

Researching livelihoods and  
services affected by conflict

# Saffron:

The social relations of  
production



Working Paper 48

Giulia Minoia and Adam Pain

August 2016



Funded by the EC



# About us

Secure Livelihoods Research Consortium (SLRC) aims to generate a stronger evidence base on how people make a living, educate their children, deal with illness and access other basic services in conflict-affected situations (CAS). Providing better access to basic services, social protection and support to livelihoods matters for the human welfare of people affected by conflict, the achievement of development targets such as the Millennium Development Goals (MDGs) and international efforts at peace- and state-building.

At the centre of SLRC's research are three core themes, developed over the course of an intensive one-year inception phase:

- State legitimacy: experiences, perceptions and expectations of the state and local governance in conflict-affected situations
- State capacity: building effective states that deliver services and social protection in conflict-affected situations
- Livelihood trajectories and economic activity under conflict

The Overseas Development Institute (ODI) is the lead organisation. SLRC partners include the Centre for Poverty Analysis (CEPA) in Sri Lanka, Feinstein International Center (FIC, Tufts University), the Afghanistan Research and Evaluation Unit (AREU), the Sustainable Development Policy Institute (SDPI) in Pakistan, Disaster Studies of Wageningen University (WUR) in the Netherlands, the Nepal Centre for Contemporary Research (NCCR), and the Food and Agriculture Organization (FAO).

Front cover photo © SLRC/Maryam Safi

---

Secure Livelihoods Research Consortium  
Overseas Development Institute  
203 Blackfriars Road  
London SE1 8NJ  
United Kingdom

T +44 (0)20 3817 0031  
E [slrc@odi.org.uk](mailto:slrc@odi.org.uk)  
W [www.securelivelihoods.org](http://www.securelivelihoods.org)

SLRC Working Papers present information, analysis and key policy recommendations on issues relating to livelihoods, basic services and social protection in conflict affected situations.

This and other SLRC reports are available from [www.securelivelihoods.org](http://www.securelivelihoods.org). Funded by UK aid from the UK government, Irish Aid and the EC.

Disclaimer: The views presented in this report are those of the author(s) and do not necessarily reflect the UK government's official policies or represent the views of Irish Aid, the EC, SLRC or our partners. © SLRC 2016

Readers are encouraged to quote or reproduce material from SLRC Working Papers for their own publications. As copyright holder, SLRC requests due acknowledgement and a copy of the publication.

---

# Contents

---

<b>About us</b>	<b>2</b>
<b>Tables, figures and boxes</b>	<b>4</b>
<b>Acknowledgements</b>	<b>5</b>
<b>Abbreviations and acronyms</b>	<b>6</b>
<b>Glossary</b>	<b>7</b>
<b>Executive summary</b>	<b>8</b>
<b>1 Introduction</b>	<b>9</b>
<b>2 Methods</b>	<b>12</b>
<b>3 Findings</b>	<b>15</b>
3.1 Saffron cultivation compared with opium poppy	15
3.2 Men and saffron production	16
3.3 Women and saffron production	22
3.4 Saffron companies	29
<b>4 Conclusions</b>	<b>31</b>
<b>References</b>	<b>33</b>
<b>Annexes</b>	<b>35</b>
Annex 1: List of informants	35

# Tables, figures and boxes

## Tables

Table 1: Land ownership distribution in three villages in Pashtun Zarghon	21
Table 2: Female growers associations	22

## Figures

Figure 1: Map of Herat province and the districts	13
---	----

## Boxes

Box 1: The use of child labour to harvest saffron	26
---	----

# Acknowledgements

This study has been developed through the contribution of Rafi Rahmani and AREU researchers. In particular Ihsan Ghafoori, Mujib Azizi, Shukria Azadmanish and Massouda Kohistani conducted the interviews in Herat districts the report is built upon. We are thankful to the external reviewers for their valuable insights and comments, and to the SLRC/ODI team for coordinating all phases of the editing process.

# Abbreviations and acronyms

AISA	Afghanistan Investment Support Agency
APPRO	Afghanistan Public Policy Research Organisation
AREDP	Afghanistan Rural Enterprise Development Programme
CDC	Community Development Council
DACAAR	Danish Committee for Aid to Afghan Refugees
DAIL	Directorate of Agriculture, Irrigation and Livestock
MAIL	Ministry of Irrigation and Livestock
MCN	Ministry of Counter Narcotics
MOLSAMD	Ministry of Labour, Social Affairs, Martyrs and Disabled
MOWA	Ministry of Women's Affairs
NGO	Non-Governmental Organisation
ODI	Overseas Development Institute
PRT	Provincial Reconstruction Team
SDO	Sanayee Development Organisation
SLRC	Secure Livelihoods Research Consortium
UNODC	United Nations Office on Drugs and Crime

# Glossary

<b>Afs:</b>	Afghanistan Afghani currency
<b>Arbob:</b>	Traditional village head
<b>Dong:</b>	Unit of measurement, 1 <i>dong</i> = 330 m <sup>2</sup>
<b>Jirib:</b>	Unit of measurement, 1 <i>jirib</i> = approximately 0.2 ha
<b>Kharwar:</b>	Unit of measurement, 1 <i>kharwar</i> = 400 kg
<b>Mann:</b>	Unit of measurement, 1 <i>mann</i> = 4 kg
<b>Seer:</b>	Unit of measurement, 1 <i>seer</i> = 7 kg

# Executive summary

Donors and government have promoted saffron as a legal alternative to the cultivation of opium poppy, as a commodity that fits with a market-led approach to Afghanistan's agricultural sector and as a crop that can enhance women's participation in economic activities and their productive role outside the household. But to what extent and in what ways can saffron be seen as an alternative to opium poppy? Does it provide the basis for growth and employment creation envisaged and what does it offer in terms of economic opportunities and employment for women?

Drawing on qualitative interviews in three saffron-growing districts of Herat, it was found that, though farmers report that the returns per unit area for growing saffron exceed those of opium poppy, the limited scale of production despite more than a decade of promotion makes it more of a niche crop. Moreover, saffron is a semi-perennial with high capital investment costs and returns that are only significant from the second year onwards. It is more likely to be grown by farmers who can easily meet their subsistence requirements, and who have sufficient land area or other sources of income to handle the risk of investment. Saffron is therefore less attractive to households that have insufficient land to be food-secure or limited sources of other income. Those who grow it have gained considerable benefit; they tend to be male farmers with larger landholdings. There are also examples of women who have gained a foothold in production through land inheritance or access to land through relations or leasing.

The formation of associations has been a key intervention to promote saffron cultivation, but these address only the organisation of production. Support for credit, inputs and post-production activities has been limited. The bureaucratic process required to legally form associations and the restrictions imposed on their scope constrains their role. The leadership of the male associations is usually made up of the village landed elite, who act as lenders of credit for other farmers but also have close links, or are even part owners of, the key saffron trading companies. Associations have been formed by women; these tend to come from households with access to more land.

Saffron has been promoted because of its potential to generate employment, particularly for women; around 5,000 women and children are hired every saffron harvesting season to clean and process saffron flowers. This work is generally piece rate and significantly lower paid than comparable work by men, and usually takes place in spaces designated for women. There are some examples of women moving from one village to another to undertake this work. A common justification for the use of women is that they can be paid less. The short-term nature of employment and the low rates do not offer a living wage or significantly change the employment constraints women face. It is uncertain why harvesting and cleaning are designated as 'women's work'. The standard response is that women are better at it and that it is 'light' work – but they are not paid more for doing it. A contributory factor to the employment of women may be that the short harvest season with high labour demand cannot be met by the available male labour supply, much of which has migrated to Iran for work.

So is the movement of women into saffron farm work transformational or simply a feminisation of farm labour, as seen elsewhere in Asia as men move out of farm-based work? Given the patriarchal structures of Afghanistan's rural economy, even in the more liberal environment of Herat, it is difficult to see this, at least in the short term, as a significant change. Nor is saffron going to achieve the scale needed to drive the transformation of the rural economy that is expected of it. It would appear from the evidence that, while saffron offers benefit to some, the structure of its market and the way it is currently regulated limits wider benefits, and poor people and women face considerable structural constraints in gaining significant returns from it.

# 1 Introduction

This paper is the third case study in a series of four looking at how commodity and labour markets in Afghanistan function. Two earlier papers (Minoia et al., 2014; Minoia and Pain, 2015) examined the workings of the onion market in Nangarhar and street vending in Kandahar; the fourth will explore the rural labour market in Herat. These four case studies will together provide the basis for a forthcoming synthesis report.

These market studies are part of a larger research programme on the effects of support activities to livelihoods in Afghanistan, which itself is part of the cross-country research programme of the Secure Livelihoods Research Consortium (SLRC) led by the Overseas Development Institute (ODI). Two broad interests have framed these four contrasting Afghan market studies, and these are linked to a panel study of Afghan livelihood trajectories. The first is an enquiry into how people construct their economic life in rural and urban settings, given the structures of power that characterise the economic market place; the second explores how core rural commodity markets work and what constraints are in relation to poor people benefiting from them.

This case study focuses on the cultivation of saffron at the lower end of its value chain within Afghanistan. Saffron is a global high-value commodity in which Afghanistan so far is a minor player. In 2010, Iran exported 107,900 kg of saffron compared with Afghanistan's 1,000 kg (Schuller and Morelli, 2013), so the challenges for Afghanistan in expanding its global market share are considerable. While the global and domestic markets for saffron are linked, it is the potential transformative role that saffron is seen to offer within Afghanistan that is the focus of this paper.

Donors and the government have promoted saffron as a possible answer to three major challenges in Afghanistan's agrarian economy. First, it has been strongly advocated as a legal alternative to the cultivation of the opium poppy, providing apparently comparable returns and responsive to a high-value global market.<sup>1</sup>

Second, it is a commodity that fits with a market-led approach to Afghanistan's agriculture sector, that still sees agricultural growth as the driver of Afghanistan's economy despite the sector's poor performance since 2001. Agriculture is seen as capable of creating jobs (World Bank, 2014) through a focus on high-potential areas, such as the Hari Rud River basin in Herat, the location of this study.

Third, saffron has been portrayed as a crop that can enhance women's participation in economic activities and their productive role outside the household. It has been suggested that its particular value chain structure has the potential to increase women's participation in agriculture and their economic opportunities and income (World Bank, 2011).

These claims for saffron frame the specific questions of this paper – to what extent and in what ways can saffron be seen as an alternative to opium poppy; does it provide the basis for growth and employment creation envisaged; and what does it offer in terms of economic opportunities and employment for women?

