UNODC
United Nations Office on Drugs and Crime

Government of Afghanistan
Ministry of Counter Narcotics

Afghanistan
Opium Survey 2010

Summary Findings

September 2010

ABBREVIATIONS

AGE	Anti-government Elements
ANP	Afghan National Police
CNPA	Counter Narcotics Police of Afghanistan
GLE	Governor-led eradication
ICMP	Illicit Crop Monitoring Programme (UNODC)
ISAF	International Security Assistance Force
MCN	Ministry of Counter-Narcotics
UNODC	United Nations Office on Drugs and Crime

ACKNOWLEDGEMENTS

The following organizations and individuals contributed to the implementation of the 2009 Afghanistan Opium Survey and to the preparation of this report:

Ministry of Counter-Narcotics:
Mohammad Ibrahim Azhar (Deputy Minister), Mohammad Zafar (Deputy Minister), Ahmad Haroon Shirzad (Director General), Policy &Coordination, Mir Abdullah (Deputy Director of Survey and Monitoring Directorate), Saraj Ahmad (Deputy Director of Survey and Monitoring Directorate).

Survey Coordinators: Eshaq Masumi (Central Region), Abdul Mateen (Eastern Region), Abdul Latif Ehsan (Western Region), Fida Mohammad (Northern Region), Mohammed Ishaq Anderabi (North-Eastern Region), Khalil Ahmad (Southern Region), Khiali Jan Mangal (Eradication Verification Reporter), Mohammad Khyber Wardak (Database officer), Mohammad Sadiq Rizaee (Remote Sensing), Shiraz Khan Hadawe (GIS & Remote Sensing Analyst), Mohammad Ajmal (Data entry), Sahar (Data entry), Mohammad Hakim Hayat (Data entry).

United Nations Office on Drugs and Crime (Kabul)
Jean-Luc Lemahieu (Country Representative), Ashita Mittal (Deputy Representative, Programme), Devashish Dhar (International Project Coordinator), Ziauddin Zaki (National Project Coordinator), Abdul Mannan Ahmadzai (Survey Officer), Noor Mohammad Sadiq (Database Developer)

Remote sensing analysts: Ahmad Jawid Ghiasee and Sayed Sadat Mehdi
Eradication reporters: Ramin Sobhi and Zia Ulhaq.

Survey Coordinators: Abdul Basir Basiret (Eastern Region), Abdul Rahim Marikh (Eastern Region), Abdul Jalil (Northern Region), Fardin Osmani (Northern Region), Sayed Ahmad (Southern Region), Fawad Ahmad Alaie (Western Region), Mohammad Rafi (North-eastern Region), Rahimullah Omar (Central Region),

Provincial Coordinators: Fazal Mohammad Fazli (Southern Region), Mohammad Alam Ghalib Eastern Region), Altaf Hussain Joya (Western Region), Lutfurhaman Lutfi (Northern Region)

United Nations Office on Drugs and Crime (Vienna)
Sandeep Chawla (Director, Division for Policy Analysis and Public Affairs), Angela Me (Chief, Statistics and Surveys Section-SASS), Martin Raithelhuber (Programme Officer), Philip Davis (Statistician), Coen Bussink (GIS & Remote Sensing Expert) (all SASS), Yen-Ling Wong (Scientific Affairs Officer, Laboratory and Scientific Section), Suzanne Kunnen (Public Information Assistant, Studies and Threat Analysis Section).

The implementation of the survey would not have been possible without the dedicated work of the field surveyors, who often faced difficult security conditions.
The MCN/UNODC Illicit Crop Monitoring activities in Afghanistan were made possible by financial contributions from the Governments of Germany, Norway, the United Kingdom and the United States of America.

Afghanistan Opium Survey 2010

Summary Findings

September 2010

Fact Sheet Afghanistan Opium Survey 2010[1]

	2009	Change from 2009	2010
Net opium cultivation (after eradication)	123,000 ha	0%	123,000 ha
in % of agricultural land	1.6%		
Number of poppy-free provinces[2]	20	No change	20
Number of provinces affected by opium cultivation	14	No change	14
Eradication	5,351	-57%	2,316
Weighted average opium yield	56.1 kg/ha	-48%	29.2 kg/ha
Potential production of opium	6,900 mt (5,100-8,800)	-48%	3,600 mt (3,300-4,000)
No. of household involved in opium cultivation[3]	245,200	+1%	248,700
in % of total population[3]	6%		6%
Average farm-gate price (weighted by production) of fresh opium at harvest time	US$ 48/kg		
Average farm-gate price (weighted by production) of dry opium at harvest time	US$ 64/kg	+164%	US$ 169/kg
Current GDP[4]	US$ 10.7 billion		US$ 12.7 billion
Total farm-gate value of opium production	US$ 438 million	+38%	US$ 604 million
in % of GDP	4%		5%
Gross income from opium per ha	US$ 3,600	+36%	US$ 4,900
Indicative gross income from wheat per ha	US$ 1,200	-36%	US$ 770

[1] Numbers in brackets indicate the upper and lower limits of the 95% confidence interval.
[2] Poppy-free provinces are those which are estimated to have less than 100 ha of opium cultivation.
[3] Estimates are based on a population of 24.0 million for 2009 and a population of 24.5 million for 2010 and an average household size of 6.2 persons. Source: Government of Afghanistan, Central Statistical Office.
[4] Source: Government of Afghanistan, Central Statistical Office.

SUMMARY FINDINGS

The total opium poppy cultivation estimated for Afghanistan in 2010 did not change from 2009 and remained at 123,000 hectares. Ninety eight per cent of the total cultivation took place in nine provinces in the Southern and Western regions[5], including the most insecure provinces in the country. This further substantiates the link between insecurity and opium cultivation observed since 2007.

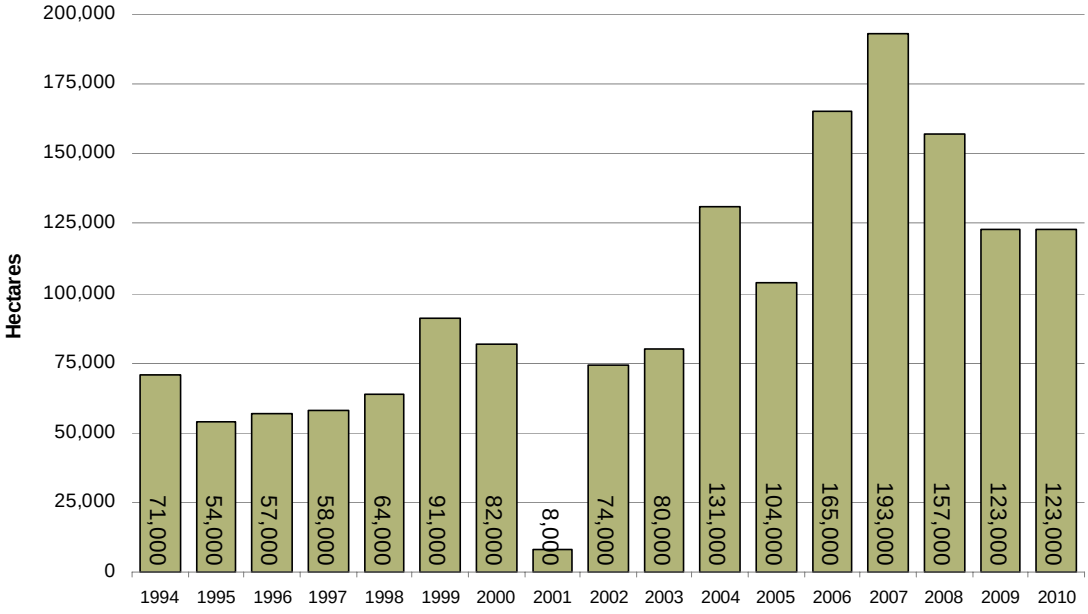
Total opium production in 2010 was estimated at 3,600 metric tons (mt), a 48% decrease from 2009. The sharp decline was due to the spread of a disease that affected opium fields in the major growing provinces, particularly Hilmand and Kandahar. The disease started to appear in the fields after flowering in spring. This was too late to plant another crop, therefore the disease did not change the area under opium cultivation. The major effect of the disease was visible in the yield which dropped to 29.2 kg/ha, a 48% reduction from 2009.

Virtually all opium production (96%) took place in the same southern and western provinces where cultivation is concentrated. The other provinces produced only 4% of the country's total opium in 2010.

All 20 provinces which were poppy free in 2009, remained poppy free in 2010.

The total estimated farm-gate income of opium growing farmers amounted to US$ 604 million. This is a significant increase from 2009, when farm-gate income for opium was estimated at US$ 438 million.

Figure 1: Opium cultivation in Afghanistan (ha), 1994-2010



Source: UNODC (1994-2002), MCN/UNODC (since 2003).

[5] Regions as designated by UNODC for analytical purposes. Please refer to Table 1 for a full list.

Table 1: Opium cultivation (2005-2010) and eradication (2009-2010) in Afghanistan

PROVINCE	Cultivation 2005 (ha)	Cultivation 2006 (ha)	Cultivation 2007 (ha)	Cultivation 2008 (ha)	Cultivation 2009 (ha)	Cultivation 2010 (ha)	Change 2009-2010 (%)	Eradication in 2009 (ha)	Eradication in 2010 (ha)
Kabul	Poppy free	80	500	310	132	152	15%	1.35	0.48
Khost	Poppy free	133	Poppy free	Poppy free	Poppy free	Poppy free	0%	0	0
Logar	Poppy free	Poppy free	Poppy free	Poppy free	Poppy free	Poppy free	0%	0	0
Paktya	Poppy free	Poppy free	Poppy free	Poppy free	Poppy free	Poppy free	0%	0	0
Panjshir	Poppy free	Poppy free	Poppy free	Poppy free	Poppy free	Poppy free	0%	0	0
Parwan	Poppy free	124	Poppy free	Poppy free	Poppy free	Poppy free	0%	0	0
Wardak	106	Poppy free	Poppy free	Poppy free	Poppy free	Poppy free	0%	0	0
Ghazni	Poppy free	Poppy free	Poppy free	Poppy free	Poppy free	Poppy free	0%	0	0
Paktika	Poppy free	Poppy free	Poppy free	Poppy free	Poppy free	Poppy free	0%	0	0
Central Region	**106**	**337**	**500**	**310**	**132**	**152**	**15%**	**1.35**	**0.48**
Kapisa	115	282	835	436	Poppy free	Poppy free	0%	31	1
Kunar	1,059	932	446	290	164	154	-6%	11	0
Laghman	274	710	561	425	135	234	73%	0	10
Nangarhar	1,093	4,872	18,739	Poppy free	294	719	145%	226	16
Nuristan	1,554	1,516	Poppy free	Poppy free	Poppy free	Poppy free	0%	0	0
Eastern Region	**4,095**	**8,312**	**20,581**	**1,151**	**593**	**1,107**	**87%**	**269**	**27**
Badakhshan	7,370	13,056	3,642	200	557	1,100	97%	420	302
Takhar	1,364	2,178	1,211	Poppy free	Poppy free	Poppy free	0%	0	12
Kunduz	275	102	Poppy free	Poppy free	Poppy free	Poppy free	0%	0	0
N.-eastern Region	**9,009**	**15,336**	**4,853**	**200**	**557**	**1,100**	**97%**	**420**	**314**
Baghlan	2,563	2,742	671	475	Poppy free	Poppy free	0%	0	0
Balkh	10,837	7,232	Poppy free	Poppy free	Poppy free	Poppy free	0%	0	0
Bamyan	126	17	Poppy free	Poppy free	Poppy free	Poppy free	0%	0	0
Faryab	2,665	3,040	2,866	291	Poppy free	Poppy free	0%	261	0
Jawzjan	1,748	2,024	1,085	Poppy free	Poppy free	Poppy free	0%	0	0
Samangan	3,874	1,960	Poppy free	Poppy free	Poppy free	Poppy free	0%	0	0
Sari Pul	3,227	2,252	260	Poppy free	Poppy free	Poppy free	0%	0	0
Northern Region	**25,040**	**19,267**	**4,882**	**766**	**Poppy free**	**Poppy free**	**0%**	**261**	**0**
Hilmand	26,500	69,324	102,770	103,590	69,833	65,045	-7%	4,119	1,602
Kandahar	12,989	12,619	16,615	14,623	19,811	25,835	30%	69	0
Uruzgan	2,024	9,703	9,204	9,939	9,224	7,337	-20%	74	15
Zabul	2,053	3,210	1,611	2,335	1,144	483	-58%	0	0
Day Kundi	2,581	7,044	3,346	2,273	3,002	1,547	-48%	27	0
Southern Region	**46,147**	**101,900**	**133,546**	**132,760**	**103,014**	**100,247**	**-3%**	**4,289**	**1,617**
Badghis	2,967	3,205	4,219	587	5,411	2,958	-45%	0	0
Farah	10,240	7,694	14,865	15,010	12,405	14,552	17%	43	198
Ghor	2,689	4,679	1,503	Poppy free	Poppy free	Poppy free	0%	0	0
Hirat	1,924	2,287	1,525	266	556	360	-35%	67	159
Nimroz	1,690	1,955	6,507	6,203	428	2,039	376%	0	0
Western Region	**19,510**	**19,820**	**28,619**	**22,066**	**18,800**	**19,909**	**6%**	**110**	**357**
Total (rounded)	**104,000**	**165,000**	**193,000**	**157,000**	**123,000**	**123,000**	**0%**	**5,351**	**2,316**

