Value Chain Governance and Gender: Saffron Production in Afghanistan

Afghanistan Public Policy Research Organization

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## Glossary

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AISA</td>
<td>Afghanistan Investment Support Agency</td>
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<tr>
<td>APPRO</td>
<td>Afghanistan Public Policy Research Organization</td>
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<tr>
<td>ANDS</td>
<td>Afghanistan National Development Strategy</td>
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<tr>
<td>CSO</td>
<td>Central Statistics Office</td>
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<tr>
<td>DACAAR</td>
<td>Danish Committee for Aid to Afghan Refugees</td>
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<tr>
<td>DfID</td>
<td>UK Department for International Development</td>
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<tr>
<td>EPAA</td>
<td>Export Promotion Agency of Afghanistan</td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agriculture Organization</td>
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<tr>
<td>GoA</td>
<td>Government of Afghanistan</td>
</tr>
<tr>
<td>ICARDA</td>
<td>International Center for Agricultural Research in Dry Areas</td>
</tr>
<tr>
<td>IDRC</td>
<td>International Development Research Centre</td>
</tr>
<tr>
<td>INGO</td>
<td>International Non-Governmental Organization</td>
</tr>
<tr>
<td>MAIL</td>
<td>Ministry of Agriculture, Irrigation and Livestock</td>
</tr>
<tr>
<td>MCN</td>
<td>Ministry of Counter Narcotics</td>
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<tr>
<td>MFI</td>
<td>Micro Finance Institution</td>
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<tr>
<td>MISFA</td>
<td>Microfinance Investment Support Facility for Afghanistan</td>
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<tr>
<td>NSCSC</td>
<td>National Saffron Coordination and Support Committee</td>
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<tr>
<td>PRT</td>
<td>Provincial Reconstruction Team</td>
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<tr>
<td>RALF</td>
<td>Research Alternative Livelihood Fund</td>
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<td>SDO</td>
<td>Sanayee Development Organization</td>
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<tr>
<td>UNIFEM</td>
<td>United Nations Development Fund for Women</td>
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<tr>
<td>USAID</td>
<td>US Agency for International Development</td>
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</table>
Table of Contents

Executive Summary............................................................................................................. 1
1. Introduction.................................................................................................................... 5
2. Objectives..................................................................................................................... 7
3. Methodology.................................................................................................................. 7
4. Gender in/and Value Chains: A Framework.................................................................. 8
5. Saffron Value Chain....................................................................................................... 10
   5.1 Production of Saffron.............................................................................................. 14
   5.2 Planting Saffron...................................................................................................... 16
   5.3 Harvesting Flowers................................................................................................. 17
   5.4 Processing Saffron................................................................................................. 17
   5.5 Packaging and Branding....................................................................................... 18
   5.6 Trading Saffron...................................................................................................... 19
   5.7 Women and Saffron Production............................................................................. 21
6. Key Findings from the Case Study................................................................................. 25
7. Conclusion...................................................................................................................... 27
8. Summary of Key Findings and Recommendations....................................................... 24
References.......................................................................................................................... 26
Appendix 1: Saffron Value Chain Actor Map.................................................................... 31
Appendix 2. List of Organizations Interviewed.................................................................. 32

List of Boxes

Box 1. Entitlements and Capabilities Approach (Excerpts from Gammage et al. [2005])........ 10
Box 2. Typology of Institutions....................................................................................... 11
Box 3. Saffron Plantation Site Requirements................................................................... 12
Box 4. A Case of Chain Governance............................................................................... 20
Box 5. Summary of Key Problems and Constraints for Saffron Farmers in Afghanistan..... 24

List of Tables

Table 1: Actors and Processes in the Saffron Value Chain.................................................. 15

List of Figures

Figure 1: Average Price of Saffron in Herat Market per kg of Saffron in $US......................... 15
Figure 2. Costs and Values of Domestic Packaged Retail Saffron..................................... 19
Figure 3. Costs and Values of Unpackaged Export for Packaged Foreign Retail Saffron.... 21
List of Photos

Photo 1: Saffron Bulb ................................................................. 12
Photo 2: Saffron Plant ............................................................... 12
Photo 3: Saffron Stigmas ............................................................ 22
Photo 4: Women Harvesting Saffron Stigmas .............................. 22
Executive Summary

Afghanistan has comparative and competitive strengths in the agriculture sector, particularly in the horticulture and livestock sub-sectors, in which women are known to participate largely in production and processing. Orchard fruits – fresh or dried – are one of the key sectors in export growth, while poultry products (both eggs and meat) can substitute for imports, which amount to US$ 78.2 million per annum. In the non-farm sector, carpets are one of Afghanistan’s key export products, produced mostly by women and their children in their homes. Until the late 1970s Afghanistan supplied 20% of the raisins on the global market, held a dominant position in pistachio and dried fruit production, and produced livestock and wool products for the regional markets. The intermittent periods of conflict since the late 1970s combined with periodic droughts have resulted in loss of agriculturally productive land and weakened productive capacity due to flight of capital, displacement of framing communities, neglect of irrigation channels, diminished technical and market support and, ultimately, loss of market share.

The percentage of women involved in agricultural production is estimated at 65% of the agricultural workforce. Women carry out the bulk of the value-adding activities as domestic chores while the trading and marketing of finished agricultural products are carried out almost exclusively by men who are also the main financial beneficiaries of the process. Two Key factors contributing to these inequitable arrangements are gender bias based on deeply ingrained cultural norms and the highly informal agricultural economy.

This study was undertaken to identify constraints and explore opportunities for women to participate and improve their position in various stages of saffron production. The findings reported in this paper are based on primary data collected through interviews with key informants and focus group discussions and secondary data from a review of the existing literature on agricultural value chains, value chain analysis, and gender in/and agricultural development. The review of the literature was used to develop an analytical framework to examine gender in/and value chain dynamics in the case of saffron production.¹

An extensive review was carried out to take stock of the available literature on agricultural production, value chain analysis, and gender in/and agricultural production.² This study is centered on saffron and the site of study is mainly Herat, supplemented with interviews with key informants drawn from commercial actors such as input suppliers, processors, financial and other service providers, traders, wholesalers, retailers, exporters, buyers and middlemen involved in export to

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¹ See Appendices 1 and 2 for the key informant and focus group participant details and the codes used to cite them in this report.
markets such as India, Pakistan, Iran, and UAE. The institutional actors at the local level included provincial and district government offices, provincial Chambers of Commerce, and NGOs and aid agencies involved in the saffron value chain and women’s socio-economic development. Institutional actors at the national level were drawn from governmental ministries, donors, aid agencies, and NGOs which support women in trade, and private sector organizations involved in business development support for both men and women such as business associations and Microfinance Institutions (MFIs).

**Summary of Key Findings and Recommendations**

Saffron is suited to the semi-desert and rugged ecology of Afghanistan, particularly in the western provinces, the northeast (Badakhshan), Central (Laghman, Panjshir, and Wardak), and some Southern (Hellmand, Kandahar, Uruzgan, and Zabul) regions. The success experienced in the Herat province has much to offer as far as learning for other ecologically comparable provinces throughout Afghanistan.

There is increasing awareness among the international aid agencies and Provincial Reconstruction Teams about the untapped potential of saffron as a legitimate, lucrative, and alternative means to generate livelihood for a large number of rural communities. The efforts to build the saffron farming sectors have come from Iran, Turkey, The Netherlands, United States, and Denmark and have involved collaboration with academic institutions such as Herat and Kabul Universities and the Ministry of Agriculture, Irrigation and Livestock. Efforts to consolidate these initiatives need to be intensified.

Growing poppy for receiving cash from illegitimate sources or for the purpose of producing drugs for recreational use is not approved of traditionally or by Islam. This prevalent cognitive institution needs to be fully tapped into to switch poppy growers to saffron. However, if saffron is to be used as a means to fight poppy cultivation and as a source of much needed income in rural communities, macro-measures need to be put in place to create an enabling environment for the saffron entrepreneurs to establish themselves through being protected from unfair competition by other newcomers to the saffron market such as Australia, China, and Turkey.

Saffron cannot be seen as the panacea for all of Afghanistan’s agricultural / livelihood / gender / drug problems despite its great potential. However, much can be done to mainstream the crop by increasing human capital, technology appropriation, quality standardization, and marketing.

