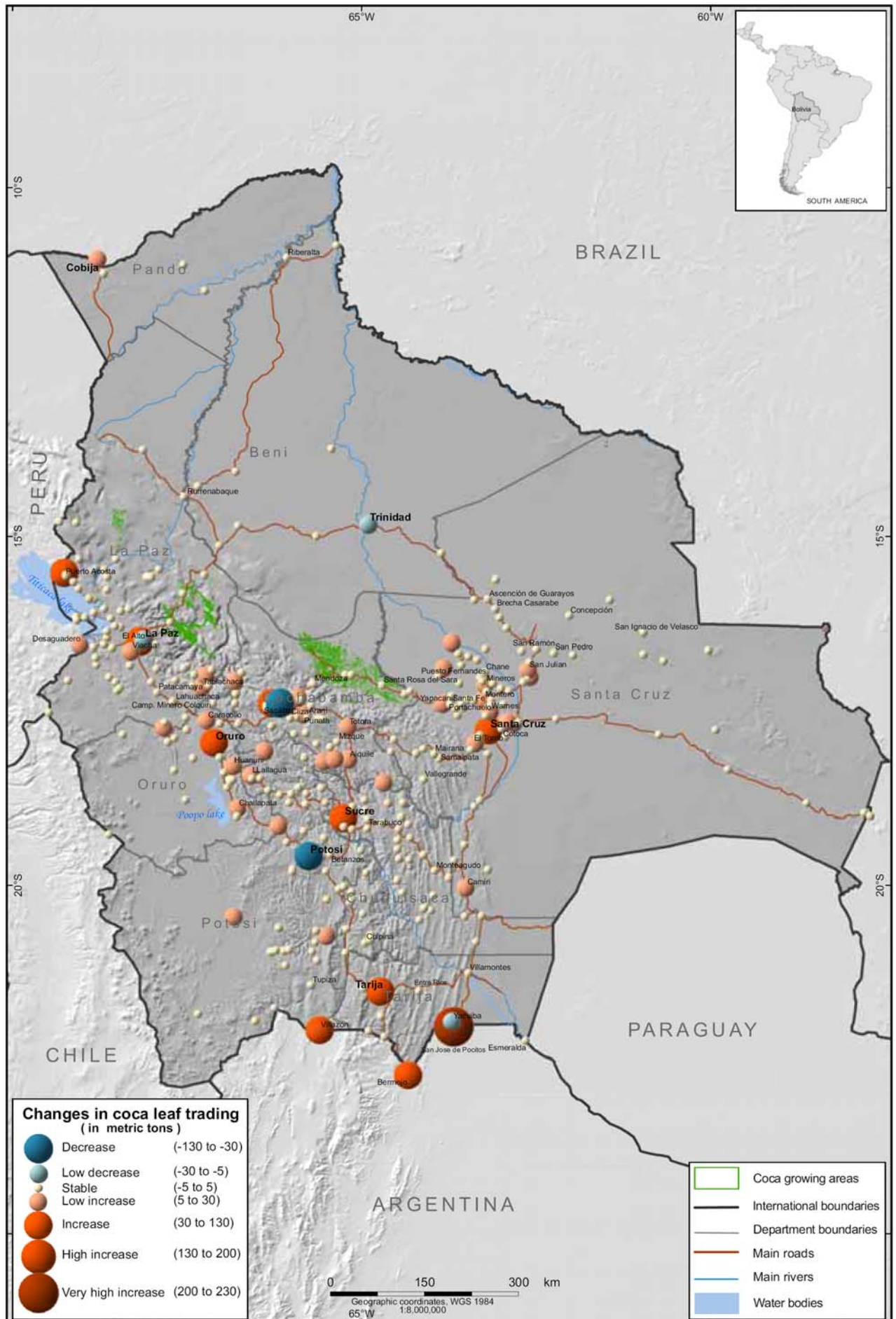
Map 5: Coca leaf trading authorized by DIGECO, 2005



Source: Government of Bolivia - DIGECO - National monitoring system supported by UNODC  
The boundaries and names shown and the designation used on this map do not imply official endorsement or acceptance by the United Nations



Map 6: Coca leaf trading authorized by DIGECO, change 2004 - 2005



Source: Government of Bolivia - DIGECO - National monitoring system supported by UNODC  
The boundaries and names shown and the designation used on this map do not imply official endorsement or acceptance by the United Nations.

Farm-gate prices of dry coca leaf have been collected in Chapare on a monthly basis by DIRECO since 1990 and by the UNODC monitoring project in the Yungas of La Paz since 2004. Average annual prices for coca leaf were higher in the Yungas of La Paz with 37 Boliviano/kg (US\$4.7/kg) than in the Chapare with 33 Boliviano/kg (US\$ 4.1/kg).

At the end of 2004, coca growers of Caranavi obtained their licenses to commercialize their production in the coca market of Villa Fátima, which caused a higher supply of coca was caused and consequently lower prices. The trend was maintained for the first months of 2005. Prices went up again on mid year where the dry season starts and harvests are poor reaching a peak on October and starting again the decreasing trend on December.

Table 11. *Monthly coca leaf price in the Yungas of La Paz, 2005*

Month	Municipality of Coripata	Municipality of Chulumani	Municipality of La Asunta	Municipality of Caranavi	Average	
	Bs./Kg	Bs./Kg	Bs./Kg	Bs./Kg	Bs./Kg	\$US/Kg
January	39	35	40	41	39	4,8
February	37	38	39	40	38	4,7
March	37	37	37	40	38	4,7
April	35	37	36	38	37	4,5
May	35	37	36	38	37	4,5
Jun	36	37	37	37	37	4,5
July	36	38	36	37	37	4,6
August	36	37	36	37	37	4,5
September	35	36	37	37	36	4,5
Ocober	35	36	37	38	37	4,5
November	36	35	38	37	37	4,5
December	35	35	37	37	36	4,5
<b>Annual average</b>	<b>36</b>	<b>37</b>	<b>37</b>	<b>38</b>	<b>37</b>	<b>4,6</b>

Source: UNODC monitoring project

Compared to 2004, coca leaf prices remained stable in Bolivian currency at Bs. 37/kg in Yungas.