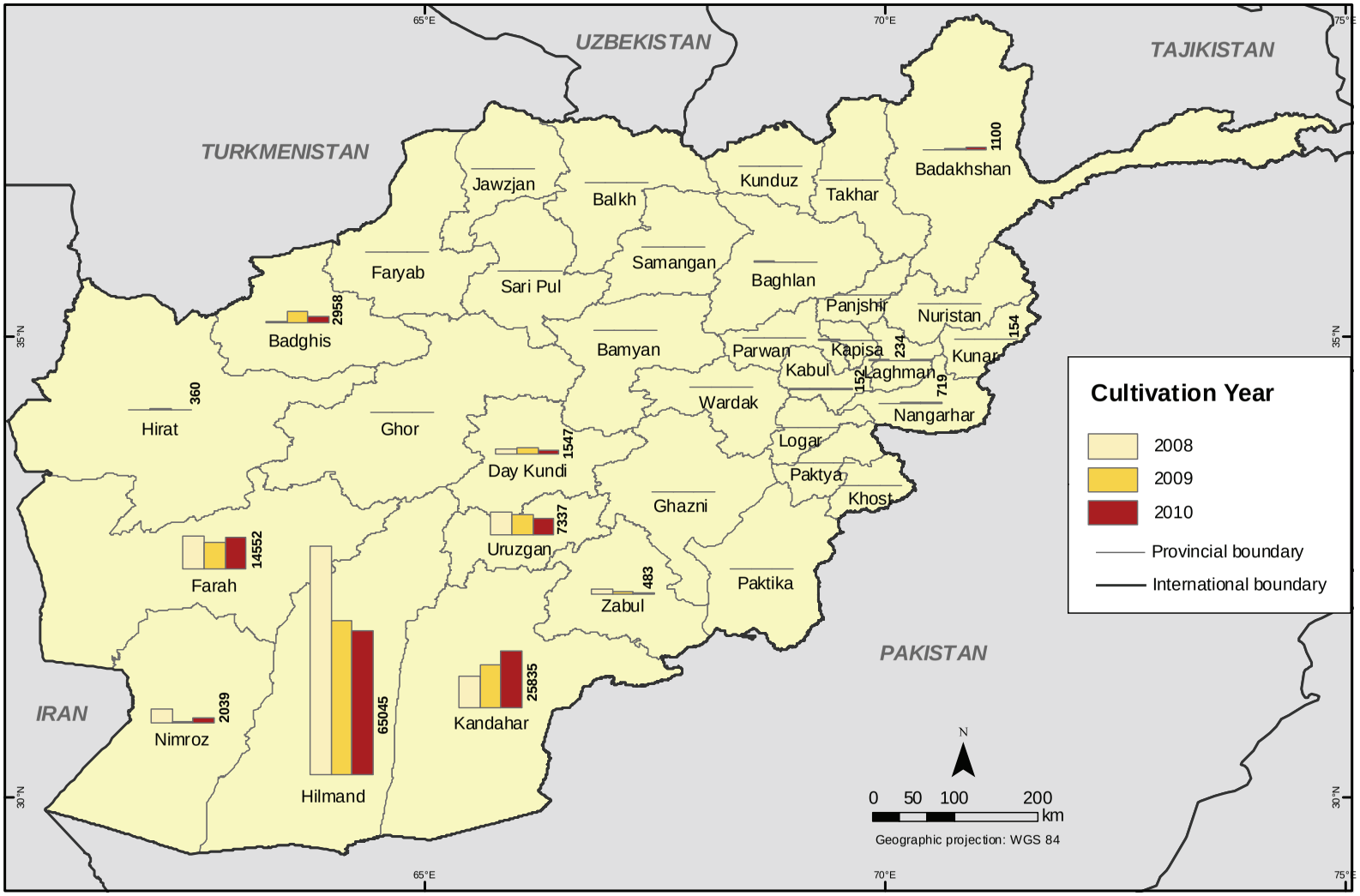
A province is defined as poppy free when it is estimated to have less then 100 ha of opium cultivation.

Source: MCN/UNODC.

Opium cultivation in 2010 remained at 2009 levels

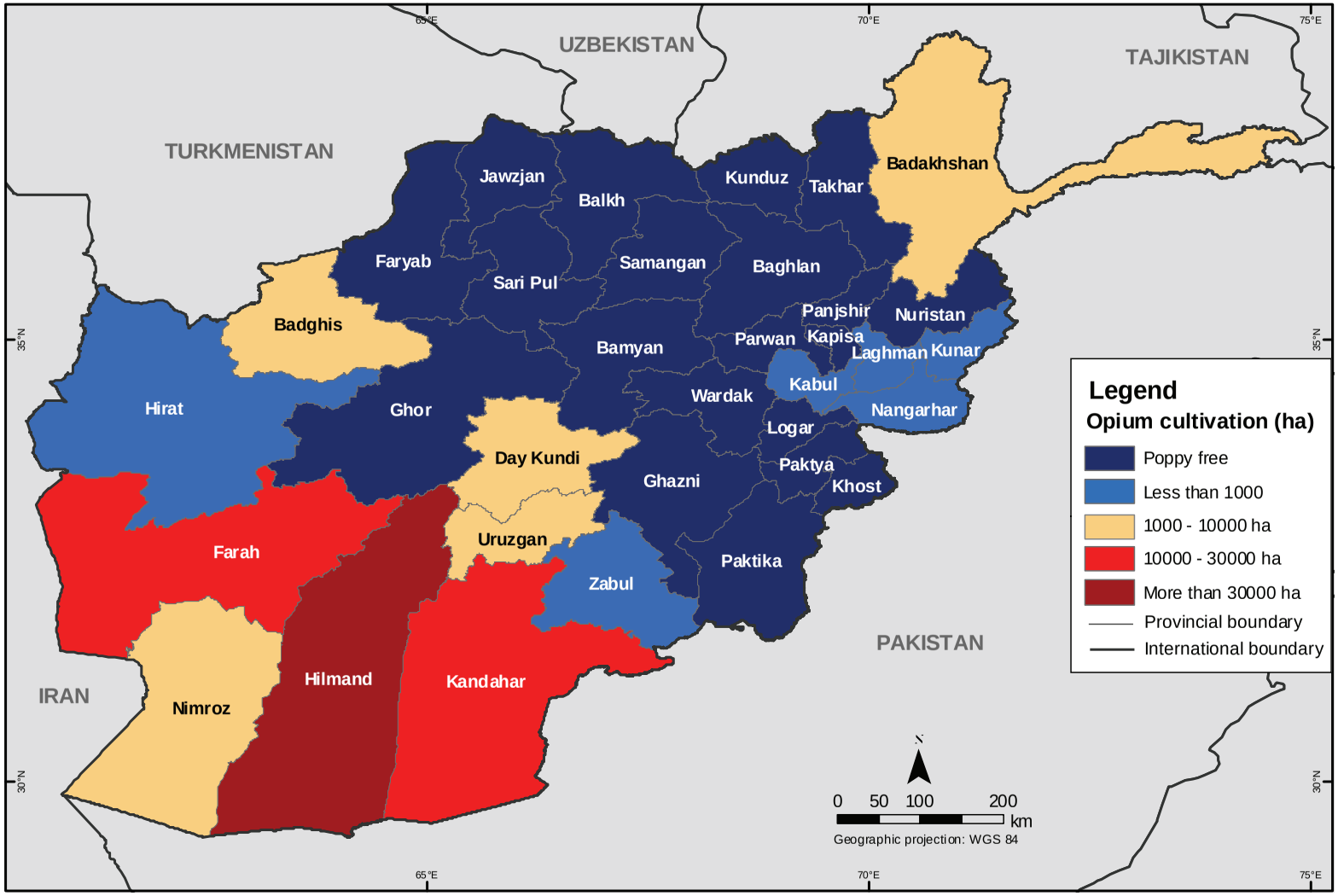
There was no major difference in the level of opium cultivation between 2009 and 2010 as opium cultivation remained at 123,000 ha, the same rounded figure as 2009.
98% of the opium cultivation remains concentrated in the Southern and Western regions, however, significant changes occurred within these regions. Cultivation decreased in some of the main opium poppy growing provinces (Uruzgan, Zabul, Day Kundi, Badghis, Hirat) and increased in others (Kandahar, Farah, Nimroz). Opium cultivation in Hilmand remained stable with a small, statistically not significant decrease of 7%. The Northern region maintained the poppy free status reached in 2009.

Opium cultivation in Afghanistan, 2008-2010



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

Opium cultivation in Afghanistan, 2010 (at province level)



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

The regional divide of opium cultivation between the south and rest of the country continued in 2010. Most of the opium cultivation remained confined to the south and west, which are dominated by insurgency and organized criminal networks. This mirrors the sharp polarization of the security situation between the lawless south and relatively stable north of the country.

Poppy-free provinces in 2010

All 20 provinces which were poppy-free in 2009 continued to be poppy-free in 2010. No additional province became poppy-free.[6]

Table 2: Provinces with poppy free status in 2010 (<100 ha opium poppy cultivation)

Region	Province
Central region	Khost, Logar, Paktya, Paktika, Panjshir, Parwan, Wardak, Ghazni
Northern region	Baghlan, Balkh, Bamyan, Faryab, Jawzjan, Samangan, Sari Pul
North-eastern region	Kunduz, Takhar
Eastern region	Kapisa, Nuristan
Western region	Ghor

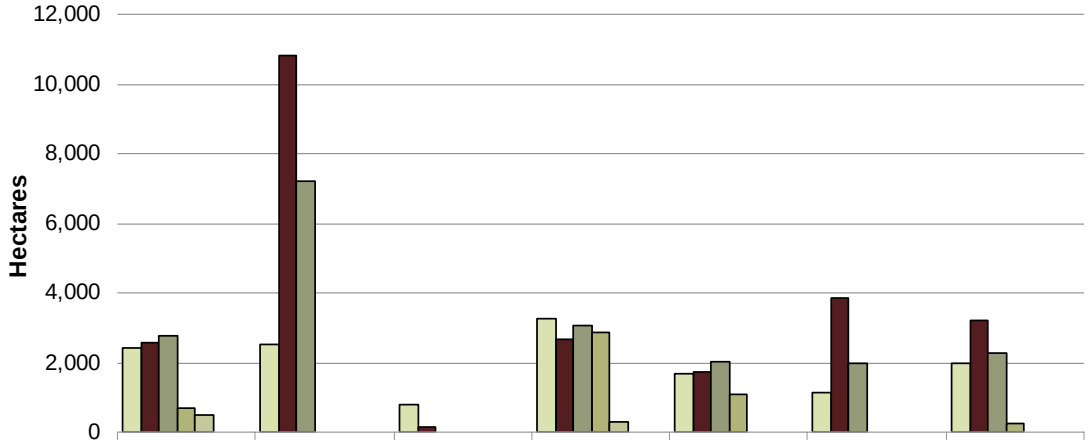
In the Central and Eastern regions, Kabul and Kunar provinces continued to have low levels of cultivation and were close to reaching poppy-free status.

All provinces of the Northern region remained poppy-free

The Northern region consists of Baghlan, Balkh, Bamyan, Faryab, Jawzjan, Samangan and Sari Pul provinces. In 2010, all the provinces in this region remained poppy-free. Most of these provinces sustained moderate levels of opium cultivation in the past except Balkh. This province emerged as a major opium cultivating province in 2005 and 2006 (10,837 ha and 7,232 ha respectively), whereas the rest of the provinces contributed in the range of 17 to 3,000 ha each. The decline in opium cultivation in the Northern region started with strict law enforcement and counter-narcotic initiatives. In 2008, poppy cultivation in these provinces was already negligible and Balkh and Bamyan provinces have remained poppy-free since 2007.

