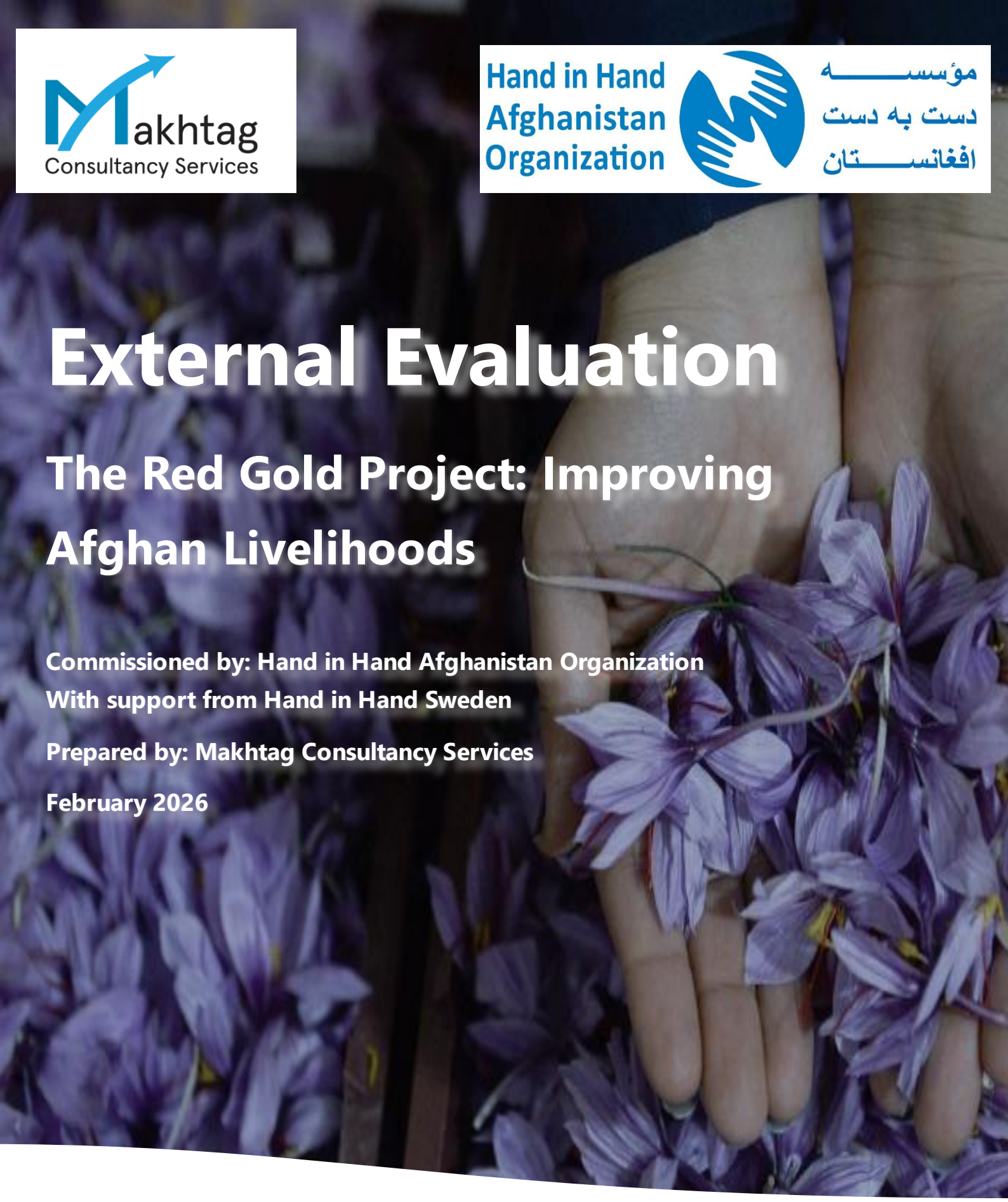


External Evaluation

The Red Gold Project: Improving Afghan Livelihoods

Commissioned by: Hand in Hand Afghanistan Organization
With support from Hand in Hand Sweden