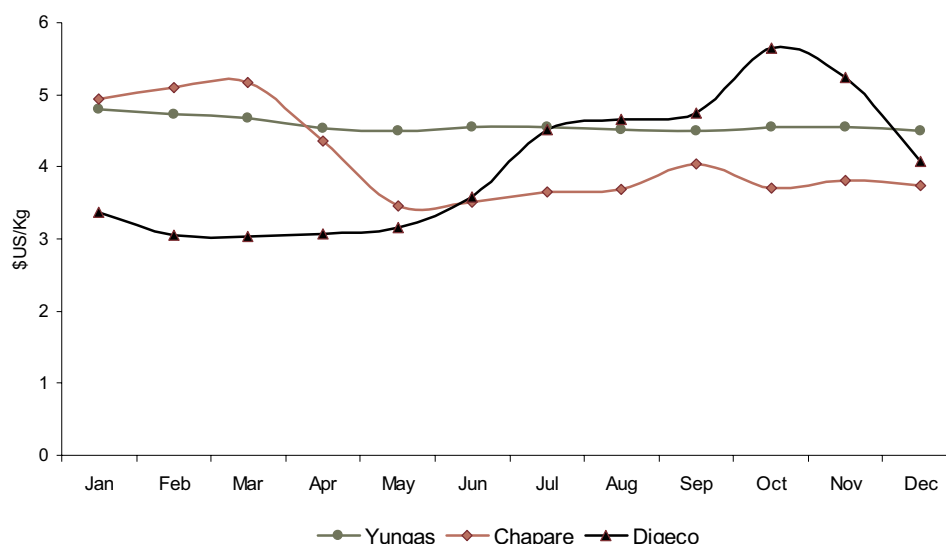
Table 12. *Reported monthly coca leaf price in the Chapare, 2005*

	Chapare	
	Bs./kg	US\$/kg
January	40	4,9
February	41	5,1
March	42	5,2
April	35	4,4
May	28	3,5
June	28	3,5
July	30	3,6
August	30	3,7
September	33	4,0
October	30	3,7
November	31	3,8
December	30	3,7
	33	4,1

Source: DIRECO

Compared to 2004, coca leaf prices in Chapare region, decreased from Bs. 41/kg to Bs. 33/kg (-19%). The decrease in prices, parallel to a decrease in production of coca leaf in the Chapare, could be due to the increased interdiction efforts in the region that disturbed the coca market and made it less attractive in general for coca buyers.

Figure 16. Monthly coca leaf price in the Yungas of La Paz and Chapare Bolivia 2005



Sources: UNODC monitoring project/ DIRECO/ DIGECO

Weighted by production, the annual average price for coca leaf outside the market controlled by DIGECO was US\$ 4.5/kg. This was a higher price than the price US\$ 4.0/kg on the market controlled by DIGECO. However, during the dry season when less coca leaves were available, prices from the markets controlled by DIGECO were similar and even larger than prices on other markets.

Prices of coca leaves have not been systematically recorded for Apolo. Anecdotal information reported much lower prices in Apolo than elsewhere in the country, ranging from US\$2.5 to US\$2.8/kg in 2005. The reason for lower prices in Apolo could be attributed to the remoteness of the region, outside the main trading centres. The low coca leaf production in Apolo (281 mt) was rather negligible compared to the national total, and therefore was not taken into account in the establishment of the national annual price estimate.

The long term trend of prices can be appreciated with prices of coca leaves from Chapare collected by DIRECO since 1990. Following a strong price rise in 1999 – in line with a strong increase in eradication – dry coca leaf prices reached a peak of US\$5.7 /kg in 2000. Since then, prices fell to the lowest since 1998 4.1/kg. However, coca leaf prices in Bolivia continued to be substantially higher than in neighbouring Peru (US\$ 2.9/kg).



Table 13. *Reported monthly prices of coca leaf in Chapare (US\$/kg)*

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
January	0.8	1.0		0.9	1.4	0.9	1.1	1.3	2.0	5.9	5.4	5.7	6.1	5.4	5.3	4.9
February	1.2	0.8	1.4	0.9	1.3	1.3	1.2	1.5	2.4	6.0	5.5	5.6	5.8	5.3	5.1	5.1
March	0.8	0.9	1.8	0.7	1.3	0.8	1.4	1.5	2.4	6.0	5.6	5.6	5.7	5.2	5.2	5.2
April	1.0	1.2	1.5	0.8	1.4	1.1	1.9	1.4	3.7	6.0	5.6	5.7	5.7	5.2	5.3	4.4
May	1.2	0.9	1.5	1.2	1.4	1.7	2.2	1.5	4.8	5.3	5.3	5.7	5.6	5.3	5.2	3.5
June	0.9	0.9	1.4	1.6	1.4	1.4	2.2	1.4	4.9	4.8	5.6	5.4	5.6	5.4	5.1	3.5
July	1.1	0.9	1.2	1.8	1.4	1.3	2.3	1.4	4.9	5.3	5.6	5.4	5.7	5.5	5.1	3.6
August	0.8	1.0	1.2	1.7	1.4	1.2	2.1	1.4	5.0	5.3	5.7	5.4	5.7	5.5	5.1	3.7
September	0.9	1.0	1.1	1.5	0.9	1.3	2.1	1.5	6.0	5.4	6.1	5.5	5.4	5.4	5.3	4.0
October	1.0	1.0	1.1	1.7	1.4	1.2	2.0	1.5	5.1	5.3	6.1	5.4	5.4	5.4	5.0	3.7
November	0.8	1.1	0.6	1.5	0.9	1.1	1.3	1.7	5.4	5.3	5.8	5.3	5.4	5.4	5.0	3.8
December	0.9	1.0	0.9	1.3	0.9	1.0	1.4	2.0	5.7	5.5	5.7	5.2	5.5	5.5	5.1	3.7
<b>Annual Average US\$/kg</b>	<b>0.9</b>	<b>1.0</b>	<b>1.2</b>	<b>1.3</b>	<b>1.3</b>	<b>1.2</b>	<b>1.8</b>	<b>1.5</b>	<b>4.4</b>	<b>5.5</b>	<b>5.7</b>	<b>5.5</b>	<b>5.6</b>	<b>5.4</b>	<b>5.2</b>	<b>4.1</b>

Source: DIRECO

The estimation of the total farm-gate value of coca leaf production in Bolivia included the total value of the market controlled by DIGECO, and the farm-gate value of coca leaves outside this market. In 2005, it amounted to US\$180 million.