[6] A province is defined as poppy-free when it is estimated to have less then 100 ha of opium cultivation.

Figure 2: Opium poppy cultivation in the Northern region by province (ha), 2004-2010

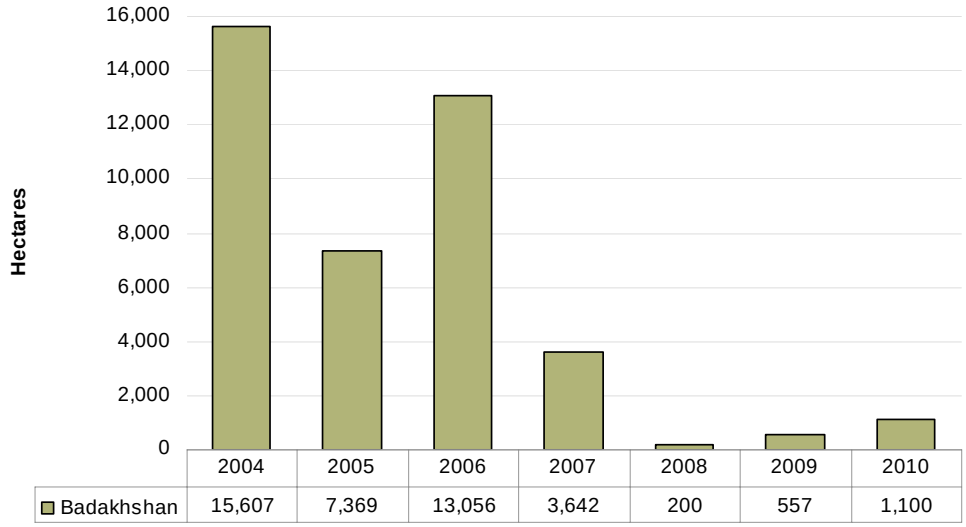


	Baghlan	Balkh	Bamyan	Faryab	Jawzjan	Samangan	Sari Pul
2004	2,444	2,495	803	3,249	1,673	1,151	1,974
2005	2,563	10,837	126	2,665	1,748	3,874	3,227
2006	2,742	7,232	17	3,040	2,024	1,960	2,252
2007	671	poppy-free	poppy-free	2,866	1,085	poppy-free	260
2008	475	poppy-free	poppy-free	291	poppy-free	poppy-free	poppy-free
2009	poppy-free	poppy-free	poppy-free	poppy-free	poppy-free	poppy-free	poppy-free
2010	poppy-free	poppy-free	poppy-free	poppy-free	poppy-free	poppy-free	poppy-free

Badakhshan remained the only opium poppy cultivating province in the North-eastern region

In the North-eastern region, Kunduz province has been poppy-free since 2007 and Takhar province since 2008. In 2009 and 2010, Badakhshan remained the only opium cultivating province in this region. Compared to cultivating provinces in the South, the 2010 opium poppy cultivation in Badakhshan remained low at 1,100 ha, although this represents a large increase (97%) from 2009. The increase happened despite the eradication of 302 ha. 98% of the opium poppy cultivation happened in rain-fed areas.

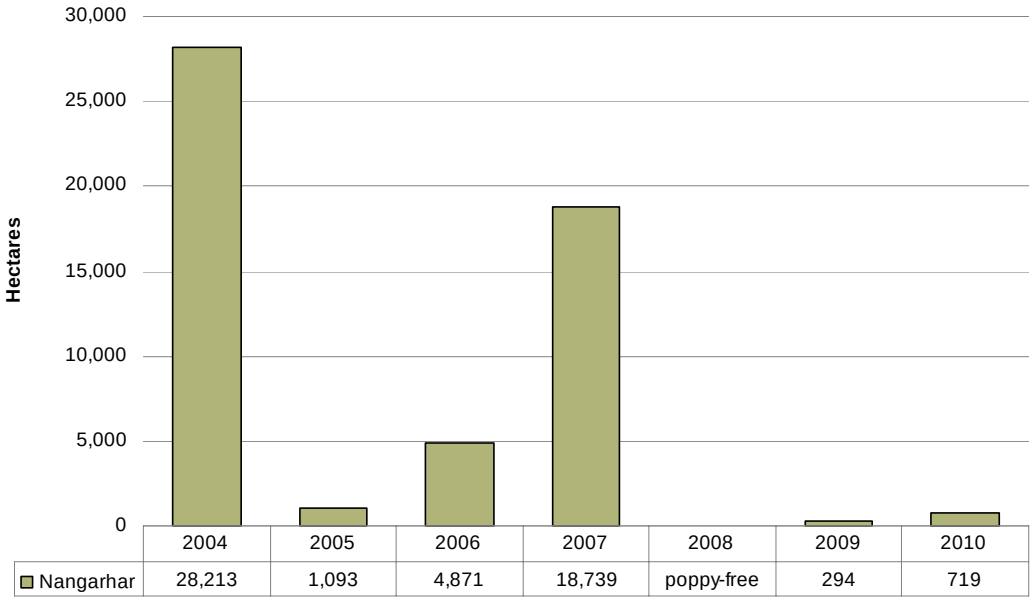
Figure 3: Opium poppy cultivation in Badakhshan province (ha), 2004-2010



Nangarhar maintains low level of cultivation

Nangarhar province became poppy-free for the first time in 2008, but in 2009 it lost the poppy-free status as 294 ha of opium poppy were detected. In 2010, opium cultivation continued to increase and reached 719 ha. Considering that Nangarhar was traditionally a large opium growing province, the area estimated in 2010 is comparatively small, despite an increase of 145% on 2009. Due to strong resistance by AGE against eradication, only 16 ha of opium poppy cultivation could be eradicated in Nangarhar province in 2010.

Figure 4: Opium cultivation in Nangarhar province (ha), 2004-2010



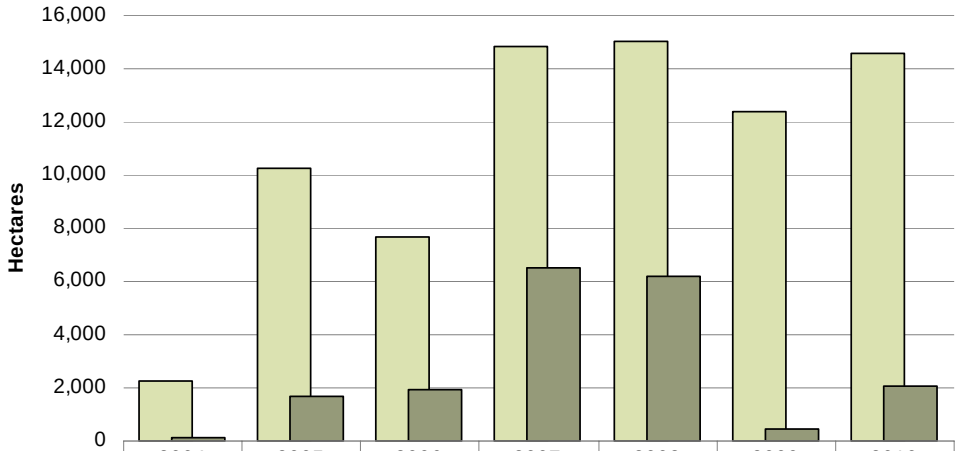
Before 2008, the level of opium cultivation in Nangarhar province was erratic. In 2004, cultivation was at 28,213 ha, the following year it dropped drastically to 1,093 ha and was confined to remote parts of the province. In 2006, it increased again to 4,872 ha and in 2007 further increased to 18,739, before becoming poppy free in 2008.

In 2010, Kunar province of the Eastern region was very close to be poppy-free with negligible amounts of cultivation (154 ha) . In Laghman province, opium cultivation increased by 73% in 2010, (234 ha) where only (10 ha) of opium poppy cultivation were eradicated in 2010.

Farah remains the main opium cultivating province in the Western region

Trends in opium cultivation level in Farah province has often been irregular. In 2008 it reached the highest cultivation level (15,010 ha). In 2009, there was a 17% decrease while in 2010, opium cultivation increased by 17%, reaching almost the same level of 2008. Farah is the most insecure province in the Western region.

Figure 5: Opium cultivation in Farah and Nimroz provinces (ha), 2004-2010

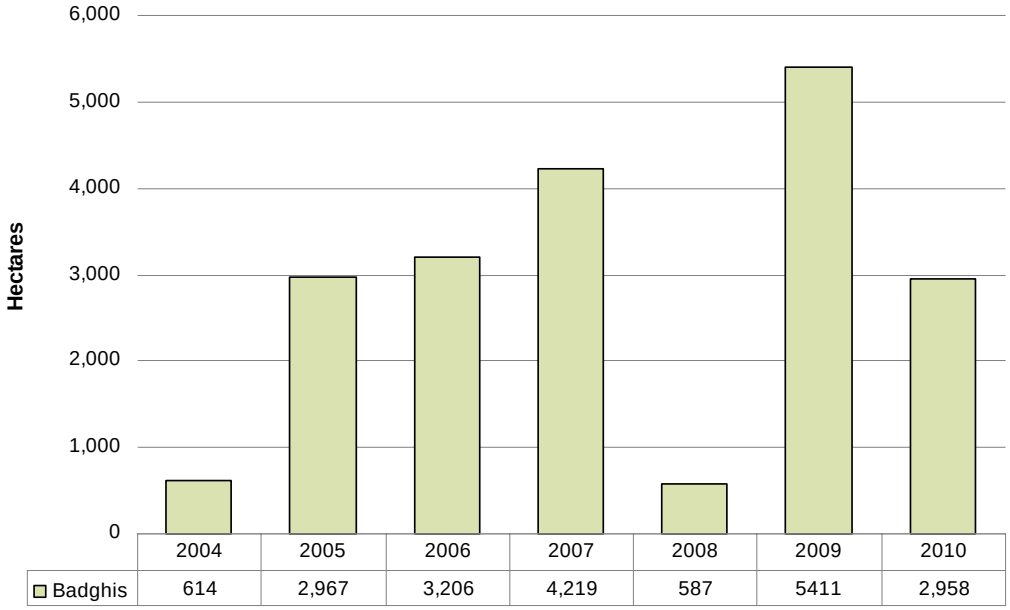


	2004	2005	2006	2007	2008	2009	2010
Farah	2,289	10,240	7,694	14,865	15,010	12,405	14,552
Nimroz	115	1,690	1,956	6,507	6,203	428	2,039

Note: Due to administrative boundary changes, the 2009 and 2010 estimates for Farah and Nimroz were calculated considering parts of Khash Rod district, the main opium cultivating district in Nimroz, as being in Farah province. Figures for 2008 and before include all of Khash Rod district in Nimroz province

Opium cultivation level in Badghis province raised steadily between 2004-2009 with the exception of 2008 when a drought and the total failure of rain-fed crops contributed to the drop in opium cultivation. In 2010, opium cultivation decreased by 45% to 2,958 ha. In 2009, good rainfall had resulted in extensive cultivation in rain-fed areas, enabling farmers to grow more poppy. This had contributed to a strong increase in opium cultivation from only 587 ha in 2008 to 5,411 ha in 2009, most of which was in areas difficult to access.