Women, even those who run their own businesses, are largely excluded from the higher stages of the saffron value chain. This is due to inequitable chain governance and the traditionally structured saffron sector. In the absence of structures for a more equitable system of governance, the only
Immediate practical option is to work toward creating a critical mass of networked women producers who could contend in the market collectively.

There are fewer possibilities at the lower stages of the value chain for gender mainstreaming except, perhaps, labour market reform to pay women a fair wage for equal work with men. Such reform is, however, a function of macro socio-economic and political factors and beyond the immediate reach or control of the chain actors.

Lessons other than acquiring technical expertise are to be learned from the main saffron producer, Iran. Allegedly, Iran intentionally exports 85 percent of its saffron to Europe unprocessed and unpackaged so the saffron could be sold on international markets as having been produced in Spain or the United Arab Emirates. While the analysis of this behaviour is beyond the scope of this research, it is clear that Afghanistan need not, at least immediately, concentrate on maximizing its domestic value adding capacity but can benefit from expanding the size of the saffron sector.

Two sets of constraints to women can be identified in agricultural production. Organizational constraints such as access to land and capital limit the opportunities for women who want to and are capable of starting up saffron producing enterprises. Institutional constraints such as ineffective regulations, insufficient government programmes to encourage women to engage in entrepreneurial activity, and strongly held views about the place of women in Afghan society can and do limit the opportunities of even those who overcome organizational constraints.

Despite organizational and institutional constraints, there are a number of opportunities for women entrepreneurs in general and women saffron producers in particular. For example, there are a number of women's associations and borrower groups who, with the help of national and international NGOs and MFIs, have managed to start up their own businesses. In the case of saffron, there is sufficient information and support from INGOs such as DACAAR for the women wishing to start their own production.

The introduction of saffron to Afghanistan by DACAAR in 1998 has been highly successful though requires scaling out and scaling up. The "new" crop, saffron, has strong historical roots to the region and thus acceptable to farmers willing to switch from other crops. However, start-up investment is a prerequisite to institute a new crop. The distribution of free bulbs by DACAAR and other agricultural extension agencies seems to have played a key role in luring farmers to experiment with the new crop.

It will be easier to draw other farmers to plant saffron if they are assured that in first 1-3 years they have access to emergency funds to support their livelihood until the saffron reaches maturity and produces economically.
While some organizing has taken place by women who have formed producer associations in and around Herat, more work could and should be done to promote the formation of women’s grower/producer associations through awareness raising and increasing the availability of start-up funds. At the same time, MISFA and the MFIs will need to be engaged in plans to mainstream more women into saffron production in rural areas by designing new financial products suited to the needs of saffron production.
1. Introduction

Afghanistan has comparative and competitive strengths in the agriculture sector, particularly in the horticulture and livestock sub-sectors, in which women are known to participate largely in production and processing. Orchard fruits – fresh or dried – are one of the key sectors in export growth, while poultry products (both eggs and meat) can substitute for imports, which amount to US$ 78.2 million per annum. In the non-farm sector, carpets are one of Afghanistan’s key export products, produced mostly by women and their children in their homes. Until the late 1970s Afghanistan supplied 20% of the raisins on the global market, held a dominant position in pistachio and dried fruit production, and produced livestock and wool products for the regional markets. The intermittent periods of conflict since the late 1970s combined with periodic droughts have resulted in loss of agriculturally productive land and weakened productive capacity due to flight of capital, displacement of framing communities, neglect of irrigation channels, diminished technical and market support and, ultimately, loss of market share.

Women are responsible for producing 70%-80% of food crops in South Asia (Samson 2006). They raise chickens and collect eggs, water and weed crops, clean and dry fruits and vegetables, and process and package agricultural produce or products. There is far less involvement of women in marketing and trading of the goods they help produce, however. In Afghanistan the percentage of women involved in agricultural production is estimated at 65% of the agricultural workforce (World Bank 2007, UNIFEM 2008). Women carry out the bulk of the value-adding activities as domestic chores while the trading and marketing of finished agricultural products are carried out almost exclusively by men who are also the main financial beneficiaries of the process. Two Key factors contributing to these inequitable arrangements are gender bias based on deeply ingrained cultural norms (Byravan 2008) and the highly informal agricultural economy.

The Government of Afghanistan stipulates gender equality to be one of the most important cross-cutting themes in the Afghanistan National Development Strategy (ANDS) 2008-2013. The Government, supported by a host of international donors, has committed to measurable improvements in women’s economic opportunities and access to and control over productive assets and income. Since agriculture accounts for approximately 50% of Afghanistan’s gross domestic product, systemic intervention to increase productivity through changes in the organization of production – including the introduction of new technologies – is necessary for creating more viable livelihood alternatives, particularly for women who are most vulnerable in poorer rural communities. However, there is insufficient precise and reliable knowledge about gender relations in agricultural production and the potential for women to assume a more central role. The reconstruction of the agricultural sector in Afghanistan requires identifying system resiliencies and establishing “what works” despite the insurmountable barriers confronted by the sector over the years while actively pursuing innovative alternatives to expand the scope of current activities and increase gender equity and productivity.
Mainstreaming women in agricultural production requires a systemic understanding of the organization(s) of production and needs to be based on local geography, gender and other local factors (Blake and Hanson 2005, cited in Byravan 2008). Introduced forms of economic organization to increase gender balance and agricultural production in Afghanistan will need to be cognizant of, and resonate with, centuries-old structures of economic organization including the allocation of gender roles. At the same time, gender mainstreaming interventions must challenge some of the existing social and economic institutions in order to pursue progressive economic and social change.

Recognizing the centrality of agriculture in the reconstruction efforts, and in supporting Afghanistan’s economic development through regional as well as international trade, donors and aid agencies have undertaken a number of studies of value chains and identified national, regional, and international markets, providing revenue assessments at each point of the chain (Millns 2007). However, none of these studies has comprehensively analyzed the gender dimension and dynamics in value chains. To enable gender equality in the manner to which ANDS aspires, i.e., facilitating women’s access to and control over assets and income, requires a comprehensive analysis that lends a gender perspective to value chain research, and through which constraints and opportunities for women’s participation in various steps of value chains can be explored. The following questions guided this research:

1. Which activities are performed by women and men in saffron production and why?
2. How can the value-added activities performed by women be increased and how can women upgrade to new activities with higher value-added?
3. At what point(s) in the value chains is there potential for women to gain financially and/or assume more responsibilities in decision making over production and/or marketing?
4. What are the constraints for women and men concerning access to markets at the local, national, regional and, if appropriate, international levels?
5. What are the constraints to moving up to higher value-adding activities in the saffron value chain?
   What are the specific constraints to women?
6. How can the position of Afghan producers and specifically of Afghan women be improved through programming or other interventions?

This study’s findings are intended to expand the pool of knowledge for informed policy making in gender mainstreaming and/in agricultural development. The main contribution of this study is the development and application of an integrated approach to understanding gender in value chains.
2. Objectives

This study was undertaken to identify constraints and explore opportunities for women to participate and improve their position in various stages of saffron production. To address questions 1-6, above, the following objectives were set for this study:

- A review of the literature on agricultural value chains, value chain analysis, and gender in/and agricultural development
- Development of an analytical framework to examine gender in/and value chain dynamics
- Collection of primary data on saffron production through field visits, focus group discussions and interviews with key informants in Kabul and Herat
- Analysis of the data from field visits and secondary sources
- Generation of key findings and recommendations for gender mainstreaming policies in agricultural development

The methodology used to address the above objectives is elaborated in the next section.

3. Methodology

The mainly qualitative data for this research were collected through reviews of the literature and existing reports and communiqués, interviews with key informants within or related to the saffron value chain, and focus group discussions with producer groups. An extensive review was carried out to take stock of the available literature on agricultural production, value chain analysis, and gender in/and agricultural production. This study is centered on saffron and the site of study is mainly Herat, supplemented with interviews with national key informants based in Kabul and international key informants in the United States and United Arab Emirates.

The key informants included commercial actors such as input suppliers, processors, financial and other service providers, middlemen, traders, wholesalers, retailers, exporters, buyers and middlemen involved in export to markets such as India, Pakistan, Iran, and UAE. The institutional actors at the local level included the following: (a) provincial and district government offices and provincial Chambers of Commerce; and (b) NGOs and aid agencies involved in the saffron value chain, in terms of social mobilization, technical assistance, microfinance, marketing and trade, and women’s socio-economic development. Institutional actors at the national level were drawn from governmental ministries, donors, aid agencies, and NGOs which support women in trade, and private sector organizations involved in business development support for both men and women such as business associations and Microfinance Institutions (MFIs).