Table 14. *Estimation of the total farm-gate value of coca leaf production in Bolivia, 2005*

Region	Production (mt)	Price (US\$/kg)	Value (US\$)
Chapare	19,348	4.1	79,326,800
Yungas, outside the 12,000 ha permitted by law 1008	11,507	4.6	52,932,200
Yungas from 12,000 ha permitted by law 1008	10,951	4.0	43,804,000
Apolo	281	2.7	744,650
Rounded total	42,000		180,000,000

The total farm-gate value of coca leaf production in 2005 was thus equivalent to 2.1% of the projected Bolivian GDP<sup>3</sup> of US\$ 8.4 billions for 2005, or 12% compared with the projected value of the licit agricultural sector of US\$ 1.5 billions in 2005. These figures suggest that, for the country as a whole, coca production still has an impact on the Bolivian economy, and continues to play an important role within the coca producing regions.

The FELCN also reported street prices of cocaine paste and cocaine of unknown purity from the major cities and coca growing regions in Bolivia. Reported prices of coca paste and cocaine did not vary from prices reported in 2004.

<sup>3</sup> sources: IICA, 2005

Table 15. *Reported prices of cocaine base and cocaine HCL, Bolivia, 2005 (US\$/kg)*

City	Cocaine base	Cocaine HCL
La Paz	1,150	2,000
Cochabamba	1,150	1,800
Santa Cruz	1,200	1,700
<b>Average</b>		
Region		
Yungas of La Paz	800	n.a.
Chapare	1,000	n.a.

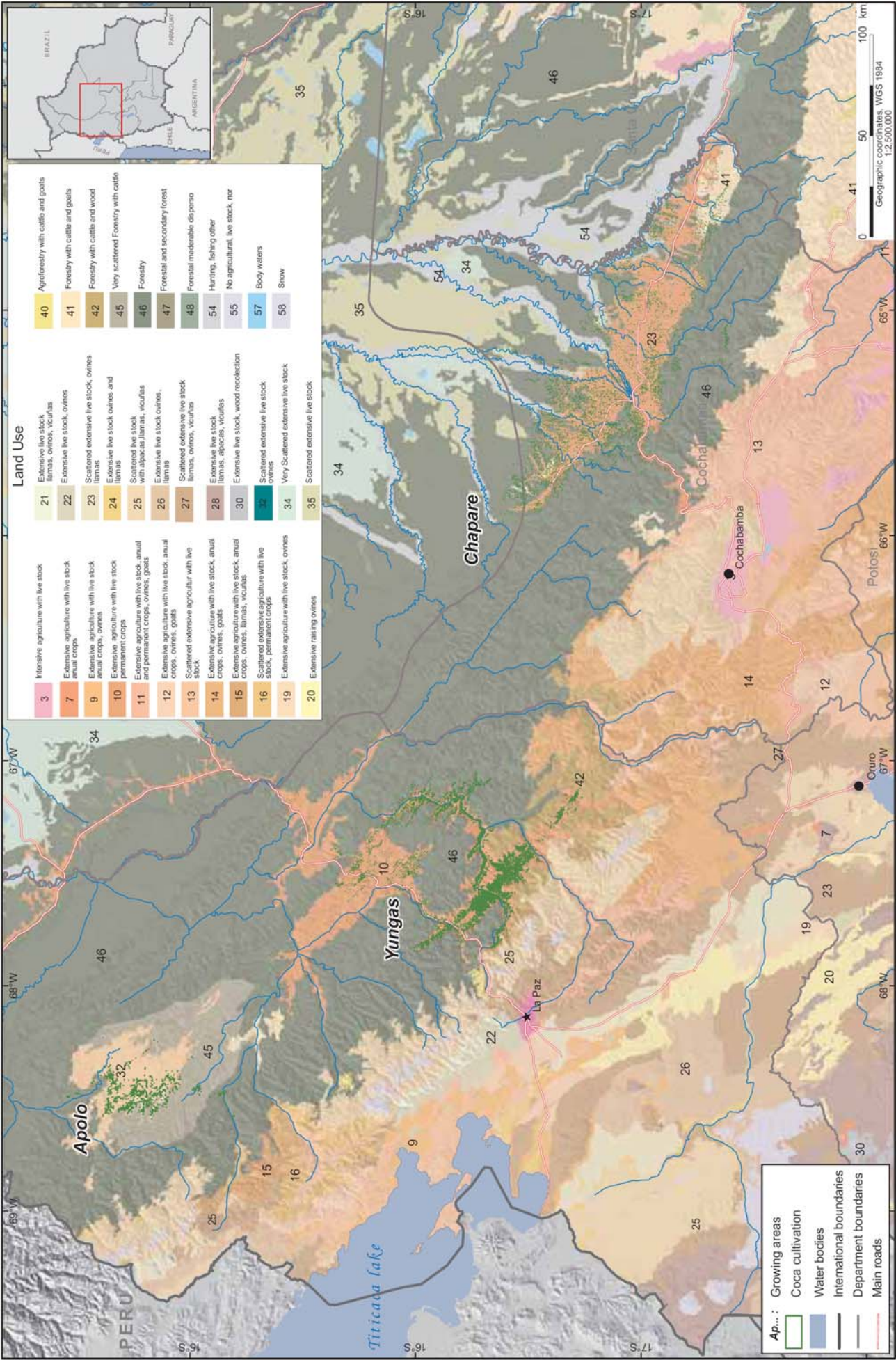
Source: FELCN

It is interesting to note that prices for coca leaf and its derivatives were consistently higher in Bolivia than in neighbouring Peru.