Figure 6: Opium cultivation in Badghis province (ha), 2004-2010

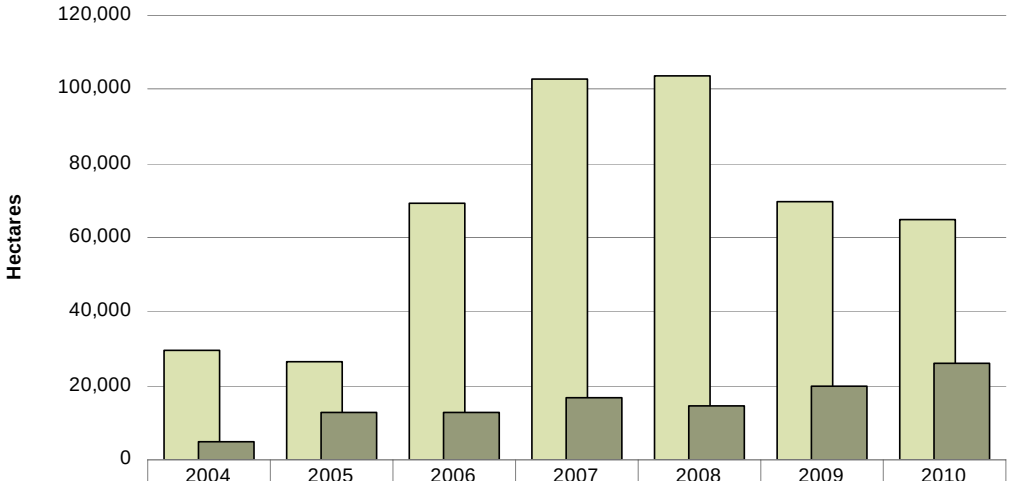


	2004	2005	2006	2007	2008	2009	2010
Badghis	614	2,967	3,206	4,219	587	5411	2,958

Opium cultivation in Hilmand decreases by 7%

In 2010, opium cultivation in Hilmand went down by 4,788 ha or 7% compared to 2009, a decrease which is statistically not significant. Despite this reduction, Hilmand remained the largest opium cultivating province with 65,045 ha (53% of total opium cultivation in Afghanistan). Kandahar province, Hilmand's neighbour to the east, experienced an opposite trend. Here, opium cultivation has been on the increase since 2007. In 2010, opium cultivation in Kandahar reached almost 26,000 ha, representing 21% of national cultivation.

Figure 7: Opium cultivation in Hilmand and Kandahar provinces (ha), 2004-2010



	2004	2005	2006	2007	2008	2009	2010
Hilmand	29,353	26,500	69,323	102,770	103,590	69,833	65,045
Kandahar	4,959	12,989	12,619	16,615	14,623	19,811	25,835

98% of opium cultivation is concentrated in the Southern and Western regions

In 2010, 82% of the Afghan opium cultivation was concentrated in the Southern region. Kandahar was the only province in this region that showed a significant increase from 19,811 ha in 2009 to 25,835 ha in 2010 (30% increase). In 2010, Kandahar was the second largest opium cultivating province after Hilmand, which still had over three times more area under opium cultivation than Kandahar. In the Western region, Farah, Badghis and Nimroz were the main opium poppy cultivating provinces with 70% of regional opium cultivation being concentrated in Farah province alone.

Security has been a major problem in the Southern and Western regions. Because the lack of security compromises the rule of law from the legitimate Government, counter-narcotic interventions are limited and these regions consistently show very high opium cultivation levels.

Table 3: Regional distribution of opium cultivation (ha), 2009-2010

Region	2009 (ha)	2010 (ha)	Change 2009-2010	2010 (ha) as % of total
Southern	103,014	100,247	-3%	82%
Western	18,800	19,909	+6%	16%
Eastern	593	1,107	+87%	0.9%
North-eastern	557	1,100	+97%	0.9%
Central	132	152	+15%	0.1%
Northern	Poppy free	Poppy free	NA	NA
Rounded Total	**123,000**	**123,000**	**0%**	**100%**

Table 4: Main opium cultivating provinces in Afghanistan (ha), 2010

Province	2007 (ha)	2008 (ha)	2009 (ha)	2010 (ha)	Change 2009-2010
Hilmand	102,770	103,590	69,833	65,045	-7%
Kandahar	16,615	14,623	19,811	25,835	+30%
Farah	14,865	15,010	12,405	14,552	+17%
Uruzgan	9,204	9,939	9,224	7,337	-20%
Badghis	4,219	587	5,411	2,958	-45%
Day Kundi	3,346	2,273	3,002	1,547	-48%
Nimroz	6,507	6,203	428	2,039	+376%
Rest of the country	35,455	5,028	2,982	3,202	+7%
Total	**193,000**	**157,000**	**123,000**	**123,000**	**0%**

Potential opium production in Afghanistan had a 48% decline in 2010

In 2010, opium production in Afghanistan decreased by almost half (48%) compared to 2009 and was lower than in any year since 2003. This was due to a strong decline in opium yield in the main cultivation areas in the South and West of the country, while the overall area under opium poppy cultivation remained at level of 2009.

Figure 8: Potential opium production in Afghanistan (mt), 1994-2010

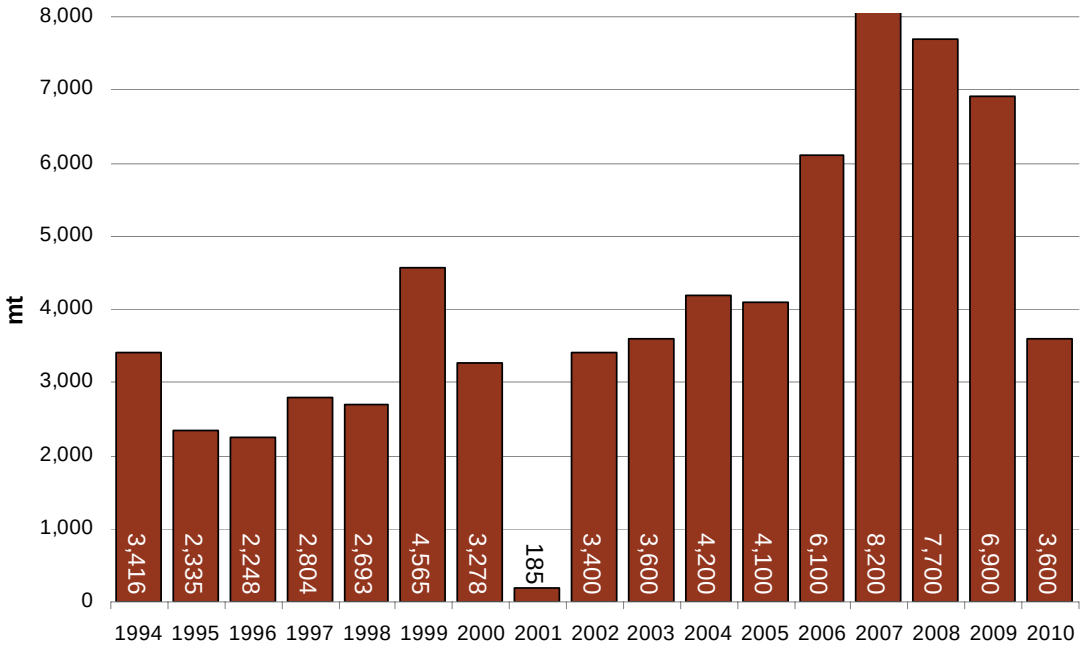


Table 5: Potential opium production by region (mt), 2009-2010

PROVINCE	Production 2009 (mt)	Production 2010 (mt)	Change 2009-2010 (mt)	Change 2009-2010 (%)
Central Region	NA*	8	NA	NA
Eastern Region	21	56	+35	+167%
North-eastern Region	19	56	+37	+195%
Northern Region	Poppy-free	Poppy-free	NA	NA
Southern Region	6,026	2,979	-3047	-51%
Western Region	825	478	-347	-42%
Total (rounded)	**6,900**	**3,600**	**-3,300**	**-48%**

* In 2009, no specific regional production figure was calculated for the Central region due to a low number of yield measurements in that region.

Despite a low yield, the South remained the largest opium producing region in 2010 contributing 83% to total opium production, followed by the Western region (13%). Opium production fell significantly in the largest opium producing province of Hilmand (Southern region) where still over half of all opium (53%) was produced. While the largest five opium producing provinces all showed strong decreases in opium production,

some smaller ones such a Badakhshan and Nimroz provinces experienced a strong production increase, which, however, did not make up for the decreases elsewhere.

Table 6: Potential opium production in main opium producing provinces (mt), 2009-2010

PROVINCE	Production 2009 (mt)	Production 2010 (mt)	Change 2009-2010 (mt)	Change 2009-2010 (%)
Hilmand	4,085	1,933	-2,152	-53%
Kandahar	1,159	768	-391	-34%
Farah	545	349	-195	-36%
Uruzgan	540	218	-322	-60%
Badghis	238	71	-167	-70%
Badakhshan	19	56	+37	+205%
Nimroz	19	49	+30	+158%
Day Kundi	176	46	-130	-74%

The average yield (weighted by cultivation area) for Afghanistan in 2010 was 29.2 kg/ha, a 48% reduction from the 56.1 kg/ha estimated in 2009. As a consequence, potential opium production decreased by 48% to 3,600 mt. This reduction was partly due to the fact that the number of opium poppy capsules per square meter and their average size were significantly smaller in the Western and Southern regions in 2010 than in 2009. An additional and more important factor was the occurrence of diseases in major growing areas that affected opium plants at late stage of plant development. The diseased plants exhibited wilt symptoms with leaves yellowing, drooping and finally desiccating completely indicative of a collar (stem/root interface) and/or upper root rot. These symptoms are consistent with those observed previously in the region for fungal infestations.

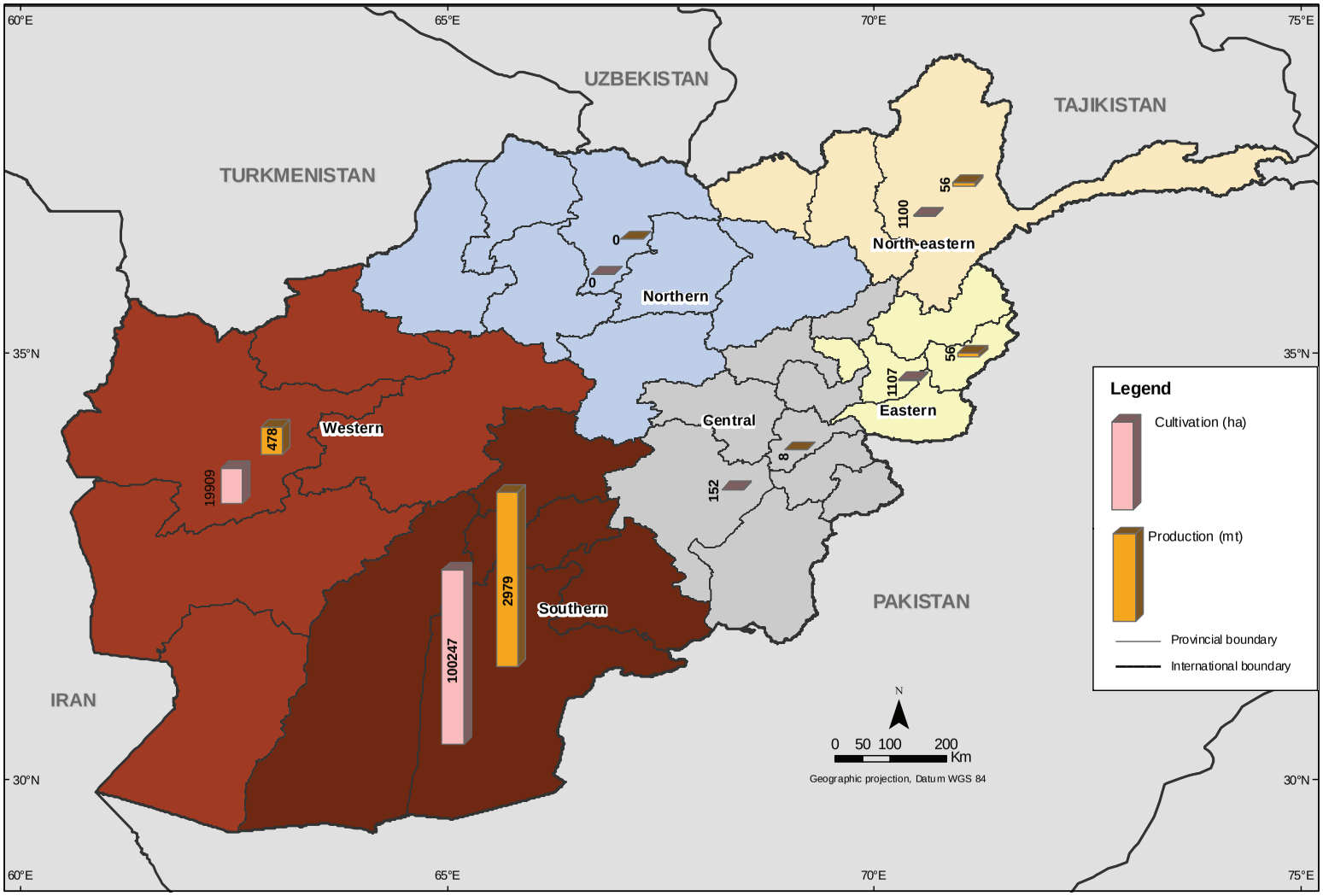
Table 7: Average opium yield by region in Afghanistan, 2008-2009

Region	2009 average yield (kg/ha)	2010 average yield (kg/ha)	% Change
Central *	NA	NA	NA
Eastern	36.2	NA	NA
North-eastern	34.3	NA	NA
Northern	NA*	NA	NA
Southern	58.5	29.7	-49%
Western	43.9	24.0	-45%
Central, Eastern, North-eastern, Northern **	NA	51.0	NA
Weighted national average	**56.1**	**29.2**	**-48%**

* In 2009, no regional yield figure for the Central region was calculated due to a low number of yield measurements in this region. The Northern region was poppy-free.

