6.2 PRODUCTION

6.2.1 Afghanistan

Fact Sheet – Afghanistan Opium and Cannabis Surveys 20101

	2009	Change on 2009	2010
Net opium cultivation (after eradication) ²	123,000 ha (102,000-137,000)	0%	123,000 ha (104,000-145,000)
Cannabis cultivation ³	10,000-24,000 ha	*	9,000-29,000 ha
No. of poppy-free provinces ⁴ No. of provinces affected by opium cultivation	20 14	No change No change	20 14
No. of provinces affected by cannabis cultivation ⁵	17	+2	19
Opium poppy eradication	5,351	-57%	2,316 ha
Weighted average opium yield	56.1 kg/ha	-48%	29.2 kg/ha
Average cannabis resin (garda) yield	143 kg/ha	-12%	128 kg/ha
Potential production of opium in % of global potential opium production	6,900 mt 88%	-48%	3,600 mt 74%
Potential production of cannabis resin (garda) ⁶	1,500-3,500 mt	*	1,200-3,700 mt
No. of household involved in opium cultivation 7 in % of total population	245,200 6%	+1%	248,700 6%
No. of households involved in cannabis cultivation	40,000 (25,000-60,000)	+18%	47,000 (27,000-88,000)
Average farm-gate price (weighted by production) of dry opium at harvest time	US\$ 64/kg	+164%	US\$ 169/kg
Average farm-gate price of cannabis resin (best quality, weighted by production) at the time of resin processing	US\$ 35/kg	+146%	US\$ 86/kg
Total farm-gate value of opium production in % of ${\rm GDP}^8$	US\$ 438 million 4%	+38%	US\$ 605 million 5%
Total farm-gate value of cannabis resin (garda) production	US\$ 39-94 million	*	US\$ 85-263 million
Potential gross export value of opiates in % of GDP	US\$ 2.8 billion 26%	-50%	US\$ 1.4 billion 11%
Potential net export value of opiates in % of GDP^8	US\$ 2.3 billion 21%	-48%	US\$ 1.2 billion 9%
Average yearly gross income from opium of opium growing households	US\$ 1,786	+36%	US\$ 2,433
Average yearly gross income from cannabis of cannabis growing households	US\$ 1,553	+93%	US\$ 3,000
Income from opium per ha (gross/net)	US\$ 3,600 / 2,005	+36% / +45%	US\$ 4,900 / 2,900
Income from cannabis per ha (gross/net)	US\$ 3,900 / 3,341	+131% /	US\$ 9,000 / 8,341

* Due to the uncertainty associated with the estimate, a change rate could not be calculated.

- 1 The information in this section comes from the Afghanistan Opium Survey 2010 (UNODC/Ministry of Counter Narcotics) and can also be found at http://www.unodc.org/unodc/en/crop-monitoring/ index.html, and the preliminary Afghanistan Cannabis Survey 2010. Source unless otherwise indicated: National Monitoring System supported by UNODC.
- 2 Figures in brackets represent the upper and lower bounds of the estimation range.
- 3 Cannabis cultivation was defined as mono-crop cannabis cultivated in fields. Small-scale and mixed cultivation could not be considered.
- 4 Out of 34 provinces of Afghanistan. Poppy-free provinces are those which are estimated to have less than 100 ha of opium cultivation.
- 5 Cannabis cultivation was defined as mono-crop cannabis cultivated in fields. Small-scale and mixed cultivation could not be considered.
- 6 Garda is the local term used in Afghanistan for the powder obtained by threshing and sieving the harvested and dried cannabis plants. This process is repeated several times and results in different quality of garda (first, second, ...) with varying proportions of resin and other plant matter. Garda is further processed into hashish.
- 7 Estimates are based on a population of 24.0 million a for 2009 and a population of 24.5 million for 2010 and an average household size of 6.2 persons. Source: Gov. of Afghanistan, Central Statistical Office.
- 8 Nominal GDP of the respective year. Source: Gov. of Afghanistan, Central Statistical Office.

Afghanistan, regional distribution of opium poppy cultivation (ha), 2009 to 2010						
Region	2009 (ha)	2010 (ha)	Change on 2009	2010 (ha) as % of total		
Southern	103,014	100,247	-3%	82%		
Western	18,800	19,909	6%	16%		
Eastern	593	1,100	97%	1%		
North-eastern	557	1,107	87%	1%		
Central	132	152	15%	0.1%		
Northern	Poppy-free	Poppy-free	NA	NA		
Rounded Total	123,000	123,000	0%	100%		



Source: MCN - UNODC Afghanistan Opium Survey 2010 Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

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Source: MCN - UNODC Afghanistan Opium Survey 2010 Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

6.2.2 Bolivia (Plurinational State of)

Fact Sheet – Bolivia Coca Survey 20109

The figures from the 2010 report on coca cultivation were not yet available at the time of printing of this report.