Table 16. *Prices for coca leaf and its derivatives in Peru and Bolivia, 2005 (US\$/kg)*

Products	Peru	Bolivia
Coca leaf	2.9	4.1
Cocaine base	640	1,200
Cocaine HCL	900	1,800

Map 7: Land use and coca cultivation, Bolivia 2005





## 2.5 COCA CULTIVATION AND RELATED ISSUES

### 2.1.4 COCA CULTIVATION AND LAND USE

The Bolivian National Authorities of Land Management ('Ordenamiento Territorial') released in 2002 a country wide map of major land use, based on the classification of Landsat images. This map was superimposed on the map of coca cultivation for 2003, 2004 and 2005. This analysis revealed that coca cultivation is found over four main types of land use: Extensive livestock and agriculture with permanent crop; timber forest; timber forest and cattle; non-timber forest and cattle; hunting, fishing and non-timber forest products.

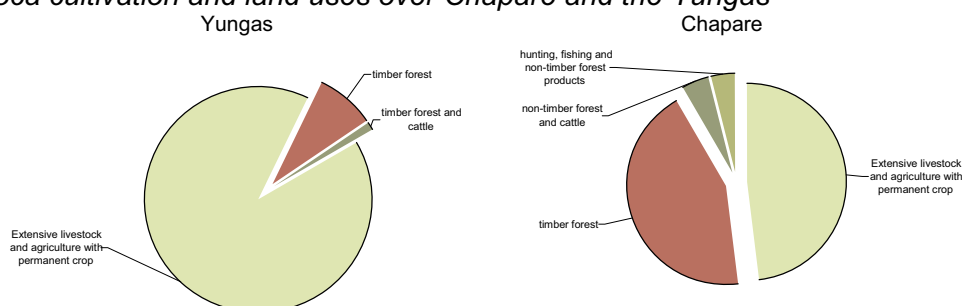
In 2005, 78% of coca cultivation took place on land dedicated to extensive livestock and agriculture with permanent crop, and 18% over land where the major land use is classified as timber forest. This last category corresponded mainly to the border of the Isiboro Secure National Park that is now protected, meaning that activities like extensive agricultural or logging are no longer permitted.

Table 17. Distribution of 2003 - 2005 coca cultivation by major land use and by region (ha)

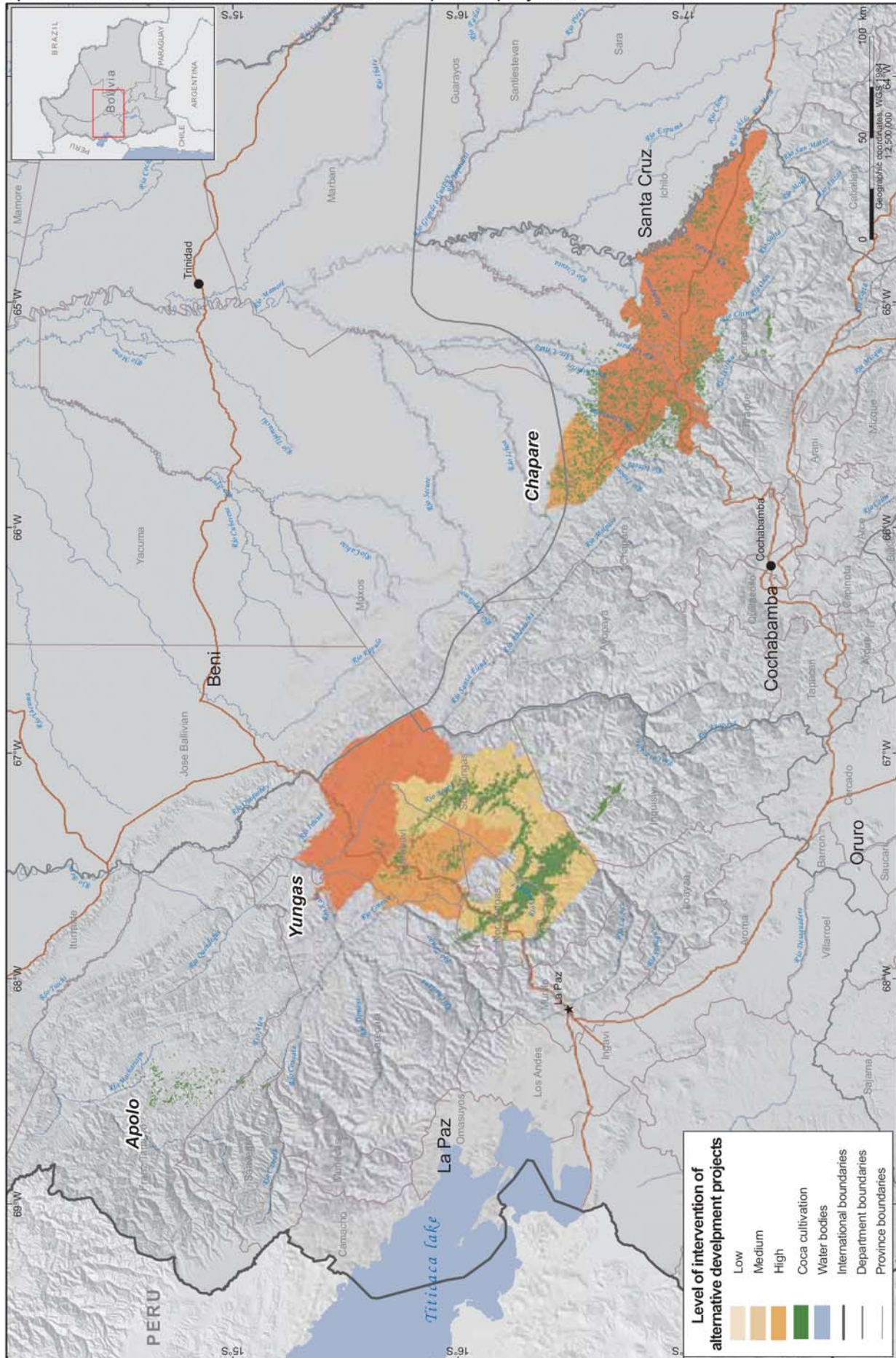
Region	Major land use	2003	2004	2005	% change 2004 – 2005	% of 2005 total
Yungas	Extensive livestock and agriculture with permanent crop	14,908	15,878	16,381	3%	91%
	timber forest	1,069	1,270	1,498	18%	8%
	timber forest and cattle	186	189	204	8%	1%
Chapare	Extensive livestock and agriculture with permanent crop	3,265	3,659	3,366	-8%	48%
	timber forest	3,442	5,433	3,069	-44%	44%
	non-timber forest and cattle	369	495	298	-40%	4%
	Hunting, fishing and non-timber forest products	194	507	277	-45%	4%
Apolo	Extensive livestock, sheep	50	178	178	0%	59%
	Timber forest		11	11	0%	4%
	Very scattered forest with cattle		51	51	0%	17%
	non-timber forest and cattle		61	61	0%	20%
total		23,600	27,700	25,400		