** In 2010, due to a low number of yield measurements in some regions, Central, Eastern, North-eastern and Northern regions were grouped into one yield region. For these regions, direct region-by-region comparison with yields in 2009 is not possible.

Regional opium cultivation and production in Afghanistan, 2010



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

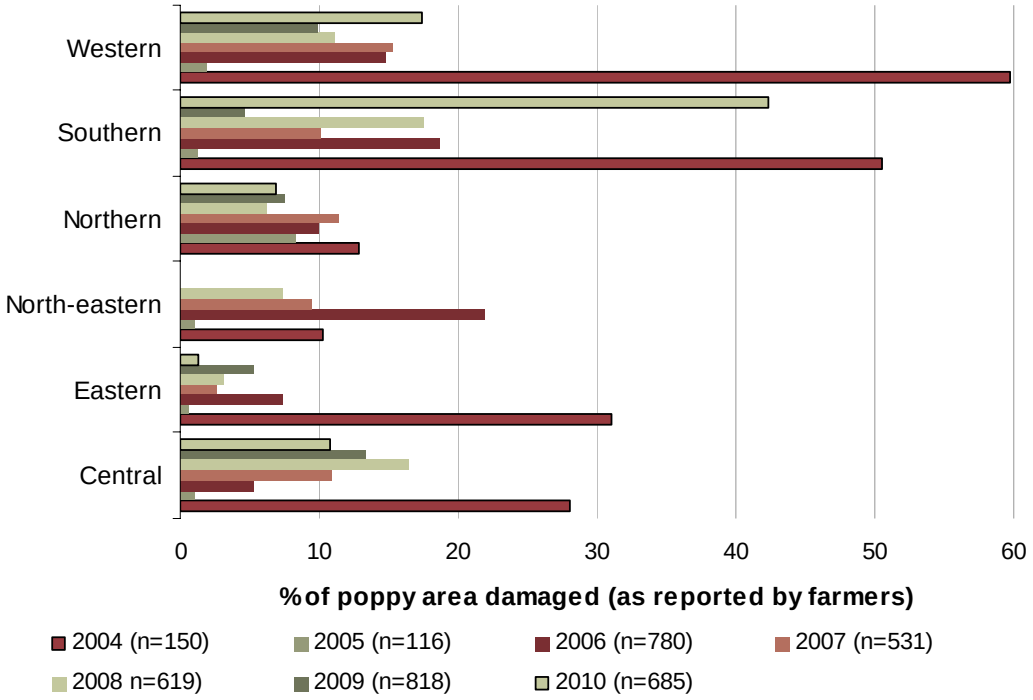
The Southern region was the most affected region with about 42% of the area under opium cultivation damaged. The Western region was also affected by diseases but to a much lower degree. In the West, a combination of factors including frost played a role according to farmer reports.

Opium poppy diseases are a normal occurrence in Afghanistan. Farmers reported varying degrees of damage to their crops in practically all years and regions since systematic yield surveys started. Reported causes of the damage farmers observed on their poppy fields include various local names for plant diseases, frost or drought conditions and different pest including aphids/insects and worms. Use of agrochemicals to fight plant diseases or pests is rather the exception. While this information on crop damage is based on farmers' assessment and not on scientific investigations, the comparison of farmers' damage assessment from 2004 to 2010 clearly shows the difference between "normal" levels of crop damage and the extraordinary high levels reach in 2004 and 2010. Both in 2004 and 2010, the Southern and Western regions were the most affected, according to farmers' damage assessment. In 2004, other regions, which at that time still had relatively high levels of cultivation, were also affected, while in 2010 this was not the case.

The pattern of diseases and other damage reported by farmers in 2010 differs clearly between the Southern and Western regions and the rest of the country. In the West, farmers most frequently identified frost as the cause of the damage. Other causes were well below 10% of responses. A large proportion of farmers in the Western region reported not to have observed any damage at all (39%). The frost damage reported by farmers may well have contributed to plant death or damage at earlier stages of plant development, resulting in low yields, which were reflected in the results of the systematic yield survey.

Photo 1: Opium poppy plants affected by disease, Hilmand province, April 2010

Figure 9: Proportion of damage to opium cultivation area reported by farmers, 2004-2010



In the Southern region, almost all farmers reported some kind of damage to their opium crops. Frost (23%) and drought (12%) were often mentioned. However, most causes of damage were reported by farmers as "yellowish" (35%) or "fungal disease" (7%). These observations could be related to a collar (stem/root interface) and/or upper root rot described above.

Opium farmers discovered this phenomenon only at a relatively late stage, often after flowering or just before the opium poppy fields were ready for harvest. The pre-mature drying of the plant greatly reduced the amount of opium which could be harvested as the harvesting technique used in Afghanistan consists of lancing the fully developed but still green opium capsules. Liquid plant juice (opium latex) oozes out of the cuts, dries on the capsules to turn into opium gum, and is scratched off the other day. If capsules turn dry earlier, less opium can be harvested. Opium yields on disease-affected fields were only 13% to 39% of the amount farmers would have normally harvested from fields with similar numbers and sizes of capsules.[7]

[7] This finding is based on weight measurements of harvested opium conducted on disease-affected fields in Hilmand and Kandahar in 2010. The results were compared to the potential yield estimated from poppy capsule volumes per square meter, which is the established method used in UNODC-supported opium surveys in Afghanistan, Lao PDR and Myanmar. See United Nations (2001), Guidelines for Yield Assessment of Opium Gum and Coca Leaf from Brief Field Visits. New York. ST/NAR/33.

Photo 2: Opium poppy field affected by disease, Hilmand province, April 2010

Eradication was at the lowest level since the monitoring system started in 2005

A total of 2,316 ha of Governor-led eradication (GLE) were verified by MCN/UNODC. GLE was carried out in 11 provinces. The final figures of eradication in Hilmand, Farah, Hirat and Badakhshan provinces were adjusted after verification using satellite images.

Table 8: Eradication and opium cultivation in Afghanistan (ha) 2005-2010

Year	2005	2006	2007	2008	2009	2010
Governor-led eradication (GLE) (ha)	4000	13050	15898	4306	2687	2316
Poppy Eradication Force (PEF) (ha)	210	2250	3149	1174	2663	0
Total (ha)	**4210**	**15300**	**19510**	**5480**	**5351**	**2316**
Opium cultivation (ha) *	104,000	165,000	193,000	157,253	119,141	123,000
% poppy in insecure provinces of South and West	56%	68%	80%	98%	99%	98%
Poppy-free provinces	8	6	13	18	20	20

* Net opium cultivation after eradication

Comparing the 2010 and 2009 eradication campaigns, the following can be noted:

- The 2010 eradication campaign started in February in Hilmand and Farah provinces. In 2009, eradication started at the same time in Hilmand and Hirat provinces.
- Eradication progressed at a slower pace in 2010 compared to 2009 throughout the country.
- The 2010 eradication campaign was mostly active in South, West, and North-eastern regions while last year there was more eradication in the Eastern region. In 2010 the

eradication in Nangarhar province was not intense due to frequent attacks on eradication teams.

- In 2010, the number of security incidents was less than in 2009. GLE teams were attacked 12 times in 2010 while there were 34 attacks on GLE in 2009. However, the number of fatalities was higher this year as compared to 2009. This year about 28 eradication campaign related fatalities were reported against 21 in 2009.
- In 2010, only GLE eradication took place whereas in 2009, the Poppy Eradication Force (PEF) had eradicated about half of the total area.

Table 9: Security incidents eradication, 2009-2010

	2008	2009	2010	Change 2009-2010 %
Persons injured	>100	52	36	-31%
Fatalities	78	21	28	33%

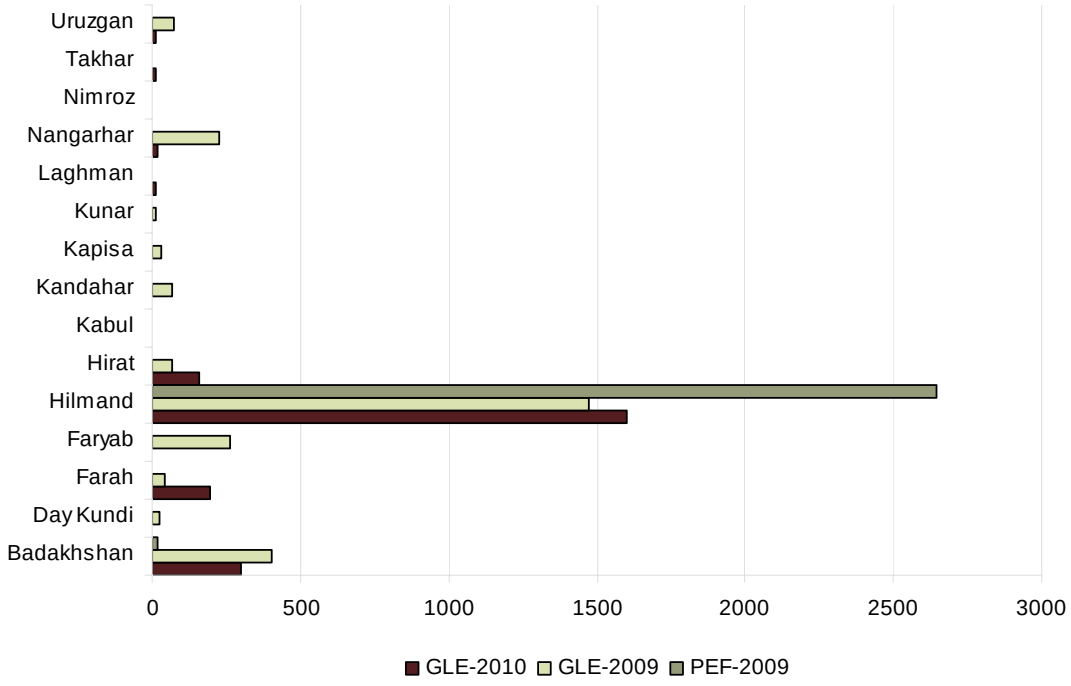
As reported by eradication verification surveyors.

Although the highest number of hectares eradicated (1,602 ha) was verified in Hilmand province, this amount was negligible (2.4%) considering the amount of opium cultivation in this province (65,045 ha). Eradication in Uruzgan (15 ha) was also negligible in comparison to its total cultivation of 7,337 ha. No eradication was carried out in Kandahar province in 2010. In Farah, 198 ha of eradication were verified (1.3%), however this amount is also negligible compared to the total opium cultivation (14,552 ha). In Badakhshan and Hirat, the percentage eradication were 27% and 44% respectively of the total area under opium cultivation in these provinces.