Despite being widely promoted as an alternative to opium, the successful cultivation of saffron has been largely confined to Herat, though efforts have been made to encourage its cultivation in Wardak, Logar and Kunduz (APPRO, 2010). Introduced by various parties during the 1990s and afterwards, one source estimated that 900 hectares (ha) of the crop are now cultivated in Herat province, comprising about 60 percent of the national crop area. Of the 900 ha, 800 ha are to be found in just two districts

---

<sup>1</sup> [http://r4d.dfid.gov.uk/PDF/Outputs/RALF/RALF15\\_001.pdf](http://r4d.dfid.gov.uk/PDF/Outputs/RALF/RALF15_001.pdf), accessed 7 June 2016; <http://www.dw.com/en/afghan-farmers-weigh-up-saffron-against-opium/a-16311181>, accessed 7 June 2016.

within Herat – Ghoryan and Pashton Zarghon.<sup>2</sup> The hectares that were under cultivation gave rise to a total production of 3,000 kg in 2012, which by 2015<sup>3</sup> had risen to 4,000 kg. As with most agricultural and other statistics in Afghanistan, these are, at best, ‘guesstimates’ of area and production, but the empirical data collected in this study are consistent with an expansion of the crop in Herat over this past decade or more. However, given the scale of opium poppy cultivation, which in 2015 reached an estimated 183,000 ha (UNODC, 2015a), Afghan farmers have clearly in general not seen saffron as much of an alternative to opium poppy. And while saffron generated employment in 2015 for 6,000 people,<sup>4</sup> this cannot compare with the employment generated by opium poppy, estimated by various sources to support at least 200,000 households (UNODC, 2015b).

Moreover, Herat, where saffron cultivation has taken hold, has never had a significant area of opium poppy cultivation. At best, it recorded about 2,500 ha in 2006 (UNODC, 2015a), whereas Farah, a neighbouring province, in 2015 cultivated over 21,000 ha of opium poppy – and labour from Herat migrates there during the season (Huot and Pain, 2016, forthcoming). Yet, as will be seen, the data provided by the informants in this study confirm that saffron is a profitable crop for those who grow it, many of whom have expanded their area under cultivation. However, in contrast with opium poppy, saffron is a semi-perennial crop with a cultivation period of about five to six years. As a semi-perennial, it displaces for several years the cultivation of annual food crops such as wheat, which for land-poor households may have food security implications. It also has high capital investment costs and provides returns only in the second year; these rise incrementally in subsequent years.

All these aspects raise a question as to who is cultivating the crop. Is the crop neutral to scale (Feder et al., 1985) – .g.5) with both large and smaller farmers adopting it and deriving proportionally equal benefits, as happens with opium poppy? Or, given its semi-perennial nature and capital investment requirements, is it more likely to be adopted by larger farmers and selectively benefit them and, if so, what are the implications of this for the agricultural growth agenda and poverty reduction? Moreover, what is its cultivation contributing in terms of jobs and employment since, as will be seen, it is primarily women who have gained work through it?

Profitability is one metric on which a comparison between saffron and opium poppy can be made. However, market support provided to smallholder agriculture to reduce risk is also critical (Poulton et al., 2010), and one of the attractions of opium poppy has been the level of support in terms of credit and inputs and farm gate purchase that it attracts from traders (Pain, 2008), which contributed to its spread. In contrast, market support for saffron appears to have been restricted largely to the formation of village-level producer associations, which, as this study found, are concerned mainly with the organisation of production rather than with input provision, credit or post-production and international marketing in the value chain. Not only do the formation of these associations, as will be seen, require the navigation of a complex bureaucracy for which good social networks are needed, but also the evidence suggests these associations tend to work for the benefit of the more powerful, echoing concerns raised by Pain and Kantor (2011) about assumptions of associational activity serving all equally at the village level.

While saffron’s potential as an opium poppy substitute and high-value crop has been part of the rationale for its promotion, a key part of the saffron story has been seen to be what it offers for women as producers and workers (World Bank, 2011). A number of women’s producer associations have indeed been formed, indicating that certain women have access to, if not necessarily directly ownership of, land. While this may reflect the more liberal environment of Herat and the influence of Iran, and therefore may be more a matter of context (Leslie, 2015) rather than crop, it also raises questions as to

---

<sup>2</sup> Key Informant #R2\_32.

<sup>3</sup> Key Informant #R2\_32.

<sup>4</sup> <http://www.worldbank.org/en/news/feature/2015/01/20/saffron-major-source-income-alternative-poppy>, accessed 26 May 2016.

how women have access this land, who has been able to do this and to what extent it has proved possible for them to move beyond production into other aspects of the saffron value chain. It is clear from the evidence provided here that a considerable number of women (and children) are being employed in saffron cultivation every harvest season for the cleaning and processing of saffron flowers. This work is generally piece rate and lower paid than comparable work by men, and usually takes place in spaces designated for women. There are some examples of women moving from one village to another to undertake the work. So the gendered impact of saffron cultivation differs from that of opium as it creates labour opportunities mainly for women but not for men. And saffron cultivation has not generated, as the report discusses, an increase in rural wage labour rates like opium did (Pain, 2010).

But it is uncertain why harvesting and cleaning is or has become designated 'women's work'. The standard response was that women are better at it – but they are not paid more for doing it; rather, they are paid less than male wage labour receives. So what does this tell us about the structural conditions that govern women's work? It is possible that the high labour demand of the short harvest season cannot be met by available male labour supply, much of which has migrated to Iran for work – so women are substituting for scarce male labour. Observations on opium cultivation in the Hari Rud a decade ago indicated that women worked in the family fields then also, as labour gangs, because of an acute need for household labour generated by opium poppy cultivation, and they were paid well for doing this (Pain, 2008). So is the movement of women into poorly paid saffron farm work transformational, or potentially so, as some hope (World Bank, 2011), or is it simply a feminisation of farm labour, as seen elsewhere in Asia as men move out of farm-based work?

The following section briefly describes the methods of the study and the criteria for the selection of informants. It then sets the context for the expansion of saffron in Herat province, examining production conditions, its role within the cropping system and its labour demand. Section 3 discusses the findings, considering producer associations, production processes and the role of women in production. This section concludes with an examination of the role of the trading companies and their relation to producer associations. Section 4 presents the conclusions and implications of the study.

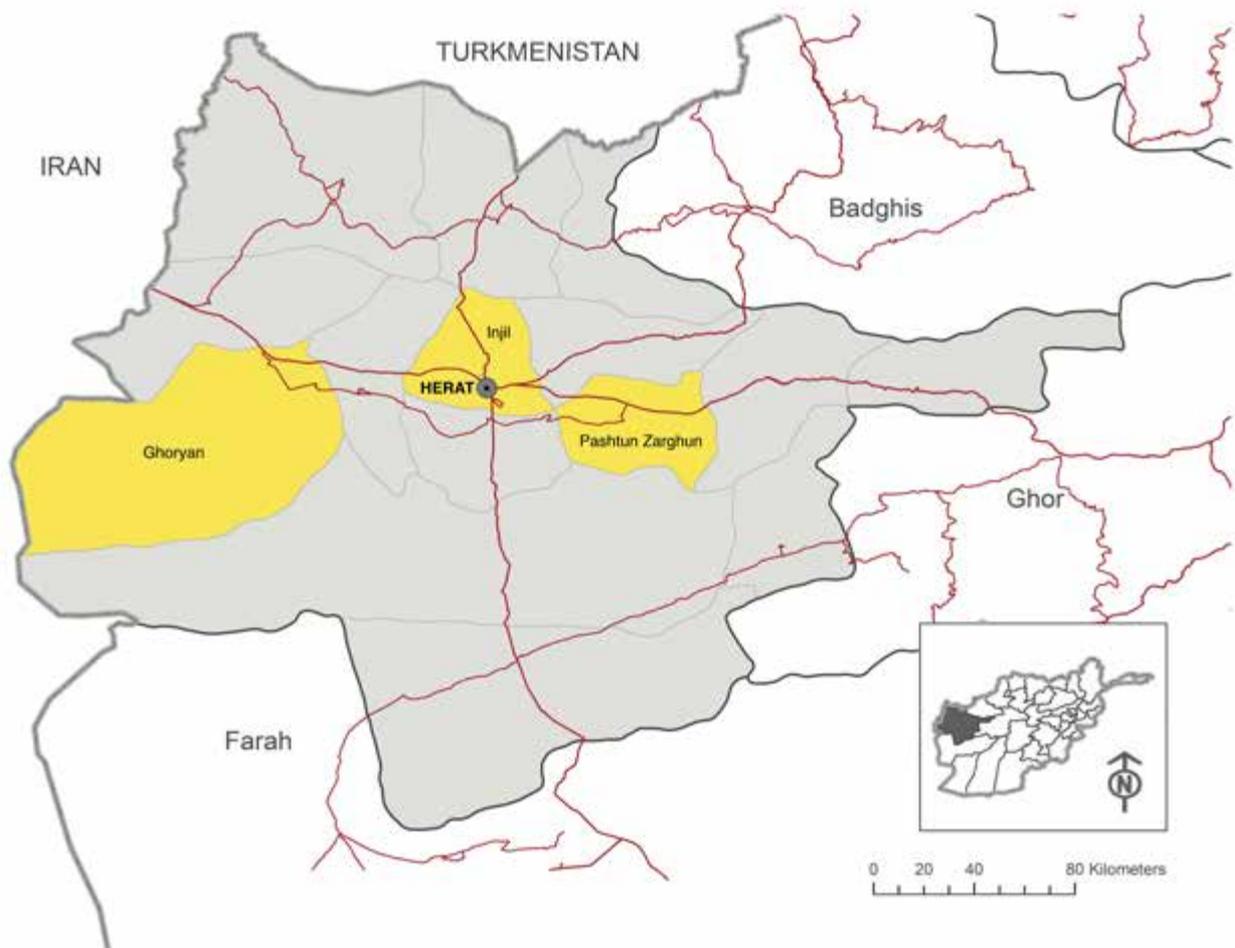
## 2 Methods

Primary data were collected through qualitative interviews conducted in Herat by a research team consisting of two men and two women. An initial scoping study of 45 interviews was undertaken with the support of a Herat-based researcher in June 2015. This was followed up with further fieldwork in Herat city and the districts of Injil, Ghoryan and Pashton Zarghon in August 2015. These districts are the major saffron-producing districts in the province.

Following the scoping study, 35 in-depth interviews were held with informants in different positions in the saffron value chain. These included traders and key informants from the government of Afghanistan and the UN in Herat city and male and female saffron associations heads, saffron producers and female seasonal workers in the sample villages. These village-level informants were purposively selected in discussion with the village elders or community development council (CDC) leadership. Annex 1 provides a list of informants, along with the code for each informant and the location of the interview.

One saffron-growing village was purposively selected per district. An additional consideration was accessibility and security of access, to ensure the research team and local partners were not put at risk. The three villages and the three districts provide contrasts in terms of proximity to Herat city and its markets, access to road and water resources and household livelihoods. A partnership with a non-governmental organisation (NGO) providing health services enabled the team to access villages in Ghoryan and Pashton Zarghon and manage the unreliable security conditions on road between Herat city and the districts.

**Figure 1: Map of Herat province and the districts**



The first village was in Injil district, which has well-irrigated agricultural land neighbouring the outskirts of Herat city. The roads are partially paved and villagers can commute on a daily basis from the district to urban Herat. Opium is no longer cultivated, and proximity to the city makes the district relatively secure. Given the employment opportunities in the city, levels of poverty in this district are probably lower than in other districts, and there appears to be less outmigration to Iran for work.

In contrast, the second study district, Ghoryan, is located close to the border with Iran and is where saffron cultivation first started in Herat. The roads are unpaved and the study village has water constraints. Irrigation is available from a spring in winter but during the summer farmers have to pay to irrigate the fields at a cost of USD 4 per ha for the use of water from a pipe laid for drinking water.