The analysis of the location of the coca cultivation that appears between 2004 and 2005 in the Yungas, showed that most of the new coca cultivation (500 ha over a total of 800 ha) took place over the land dedicated to extensive livestock and permanent crop. The remaining increase of 300 ha took place at the expense of forested areas, where coca cultivation increased by 26% between 2004 and 2005. In the Chapare area, coca cultivation is spread over extensive livestock, permanent crop (48%) and forest areas (44%). The decrease in coca cultivation between 2004 and 2005 took place mainly over forested areas (-44%).

Figure 17. Coca cultivation and land uses over Chapare and the Yungas



Map 8: Coca cultivation and alternative development projects, Bolivia 2005





### 2.1.5 COCA CULTIVATION AND ALTERNATIVE DEVELOPMENT PROJECTS

The Bolivian government usually refers to six geographical zones for the implementation of Alternative Development projects: four in the Yungas of La Paz (Caranavi North and Alto Beni, Caranavi Centre South, region of La Asunta, Inquisivi, south-western region), and two in Chapare (Bosque de uso multiple, or BUM, and the colonization area of the Isiboro Secure National Park). The number of projects and their level of interventions within each of these zones was not quantified in 2005, but varied broadly from no intervention at all to high level of intervention.

Table 18. Coca cultivation and alternative development in Bolivia

Region	Zone	level of interventions	Coca cultivation in 2003	Coca cultivation in 2004	Coca cultivation in 2005	% of change 2004 - 2005	% of 2005 coca cultivation total
Yungas of La Paz	Caranavi North Alto Beni	High	96	99	96	-3%	0.4%
	Caranavi Centro South	Medium	478	650	708	9%	3%
	South-western Yungas and La Asunta	Low	14,825	15,802	16,470	4%	65%
	Inquisivi	None	801	807	809	0%	3%
Chapare	Bosque Uso Multiple (BUM) or Multiple Use Forest	High	4,370	4,317	4107	-5%	16%
	Colonization area of the Isiboro Secure National Park	Low	1,640	2,587	1241	-52%	5%
	Other	None	1,273	3,185	1663	-48%	7%
Apolo	Apolo	None	50	300	300	0%	1%
	Rounded total		23,500	27,700	25,400	-8%	100%

In the Yungas of La Paz, the area of major intervention of alternative development was the Northern part of the municipality of Caranavi and the Alto Beni, representing 0.4% of the national total of coca cultivation in 2005. However, the region of South-western Yungas and La Asunta representing the largest proportion of coca cultivation in 2005 (65%), received fewer support from alternative development project.

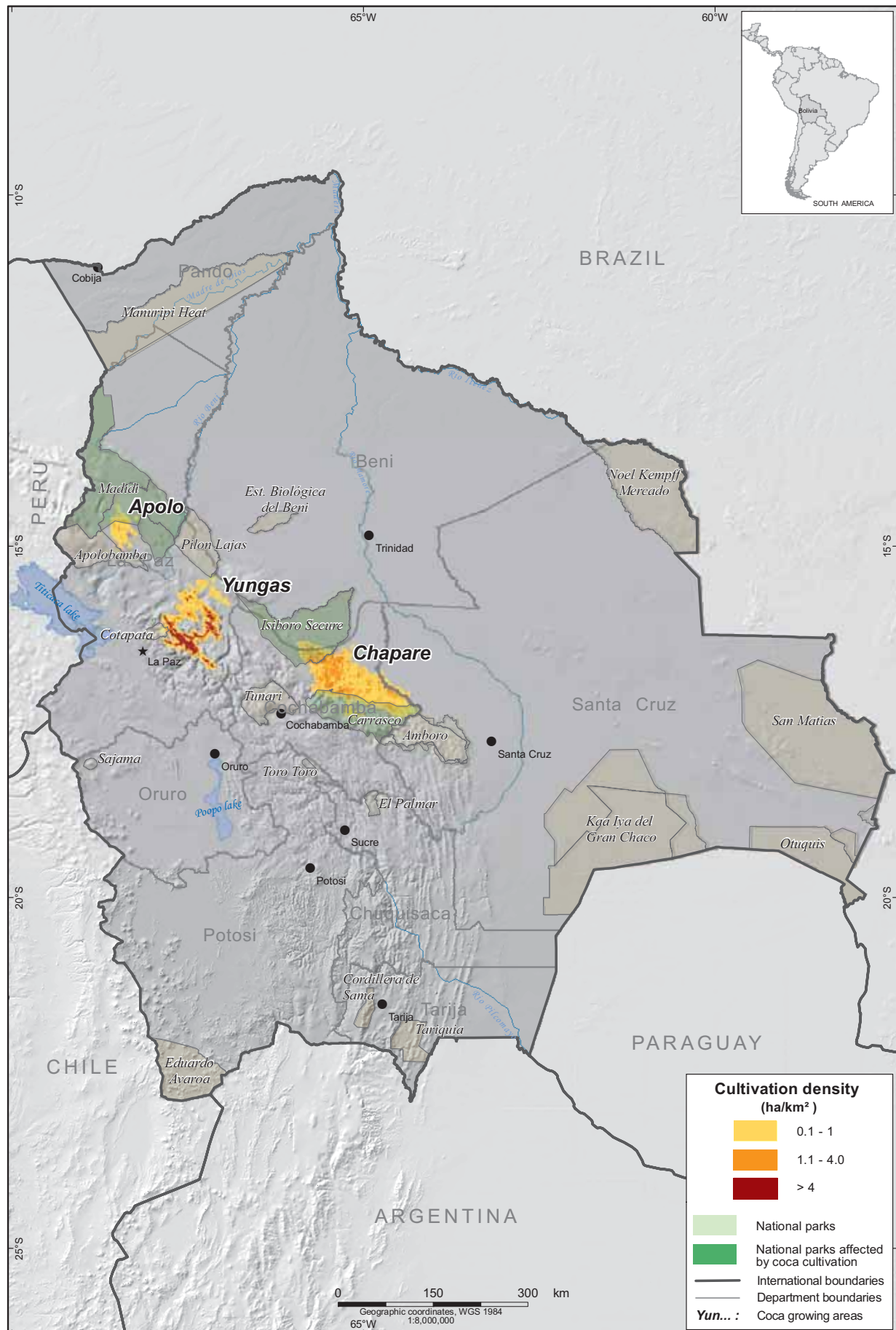
In Chapare, the main area of intervention of alternative development was the region defined by the Ministry as 'multiple use forest'. Between 2004 and 2005, coca cultivation decreased 5% in this area, whereas coca cultivation decreased by 31% in the Chapare region as a whole.