Table 10: Governor-led eradication by province (ha), 2010

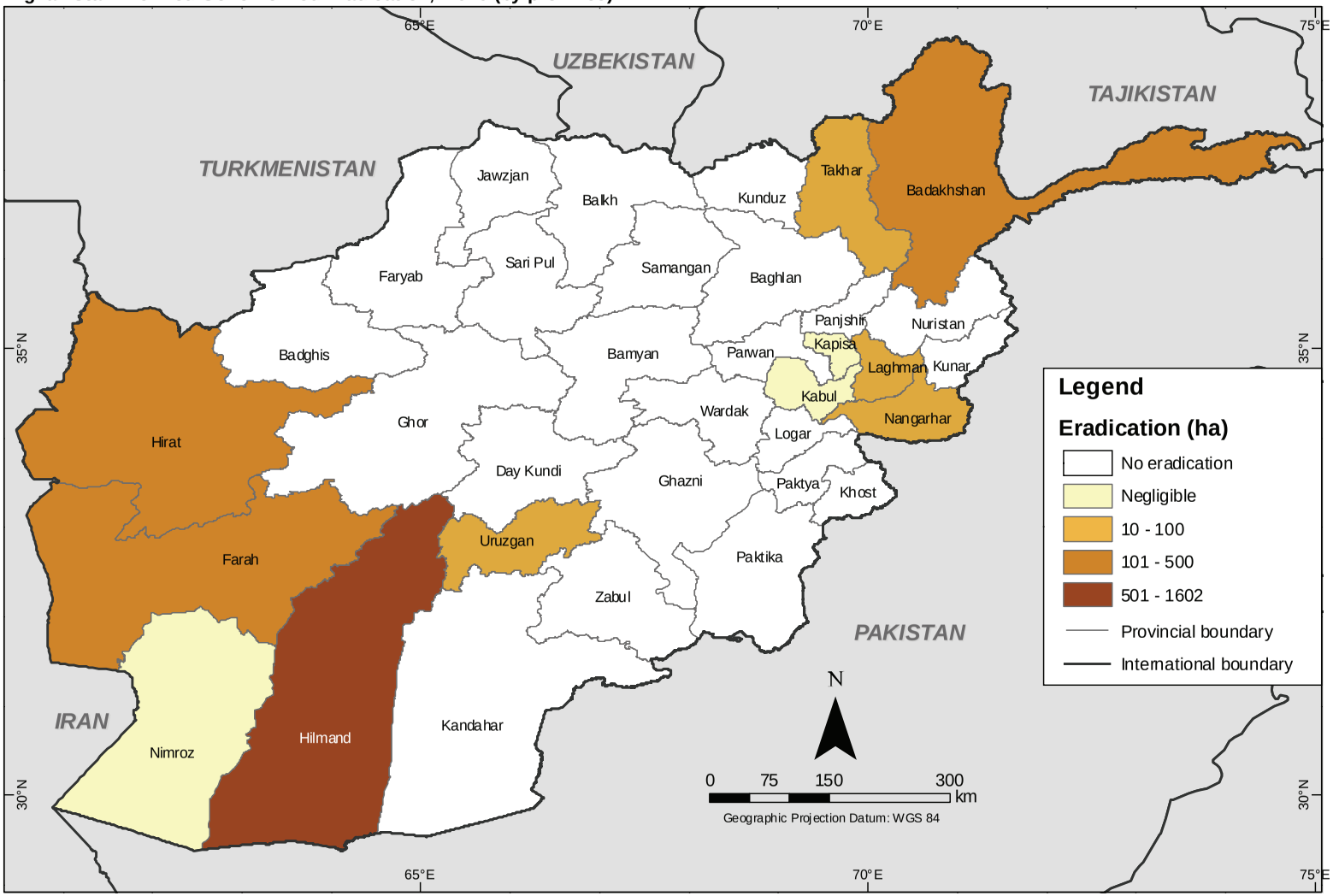
Province	Eradication (ha) verified	No. of fields eradication reported	No. of villages eradication reported
Badakhshan	302	1,760	103
Farah	198	431	35
Hilmand	1,602	3,573	178
Hirat	159	741	42
Kabul	0	9	1
Kapisa	1	28	11
Laghman	10	27	4
Nangarhar	16	45	5
Nimroz	0	14	2
Takhar	12	51	7
Uruzgan	15	197	14
Total	**2316**	**6876**	**402**

Figure 10: Eradication comparison by province in 2009 and 2010



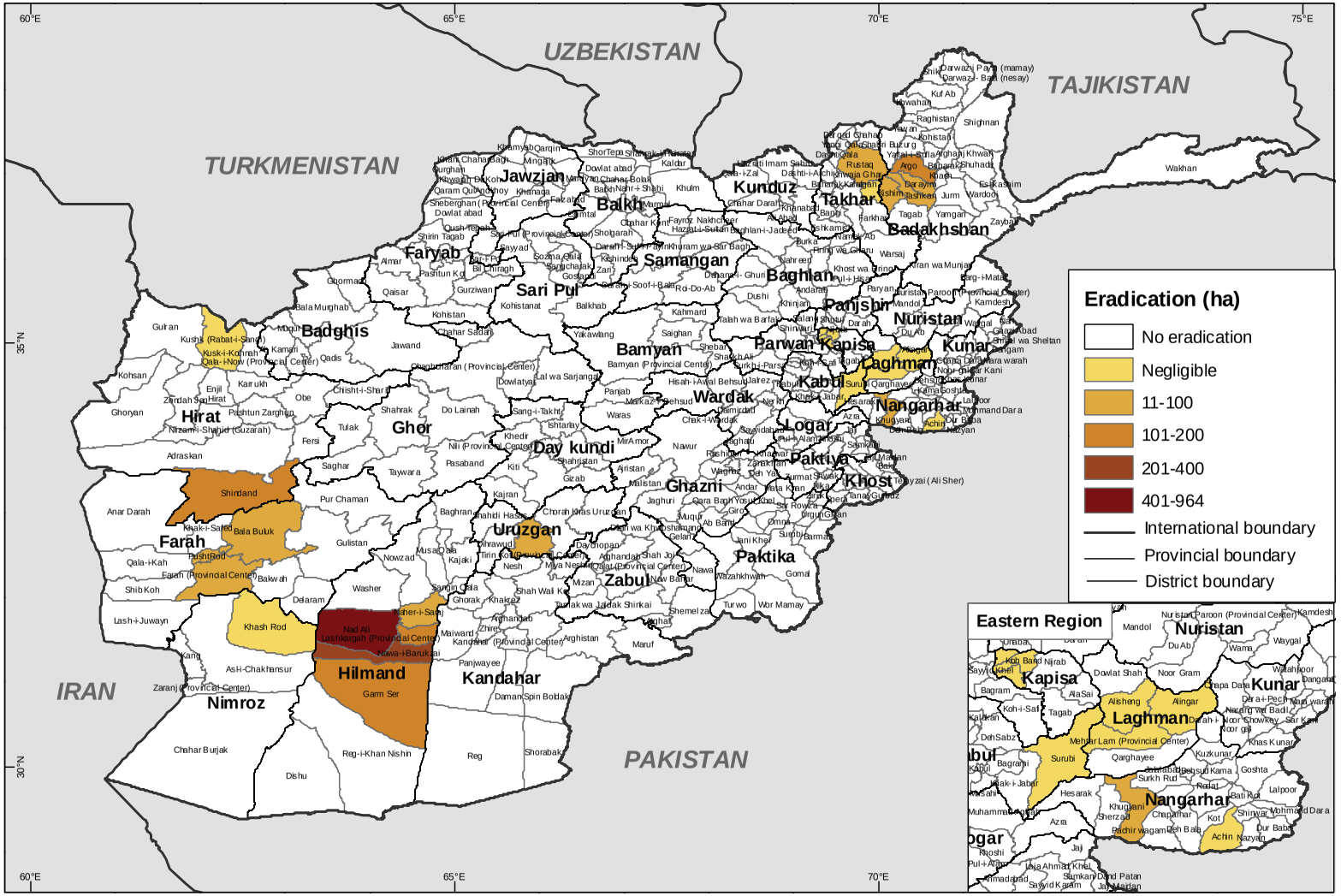
Note: In 2010, no PEF eradication took place.

Afghanistan: Verified Governor-led Eradication, 2010 (by province)



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

Afghanistan: Verified Governor-led Eradication, 2010 (by district)



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

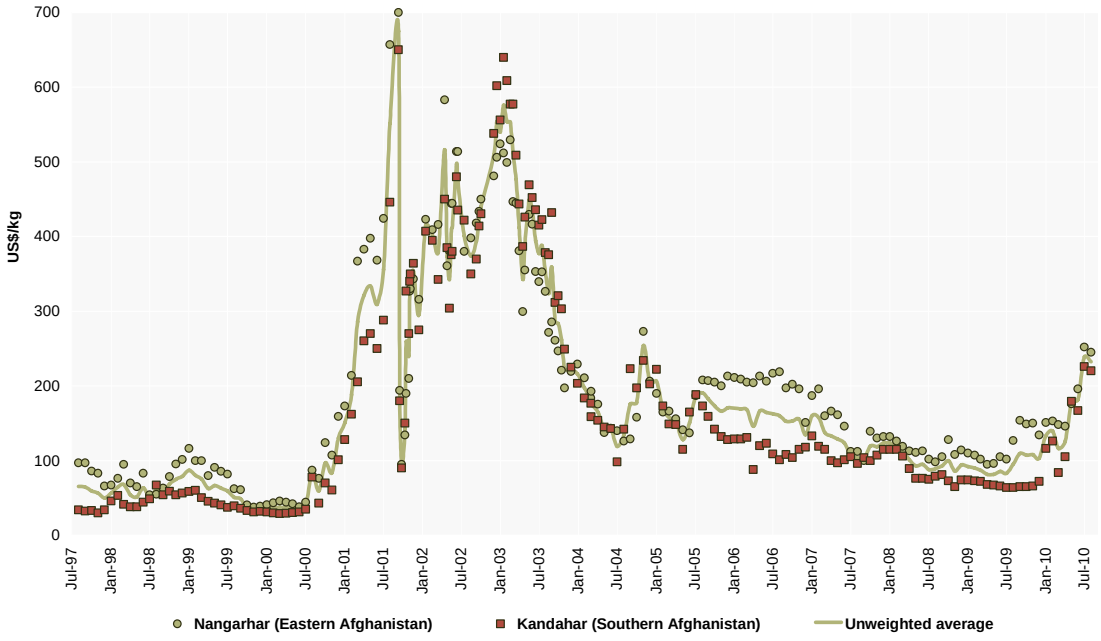
Opium prices show rapid increasing trends in 2010

In 2010, the average farm-gate price of dry opium at harvest time (weighted by production) was US$ 169/kg, a 164% increase from 2009. The rapid increasing trend is a market response to the drastic reduction of the opium production which is due to the spreading of the opium disease in the major growing areas.

After a steady decline between 2005-2009, opium price started a rapid increase in 2010 reaching nominal levels observed only at the end of 2004, a year when opium cultivation was also heavily affected by diseases. The long-time trend of opium price observed in the two provinces of Nangarhar and Kandahar shows that the price trend in 2010 followed a similar trend observed in 2004, but that the peak is still far from the very high levels reached in 2001 and 2003 when the market was affected by the lowest level of production.

Price trends in the next months will show how the opium market will be affected by the production decrease in 2010, however, the current high price may play an encouraging factor for farmers to cultivate opium. In 2009 data on famers motivation to cultivate opium had started to show an increasing number of farmers stopping opium cultivation due to its low sale price. It is worrying that the current high sale price of opium in combination with a lower wheat price may encourage famers to go back to opium cultivation.

Figure 10: Opium prices reported by traders in Kandahar and Nangarhar, Jul 1997 – Aug 2010 (US$/kg)



Nominal prices converted to US$ at local exchange rate, not adjusted for inflation.

MCN/UNODC has monitored opium prices on a monthly basis in selected provinces of Afghanistan since 1994. In all regions monthly prices showed a decreasing trend since

2005. Since mid-2007, opium prices at the trading level in the Western and Eastern regions tended to be higher than prices in other regions. Between July and November 2009 opium started to increase in all regions with the Western, Southern and Eastern regions reaching the highest levels .