The third village was in Pashtun Zarghun district, about an hour's drive from Herat city. A Danish NGO, the Danish Committee for Aid to Afghan Refugees (DACCAR), played a major role in the introduction of Saffron to this district, which lies along the Hari Rud River, with the villages relatively well irrigated.<sup>5</sup>

Interviews with Herat-based traders focused on the introduction of saffron cultivation in Afghanistan, aid funding for companies to establish themselves and the current and future perspectives of government support to traders. Interviews with farmers and farmers associations investigated the nature of the relationship between the Herat saffron market and the districts and villages. During

---

<sup>5</sup> The history of how donors supported saffron cultivation is linked to an 'integrated rural development approach' that started in Afghanistan in the early 1990s and then developed as a crop substitution programme after the end of the Taliban regime in 2001/02 under the label of 'alternative livelihoods'. The concept was officially adopted under the Afghan National Drug Control Strategy in 2006. In 2012, the Ministry of Counter Narcotics (MCN) in collaboration with the UN Office on Drugs and Crime (UNODC) developed a National Alternative Livelihood Policy, which the government endorsed (MCN, 2012).

interviews with farmers and seasonal labour (15 women), the discussion focused on wage rates for female and child labour, the scope for negotiation of these rates, the possibilities for women to work outside the private space of the household and therefore negotiate *purdah* norms and outcomes of the saffron economy for the village. All interviews with women were conducted by two female members of the research team and were arranged by previous negotiation between the male team leader and the village elders or *arbob* or the head of a farmers association. In two districts (Ghoryan and Pashton Zarghon), interviewers met women in a communal space; in Injil district, women had been gathered in the house of the head of the saffron growers association.

## 3 Findings

The discussion on findings is organised in four sections. It starts with a direct discussion of a comparison of the benefits of saffron and opium poppy cultivation. The second section discusses the support provided to saffron production and the role of associations and investigates who is growing saffron. The third section explores the specific engagement of women as producers and workers in the saffron industry and the fourth section examines the links between the saffron trading companies, saffron production and farmers.

### 3.1 Saffron cultivation compared with opium poppy

As noted earlier,<sup>6</sup> much has been made of the virtues of saffron as a viable alternative to opium poppy, providing equivalent if not greater returns. All informants of this study agreed that, in terms of net income per *jirib* (around 0.2 ha), the income from saffron was equivalent to or better than that of opium poppy. Speaking for many, one informant gave the following calculation:

*When I was cultivating opium my yearly income was Afs 10,000–15,000 from 1 jirib of land while my income from 0.5 jirib of saffron is more than that. In this 0.5 jirib of land the first year I had Afs 6,000, the second year Afs 15,000, the third year Afs 44,000 and the fourth year Afs 67,000, and this will add up to more than Afs 170,000 if I count both the sale of bulbs and saffron.*<sup>7</sup> (Key Informant #R2\_06)

However, it should be noted that the farmer had to wait until the third year of saffron cultivation before the income exceeded that of the cultivation of opium poppy over a three-year period. For those who can afford to discount the present for a future higher income, there is no doubt that saffron offers a better long-term return. However, for those who might struggle to do so and be more concerned with immediate food needs, higher returns in the future need to be discounted against surviving in the present. One also has to take account of the significant costs of the saffron bulbs in contrast with the opium poppy seed. As we see later, for many farmers who do cultivate saffron, the costs of the saffron bulbs are still a significant challenge. Thus the odds are somewhat stacked against resource-poor farmers in terms of taking up saffron cultivation.

A second question that arises is that of the labour demand for cultivating the crop. Again, all respondents agreed that, in comparison with wheat or vegetables, the cultivation of saffron required considerably more labour. Notably, this is concentrated around the short harvest season of about 20–30 days. This demand also rises with the year of cultivation. In the first year, five people per *jirib* per day are needed for the harvesting, and an equivalent number for the processing – so equivalent to 250 person days per *jirib*. By the third year this rises to about 30–50 people per day per *jirib* for the harvesting and an equivalent amount for the processing, thus requiring in total about 2,000 person days per *jirib*. How does this compare with opium poppy?

There are various estimates of opium poppy's labour requirements, but generally a figure of about 70 person days per *jirib* is used (Pain, 2010). So on the face of it, the labour demand per *jirib* of saffron is significantly greater than that of opium poppy. But the maximum area of saffron cultivation of about 1,000 ha nationally pales into insignificance compared with an estimate of 183,000 ha of opium poppy cultivation in 2015 (UNODC, 2015a). So, while on the basis of a per *jirib* estimate of job creation saffron appears to have the advantage, given the scale of opium poppy the effects of saffron cultivation on employment are at best likely to be very local, which is not to deny its significance.

---

<sup>6</sup> <http://www.worldbank.org/en/news/feature/2015/01/20/saffron-major-source-income-alternative-poppy>, accessed 26 May 2016.

<sup>7</sup> Key Informant #R2\_06.

It is the scale of opium poppy cultivation that generated its effects, significantly raising wage labour rates, bringing women into the opium poppy fields as workers with comparable wages to men (Grace and Pain, 2011) and having multiplier effects on the rural economy as a result of rising rural incomes. One estimate of these was about 5.6 jobs in the rural non-farm economy for each hectare of cultivation. In sum, for individual farmers, there are financial benefits in saffron over opium poppy cultivation and, as many reported, saffron cultivation also meant they were no longer subject to informal taxation by the police and other authorities. But it is far from evident that saffron can ever have the scale effects in terms of employment and non-farm economy benefits that one saw with opium poppy.

## 3.2 Men and saffron production

### Growers associations

About 30 growers or producer associations have been established in Herat province, with support from various organisations, including DACCAR. Katawazy (2013) reports 28 such associations, of which 4 are women's associations; Schuller and Morelli (2013) list 33, of which 10 are women's associations: the reason for the different figures is not known. However, the formation of women's associations provides evidence of women's direct involvement as saffron producers and not just as labour for harvesting and processing. This confirms women's ability to access land through direct ownership or through leasing land. The significance and scale of this is noted here and returned to in detail later (see Section 3.3).

Male growers groups are registered as social organisations with the Ministry of Labour, Social Affairs, Martyrs and Disabled (MOLSAMD) and are not registered or formally supposed to operate as businesses (Schuller and Morelli, 2013). Thus, in practice, the role of these groups appears to be limited to liaising with traders, connecting farmers to the Directorate of Agriculture, Irrigation and Livestock (DAIL), and participating in projects financed by donors and international agencies. In contrast with the male associations, the female associations are reportedly registered with the Ministry of Women Affairs (MoWa), although the reasons for this difference are not clear (ibid.).

Association formation has been a key strand in the Afghanistan Rural Enterprise Development Programme (AREDP) but the benefits and effects of this are far from clear. Assumptions are clearly being made about the nature of collective action through association formation (Pain and Kantor, 2011) at the village level, which has rarely been examined. Support to the formation of rural producer associations assumes that accessing services (e.g. advice and training), economies of scale in procurement and sales and knowledge-sharing can benefit those at the bottom of the value chain.<sup>8</sup> But as this paper discusses, the evidence suggests these grower associations are not cooperatives or organised in a way to ensure that benefits and costs are distributed according to specified rules. They appear to be strictly limited to organising inputs and services with a narrow focus on the production level within the saffron value chain (Poulton et al., 2010). Little or no attention goes to post-production activities that could be used as a vehicle for getting support and increasing returns.

The registration of these associations is highly bureaucratic, as we will see, and requires good personal connections. Informants also made clear that the associations, once formed, often do not provide the benefits of market connections that producers expect, but tend to benefit the key players within them, who are often the more influential personalities at village, district and provincial level.

Until recently, the head of the association had to register in person in Kabul. For the women's as with the men's associations, the process starts with the Ministry of Justice. But in the case of the women's associations, it is often a male member of the family of the female head of the association who formally does the registration. The head of the Azada Social Saffron Growers association, established in 2010

---

<sup>8</sup> <http://aredp-mrrd.gov.af/eng/>, accessed 26 May 2016.

with help from DACCAR, reported that a male member of her family did the registration and the cost of the process amounted to Afs 20,000 (USD 400), which the association members paid.<sup>9</sup>

The head of Taban Saffron Association in Injil district described well the bureaucratic process of getting registered experienced by most of the associations:

*Taban Saffron Association was established three years ago [...] With the coordination of Eng Bashir Rashidi, Head of the Saffron Union in Herat, I started processing for our association. Our association was the first association in Injil.*

*The procedure for making an association is to give an official paper to head of the Saffron Union and then he refers the paper to the Justice Department. This gave me a letter to get approval from the Health Department that you are healthy, from the National Directorate of Security that you don't have any criminal record and from the security commander of Herat that you don't have any criminal case there and a paper to the bank to pay 2,500 Afs to the government account as a price of the licence for the association. They asked me for an approval letter from the Injil district governor too.*

*I completed all the paper work from Herat. Then from the provincial Justice Department they gave me a letter for the Ministry of Justice in Kabul and I went to Kabul and got approval for the association and came here again and started activities. During the three years of my association's activities I have made six men's groups and seven women's groups, which together have about 170 members.<sup>10</sup> (Key Informant #R2\_02)*

The head of the Saffron Association in Pashtun Zarghon (#R2\_04) provided a similar account of the bureaucratic hurdles that have to be crossed.<sup>11</sup> This respondent also commented that, even though criminal record clearance can now be done in Herat, it still has to be renewed every three to four years. As is apparent from the above descriptions, the registration process requires good connections and networks to work the system. As became very clear from the interviews with the head and members of the associations, those individuals who have the networks tend to be the village elite, with larger landholdings and influence within the village.

In Injil district, the head of the Taban Saffron Association is an *arbob*. He has been growing saffron for the past 10–12 years and was previously cultivating opium on 1 *jirib* of land (2,000 m<sup>2</sup>). He reported that, when he decided to move to saffron cultivation and abandon opium poppy cultivation, another 70 farmers in the village followed his example. The Taban association works only within the district, and it now has 170 members and 6 employees. It is hoping to receive a grant from the Ministry of Irrigation and Livestock (MAIL); according to the *arbob*, the provincial offices of MAIL have received USD500,000 for the purpose of supporting associations but so far they have not received anything. Each farmer member pays a fee of Afs 10 a month (USD0.20) to allow him or her to sell saffron through the association to saffron companies. The association works therefore mainly as a facilitator, and in a year it trades about 400 kg. However, the association, and often the head of the association directly, have played a key role in proving loans to start cultivation.

The association members met in Injil had a consistent account: they started cultivating saffron when they received loans (or bulbs) from the head of Taban Saffron Association, who was the key figure (middleman) selling their production to Herati companies. This happened 12 years ago when he was just the *arbob* (#R2\_06) and, even though '*bulbs were too costly*', the farmers took loans from him to

---

<sup>9</sup> Key Informant #R1\_037.

<sup>10</sup> Key Informant #R2\_02.

<sup>11</sup> Key Informant #R2\_04.

buy them.<sup>12</sup> The association pays the farmers around USD 180 for 100g of saffron. However, they can also sell the processed flower directly to retailers or traders in Herat if they need money (#R2\_07).<sup>13</sup> The farmers had heard of NGOs providing training on saffron cultivation and processing to farmers in other districts but they had not received any themselves.