The area of the Isiboro Secure National Park was the area where most of the eradication took place in 2005. Unlike in previous year, eradication was not followed by replanting of coca fields, principally due to the agreement between the Government and the coca farmers to limit coca cultivation to 3,200 ha in the Chapare region. This resulted in a net coca cultivation decrease in the area of 52% between 2004 and 2005.



UNODC agro-forestry project support to coffee development (picture: project BOL/I79)

Map 9: Coca cultivation and National Parks, Bolivia 2005



### 2.1.6 COCA CULTIVATION IN NATIONAL PARKS

There are 21 protected areas and national parks in Bolivia, totalling an area of 165,000 sq km, representing 15% of the national territory. In 2005 coca cultivation was found in three national parks: In the national park of Madidi, in the Apolo region, only about 10 ha of coca cultivation were found. A much larger amount of 1,950 ha of coca cultivation was found in the two national parks Isiboro Secure and Carrasco, in Chapare region. Coca cultivation within these two National Parks represented 28% of the coca cultivation of Chapare region.

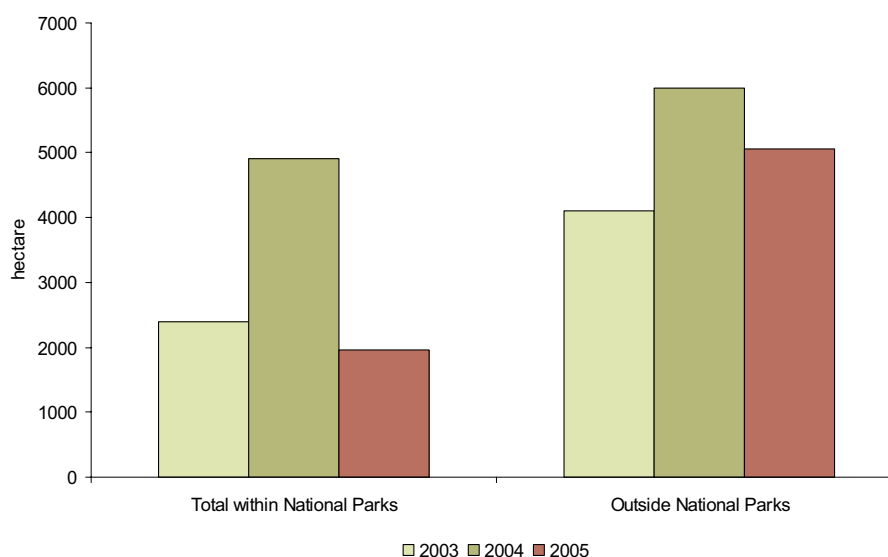
Between 2004 and 2005, coca cultivation decreased by 52% in the areas of the National Parks, from 4,100 ha to 1,952 ha. The decrease is mainly due to strong eradication efforts inside the parks. The agreement between the coca farmers and the government to limit to 3,200 ha the level of authorized coca cultivation in 2005, resulted in the farmers complying with the limit, without replanting the coca fields that had been destroyed by eradication.

Ecosystems of the National Parks are particularly fragile and the deforestation for the establishment of coca cultivation makes irreversible damages to their environment. Although eradication has been efficient, it should be noted that the damage to the forest due to coca cultivation is irreversible.

*Table 19. Coca cultivation estimates by national parks in Chapare 2003 – 2005 (ha)*

Area	2003	2004	2005	% change 2004 - 2005	% of 2005 total
Isiboro Secure National Park	1,605	2,807	1,161	-59%	17%
Carrasco National Park	778	1,257	781	-38%	11%
Madidi National Park	n.a.	10	10	0%	0.1%
Total within National Parks	2,400	4,100	1,952	-52%	28%
Outside National Parks	4,900	6,000	5,053	-16%	72%
Rounded Total	7,300	10,100	7,005	-31%	100%

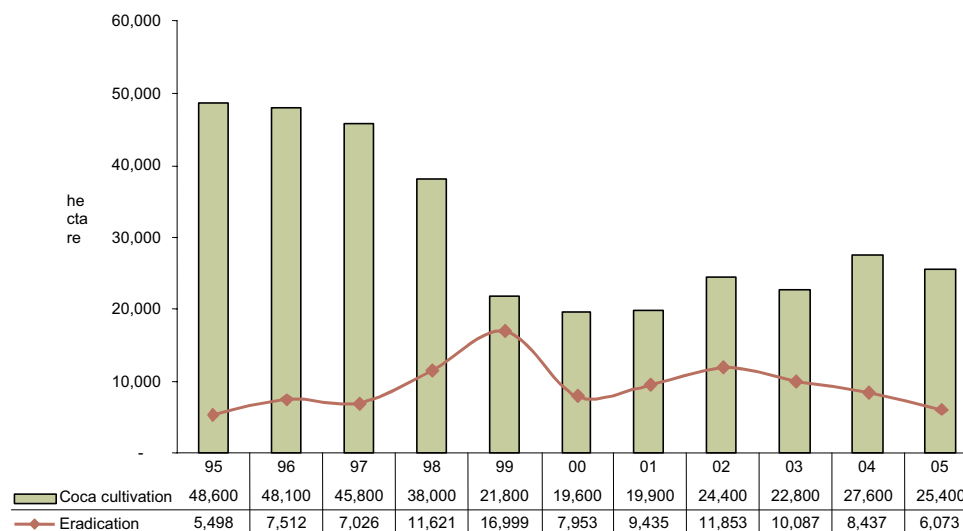
*Figure 18. Distribution of coca cultivation in Chapare region inside and outside national parks, 2004 – 2005 (ha)*