Figure 11: Dry opium prices reported by traders, by region (US$/kg), January 2005 to August 2010

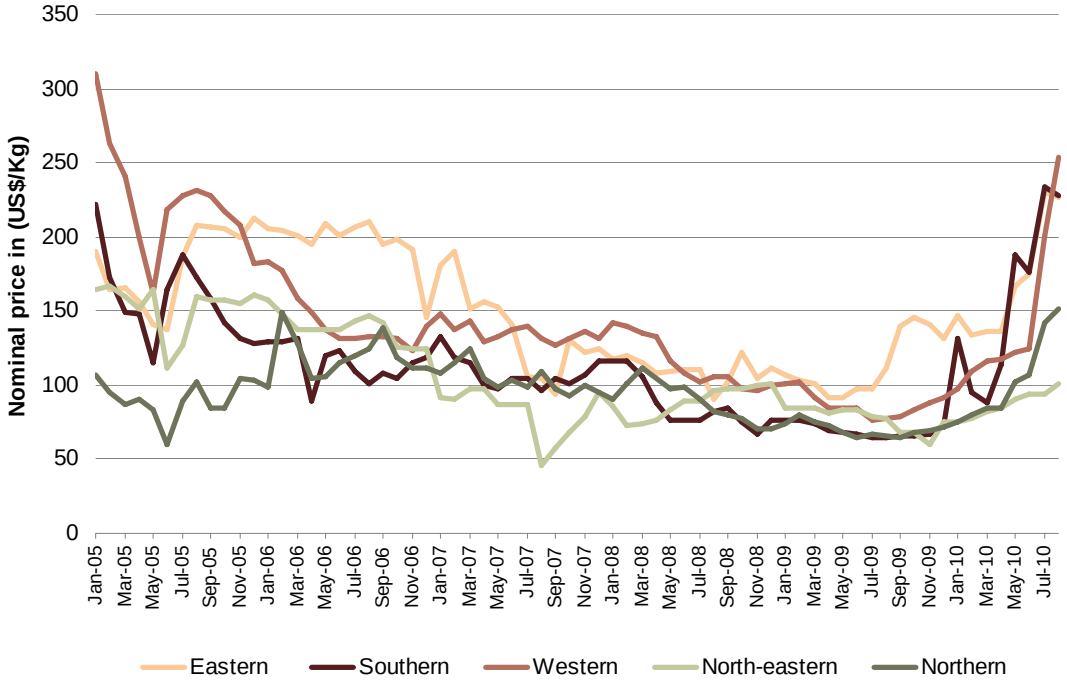


Table 11: Regional farm-gate prices of dry opium at harvest time (US$/kg), 2009-2010

Region	Average Dry Opium Price (US$/kg) 2009	Average Dry Opium Price (US$/kg) 2010	Change
Central	160	133	-17%
Eastern	90	130	+44%
North-eastern	75	91	+21%
Northern	64	104	+63%
Southern	62	181	+192%
Western	72	108	+50%
National average weighted by production*	**64**	**169**	**+164%**

* Prices for the Central region were taken from the annual village survey as there is no monthly opium price monitoring in the Central region. Prices for all other regions were derived from the opium price monitoring system and refer to the month when opium harvest took actually place in different regions of the country.

Total farm-gate value of opium increased by 38% in 2010

Based on potential opium production and reported opium prices, the farm-gate value of the 2010 opium harvest amounted to US$ 604 million increasing by 38% from 2009. The farm-gate value of opium as a proportion of GDP also increased in 2010 to 5% compared to 4% in 2009. Despite the considerably lower amount of opium produced in 2010, the increase in opium price made overall the opium business more productive. While many farmers in the disease-affected areas lost much of their expected income from opium, other farmers not affected by the disease or affected only marginally had a large increase in their profits.

Gross income from opium increased by 36% to US$ 4,900 per ha

Due to the high price of opium in 2010, the gross income for farmers per hectare increased by 36% to US$ 4,900. This reversed the decreasing trend observed since 2007. At the same time, the gross income per hectare of wheat decreased to US$ 770. This is higher than in the years 2003-2007 but considerably lower than in 2008 and 2009, when wheat prices reach peak levels worldwide. These diverging price trends increased the discrepancy between (illicit) gross income from opium and (licit) income from wheat.

Table 12: Gross income from opium and wheat (US$/ha), 2003-2010

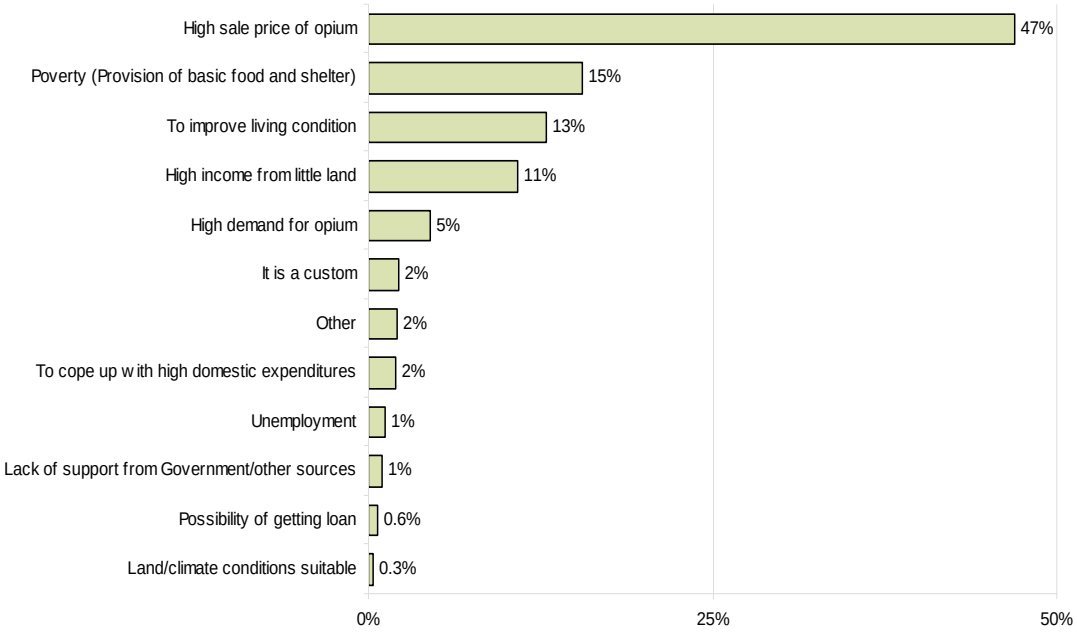
Year	Income in US$/ha		Ratio opium/wheat income
	Opium	Wheat	
2003	12,700	470	27:1
2004	4,600	390	12:1
2005	5,400	550	10:1
2006	4,600	530	9:1
2007	5,200	550	10:1
2008	4,700	1600	3:1
2009	3,600	1200	3:1
2010	4,900	770	6:1

In prices of the reporting year, not adjusted for inflation. Income from poppy stalks and seeds and from wheat straw is not considered in this calculation.

Reasons for cultivating opium poppy

The high sale price was the most important reason cited by farmers (47%) for cultivating opium poppy in 2010. Provision of basic food and shelter for the family, improving living condition and high income from little land were other important reasons given.

Figure 12: Reasons for cultivating opium in 2010 (n=392 farmers)



Reasons for stopping cultivation

In 2010, farmers who stopped cultivating opium in 2010 or before were asked about their major reason for doing so. The Government ban on opium cultivation was mentioned by about 25% of the respondents, making it the most frequently cited reason for stopping. Considering opium cultivation as being against Islam was the second main reason (13%). 7% of farmers mentioned low opium price as the reason for stopping cultivation. This is a decrease from the 18% observed in 2009 and it reflects the choice made during the planting season (November 2009 in the main cultivating areas) when opium prices were still relatively low.

Reasons for never cultivating opium poppy

Religious belief is the most dominant reason for never having cultivated opium poppy. 63% of farmers who never grew opium reported that they did not do it because it is forbidden (haraam) in Islam. The ban by the Government was another main reason for never cultivating opium poppy.

Figure 13: Reasons for stopping opium cultivation in or before 2010 (n=1507 farmers)

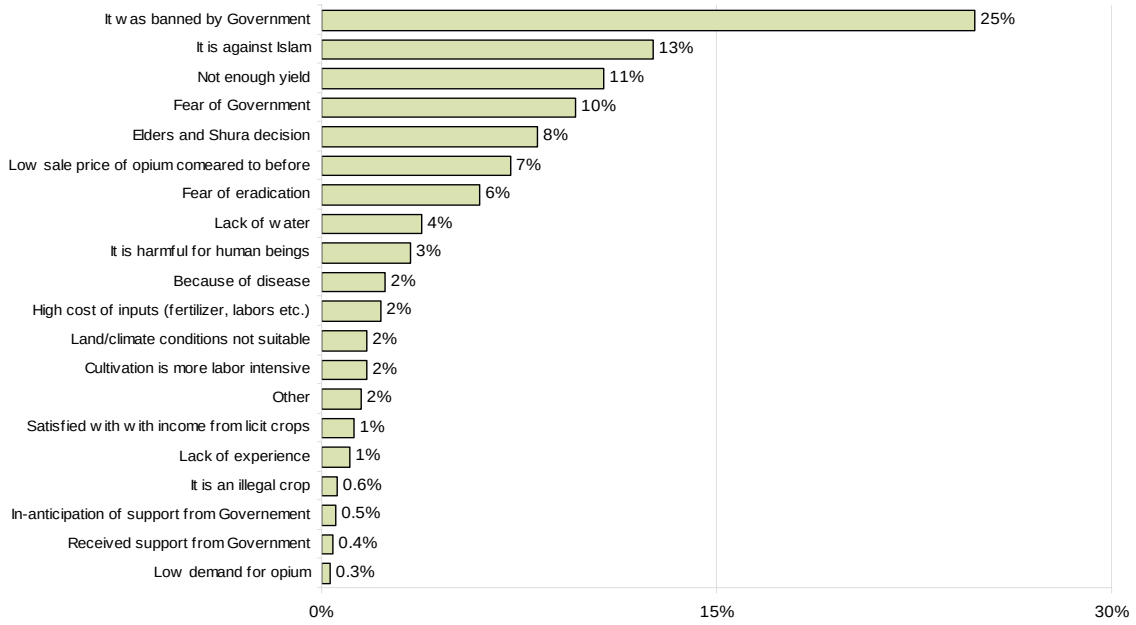
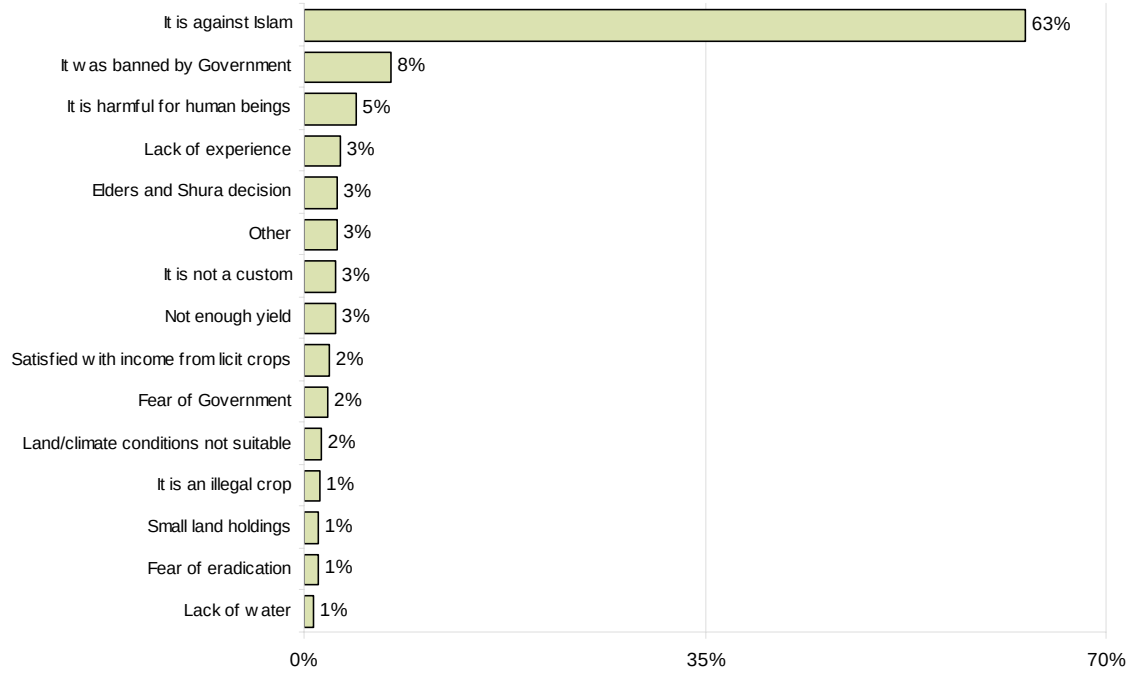


Figure 14: Reasons for never cultivating opium (n=2460 farmers)



