



# UNODC

United Nations Office on Drugs and Crime



Islamic Republic of Afghanistan



# Afghanistan Opium Survey 2020

Cultivation and Production – Executive Summary

APRIL 2021



## Acknowledgements

The following organizations and individuals contributed to the implementation of the Afghanistan Opium Survey 2020 and to the preparation of this report:

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### *United Nations Office on Drugs and Crime (Vienna)*

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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 NSIA/UNODC illicit crop monitoring activities in Afghanistan were made possible by financial contributions from the Government of the United States of America.

## Abbreviations

ICMP	Illicit Crop Monitoring Programme (UNODC)
NSIA	National Statistics and Information Authority
UNODC	United Nations Office on Drugs and Crime

## **Introduction**

This Executive Summary presents the key findings of the *Afghanistan Opium Survey 2020*. The survey is implemented by NSIA in collaboration with UNODC. The survey team collects and analyses information on the location and extent of opium poppy cultivation, potential opium production and the socio-economic situation in rural areas. This information is essential for planning, implementing and monitoring counter-narcotic efforts.

The opium survey is implemented within the technical framework of the UNODC Illicit Crop Monitoring Programme (ICMP), established in 1999 upon request of the Commission on Narcotic Drugs in its resolution 42/3, Monitoring and verification of illicit cultivation. The objective of ICMP is to assist the international community in monitoring the extent and evolution of illicit crops and to compile reliable and internationally comparable data. Currently, UNODC carries out monitoring activities in seven countries affected by illicit crop cultivation: coca surveys in Bolivia, Colombia and Peru; opium poppy surveys in Afghanistan, Mexico and Myanmar; and a cannabis survey in Nigeria.

The Afghanistan Opium Survey 2020 was implemented under the project “Monitoring of Opium Production in Afghanistan” (AFG/F98), with financial contributions from the Government of United States of America.

## Fact Sheet, Afghanistan Opium Survey 2020<sup>1</sup>

	2019	Change from 2019	2020
Opium poppy cultivation <sup>2</sup>	163,000 ha (149,000 - 178,000)	37%	224,000 ha (202,000 - 246,000)
Number of poppy free provinces <sup>3</sup>	13 out of 34	-1	12 out of 34
Number of provinces affected by poppy cultivation	21 out of 34	+1	22 out of 34
Eradication <sup>4</sup>	21 ha	NA	NA
Average opium yield (weighted by cultivation) <sup>5</sup>	NA	NA	28.0 kg/ha
Potential production of opium <sup>5</sup>	NA	NA	6,300 tons (5,400 - 7,200)
Average farm-gate price of fresh opium at harvest time	US\$ 52/kg	-18%	US\$ 42/kg
Average farm-gate price of dry opium at harvest time	US\$ 63/kg	-13%	US\$ 55/kg
Total farm gate value of opium production	NA	NA	US\$ 350 (300 – 400) million

*Note: Estimates are rounded, percentage changes have been calculated based on precise figures.*

<sup>1</sup> Numbers in brackets indicate the lower and upper bounds of the 95% confidence interval.

<sup>2</sup> In 2019, eradicated area was accounted for in the area estimates. In 2020, no verified eradication data was available to NSIA/UNODC.

<sup>3</sup> A province is defined as poppy-free when it is estimated to have less than 100 hectares of opium poppy cultivation.

<sup>4</sup> In 2020, opium poppy eradication could not be verified by NSIA/UNODC.