## 2.6 REPORTED ERADICATION

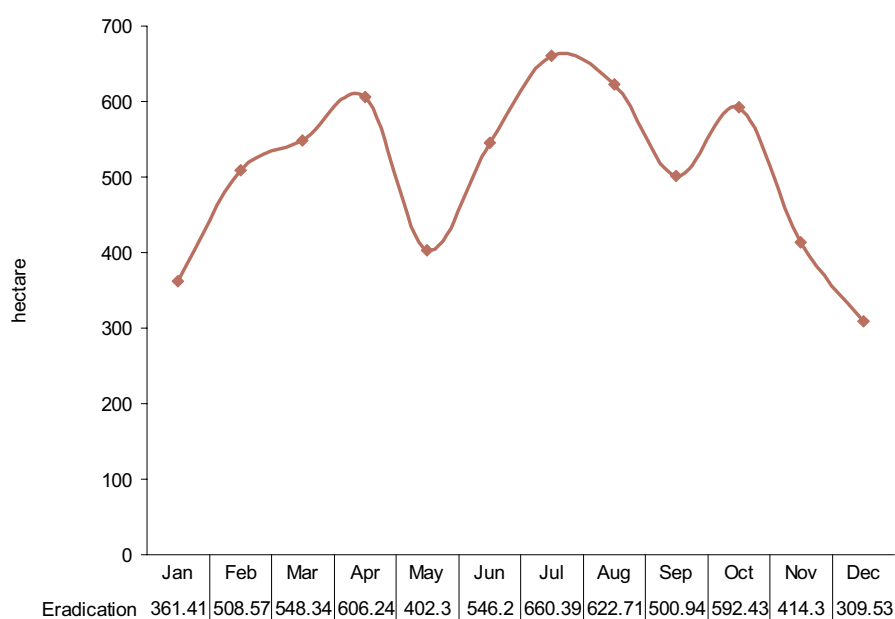
In 2005, the Bolivian Government reported the eradication of 6,073 ha of coca fields. No eradication was reported in Yungas of La Paz. The level of reported eradication decreased by 28% compared to the level of eradication in 2004. In Bolivia, the eradication of coca cultivation is exclusively manual, and no chemical or spraying agents are used.

Figure 19. Reported eradication and coca cultivation in Bolivia, 1995 – 2005 (ha)



Eradication in the Chapare was often opposed by the farmers. However, since the agreement signed in October 2004 and temporarily authorizing coca farmers to grow up to 3,200 ha of coca in the Chapare, eradication campaigns have been better accepted by the farmers, and there was no violence reported. Since February 2006 the Government has been implementing a policy of voluntary eradication.

Figure 20. Reported monthly eradication in Chapare in 2005 (ha)





The Bolivian government also reported the eradication of 52 ha of coca seedlings in the Chapare region, an increase of 6% compared to 2004. The increase in the eradication of coca seedlings avoided the replanting of eradicated coca fields.

Table 20. Reported monthly eradication of coca seedlings, 2003 -2005 (m<sup>2</sup>)

	2003	2004	2005
January	1,460	1,795	2,748
February	1,415	2,830	4,516
March	4,520	3,296	4,320
April	4,013	2,936	4,825
May	2,352	2,989	3,639
June	2,972	5,411	4,737
July	5,962	6,963	4,372
August	10,140	4,344	5,294
September	6,438	3,156	4,010
October	9,978	4,470	4,812
November	7,280	5,869	4,222
December	3,294	5,488	4,862
<b>Total</b>	<b>59,823</b>	<b>49,547</b>	<b>52,357</b>

Source: DIRECO



Manual eradication of a coca field in Chapare



## 2.7 REPORTED SEIZURE

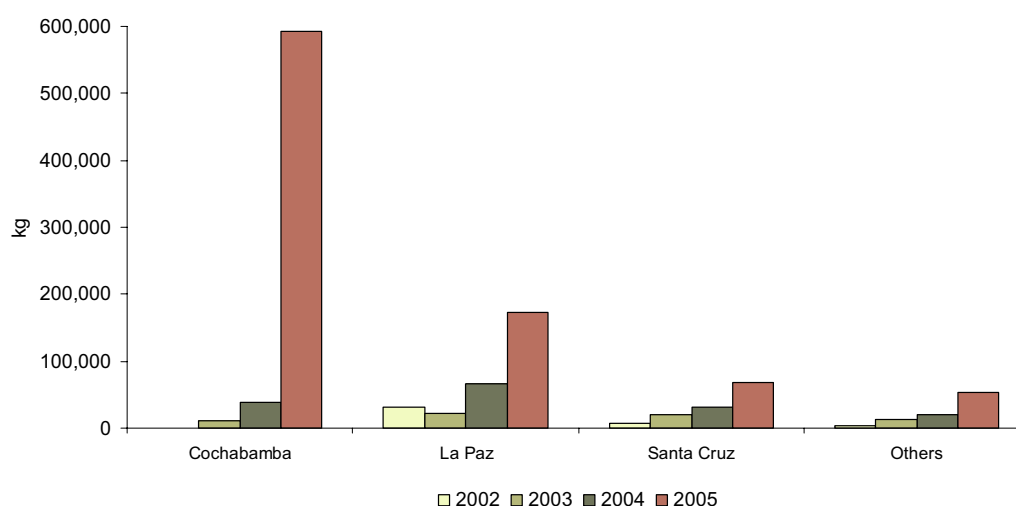
DIGECCO controls the trade of coca leaves within the country, which also includes control over the transport of coca leaves. Coca leaves are seized if transported without license or outside the authorized route specified in the license. In 2005, DIGECCO reported the seizure of 886 metric tons of coca leaves, representing a spectacular increase of 470% compared to the 2004 reported seizure of 155 metric tons. The increase in seizure of coca leaf can be attributed to the strengthening of DIGECCO's special force for the control of coca leaves (Grupo Especial de Control de la hoja de Coca, GECC), which included the control of additional roads, and improvement in equipment and infrastructure.