	2009	Change on 2009	2010
Coca cultivation Of which in the Yungas of La Paz in Chapare in Apolo Of which permitted by Bolivian law 1008	30,900 ha 20,900 ha 9,700 ha 300 ha 12,000 ha		12,000 ha
Production of sun-dried coca leaf	54,800 mt		
Potential production of cocaine HCI	n.a.		
National weighted average farm-gate price of coca leaf (outside state market)	US\$ 4.9/kg		
Total farm-gate value of coca leaf production GDP ¹⁰ Farm-gate value of coca leaf production in per cent of GDP Farm-gate value of coca leaf production in per cent of GDP of agricultural sector	US\$ 265 million US\$ 13.0 billion 2% 14%		
Reported eradication of coca bush*	6,341 ha	+29%	8,200 ha
Reported seizure of sun-dried coca leaves*	1,624 mt	-37%	1,016 mt
Reported seizure of cocaine base*	21,970 kg	+17%	25,714 kg
Reported seizure of cocaine HCI*	4,922 kg	-31%	3,390 kg
Reported destruction of coca laboratories ¹¹ *	4,888	+21%	5,922

* As reported by the Government of the Plurinational State of Bolivia. Eradication: includes voluntary and forced eradication.

⁹ The information in this section comes from the report on Coca Cultivation in Bolivia (UNODC/Government of Bolivia, June 2010), and can also be found on the internet (http://www.unodc.org/ unodc/en/crop-monitoring/index.html). Source unless otherwise indicated: National Monitoring System supported by UNODC.

¹¹ Including installations producing cocaine base, HCl or "recycling" precursors. Excluding coca leaf maceration pits.

6.2.3 Colombia

Fact Sheet - Colombia Coca Survey 201012

	2009	Change on 2009	2010
Net coca cultivation (on 31 Dec, rounded) Without adjustmenfor small fields With adjustment for small fields ¹³ Of which ¹⁴ Pacific region Central region Putumayo-Caquetá region Meta-Guaviare region elsewhere	68,000 ha 73,000 ha 27,020 ha 18,050 ha 9,620 ha 13,130 ha 5,320 ha	-16% -15% -5% -15% -23% -34% -11%	57,000 ha 62,000 ha 25,680 ha 15,310 ha 7,360 ha 8,710 ha 4,750 ha
Potential production of cocaine (100% purity) Based on area without adjustment for small fields Based on area with adjustment for small fields	410 mt n.a.	n.a. n.a.	n.a. 350 ml (350-400)
Average farm-gate price of coca paste Average wholesale price of cocaine* (of unknown purity in major cities)	US\$956/kg COP2,047,970/kg US\$2,147/kg COP 4,587,000/kg	-6% -6% +14% +1%	US\$1,015/kg COP1,923,000/kg US\$2,439/kg COP4,623,000/kg
Total farm-gate value of the production of coca leaf and its derivatives	US\$496 million		n.a.
in per cent of GDP ¹⁵ in per cent of agricultural sector	0.2% 3%		n.a. n.a.
Reported aerial spraying of coca bush* Reported manual eradication of coca bush* Reported seizure of cocaine* Reported destruction of coca processing laboratories* <i>Of which cocaine HCl processing lab.</i>	104,771 ha 60,544 ha 203 mt 2,888 278	-3% -28% -9% -9%	101,939 ha 43,792 ha 215 mt 2,623 254
Reported opium poppy cultivation*	356 ha	-3%	346 ha
Potential opium latex production**	26 mt		
Potential heroin production (rounded) **	1.1 mt		
Average farm-gate price of opium latex* Average wholesale heroin price*	US\$358/kg US\$9,993/kg	+37% +7%	US\$489/kg*** US\$10,667/kg***
Reported seizure of heroin*	732 kg	-54%	337 kg

Note: Due to the introduction of an adjustment factor for small fields, 2009 figures are being revised.

* As reported by the Government of Colombia.

** Own calculations based on regional yield figures and conversion ratios from US Government/DEA scientific studies.

*** Preliminary, refers to January to October 2010, only.

12 The information in this section comes from the report on Coca Cultivation in Colombia (UNODC/Government of Colombia, June 2011), and can also be found on the internet (http://www.unodc. org/unodc/en/crop-monitoring/index.html). Source unless otherwise indicated: National monitoring system supported by UNODC. coca monitoring limits the detection of small fields below 0.25 ha. Based on studies with very high resolution imagery, a correction factor was calculated to minimize this effect and improve the accuracy of the estimate.