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3 See Appendices 1 and 2 for the key informant and focus group participant details and the codes used to cite them in this report.
The remainder of this paper is organized as follows. Section 4 describes and elaborates on the key elements of the analytical framework used in this study. Section 5, provides a detailed overview of what is known about saffron production in Afghanistan, paying particular attention to the role of women in production. Section 6 highlights the key findings from the analysis of the primary data collected through interviews with key informants drawn from national and local organizations and focus group discussions with two women saffron producers associations in Herat. Section 7 concludes by highlighting the key lessons learned while Section 8 provides a series of recommendations aimed at informing decision making on gender mainstreaming in agriculture development.

4. Gender in/and Value Chains: A Framework

The study adapted the global value chain approach to account for the gender dimension of agricultural production. Through the value chain approach, each step of the production and distribution process (e.g. input supply, production, processing, marketing, trading) was mapped and analyzed, including supporting services such as retailing, storage and transport. The value chain approach was also adapted to incorporate an institutional perspective, taking into account the embeddedness of value chains in their contextual settings. To understand the constraints against women’s participation and capture of higher value-added in value chains (and to find solutions), this study adopted a vertical perspective to focus on sectoral dynamics and specific actors and a horizontal perspective to take account of constraints in the specific context of Afghanistan. Specifically, the study sought information and collected data on:

- Demand and market size at local, national (Kabul and other major urban centers), regional and international levels
- Costs and benefits at the producer level, including labour, other inputs and credit
- Competitive issues (focusing on both price and quality), and
- Market access and infrastructure (access to roads and electricity), logistics, input supply, processing, access to markets and marketing support services, access to capital, administrative procedures, and skills.

The frame of analysis adopted for this study was informed by Bolwig et al. (2008) and Laven et al. (2009). Bolwig et al. (2008) build on Barreintos’s (2001), Barrientos et al. (2003), and Tallontire et al. (2005) to offer a comprehensive framework for integrating gender with the “vertical” and “horizontal” aspects of value chains that affect poverty and sustainability. Bolwig et al. (2008) then offer their integrated frame of analysis to underline the importance of the following components and aspects of the value chain:

5 See Barrientos (2001) and Barrientos et al. (2003).
- Types of actors – chain actors, external actors/networks, excluded chain actors and non-participants.
- Types of change in value chain ‘position’ – inclusion into value chain, continued participation under new terms, exclusion of participants, and non-participation.
- How the change in value chain position may be driven by changes from above (in value structure, governance, standards and certifications), or from below (in actor capabilities resulting from upgrading or local factors).
- Key dimensions of poverty/the environment, for each type of change in position.
- Illustrations of how commonly observed vertical chain dynamics (change in position and the causes) may impact on each dimension of poverty/the environment.
- Gender issues relating to both vertical dynamics and horizontal impacts/issues.

Laven et al. (2009) also outline an integrative framework for value chain and gender analysis by integrating two separate frameworks on gender empowerment and chain empowerment to provide insights into the internal dimensions of value chains such as vertical and horizontal integration, and external dimensions such as gender dynamics in the household and the community and the institutional context including norms, rules, and values. Similarly, Gammage et al. (2005) identify four markets in which gender imbalances constrain equitable access and outcomes: labour markets, in which individuals sell their labour and are remunerated by wages; finances markets which comprise a broad range of products and services offered by financial intermediaries, such as banking, credit, savings, insurance, pensions, and mortgages; goods markets where production inputs and outputs are purchased and sold; and services markets, which encompass the delivery, purchase, or hiring-in of services that can enhance or upgrade productive activities. Gammage et al.’s (2005) approach is based on “entitlements and capabilities analysis of poverty and deprivation”. Entitlements are defined as the bundle of resources that an individual or group of individuals commands for the purpose of consumption, production, or exchange. Capabilities are the individual’s or group’s freedom and abilities to deploy their resources (Box 1).

Gammage et al.’s (2005) find that projects tend to concentrate disproportionately on microfinance, diversifying agricultural production, and rural livelihoods. Far fewer projects address training and workforce development; labor market intermediation; and generalizing financial instruments for insurance, social security, and pensions. Projects that provide capabilities and entitlements may be more successful when nested within programmes and sector wide activities that address structural exclusions and barriers. For a gender-sensitive approach to development, Gammage et al. (2005) propose the following:
- Use of gender analysis tools to design, implement, and evaluate projects and programmes
- Undertake a value chain analysis to identify opportunities for women’s broader participation in markets
- Improve micro-meso-macro linkages
- Pursue a lifecycle or livelihoods approach
- Support entitlement and capability programmes
- Promote clustering and networking
- Expand access to credit and financial services, and
- Address informality

To establish the extent, quantitatively and qualitatively, to which women participate in economic activities and benefit from them requires a methodology that accounts for the total input from women throughout the production value chain. An “engendered” value chain approach in socio-economic analysis as adopted in this study allows for taking account of all aspects of the production process, distribution, and retailing across global supply networks to identify inputs, outputs, and the distribution of the benefits in a given value chain.

**Box 1. Entitlements and Capabilities Approach (Excerpts from Gammage et al. [2005])**

- Entitlements describe the bundle of resources that an individual or group commands for the purpose of consumption, production, or exchange.
- Capabilities summarize an individual’s or group’s freedoms and abilities to deploy their resources.
- Projects focused on entitlements focus on increasing access to resources and inputs that enable women to enter markets, increase their productivity, or scale up their existing activities.
- Projects focused on capabilities emphasize improving women’s capacity to deploy available resources to increase their market access and improve market outcomes.
- Projects focused on entitlements are more likely to have emerged without an explicit gender analysis or focus.
- Projects focused on capabilities are disproportionately likely to have emerged from a process that analyzed gender inequalities and sought to address gender-based exclusion or barriers to market entry and participation.
- The majority of projects and programmes pursue an entitlements approach concentrating on direct inputs such as credit, storage, and transport.
- Fewer projects and programmes focus on a capabilities approach, increasing women’s ability to enter markets, negotiate with buyers and sellers, and position themselves higher up the value chain.
- Programmes and projects that focus on enhancing women’s capabilities as well as their entitlements are likely to increase the value added of their production, and enable women to secure better outcomes in existing and new markets.
- Market access is a necessary but not sufficient condition for ensuring better mainstreaming women in production.
- Successful projects and programmes pay attention both to inputs as well as to the individual or group ability to deploy these inputs. Programmes and projects that provide information and communications technologies are likely to improve women’s bargaining power with monopsonists (sole buyers). Programmes that provide collective access to child care can enable women to enter markets or receive training and engage in workforce development initiatives.
Our analysis focused on the four key elements of production, employment, exports and the role of women throughout the process. Value chain mapping was carried out as part of the analysis to identify the key commercial and institutional actors and their relationships, their gender distribution, and their position in relation to the value chain steps (including production and distribution of the products). Institutional actors were mapped at the local, provincial, national, regional and, as much as possible, international levels. The mapping was used to examine two sets of constraints, and to suggest remedial action through policy and donor-aided programs to address them. The first set, organizational constraints, were defined as those that influence gender balance in the process of introducing basic import substitution measures through technology transfer, extension, and other measures such as rural microfinance. The second set, institutional constraints, influence macro-measures aimed at reducing the quantitative and qualitative gender gaps in agriculture-based production.