In addition, it should be noted that 2.1 metric tons of coca leaves from Peru were seized mostly in La Paz department, representing 0.2% of the total seizure in Bolivia. This seizures occurred mainly during the Bolivian dry season, when there are less coca leaf available in Bolivia. During 2004, 26 metric tons of Peruvian coca leaves had been seized by the GECC.

Table 21. Reported seizure of coca leaves, 2002 – 2005 (kg)

Department	2002	2003	2004	2005
Cochabamba	214	11,105	37,748	591,803
La Paz	31,291	22,375	66,396	172,331
Santa Cruz	7,343	20,828	30,441	68,508
Oruro	1,205	4,682	6,120	24,814
Tarija	1,407	4,451	10,183	16,499
Beni	728	600	904	7,525
Sucre	0	1,450	1,448	3,229
Potosi	357	1,321	1,942	1,509
Pando	0	0	-	50
<b>Total:</b>	<b>42,544</b>	<b>66,811</b>	<b>155,182</b>	<b>886,268</b>

Figure 21. Reported seizure of coca leaves, 2002-2005 (kg)



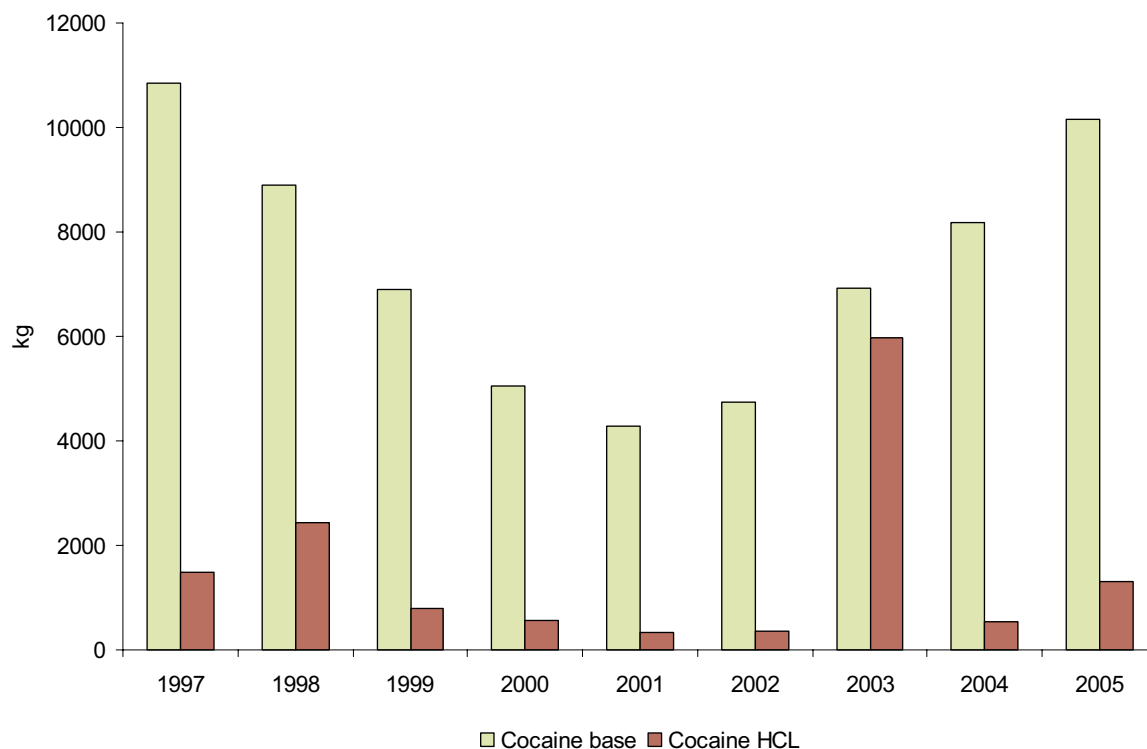
The Special Force for the Fight against Drugs (FELCN) reports annually on drugs seizures. Between 2004 and 2005, there was a spectacular increase in reported seizure of cocaine hydrochloride, from 531 mt to 1,300 mt.

Table 22. Reported seizure of drugs, Bolivia, 1997 – 2005 (kg)

	1997	1998	1999	2000	2001	2002	2003	2004	2005
Cocaine base	10,848	8,906	6,905	5,044	4,280	4,741	6,934	8,189	10,152
Cocaine HCL	1,477	2,440	802	555	334	362	5,969	531	1,309
Heroin	2.9	0.8	0	0	0	0	0	0	0
Cannabis	3,617	320	2,160	3,745	7,055	8,754	8,510	28,200	34,557

Source: FELCN

Figure 22. Reported seizure of cocaine base and cocaine HCL, Bolivia, 1997 – 2005 (kg)



The peak in seizure of cocaine HCL in 2003 was due to an exceptional operation conducted by FELCN. The graph also showed that seizure of coca paste increased steadily since 2001. The same trend can be seen in the report of destruction of maceration pit and clandestine coca paste or cocaine laboratories.

Table 23. Reported destruction of clandestine laboratories and macerations pits

Type	1997	1998	1999	2000	2001	2002	2003	2004	2005
Coca paste and/or cocaine laboratories	1,066	1,245	925	628	1,006	1,420	1,769	2,254	2,619
Precursors laboratories	19	15	8	3	2	6	0	3	2
Cocaine laboratories only	10	4	3	17	3	1	0	4	3
Maceration pit	1,481	1,659	1,179	790	1,292	1,950	2,544	3,293	4,064

Figure 23. Reported destruction of clandestine laboratories and macerations pits