Prepared by: Makhtag Consultancy Services

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Makhtag Consultancy Services

Contact us at +93 74 421 6216; +93 707842806

E- mail: makhtagconsulting@gmail.com; info@makhtag.com

Abbreviations

AFN	Afghan Afghani
BL	Baseline
EL	Endline
FGD	Focus Group Discussion
HH	Household
HIHAO	Hand in Hand Afghanistan Organization
HIH Sweden	Hand in Hand Sweden
KII	Key Informant Interview
MCS	Makhtag Consultancy Services
MTR	Mid-Term Review
TOC	Theory of Change
Sq. m	Square Meters

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Executive Summary

Purpose and Scope: The Red Gold Project was implemented across five districts of Balkh Province (Balkh, Nahr-e-Shahi, Chemtal, Chahar Bolak, and Dawlat Abad) to strengthen smallholder livelihoods through promotion of saffron as a high-value, climate-resilient crop. **Over the implementation period, approximately 1,200 saffron farms were established, and 2,400 farmers (50% women) were trained and supported.**

This endline evaluation assesses whether the project achieved its intended outcomes and whether observed changes are likely to endure. The evaluation draws on a survey of 357 beneficiary households, and 38 qualitative interactions (focus group discussions, key informant interviews, and field observations). The analysis is contribution-oriented and structured around OECD-DAC criteria, recognizing that livelihood outcomes in fragile contexts are shaped by interacting economic, social, climatic, and institutional forces.

Relevance: intervention fit within structural constraints: The intervention was highly relevant to the realities facing the beneficiary households. At baseline, the households operated under chronic income insecurity, rising input costs, declining agricultural returns, and growing water scarcity. Saffron offered rare yet perfect alignment between agronomic suitability and livelihood needs. It also has limited water requirements, can be cultivated on small plots, has a high value per unit area, and can be processed at household-level enabling women's participation even under restrictive mobility conditions.

The project's theory of change assumed that improved access to quality corms, technical training, and association-facilitated market engagement would gradually strengthen income stability. In retrospect, this logic proved realistic regarding technical adoption and participation expansion. However, it was optimistic regarding the pace at which market power dynamics could shift. Value- chain facilitation in fragile contexts, such as that of Afghanistan, can effectively build production capacity and participation. However, without parallel shifts in market structure or financing mechanisms, redistribution of power along the chain is slower and more constrained than anticipated.

Effectiveness: strong technical adoption, conditional income gains: Delivery performance was strong. Within the valid response base, 96% of respondents received saffron corms and 93% received cultivation training. Technical uptake has consolidated across production cycles: 78% of households rated their saffron quality as "high," and recommended practices are widely applied. However, adoption reflects cautious scaling. Most households cultivated small plots averaging 263 grams of production per household. Income effects were widespread but moderate in magnitude. 97% of households reported increased income relative to pre-project conditions, but 86 % characterized this increase as "slight." Average saffron income was AFN 18,134 (~USD 277) per household in the most recent season. For 63% of households, saffron accounted for less than one-quarter of total income. Yet continuation intent is exceptionally high (98%). This apparent paradox "modest income gains alongside near-universal persistence" is explained by reliability. Saffron provides predictable seasonal cash flow, requires limited water, and can be cultivated on small plots without displacing staple crops. Thus, the project strengthened income predictability more than income scale.

Impact: participation expanded, market power did not: Women's participation in saffron production is one of the most consolidated outcomes. Among female respondents, 96.5% reported involvement in harvesting and 95.3% in processing and drying. These roles are now widely normalized within

communities. However, market-facing functions remain predominantly male-managed. 95.3% reported that selling is primarily conducted by men. Decision-making over saffron income was reported as joint in 61% of households, male-only in 36%, and female-only in only 2.6%. This reveals a layered pattern: women's labour participation expanded substantially and durably, their consultation within households increased but control over pricing, negotiation, and cash flow remains structurally constrained. Several women interviewed described their role in income discussions as "we do the work, they decide the sale," indicating that economic influence remains embedded within household norms rather than formal authority.