Box 2. Typology of Institutions

**Behavioural:** Institutions as standardized (recognizable) social habits – manifest in deeply ingrained behaviour of individuals and groups as reflections of social norms

**Cognitive:** Institutions as mental models and constructs or definitions, based on values and embedded in culture – aspired to by individuals and groups

**Associative:** Institutions as mechanisms facilitating prescribed or privileged interaction among different private and public interests – manifest in activities of groups of individuals

**Regulative:** Institutions as prescriptions and proscriptions – manifest as the immediate boundaries of action by individuals and groups

**Constitutive:** Institutions setting the bounds of social relations – manifest as the ultimate boundaries of action by individuals and groups

Source: Parto (2008)

The work on the organizational set of constraints was carried out through an examination of the policy process for reviving agricultural production in Afghanistan since 2002, the impact of these policies based on the information available from secondary sources, and the assessment of the impact on women based on interviews with key informants from the sector. The analysis was to reveal path dependency, the pace of change, and the evolution of the activities, roles, and relationships within the saffron value chain. The work on the institutional set of constraints consisted of taking stock of formal and informal institutions that structure the agricultural sector including the allocation of gender roles. The inventoried institutions were then assessed for significance based on the “typology of institutions” (Box 2) to determine entry points for policy intervention to effect institutional change.
5. Saffron Value Chain

According to Abdulaev (1998), apart from its culinary and cosmetics uses saffron has potentially beneficial medical uses as an anodyne, antispasmodic, aphrodisiac, diaphoretic, emmenagogue, expectorant, and sedative. The plant has been used as a folk remedy against scarlet fever, smallpox, colds, insomnia, asthma, tumors, and cancer and its colouring effect has been found in cave artwork from pre-historic communities dating back 50,000 years. Until relatively recently saffron was widely used as a dye in fabrics and wool for carpet weaving. As a spice saffron has been traded for about 5,000 years (ICARDA 2007). Today saffron is the most expensive spice and has been compared to gold and opium for its value by weight.

Saffron growing is highly profitable and ecologically suited to the arid growing conditions prevalent in western and northwestern Afghanistan. Saffron is dried stigmas of *crocus sativus*, a type of crocus. The plant does not compete against other crops for irrigation and labour (despite being particularly labour-intensive) as the harvesting time, around 2-3 weeks in October each year, occurs after most other crops have been harvested. The ecology of numerous parts of Afghanistan, particularly in flatter and more arid areas with some access to water such as Herat, are suitable for planting saffron (see Box 3).

**Box 3. Saffron Plantation Site Requirements**

<table>
<thead>
<tr>
<th>Climate:</th>
<th>Mild winters with heavy snowfall and hot summers.</th>
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<tr>
<td>Temperature:</td>
<td>Saffron grows well under temperate and dry climates; its vegetative growth coincides with cold weather and freezing condition. Saffron tolerates maximum of +45°C and minimum of -18°C.</td>
</tr>
<tr>
<td>Moisture:</td>
<td>Annual rainfall requirement for saffron is about 300 mm. Maximum water requirement is in March and April of about 15 to 20 litres per m2 per irrigation period.</td>
</tr>
<tr>
<td>Soil:</td>
<td>Saffron can be grown in a wide range of soils, with moderate structure and good infiltration. But for better growth and production, soil should be sandy loam, rich in calcium and high content of organic matter.</td>
</tr>
</tbody>
</table>

Source: ICARDA/DACAAR (2008)

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**Photo 1: Saffron Bulb**  **Photo 2: Saffron Plant**

Source: DACAAR
During the harvesting the flowers are hand picked and carried off to have their stigmas removed and dried to produce saffron. The plant requires minimal fertilization. Throughout its growing process it needs two irrigations, a great advantage in a geographic area suffering from a general scarcity of water particularly for the many smallholding farmers. In addition, growing saffron does not carry with it the burden of sin, often associated with growing poppies and marijuana by most interpreters of Islamic teachings.

Producing a kilogram of dried saffron requires 150,000 to 170,000 flowers and around 400 hours of labour. According to the farmers in Herat, a jerib of land (one fifth of a hectare or 2,000 square meters) yields opium worth US$400-600, while the same land area can produce 1-3 Kilograms of saffron worth US$2-3,000 per Kilogram. Annual global saffron production is around 300 tons, of which Iran is estimated to produce between 90-94 percent. High quality packaged saffron retails for as much as US$11,000 per Kilogram or higher in Western markets while recent years have witnessed a surge in the demand. One US-based trader estimates the demand in the United States alone at 20 tons per year at minimum.

Saffron production has significantly increased over the past few years in Afghanistan. There are no reliable official records of Afghanistan’s total saffron exports at Afghanistan’s Central Statistics Office, the Export Promotion Agency of Afghanistan, or Afghanistan Investment Support Agency. The Directorate of MAIL in Herat estimates the production of saffron for 2009 at over 900 Kilograms. Limited quantities of saffron have also been produced in Maidan Wardak, Logar, Kunduz and a number of other provinces, largely as an experimental crop. Herat and the other western provinces remain the main saffron growing regions of Afghanistan.

Globally, Germany, Italy, the United States, Switzerland, UK, and France are the largest saffron importing countries. The major producers of saffron in the world are Iran, Spain, India, Greece, Azerbaijan, Morocco, and Italy. A senior official of the Department of Agriculture, Irrigation and Livestock in Herat estimates the area of land under saffron cultivation at around 212 hectares, involving over 1,000 farmers and with the potential to produce between 50 to 70 tons of saffron. Experts, government officials, and saffron traders all claim that Afghan saffron is of the highest quality with a potential to make significant inroads into the international market. According to the Danish Committee for Aid to Afghan Refugees (DACAAR), a 2007 project survey in the Herat province showed that over 80% of farmers grow at least small quantities of saffron every year for household use. The survey also reported that about 1,100 farmers in Afghanistan grew saffron.

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7 Email exchange with a saffron trader based in San Francisco on January 16, 2010.

8 Major saffron traders shy away from reporting the volumes of their trade and prefer to conduct business transactions informally and without much publicity via “saffron carriers” who transport the finished product in bulk for sale in international markets.


According to the main traders in Herat, Ministry of Agriculture officials, and NGO officials interviewed Afghan processed saffron is exported at a price of around $5,500 US to countries such as Iran, India, UAE, Pakistan, USA, and Europe. Exports of Afghan saffron to the American and European markets takes place through transit locations such as Iran or Dubai, which usually brand the product as originating from those countries. Internationally, saffron is graded according to the ISO standards (ISO 3632), ranging from I (finest) to IV (poorest). Afghanistan’s saffron, if processed adequately, is said to be of the highest grade.\footnote{APPRO interview with DACAAR, 27 September 2009.} Most of the work done to harvest, process, and package saffron in Afghanistan is carried out by women - up to 80% according to estimates by the key informants interviewed for this study. Efforts are being made by saffron growing women in Herat to assume a more central role in the marketing of their products.\footnote{This study identified two saffron producing women’s associations in Herat, in Pashtun Zarghoon and Ghoryan Districts. More information on these groups is provided later sections of this paper.}

5.1 Production of Saffron

The production process begins with preparing the land for planting the saffron bulb.\footnote{See Appendices 1 and 2 for a detailed value chain actor map and an overview of different cases of values chains and its respective added value activities.} Saffron bulbs are mostly smuggled in from Iran by individuals working for saffron trading businesses or for themselves and sold at around $3 to $4 (US) per Kilogram in Herat.\footnote{The bulbs are smuggled in, rather than legitimately imported, from Iran since Iran has imposed an embargo on export of saffron bulbs.} Bulbs are also available from local farms in Herat between the fourth and seventh year of cultivation at a price between $4 to $5 US per Kg. Bulbs produced in Afghanistan are of a higher quality since they are fresher, acclimatized,
and less likely to have been damaged in transportation. Some limited quantities of bulbs were also imported from the Netherlands a few years ago but were found unsuitable for the harsher Herat climate. The buyers of bulbs are saffron trading businesses, the government departments such as the Directorate of Agriculture, NGOs, PRTs, and farmers (see Table 1). Since most of the bulbs on the market are smuggled bulbs, there are no official records of the quantity of bulbs entering the country.

Bulbs, smuggled or domestically produced, are distributed by NGOs, PRT, and the Directorate of Agriculture in Herat to farmers in limited amounts at no cost in some cases and in others under the condition that the farmers return the same amount of bulbs to the distributor after extraction from the ground in four to seven years after the first planting. The returned bulbs are then redistributed to new farmers based on farmers’ requests, amount of bulbs available, suitability of the land and environment, and in consultation with village elders (typically Maliks or Arbabs) and heads of saffron producer associations, if in existence.

Trading saffron bulbs has been primarily a men’s job in Afghanistan. Women are involved in bulb trade but only as buyers or receivers. Representatives from the Association of Women Saffron Producers of Ghoryan and the Association of Women Saffron Producers of Pashtun Zarghoon (both in Herat and interviewed for this study), said that they have received limited quantities of saffron bulbs from NGOs under the abovementioned conditions. The Associations distribute the bulbs among their members for planting on their individual farms.