In Ghoryan district, there are reported to be six saffron associations. The Almas Saffron Farmers Association was established five years ago. The association initially received some funds from the Italian Provincial Reconstruction Team (PRT) (USD 20,000) for construction and machinery for drying and packing. The head said that in 1992 he was the first to introduce saffron in Afghanistan.<sup>14</sup> During the 10 years he spent in Iran as a refugee, he learnt how to cultivate saffron; when he returned to Herat he decided to smuggle 407 kg of saffron (#R2\_15) over the border. The man said he was the one who had trained farmers in Pashton Zarghon, including the trader and grower who became 'Babai Saffron' (grandfather of saffron) and who had received a medal from President Karzai in 2009. The Almas association has seven members and sells its saffron to Herati traders, about 30–40 kg per year. The head claimed to be able to sell saffron to traders for USD 1,750/kg. Almas works mainly for its own village, but also provides intermediation for farmers in other villages.

Even though the heads of associations often claimed they helped farmers market their production, informants in Ghoryan had a rather different view. They did not see their district associations as protecting farmers' interests, and they felt they were not distributing bulbs to farmers as they should. A farmer and *arbob* in another village said saffron associations were just 'brokers' of the traders.<sup>15</sup> He felt that, while the government should be protecting farmers, instead it protected companies that were buying cheap and selling on the market at the highest price possible. Others felt farmers with small volumes of production would do better to sell to shopkeepers rather than associations.

In Pashton Zarghon, NGOs such as DACAAR have had a long-term presence promoting saffron cultivation, the formation of its 12 associations and organising trainings for farmers. However, Babai Saffron, a prominent member of the district's powerful Alokozai tribe, dominates the saffron market. Babai Saffron returned from Iran 22 years ago and heads one of the saffron growers associations that has 120 members. He has his own company and a retail shop run by his son<sup>16</sup> in Herat and he buys most of the saffron produced by farmers in Pashton Zarghon.

In Pashton Zarghon, informants often preferred to sell saffron themselves, not through associations. One farmer who had been growing saffron for the past 12 years said he had been motivated by Babai Saffron and in turn had been motivating other farmers: '*Each farmer in this village has been motivating another 30 farmers, I think.*'<sup>17</sup> However, he prefers to sell directly to traders in Herat rather than through associations. This way he can actually sell to those who are '*buying at the right price*'. He proudly said he had sold 1 kg to Aryana Saffron Company for \$1,300 in the previous season.

It is thus far from clear what the real function or benefits of these growers associations really are and whose interests their formation have served. In part, they seem to have been supply-driven, with multiple funding agencies and NGOs promoting the cultivation of a crop that could be championed as an alternative to opium poppy.<sup>18</sup> This hope generated a considerable level of funding – the Almas

---

<sup>12</sup> Key Informant #R2\_06.

<sup>13</sup> Key Informant #R2\_07.

<sup>14</sup> Key Informant #R2\_15.

<sup>15</sup> Key Informant #R2\_23.

<sup>16</sup> <http://southasiainstitute.harvard.edu/2015/03/qa-cultivating-peace-in-afghanistan-with-saffron/>, accessed 22 March 2016.

<sup>17</sup> Key Informant #R2\_24.

<sup>18</sup> A 2010–2012 Alternative Livelihood Policy (MCN, 2012) proposed allocating \$9 million to such activities.

association receiving \$20,000 from the Italian PRT – but this has clearly been unevenly spread and created further expectations, which may have contributed to the formation of further associations. The bureaucratic burden of forming an association has favoured those with connections, and it would appear that village customary elites in the person of the *arbobs* have come to establish themselves as association heads. In turn, they have come to play a key role in providing credit to other members of the association, although we do not know the terms under which this is provided. However, there are evidently views that the *arbobs* in some cases are acting more in their own interests than in those of members of the association. Otherwise, the functions of growers associations are very limited.

### Who is growing saffron?

In 2013, a survey carried out by Sanayee Development Organisation (SDO) estimated about 3,000 farmers were growing saffron, although the informant reporting this did not make clear whether this was for Herat or the country as a whole.<sup>19</sup> A report from the Afghanistan Investment Support Agency (AISA) at the same time (Katawazy, 2013) stated that nationally there were about 1,300 farmers growing saffron on about 250 ha. Whatever the figures are, it is clear this is not a crop that everyone with land is growing, and it has not spread to the extent that opium poppy did. More exacting growing conditions for saffron in contrast with opium poppy may be part of the reason for this. However, the economics of the crop may also represent a barrier for smaller farmers to move into saffron cultivation. For a start, and according to various informants, there are the initial costs of purchasing the bulbs to plant with. The head of the Taban association in Injil estimated the costs as follows:

*If we count each item like the bulbs that we need 800 kg for 1 jirib of land and the price of each kg of bulb is Afs 400 [giving a total cost of Afs 320,000 for the bulbs], the cost of planting of bulbs and land preparation will be at least Afs 500,000 Afs [equivalent to \$7,300].*

Others provided slightly lower estimates of costs but, whatever the actual value, this is a considerable start-up investment. As we will see, although this cost can be reduced by planting a small area of land – say 0.5 *jirib* – it does represent a barrier to entry. In the case of Taban Saffron Association, the head advanced these costs (although we do not know what the costs of this advance were) and he reflected on the need for capital to start cultivation and how it could be raised:

*But the only problem is that the farmers do not have money to start cultivation of saffron and there is no source to support them. Last year and this year, I have sold 560 kg saffron for seven farmers, 80 kg for each of them, and told them when you harvest [...] at that time you can pay my money.*

The costs of planting, fertilising and irrigation may amount to a further Afs 10,000 per year (\$150). Harvesting, as noted, takes place only from the second year, and the labour demand for this rises in the following years, generating substantial costs which need to be met. Saffron sales from the second year onwards contribute to meeting these. Finally, there is the trade-off between allocating land to saffron production for a period of years and losing land area that meets household food needs. The risks of the trade-off will depend on the household economy and other sources of income that households have, particularly from remittances from Iran.

The head of the Taban association has certainly been influential in encouraging farmers to grow saffron. One informant described how he started:

*It is about five years that I started the cultivation of saffron with support of Muhammad Naiem who is the head of the Taban association. I started saffron cultivation on 0.5 jirib and this year will cultivate 2 jirib and will gradually increase the area as the bulbs increase. I am cultivating saffron on my own land – we have enough land but don't have water for cultivation of a second*

---

<sup>19</sup> Key Informant #R2\_32.

*crop. This is why saffron is a good plant in our village because it does not need more water during the summer. It needs water during the fall and winter and we have water at that time. I will increase my lands in the future to more than 4 or 5 jiribs. Well I can tell you that most of the people took more benefit from cultivation of saffron than me. The harvest of my lands was about Afs 150,000 (\$2,000 \$). The income of saffron is very good just the cultivation is a bit expensive and people can't cultivate it. (Key Informant #R2\_06)*

Two other farmers reported how they had started small and gradually built up their area of saffron. The first commented as follows:

*Yes, I am growing saffron for past five years in our village. At the beginning we had less experience in the cultivation of saffron. For the first time I cultivated 20 mann (80 kg) of saffron bulbs on 0.5 jirib but with the passage of time I got experience, so currently I am cultivating the same 20 mann of saffron bulbs on the 1.5 dong [495 m<sup>2</sup>]. I get around 200–300 g of saffron from 1.5 dong of land. We are selling 1 seer of saffron for Afs 8,500–9000. I buy 1 mann (4 kg) of saffron bulbs for Afs 500. Last time I bought saffron bulbs from my neighbour in the village. We mostly give the harvest of saffron to the association.<sup>20</sup> (Key Informant #R2\_07)*

He went on to say that, because of the benefits of growing saffron, his economic condition had really improved and he was planning to increase the proportion of his 9 *jirib* of land given over to cultivation.

The second farmer was a more recent grower of saffron:

*For two years I have been cultivating saffron. In total I have 5 jirib of land but now I cultivate saffron on only 500 m<sup>2</sup>. The reason for cultivating saffron on only 500 m<sup>2</sup> is that I do not have enough money to buy saffron bulbs and plant more land. Over the years I will increase saffron on the other parts of my land with the increase in saffron bulbs. The first harvest of saffron from 500 m<sup>2</sup>, I received about 80 g of saffron and sold this for Afs 6,000 (\$87). I was very happy from this harvest because from very small piece of land I received this much income. For other crops like wheat and vegetable, I am not able to get that much harvest from 500 m<sup>2</sup>.<sup>21</sup> (Key Informant #R2\_08)*

He then went on to comment about the rising need for household labour on account of the saffron cultivation:

*Two of my sons migrated to Iran where they work as daily wage labour and after two or three months they send up to Afs 20,000 as remittance. However, when I increase saffron cultivation I will need to ask my children to come back home, because they will need to help me. (Key Informant #R2\_08)*

This account of starting small and building up the cultivated area of saffron is common to most of the accounts provided by the saffron growers in the other Herat districts as well. What is also common to farmers interviewed is that they are able to expand the scale of saffron cultivation either on land they already own or through leasing in additional land.<sup>22</sup> The ability for existing growers to expand saffron cultivation rather suggests it is the farmers with larger landholdings who are benefiting from the cultivation of saffron. A notable example is probably one of the largest cultivators of saffron, in Pashtun Zarghon:

*I started cultivation of saffron on 300 m<sup>2</sup>. From the income in recent years I could buy much land. I bought 10 jirib of irrigated land for Afs 1 million six years ago and 10 jirib for Afs 1.3 million four*

---

<sup>20</sup> Key Informant #R2\_07.

<sup>21</sup> Key Informant #R2\_08.

<sup>22</sup> Various informants: #R2\_15, Ghoryan, #R2\_16, Ghoryan, #R2\_24, Pashtun Zarghon, #R2\_25, Pashtun Zarghon.

years ago and 1 jirib close to my home for Afs 180,000. I bought 100 jirib of rain-fed land for Afs 2.7 million two days ago. I sold to an NGO 100 kharwar [40,000 kg] of bulbs for Afs 5 million but I forgot the name of that NGO. I sold 35 kg of saffron from my own land. Currently, I have 31 jirib of land, which are saffron, and 11 jirib is prepared for saffron cultivating this year. All the land that I cultivated and will cultivate is my own. I have 80 oxen and will sell them in Eid-e-Qurban; till then I can collect the dung for my new saffron land, which is very useful, this is also an investment. I forgot to say one thing, that I lease 70 jirib of saffron from Bahwudin Bah, an influential person of Herat who has 1,200 jirib of land in Rubat Hafez village, which is a very good point for encouraging other farmers.<sup>23</sup> (Key Informant #R2\_25)

We do not have data on land distribution from the specific villages in which the saffron cultivators were interviewed. However, data exist from three other villages in Pashtun Zarghon (Table 1) in which a parallel study on livelihood trajectories is being carried out (Huot and Pain, 2016, forthcoming). The village differences in land distribution should be noted: villages A and C have much more skewed ownership than village B. In addition, village A has more reliable irrigation than villages B and C, although in village C the large landowner has compensated for this by sinking wells to provide more reliable water supply. Observational evidence suggests the pattern of land distribution seen in these three villages is common to other villages. It is likely, therefore, given the ability to expand saffron cultivation described by the informants above, that they come from the large or the medium landowning group rather than the small landowning group, which is likely to be less engaged in saffron cultivation.