Market participation was also improved significantly: 83% of households sold saffron in the last season, predominantly through associations-linked channels (70%). Perceptions of price fairness were high (87%). However, pricing remains largely buyer- determined. Qualitative evidence consistently indicates limited negotiation capacity at the farmer level. Associations have matured administratively and function effectively as coordination and aggregation platforms. They facilitate buyer contact and reduce transaction friction. However, they have not evolved into intermediaries that are capable of negotiating prices, absorbing risk, or providing structured pre-financing.

Sustainability: Behavioural sustainability is strong. Technical knowledge is internalized, women's participation is embedded, and continuation intent is exceptionally high. However, sustainability is conditional. When asked what is required to sustain production:

- 84% prioritized continued access to quality corms
- 55% prioritized ongoing technical support
- 49% prioritized reliable market access
- 40% cited finance
- 39% cited association support

These findings indicate that sustainability is no longer primarily knowledge-constrained, but it is system-constrained. Climate shocks affected 22% of households in the past year but did not undermine continuation intent, reinforcing that market instability is perceived as a greater threat than agronomic volatility.

Strategic Recommendations

- **Consolidation of post-harvest infrastructure** to protect quality gains. Installation of cluster-level drying facilities, distributing calibrated weighing and grading tools, and introducing standardized packaging.
- **Stabilizing markets before expanding production.** Formalizing seasonal buyer engagement protocols, creating transparent price information systems, and exploring limited pre-financing pilots.
- **Safeguarding access to quality corm supply** as a core sustainability pillar. Establishing reliable supplier relationships, facilitating association-level bulk purchasing, and piloting small-scale corm multiplication. Yield stability is dependent upon input continuity more than additional training.
- **Strengthening associations as coordinators, not substitute market actors.** Formalizing core coordination functions, establishing quality aggregation protocols, and facilitating

communication flows. Associations function effectively as coordination platforms but lack capital and leverage to operate as market intermediaries.

- **Protecting and incrementally expanding women's economic benefit within feasible boundaries.** Introducing performance-based input incentives tied to women's quality work and integrating kitchen garden programming. Given the restrictive operating environment, prioritizing tangible economic gains within home-based spaces is reasonable rather than pursuing formal institutional or market-facing roles that carry unacceptable risk.
- **Exploring complementary high-value crop diversification** to distribute market risk. Piloting 1-2 drought-tolerant crops with lead households to test household-level compatibility and market absorption.

Conclusion

The Red Gold Project demonstrates that value-chain programming in fragile contexts can achieve durable technical adoption, stabilize supplementary income streams, and expand women's economic participation within socially negotiated boundaries.

The project was highly relevant and technically effective. It strengthened production capacity, improved income predictability, and institutionalized saffron as part of household livelihood strategies. However, in practical terms, sustainability will depend on whether the associations can continue sourcing corms, maintain drying equipment, and retain buyer relationships without external coordination.

In OECD- DAC terms:

- **Relevance:** High
- **Effectiveness (technical):** High
- **Impact (income stability):** Moderate
- **Efficiency:** Strong at delivery level
- **Sustainability:** Conditional on system

1.1 Project Overview and Intended Logic

The Red Gold Project was designed to address chronic livelihood vulnerability among smallholder farming households in Balkh Province through the promotion of saffron as a high-value, climate-resilient agricultural livelihood. The project was implemented across five districts, namely, Balkh, Nahr-e-Shahi, Chemtal, Chahar Bolak, and Dawlat Abad. It targeted rural households whose livelihoods were predominantly based on small-scale, family-managed agriculture characterized by low productivity, limited access to capital, and high exposure to environmental and economic shocks.

Prior to the Red Gold Project, saffron cultivation in Afghanistan was largely concentrated in Herat province. In Balkh and other northern provinces with comparable agro-climatic conditions, saffron remained underdeveloped due to limited farmer knowledge, absence of starter inputs, and weak market linkages. The Red Gold Project therefore represented a significant expansion of saffron cultivation in Balkh Province. **Over the implementation period, the project established approximately 1,200 saffron farms and supported and trained 2,400 farmers (50 % women) across the five districts.**

The project's underlying logic is that introducing saffron as an alternative crop, combined with technical training, starter inputs, associations engagement, and market facilitation, could contribute to improved household income stability and enhanced participation of women in economic activities. Rather than replacing existing livelihoods, saffron was intended to complement prevailing agricultural and income strategies by offering a crop with higher value density, lower water requirements, and suitability for cultivation on small plots.