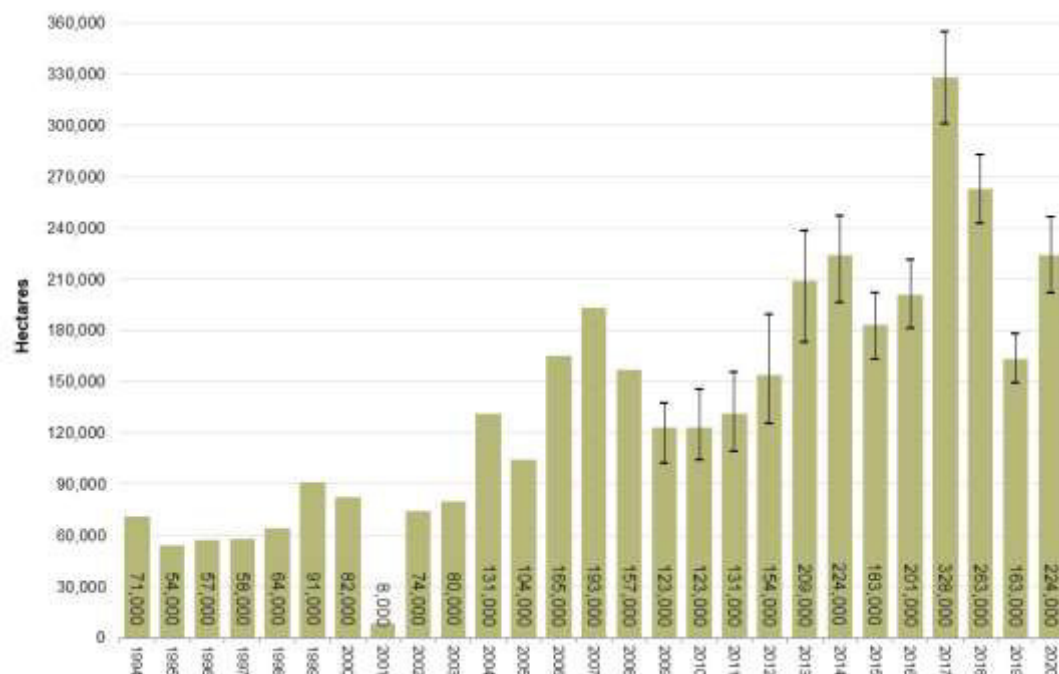
<sup>5</sup> Data on opium yield and production for 2019 were not validated by the Government of Afghanistan and have not been published in a joint NSIA/UNODC report.



## The area under opium poppy cultivation increased by 37% in 2020

The total area under opium poppy cultivation in Afghanistan was estimated at 224,000 hectares (202,000 - 246,000) in 2020, which represents an increase of 37% or 61,000 hectares when compared to 2019.

**Figure 1 Opium poppy cultivation in Afghanistan, 1994-2020 (hectares)**



Sources: MCN/UNODC opium surveys 1994-2018; NSIA/UNODC opium surveys 2019 onwards. The vertical lines represent the upper and lower bounds of the 95% confidence interval.

All regions<sup>6</sup> except the Eastern region saw an increase in opium poppy cultivation in 2020, with the largest relative increases being in the Southern region, followed by the Western, North-eastern, Northern, Central and South-Western regions. Cultivation in the Eastern region reduced by 28%.

In 2020, the number of poppy-free provinces in Afghanistan decreased from 13 to 12. Kapisa lost its poppy-free status.

Hilmand remained the country's major opium poppy cultivating province, followed by Badghis, Kandahar, Uruzgan<sup>7</sup>, Faryab, Farah, Badakhshan, Balkh and Nimroz.

All main opium poppy-growing provinces saw significant increases in area under cultivation. Opium poppy cultivation increased in Badghis (194%), in Faryab (98%), Kandahar and Farah (47%), Nimroz (46%), Badakhshan (36%), Hilmand (27%) and Uruzgan (16%). Decreases were observed in four provinces with lower levels of cultivation, in Kunar (-39%), Nangarhar (-27%), Laghman (-20%), Balkh and Jawzjan provinces (-16%).

In absolute numbers, the largest increases were observed in Hilmand (24,870 ha), Badghis (14,771), Kandahar (6,600 ha) and Faryab (6,462) and the largest decrease in Balkh (1,096 ha).

Table 4, at the end of this report, presents an overview of all provincial estimates.

<sup>6</sup> The regional groupings used in this report are in line with the groupings used in the work of NSIA and are different from those used in earlier reports. See Map 2.

<sup>7</sup> Including Gizab district, a district formally part of Day Kundi province, but since 2014 under the administration of the Governor of Uruzgan province.

**Table 1. Regional distribution of opium poppy cultivation, 2019-2020 (hectares)**

Region	2019 (ha)	2020 (ha)	Change 2019-2020	2019 (ha) as % of total	2020 (ha) as % of total
Central	780	1,011	30%	0%	0.5%
Eastern	4,942	3,543	-28%	3%	2%
North-eastern	4,973	6,967	40%	3%	3%
Northern	17,128	22,760	33%	11%	10%
South-western	118,444	152,935	29%	73%	68%
Southern	123	290	136%	0.08%	0.1%
Western	17,053	36,188	112%	10%	16%
<b>Rounded Total</b>	<b>163,000</b>	<b>224,000</b>	<b>37%</b>	<b>100%</b>	<b>100%</b>

## Eradication of opium poppy in 2020

In 2020, opium poppy eradication could not be verified by NSIA/UNODC.