**Table 1: Land ownership distribution in three villages in Pashtun Zarghon**

	Village A		Village B		Village C	
	N	Irrigated land (j)	N	Irrigated land (j)	N	Irrigated land (j)
Large	1	100	3	5-6	1	850
Medium	10	10-15	30-5	3-4	5	15-20
Small	30	1-2	7	1-2	15-20	5-8
Landless	95	-	5-6	-	16	-
Total	135		50		43	

Source: Huot and Pain (2016, forthcoming).

Of particular note is the informant above (#R2\_25) who spoke of taking on a lease in Rubat Hafez. This is in fact village C, and we know from interviews there that, to be able lease out the land to the informant, the landlord ejected at short notice all the sharecroppers who had previously been working on the land. These people had to find farm labour work elsewhere in the district. While the informant (#R2\_025) might see his leasing of the land as encouraging the cultivation of saffron, this speaks only to those who have land. Those with insecure tenure, such as the sharecroppers of Rubat Hafez, are unlikely to benefit. Nor are they likely to find much employment in the saffron fields. As we see below, the employment is not only highly seasonal and short term but also heavily skewed towards lower-paid women.

<sup>23</sup> Key Informant #R2\_25.

### 3.3 Women and saffron production

#### Women as saffron growers

The discussion of women’s role in saffron production starts with an examination of their direct involvement in the growing of saffron. At least 10 female growers associations have been established (Table 2), which shows the direct involvement of women in saffron production. No data were collected on the size of the overall membership of all these associations, the number of active women producers and the volumes of saffron they deal in. However, the 32-year-old head of the Azada Social Saffron Growers Association provided information on the activities of the Azada association.<sup>24</sup>

**Table 2: Female growers associations**

District	Female associations
Injil	Injil District Saffron Women Growers Association Afghan Injil Saffron Women Growers Association Gahharshad Begom Saffron Women Growers Association
Ghoryan	Ghoryan District Women Saffron Growers Association Azada Social Saffron Growers Association
Pashtun Zarghon	Pashtun Zarghon Women Social Saffron Growers Association Expert Women Social Saffron Growers Association Rabat Gulbibibi Women Saffron Growers Association
Herat	Estwanan Women Saffron Growers Association Afghan Women Saffron Growers Union

Source: Schuller and Morelli (2013).

According to her, the Azada association was set up in 2010 with the help of DACCAR, which provided the women with the saffron corms (or bulbs), although, as noted earlier, male relatives did the registration. Azada has at least 40 members in 12 villages within Ghoryan district. As the head put it, *‘this is our district [...] and going to other districts is difficult for women.’* Other than the initial support from DACCAR and some training provided by Sanayee Development Organisation on cultivation and harvest methods, they have not received any other support, but they are looking for grants from an Agricultural Development Fund. The primary function of the association seems to be providing a connection between members and traders in the city, it usually sells its saffron to one of three companies – Ariyana Saffron, Talai Sorkh and Babai Saffron. The head noted that they had a permit only to form an association and not to trade in the saffron market, so their role is to link female growers and traders. In the previous year, they had sold 10 kg of saffron and they also had an income from the sale of saffron corms to other farmers, of USD 5,600.

Two female saffron producers in Ghoryan were interviewed. The first was a 50-year-old widow who said she had taken 1 *jirib* of land on lease for Afs 16,000 (\$320) five years ago.<sup>25</sup> She did not say where this land was but it was probably in her village, where she worked it with her three daughters and one son.

<sup>24</sup> Key Informant #R1\_37.

<sup>25</sup> Key Informant #R2\_20.

This made it possible for her, as an older woman and widow, to work in the public eye. She also did not say where she obtained the saffron bulbs but these may have come from the saffron association. She did not employ any additional labour as she did not have the funds to do so. She reported that in the earlier years she had harvested 2 kg of saffron; this had increased to 6 kg in Year 4. Because she did not sort or package her saffron well she had sold it at Afs 70,000–80,000 (\$1,000) per kilo, which she considered a low price, to local traders. Not taking account of the costs of her labour and other inputs she appears to have gained (at Afs 70,000 per kg) a gross income of Afs 124,000 (USD 2,480) in the early years, rising to Afs 404,000 (USD 8,000) more recently.

The second female producer in Ghoryan was 30 years old and was also working as a teacher.<sup>26</sup> She reported that she had taken with her father a lease on 2 *jiribs* of land with a third party and together the three had formed a business partnership. From her account, it was clear she was the effective manager of the enterprise. Her father had cultivated saffron in the past and she had learned about its cultivation from him before she had married 10 years ago. Her husband did not have land and was in irregular and badly paid self-employment. Accordingly, three years ago she decided to start the cultivation of saffron. She had recruited a male employee to act under her instructions to manage the crop since the leased land was about one hour away and women could not go there. Through him, she had employed men and children to harvest the crop and bring the flowers to her. She then organised her husband to distribute the flowers to the houses of 30–40 women she had identified and employed to clean the flowers.

In Pashtun Zarghon, the wife of the head of the male Adalat Saffron Association<sup>27</sup> was the head of a women's saffron association called Gul Meer, although we have no details on how this came to be set up and it is not reported by Schuller and Morelli (2013). The woman said he was closely linked with the Afghan Saffron Company, where he sold most of the saffron collected from the Adalat association. It is possible therefore that he might have encouraged the setting up of the Gul Meer association to tap into the saffron collected from women producers in the district.

Five women were interviewed in Pashtun Zarghon who were directly or indirectly engaged in saffron production. The first three were all from Gul Meer village. The first, a 52-year-old woman (#R2\_28) is related to Babai Saffron, and her husband is one of the biggest landholders in the village, cultivating some 8–9 *jiribs* of land.<sup>28</sup> She provides labour on her husband's saffron crop and is paid in common with other female labour, Afs 50 (\$1) per kg harvested. Underlying this arrangement is the fact that she is the first wife of the husband and without children; her husband has taken a second wife with whom he has children. However, when she inherited some land from her father she decided to set up growing saffron on her own, selling her jewellery and buying 20 *mann* (80 kg) of corms. The details on the management arrangements of this land were not collected.

The second informant (#R2\_30) is a 50-year-old woman whose husband has gone to Iran and not returned.<sup>29</sup> She reported that she had about 10 *jiribs* of land that she was gradually bringing under saffron cultivation. She supervises all her saffron production and has even built a wall around 1 *jirib* of her land so that younger and married women, who cannot work on the open land unlike older and widowed women, can work for her without fear. She reported that it was Babai Saffron who had encouraged her to cultivate saffron. At the start she did not have money, but she had a house in the city that she mortgaged to provide the cash to buy the corms to start cultivation eight years ago. She started cultivation on 1 *jirib* of land, in the second year expanded to a second *jirib* and in the third brought

---

<sup>26</sup> Key Informant #R2\_19.

<sup>27</sup> Key Informant #R2\_04.

<sup>28</sup> Key Informant #R2\_28.

<sup>29</sup> Key Informant #R2\_30.

another 2 *jiribs* under cultivation. After three years, she had earned enough to pay the mortgage on the house and recover it. Now she is cultivating nearly 10 *jiribs* of land under saffron. She commented that the price now was about Afs 120,000–130,000 per kg (\$USD 1,800).

A third informant (#R2\_031) from the same village is a 48-year-old woman who shares 20 *jiribs* of land with her four brothers-in-law.<sup>30</sup> She previously worked as an employee for the Babai Saffron company, cleaning saffron. Last year, she persuaded her husband that they should cultivate 1 *jirib* of saffron; because he was sceptical about the benefits she took responsibility for its management.

In Injil district, there are three women's saffron associations (Schuller and Morelli, 2013) and the women of two saffron-cultivating households were interviewed. In the first case, #R2\_9 and #R2\_10, they are family of the head of the Taban association and are both active in the management of the crop.<sup>31</sup> The daughter, who had just graduated from Class 12 at school, had enjoyed working in the family business and, as she was shortly to get married, was hoping she would be able to continue the business in her husband's house as well.

In the second case, the respondent (R2\_11) was the 17-year-old daughter of a saffron farmer and landowner.<sup>32</sup> She was still at school but was fully involved in the processing, drying, packing and labelling activities and liked the crop because it was 'easy and clean work'. She had supervisory responsibilities to ensure the processing and packaging were done well. However, as she put it, '*Women are not doing deals with people – only men talk about rates and undertaking business activities while women only do work inside their house*'. She did not get paid for her work but once a year her father took her to the city so she could buy clothes and cosmetics.

These various accounts of the direct involvement of women in saffron production, whether on an independent basis or through their families, reveal a number of interesting features. First, in these Herat villages women have access to and use of property (as in #R2\_30) and land, either through inheritance (as in #R2\_28), marriage or contractual arrangements such as leasing. Second, while in many cases these appear to be better-off women – or come from families with assets – this is not always the case, as with the first wife (#R2\_28) who leased land to secure a degree of economic independence. Third, whether or not they have land, women are able to exert management authority over the business as the case of #R2\_19 shows. Fourth, even where women do not have independence but work within a family, they clearly see themselves as actively involved, even with certain limits, in the saffron business and contributing to the family economy.

This evidence of the engagement of women in farm production challenges the widespread perception of women's non-involvement in productive activities. An argument might be made that this has been a transformative effect of the spread of saffron cultivation in the province. However, women's existing involvement (Grace and Pain, 2011) in other farm production activities (e.g. livestock) and other income generation activities (embroidery) suggest this is not necessarily such a significant change from the past. It is possible the perception of saffron cultivation as women's work, driven by their involvement in crop processing, which has become part of the narrative built by NGOs and donors and well accepted in the districts, has made the step for certain women into saffron production an easier one. But equally, as seen below, the low wages women receive for their labour (and there is no evidence that women producers hire women labour at a higher rate) has been an incentive for farmers and village elites such as *arbobs* to allow females to work with saffron, as this has increased their returns. We must also take account of the fact that Herat has long been seen as one of the more liberal regions in Afghanistan for

---

<sup>30</sup> Key Informant #R2\_31.

<sup>31</sup> Key Informant #R2\_09 and #R2\_10.

<sup>32</sup> Key Informant #R2\_11.

women. The influence of Iran and the experience of many Heratis there as refugees are likely to have contributed to the relaxation of *purdah* norms.

However, the restrictions of not being able to work in public in the fields – unless you are old or a widow – should not be forgotten. As will be seen (Section 3.4), it is one matter for women to form associations – and even then under a different ministry than that of male associations – and quite another for them to become traders.