Table 1: Actors and Processes in the Saffron Value Chain

<table>
<thead>
<tr>
<th>Process</th>
<th>Importing Bulbs</th>
<th>Distributing Bulbs to Farmers</th>
<th>Producing Bulbs</th>
<th>Preparing Land, Planting Saffron Bulb, Maintaining Farm</th>
<th>Harvesting Flowers</th>
<th>Separating Stigmas and Drying Saffron</th>
<th>Branding, Packaging and Marketing</th>
<th>Wholesale Trading (Consumers Not Involved)</th>
<th>Retail Trading</th>
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<tbody>
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<td>Bulb Traders/Smugglers</td>
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<td>Smugglers to Iran</td>
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</table>
5.2 Planting Saffron

Most of the land under saffron cultivation belongs to men. Saffron farmers are individual farmers and farmers contracted by saffron businesses. There are three main businesses in Herat involved in planting, processing and exporting saffron. In 2009 four additional businesses registered as saffron producers\(^1\) in Herat. These businesses are all involved in trading saffron bulbs. Other inputs in addition to land and bulbs are fertilizers (either animal manure available locally or chemical fertilizers available in the district and provincial markets, both used sparingly and minimally), labour (available locally), water (available locally, free or at varying costs), transportation of bulbs (by truck and/or animals), and training for preparing land and selecting and planting bulbs. The costs, officially unavailable, have been estimated by the NGOs involved in the development of the saffron sector since the late 1990s.\(^2\)

Some of these costs are difficult to estimate for incorporation into a value chain because no monetary value has ever been placed on some inputs such as water and training.\(^3\) Land value also varies across villages, districts, and provinces and is a function of local rules and customs. However, if we base the analysis of the value chain on the assumption that land, labour, water and, to some extent, organic fertilizers are a given in small and medium scale farming, the value chain can be mapped from the purchase of the saffron bulbs and some training as start-up inputs.

Some international NGOs, Provincial Reconstruction Teams, government agencies, and local associations provide training for selected farmers and on occasion distribute bulbs free of charge. Farmers can receive around 200 Kilograms of bulbs for each 1,000m\(^2\) of land or in smaller quantities for less land. Since bulbs multiply in the ground, most farmers will not need additional bulbs from the aid agencies to expand the saffron farms. Each Jerib (2000 m\(^2\)) of land is ideally planted with 500 to 800 Kilogram of bulbs depending on the labour input by and the purchasing power of the farmer. Other activities required during planting and caring for the land are weeding and breaking of soil crust. Pesticides or herbicides are not typically used in saffron farming.

Women typically plant on smaller farms, made available to them by their male family members. Water rights are based on historically allocated cultivated lands in the rural areas. There appears to be no discrimination against women in receiving sufficient and timely water. Labour is provided by the women themselves and their men when needed, particularly in land preparation prior to planting saffron bulbs. Planting bulbs is done by both men and women. On average, about US$2,500 is spent on cultivating each Jerib of saffron in the first year. This includes labour and fertilizer costs. In the

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15 APPRO interview with AISA – Herat, 10 January 2010.
16 See, for example, “Saffron Manual for Afghanistan”, Annex 8 (ICARDA/DACAAR 2008). The values used in this report are based on the ICARDA/DACAAR publication and updated with new information collected from farmers, NGOs, Government officials, and traders during the course of this research.
17 A notable exception is the “Plan for the Development of the Saffron Sector”, prepared under the leadership of Hashim Aslami, Natural Resource Manager at DACAAR in 2007. Available in Dari only.
subsequent years, an average of US$500 per year is spent on each Jerib for maintenance consisting of fertilizers and labour. Weeding or breaking of the soil crust is carried out by both men and women.  

5.3 Harvesting Flowers

The number of flowers after the first year of cultivation are much lower than later years though they can still be picked and used to extract the stigmas. Picked saffron flowers may be sold directly to traders without processing but at a relatively very low price of US$24 per Kilogram (2009 price). Very few farmers choose to sell flowers without processing, however. Collecting saffron flower is done mostly by women and children. Small scale farmers (around two jeribs of land or less) who have two or more family members old enough to pick flowers do not, normally, need additional workers. Every person can collect 3 to 5 Kilogram of flower in about 3 hours every day during the collection time. Should additional workers be needed, they are hired from among the relatives, neighbours, and daily wage workers who are familiar with saffron flower harvesting. Both men and women labourers are paid an average of US$1.50 per day, which is only three hours long and be completed in early morning before sunlight can damage the stigmas in the flowers.

Men participate in saffron flower collection if the farm is not visually protected enough for the women to work. This trend varies across districts and regions depending on the level of cultural sensitivities against women working outside their homes. For instance, women in the Ghoryan District feel more comfortable working on the farms than women in Pashtoon Zarghoon.

5.4 Processing Saffron

Removing the stigmas from the flowers is done exclusively by women. The process takes place either at homes by the family members or at the processing centres run by saffron businesses. Small scale farmers who can harvest their own flowers are generally able to process flowers without hiring additional workers. Larger scale farmers hire workers to help them with processing saffron flowers. These workers are often the same individuals who help with harvesting flowers. Every worker can process 3 to 5 Kilogram flower per day, depending on experience.

A worker, male or female, receives around US$0.60 for every Kilogram of flower processed. Female workers are preferred by larger businesses for their speed, patience and precision in separating stigmas. The representative of one of the saffron businesses interviewed in September 2009, however, stated that on occasion he paid women US$2.20 per day while paying men US$3 per day.

20 APPRO interview with Afghan Red Gold, 26 September 2009.
for processing saffron flowers in 2008. He also added that the quality of the women’s work was better than that of men and that he preferred to hire women. More recently (January 2010), women’s daily wage was quoted as US$3 per day plus US$1 for lunch expenses.\(^{21}\)

In larger operations run by businesses and the two women’s associations interviewed for this study, drying stigmas is done by electric dryers. Smaller producers without access to electric dryers dry their saffron in open air, yielding the lowest quality, or traditional sifters over warm charcoal which runs the risk of burning the valuable stigmas. Electric dryers cost around US$400\(^{22}\) each though recently this price has been reduced to around US$180 for dryers imported from Iran\(^{23}\). The electric dryers produce much better quality saffron in a shorter time. The farmers and businesses interviewed all had their own dryers but could not estimate the energy cost of running the dryers and seemed not at all concerned with electricity consumption.\(^{24}\) The dryers are run for around 30 minutes for drying one Kilogram of stigmas. Most small scale farmers cannot afford buying electric dryers though there were numerous examples of sharing dryers among the farmers of the same areas. Both men and women take part in drying saffron stigmas.

5.5 Packaging and Branding

Saffron is packaged by Afghan Red Gold (Saffron) Co., Afghan Zafaran and Faizi’s Saffron Processing and Production Co., while only Afghan Zafaran and Faizi’s Saffron Processing and Production Co. brand their packages. Women are the main workers in packaging and work mainly in the processing centres set up by these businesses.

Ghoryan’s Association of Women Saffron Producers received a grant from USAID/SMED to try its own packaging brand for the first time. The Association bought some general use packaging material for spices from the local market and packaged and branded the saffron. The new brand was sold at an exhibition at a lower price than that in the market for publicity purposes in early 2009. In late 2009 the same Association sold packaged and branded saffron in India for US$4,500 per Kilogram.\(^{25}\) This advertising method seems to have been effective as the Association has been receiving calls for more saffron of that brand. The Association is currently awaiting its 2009/2010 crop but is unsure of being able to repeat the previous year’s success due to not having the grant to purchase the packaging material for the next crop.

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23 APPRO interview with DADS – Training Services, 1 December 2010.
24 Drying one Kilogram of saffron costs approximately US$1 worth of generator fuel.
Since saffron is sold in grams by retailers and the packaging boxes need specific type and quality of material, packaging for retail is likely to be expensive for small businesses or the women’s association interested in entering the market to sell their own brands. In 2008 processing and packaging saffron cost around US$500 per Kilogram of saffron in Herat. This problem is compounded when the produced quantities are limited and not (yet) meeting international standards in terms of quality and certification. Unpackaged saffron sold in bulk yields lower returns to the sellers.

Figure 2. Costs and Values Added by Saffron Actors for Domestic Packaged Retail Saffron in $US.

Source: Average values based on information provided by key informants in 2009 (exclude the value of harvested bulbs).