- 14 Regional area figures refer to area adjusted for small fields.
- 13 The spatial resolution of the satellite images ("pixel size") used for
- 15 GDP of the respective year as reported by the Government.



Colombia, annual farm-gate prices* for opium latex, 2006 to 2010

*Nominal prices. Source: DIRAN.



Colombia, annual wholesale price of heroin,* 2006 to 2010

*Nominal prices for heroin of unknown purity. Source: DIRAN.





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

6.2.4 Lao People's Democratic Republic

Fact Sheet – Lao People's Democratic Republic Opium Survey 2010¹⁶

	2009	Change on 2009	2010
Opium poppy cultivation	1,900 ha (900-3,000)	+58%	3,000 ha (1,900-4,000)
Average dry opium yield ¹⁷	6 kg/ha	na	6 kg/ha
Potential production of dry opium	11 mt (5.4-18)	+58%	18 mt (11.4-24.0)
Average retail/wholesale price of opium ¹⁸	US\$ 1,327 (350-2,440)	+26%	US\$ 1,670 (580-2,700)
Eradication ¹⁹	651 ha	-11%	579 ha

Lao People's Democratic Republic, annual opium prices (US\$/kg), 2002 to 2010

1,800 1,670 1,600 1,327 1,400 1,227 1,200 974 US\$/kg 1,000 800 550 521 600 400 218 160 172 200 0 2002 2003 2009 2004 2005 2006 2007 2008 2010

Source: LCDC, Provincial authorities survey.

- 16 The information in this section comes from the report on Opium Poppy Cultivation in South-East Asia (UNODC/Governments of Lao PDR and Myanmar), and can also be found on the internet (http://www.unodc.org/unodc/en/crop-monitoring/index.html). Source unless otherwise indicated: National monitoring system supported by UNODC. Figures in brackets represent the upper and lower bounds of the 90% confidence interval unless otherwise indicated.
- 17 In the absence of a recent yield survey, the yield per hectare estimated in 2007 was used.
- 18 Source: LCDC, Provincial authorities survey. Due to the limited market for opium, a clear distinction between farm gate, wholesale and retail prices could not be established. The range refers to the lowest and highest provincial price observed.
- 19 Source: LCDC. Eradication campaigns were conducted during and after the survey.

6.2.5 Myanmar

Fact Sheet - Myanmar Opium Survey 2010²⁰

	2009	Change on 2009	2010
Opium poppy cultivation in Myanmar	31,700 ha (24,000 - 42,900)	+20%	38,100 ha (23,200 - 53,900)
Of which in Shan State	30,000 ha (24,000 - 40,000)	+17%	35,000 ha (22,700 - 50,100)
Average opium yield (weighted by area)	10.4 kg/ha	+46%	15.2 kg/ha
Potential production of dry opium	330 mt (214 - 447)	+76%	580 (350 - 820)
Opium poppy eradication ²¹	4,087 ha	+102%	8,268 ha
Average farm-gate price of opium at harvest time	US\$ 317/kg	-4%	US\$ 305/kg
Total potential farm-gate value of opium production ²²	US\$ 105 million (68 - 142)	+68%	US\$ 177 million (107 - 250)
Estimated number of households involved in opium poppy cultivation	192,000 (160,000 - 225,000)	+17%	224,000 (102,000 - 342,000)
Of which in the Shan State	176,500 (141,200 - 235,300)	+17%	206,000 (134,000 - 295,000)
Opium-producing households in Shan State: Average yearly household income Income from opium sales Per capita income	US\$ 700 US\$ 160 US\$ 125	+19% ²³ +125% +19%	US\$ 830 US\$ 360 US\$ 155
Non-opium poppy producing households in Shan State Household average yearly income Per capita income	US\$ 750 US\$ 133	+13% ²⁴ +17%	US\$ 850 US\$ 155

Numbers in brackets refer to the lower and upper bound of the 95% confidence interval.

20 The information in this section comes from the report on Opium Poppy Cultivation in South East Asia (UNODC/Governments of Lao PDR and Myanmar, December 2010), and can also be found on the internet (http://www.unodc.org/unodc/en/crop-monitoring/ index.html).

21 Source: CCDAC.

- 22 The farm-gate value should calculated with the price of dry opium. However, the price of dry opium is difficult to establish in Myanmar because of the selling and storing practices of the farmers. The farmgate value here is calculated with the price of fresh opium. This result in a lower estimate.
- 23 This is equivalent to a 10% increase in constant 2009 Kyats.
- 24 This is equivalent to a 5% increase in constant 2009 Kyats.