This endline evaluation examines whether the project assumptions held under real-world constraints, specifically, whether improved access translated into durable adoption (effectiveness), whether associations shifted market dynamics (impact), whether women's participation translated into meaningful agency (gendered impact), and whether observed changes are likely to persist beyond project support (sustainability).

1.2 Operating Context and Structural Constraints

The project was implemented in a context of deep and interlocking structural constraints that shaped both feasibility and outcomes.

Livelihood pressures: Baseline evidence indicated that average annual household income among beneficiaries was equivalent to roughly USD 0.48 per person per day, placing many households close to or below the poverty line. Agricultural incomes were low and volatile, input costs were rising, and alternative employment opportunities were scarce. Even where saffron offered higher potential returns, its delayed yield cycle and upfront investment requirements posed challenges for liquidity-constrained households.

Gender norms and social structure: At baseline, only 16.67 % of women reported sole decision-making authority over household income, reflecting structural constraints on women's economic control. While women contributed substantial labour to agricultural production and household income-related activities, their participation remained shaped by mobility restrictions and unequal control over assets and income. Household-based activities were widely accepted however, market-facing and leadership

roles were not. This distinction between participation and control is critical for interpreting gender outcomes.

Market conditions: Saffron markets were present but fragile. Buyer presence was thin and seasonal, pricing mechanisms were largely informal, and farmers' bargaining power was weak. The absence of predictable pre-financing and limited buyer diversification constrained income predictability. While global demand for Afghan saffron has remained positive during implementation, translating production gains into stable income is heavily dependent on sustained buyer engagement, factors that are largely outside the farmers' direct control.

Climate and environmental factors: Recurrent droughts and severe cold waves affected cropping cycles during implementation. These shocks reinforced household risk aversion. At the same time, saffron was widely perceived as less water-intensive and more viable than traditional crops under increasing water scarcity.

Political and access constraints: The project was implemented during a period of profound political and institutional change in Afghanistan. Restrictions affecting women's mobility and participation in formal employment, disruptions to financial systems, and evolving regulatory conditions increased operational complexity. While these constraints did not prevent women's participation in household-based saffron production, they limited opportunities for scale, formalization, and deeper engagement along the value chain.

1.3 Why Saffron Was a Context-Appropriate Intervention Choice

Within this constrained operating environment, saffron represented a strategically appropriate livelihood option.

Agronomically, saffron's low water requirements and suitability for small landholdings aligned well with declining irrigation reliability and land scarcity.

Economically, its high value-to-volume ratio offered the potential for meaningful income supplementation without requiring large, cultivated areas.

Socially, saffron cultivation and post-harvest processing were widely regarded as culturally acceptable for women, enabling their participation within prevailing norms and political restrictions.

However, saffron was never intended as a short-term income support intervention. For this reason, the project combined technical training, starter packages, associations engagement, and market facilitation as interdependent elements of a broader value-chain strategy rather than as stand-alone activities.

The coherence of this design which is linking production, coordination, and market facilitation, thus, provides the basis for assessing the project against OECD-DAC criteria of relevance, effectiveness, impact, and sustainability.

1.4 Implications for What Was Realistically Achievable

Taken together, these contextual conditions defined the boundaries of what the Red Gold Project could reasonably achieve within the evaluation period. Accordingly, this endline evaluation interprets observed results not as isolated outputs, but as outcomes emerging from the interaction between programme inputs and a highly constrained livelihood, gender, market, and political environment.

In retrospect, the project's theory of change proved realistic regarding technical adoption and participation expansion, but optimistic regarding the speed of market-level transformation. The assumption that improved quality and association strengthening would gradually enhance bargaining power did not fully account for structural buyer dominance, liquidity constraints, and/or limited institutional capitalisation.

This does not invalidate the intervention logic, rather, it clarifies its limits. Value-chain facilitation in fragile contexts can effectively build production capacity and participation. However, without parallel shifts in market structure or financing mechanisms, redistribution of power along the chain is slower and more constrained than the original theory may have anticipated.

Section II- Evaluation Approach and Analytical Methods

2.1 Evaluation Design and Analytical Orientation

This endline evaluation adopted a mixed-methods design combining quantitative household survey data with qualitative evidence from focus group discussions, key informant interviews, and field observation. The design was selected to support credible interpretation of outcomes in a highly constrained and unstable operating environment. The analytical framework was structured around the OECD-DAC criteria of relevance, coherence, effectiveness, efficiency, impact, and sustainability.

Given the nature of the intervention and context, the evaluation was explicitly contribution oriented. Rather than asking whether observed changes can be causally attributed to the project in isolation, the analysis examines how project inputs interacted with household behaviour, gender norms, market structures, and climatic conditions to shape outcomes.

2.2 Data Sources and Stakeholder Coverage

The evaluation draws on evidence from multiple stakeholder groups to capture perspectives across the livelihood and value-chain system.

Primary data collection included:

- ***Household surveys*** with project beneficiaries across all five target districts, capturing information on livelihoods, production practices, income use, gender roles, and sustainability perceptions
- ***Gender-segregated Focus Group Discussions (FGDs)*** with women and men beneficiaries to explore participation, decision-making, risk management, and perceived benefits
- ***Key Informant Interviews (KIIs)*** with project staff, associations leaders, extension actors, traders and buyers, and relevant local stakeholders
- ***Direct field observation*** of cultivation, post-harvest processing, and associations functioning during site visits.

These primary sources were complemented by a structured desk review of project documentation, including the project proposal, baseline and midterm assessments, monitoring data, associations records, and relevant sectoral literature. This enabled longitudinal comparison and triangulation across implementation phases.

2.3 Sampling Logic and Coverage

The quantitative household survey employed a stratified sampling approach to ensure representation across all five project districts and to maintain gender balance in line with project design. Qualitative sampling was purposive rather than representative. Participants were selected to reflect variation in gender, landholding size, level of engagement with the project, associations membership, and exposure to market and climate-related risks.

2.4 Analytical Process

Analysis followed an iterative and integrative process combining quantitative and qualitative techniques.

- ***Thematic analysis:*** Qualitative data from FGDs and KIIs were coded using a structured thematic framework aligned with the evaluation questions and OECD-DAC criteria. Coding focused on livelihood strategies, gendered roles and agency, market engagement, risk management, and sustainability.
- ***Cross-group comparison:*** Findings were analysed across key sub-groups, including women and men, districts, and households with differing asset bases and levels of engagement. This enabled identification of uneven outcomes and patterns that would not be visible through aggregate analysis alone.
- ***Triangulation:*** Quantitative findings were interpreted alongside qualitative narratives and checked against baseline and midterm data. Divergences between data sources were analysed rather than averaged out, helping to surface tensions between participation, control, and outcomes.

This analytical approach underpins the structure of Sections IV-V, which presents findings and recommendations.

2.5 Key Limitations and Implications for Interpretation

Several limitations are important for interpreting the findings presented in this report.

First, the absence of a counterfactual or control group limits the ability to attribute observed changes exclusively to the project. The evaluation therefore relies on contribution analysis, consistency across data sources, and alignment with the project's theory of change rather than causal attribution.

Second, climatic shocks particularly cold waves affected agricultural production during the implementation period. These shocks complicate comparisons with baseline expectations and planned production targets and reinforce the need to interpret results within an environmentally volatile context.

Third, gender-related findings must be interpreted within prevailing cultural norms regarding public attribution of authority. In some cases, women may attribute decision-making to husbands as a form of social respect, even where influence is exercised informally. While gender-segregated FGDs were used to mitigate this bias, self-reported measures of decision-making may be understating women's informal influence within households.

Fourth, income, decision-making, and benefit perceptions rely partly on self-reported data. Although triangulated with qualitative evidence, these measures cannot fully capture intra-household dynamics or informal income flows.