5.6 Trading Saffron

There are three main saffron trading businesses in Afghanistan, all based in Herat. Most of their marketing is done through participating in national, regional, and international exhibitions. Buyers are importers from Iran, Pakistan, UAE, Europe and the United States. Due to competitive pressures, two of the exporters interviewed for this study were generally reluctant to disclose the details of their dealings with foreign buyers or the prices at which they sell their products. Secondary sources report, however, that Afghan-produced saffron is sold almost entirely in bulk and without being registered on listings held by provincial chambers of commerce.

26 APPRO interview with Afghan Red Gold, 26 September 2009.
Box 4. A Case of Chain Governance

Early in 2009 the Head of a women’s Saffron Association decided to package and sell association-branded Saffron. To do this the Association needed funding for the packaging and printing costs. The Association’s Head approached an international aid organization office for assistance and received a positive response. A requirement of qualifying for funding was providing quotations on costs. To find out about packaging costs, the Association’s Head and her husband visited one of the main saffron traders. They were advised by one of the senior managers of the saffron trading company not to pursue packaging and branding saffron as this was the saffron traders’ domain of activity. The Association’s Head was told that “every actor has certain tasks to perform within the saffron value chain and the job of the Association is to produce saffron to sell to [the large saffron traders] who will then do the packaging and branding, and selling.” The Association’s Head was unable to convince the large saffron trader to assist the Association with a quote on packaging and branding costs.

Following the event the Association’s Head was informed by a friend working at the international aid organization that some key personnel at the organization had received an email from the saffron trader, who had been approached for a quote on packaging, stating that the saffron produced by the Association was of sub-standard quality and not deserving of assistance by the international aid organization. In an interview with the said trader, the researchers for this report were told the same story by the trader who proceeded to insist that there needed to be a clear division of labor among the actors in saffron production with the women producing and traders selling. The women’s Association eventually managed to convince the international aid organization (through personal contacts) to provide the necessary financial assistance for their packaging and branding initiative.

The exact method of shipment and retail price of Afghanistan’s saffron is unknown though secondary sources report that exporting bulk saffron is sometimes done as simply as being placed in travelers’ luggage destined for points of sale in Europe and the United States. The transportation to Iran and Pakistan of Afghan-produced saffron is said to take place by land. Needless to say, much of the saffron exported in bulk ends up being packaged as being produced by the bulk recipient country traders. The local saffron markets in Afghanistan are supplied by Iranian (branded) as well as Afghan-produced saffron, often sold in herb stores without packaging. The Iranian saffron has a higher price in these markets because of its better packaging and reputation of higher quality. The interviews with the Association of Women Saffron Producers of Ghoryan suggest that the current arrangements for exporting may be changing. The Association has been attempting to formally market its own brand in competition with the more established traders.

The main challenges for the emerging sector are insufficient and unreliable supply of high quality saffron bulbs, lack of access to capital (particularly for smallholding farmers), lack of mechanization, relatively difficult physical labour, post harvest loss of value due to inadequate harvesting and/or drying, lack of direct access to the end buyer of the product (see Box 5), the lead time required before the plant yields economically, and lack of cooperation by the larger and more established traders. The bulb usually takes up to 3 years from the first planting before producing plentiful flowers and thus a high yield of saffron. Another major concern is the initial (relatively high) cost of purchasing saffron bulbs. Most smallholders are thus hesitant to switch to saffron from crops with more immediate return such as cotton, wheat, or rice. Currently, the main beneficiaries of saffron production are the middle agents and larger traders who purchase the saffron in bulk from the growers at a fraction of the price paid by the retail customer.

27 An added twist to this tale is that Iran purportedly exports 85 percent of its saffron in bulk to Spain to be packaged and sold as Spanish saffron. If true, this may be because Iran wishes to pre-empt accusations of monopolistic behaviour in the world saffron market. See www.ferl.org/content/article/1068856.html for details.
5.7 Women and Saffron Production

A large amount of the work to produce saffron is done by women who help in land preparation and planting, harvesting the flowers, extracting the saffron from the flowers, batching, drying, and sometimes packing. Recognizing this, numerous donor-funded projects are designed to create an enabling environment for women to receive adequate compensation for their labour. As of 2007, DACAAR (ICARDA/DACAAR 2008) claims to have trained over 250 women in improved production and processing methods. Also, DACAAR has held a series of women’s meetings and field days, and established community-level, women-only facilities for drying saffron.

Much work has been done in recent years to establish saffron as a stable crop in Afghanistan. The Saffron Programme by the International Center for Agricultural Research in the Dry Areas (ICARDA) has been funded by the United Kingdom’s Department for International Development (DFID) and is run jointly with the Afghan Ministry of Agriculture, Irrigation and Livestock (MAIL), the Research for Alternative Livelihood Fund (RALF) Programme by DACAAR, Washington State University, and Catholic Relief Services. The Programme has engaged the Ministry of Counter Narcotics, FAO, other NGOs, and donor agencies in providing direct assistance to the farmers and organizing workshops and other forums.

In the course of this study, two Women Producer Associations from Herat who had been assisted by DACAAR were interviewed on a number of occasions about saffron production in general and barriers to women’s attempts to move up the value chain in particular. The first was Association of Women Saffron Producers of Pashtun Zarghoon, founded in 2005 and formally registered in 2008.
The Association has 121 registered female members and one male member. While membership in the association is open to all women interested in growing saffron, only 40 of its present members have saffron plantations from bulb donations to the Association. The Association has received saffron bulbs, dryers, and an electric generator from DACAAR. DACAAR also provides guidance and training in saffron production. All female heads of the Association are illiterate except for two who have some reading and writing skills acquired at the mosque. It was observed during a focus group discussion and a number of interviews with the Association members and Heads that the major decisions within the Association were influenced by the non-member husbands of the female members. While owning almost all the land on which the women plant their saffron, these men also act as intermediaries between the Association and the market and donor organizations.

The second association, Association of Women Saffron Producers of Ghoryan, was founded in 2007 and registered in early 2009. The Ghoryan Association has 72 permanent members, 25 temporary members, and non-member female associates. The Association has received bulbs, dryers, office supply and furniture, packaging fund, and training from the Italian Provincial Reconstruction Team (PRT), ICARDA, USAID/ASMED, and Sanayee Development Organization (SDO). Permanent membership is limited to its present members who have all received bulb donations from the Italian PRT and ICARDA in the past. The Association does not admit new members due to insufficient facilities and resources but it does provide work opportunities for its permanent members as labourers for saffron farmers across Ghoryan district during saffron planting, harvesting and processing. While its permanent members take precedence over the temporary and non-member associates during the work season, they are not entitled to receiving more bulbs from future donations to the Association.

In a recent initiative, the Ghoryan Association’s Head rented one hectare of land for a period of five years, installed a water pump and a generator for irrigation, and assigned 25 widowed women as temporary labourers to grow and produce saffron. The investment is expected to be recovered at the end of the five year period when the saffron is produced and the bulbs have multiplied. The temporary labourers will be left with sufficient bulbs to start on their own. The only male member of the

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**Photo 3: Saffron Stigmas**

**Photo 4: Women Harvesting Saffron Stigmas**

Source: DACAAR
Association holds the second most senior position in the Association. Almost all female heads of the association are high school educated and articulate. The cultural impact of immigration to Iran in previous years by many members of the Ghoryan community in general has resulted in a more open environment for women to work on saffron farms, participate in social activities, and work to generate an income. This has better prepared the Association members, and particularly its senior members, to be less dependent on their men when compared to Pashtun Zarghoon Association members.

As the cases of the two women’s association clearly illustrate, DACAAR has been successful in distributing saffron bulbs, providing training, and conducting research in cultivation methods, processing, and marketing of saffron. It has also facilitated the founding of four grower associations (including the Association of Women Saffron Producers of Pashtun Zarghoon), the establishment of links between the associations and international buyers, national conferences on saffron in Afghanistan, and the creation of the first quality control laboratory for saffron in Herat, now run by the Department of Agriculture, Irrigation, and Livestock. A conference in 2006 resulted in the creation of the National Saffron Coordination and Support Committee, led by MAIL, to coordinate the work of different ministries and research institutions on issues such as production methods, quality standards, import and export regulation, and marketing.