Myanmar, opium poppy cultivation by region (ha), 2008-2010						
Region	2008	2009	2010	% of total area of opium poppy cultivation		
East Shan	9,300 (6,800 to 11,800)	11,900 (8,100 to 15,000)	12,100 (6,200 to 19,000)	32%		
North Shan	800 (400 to 1,200)	1,600 (390 to 2,900)	3,700 (1,500 to 6,700)	10%		
South Shan	15,500 (9,500 to 21,500)	16,500 (10,900 to 22,600)	19,200 (9,400 to 31,500)	50%		
Shan State total	25,300	30,000 (24,000 to 40,000)	35,000 (22,700 to 50,100)	92%		
Kachin	1,500 (1,100 to 1,900)	1,400 (1,100 to 1,700)	3,000 (500 to 3,800)	8%		
Kayah	1,800 (1,800 to 2,500)	300 ²⁵ (60 to 700)	100	0.3%		
National total (rounded)	28,500 (17,900 to 37,000)	31,700 (20,500 to 42,800)	38,100 (23,200 to 53,900)	100%		

Numbers in brackets refer to the lower and upper bound of the 95% confidence interval.

Myanmar, reported eradication of opium poppy by region (ha), 2006-2010							
Region	2006	2007	2008	2009	2010		
East Shan	32	1,101	1,249	702	868		
North Shan	76	916	932	546	1,309		
South Shan	3,175	1,316	1,748	1,466	3,138		
Shan State total	3,283	3,333	3,929	2,714	5,316		
Kachin	678	189	790	1,350	2,936		
Kayah	0	12	12	14	13		
Total within the surveyed area	3,961	3,534	4,731	4,078	8,265		
Magwe	0	45	0	1	1		
Chin	0	10	86	5	2		
Mandalay	9	0	3	2	0		
Sagaing	0	9	0	1	0		
Other states	9	64	0	0	0		
Total (national)	3,970	3,598	4,820	4,087	8,268		

25 The estimates in Kayah for 2008 and 2009 are not directly comparable due to a change in methodology.



6.2.6 Peru

Fact Sheet - Peru Coca Survey 2010²⁶

		2009	Change on 2009	2010
Coca cultivation Of which in Alto Huallaga Apurímac-Ene La Convenciór Elsewhere	-Lares	59,900 ha 17,500 ha 17,500 ha 13,200 ha 11,700 ha	+2% -26% +13% +1% +29%	61,200 ha 13,000 ha 19,700 ha 13,300 ha 15,200 ha
Weighted average sun-dried c	oca leaf yield	2,200 kg/ha	-5%	2,100 kg/ha
Potential production of sun-dr	ied coca leaf ²⁷	128,000 mt	+1%	129,500 mt
Potential production of sun-dried coca leaf available for cocaine production		119,000 mt (102,400-134,200) +1%		120,500 mt (103,000- 136,300)
Average farm-gate price of su Average farm-gate price of su (weighted by production) ²⁸ Average farm-gate price of co Average price of cocaine HCI	n-dried coca leaf n-dried coca leaf ca paste n coca cultivating regions	US\$ 3.2/kg US\$ 3.0/kg US\$ 778/kg US\$ 1,021/kg	-3% -7% -1% -7%	US \$ 3.1/Kg US \$ 3.1/Kg US \$ 784/Kg US \$ 947/Kg
Potential farm-gate value of su	un-dried coca leaf ²⁹	US\$ 384 million		
Reported eradication of coca	cultivation*	10,025 ha	+2%	12,239 ha
Reported seizure of sun-dried coca leaves*		1,031 mt		
Reported seizure of coca paste*		9,914 kg	+34%	13,238 kg
Reported seizure of cocaine HCI*		10,744 kg	+63%	17,544 kg
Reported destruction of coca laboratories ^{30*}		1,242	+6%	1,317
Of which cocaine HCl process	ing laboratories	25		21

* As reported by the Government of Peru.

- 26 The information in this section comes from the report on Coca Cultivation in Peru (UNODC/Government of Peru, June 2011), and can also be found on the Internet (http://www.unodc.org/unodc/ en/crop-monitoring/index.html). Source unless otherwise indicated: National monitoring system supported by UNODC.
- 28 The weighted average price takes into account that different amounts of coca leaf are sold in different regions at different price levels.
- 27 Includes all coca leaf potentially produced. For the calculation of coca leaf available for cocaine production, 9,000 mt of sun-dried coca leaf were deducted from this figure, which, according to Government sources, is the amount used for traditional purposes.
- 29 Takes into account all coca leaf produced, irrespective of its use. For the calculation, the weighted average coca leaf price was used.
- 30 Excluding coca leaf macerations pits.