### Women as saffron labour

Saffron generates a significant but very short demand for casual labour for harvesting and processing. Saffron production increases year by year during its five-year production cycle, raising demand for each *jirib* of saffron cultivation. After harvesting, the stamens have to be separated from the flower, and cleaned, sorted and dried within a short period of time to maximise the value obtained from the crop, so for up to 20 days there is an intensive need for labour. This rises and falls over the harvest period. One male farmer described the labour requirement for harvesting as follows:

*To collect saffron flower from 1 jirib of land needs up to 15 workers per day, but this number could increase when flower is at its peak. The first three to four days the plant has a small number of flowers, but after the fifth to 10 days, the flowers have increased up to 10 times that of the first two to three days. This increases the number of workers required to collect the flower as quick as possible.*<sup>33</sup> (#Key Informant R2\_08)

In the third year of production, 20–25 people are needed per day; in the fourth, up to 30–40 may be required per day per *jirib*. The labour required to process the flowers is equivalent to that required to harvest it. The quality of saffron rapidly declines after harvest as one informant made clear:

*When the women collect flowers from the field the other labour have just seven to eight hours for separating saffron from the flowers, otherwise the saffron will lose its quality. If more than 10 hours passes from harvesting the flowers and the saffron is not separated from the flowers then saffron quality will be very low.*<sup>34</sup> (Key Informant #R2\_03)

Up to 50–60 kg of saffron may be harvested per day from the fields, and one woman can separate up to 2 kg of saffron from the flowers each day. Thus, over the 20-day period, up to 100 women per *jirib* can be involved in both the collection (although children are commonly employed for this (see Box 1) and the processing of the crop (they work primarily on the latter). The demand for labour for saffron was consistently contrasted with other crops (#R2\_08): wheat or barley, for example, require about three people for harvesting 1 *jirib* of land.<sup>35</sup> So it is easy to see how saffron cultivation has dramatically increased this very seasonal demand for labour. A thousand women or more might be working at the district level during the harvest season. There were consistent statements that about 80 percent of this labour was female and that tasks were segmented by gender. The men work on land preparation, planting, weeding, fertilising and irrigation and only to a limited extent on processing. They also harvest the corms when they are ready to be lifted and sold as new planting stock. Women work primarily on processing, although older women can also work on the harvesting.

---

<sup>33</sup> Key Informant #R2\_08.

<sup>34</sup> Key Informant #R2\_03.

<sup>35</sup> Key Informant #R2\_08.

### Box 1: The use of child labour to harvest saffron

Only women who are widowed or old can work in public in the saffron harvest. However, children down to the age of 12 are commonly used to harvest the crop but not in processing, since they are judged not to be careful enough to be handling the delicate flowers. One informant, a trader, justified the use of children as follows:

*The reason for involving children is that schools are closed in the winter for three months and the harvest season of saffron comes at the same time. The children are free, therefore they are working in collecting flowers of saffron. My 10-year-old son is more expert than me in collecting flowers of saffron. I can say that children are more expert in collecting flowers so we hire them during the harvest season of saffron (#R2\_07).*

Another informant justified the employment of children by the fact that they are free as schools are closed and the fact that they come from poor families and this represents a contribution to household expenses. He also noted *'the children are more energetic and they became experts in collecting flowers therefore, they are mostly hired for the collection of flowers from the saffron fields'* (#R2\_05).

The use of children as labour in saffron cultivation is acknowledged in earlier reports as a side effect of the spread of the crop (Gohar and Wyeth, 2006: 2) and advice has been given to saffron growers associations to discourage children from missing school. The scale of the expansion of the crop, however, has drawn in this child labour; framing it as part of their household duties, as with women, appears to be used to justify the very low wages they receive (#R2\_18, #R2\_26).

We do not know the genesis of the involvement of women in the processing of saffron and how this has come to be seen as 'women's work'. One factor may be, given the scale of the time-bound demand for labour and the imperative of timeliness, that there are simply not enough men around to provide the labour. It was commonly reported, and also found in the livelihood panel study in Herat (Huot and Pain, 2016, forthcoming), that most of the village young men are working in Iran because of the lack of sufficient employment opportunities in Herat. However, shortage of male labour was not the reason given for saffron processing becoming women's work. Expressing the commonly stated view on why women are so heavily involved, one informant gave three reasons, all very gendered in assumptions and expectations for the use of women in saffron processing:

*The first one is the low wage, mostly women work on a low wage compared with men. The second reason is their patience, collecting saffron needs more patience and mostly men does not have patience and as a result people prefer to hire women, because they have patience more than men. The last reason is the hard work of women, compared with men. Women are more loyal in their work and their perfectionism makes women more desirable in the saffron market.<sup>36</sup> (Key Informant #R2\_01)*

The head of the Adalat association (#R2\_04) gave a similar justification but stressed that 80 percent of labour employed in saffron were women mainly because they accept lower wages than men do, and of course processing requires patience and women *'have more patience compared with men'*. This view of women being more skilled than men in processing was also stated by a woman whose household cultivated saffron<sup>37</sup> (#R2\_12) and a saffron worker<sup>38</sup> (#R2\_18) but it is not a skill that appears to attract a wage premium.

There is no doubt wages are gender-differentiated. There are also seems to be variation, with some labour paid on a daily basis and some on a piece rate. At harvest time for one saffron company, male

---

<sup>36</sup> Key Informant #R2\_01.

<sup>37</sup> Key Informant #R2\_12.

<sup>38</sup> Key Informant #R2\_08.

labour was paid Afs 150 per day while a women would be paid only Afs 120.<sup>39</sup> On the other hand, one female worker reported that for harvesting she was being paid Afs 10 per kg for the harvest and Afs 50 per kg for the processing,<sup>40</sup> and on another occasion she was also paid Afs 50 per kg for the cleaning but Afs 30 per kg for the collection. The general view was that a woman could process no more than 1 kg of saffron per day, giving a wage of Afs 100 per day. One woman compared this with the Afs 100–200 she could earn in a day doing tailoring but noted that the latter was not regular work.<sup>41</sup> All accounts from women consistently stated that they were happy to have the work and that they accepted what was offered in wages but also that wages had not varied over the years. Only in one case did one woman report there had been a small increase in the wage rate.<sup>42</sup> Farmers in turn justified the low wages women received in terms of the high fixed costs saffron requires in terms of initial capital investment and the paternalistic explanation that saffron processing allows women to be work in a private space and sit together and this is good for them.

How do returns from saffron compare to other crops. One farmer gave the following calculation:

*Saffron is also more expensive compared with other crops. For example, from 1 jirib of good land a person can get up to 800 kg of wheat, and each kilo of wheat at the time of harvest can fetch Afs 15–20. So the total amount of money a farmer can receive from 1 jirib of land is equal to Afs 16,000, but when a person cultivates 1 jirib of saffron, in its second year he will be able to get up to 1 kg of saffron, if at the time of season the price of 1 kg of saffron is between Afs 80,000 and 90,000.<sup>43</sup>*

The labour requirement for harvesting 1 *jirib* of wheat is three men at Afs 200 per day per man. For saffron, 100 women at Afs 100 are required for harvesting and processing. The relative costs of labour in relation to the sale price (crop sale price less labour costs) for saffron are clearly much greater than those of wheat, and labour costs absorb about 4 percent of the crop value per *jirib* of wheat and about 11 percent of the crop value per *jirib* of saffron. However, the absolute return to saffron farmers, even taking into account the start-up costs of planting and crop maintenance and the time delay on returns is considerably higher for saffron. No justification was given for the lower wage rates for women (other than the stated cultural fact they are paid less, and producers could get away with paying less for women). Implicitly, however, to support the gender differential, there seems to be a comparison being made between heavy agricultural work versus light processing work. This question of the wage differential was specifically raised in one interview with a saffron trading company (discussed in more detail in the next section) that grows its own saffron as well as purchasing it.

*Q: From what we have heard the wage for women is not the same as the wage for men; a man can take Afs 200–300 per day while a women gets more than Afs 100 per day or Afs 50–70 per kg of flower in harvesting and Afs 20–30 in processing. Why it is there this very low wage for the women?*

*A: I think you are right, but work in saffron doesn't need more physical work, rather it is easy work for women and they agree to that wage rather than having nothing and sitting at home and as I mentioned before it is good socially and mentally for them. With the amount of money they receive, they can support their family and resolve their own financial problems. If we give the amount that a man is receiving, like Afs 200 or 300, the cost for 1 kg of saffron for a farmer will reach Afs 200,000 Afs, and how much should he sell it to get benefit? Therefore one of the*

---

<sup>39</sup> Key Informant #R1\_02.

<sup>40</sup> Key Informant #R2\_27.

<sup>41</sup> Key Informant #R2\_22.

<sup>42</sup> Afs 150 is at the current rate less than \$3.

<sup>43</sup> Key Informant #R2\_08.

*benefits of farmers and companies that are working with these women in saffron is the wage they receive currently.*<sup>44</sup> (Key Informant #R2\_03)

While the statement that wage costs would reach Afs 200,000 if women were paid Afs 200 a day appears something of an exaggeration (costs would rise at best to Afs 20,000–30,000), this clearly stated interest in employing women and paying them low wages reflects the deep gender structures of employment in the rural economy. It also ignores the likely profit margins growers and traders are obtaining by using cheap female labour. And it should be noted there was no suggestion from the women growing saffron as members of female associations that they were paying better wages to their workers. Given the limited scale of employment (a month at best), the wage levels, the (secluded) conditions under which such labour is carried out, the attitude towards woman working and the scarcity of other employment for women, this casual employment could hardly be called transformative, although this is not to deny the benefits it can generate for those women who do find work.

### **Female labour and inter-village movement**

The time-bound nature and scale of demand for processing the saffron raise challenges in mobilising sufficient labour. As was seen earlier, one female producer (#R2\_20) could not afford to employ labour and used only family labour to meet her requirements. Moving to any scale of production, however, requires the mobilisation of labour beyond the household supply. While it might be possible for individual producers to use relatives and networks within a village to do this, there is also evidence that this may not meet demand and that there is mobilisation of female labour from outside the village, primarily by the saffron associations.

In Injil, the head of one saffron association confirmed that they had labour supply problems during the harvesting season and that they had to seek labour elsewhere:

*It can happen during the harvesting of saffron...we need more labour as the women from one village are not enough for collecting saffron flower, processing saffron and drying saffron. Then we go to another village arbob and ask him to announce to the families that if they want to work on the next village's saffron lands we will take the responsibility for transportation and paying the wages for them. The arbob announces this in the village and anyone who accepts will send their women to work. Some of the families come from the time of harvesting in another village with all the family if they find place for their family and till the end of the harvest they will settle in the village and work on saffron collection and processing. After finishing the work they go back directly to their villages.*<sup>45</sup> (Key Informant #R2\_02)

However, inter-village movement of labour appears to happen mainly between villages that are close to each other; it is very difficult for women to move beyond this. Further, such movement requires transport, and a male member of the woman's family has to accompany her (#r2\_01).<sup>46</sup> There appear to be differences between districts; Injil<sup>47</sup> in particular has a labour shortage in the village where we conducted interviews. One trader (#R2\_05) reported taking saffron flowers to Ghoryan to be processed.<sup>48</sup>

---

<sup>44</sup> Key Informant #R2\_03.

<sup>45</sup> Key Informant #R2\_02.

<sup>46</sup> Key Informant #R2\_01.

<sup>47</sup> Injil is, however, on the outskirts of Herat city with the possibility of commuting daily to the city, and possibly with more liberal views on women working outside the household than in the other two districts where the study was conducted.

<sup>48</sup> Key Informant #R2\_05.

In sum, rather than generating higher-paid labour, as happened with the cultivation of opium poppy, we have here the creation of short-term low-paid labour for women. The short duration of this work and low wages provided can only be seen as reinforcing the lower economic status of women.