The elaborate strategy submitted to MAIL by Hashim Aslami of DACAAR in 2008 calls for a number of measures to build the Afghan saffron production sector including:

- Introduction of new methods for processing and packaging utilizing state of the art technologies and adherence to international quality standards
- Provision of marketing and branding techniques to create competition among domestic producers and strengthen the export base
- Prioritization of saffron production as a viable and profitable crop in national strategies to strengthen licit agricultural production in Afghanistan
- Recognition of the potential of saffron production as a means to provide rural livelihoods and food security, fight poverty, engage women in agricultural production to increase gender equity, protect the natural environment, and use scarce natural resources sustainably.

The plan calls for human capital development through training and public awareness programmes, workshops, seminars and introducing saffron as a subject of study at Afghan universities with agricultural faculties. The need to train woman saffron producers and linking with other saffron producing countries are also emphasized. The plan points to there having been no systematic appraisal of the sector despite its potential promise in social and economic reconstruction. DACAAR’s work on the sector since 1998 is underlined as the only consistent effort to mainstream saffron production and women’s role as a key part of that process. To move further in establishing a socio-economically viable sector the plan calls for the creation of saffron producing associations and government and private sector funded research programmes on agronomics, marketing, and packaging of saffron.
Box 5. Summary of Key Problems and Constraints for Saffron Farmers in Afghanistan

**Marketing of Afghan product**

- Afghan saffron is unrecognized and unbranded in the market, most goes through Iranian channels. However, there is strong interest amongst international buyers (particularly Holland, USA, Australia and Italy) to procure Afghan saffron, provided a guarantee of quality can be assured.
- Lack of quality assurances for international buyers (no ISO compliance)
- Lack of knowledge of market dynamics, pricing structures and marketing approaches (strong need for detailed study)
- Lack of skills in marketing
- Lack of competition amongst Afghan exporters

**Lack of production capacity**

- Producers need to be organized in local, provincial and national associations to improve their access to technical support
- Lack of regulation on corm imports. Farmers have no training to identify good quality leaving them vulnerable to purchasing bad quality corms. Without this basic training, growing saffron becomes a high risk investment as farmers may lose their initial investment.
- High prices and low availability of corm. The increasing interest in corm has led to an artificial increase in corm prices. Current investments needed are around USD $5,000 per hectare which is prohibitively expensive for many farmers. ‘Corm banks’ and subsidized corm schemes should be used to improve this situation.
- Lack of government support. Some organizations are importing corm from Iran rather than purchasing from Afghan farmers at higher prices
- Because of the strong demand for corm, some farmers are now making short term gains by producing corm rather than producing saffron. This is impacting the horizontal expansion of the industry which, if left unregulated, may lead to reductions in overall production if farmers remain untrained on corm quality.
- Farmers that are ‘given’ corm by some organizations may not be trained sufficiently in its cultivation, particularly in bed preparation (raised beds), row spacing, timely irrigation or adequate fertilization.
- More training is needed for farmers in the area of post-harvest management. This is a key issue, as most processing and drying is conducted at a village level.

**Lack of industry standards**

- Farmers are not aware of the international standards for quality and hygiene required for selling produce directly to international customers.
- A grading system based on quality needs to be established
- It is necessary that unless standards are addressed quickly, then the private sector is likely to move intro Afghan production and gain market share.

**Lack of local storage or packaging capacity**

- Lack of packaging equipment for organizing consignments to international markets. It has been proven that prices fluctuate according to the season – for instance, prices are highest just prior to harvest (up to USD $8,000 per kilogram). Without adequate packaging to store saffron or package it in small attractive packages, local exporters cannot add maximum value to the final product or take advantage of price speculation.
- Key problems cited are the expense of industrial packaging machines, capable of producing the necessary packages needed for the western markets. Partnerships may need to be developed with donors and the private sector to establish a packaging factory. Current production levels are likely to be too small for localized investment.

**Coordination between all industry stakeholders**

- More coordination is needed between all value chain actors in the saffron industry. Current market outlooks show that foreign companies are beginning private sector operations within Herat, and that China is now moving into saffron production. It is clear that the Afghan industry will unlikely be able to compete in this environment unless it organizes itself in a relatively short timeframe. Suggestions for doing this firstly, we should establish a provincial and national level Saffron Promotional Centre and organize the industry into more associations. Secondly to coordinate regular meetings between interested stakeholder groups and finally, to establish provincial and National level coordination committees.

**Shortage of women extension specialists**

- Promoting saffron is a practical way to empower women in a conservative society – building on their skills and traditional roles, to increase incomes and encourage self-reliance. There are insufficient female extension workers to work with women.

Adapted from ICARDA / DACAAR (2008)
Most centrally, the plan emphasizes the need for coordination of efforts in building the sector through cooperation and information sharing by all actors. Part of intensifying this coordination is the potentially pivotal role expected of the recently established National Saffron Coordination and Support Committee. Finally, attention is drawn to the need for tailor-made financial products to suit saffron producers’ specific and unique needs as paramount in further development and expansion of the sector.28

In a similar vain, ICARDA/DACAAR (2008) provides a comprehensive list of problems and constraints confronted by the nascent sector (Box 5). This manual for saffron production goes beyond its primary intent of being a “how-to” guide by speaking authoritatively and based on many years of experience on a number of issues relevant to the sector including the suitability of the crop to the ecological conditions in Afghanistan, international product standards, marketing strategies, priorities for the development of the sector, input costs and revenues from saffron production, and current (2007) prices. A major omission in this valuable resource book is a discussion of the governance of the saffron chain, the inequities of which are likely to frustrate initiatives by women to move up the value chain and by the government and donor agencies to strengthen the sector in a gender-equitable manner.

6. Key Findings from the Case Study

Women’s participation in the saffron production and processing has been significant to the development of the saffron business in Afghanistan, particularly during the last 2-3 years. Women prepare saffron bulbs for planting, help men prepare the land, help planting the bulbs, maintain the plants by weeding, watering, and breaking of the soil crust. At harvest time women (and children) collect the flowers, process the flowers by separating the saffron stigmas, and dry and package the saffron.

While women are present throughout the value chain, their presence is most visible in the lower levels of the chain. Saffron is labour intensive at the cultivation, harvesting, and processing stages. Prior to planting, bulbs need to be sifted to separate out the damaged bulbs, cleaned and then planted following specific guidelines. This is a joint task performed by both men and women. While men are responsible for physically heavier duties, women carry out the tedious and time consuming parts of the process. Women’s work is limited largely to planting on their own or their families’ farms.

Women’s highest contribution in the saffron value chain is provided during the harvesting and processing stages. All women of the family and most of the female relatives and neighbours are likely to be needed to help at the peak of flower harvesting season. This includes younger male and female

28 Translated from the original in Dari. MAIL officials interviewed for this study were aware of the existence of the Committee but no details were available as to what it had accomplished since inception.
family members. Flower harvesting begins before sunrise for a few hours. Pickers collect thousands of flowers which then have to be processed by having their stigmas removed. Most key informants were in agreement with one another regarding the better performance of women demonstrated through their superior skills, speed, and patience when collecting flowers and separating stigmas. Officials interviewed from two saffron trading companies both favoured hiring women as opposed to men for processing the flowers because women were better workers and cost less than men.

Women’s role weakens as we move up the value chain and as the work performed requires less physical energy and skills and more investment capital, business relations, and culturally sanctioned freedom to move and manoeuvre in a market environment. This starts at the stage when the saffron is to be packaged and/or branded and is ready to be marketed and sold. All three major saffron businesses in Herat belong to and are operated by men. This is the stage where the balance of power in chain governance shifts toward the men who own large saffron trading enterprises. Women are consciously barred by the powerful saffron oligopoly from entering the market and competing fairly.

Aside from being absent at higher stages of the saffron value chain, women also get paid less than men for the same work. For instance, the owner and CEO of one of the saffron companies in Herat admitted that he paid women twenty percent less than the men who processed saffron flowers for him in 2008. He also added that women did a better job than men. One large saffron processing / packaging owner stated that the main reason for employing women was the unwillingness of the men to work for the same wage as women. The greatest case of inequity can be observed in the ratio of work performed versus the income accrued to men and women from the value adding activities. While the general consensus among those interviewed was that women do most of the difficult work throughout the value chain, the unstated fact was that they shared significantly less of the value generated through their hard work.

Saffron production has a proven potential to create more, and relatively lucrative, jobs for women at home and away from home even when they do not own land. Those who own farmland can generate handsome profits from growing saffron. Saffron production requires fewer labour hours than most crops and hence provides an opportunity for women to become involved in other income generating activities such as weaving carpets and tailoring.