## Potential opium production was estimated at 6,300 tons in 2020

In 2020, potential opium production in Afghanistan was estimated at 6,300 tons (5,400 - 7,200 tons). The average opium yield was 28.0 kilograms per hectare. The South-western region remained the country's major opium producing region, accounting for 71% of total opium production in Afghanistan.

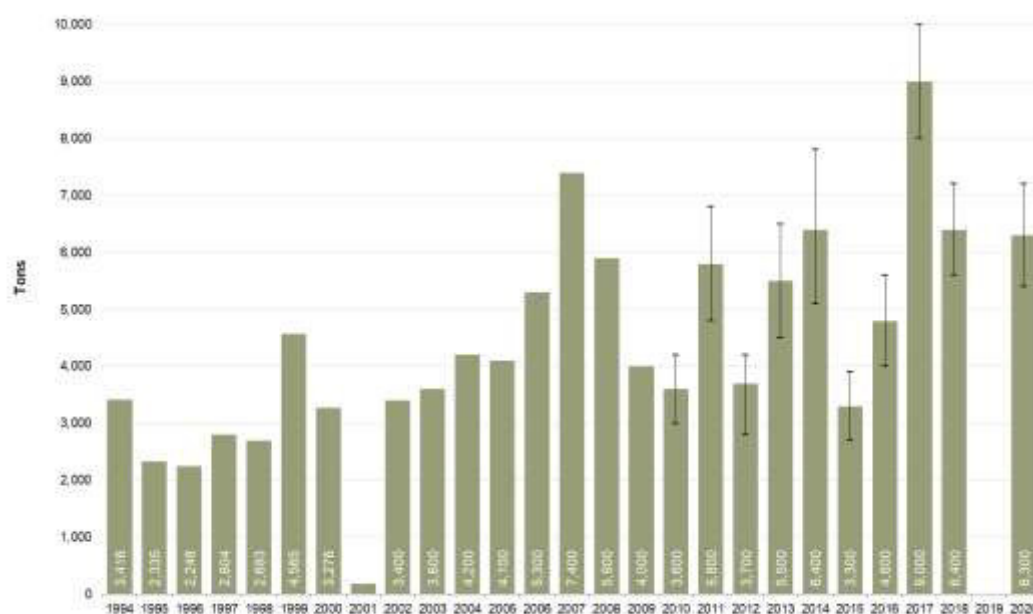
In 2020, due to COVID-19 related measures, it was not possible for NSIA/UNODC to collect opium yield data in the field. In the absence of the field survey, UNODC and NSIA jointly estimated opium poppy yields using satellite imagery.

In this approach, a representative sample of opium poppy fields was visually ranked according to the quality of crops on the field. Each value of the rank (low, medium, and high quality) corresponded to a specific range of yields, which was estimated from previous years' yield data per region. For example, previous years' data indicated that poppy fields visually ranked as low quality had yield values between 9 and 12 kg/ha in the Central region. Therefore, opium poppy fields interpreted as low quality in the Central region were assigned those yield values. The procedure was repeated for all rank values, and then average yields were calculated per region, and a weighted average was estimated at national level.

The methodology was tested for accuracy by predicting the average yield of each of the previous years, using the data from all other years, but not of the year being estimated (cross-validation, rotation, or out-of-sample test). The predicted average yields of previous years showed only minor differences of between -4 and 6 percent from the average yields calculated from field data.

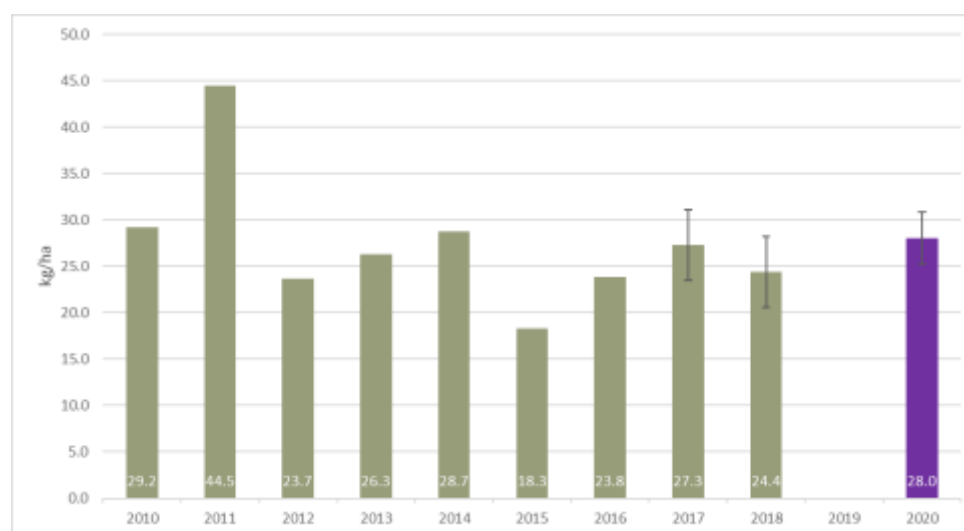
**Table 2. Opium yield and potential production, by region, 2020**