### 3.4 Saffron companies

Saffron associations are licensed solely to undertake activities in relation to the organisation and coordination of saffron production. The sale of saffron, whether it is done by an association or directly by the farmers, is meant to be undertaken with one of the 14 firms that have been licensed by the Afghanistan Investment Support Agency (AISA) to trade in and export saffron (Katawazy, 2013) or an intermediary trader. According to Katawazy (2013: 27), there is high concentration in the market, with three companies (two in Herat and one in Kabul) dominating. Katawazy is fairly scathing of what he sees as the short-term perspectives of these companies in seeking short-term profits over long-term investment and strategy, with 'a few big players who control and set the prices' (2013: 41). This statement is consistent with the observation made by many saffron producers that there is a large gap between what they are paid by these firms and what saffron sells for in the international market. There are also mentions of a powerful saffron oligopoly that consciously bars women from entering the market and competing fairly, with a case cited of a trader trying to block the funding of a women's saffron association packaging and branding initiatives (APPRO, 2010).

As an informant from the MAIL office made clear, many of these companies were able to establish themselves with international funds, linked with efforts to displace opium and a supply-driven approach to the development of saffron.

*During the early years of the Karzai regime there were many projects in the MAIL department and Counter Narcotics Department of Herat province because saffron was replacing opium in our province.*<sup>49</sup> (Key Informant #R2\_032)

When the saffron business started 18 years ago, those who could access funds allocated for investments in Herat were part of a small network: one trader received \$50,000 through a World Bank loan (#R2\_03); a second (#R2\_037) started his business by selling bulbs to UNODC under a contract to implement saffron cultivation in the South. This second trader had been doing business with UNODC up to 2008 providing technical support to a poppy eradication programme in the southern provinces. This collaboration ended in 2008. This same trader has family links to the panel of experts within Herat University who guide the distribution of funds at provincial level in the saffron market. It is also evident that tribal affiliations and kinship connect key players, as the story of Babai Saffron suggests (see Section 3.2).

The focus of this paper, however, is not on the upper end of the saffron value chain and its international trading, but more on the relations of production in Afghanistan. In view of this, the role of the Saffron companies as direct producers themselves is worth noting. Three trading companies were interviewed in Herat. This did not include the Safi Company, which is one of the big three saffron companies and which has 20–30 ha of saffron under cultivation. The relative share of the three companies interviewed of overall trade is not known.

The first informant was the director of Aryana Saffron Company,<sup>50</sup> to which the Adalat association in Pashton Zarghon sells most of its saffron. This set up as a registered company in 2011 with USD 60,000 start-up capital; it has grown in size to over USD 500,000. The informant said they had also received a World Bank loan. They have land in three districts (17.5 *jiribs*), some of which they own and the rest leased, which produced in 2014 about 50 kg of saffron. In total, they exported 800 kg of

---

<sup>49</sup> Key Informant #R2\_32.

<sup>50</sup> Key Informant #R2\_03.

saffron in 2014, buying the balance from associations such as the Adalat association. They manage their lands by hiring farmers and paying them a salary. However, they directly hire and manage female labour for flower collection and the processing and packing of saffron. They also provide a full range of credit services to independent saffron farmers. Although the terms of this credit are not known, farmers are in effect required to sell saffron to Aryana at harvest time at a price set by the company.

The second trader was from a much smaller company, called Takchine (not listed by Katawazy, 2013).<sup>51</sup> Although this has been running for five years, it went through the formal registration process for a licence only three years ago. They started the business with about USD 80,000 in capital and are directly involved in production. They own 12 *jirib* of land and have another 30 *jirib* on lease, where they have cultivated saffron for the past three years. They also buy saffron direct from farmers and reported an annual trade of around 350 kg of saffron. As with the first trading company, they recruit female casual labour seasonally at the going rates. As observed earlier, the main reason for doing this is that women work on a low wage compared with men.

The third trading company, Tela e Surkh (literally Red Gold) has been longer in the business: it was established in 2002 although it got its trading licence only in 2008. They started with capital of USD 50,000. They own 80 *jiribs* in four districts and buy saffron from farmers in Ghoryan and Pashton Zarghon districts and from other provinces in Afghanistan. They are probably one of the bigger companies, as explained by the director, one of the two brothers co-owning it:

*Afghanistan is exporting 2.5 tons of saffron in a single year. We are exporting 700 kg, Aryana is exporting 500–600 kg, the Afghan Saffron Company is exporting 100–150 kg and other companies are on average exporting 15–20 kg per year. The statistics I have given you are for the previous year because this year the harvest of saffron was not good. We have had less export or business this year. The reason was the cold climate, which affected saffron farms in Herat province.*<sup>52</sup> (Key Informant #R2\_05)

Tela e Surkh have two permanent staff to manage production and the recruitment and management of labour at the district level. They employ 150–200 seasonal labourers for harvesting, processing and packing the flowers. They commented that the *arbobs* have a key role in organising and supervising seasonal labour in the districts:

*I will give you an example, the arbob of one village comes to the farmer with 30 labour[er]s from his village. The farmer hires them and makes the arbob supervisor of his team. The arbob himself does not work because he is only responsible for supervising. All the labour along with arbob take their daily wage for the work they have performed in a few days. Similarly, the farmers send the flowers of saffron to the women in the neighbourhood where they process it within the house. They are paid Afs 40–50 per kg for processing the flowers of saffron.* (Key Informant #R2\_05)

The role of the *arbobs* or village leaders in mobilising and supervising male labour for the harvesting of the crop is an aspect of the labour market that did not emerge from other informants but is consistent with the role of *arbobs* in regulating access to labour at the village level. The observation made earlier of leaders of saffron associations approaching *arbobs* of neighbouring villages to find female labour should be noted. It is, however, not entirely clear whether or not these labour gangs include children as well, since this informant (#R2\_05) then went on to talk about the hiring of children for the harvesting. This informant was also clear that the main reason for hiring female labour was they were cheap and the work was light, but also noted that men were busy at this time harvesting wheat.

---

<sup>51</sup> Key Informant #R2\_01.

<sup>52</sup> Key Informant #R2\_05.

## 4 Conclusions

The case for saffron as a high-value crop with export potential is well evidenced by existing sources. This paper has focused more on the socioeconomic effects of saffron cultivation in Herat, and on its impacts on the social relations of production, investigating who is likely to benefit from its cultivation and the scale of employment it is likely to generate. The evidence reported shows that saffron cannot provide at a national level a viable alternative to opium poppy. It will never achieve the scale of production that opium poppy has, which in 2016 is anticipated to reach a new record (Mansfield and Fishtein, 2016). In part, this may reflect the more exacting growing conditions required for saffron in comparison with those for opium poppy. Is it then more of a niche crop, which at a local level can substitute for opium poppy, although it should be remembered that the scale of opium poppy production in Herat province has always been limited. As the evidence reported shows, on the basis of income per unit area, those farmers who are growing saffron reported that it was more lucrative than opium poppy and the employment it was generating per unit area also exceeded that of opium poppy.

But as a semi-perennial crop with high capital investment costs and returns that are only significant from the second year onwards, it is evident that saffron is more likely to be grown by farmers who can easily meet their subsistence requirements, have sufficient land area or other sources of income to take the risk of investment and can afford to take risks. It is likely therefore to be less attractive to farming households that have insufficient land to be food-secure or limited sources of other income. The evidence suggests that those who have been able to move into its production have gained considerable benefit; they tend to be male farmers with larger landholdings. There are also examples of women who have gained a foothold in production, through land inheritance or access to land through relations or leasing.

The formation of associations has been seen as a key instrument in promoting saffron cultivation but these largely address the production supply side; support for post-production and international marketing has been limited. The bureaucratic process required to legally form an association and the restrictions imposed on the scope of their activities further constrains them. Leadership of the male associations appears usually to be provided by the village landed elite, who not only act as lenders of credit for other farmers who wish to move into saffron production but also have close links, or are even part owners of, the key saffron trading companies. However, a few associations have been formed by women, some through women who are wives of the heads of male saffron associations and who come from households with more land.

The comparison with the market support given by traders to opium poppy cultivators is striking. For opium poppy, traders provide credit, inputs and farm gate purchase, and it is this level of market intermediation by traders that has been critical to small farmer engagement. It is precisely this level of support, including the supply of agricultural advisory services by the state, that was so crucial in making the new varieties of wheat and rice during the Green Revolution period less risky to smallholders in South-East Asia (Hazell, 2009) and that supported their adoption. While Afghanistan's Agricultural Sector Review (World Bank, 2014) makes explicit reference to the Green Revolution model and the role of the state in its support, it argues (p.vi) that there are greater opportunities in Afghanistan for the private sector and NGOs to help provide market-led solutions to reduce market risks. There is little evidence that the private sector or NGOs in the case of saffron have provided such support, and the absence of effective market intermediation to reduce market risks for smallholders will restrict the adoption of saffron by small farmers.

One reason saffron has been promoted is its potential to generate employment, particularly for women; around 5,000 women and children are being hired in Herat province every saffron harvesting season to clean and process saffron flowers. This work is generally piece rate and significantly lower paid than

comparable work by men, and usually takes place in spaces designated for women. There are some examples of women moving from one village to another to undertake the work. A common justification for the use of women is precisely that they are lower paid, but the short-term nature of employment and the low rates do not offer a living wage or significantly change the employment constraints women face. The reason women are employed is probably that this is an activity that can be carried out in screened or private conditions where men are not present. Nevertheless, women who are employed as casual labour are appreciative of what it offers and the benefits to be gained from it.

It is uncertain why harvesting and cleaning are designated as 'women's work'. The standard response is that women are better at it and that it is 'light' work – but they are not paid more for doing it. Whether these reasons are used to justify the fact that women are doing the work and therefore they can be paid less than men is unclear. A contributory factor might be that the short harvest season with high labour demand cannot be met by the available male labour supply, much of which has migrated to Iran for work. Observations on opium cultivation in the Hari Rud a decade ago indicated that women also worked in the family fields then because of acute needs for household labour generated by opium poppy cultivation; they earned higher wages to do so.

So is the movement of women into saffron farm work transformational or simply a feminisation of farm labour, as seen elsewhere in Asia as men move out of farm-based work? Given the patriarchal structures of Afghanistan's rural economy, even in the more liberal environment of Herat, it is difficult to see this, at least in the short term, as a significant change. Nor is saffron going to achieve the scale needed to drive the transformation of the rural economy that is expected of it. It would appear from the evidence that, while saffron offers benefit to some, the structure of its market and the way it is currently regulated limits wider benefits, and poor people and women face specific structural constraints in gaining significant returns from it.