29 APPRO interview with Afghan Zafran, conducted on 30 September 2009.
7. Conclusion

Gender inequity in saffron production is a function of land ownership arrangements, initial capital, division of labour within the household, traditions, cultural and religious norms, level of education, and biased and unhealthy market practices by some actors. The combined impact of these factors places women at a significant disadvantage against men, even when women are able to overcome some of the other main barriers such as access to capital or gaining their husbands’ approval to work. This situation speaks to the prevalence of the largely behavioural and cognitive structures (see Box 2) that govern gender relations throughout Afghanistan with some structures relating to “the place of woman” being “stickier” than others.

Gammage et al. (2005) identify four types of markets that can constrain gender mainstreaming efforts: Labour, Finance, Goods, and Services. Labour market reform to remove constraints for women is perhaps a possibility in Afghanistan’s distant future. Changes in the finance market, however, have been well underway since 2003 and through a proliferation of Microfinance Institutions (MFIs) regulated by the Microfinance Investment Support Facility for Afghanistan (MISFA). While numerous MFIs have taken an active role in encouraging the formation of women borrower groups as part of their broader mandate, none of the four MFIs interviewed for this study reported providing loans to saffron growers. There were two reasons for this. First, no saffron producer group had approached any of them. And second, and most importantly, no MFI in Afghanistan is currently prepared to provide loans that run beyond 12 months. On asking whether MFIs would consider lending to women saffron producers, the response was a guarded “yes” and based on a number of conditions including guarantees for the borrowers, subsidies to alleviate the pressure of accumulated interest (25% minimum per year), and favourable results from piloted microfinance products to suit the saffron producers’ needs. Security was also listed as a factor to be considered since saffron growing areas of Pashtun Zarghoon and Ghoryan have not been deemed as safe for MFIs’ presence.

A significant portion of the saffron goods market remains informal (unregistered). It is conceivable to bring to account some of the informalities through regulatory intervention but, as with most cases of formalization attempts by the Government and the international donors, these efforts are likely to be largely ineffective, at least in the immediate term. A large portion of the Afghan-produced saffron is likely to continue to be shipped in bulk to other countries for packaging, most likely to avoid paying taxes on retail of packaged saffron. The saffron sector has benefited enormously from the initiatives of organizations such as DACAAR and ICARADA which appear to have made significant strides in providing some of the essential services to the sector.

Gammage et al. (2005) also refer to capabilities and entitlements in dealing with “poverty and deprivation”, both of which have significant implications for any analysis of agricultural production and particularly one with gender mainstreaming as a focus of study. Much of the entitlement for the saffron sector as a whole has been provided through DACAAR’s work since 1998. In addition,
DACAAR appears to have been instrumental in facilitating the emergence of the Association of Women Saffron Producers of Pashtun Zarghon by providing expertise and input materials such as saffron bulbs. DACAAR also seems to have provided the women with “capabilities” to act independently and to run a profitable operation. Much work remains to be done in both entitlements and capabilities particularly if we include in aid programming priorities land titling arrangements, access to finance, and education.

Opportunities for women can be improved through further facilitation by organizations similar in mandate to DACAAR and, perhaps more importantly, coordination of these efforts by such bodies as the National Saffron Coordination and Support Committee which, unfortunately, appears to have been largely inactive since inception in 2006. The recent political turmoil in the country in the aftermath of the Presidential Elections and the disarray that spread through the various Government Ministries including MAIL could not have been helpful to operation of any cross-ministerial body, however.

In the absence of a whole host of pre-requisites such as a widely recognized regulatory framework, functioning ministries and cross-ministerial committees, and rule of law and security it is unrealistic to expect that chain governance and gender issues could be addressed formally and through regulatory channels. Financial independence for women (through access to affordable loans, for example) and consensual contracting mechanisms between women producers and the larger producers mediated by intermediaries such as DACAAR may be useful intermediate measures to address some of the most pressing inequities in production.

The traditional view of women as mainly homemakers is more visible in the rural parts of the country as compared to urban areas in which some women can work outside of home and supplement the income generated by the male household members. Traditionally men are in control of the accumulated wealth of the family and act as the household’s main decision maker. While female household income earners may gain more of a voice in household decision making, the balance of power over the use of household assets remains with men and legitimated and strengthened by the religious inheritance laws which entitle a woman to half of what a man receives. The possibilities for women to gain a higher degree of independence based on accumulated wealth are thus limited due to this very “constitutive” structure (Box 2). Over time, this has resulted in men’s possession of most of the land in the family. A number of women from both saffron producing associations in Herat spoke of these factors at length and in terms of their disadvantaged position to profit more from growing saffron.

While only a few of the women owned their own farms, most of them were planting on the farms belonging to men or the family. The decision on whether or not to let a women have a saffron plantation of her own rests mostly with men. However, we also found that the saffron bulb distribution programmes by NGOs which targeted women as their beneficiaries had made a positive difference in women’s ability to secure farms of their own. In nearly all cases, women lacked the
initial capital to buy saffron bulb and had to borrow from men to pay the cost or to receive bulbs free of charge from development aid agencies such as DACAAR active in their area.

The dominant cognitive institutions rooted in social, cultural, and religious beliefs also deter women from reaching the markets. Women’s unwillingness, fear, or prohibition to freely explore the markets limits their capacity to effectively employ the limited resources they have at their disposal to make a fair profit from their contributions to the saffron value chain. The women from the Association of Women Saffron Producers of Pashtun Zarghoon reported that while the Association consists primarily of female members, the main decisions are made by its few male members. A group discussion with both male and female members of the association revealed that women had little knowledge of the saffron national and international markets. Most of them had to go through the male members of their families or the Association to sell their produce, buy, or receive bulbs or other input materials. The barriers to women’s full participation in economic / entrepreneurial activity is compounded by unchecked prejudices of male-dominated market oligopolies (Box 4) which “regulate” the market unfavourably for women.\textsuperscript{30}

There is ground to assume, based on a comparison of the two women’s Associations, that the women’s educational background and exposure to other contexts play a role in determining their place in the saffron value chain. Ghoryan’s Association was formed by a number of educated, well-groomed, and well-spoken women. They have managed to convince several national and international aid agencies as well as a number of government organizations to assist them with their activities and plans. The higher level of education among these women seems symptomatic of the Ghoryan community in general. Also, a large number of the women have traveled in the wider region and lived in other countries. All the women interviewed from this Association appeared to be enjoying relatively more freedom in the community than their counterparts in Pashtun Zarghoon.

That the work by DACAAR and other organizations can facilitate the emergence of the two women’s associations in Ghoryan and Pashtun Zarghoon is testament to the importance of the role of associative institutions (Box 2) as key ingredients for challenging and ultimately overcoming the governance inequities of the saffron value chain. Gender inequities cannot, however, be eliminated through the creation of women’s associations alone. Systemic change in chain governance requires continued support, nurturing and even protection of these associations, regulatory reform, and (dis) incentives aimed at creating an enabling environment conducive to the emergence of a level playing field for all actors in the saffron value chain.

\textsuperscript{30} See “Regulative Institutions”, Box 2.
References


Appendix 1: Saffron Value Chain Actor Map
Appendix 2. List of Organizations Interviewed
(Names have been removed to maintain confidentiality)

1. MAIL, Herat
2. Faculty of Agriculture, Herat University
3. Afghan Zafaran, Herat
4. Afghan Red Gold, Herat
5. DACAAR, Herat
6. DACAAR, Herat
7. Catholic Relief Services (CRS), Herat
8. USAID/ASMED
9. SDO - Sanayee Development Organization
10. First Microfinance Bank
11. Ghoryan Women Saffron Association
12. Ghoryan Women Saffron Association
13. Ghoryan Women Saffron Association
14. Ghoryan Women Saffron Association
15. Pashtoon Zarghoon Women Saffron Association
16. Pashtoon Zarghoon Women Saffron Association
17. FAO, Herat
18. Female CDC in Ghoryan
19. Herat Chamber of Commerce
20. MADRAC
21. AWBF
22. Export Promotion Agency of Afghanistan
23. MAIL, Herat
24. CRS
25. Afghan Red Gold
26. Pashtoon Zarghoon
27. AISA - Herat
28. DADS - Training Services
29. ACCI - Herat
30. AISA - Herat
31. Various saffron retails in Herat City
32. BRAC
33. FMFB
34. FINCA Afghanistan