REGION	2020 average yield (kg/ha)	Production 2020 (tons)	Production as % of total
Central	34.8	35	1%
Eastern	40.9	145	2%
North	31.0	709	11%
North-eastern	32.3	229	4%
South	41.0	12	0.2%
South-western	29.3	4,479	71%
Western	18.4	667	11%
<b>Weighted national average</b>	<b>28.0</b>	<b>6,300</b>	<b>100%</b>

**Figure 2 Potential opium production in Afghanistan, 1994-2020 (tons)**

Sources: MCN/UNODC opium surveys 1994-2018; NSIA/UNODC opium surveys 2020 onwards.

Figures refer to oven-dry opium. The vertical lines represent the upper and lower bounds of the 95% confidence interval. Data on opium yield and production for 2019 were not validated by the Government of Afghanistan and have not been published in a joint NSIA/UNODC report.

**Figure 3. Average opium yield weighted by cultivation, 2010-2020 (kilograms per hectare)**

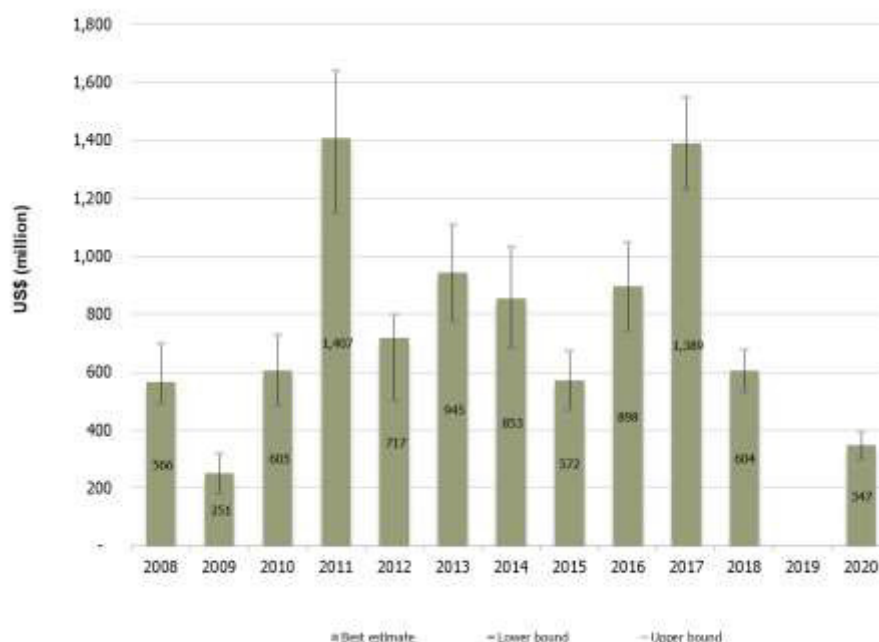
Sources: MCN/UNODC opium surveys 1994-2018; NSIA/UNODC opium surveys 2020 onwards.

In 2020, due to COVID-19 related measures, the annual yield survey could not be conducted. In absence of data from the field, NSIA/UNODC developed a remote sensing based method to estimate yields (see main text). Data on opium yield and production for 2019 were not validated by the Government of Afghanistan and have not been published in a joint NSIA/UNODC report.

## Farm-gate value of the opium production

The farm-gate value of opium production in 2020 was estimated at US\$ 350 (300 – 400) million. The farm-gate value is at its lowest level since 2009, due to opium prices being at their lowest level since beginning of the systematic monitoring.

**Figure 4. Farm-gate value of opium, 2008-2020 (US\$ million)**



Data on opium yield and production for 2019 were not validated by the Government of Afghanistan and have not been published in a joint NSIA/UNODC report. Therefore, no estimate of the farm-gate value was available for 2019.

## Discussion of the results

Opium poppy cultivation in Afghanistan is driven by a multitude of factors. Rule of law related challenges, such as political instability, instability and insecurity caused by insurgency groups, have been found among the main drivers. Socio-economic factors also impact farmers' decisions, for example scarce employment opportunities, lack of quality education and limited access to markets.<sup>8</sup>

In 2020, the area under cultivation was among the four highest ever measured. While area under cultivation presented an increasing trend in the past decade, it has been volatile with strong year-on-year changes in previous years. This makes an interpretation of the increase from 2019 to 2020 challenging. Many different factors may play a role in annual changes, including shocks to the system such as the devastating droughts in 2018 and high seasonal floods in 2019, as well as a deteriorating security situation and increased instability in 2020. The COVID-19 crisis did not affect the 2020 opium season in terms of area cultivated or labor available for harvesting; however, it can be expected that the economic downturn following the pandemic in combination with increasing food prices may lead to further increases in opium poppy cultivation in future years.

A more detailed discussion of the results and an analysis of the factors contributing to changes in area and production in 2020 will be presented in the upcoming reports "Afghanistan opium survey report 2020 – Cultivation and Production" and "Afghanistan opium– Socio-economic analysis 2020".

<sup>8</sup> A detailed discussion on the drivers of opium poppy cultivation in Afghanistan is presented in the reports on the annual socio-economic surveys conducted by the project in Afghanistan. All reports can be found here: <https://www.unodc.org/unodc/en/crop-monitoring/index.html>



**Table 4. Opium poppy cultivation in Afghanistan 2019-2020 (hectares)**

PROVINCE	Cultivation (ha)		Change 2019-2020 (%)	Estimation method 2020
	2019	2020		
Kabul	197	284	+44%	T
Logar	Poppy-free	Poppy-free	NA	T
Panjshir	Poppy-free	Poppy-free	NA	V
Parwan	Poppy-free	Poppy-free	NA	T
Wardak	Poppy-free	Poppy-free	NA	V
Kapisa	Poppy-free	178	NA	T
Bamyan	Poppy-free	Poppy-free	NA	V
Day Kundi*	583	550	-6%	S
<b>Central Region</b>	<b>780</b>	<b>1,011</b>	<b>+30%</b>	
Kunar	967	595	-39%	S
Laghman	908	723	-20%	S
Nangarhar	3,067	2,225	-27%	S
Nuristan	Poppy-free	Poppy-free	NA	T
<b>Eastern Region</b>	<b>4,942</b>	<b>3,543</b>	<b>-28%</b>	
Badakhshan	4,702	6,395	+36%	S
Kunduz	Poppy-free	Poppy-free	NA	T
Takhar	Poppy-free	Poppy-free	NA	T
Baghlan	271	572	+111%	T
<b>North-eastern Region</b>	<b>4,973</b>	<b>6,967</b>	<b>+40%</b>	
Balkh	7,042	5,946	-16%	S
Faryab**	6,621	13,083	+98%	S
Jawzjan	1,332	1,124	-16%	S
Samangan	Poppy-free	Poppy-free	NA	T
Sari Pul	2,134	2,607	+22%	S
<b>Northern Region</b>	<b>17,128</b>	<b>22,760</b>	<b>+33%</b>	
Hilmand	90,727	115,597	+27%	S
Kandahar	13,954	20,555	+47%	S
Uruzgan*	11,578	13,444	+16%	S
Zabul	183	408	+123%	S
Nimroz	2,002	2,931	+46%	S
<b>South Western Region</b>	<b>118,444</b>	<b>152,935</b>	<b>+29%</b>	
Khost	Poppy-free	Poppy-free	NA	V
Paktya	Poppy-free	Poppy-free	NA	V
Ghazni	123	290	+136%	T
Paktika	Poppy-free	Poppy-free	NA	V
<b>Southern Region</b>	<b>123</b>	<b>290</b>	<b>+136%</b>	
Badghis**	7,631	22,402	+194%	S
Farah	7,113	10,483	+47%	S
Ghor	1,960	2,848	+45%	S
Hirat	349	455	+30%	T
<b>Western Region</b>	<b>17,053</b>	<b>36,188</b>	<b>+112%</b>	
<b>Total (rounded)</b>	<b>163,000</b>	<b>224,000</b>	<b>+37%</b>	

Area estimation method: S=remote sensing sample survey, T=remote sensing target survey, V=village sample survey and field observation. A province is defined as poppy-free when it is estimated to have less than 100 hectares of opium poppy cultivation. Percentage changes have been calculated with precise figures.

\* Gizab district of Day Kundi province was considered under Uruzgan province as per presidential decree.

\*\* Ghormach district of Badghis province was considered under Faryab province as per presidential decree.