# References

- APPRO (Afghanistan Public Policy Research Organisation) (2010) *Value chain governance and gender: saffron production in Afghanistan*. Kabul: APPRO.
- Gohar, A. and Wyeth, P. (2006) 'Saffron production and farmers perception in Pashton Zarghon district of Herat'. Based on interviews by DACAAR field staff, ICARDA and DFID.
- Feder, G., Just, R.E. and Zilberman, D. (1985) 'Adoption of agricultural innovations in developing countries: a survey', *Economic Development and Cultural Change*, 33, 255–98.
- Grace, J. and Pain, A. (2011) 'Rural women's livelihood: their position in the agrarian economy'. In J. Heath and A. Zahedi (eds) *Land of the unconquerable: the lives of contemporary Afghan women*. Berkeley and Los Angeles, CA: University of California Press: 262–75.
- Hazell, P.B.R (2009) 'Transforming agriculture: The green revolution in Asia'. In D.J. Spielman and R. Pandya-Lorch (eds) *Millions fed: Proven successes in agricultural development*. Washington, DC: IFPRI: 25–32.
- Huot, D. and Pain, A. (2016, forthcoming) 'Livelihood trajectories in three villages of Herat'. SLRC Working Paper series. London: Secure Livelihoods Research Consortium.
- Katawazy, A.S. (2013) *A Comprehensive study of Afghan saffron*. Kabul: Afghanistan Investment Support Agency.
- Leslie, J. (2015) *Political and economic dynamics of Herat*. Peaceworks 107. Washington, DC: United States Institute for Peace.
- Mansfield, D. and Fishtein, P. (2016) *Moving with the times: How opium poppy cultivation has adapted to the changing environment in Afghanistan*. Kabul: AREU.
- MCN (Ministry of Counter Narcotics) (2012) *National alternative livelihood policy*. Joint Initiative of the Agriculture and Rural Development Cluster. Kabul: MCN.
- Minoia, G., Mumtaz, W. and Pain, A. (2014) *The social life of the onion: the informal regulation of the onion market in Nangarhar, Afghanistan*. SLRC Working Paper 26. London: Secure Livelihoods Research Consortium.
- Minoia, G. and Pain, A. (2015) '90% real' – *The rise and fall of a rentier economy: Stories from Kandahar, Afghanistan*. SLRC Working Paper 38. London: Secure Livelihoods Research Consortium.
- Pain, A. (2008) *Opium poppy and informal credit*. Issues Paper. Kabul: AREU.
- Pain, A. (2010) 'The opium "revolution": continuity or change in rural Afghanistan'. In B. Harris-White and J. Heyer (eds) *The comparative political economy of development: Africa and South Asia*. Abingdon: Routledge: 197–224.
- Pain, A. and Kantor, P. (2011) *Beyond the market. Can the AREDP transform Afghanistan's rural nonfarm economy?* Briefing Paper. Kabul: AREU.
- Poulton, C., Dorward, A. and Kydd, J. (2010) 'The future of small farms: new directions for services, institutions, and intermediation'. *World Development* 38(10), 1413–28.
- Schuller, R. and Morelli, G. (2013) 'An assessment on the saffron industry in Herat'. Kabul: Embassy of Italy and Italian Ministry of Foreign Affairs.
- UNODC (United Nations Office on Drugs and Crime) (2015a) *Afghanistan opium survey*. Kabul: UNODC and Islamic Republic of Afghanistan Ministry of Counter Narcotics..

UNODC (United Nations Office on Drugs and Crime) (2015b) *World drug report*. Vienna: UNODC.

World Bank (2011) *Understanding gender in agriculture value chains: the cases of grapes/raisings and almonds and saffron in Afghanistan*. New Delhi: World Bank. South Asia Region, Agriculture Rural Development Unit, Sustainable Development Department.

World Bank (2014) *Islamic State of Afghanistan agriculture sector review (ASR): Revitalising agriculture for economic growth, job creation and food security*. New Delhi: World Bank, South Asia Region, Sustainable Development Network Agriculture and Natural Resources Department.

# Annexes

## Annex 1: List of informants

### Round 1

File name	Role (occupation)	Age	Village	District	Date of interview
R1_01	Saffron association	52	Sra Naw	Injil	05-Jun-15
R1_02	Labour	19	Shaidi	Injil	12-May-15
R1_03	Labour	45	Shaidi	Injil	12-May-15
R1_04	Labour	40	Shaidi	Injil	12-May-15
R1_05	Labour	39	Sra Naw	Injil	20-May-15
R1_06	Farmer	50	Sra Naw	Injil	20-May-15
R1_07	Farmer	62	Shaidi	Injil	12-May-15
R1_08	Farmer	36	Kahdistan	Injil	12-May-15
R1_09	Labour	41	Rabat Naw	Injil	12-May-15
R1_10	Labour	46	Kahdistan	Injil	12-May-15
R1_11	Labour	48	Sra Naw	Injil	20-May-15
R1_12	Labour	27	Kahdistan	Injil	12-May-15
R1_13	Labour	24	Kahdistan	Injil	12-May-15
R1_14	Labour	41	Shaidi	Injil	12-May-15
R1_15	Labour	32	Estalu	Ghoryan	17-May-15
R1_16	Farmer	48	Barnabad	Ghoryan	17-May-15
R1_17	Labour	35	Estalu	Ghoryan	17-May-15
R1_18	Labour	41	Barnabad	Ghoryan	17-May-15
R1_19	Labour	46	Deza	Ghoryan	17-May-15
R1_20	Labour	30	Center of Dist	Ghoryan	17-May-15
R1_21	Labour	45	Barnabad	Ghoryan	17-May-15
R1_22	Labour	44	Deza	Ghoryan	17-May-15
R1_23	Labour	35	Deza	Ghoryan	17-May-15
R1_24	Labour	42	Barnabad	Ghoryan	17-May-15

R1_25	Farmer	54	Qanjun	Ghoryan	17-May-15
R1_26	Farmer	34	Center of Dist	Ghoryan	17-May-15
R1_27	Farmer	46	Center of Dist	Ghoryan	17-May-15
R1_28	Saffron association	26	Center of Dist	Ghoryan	17-May-15
R1_29	Labour	44	Gulmir Bala	Pashton Zarghon	14-May-15
R1_30	Labour	46	Shabad	Pashton Zarghon	14-May-15
R1_31	Labour	43	Shabad	Pashton Zarghon	14-May-15
R1_32	Labour	37	Gulmir Pahin	Pashton Zarghon	14-May-15
R1_33	Labour	43	Gulmir Bala	Pashton Zarghon	14-May-15
R1_34	Labour	51	Gulmir Bala	Pashton Zarghon	14-May-15
R1_35	Labour	37	Salimi	Pashton Zarghon	14-May-15
R1_36	Labour	21	Shabad	Pashton Zarghon	14-May-15
R1_37	Saffron association	32	Gulmir Bala	Pashton Zarghon	14-May-15
R1_38	Farmer	56	Gulmir Bala	Pashton Zarghon	14-May-15
R1_39	Farmer	49	Shabad	Pashton Zarghon	14-May-15
R1_40	Farmer	53	Shabad	Pashton Zarghon	14-May-15
R1_41	Labour	24	Gulmir Pahin	Pashton Zarghon	14-May-15
R1_42	Labour	40	Salimi	Pashton Zarghon	14-May-15
R1_43	Saffron company	44	11th Dist Farqa St	Pashton Zarghon	11-May-15
R1_44	Saffron company	25	3th Dist Mokhaberat St	Herat city	23-May-15
R1_45	Saffron company	38	5th Dist 64 Metra St	Herat city	26-May-15

## Round 2

File name	Gender	Age	Role (occupation)	Village	District	Date of interview
R2_01	Male	22	Head of Takchine Company	Herat city	Herat city	29 07 2015
R2_02	Male	58	Head of Taban Association	Sarai Naw	Injil	29 07 2915
R2_03	Male	40	Head of Aryana Saffron Company	Herat city	Herat city	01 08 2015
R2_04	Male	50	Head of Adalat Association	Herat city	Pashton Zarghon	01 08 2015
R2_05	Male	28	Head Tela Surkh Saffron Company	Herat city	Herat city	01 08 2015
R2_06	Male	44	Farmer	Sarai Naw	Injil	02 08 2015
R2_07	Male	35	Farmer	Sarai Naw	Injil	02 08 2015
R2_08	Male	50	Farmer	Sarai Naw	Injil	02 08 2015
R2_09	Female	50	Farmer	Sarai Naw	Injil	02 08 2015
R2_010	Female	19	Farmer	Sarai Naw	Injil	02 08 2015
R2_011	Female	17	Worker	Sarai Naw	Injil	02 08 2015
R2_012	Female	26	Worker	Sarai Naw	Injil	02 08 2015
R2_013	Female	40	Worker	Sarai Naw	Injil	02 08 2015
R2_014	Female	30	Farmer	Sarai Naw	Injil	02 08 2015
R2_015	Male	60	Deputy of Al Maas Association	Sarya Sia, Mahal-e-Araban	Ghoryan	04 08 2015
R2_016	Male	35	Farmer	Sarya Sia, Mahal-e-Araban	Ghoryan	04 08 2015
R2_017	Male	59	Farmer	Sarya Sia, Mahal-e-Araban	Ghoryan	04 08 2015
R2_018	Female	54	Worker	Sarya Sia, Mahal-e-Araban	Ghoryan	04 08 2015
R2_019	Female	30	Farmer	Sarya Sia, Mahal-e-Araban	Ghoryan	04 08 2015
R2_020	Female	50	Farmer	Sarya Sia, Mahal-e-Araban	Ghoryan	04 08 2015
R2_021	Female	45	Worker	Sarya Sia, Mahal-e-Araban	Ghoryan	04 08 2015

R2_022	Female	27	Worker	Sarya Sia, Mahal-e-Araban	Ghoryan	04 08 2015
R2_023	Male	70	Farmer	Sarya Sia, Mahal-e-Araban	Ghoryan	04 08 2015
R2_024	Male	50	Farmer	Gul Meer	Pashton Zarghon	05 08 2015
R2_025	Male	70	Farmer	Gul Meer	Pashton Zarghon	05 08 2015
R2_026	Male	48	Farmer	Gul Meer	Pashton Zarghon	05 08 2015
R2_027	Female	55	Worker	Gul Meer	Pashton Zarghon	05 08 2015
R2_028	Female	52	Farmer	Gul Meer	Pashton Zarghon	05 08 2015
R2_029	Female	45	Farmer	Gul Meer	Pashton Zarghon	05 08 2915
R2_030	Female	50	Farmer	Gul Meer	Pashton Zarghon	05 08 2015
R2_031	Female	48	Farmer	Gul Meer	Pashton Zarghon	05 08 2015
R2_032	Male	33	MAIL	Herat city	Extension office MAIL	06 08 2015
R2_033	Male	50	Border Police	Herat city	Border Police	08 08 2015
R2_034	Male	45	ANP	Herat city	ANP	08 08 2015
R2_035	Male	31	Head of AREDP MRRD	Herat city	MRRD	08 08 2015
R2_036	Male	38	Senior Political Affairs UNAMA	Guzara district	UNAMA	10 08 2015
R2_037	Male	36	Jahan Saffron Co	Herat city	Herat city	07 07 2015





---

SLRC Working Papers present information, analysis and key policy recommendations on issues relating to livelihoods, basic services and social protection in conflict affected situations.

This and other SLRC papers are available from [www.securelivelihoods.org](http://www.securelivelihoods.org).  
Funded by UK aid from the UK government, Irish Aid and the EC.

---

Disclaimer: The views presented in this report are those of the author(s) and do not necessarily reflect the UK government's official policies or represent the views of Irish Aid, the EC, SLRC or our partners. © SLRC 2016

---

Readers are encouraged to quote or reproduce material from SLRC for their own publications. As copyright holder SLRC, requests due acknowledgement

---

**Secure Livelihoods Research Consortium**  
Overseas Development Institute (ODI)  
203 Blackfriars Road  
London SE1 8NJ  
United Kingdom

T +44 (0)20 3817 0031  
F +44 (0)20 7922 0399  
E [slrc@odi.org.uk](mailto:slrc@odi.org.uk)  
[www.securelivelihoods.org](http://www.securelivelihoods.org)  
[@SLRCtweet](https://twitter.com/SLRCtweet)