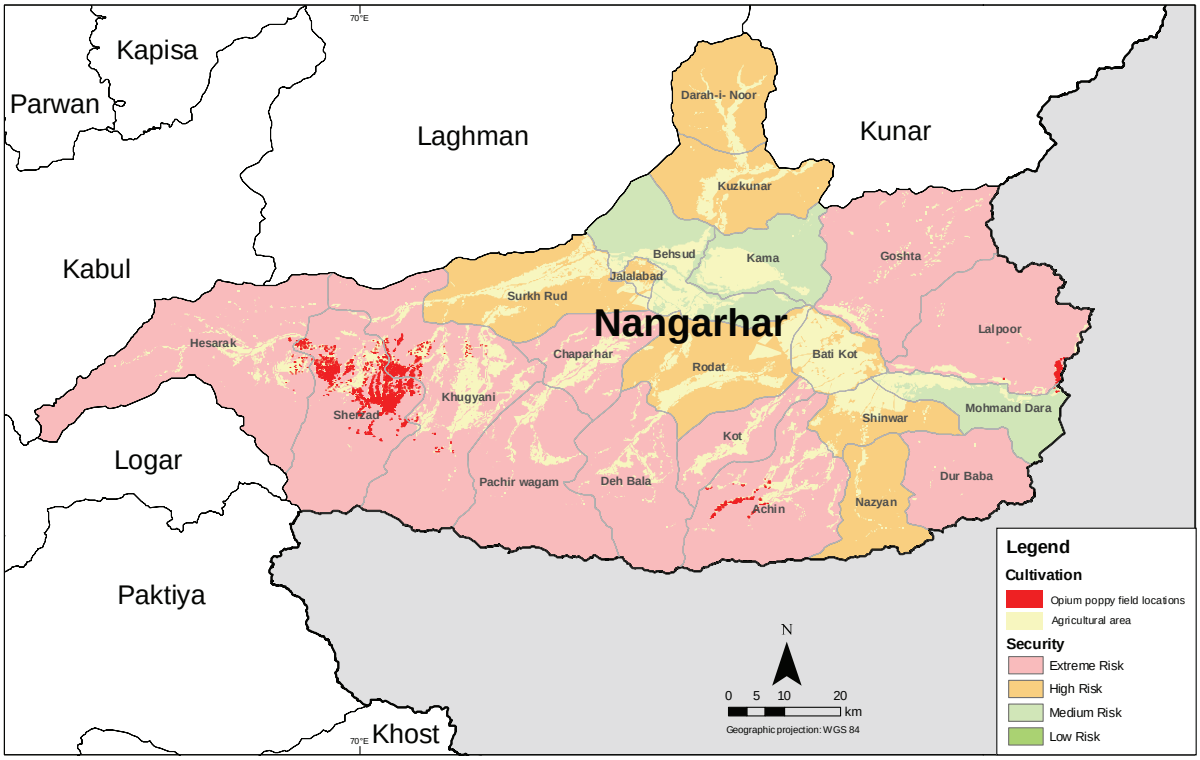
Strong correlation between lack of security and opium cultivation

Eighty two per cent of the opium cultivated in 2010 was concentrated in Hilmand, Kandahar, Uruzgan, Day Kundi, and Zabul provinces of the Southern region and 16% was concentrated in Farah, Badghis, Nimroz provinces in the Western region. These are the most insecure provinces where security conditions are classified as high or extreme risk by the United Nations Department of Safety and Security (UNDSS). Most of the districts in this region were not accessible to the United Nations and non-governmental organisations.

Overall, 98% of the total opium cultivation took place in the Southern and Western regions. Anti-government elements (AGE) as well as drug traders are very active in the Western region. Provinces in the south are the strongholds of AGEs, while provinces in the west (Farah, Badghis and Nimroz) are known to have organized criminal networks. The link between lack of security and opium cultivation was also evident in Nangarhar province (Eastern region) and Kabul province (Central region), where cultivation was located in districts classified as having high or extreme security risk.

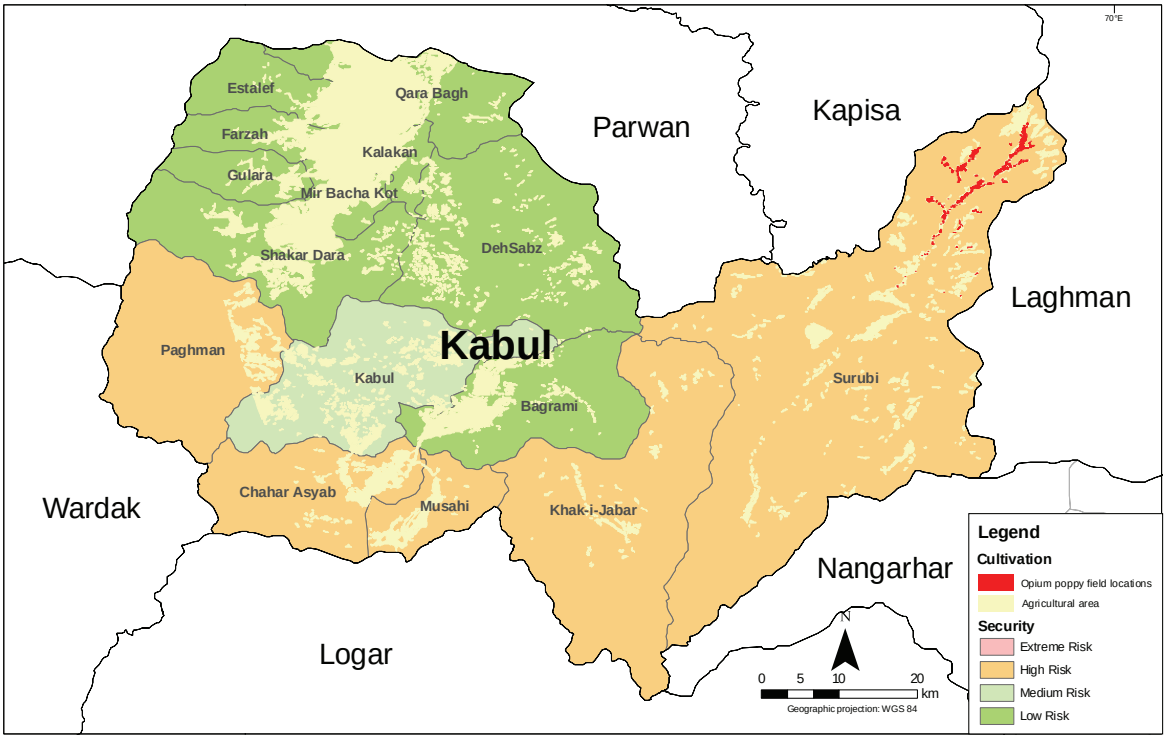
Security incidents in Afghanistan have been on the rise every year since 2003, especially in the south and south-western provinces.

Security level (as of 30 March 2010) and opium cultivation in Nangarhar, 2010



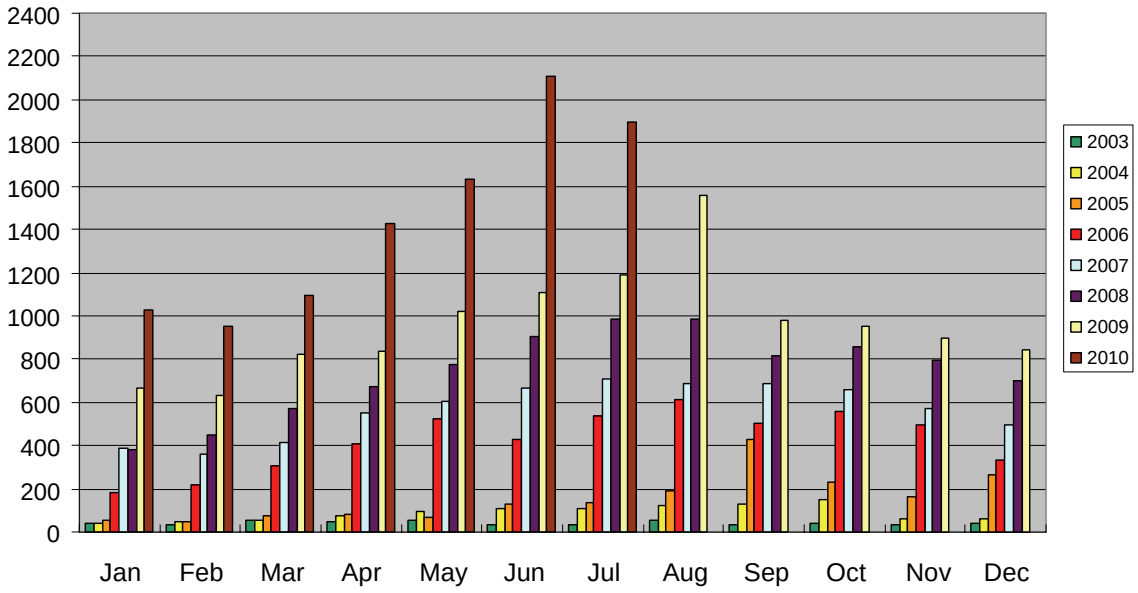
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Source security map: United Nations Department of Safety and Security.

Security level (as of 30 March 2010) and opium cultivation in Kabul, 2010



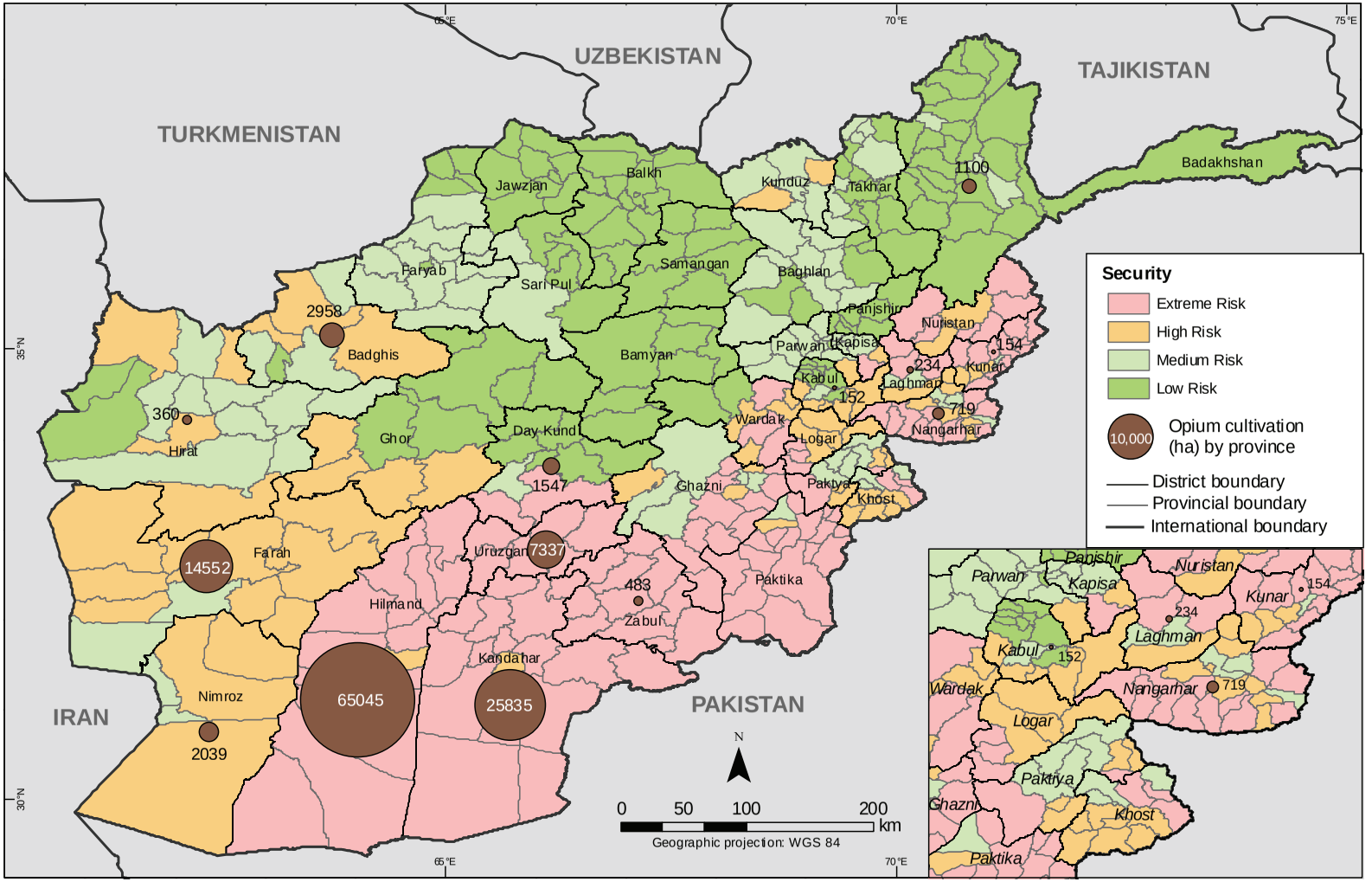
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Source security map: United Nations Department of Safety and Security.

Figure 15: Number of security incidents by month, January 2003 to July 2010



Source: United Nations Department of Safety and Security

Security map (as at 30 March 2010) and opium cultivation in Afghanistan by province, 2010



Source security map: UNDSS
Source cultivation :Government of Afghanistan - National monitoring system implemented by UNODC
Note: The boundries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations