



## **How we have calculated revenues**

Annex to the report 'War gains: how the economic benefits of the conflict are distributed in Afghanistan and the implications for peace'

Alcis, David Mansfield and Graeme Smith



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# About the annex

This annex serves as a reference point for the calculations and maps in the main report. It documents how we have calculated the revenues of the different power-holders derived from production, trade, land and services in Nimroz province. It provides details of the costs incurred on the different commodities taxed by power-holders under each

category, as well as the amounts collected and the volumes on which they are levied. We provide further information on how the results of our fieldwork – including both interviews and ground photography – were merged with high-resolution satellite imagery analysis to provide estimates of the total value of the monies collected, and the subsequent mapping.

# 1 Revenues from production

## 1.1 Agriculture

Agricultural diversity is limited in Nimroz. Dry conditions, especially in 2021, constrained annual and perennial horticultural production, resulting in an overwhelming majority of agricultural land being cultivated with wheat. While there are some vineyards in Khashrud, most of the residual land is occupied by melon and watermelons along with limited vegetable production for household consumption. In the better-irrigated areas of Ziranj, there is some cultivation of vegetables for sale in the city, but even here production is limited.

Opium poppy is one of the few commercial crops grown in Nimroz, but even this is largely contained within the river-irrigated areas of Khashrud and Charburjak, and the former desert areas of Khashrud where land has been increasingly encroached on over the past decade and irrigated using diesel- and solar-powered deep wells. Further downstream on the Helmand and Khashrud rivers, water availability

is limited for much of the year, resulting in negligible levels of opium poppy cultivation in Kang, Chakhansur and Ziranj (see Figure 2A).

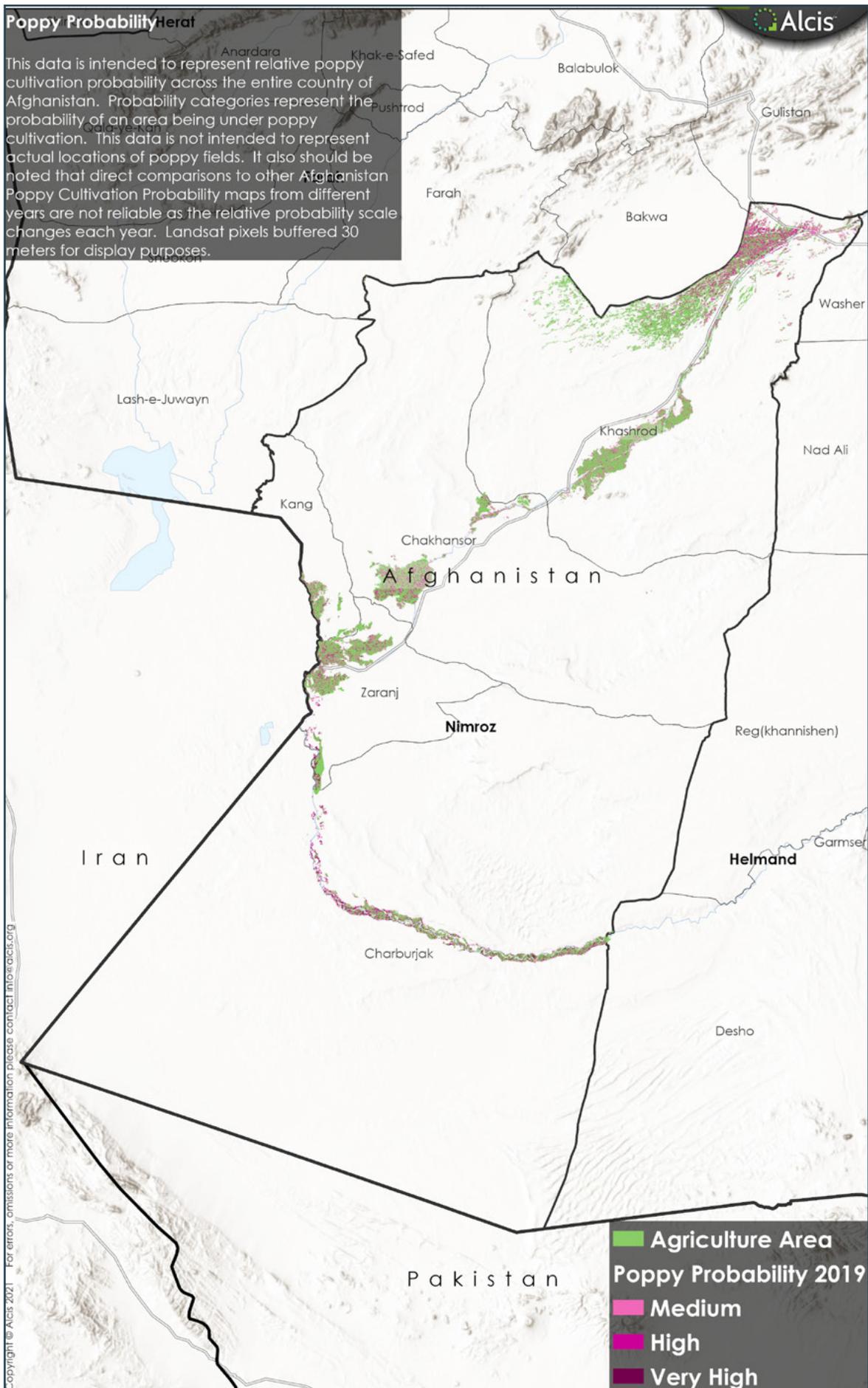
While some crops (especially poppy and wheat) can be identified using high-resolution imagery, it was beyond the scope of this project to do so (see Figure 1A). The geography of Nimroz, with its vast landmass mostly covered by desert, would require a significant amount of imagery collected at times that coincide with specific periods in the cycle of different crops. This was beyond the resources available for our work.

Instead, we estimated the amount of land dedicated to agricultural crops for each of the five districts in Nimroz using the Normalized Difference Vegetation Index (NDVI). The NDVI is used to assess both areas under vegetation and their condition, with higher positive values representing areas of dense agricultural growth. The area under cultivation in each district was then further disaggregated based on ground assessments to denote the government and the Taliban's influence. The areas where

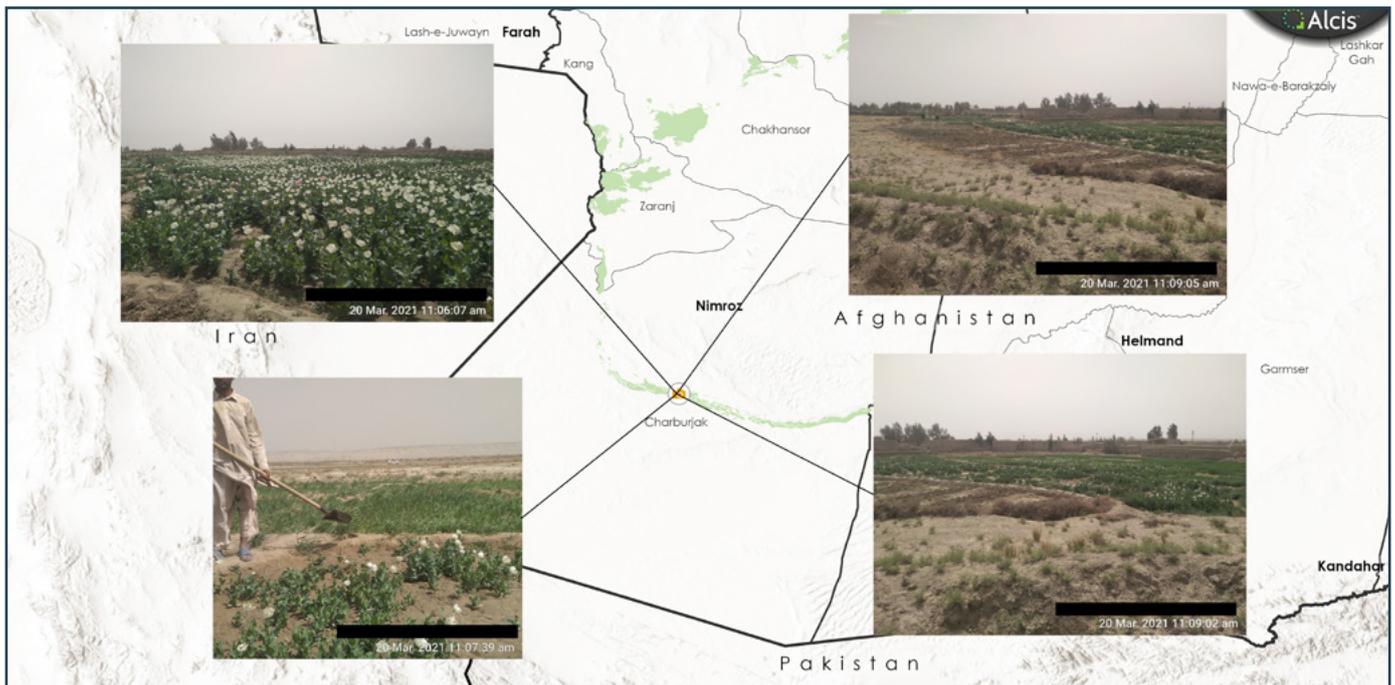
**Figure 1A** Imagery showing the different visual signatures for poppy and wheat



**Figure 2A Imagery showing agricultural land and poppy probability in the province of Nimroz**



**Figure 3A** Map and ground photography showing areas of poppy cultivation in Nimroz



the government could assert its authority were subsequently mapped, along with those where the Taliban dominated (see Figure 4A).

The amount of land dedicated to poppy was derived from the United Nations Office on Drugs and Crime (UNODC)'s annual opium survey for 2020.<sup>1</sup> In the absence of a detailed breakdown of poppy cultivation at a district level, the provincial total was disaggregated based on historical precedent, which since 2015 identifies cultivation as concentrated in Khashrud, with lower levels of cultivation along the upper parts of the Helmand river in the district of Charburjak. Local knowledge and ground photography during our research indicated that the bulk of cultivation in Charburjak was located between the village of Ashkinak, some 12 km from the district centre, and the border with Deshu in Helmand. Both this area and Khashrud have a significant Taliban presence (see Figure 3A).

Taking the estimates of the total amount of land under agricultural production and subtracting the area under opium poppy cultivation in each district, the land remaining for other crops can be estimated. Visual reports and interviews were used to identify these crops, mostly wheat and melons/watermelons. The yields of the main crops were collected *in situ*

from farmers along with prices at the time of harvest, differentiating by district and type of irrigation. While crop prices fluctuate over the course of the agricultural cycle, typically falling after the harvest, the harvest price was prioritised because the Taliban typically collects taxes – in cash or in kind – once the harvest is complete. Table 1A outlines the areas under agriculture, wheat and other crops, and the total production and values.

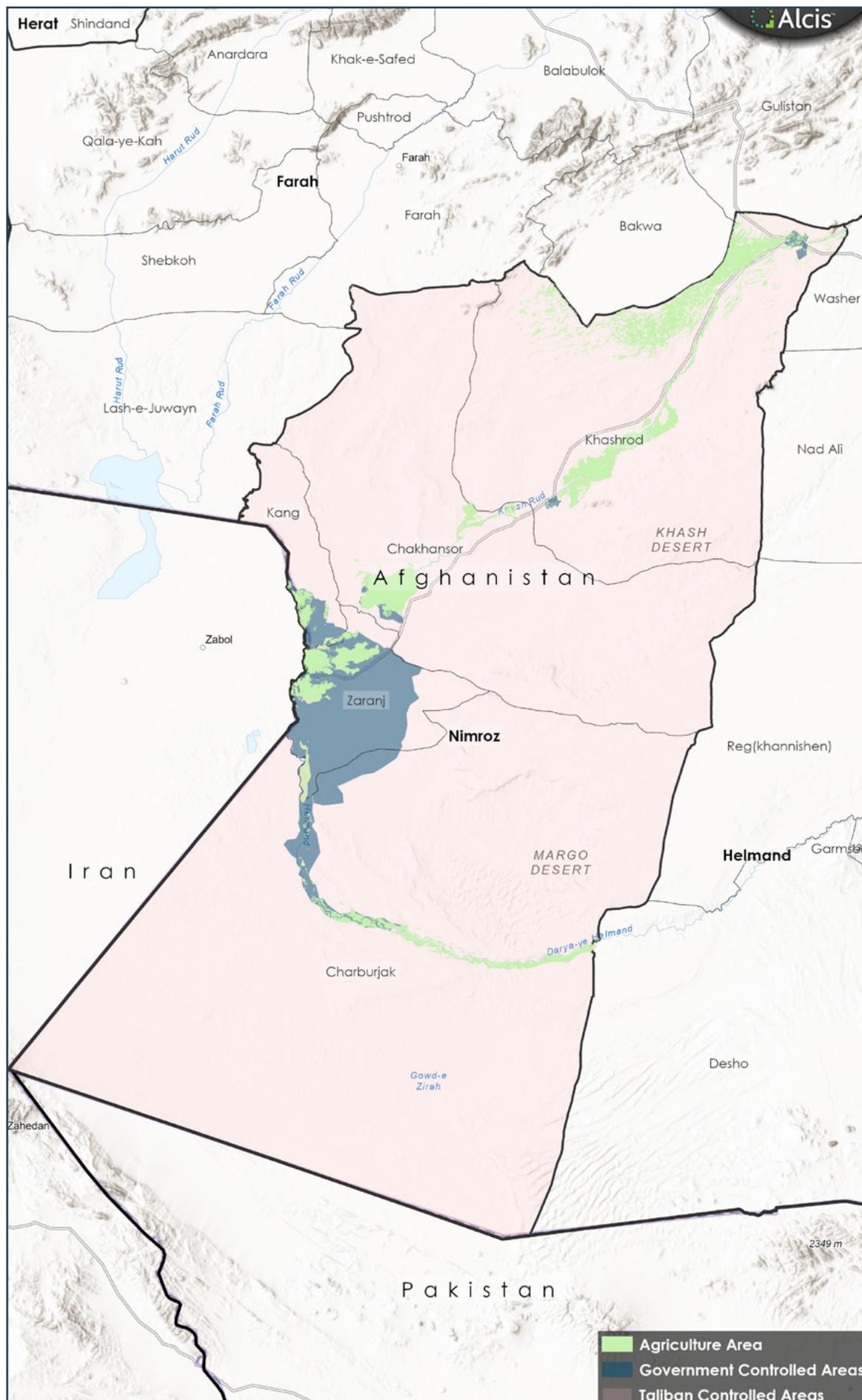
Fieldwork in each of the districts indicated that taxes on agricultural production were only collected in Taliban-held areas, through village representatives (typically elders). These individuals were delegated the task of collecting the taxes and would be approached by the Taliban for details on household land and cropping patterns during the growing season. The Taliban would then return to collect the payments after the harvest. In the case of opium, payments were often in-kind and sold at the market (*mela*) for cash.

As in other parts of Afghanistan, explanations of the tax collected on agricultural production focused on the term '*ushr*'. In Afghanistan, *ushr* is often used along with '*zakat*' as a general term for taxation,<sup>2</sup> but both terms have more nuanced definitions in Islamic texts. *Ushr* is defined in one text as a compulsory tithe (or *zakat*) of one-tenth of the yield of agricultural land

1 UNODC (2021) *Afghanistan opium survey 2020. Cultivation and production – executive summary*. Kabul: United Nations Office on Drugs and Crime ([www.unodc.org/documents/crop-monitoring/Afghanistan/20210503\\_Executive\\_summary\\_Opium\\_Survey\\_2020\\_SMALL.pdf](http://www.unodc.org/documents/crop-monitoring/Afghanistan/20210503_Executive_summary_Opium_Survey_2020_SMALL.pdf)).

2 Noelle, C. (1997) *State and tribe in nineteenth-century Afghanistan: the reign of Amir Dost Muhammed Khan (1826-1863)*. Surrey: Curzon Press.

Figure 4A Map showing agricultural land and areas under government influence at time of research



**Table 1A Estimates of non-poppy crop production in Nimroz and potential revenues generated**

	Total irrigated land (ha)	Total irrigated land – non-poppy (ha)	Cultivated land (ha)	Wheat		Other crops		
				Total production (kg)	Total value (\$)	Cultivated land (ha)	Total production (kg)	Total value (\$)
Chakhansur	23,379	23,379	21,041	37,873,980	11,362,194	2,338	26,301,375	3,682,193
Charburjak	21,678	20,711	18,640	33,551,447	10,065,434	2,071	23,299,616	3,261,946
Kang	5,632	5,632	4,506	9,461,760	2,838,528	1,126	12,672,000	1,774,080
Khashrud	105,257	103,323	98,156	206,128,467	61,838,540	5,166	58,118,929	8,136,650
Ziranj	23,381	23,381	21,043	37,877,220	11,363,166	2,338	26,303,625	3,682,508
<b>Total</b>	<b>179,327</b>	<b>176,425</b>	<b>163,386</b>	<b>324,892,875</b>	<b>97,467,862</b>	<b>13,040</b>	<b>146,695,545</b>	<b>20,537,376</b>

fed by rainwater or natural watercourses; on lands irrigated by wells, the *zakat* is defined as half of an *ushr*, or one-twentieth of the yield.<sup>3</sup> In other contexts, *zakat* is sometimes considered a tax of 2.5% on the value of savings.

In the case of wheat and melons in Nimroz, respondents reported that although the Taliban were asking for one-tenth of their crops, they rarely paid this much. Farmers typically negotiated to pay less, or simply underreported either the amount of land dedicated to each crop or their final yield, or both. Respondents claimed that payments rarely exceeded 5% of the final crop and that they often paid much less. This is similar to the taxes imposed in other parts of Afghanistan,<sup>4</sup> and indeed other areas where this agricultural tithe is collected.<sup>5</sup> A common explanation for these reduced rates of payment were ‘the yields are poor; the people are poor’, while it was also argued that the Taliban ‘don’t push the people’ in payment of agricultural taxes, with most respondents claiming they

typically paid anything from \$10 to \$25 per household over the course of a year. Table 2A outlines the estimates of the amount of taxes paid to the Taliban on non-poppy crops, based on the amount of land under cultivation with wheat and melons, estimated yields, harvest prices, and a de facto tax of 5% of the final yield.

For opium poppy cultivation, taxes were set by the Taliban based on the number of labourers required for the harvest – people known locally as *neshgar* – with a payment of 100 g of opium for each harvester. This is similar to the way taxes are calculated in Bakwa and in central Helmand, where the Taliban impose a tax of one *khord* (125 g) per *neshgar*.<sup>6</sup> Farmers typically work on a rule of thumb that one *jerib* of land (one-fifth of a hectare) requires two labourers to harvest the opium crop. As such, the tax on opium in Nimroz was the equivalent of 1 kg per hectare. With farmers and traders reporting fresh opium yields of between 2–5 *man*<sup>7</sup> per *jerib* (the equivalent of between 45 and 112.5 kg per hectare)<sup>8</sup> in Charburjak, and sometimes even higher

3 Sahih al-Bukhari 1483, narrated by Salim bin Abdullah from his father. <https://sunnah.com/bukhari:1483>.

4 Mansfield, D. (2013) ‘Briefing paper 7: Taxation in central Helmand and Kandahar’. Unpublished paper for the UK Embassy, Kabul, pages 11–12 ([www.davidmansfield.org/home/docs/field/56.pdf](http://www.davidmansfield.org/home/docs/field/56.pdf)).

5 For example, see James Scott’s (1987) empirical work in Malaysia detailing the different methods farmers used to avoid paying *zakat*. Scott, J. (1987) ‘Resistance without protest and without organization: peasant opposition to the Islamic *zakat* and Christian tithe’ *Comparative Studies in Society and History* 29(3): 417–452.

6 Mansfield, D. (2017) *Understanding control and influence: what opium poppy and tax reveal about the writ of the Afghan state*. Kabul: AREU, page 37 (<https://areu.org.af/wp-content/uploads/2017/08/1724E-Understanding-Control-and-Influence1.pdf>).

7 A *man* is a measure of weight. In Nimroz, a *man* is typically the equivalent of 4.5 kg.

8 Farmers report that the opium in Khashrud has a high moisture content and experiences up to 50% weight loss when dry.

**Table 2A Estimates of non-poppy crop production in Taliban areas of Nimroz and the potential revenues earned**

	Irrigated area under Taliban (ha)	Cultivated land (ha)	Wheat			Other			
			Total production (kg)	Total value (\$)	Estimated tax (\$)	Cultivated land (ha)	Total production (kg)	Total value (\$)	Estimated tax (\$)
Chakhansur	14,948	13,453	24,215,760	7,264,728	363,236	1,495	16,816,500	2,354,310	117,716
Charburjak	12,131	10,047	18,085,307	5,425,592	271,280	1,213	13,647,375	1,910,633	95,532
Kang	90	72	151,200	45,360	2,268	18	202,500	28,350	1,418
Khashrud	103,663	96,642	202,948,437	60,884,531	3,044,227	5,183	58,310,438	8,163,461	408,173
Ziranj	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>130,832</b>	<b>120,215</b>	<b>245,400,705</b>	<b>73,620,211</b>	<b>3,681,011</b>	<b>7,909</b>	<b>88,976,813</b>	<b>12,456,754</b>	<b>622,838</b>

**Table 3A Estimates of opium production in Nimroz and the potential revenues generated**

	Cultivated land (ha)	Total production (kg)	Total value (\$)	Estimated tax (\$)
Chakhansur	0	0	0	0
Charburjak	967	43,525	3,808,468	84,633
Kang	0	0	0	0
Khashrud	1,934	87,051	7,616,936	169,265
Ziranj	0	0	0	0
<b>Total</b>	<b>2,902</b>	<b>130,576</b>	<b>11,425,404</b>	<b>253,898</b>

in Khashrud, the tax on opium (as with other crops) is considerably less than the one-tenth of the final yield, as *ushr* is sometimes described in other literature. Table 3A outlines the estimated amounts payable on the opium crop and the value of production at the time of harvest.

To then map the taxes collected on agricultural crops, both poppy and non-poppy, these values were distributed across each of the household compounds in the areas where the Taliban dominates in the districts.

## 1.2 Drug processing

As in other parts of Afghanistan, the Taliban impose a tax on the production of opiates, ephedrine and methamphetamine in labs, locally referred to as factories. In Nimroz, these taxes are

levied on the weight of the final output of 'powdah', with all but ephedrine exacting the same rate of tax of \$1.25 to \$1.875 per kg. In the case of opiates, this means that payment is according to the weight of the final product and not the interim stages of production. For example, if a lab converts opium to morphine base (at a rate of 18:2), and then the morphine base is converted into heroin base (at a rate of 2:1), the tax is based on the final weight of the heroin (1 kg) and not on both the amount of morphine base produced (2 kg) and amount of heroin (1 kg). This reporting is consistent with other parts of south-western Afghanistan where morphine and heroin are produced, such as Bakwa in Farah province, and Gandam Raiz in the district of Kajaki in northern Helmand.<sup>9</sup>

<sup>9</sup> Mansfield, D. (2019) *Denying revenue or wasting money? Assessing the impact of the air campaign against 'drugs labs' in Afghanistan*. LSE International Drug Policy Unit, page 45 ([www.lse.ac.uk/united-states/Assets/Documents/mansfield-april-](http://www.lse.ac.uk/united-states/Assets/Documents/mansfield-april-)

As detailed research in Bakwa has shown, the methamphetamine industry is structured differently from the production of opiates.<sup>10</sup> Whereas the production of morphine base (*bist*), heroin base (*gul*) and heroin hydrochloride (*crystal*) requires a skilled chemist or ‘cook’, typically working in a single lab, the production of ephedrine from ephedra is a relatively low-skill, low-cost enterprise undertaken by cooks with minimal knowledge of chemistry or training, many of them farmers. Moreover, ephedrine production tends to be processed in an outbuilding within a household compound, or a building nearby, not in a dedicated compound. In contrast, converting ephedrine to methamphetamine is a higher-cost operation requiring a relatively skilled cook and a separate compound, akin to the production of opiates. In Nimroz, the cottage industry in ephedrine production incurs a lower tax rate of \$0.31 to \$0.62 per kg, while the tax imposed on methamphetamine is the same as for opiates, between \$1.25 and \$1.88 per kg.

Responsibility for payment of taxes on drug processing lies with the owner of the lab, although the task will often be delegated to the clerk (*munshi*). Respondents reported that Taliban representatives do not have intimate knowledge of the amount of production in a lab (‘They don’t live in the lab’) but are aware of the overall level of activity taking place. For example, the other taxes levied – such as on the drugs trade – act as a reference point for the amount of opiates or methamphetamine produced by a given lab, or area, and therefore a counter for attempts by lab owners to significantly underreport production levels. As with other taxes, owners reported a degree of pragmatism exhibited by local Taliban commanders, with payments negotiable based on patronage, the prevailing economy and individual circumstances. Only flagrant attempts to avoid payment altogether led to punitive action, including doubling the amount payable.

While previous research has shown that individual lab owners may make irregular payments to the Taliban, these are typically referred to as ‘gifts’ or ‘charity’ rather than taxes. These payments can be as much as \$400 for larger labs, such as those in Gandam Raiz in Kajaki, but are often much less, sometimes as little as \$80 in Bakwa.<sup>11</sup> These payments are paid on a seasonal basis and are a function of profitability of an individual lab, and as such are not guaranteed.

Calculating the revenues earned in the production of ephedrine, methamphetamine and opiates was not an easy task. It was informed by four different inputs: (1) detailed imagery analysis; (2) interviews with those involved in illicit drug production in Nimroz; (3) previous in-depth research in the south-western region, in particular repeated rounds of fieldwork and imagery analysis in Bakwa; and (4) a series of assumptions that will be made explicit here.

### 1.2.1 Ephedrine production

High-resolution imagery analysis was used in the assessment of the scale of ephedrine production. Previous research has shown the unique visual signature associated with ephedrine production, a function of the batch size and the amount of waste (both liquid and solid) discarded nearby, which a skilled imagery analyst can use to identify labs (see Figure 5A). An analysis of historical imagery of each of the compounds in Nimroz meant it was possible to identify 148 ephedrine labs, all of them located in Khashrud. The vast majority were found in the former desert lands adjacent to the district of Bakwa, and the market hub of Abdul Wadood bazaar, with a smaller number located in the area irrigated by the Khashrud river and near to the Ziranj to Delarem highway (see Figure 6A).

With an estimate of the number of ephedrine labs, it was then possible to draw on previous research in neighbouring Bakwa to calculate the amount of ephedrine that could be produced per year.<sup>12</sup>

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update.pdf).

10 EMCDDA – European Monitoring Centre for Drugs and Drug Addiction (2020) *Emerging evidence of Afghanistan’s role as a producer and supplier of ephedrine and methamphetamine*. EU4MD Special Report, November 2020. Lisbon: EMCDDA ([www.emcdda.europa.eu/system/files/publications/13410/emcdda-methamphetamine-in-Afghanistan-report.pdf](http://www.emcdda.europa.eu/system/files/publications/13410/emcdda-methamphetamine-in-Afghanistan-report.pdf)).

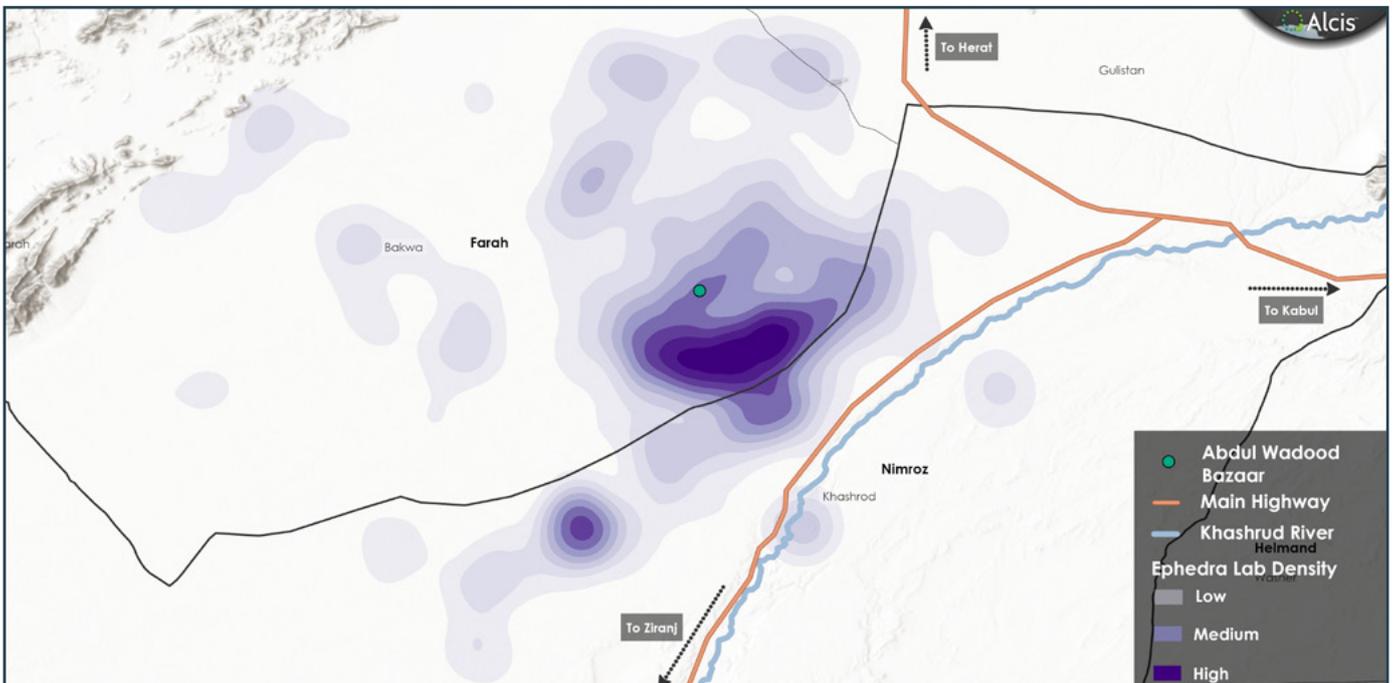
11 Mansfield, D. (2019) *Denying revenue or wasting money? Assessing the impact of the air campaign against ‘drugs labs’ in Afghanistan*. LSE International Drug Policy Unit, page 45 ([www.lse.ac.uk/united-states/Assets/Documents/mansfield-april-update.pdf](http://www.lse.ac.uk/united-states/Assets/Documents/mansfield-april-update.pdf)).

12 EMCDDA (2020) *Emerging evidence of Afghanistan’s role as a producer and supplier of ephedrine and methamphetamine*. EU4MD Special Report, November 2020. Lisbon: EMCDDA ([www.emcdda.europa.eu/system/files/publications/13410/emcdda-methamphetamine-in-Afghanistan-report.pdf](http://www.emcdda.europa.eu/system/files/publications/13410/emcdda-methamphetamine-in-Afghanistan-report.pdf)).

**Figure 5A Imagery showing ephedrine lab in Khashrud, Nimroz**



**Figure 6A Imagery analysis showing density of ephedrine labs in Bakwa and Khashrud**



Interviews with lab workers in Bakwa indicated that a typical ephedrine lab operates for 20 days per month, producing around 300 kg of ephedrine, making a total of 3,600 kg per year. With 148 ephedrine labs in Khashrud, we calculated potential production of 532,800 kg of ephedrine per year.

Methamphetamine labs are harder to identify using imagery. There is none of the large-scale waste associated with ephedrine production, batch loads are

smaller, and processing is done inside the buildings. So to calculate the total amount of methamphetamine produced in Nimroz, we drew on our previous research in neighbouring Bakwa, where methamphetamine cooks reported working 20 days a month, with a conversion rate of 1.5 kg of ephedrine to 1 kg of methamphetamine. Thus 532,800 kg of ephedrine produce a potential 351,648 kg of methamphetamine. With traders and cross-border smugglers unable to cite

**Table 4A Estimates of ephedrine and methamphetamine production in Nimroz and potential revenues generated**

	Estimated production (kg)	Total value (\$)	Total input costs (excl. labour) (\$)	Labour costs (\$)	Profits (\$)	Total tax (\$)
Ephedrine	532,800	29,970,000	15,284,700	719,280	13,633,020	333,000
Methamphetamine	351,648	131,868,000	115,120,764	5,802,192	10,285,704	659,340
<b>Total</b>		<b>161,838,000</b>	<b>130,405,464</b>	<b>6,521,472</b>	<b>23,918,724</b>	<b>992,340</b>

the price for transporting ephedrine to or across the Iranian border, or provide the price of ephedrine in Sistan Balochistan, we judged that the vast majority of ephedrine produced in Khashrud was converted into methamphetamine. While there were some reports of ephedrine being transported to Baramchar, on the border with Pakistan, the quantities were believed to be limited.

Having established estimates of the amount of ephedrine and methamphetamine production, it was possible to apply detailed costing of production from previous research and current tax rates collected in Nimroz, to calculate the potential amounts payable to the Taliban over a year (see Table 4A).

Mapping the taxes collected on ephedrine production could be done using the specific locations

of the labs. However, as we did not have locations for the methamphetamine labs, the value of the taxes on methamphetamine production had to be distributed evenly across each of the household compounds in the Khashrud area.

### 1.2.2 Opiate production

Estimating the amount of opiates produced in Nimroz was a much more challenging endeavour that involved assessing production levels in other parts of the south-west. For example, those working in the labs in Nimroz and in the opium trade in the south-west reported that the opium they smuggled and processed came from different districts in Helmand, including Gereshk (Nahre Seraj), Kajaki and Nawzad, as well as further afield. There was every indication that the production and smuggling process was

**Figure 7A Imagery showing heroin lab in Kajaki, Helmand**



almost indistinguishable from neighbouring Bakwa, further complicating matters. Reports from the ground suggested that there were also as many as 50–100 heroin labs in Khashrud.

Like methamphetamine labs, opiate labs are difficult to identify using imagery (see Figure 7A). While there are some tell-tale signs of the processing of opiates, including evidence of staining of the ground from effluents, as well as metal barrels and materials used in the heating and processing of opium, much of the work is concealed under a permanent lean-to (*bandara*) or a tarpaulin (*sapara*), and cleared away when not in use.<sup>13</sup> This is perhaps more so following the military strikes against heroin labs by United States Forces-Afghanistan (USFOR-A) in late 2017 and 2018.<sup>14</sup> In the absence of some of the more permanent visual signatures seen with ephedrine labs, identifying heroin labs would have required an in-depth review of a catalogue of historical imagery and more resources than were available under this project.

To overcome this challenge, we drew on our prior in-depth research on heroin labs, alongside interviews with key informants and lab workers in Nimroz. Our work in Bakwa indicated that the heroin labs in the area were relatively small compared to those in northern Helmand, where labs could have as many as 100 or more barrels in operation at one time, suggesting significant processing capacity.<sup>15</sup> Fieldwork in Nimroz confirmed a similar situation to that in Bakwa, with labs rarely containing more than 20 barrels and therefore producing significantly less morphine and heroin base than some labs in Helmand.

Drawing on this knowledge of lab size, and details of both work and conversion rates, we judged that it was unfeasible for there to be 50–100 heroin labs in Khashrud alone. This many labs would absorb anything from 25–52% of the country's total opium production of around 6,000 metric tons, even if they

were operating half of the time for nine months of the year, and a quarter of the time over the summer months, as was reported. This estimate of the number of labs in Khashrud was also inconsistent with our previous work on heroin production in different parts of northern Helmand and Bakwa, ground knowledge of other locations in eastern and north-eastern Afghanistan where labs are located, and USFOR-A's claims of striking 200 labs between November 2017 and August 2018.

In the absence of imagery, and with knowledge of the amount of opium required to produce morphine base and heroin, we determined that it was more likely there could be a maximum of 30 heroin labs in Khashrud, with a similar number operating in Bakwa. Operating with 20 barrels, these 30 labs could process 992,250 kg of opium – 15.75% of the total opium crop in 2020 – and would require significant amounts of opium from other districts in accordance with local reports.

Given that taxes were only payable on the final product, we had to assume the amounts of morphine and heroin base that were produced to calculate the monies payable to the Taliban, as outlined in Table A5. With limited capacity for the production of heroin hydrochloride in the area, and reports of little to no heroin hydrochloride being produced locally, we assumed 50% of the production from these labs was in the form of morphine base and 50% heroin base, with a value of \$93.4 million (Table 5A). With reported prices of up to \$820 per kg for morphine base and \$1,750 for heroin base, we calculated a tax of \$155,039 accruing to the Taliban – a fraction of 1% of the total value of production.

As with methamphetamine production, in the absence of knowledge of locations for each of the heroin labs, the values for taxes collected on morphine and heroin production were distributed evenly across the household compounds in Khashrud.

13 Mansfield, D. (2019) *Denying revenue or wasting money? Assessing the impact of the air campaign against 'drugs labs' in Afghanistan*. LSE International Drug Policy Unit, page 30 ([www.lse.ac.uk/united-states/Assets/Documents/mansfield-april-update.pdf](http://www.lse.ac.uk/united-states/Assets/Documents/mansfield-april-update.pdf)).

14 US Department of Defense News Transcript, Department of Defense Press Briefing by General Nicholson via 6 teleconference from Kabul, Afghanistan, 20 November 2017 ([www.defense.gov/News/Transcripts/Transcript-View/Article/1377753/departement-of-defense-pressbriefing-by-general-nicholson-via-teleconference-fr](http://www.defense.gov/News/Transcripts/Transcript-View/Article/1377753/departement-of-defense-pressbriefing-by-general-nicholson-via-teleconference-fr)).

15 Mansfield, D. (2019) *Denying revenue or wasting money? Assessing the impact of the air campaign against 'drugs labs' in Afghanistan*. LSE International Drug Policy Unit, page 30 ([www.lse.ac.uk/united-states/Assets/Documents/mansfield-april-update.pdf](http://www.lse.ac.uk/united-states/Assets/Documents/mansfield-april-update.pdf)).

**Table 5A Estimates of morphine base and heroin base production in Nimroz and the potential revenues generated**

	<b>Estimated production (kg)</b>	<b>Total value (\$)</b>	<b>Total input costs (excl. labour) (\$)</b>	<b>Labour costs (\$)</b>	<b>Profits (\$)</b>	<b>Total tax (\$)</b>
Morphine base	55,125	45,202,500	32,545,800	795,564	11,757,777	103,359
Heroin base	27,563	48,234,375	44,857,969	1,109,391	2,215,336	51,680
<b>Total</b>	<b>82,688</b>	<b>93,436,875</b>	<b>77,403,769</b>	<b>1,904,955</b>	<b>13,973,113</b>	<b>155,039</b>

## 2 Revenues from trade

Located in the south-west corner of Afghanistan bordering Iran and Pakistan, Nimroz has become a key conduit for trade, especially since the opening of a formal border crossing at Ziranj in 2005.<sup>16</sup> Hundreds of trucks cross the border each day, transporting a wide variety of goods. Fuel and transit goods make up the vast majority of goods crossing into Afghanistan via this route. There are also a number of smuggled goods crossing via unofficial borders with Afghanistan, including fuel from Iran (via Kang), the movement of migrants from Ziranj to Iran (via Afghanistan's border with Pakistani Balochistan), and drugs, including both opiates and methamphetamine (via a number of different routes, most notably to Iran through the border areas at Kang and Ziranj, and to Pakistan via Helmand). The trade in each of these commodities generates significant revenues to different actors, including those affiliated with the government and the Taliban (see Figure 9A).

### 2.1 The fuel trade – formal

According to official trade statistics, most of the fuel crossing the border from Iran is either 'diesel' or 'L05-62 diesel',<sup>17</sup> transported via tankers with a maximum weight of 25 metric tons that pass through the official border crossing at Ziranj before either being unloaded and stored by traders near the exit gate to the east of the city, or travelling onwards to other destinations along the Ziranj to Delarem highway (see Figure 8A).

For the purpose of calculating the revenues collected on the fuel trade, we assumed all the trucks passing through Ziranj contained diesel (and not petrol and liquid gas). Interviews with traders and those transporting fuel from Iran, and onward to Delarem, allowed us to document the locations of payments – formal and informal taxes and fees – upon entering Afghanistan, as well as along the main highway. High-resolution imagery and photography supported the identification of these locations. We

were also able to determine the amount paid at each checkpoint and the unit on which the tax was levied. While government duties and taxes paid at the Customs House at Ziranj were often based on the amount of fuel imported, both fees and informal taxes collected on the journey to Delarem were typically charged against a fuel tanker regardless of its size. We collected information on the tax rates on fuel levied by the government and the Taliban from traders, transporters and officials.

These interviews revealed 27 different checkpoints on the 230 km journey between the official crossing at Ziranj through Delarem to the provincial border with Helmand and the district of Washer (see Figure 10A). Most of these checkpoints collected informal taxes, or bribes, and were staffed by government security officials, most notably the Afghan National Police (ANP), the Afghan Border Police (ABP), the Traffic Police, as well as Customs. In total there were six checkpoints collecting informal taxes in Ziranj, six in the district of Chakhansur, four in or around the district centre of Ghorghory in Khashrud, and seven in and around Delarem. Typical payments at ANP checkpoints were no more than \$5 per truck.

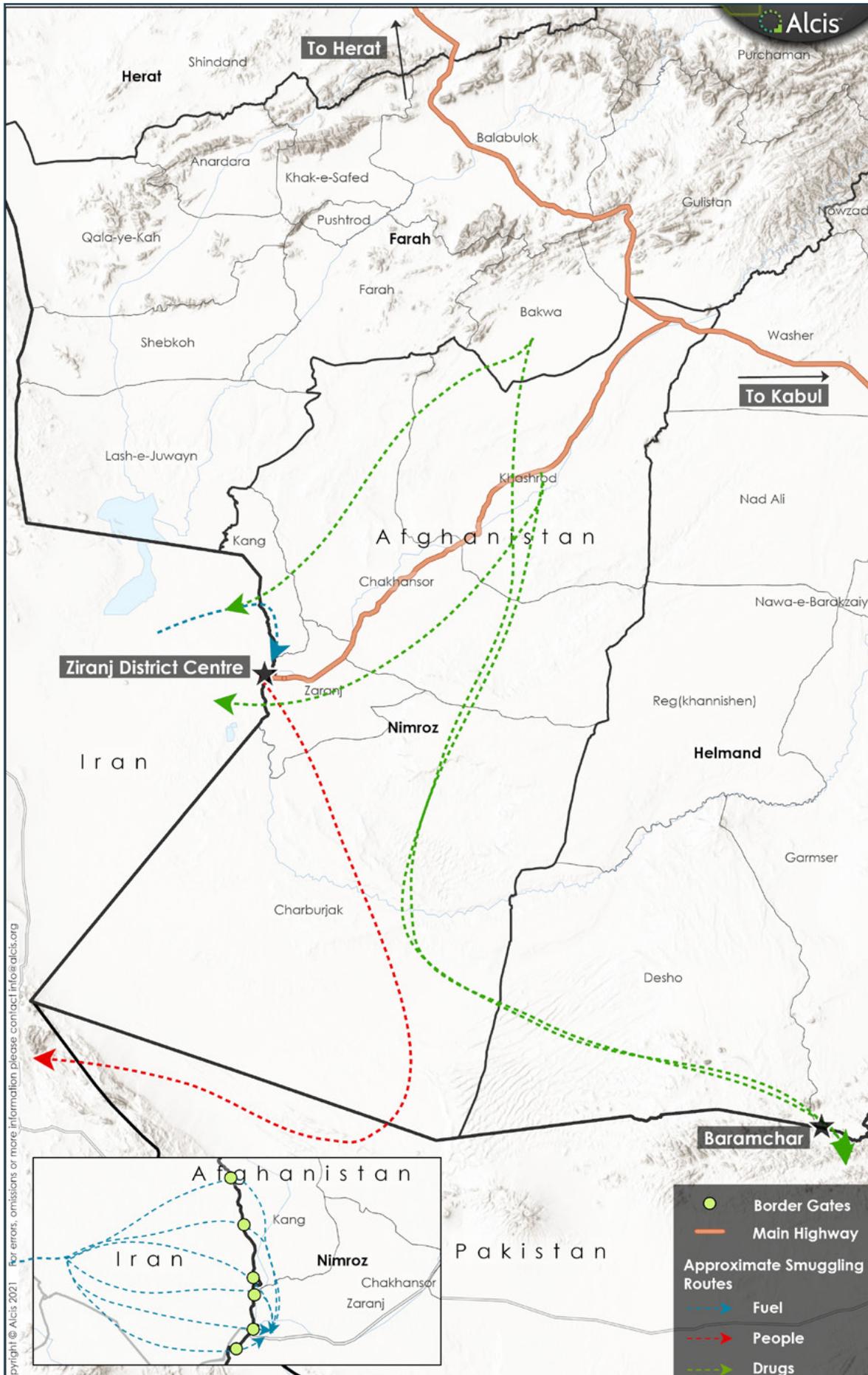
**Figure 8A** Ground photography showing fuel trucks in Ziranj, Nimroz



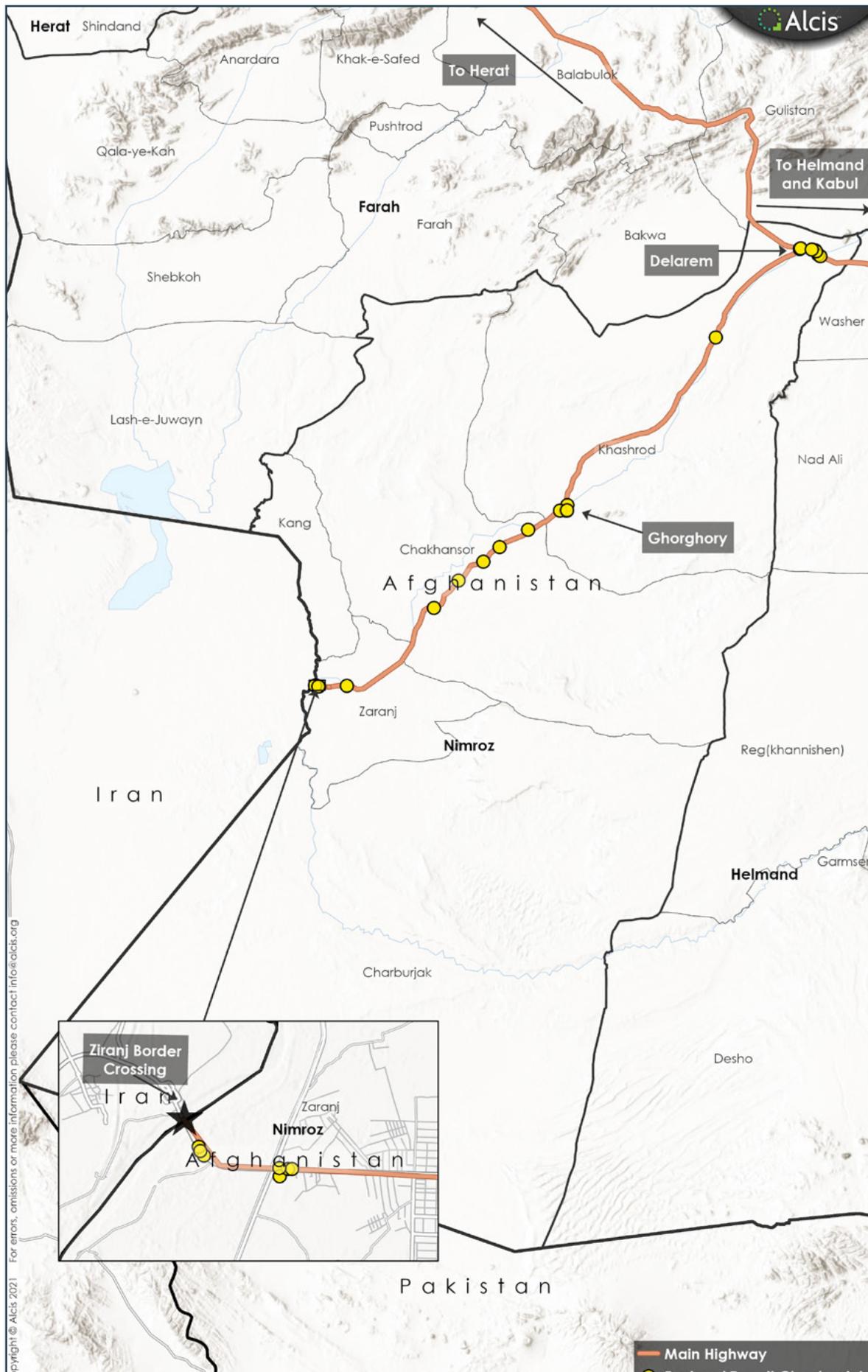
16 Mansfield, D. (2020) *Catapults, pickups and tankers: cross-border production and trade and how it shapes the political economy of the borderland of Nimroz*. Kabul: AREU (<https://areu.org.af/wp-content/uploads/2020/09/2013E-Catapults-Pickups-and-Tankers.pdf>).

17 National Statistics and Information Authority (2020) *Afghanistan Trade Statistics Yearbook 2019*, pages 16, 25 115, 118 ([www.nsia.gov.af:8080/wp-content/uploads/2020/10/Afghanistan-Trade-Statistics-Yearbook-2019.pdf](http://www.nsia.gov.af:8080/wp-content/uploads/2020/10/Afghanistan-Trade-Statistics-Yearbook-2019.pdf)).

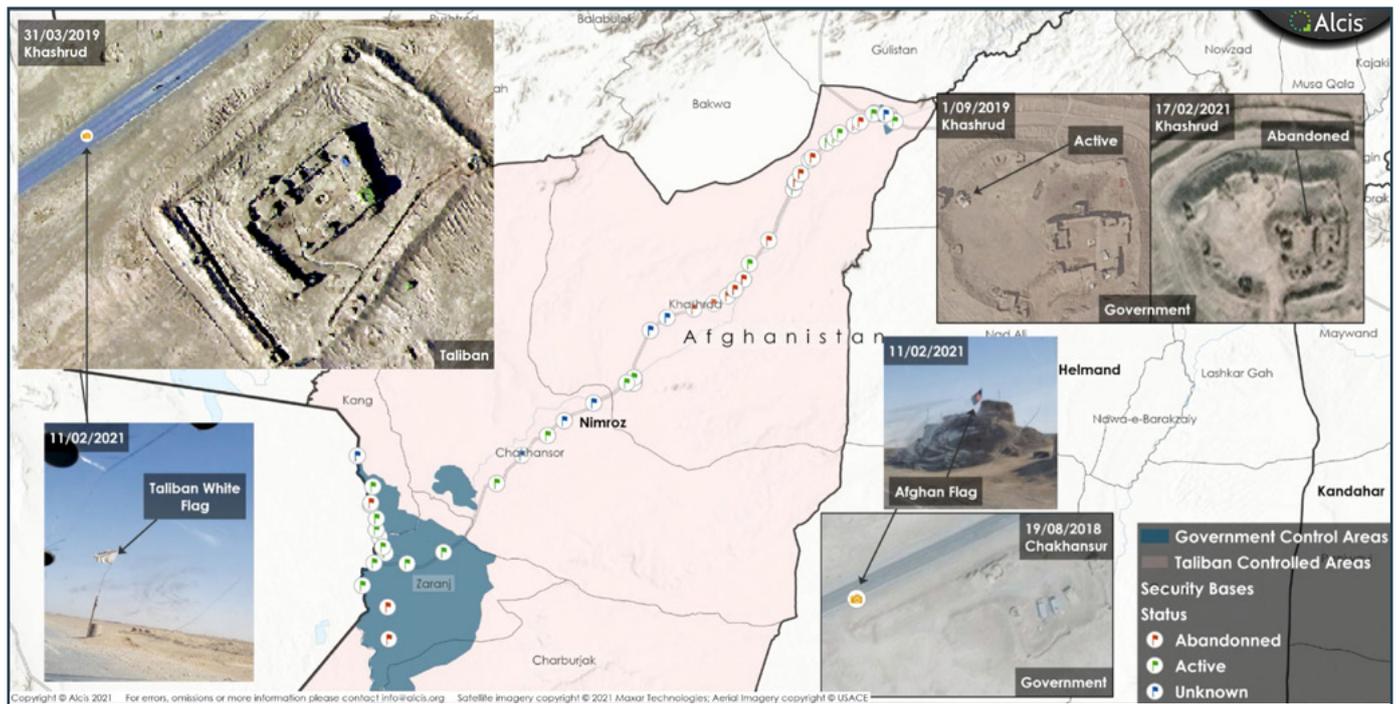
Figure 9A Map showing primary routes in Nimroz for the smuggling of fuel, drugs and people



**Figure 10A** Map showing checkpoints on the main highway between Ziranj and the Nimroz–Helmand provincial border



**Figure 11A** Map containing imagery and ground photos showing location and changes to security bases



Payments to customs, however, could be as much as \$25 per truck.

Reports indicated that prior to fieldwork, there had been a lot more checkpoints between Ghorghory and Delarem and that a number of these had been abandoned by the government in recent weeks. These included 6–10 ANP bases, along with an Afghan National Army (ANA) base at Manar (see Figure 11A). Some of these abandoned bases could be seen with the white flag of the Taliban flying. It was claimed that the removal of ANP checkpoints was favoured by both transporters and traders who appreciated the reduction in travel time and costs associated with the journey to Delarem – a point the Taliban sought to capitalise on. The Taliban had only one checkpoint, located in Khashrud, around 70 km from Ghorghory and 20 km from the abandoned ANA base at Manar, and where they were said to collect taxes.

Payments of formal duties and taxes along this route were few and far between – only three in total: two were municipal taxes collected in Ghorghory and Delarem, the other was duty and taxes collected on imports at the Customs House (Gumruk) in Ziranj. There were also fees to be paid for various services rendered, including payments to the transport union, insurance, and commission to those who facilitate access and speedy resolution of any problems at the Customs House. For details of all payments made to the government, the Taliban and government-affiliated actors on each truck from its point of entry at the border at Ziranj to the border with Washer, see Table 6A.

Both ground data and high-resolution imagery were used to calculate the amount of fuel imported via Ziranj and travelling along the main highway. High-resolution imagery allows for container trucks to be differentiated from fuel tankers (see Figure 12A). These counts, and those from the ground, indicated that approximately 100 fuel trucks cross the border each day at Ziranj, six days per week. With each fuel truck containing 25 metric tons, and prices in Ziranj of \$575 per metric ton at the time of our fieldwork, the fuel industry in Nimroz was worth an estimated \$448.5 million.

On the road between Delarem and the border with Helmand – the ring road – calculations were made more complicated by additional trucks from Islam Qala in Herat (100 trucks a day), and Mile 78 in Farah province (40 trucks a day). High-resolution imagery and prior fieldwork in both locations allowed these trucks to be counted and included in the total for this

**Table 6A** Reported payments per fuel truck on the route from Ziranj to Delarem

Payment type	Institution	Amounts (\$)
Formal taxes	Government	1,419
Informal taxes	Government	162.5
Informal taxes	Taliban	562.5
Fees	Private	81.25
<b>Total</b>		<b>2,225.25</b>

**Figure 12A Imagery showing trucks at Ziranj on Afghan–Iranian border**



**Figure 13A Imagery showing tractors smuggling fuel crossing the Iran–Afghanistan border**



stretch of the highway.<sup>18</sup> With total truck numbers and details on the amounts paid at the different locations en route, it was then possible to map the potential revenues collected. In contrast to the taxes on agriculture and drugs processing, values were able to be allocated to the specific locations where payments were made, as outlined in Table 7A.

## 2.2 The fuel trade – informal

Aside from the trade in fuel through the official crossing at Ziranj, there is a flourishing trade in smuggling Iranian diesel into Afghanistan, primarily across the border at Kang. This cross-border trade exploits the price differentials between the heavily subsidised

<sup>18</sup> Alcis (2021) *Managing local resources and conflict: the undeclared economy*. A report for USAID, page 46.

**Table 7A Estimates of the revenues earned on the fuel trade in Nimroz**

District	Nature of payment	Location	Institution	Total value (\$)
Ziranj	Informal tax	Ziranj	ABP	195,000
Ziranj	Informal tax	Ziranj	Customs Police	117,000
Ziranj	Fee	Ziranj	'Insurance'	390,000
Ziranj	Informal tax	Ziranj	Customs Entry	195,000
Ziranj	Formal tax	Ziranj	Customs	43,804,800
Ziranj	Fee	Ziranj	Commissionkar	780,000
Ziranj	Fee	Ziranj	Transport Union	1,365,000
Ziranj	Informal tax	Ziranj (City gate)	Customs	780,000
Ziranj	Informal tax	Ziranj (City gate)	ANP	195,000
Ziranj	Informal Tax	Airport	ANA	0
Chakhansur	Informal tax	Dehrahi	ANP	156,000
Chakhansur	Informal tax		ANP	156,000
Chakhansur	Informal tax	Antenna	ANP	156,000
Chakhansur	Informal tax	Khasorjo	ANP	156,000
Chakhansur	Informal tax	Kamingah	ANP	156,000
Chakhansur	Informal tax	Alili	ANP	156,000
Khashrud	Informal tax	Ghorghory (entry)	ANP	156,000
Khashrud	Informal tax	Ghorghory (exit)	ANP	156,000
Khashrud	Informal tax	Ghorghory	Transport	780,000
Khashrud	Formal tax	Ghorghory	Municipality	390,000
Khashrud	Informal tax	Pul	ANP	156,000
Khashrud	Informal tax	Raken	Taliban	17,550,000
Khashrud	Informal tax	Delarem entry	ANP	280,800
Khashrud	Informal tax	Delarem	ANP	280,800
Khashrud	Informal tax	Delarem	Customs	1,872,000
Khashrud	Informal tax	Delarem	ANP	280,800
Khashrud	Informal tax	Delarem (Derahi)	Traffic Police	374,400
Khashrud	Formal tax	Delarem	Municipality	187,200
Khashrud	Informal tax	Delarem	ANA	0
Khashrud	Informal tax	Delarem (City gate)	ANP	280,800

domestic diesel available in Sistan Balochistan in Iran, and the price of export-quality diesel that crosses the formal border at Ziranj, sold in Afghanistan.

This fuel smuggling is largely undertaken by farmers whose land and homes are separated by Iranian border controls, most notably the fence and wall, constructed by Tehran since 2007. These farmers are allowed access to their lands on their tractors, passing through gates staffed by the Iranian Border

Guards. Each tractor carries 80–100 20-litre barrels (*bushka*), which are subsequently loaded onto pickups and driven south to Ziranj, where the fuel is then stored – even mixed with export-quality fuel – then transported to other parts of Afghanistan.

To calculate the value of the trade in smuggled fuel and the revenues generated along its route from Kang to Ziranj, we combined high-resolution imagery and in-depth interviews with those involved in the

**Table 8A** Estimates of the revenues earned on the smuggled fuel trade in Nimroz

District	Nature of payment	Location	Institution	Total value (\$)
Kang	Fee	Kang	Landowners	179,508
Kang	Informal tax	Kang	ABP	137,623
Kang	Informal tax	Kang	ABP	137,623
Kang	Informal tax	Kang	ABP	137,623
Kang	Informal tax	Kang	ABP	137,623
Kang	Informal tax	Deh Rais	ABP	137,623
Kang	Informal tax	Sar Shila	ABP	137,623
Ziranj	Informal tax	Nad Ali	ABP	62,828
Ziranj	Informal tax	Sia Chushman	ABP	62,828

trade. Estimates from our fieldwork report that up to 60 tractors cross the border each day at six different locations. High-resolution imagery supported these claims (see Figures 13A and 14A).

With an estimate of the number of tractors crossing the border each day, and knowing their carrying capacity, it was possible to calculate the amount of fuel smuggled into Afghanistan via this route, at 43.8 million litres over a year – the equivalent of 37,245 metric tons. With a price of \$0.375 per litre in Ziranj at the time of our fieldwork, this smuggled fuel economy could be worth up to \$19.2 million.

Those involved in smuggling the fuel reported making a number of payments between the border and the city of Ziranj. For example, the ABP at the point of entry, as well as the landowner whose land the tractors passed through, were reported to exact payments based on the number of barrels carried, at \$0.20 and \$0.08 respectively. Once loaded onto pickup vehicles, with a carrying capacity of up to 120 barrels, further payments were levied by the ABP along the road, with taxes charged per vehicle. We distributed these values evenly across the six ABP bases in Kang, as well as the two ABP bases in Ziranj through which these vehicles pass en route to the city. Table 8A outlines the distribution of these payments.

## 2.3 The transit trade

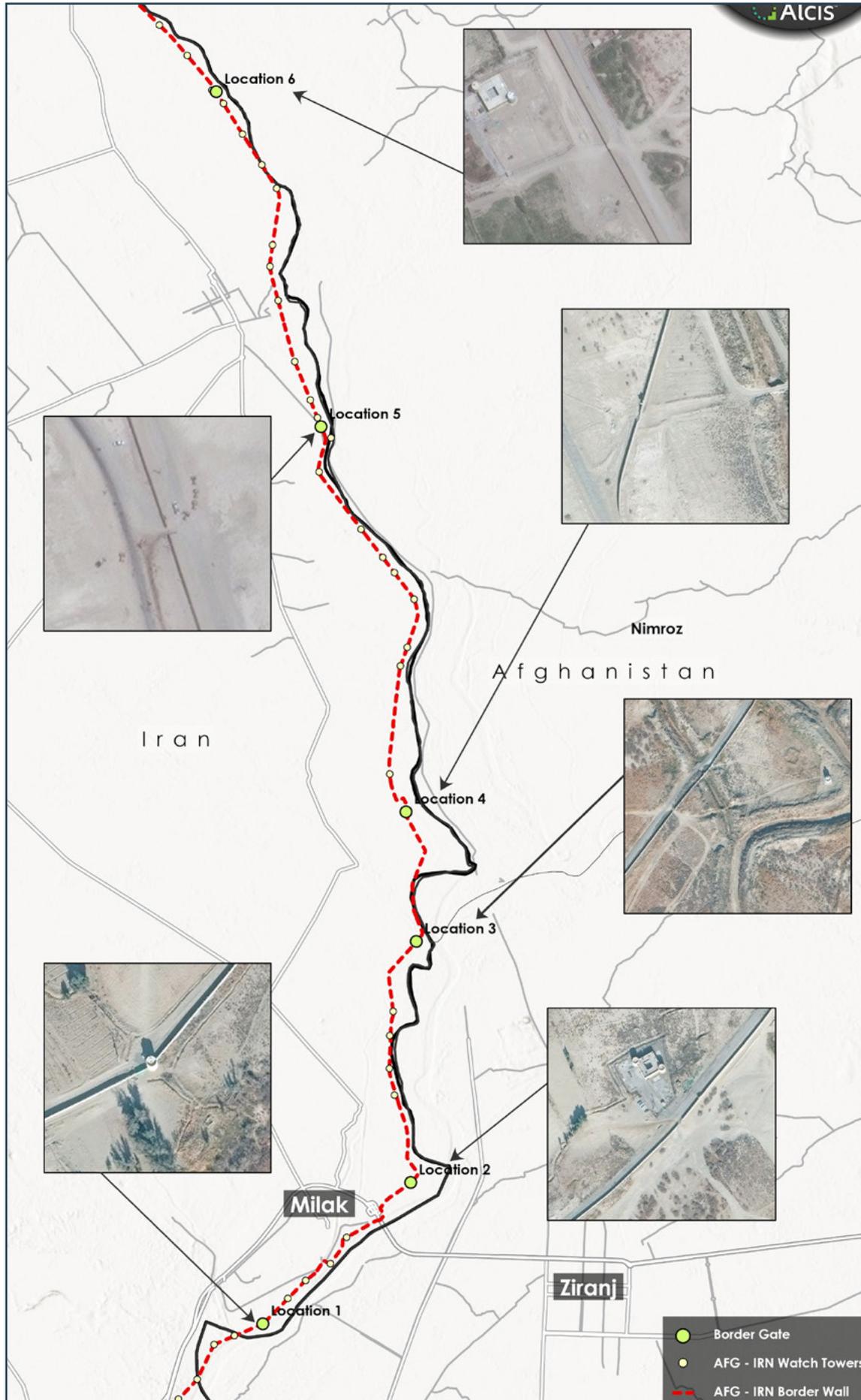
The transit trade consists of a wide range of goods imported into Afghanistan from across the Middle East, Asia and Australasia (see section 3.3 of the main report). Prior to 2014 most of these transit goods passed through Pakistan, but increasingly, reflecting the Ghani government's efforts to improve relations with Iran, imports come from Iran via Ziranj. In fact, by 2017, official trade between Iran and Afghanistan was valued at over \$2 billion – almost twice the value of trade with Pakistan.<sup>19</sup>

Although transit goods take the same route as fuel imports, and use the same checkpoints along the main highway, calculating the revenues earned was more challenging due to the wide range of goods imported and the different taxes imposed by both the Afghan government and the Taliban. However, through our interviews with traders, transporters and officials, we were able to collect the different tax rates imposed on goods by the government and the Taliban and build this into our calculations.

First, we needed to estimate the number of trucks carrying transit goods. As with fuel, we used a combination of counts on the ground and high-resolution imagery, calculating that around 250 trucks entered Afghanistan at Ziranj each day. We then had to differentiate between the type of goods being imported so that we could apply the appropriate tax rates (for both the government and the Taliban). Government tax rates varied from \$744 on a 25-metric ton truck of cement to \$3,482 on spare parts for cars. The tax

19 Financial Tribune (2018) 'Iran biggest trade partner of Afghanistan in 2017-18', 8 April (<https://financialtribune.com/articles/economy-domestic-economy/84309/iran-biggest-trade-partner-of-afghanistan-in-2017-18>).

Figure 14A Imagery product showing locations where tractors smuggling fuel cross the Iran-Afghan border



exacted by the Taliban on these same goods ranged from \$125 to \$562.50. All other checkpoints simply imposed taxes by the truck rather than by goods transported, applying the same rates as with fuel.

To differentiate between the types of goods, we drew on interviews with officials and key informants, such as those that facilitated the

processing of goods at customs, known as *commissionkars*. Based on this breakdown, we calculated the revenues at each location, as with fuel, including the increased traffic in transit goods from Islam Qala and Mile 78 once at Delarem (see Table 9A). These were then mapped by location, reflecting the amounts taxed at each point.

**Table 9A Estimates of the revenues earned on the transit trade in Nimroz**

District	Nature of payment	Location	Institution	Total value (\$)
Ziranj	Informal	Ziranj	ABP	487,500
Ziranj	Informal	Ziranj	Customs Police	292,500
Ziranj	Fee	Ziranj	'Insurance'	975,000
Ziranj	Informal	Ziranj	Customs Entry	487,500
Ziranj	Formal	Ziranj	Customs	132,277,080
Ziranj	Fee	Ziranj	Commissionkar	1,950,000
Ziranj	Fee	Ziranj	Transport Union	3,412,500
Ziranj	Informal	Ziranj (City gate)	Customs	1,950,000
Ziranj	Informal	Ziranj (City gate)	ANP	487,500
Ziranj	Informal	Airport	ANA	0
Chakhansur	Informal	Dehrahi	ANP	390,000
Chakhansur	Informal		ANP	390,000
Chakhansur	Informal	Antenna	ANP	390,000
Chakhansur	Informal	Khasorjo	ANP	390,000
Chakhansur	Informal	Kamingah	ANP	390,000
Chakhansur	Informal	Alili	ANP	390,000
Khashrud	Informal	Ghorghory (entry)	ANP	390,000
Khashrud	Informal	Ghorghory (exit)	ANP	390,000
Khashrud	Informal	Ghorghory	Transport	1,950,000
Khashrud	Formal	Ghorghory	Municipality	975,000
Khashrud	Informal	Pul	ANP	390,000
Khashrud	Informal	Raken	Taliban	25,350,000
Khashrud	Informal	Delarem entry	ANP	702,000
Khashrud	Informal	Delarem	ANP	702,000
Khashrud	Informal	Delarem	Customs	4,680,000
Khashrud	Informal	Delarem	ANP	702,000
Khashrud	Informal	Delarem (Derahi)	Traffic Police	936,000
Khashrud	Formal	Delarem	Municipality	468,000
Khashrud	Informal	Delarem	ANA	0
Khashrud	Informal	Delarem (City gate)	ANP	702,000

Conservative estimates would place the value of a 25-metric ton truck entering Afghanistan containing most transit goods (bar the most basic) at around \$10,000, with items like cigarettes, spare parts for cars and electrical items worth considerably more.<sup>20</sup> With 250 trucks transiting Ziranj each day, it is not unreasonable to proffer a cautious estimate of the value of the transit trade in Nimroz at \$780 million a year.

## 2.4 People-smuggling

The people-smuggling business is centred in Ziranj.<sup>21</sup> Prior to the Iranian authorities reinforcing their border infrastructure, including building a 70 km wall at the city, the smuggling of people into Iran was a relatively free market, involving many of the villages straddling the border, who would help people cross into Iran for a small fee. The border wall is seen as instrumental in shifting the transport route southwards, initially to the district of Charburjak, and then, with an increase in the number of Afghan Border Police deployed there as well as growing levels of violence and robbery, to the border with Pakistan and the village of Dak in Balochistan (see Figures 16A and 17A). While this is a longer route, the

journey to Iran from Ziranj to Balochistan is viewed as far more secure and dependable for the movement of large numbers of people.

Despite this change of routes into Iran, the focal point for the people-smuggling business continues to be the estimated 1,200 hotels scattered across the city of Ziranj. These hotels have links back to the provinces from where migrants, or passengers (*musafar*) come from, and pay a small fee, a commission, to those who recommend prospective travellers. Once in the hotel, migrants may stay a few days before making their journey south, paying for food and accommodation. The cost of the journey to Iran via Pakistan is separate and, at the time of our fieldwork, was between \$145 and \$205 per passenger, out of which the smuggler has to pay the cost of travel and any informal taxes along the way.

The journey to Iran begins with a short trip via Ziranj to Masoomabad, just south of the city (see Figure 15A). Here, travellers accumulate in six abandoned compounds, boarding pickup vehicles (as many as 22 in each) for the long drive south, travelling in multi-car convoys in case of breakdown. Officials from a number of state security agencies

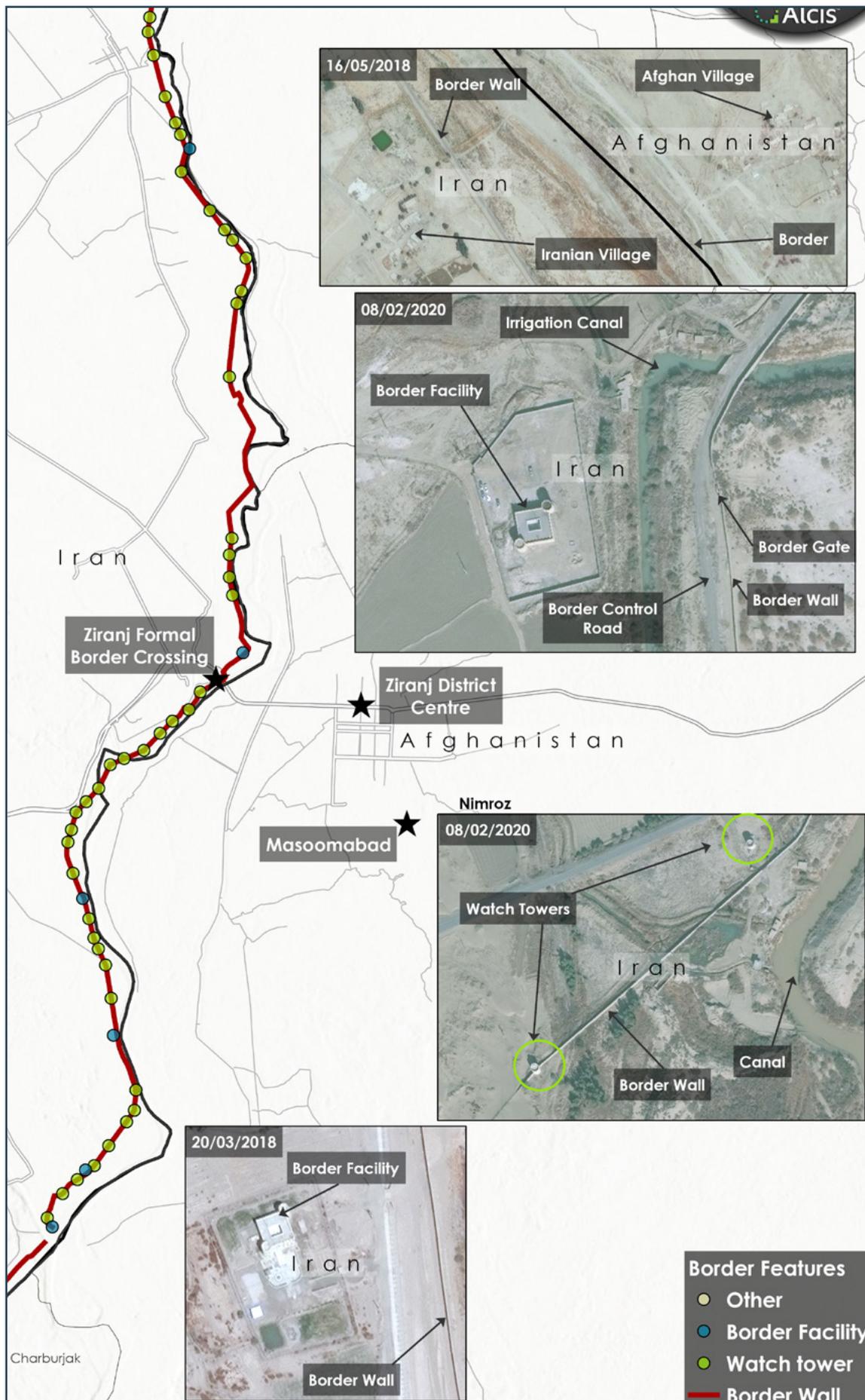
**Figure 15A** Imagery showing route for migrants departing Ziranj en route to Pakistan and on to Iran



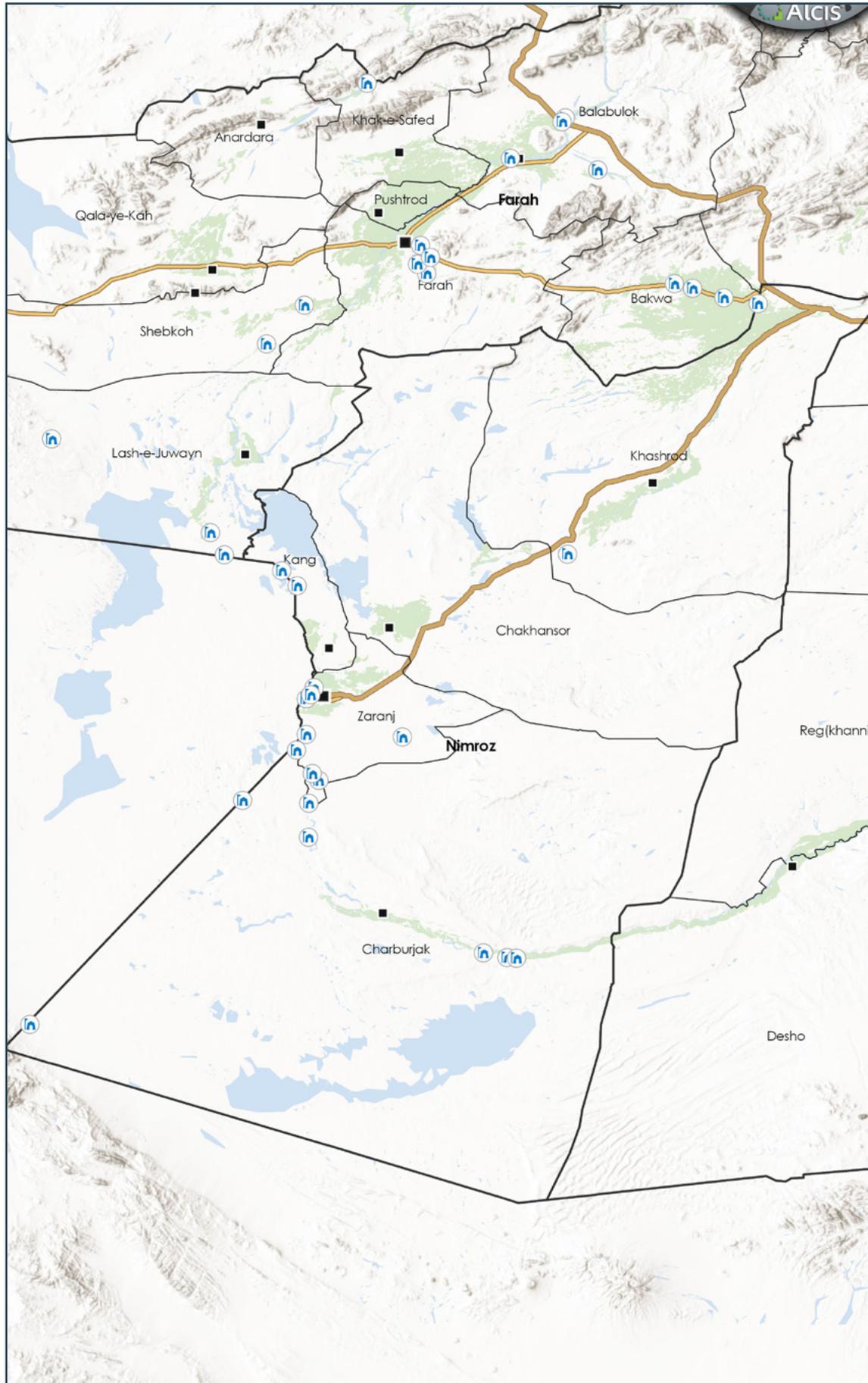
20 The contents of a 25-metric ton truck of steel bars used in construction would be worth \$18,600, while a container of cigarettes could be worth anything from \$60,000 to \$100,000 when sold in Afghanistan. See Alcis (2021) *Managing local resources and conflict: the undeclared economy*. A report for USAID, pages 66–6.

21 Mogelson, L. (2012) 'The scariest little corner of the world'. *The New York Times Magazine*, 12 October ([www.nytimes.com/2012/10/21/magazine/the-corner-where-afghanistan-iran-and-pakistan-meet.html](http://www.nytimes.com/2012/10/21/magazine/the-corner-where-afghanistan-iran-and-pakistan-meet.html)).

Figure 16A Imagery showing the fortification of the Iran–Afghan border



**Figure 17A** Map showing the location of security bases in Nimroz, including the concentration around Kamal Khan dam south of Ziranj



are located at these compounds and collect payment from each pickup prior to its departure.

Taking the desert route they drive to the district centre at Charburjak, stopping briefly to make payments to landowners, the ANP and a number of ABP checkpoints. At Charburjak, ferries transport pickups across the Helmand river for a small fee (see Figure 18A). From

Charburjak it is a 100 km journey through the desert across the border into Dak. This is a particularly challenging leg of the journey, where cars often break down. The sheer number of pickups plying this route is such that small traders have set up tents in remote and barren locations, selling food and drinks, and fuel and spare tyres, all at a premium price (see Figure 19A).

**Figure 18A Imagery and ground photographs showing the crossing point on the Helmand river at Charburjak district centre**



**Figure 19A Imagery and ground photographs showing the location of transit points near the border with Pakistan**



Once across the border in Dak, there are further checkpoints where payments have to be made – this time to the Taliban and the Pakistani border militia. In Dak, passengers disembark, travelling on via different pickups through the deserts of Balochistan to either Raja or the foothills of the Mashkel mountains. This journey is also by pickup vehicle and can entail further payments to the Pakistani Police, ISI and possibly Jundullah (the People’s Resistance Movement of Iran), a Sunni extremist group opposed to the government in Tehran. Once in Pakistan these bribes are borne by the passenger and not the smugglers back in Ziranj. The journey over the Mashkel mountains can be a six- to eight-hour walk and is largely undertaken by young men.

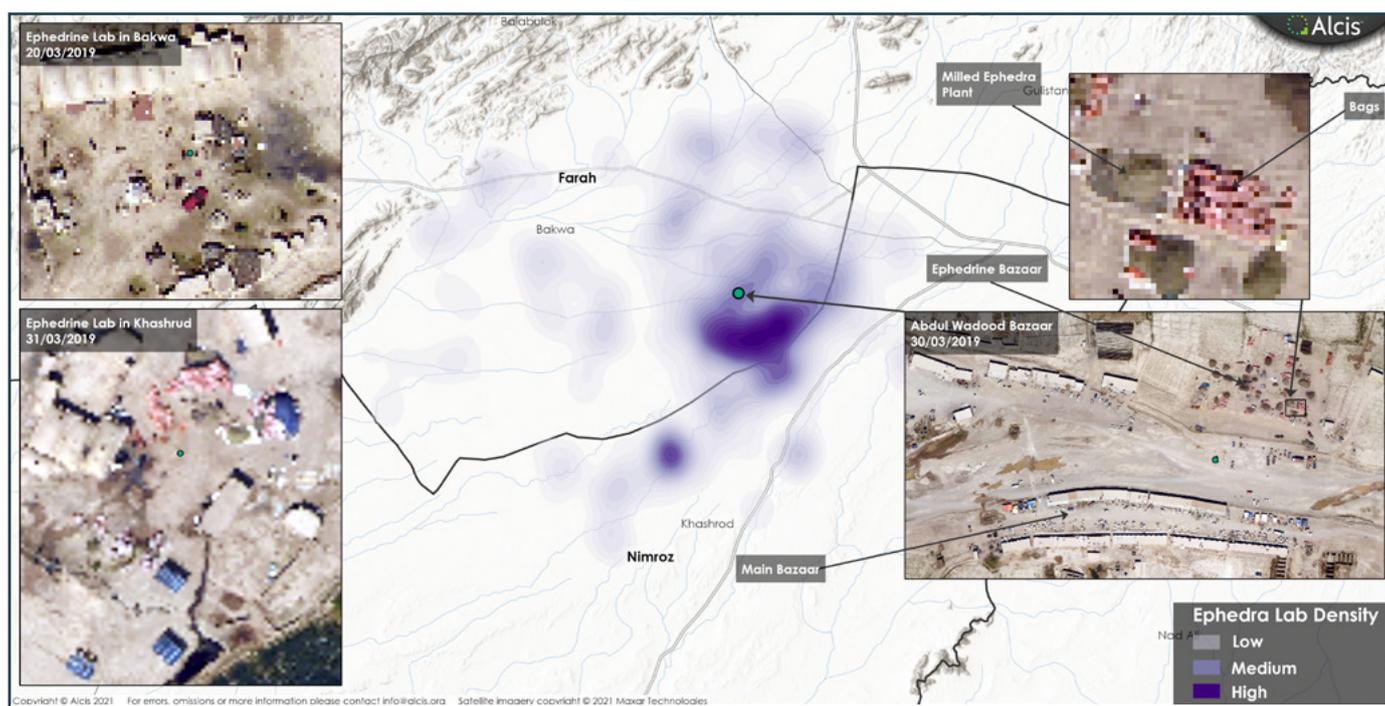
Calculating the revenues earned from people-smuggling was similar to calculating the fees and taxes collected on importing fuel or transit goods. In-depth interviews with those involved elicited the amounts paid at each location, in what units, and with what frequency.

Interviews with transporters, hoteliers and key informants also supported an assessment of the number of pickups making the journey between Masoomabad and Dak each day (allowing for seasonal variation) during the summer and winter, and the number of passengers carried. Estimates varied from 100 pickups per day in the winter months, when the journey is more difficult – especially over the mountains into Iran – to 200 or more in the summer. By April,

**Table 10A Estimates of the revenues of the people-smuggling trade in Nimroz**

Location	Nature of payment	Institution	Amount paid (\$)
Ziranj	Informal tax	Security Commander	540,000
Ziranj	Informal tax	National Directorate of Security	2,700,000
Ziranj	Informal tax	Municipality	90,000
Ziranj	Informal tax	Finance Dept	60,000
Ziranj	Fee	Pickup owner	2,340,000
Ziranj	Fee	Commissionkar	9,900,000
Ziranj	Fee	Ziranj driver	825,000
Masoomabad	Fee	Agency/Driver	16,229,508
Masoomabad	Fee	Pickup driver	368,852
Ziranj	Informal tax	Agency	245,902
Masoomabad	Informal tax	NDS/ANP	983,607
Masoomabad	Fee	Landowner	49,180
Masoomabad	Fee	Landowner	49,180
Dasht	Informal tax	ANP	983,607
Sar Dasht	Informal Tax	ABP	1,475,410
Charburjak	Informal tax	ANP	983,607
Charburjak	Fee	Boat owner	73,770
Dak	Informal tax (Ziranj to Dak)	Taliban	375,000
Dak	Informal tax (Dak to Iran border)	Taliban	375,000
Dak	Fee	Driver	368,852
Pakistan	Informal tax	Pakistan militia	1,622,951
Dak	Informal tax	Pakistan police	1,081,967
Pakistan	Informal tax	Inter services intelligence	1,081,967
Pakistan	Informal tax	Jundullah	1,622,951

**Figure 20A Imagery showing density of ephedrine labs near Abdul Wadood bazaar in Bakwa**



there were reports of as many as 300 pickup vehicles making the journey to Dak each day from Masoomabad, carrying approximately 6,600 people. While possibly a function of the deteriorating security situation in Afghanistan and the failing peace process, we judged that this was atypically high, so maintained an upper estimate of 200 pickup vehicles per day during the summer for the purposes of our calculations.

Deploying high-resolution imagery in an attempt to confirm the number of pickups plying this route proved challenging, given that most departed Masoomabad between 1400 and 1800 each day and arrived in Dak at night. Imagery is typically collected around midday, and with departures from Masoomabad staggered, it was not possible to find large numbers of pickup vehicles at a single location at the same time.

Based on the approximate number of pickups making the journey each day and the number of passengers they carried, as well as detailed costs, we estimate that the people-smuggling business is worth \$270 million per year, with costs of \$50.9 million, earning profits of up to \$219.1 million. For the distribution of revenues along the journey, see Table 10A.

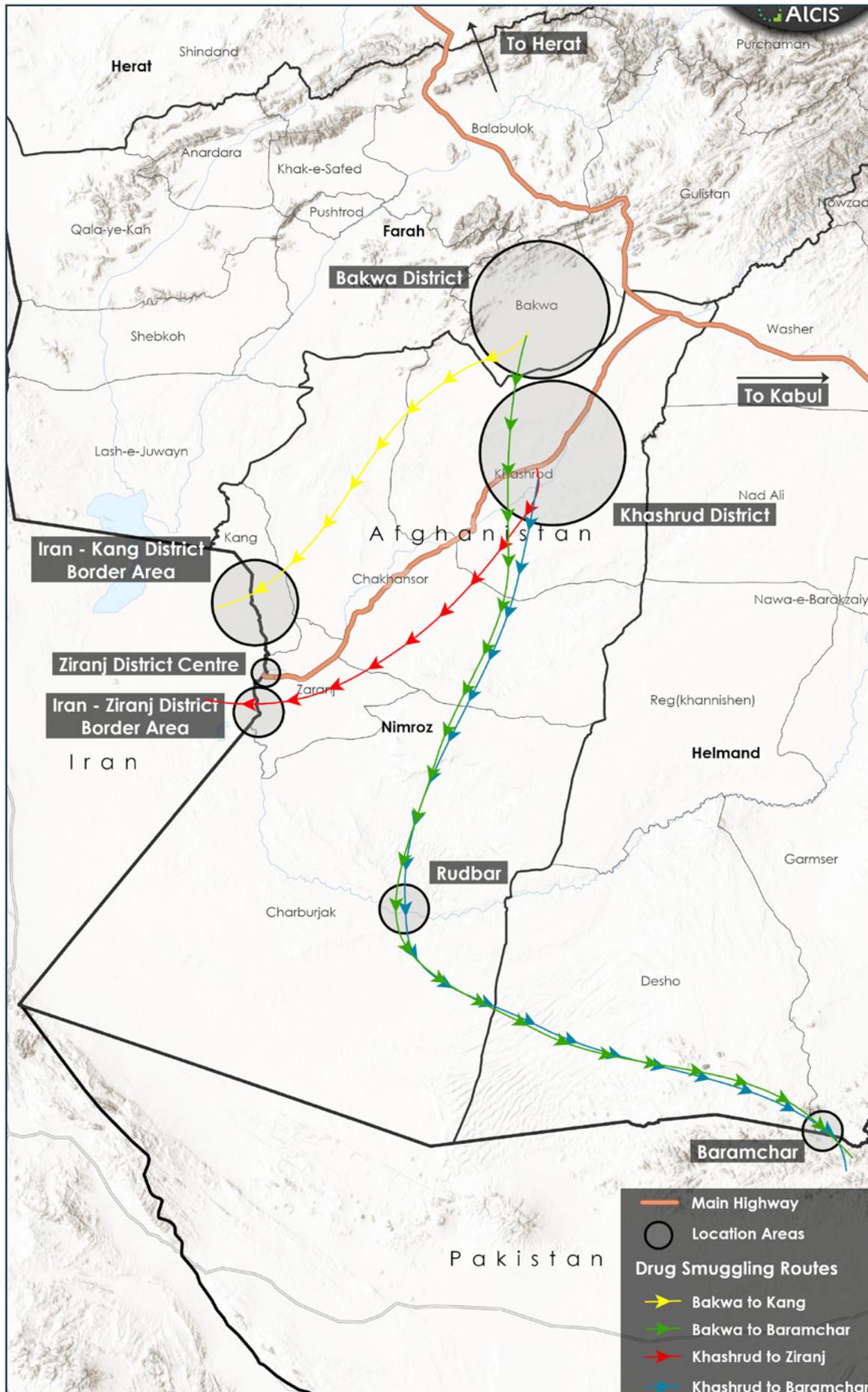
## 2.5 The drugs trade

Nimroz serves as a major conduit for drug-smuggling into Iran but also into Pakistan. As has already been documented, the province has significant capacity for the production of opiates, ephedrine and methamphetamine in Khashrud, with most of the raw materials sourced in other parts of south-western and central Afghanistan. Nimroz also sits astride a number of important drug-smuggling routes, particularly given its proximity to the district of Bakwa (Farah province), which is a major market hub for the drugs trade. In this regard Khashrud should be treated largely as an extension of the burgeoning drugs market in Bakwa – a fact perhaps highlighted by the imagery analysis showing the concentration of ephedrine labs along the district border in the former desert lands (see Figure 20A).

In fact, interviews with those involved in the drugs trade and key informants during our fieldwork for this study, as well as previous iterations of research, indicated that there were broadly four primary routes for smuggling drugs through Nimroz: (1) Bakwa to Kang; (2) Khashrud to Ziranj; (3) Bakwa to Baramchar; and (4) Khashrud to Baramchar. This further highlights the central role of the Bakwa/Khashrud area in the drugs trade in south-west Afghanistan (see Figure 21A).

The route from Bakwa to Kang was said to be dominated by smugglers transporting drugs 140 km by car through the deserts of northern Khashrud and

Figure 21A Map showing primary smuggling routes for from Bakwa and Khashrud to Pakistan and Iran



Chakhansur to the villages straddling the Iranian border. In Kang, the drugs would be stored in the smugglers' compound, or in a fellow villager's house, for a small fee. Once arrangements with contacts on the Iranian side of the border have been made, the drugs are transported over by ladder, or catapult. Ladders are considered a risky affair, as even when agreements are reached with the local Iranian Border Guards, there is the potential that Iranian mobile border patrols might be operating and open fire on smugglers. This is an activity undertaken at night and involves transporting one or two 'bags' of drugs over the border fence, each the equivalent of around 30 kg.

Catapults (1.5 m high) (see Figure 22A) were a more recent addition in Kang – a consequence of the border fencing – and a means of reducing both the costs and dangers of cross-border smuggling. These catapults can propel 1 kg up to 300 meters into Iran. there are said to be as many as 150 catapults stretched along the road in Kang, identified by the concrete bases and surrounding trenches used by operators (Figure 23A). Smugglers report that on a 'good night' – at dusk with minimum winds – a team can propel up to 100 kg across the border where they are caught by net by their Iranian counterparts.

Those transporting drugs from Bakwa to Kang are subject to a number of taxes and fees. As with the production of opiates, ephedrine and methamphetamine, the Taliban levy varying rates of tax, ranging from up to \$1.25 per kg for opium and cannabis to up to \$3.75 per kg for 'powdahs'. Smugglers reported that they paid this tax in the area where they purchased the drugs prior to transporting them to the border, typically in Bakwa and Khashrud. Receipts (*parchar*) were issued so that if they were stopped by the Taliban while in transit, they would not have to pay again.

Payments to government-affiliated actors along these routes are largely levied against the weight of drugs transported, although there are also payments exacted on each catapult (\$120 per month) and payments imposed on each smuggler by district officials.

Smuggling along the second primary route (from Khashrud to the border areas of Ziranj) and the payments and fees involved, operate much as they do for the primary route, with both Taliban and Afghan government officials levying taxes on the drugs trade.

The final two routes, are from Bakwa and Khashrud to Baramchar in the district of Garmser in the province of Helmand, involve a 400 km journey passing through Rudbar in Charburjak, taking around 12 hours by vehicle. Those taking this route typically move much

**Figure 22A** Ground photography showing catapult used for smuggling drugs into Iran



**Figure 23A** Ground photography showing location of catapult on Iran-Afghanistan border



larger amounts of drugs, with convoys of up to 16 vehicles (10 land cruisers containing on average 500 kg each, and six pickups carrying armed men). Other than the tax levied by the Taliban at either Bakwa or Khashrud, depending on the vehicles' point of departure, these convoys do not incur any other payments other than a small fee payable to boatowners in Rudbar in exchange for crossing the Helmand river.

To estimate the revenue earned on the drugs trade and its distribution, we needed to make some well-informed assumptions about the amount of drugs transported both to Nimroz from other provinces, and then along each of the main smuggling routes. Data on prices, fees and taxes at different locations told us much about the degree to which a particular drug was smuggled along a specific route. For example, the fact that respondents in multiple locations did not have details on the transport costs for ephedrine and heroin hydrochloride between both Bakwa and Khashrud and the Iranian border, indicated that very little (if any) of these drugs were being smuggled into Iran through Nimroz.

First, we drew on existing estimates of the amounts of methamphetamine, morphine base and heroin base produced in Nimroz, as discussed earlier. We then assumed that levels of morphine and heroin production in Bakwa were of a similar order to that of Khashrud (perhaps a conservative assessment given the degree to which Bakwa was targeted by the USFOR-A campaign). The amount of methamphetamine produced in Bakwa was derived from earlier work and a count of ephedrine labs using high-resolution imagery.

To estimate the amount of opium trans-shipped through Nimroz, we drew on reports from traders, transporters, lab workers and key informants. It is clear both from our respondents, as well as Iranian seizures, that considerable amounts of opium are smuggled into Iran, in part across the border from Nimroz, but also large amounts through Balochistan into Pakistan and onto Iran. The question was how much? Again, we had to rely on assumptions informed by fieldwork, mapping data and estimates from UNODC's opium poppy survey.

Reports from traders and lab workers indicated that opium was transported to Bakwa and Nimroz from a wide range of districts across the south-west. Drawing on measurements of the distance between the primary opium-growing districts and some of the major points of exit (most notably Kang, Ziranj and

Baramchar), we judged that aside from the opium produced in Nimroz – which would undoubtedly be either smuggled across the border as opium or processed into opiates in Khashrud – 75% of the opium produced in northern Helmand would do the same. With the journey to Baramchar of similar distance to that of Khashrud, we judged that the opium produced in Nahre Seraj in Helmand and Uruzgan was just as likely to be transported directly to Baramchar and therefore assumed only half of it would be transported to Nimroz.

With assumed yields of 45 kg per hectare, this calculation indicated that as much as 2,390,951 kg of opium could be transported to the Khashrud and Bakwa areas. Subcontracting the amount of opium required to produce the morphine base and heroin base in Khashrud, and assuming that the opium required for the heroin labs in Bakwa could be sourced from these same districts as well as from production in Farah and Ghor, this calculation left a residual 901,704 kg of opium for transporting along the four main routes.

To determine the distribution of revenues from the drugs trade within Nimroz, we then had to make a judgement as to the amount of drugs that were likely to be transported along each of the four primary smuggling routes. Much of this focused on the centrality of Khashrud and Bakwa given their processing capacity and the role of Bakwa as a market hub. With the Iranian authorities seizing 761 metric tons of opium in 2019, and 783 metric tons in 2020 (and reports that much of this was seized in Sistan Balochistan, along the border with Pakistan), we judged that the route through Baramchar was the more significant and assumed that as much as half of the drugs – opium, morphine base, heroin base and methamphetamine – channelled and processed in Bakwa and Khashrud would be smuggled along this route. The other half we distributed evenly between the smuggling routes from Bakwa to Kang and Khashrud to Ziranj, as outlined in Table 11A.

**Table 11A The quantities of drugs assumed to be transported, and the smuggling routes used**

	Opium (kg)	Morphine base (kg)	Heroin base (kg)	Methamphetamine (kg)
Bakwa to Kang	225,426	20,672	10,336	356,400
Khashrud to Ziranj	225,426	20,672	10,336	175,824
Bakwa to Baramchar	225,426	20,672	10,336	356,400
Khashrud to Baramchar	225,426	20,672	10,336	175,824
<b>Total</b>	<b>901,704</b>	<b>82,688</b>	<b>41,344</b>	<b>1,064,448</b>

With assumptions as to the amount of drugs transported along each route, we could then calculate how revenues were distributed among the different actors involved on each route, drawing on in-depth fieldwork as to amounts paid and the particular rules that governed each payment. These calculations are outlined in Tables 12A, 13A, 14A and 15A. As with the trade of other commodities, mapping these values was easier where we had specific locations. Where we did

not, values had to be distributed across the relevant infrastructure in particular areas, be it household compounds in the case of landowners, or transporters, or security bases along particular stretches of the border, in the case of payments to the Afghan Border Police (ABP) or Iranian Border Guards (IBG).

The value of the quantities of drugs smuggled through Nimroz can be calculated using the prevailing prices, and assumed amounts transported

**Table 12A Estimates of the revenues from the drugs trade in Nimroz – Bakwa to Kang**

Location	Nature of payment	Institution	Amount paid (\$)	
			Opiates	Methamphetamine
Bakwa	Informal tax	Taliban	398,062	1,336,500
Kang/Bakwa	Fee	Transporter	577,519	2,629,180
Kang	Informal tax	ABP	525,479	730,328
Kang	Fee	Landowner	52,548	73,033
Kang	Fee	Houseowner	105,096	146,066
Kang	Informal tax	NDS/District Governor/Chief of Police	314,026	73,033
Kang	Informal tax	Counternarcotics Police of Afghanistan	4,426,230	0
Border	Informal tax	IBG	420,383	584,262
Kang to Iran	Fee	Transporter	4,525,562	13,365,000

**Table 13A Estimates of the revenues from the drugs trade in Nimroz – Khashrud to Ziranj**

Location	Nature of payment	Institution	Amount paid (\$)	
			Opiates	Methamphetamine
Khashrud/Ziranj	Informal tax	Taliban	398,062	659,340
Khashrud	Fee	Transporter	6,052,411	2,522,066
Ziranj	Informal tax	ABP	525,479	360,295
Ziranj	Fee	Landowners	52,548	36,030
Ziranj	Fee	Houseowner	105,096	72,059
Ziranj	Informal tax	NDS/DG/CoP	315,287	216,177
Border	Informal tax	IBG	420,383	288,236
Ziranj to Iran	Fee	Transporter	5,356,333	8,351,640

**Table 14A Estimates of the revenues from the drugs trade in Nimroz – Bakwa to Baramchar**

Location	Nature of payment	Institution	Amount paid (\$)	
			Opiates	Methamphetamine
Bakwa	Informal tax	Taliban	199,031	1,336,500
Bakwa/Baramchar	Fee	Transporter	1,059,754	8,910,000
Rudbar	Fee	Boat owner	1,261	1,745

**Table 15A** Estimates of the revenues on the people-smuggling trade in Nimroz - Khashrud to Baramchar

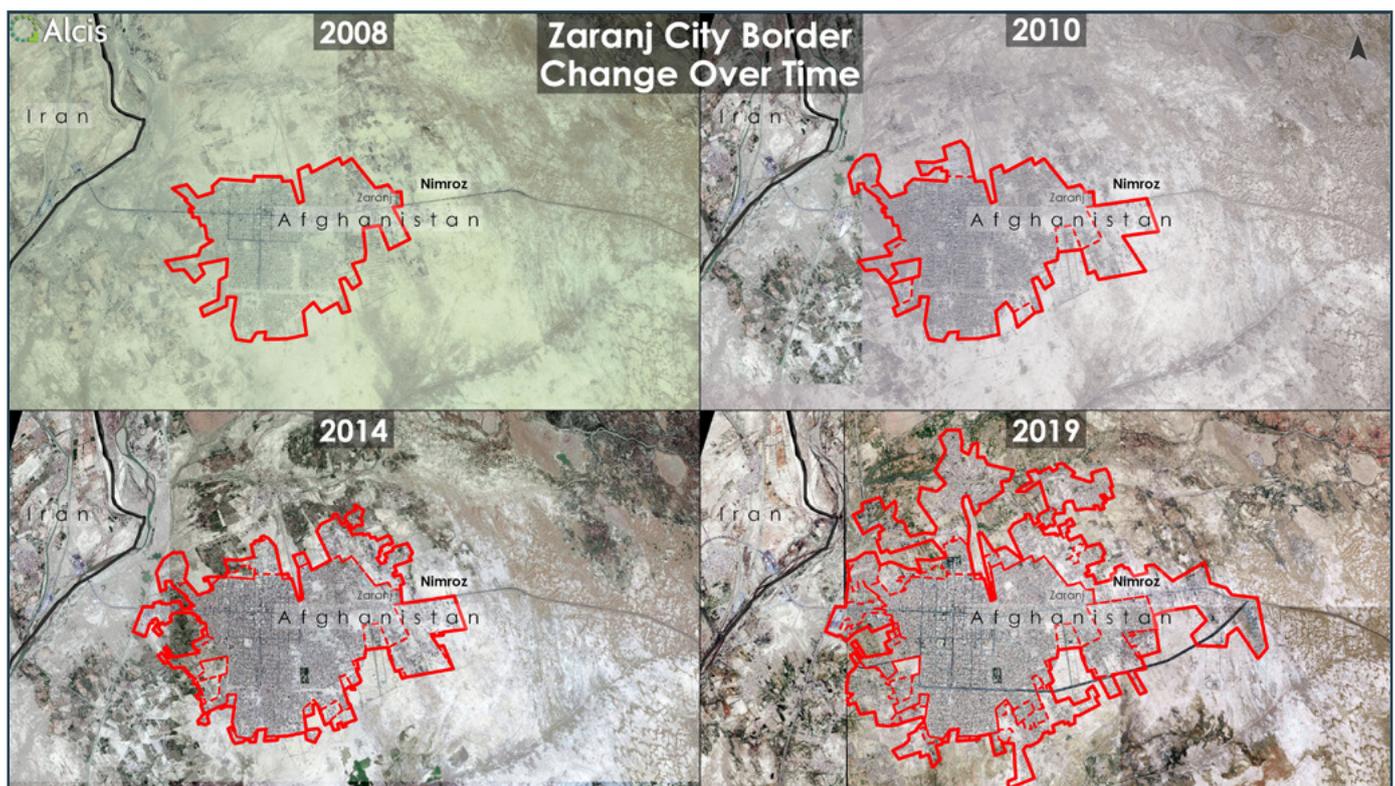
Location	Nature of payment	Institution	Amount paid (\$)	
			Opiates	Methamphetamine
Khashrud	Informal tax	Taliban	199,031	659,340
Khashrud/Baramchar	Fee	Transporter	1,059,754	4,395,600
Rudbar	Fee	Boat owner	1,261	872

along each route, producing an estimated potential gross value of \$618.2 million. However, estimating the value of the drugs trade to Nimroz was more challenging as in some case the drugs only transit the province, generating very little revenue for those extracting payments within the province. For example, take the smuggling route from Bakwa to Baramchar; here, the drugs convoys stop only once in Rudbar to hire a boat to cross the river, so all economic benefits would appear to accrue to those in either Farah or Helmand provinces. At a minimum, it could be argued that all the payments made along the different smuggling routes to those in Nimroz (apart from the tax levied by the Taliban, which we can assume is used for the war effort) provide some economic benefit to the provincial economy. On this basis, the drugs trade would provide up to \$16.9 million in payments into the

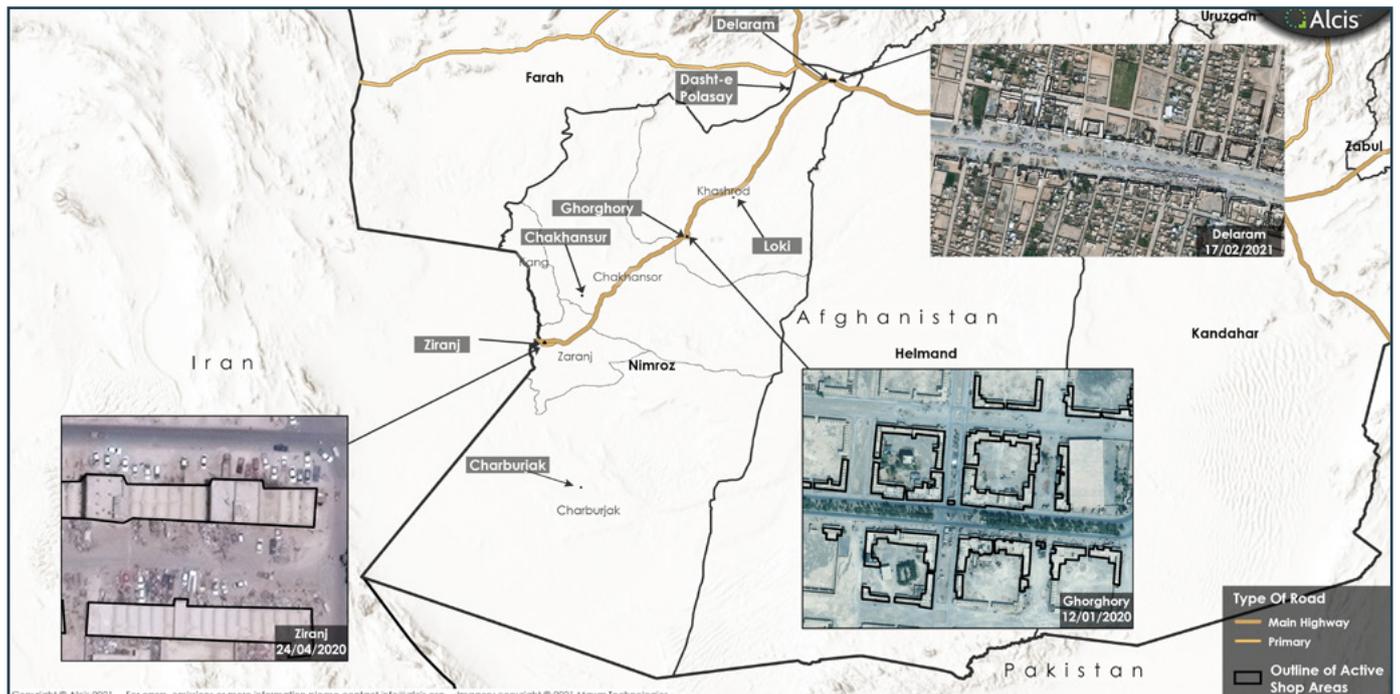
Nimroz economy, in addition to the monies earned on opium production (\$11.4 million) and the processing of opiates (\$93.4 million), ephedrine (\$29.9 million) and methamphetamine (\$131.9 million) – a total of \$190.1 million.

## 2.6 Commercial businesses

The city of Ziranj has seen dramatic economic and population growth since 2008 (see Figure 24A). Nimroz has relatively low levels of violence compared to Afghanistan's other provinces, leading to an inflow of wealthy traders, many from neighbouring Helmand and Farah provinces, and investments and properties. There is a perception locally that neither the Taliban nor the government want to undermine Ziranj's role as an economic hub, particularly given the financial benefits that both derive from it. As one interviewee

**Figure 24A** Imagery analysis showing the growth in Nimroz, 2008–2019

**Figure 25A Map and imagery showing locations of commercial businesses in Nimroz**



noted: ‘the Taliban don’t want to create a problem; the government don’t want to create a problem’.

The commercial sector in Nimroz is a source of income for those in government. It is subject to a variety of regulations in the form of licenses, as well as taxation, that government officials can exploit. While most businesses are in Ziranj, there are also commercial properties in each of the district centres and Delarem, as well as 57 fuel stations across the province, including on the highway between Ziranj and Delarem. As of April 2021, business owners reported that they were not subject to taxes by the Taliban, although there were some concerns that this position might change.<sup>22</sup>

To calculate the revenues collected on commercial properties, we used data collected from a range of such properties in each district, as well as the fuel stations. We also interviewed officials responsible for collecting taxes and issuing licenses, including those in the municipalities. Commercial licenses were typically issued for a three-year period, at a cost of \$250 each. None of those in the district centres of Chakhansur, Charburjak, Khashrud and Kang reported purchasing a commercial license. In Chakhansur district centre, Delarem, Ghorghory and Ziranj, shops paid for a municipal license. In Ziranj, as in Chakhansur and Khashrud, shopkeepers talked of a 3.5% sales tax on goods payable to the Finance

Department, with most reporting that they came to ‘an agreement with officials’. Shopkeepers in the district centres of Kang and Charburjak reported that they paid no taxes whatsoever and had no commercial or municipal license.

To calculate the total amount payable to the government, we looked to assess the number of commercial businesses in each of the districts (see Figure 25A). Efforts to do this using high-resolution imagery proved ineffective as it was difficult to identify how many businesses were operating within a market or larger building. Instead, we had to rely on estimates from officials, shop keepers and business owners, as well as ground assessments. Based on these estimates and details of the amounts paid from shopkeepers themselves, we calculated a total of \$5.1 million payable in taxes to government officials (see Table 16A).

Fuel stations are licensed separately, and pay for a license from the Fuels Department in the Ministry of Mines and Petroleum (covering five years, costing between \$750 and \$1,000) as well as to the municipality for those in the city of Ziranj (costing between \$50 and \$62.50 per year). A 2% tax is also meant to be levied on fuel sales by the Finance Department but most of those interviewed reported that they reached an accommodation with officials, rarely paying more than \$750 per year regardless of

<sup>22</sup> As one fuel station owner on the highway commented: ‘We don’t pay tax to the Taliban, and they don’t ask from us, but they intimidate us so we don’t know if this will continue.’

the amount of fuel sold. Based on these calculations and the high-resolution imagery analysis identifying each of the fuel stations and their location, it was

possible to calculate the potential payments to the government (see Table 17A), and map them accordingly (Figure 26A).

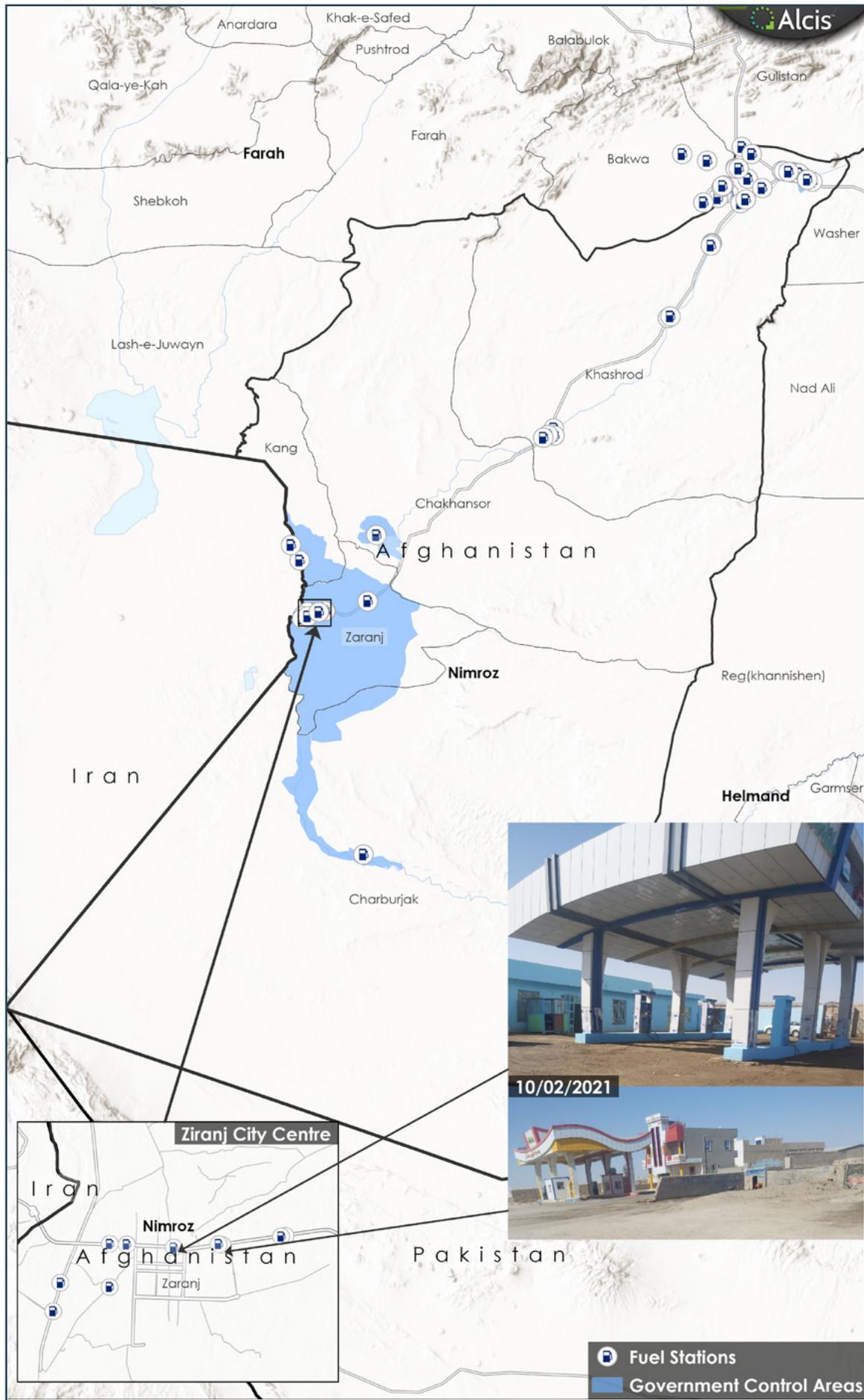
**Table 16A Estimates of the revenues on commercial businesses in Nimroz**

District	Number of commercial businesses	Amount payable to government (\$/year)
Chakhansur	30	1,050
Charburjak	10	0
Kang	8	0
Khashrud (Ghorghory)	500	40,625
Khashrud (Delarem)	1,500	234,375
Ziranj	10,000	4,866,667
<b>Total</b>	<b>12,048</b>	<b>5,142,717</b>

**Table 17A Estimates of the revenues on fuel stations in Nimroz**

District	Number of fuel stations	Amount payable to government (\$/year)
Chakhansur	1	950
Charburjak	1	950
Kang	1	950
Khashrud	43	40,850
Ziranj	11	12,513
<b>Total</b>	<b>57</b>	<b>56,213</b>

Figure 26A Map with ground photography showing location of fuel stations in Nimroz



# 3 Revenues on land

The tax levied on land by the Taliban is nominal. Payments on irrigated land (river irrigation) are the equivalent of \$0.94 per hectare. On government lands – most of which are former desert lands captured by farmers in Khashrud and cultivated by deep well – the tax levied is the equivalent of \$4.70 per hectare. These taxes are only imposed in areas that the Taliban dominate. The government does not impose a tax on the areas under its writ.

To calculate the revenues on land, we used calculations derived from the NDVI and a ground assessment of the areas under the government and the Taliban's writ. We also used imagery to differentiate between land under the traditional irrigation system and land using deep wells. With these calculations, we could then estimate the potential taxes received by the Taliban (Table 18A).

**Table 18A Estimates of potential revenues generated for the Taliban from land**

	Irrigated area under Taliban (ha)	Estimated tax (\$)
Chakhansur	14,948	45,855
Charburjak	12,131	22,746
Kang	90	169
Khashrud	103,663	794,481
Ziranj	0	0
<b>Total</b>	<b>130,832</b>	<b>863,250</b>

# 4 Revenues on services

## 4.1 Mobile telephone network

The mobile telephone network has been cited as another source of revenue for the Taliban.<sup>23</sup> While our work in Nimroz confirms that taxes are payable, the amounts would appear nominal, charged on the number of cell towers under their jurisdiction. Reports indicate that the tax rates levied were \$250 for each cell tower in areas under Taliban control, while the government charged \$500. If amounts were payable by the cell phone companies centrally in Kabul, those on the ground in Nimroz were either not aware of that or chose not to speak about it. High-resolution imagery was then used to identify and map every cell tower in the province (see Figure 27A). In total, 11 cell towers were found, seven in areas under government control (although not necessarily government land) and four in Taliban areas (two in Chakhansur and two in Nimroz), generating a potential revenue of \$1,000 for the Taliban.

## 4.2 Electricity

In other provinces, there are reports of the Taliban charging taxes on the electricity supplied by the state-owned power company Da Afghanistan Breshna Sherkat.<sup>24</sup> There were no such reports in Nimroz. Imagery analysis – ‘lights at night’ – shows that electrical power is largely restricted to the city of Ziranj, with smaller amounts in Delarem along the southern highway, both of which fall under the government’s influence.

## 4.3 Development assistance

Nimroz is not a major recipient of development assistance, receiving only 1.2% of the funds available for national programmes and provincial development in 2019, and only 1% of the funds spent by NGOs – a total of \$20.2 million.<sup>25</sup> The only significant infrastructure project is the construction of the Kamal Khan dam, 45 km south of Ziranj. When completed it will be capable of generating 8.5 kilowatts of power and irrigating more than 100,000 hectares of agricultural land (see Figure 28A).<sup>26</sup>

In Nimroz, as in other areas, development assistance is subject to tax by the Taliban but only on the projects implemented in areas they Taliban. It is claimed that there are currently few projects being implemented in these areas, but those that are pay 10% of the project budget in tax. This can be as simple as taking the tenth bag of food items such as wheat flour in the case of food assistance. This contribution is then taken to the market and sold for cash. There were no reports of the Taliban collecting a percentage of the salaries of teachers and staff working in clinics.

Government officials are also said to levy payments on development programmes. Some respondents argued that the total amount payable was often in excess of the amounts paid to the Taliban due to the number of different government departments involved in approving and monitoring project implementation, each demanding a separate payment. For the purpose of our research, we used a consistent 10% tax on the value of development assistance for both the government and the Taliban.

Current details on development project implementation for Nimroz were difficult to obtain. In the absence of specific geolocated data for the

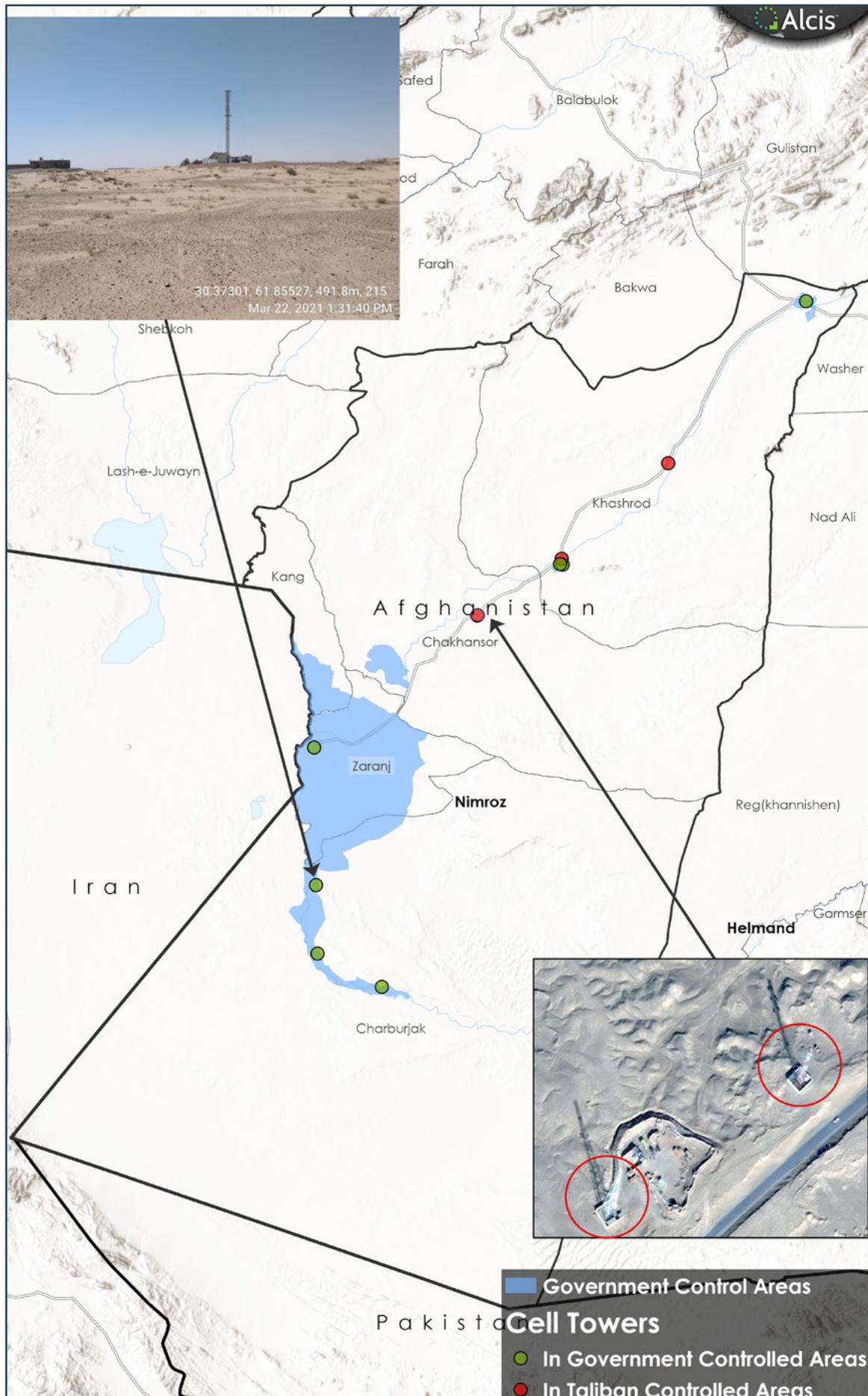
23 Sediq, A.W. (2018) ‘Taliban tax collectors help tighten insurgents grip in Afghanistan’. Reuters, 6 November ([www.reuters.com/article/us-afghanistan-taliban-finance-idUSKCN1NB19Y](http://www.reuters.com/article/us-afghanistan-taliban-finance-idUSKCN1NB19Y)).

24 Ibid.

25 National Statistics and Information Authority (2020) *Afghanistan Statistical Yearbook 2019* Issue No. 41, pages 276 and 292 ([www.nsia.gov.af:8080/wp-content/uploads/2020/05/Afghanistan-Statistical-Yearbook-2019-1st-Version.pdf](http://www.nsia.gov.af:8080/wp-content/uploads/2020/05/Afghanistan-Statistical-Yearbook-2019-1st-Version.pdf)).

26 Wadsam (2018) ‘Completion of Kamal Khan dam in Nimroz province’. 3 December (<https://wadsam.com/afghan-business-news/completion-of-kamal-khan-dam-in-nimroz-province-232>).

Figure 27A Map with imagery and ground photography showing cell towers in Nimroz



**Figure 28A Imagery showing development of Kamal Khan dam, 2018-2020**

development spend for 2019, we drew on project data from the United States Agency for International Development (USAID) for Nimroz from 2007 to 2015, as indicative of the possible geographic distribution of aid. That data showed a concentration of development effort in the drier areas of Kang, Chakhansur and Ziranj, reflecting the agricultural and humanitarian focus of their interventions. Once mapped, the data showed a total of 91 projects, 68 of them in government areas and 23 in areas where the Taliban were dominant (see Figure 29A). We then applied the total number of projects and their geographic distribution to the development spend

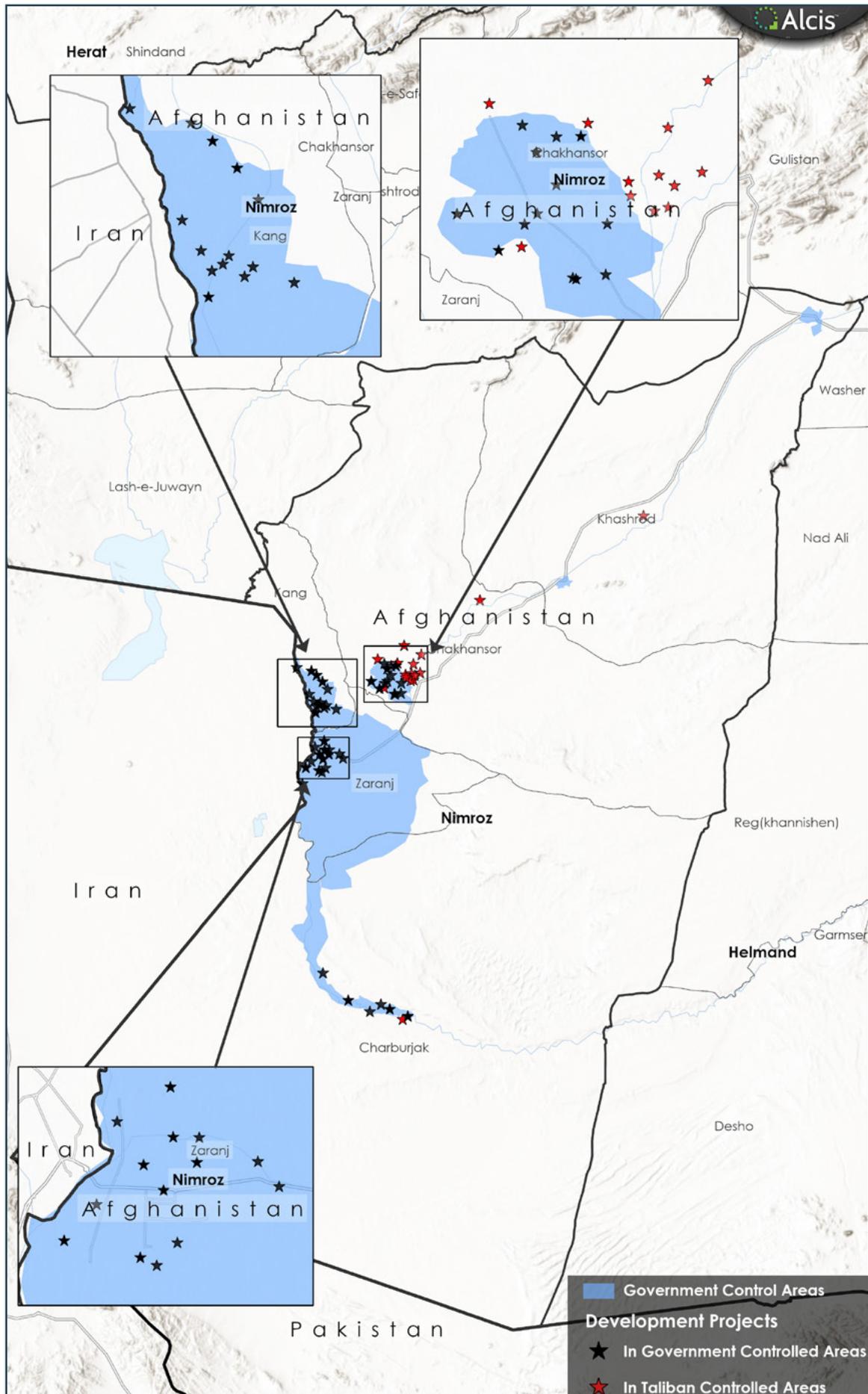
reported for 2019. Based on this, we could calculate potential taxes payable to both the Taliban and government officials (see Table 19A).

We judge that it is likely that an even greater proportion of the taxes paid on the 2019 development budget accrue to government officials than estimated using this method. With the Afghan government having lost further rural areas to the Taliban, it is likely that a greater amount of the development spend is concentrated on Ziranj and environs than was the case in 2015. As such, the amount of development money spent in the Taliban areas of Nimroz is likely to be significantly less than the \$5.1 million estimated here.

**Table 19A Estimates of the revenues on development assistance in Nimroz**

District	Total development projects		In government areas		Potential tax to government actors	In Taliban areas		Potential tax to Taliban
	No.	Value (\$)	No.	Value (\$)	Value (\$)	No..	Value (\$)	Value (\$)
Chakhansur	39	8,666,503	18	3,999,925	399,992	21	4,666,579	466,658
Charburjak	11	2,444,398	9	1,999,962	199,996	2	444,436	44,444
Kang	18	3,999,925	18	3,999,925	399,992	0		0
Khashrud	1	222,218	1	222,218	22,222	0		0
Ziranj	22	4,888,797	22	4,888,797	488,880	0		0
<b>Total</b>	<b>91</b>	<b>20,221,841</b>	<b>68</b>	<b>15,110,826</b>	<b>1,511,083</b>	<b>23</b>	<b>5,111,015</b>	<b>511,101</b>

Figure 29A Maps showing distribution of development projects in Nimroz





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