Finally, the evaluation captures outcomes within the project timeframe and shortly after the final production cycles. Institutional strengthening, associations maturation, and shifts in market power typically require longer time horizons, limiting assessment of longer-term transformation.

Despite these limitations, the combination of multiple methods, diverse data sources, and systematic triangulation provides a sufficiently robust evidence base to support the evaluation's findings, conclusions, and recommendations.

Section III- Respondent Profile & Evidence Base

The endline evaluation draws on a robust and triangulated evidence base combining **quantitative and qualitative data sources** collected across all five target districts in Balkh. Data collection was implemented in accordance with the sampling framework and methodological approach set out in the inception report.

Quantitative evidence was generated through a household survey administered to 357 beneficiary households, the sample was near gender-balanced, comprising 183 men (51.26 %) and 174 women (48.74 %)[1]. Survey respondents were also distributed proportionally across the districts aligned with the relative size of beneficiary populations and the sampling plan approved at inception.

District	Total	Male	Female
Balkh	77	41	36
Chahar Bolak	68	34	34
Chemtal	37	18	19
Dawlat Abad	89	45	44
Nahr-e-shahi	86	45	41
Total	**357**	**183**	**174**

Table 1 Quantitative HH Survey Sample (Gender & District Disaggregation)

Qualitative evidence comprised:

- ***Focus Group Discussions (FGDs)*** with women and men beneficiaries, conducted separately to enable open discussion of gendered roles, decision-making, and intra-household dynamics
- ***Key Informant Interviews (KIIs)*** with associations leaders, project staff, extension actors, buyers, and relevant stakeholders
- ***Direct field observations*** of cultivation, post-harvest processing, and associations activities Observation checklists were used to triangulate self-reported survey and FGD findings, allowing assessment of actual practice adoption, quality control, and associations functionality.

Categories/ Districts	Dawlat Abad	Nahr-e-Shahi	Balkh	Chahar Bolak	Chemtal	Total
FGD- Women	1		1	1	1	4
FGD- Men		1	1	1	1	4
KII- Cooperations/ Associations	2	1	1	1	1	6
KII- Market Actors			2 (Based in Mazar & Herat)			2

[1] Due to item-level non-response and data cleaning procedures, the analytical base (N) may vary slightly across indicators. Unless otherwise specified, %ages are calculated on the valid response base for each question. Where relevant, the specific N is indicated in tables or footnotes.

KII- Project & MEAL Staff			4 (Based in Mazar)			4
KII- VSF				1		1
KII- Shuras/ Elders/ Community Representatives	1	1	1	1	1	5
KII- DAIL/ MAIL/ Agri. Extension Officers	1	1				2
Success Stories		1		1	2	4
Observations	2	1	1	1	1	6
Total						**38**

Table 2 Qualitative Sample

Evidence from primary data collection was triangulated with secondary sources, including the project proposal, baseline assessment, midterm review, monitoring data and relevant sectoral documentation. This triangulation strengthened the reliability of findings and supported contribution-based interpretation of results.

4.1. Structural Conditions Shaping Outcomes

This section examines how the underlying structural conditions have shaped project outcomes. The section focuses on how the household livelihood pressures, gender norms, and external constraints have interacted to influence participation, uptake, and the depth of change achieved. Rather than treating these factors as background context, the analysis considers how they have actively conditioned what the project was able to achieve in practice, and why certain outcomes have proved more durable than others.

4.1.1. Household Livelihoods and Risk Management

Households participating in the Red Gold Project operate under chronic income insecurity, constrained cash flow, and heightened exposure to climatic and market volatility. At BL (2022), beneficiary households reported low and unstable agricultural income with no measurable saffron-derived earnings. Saffron cultivation had not yet matured into an income-generating stream, and households relied primarily on staple crops and seasonal labour. By MTR (2024), early production cycles had begun generating returns, with progress on the income indicator reported at approximately 9% against the stated target (midterm review). However, saffron remained supplementary and had not displaced primary livelihood sources.

Endline findings confirm consolidation rather than transformation. Based on the endline household survey (N=350), 63.4% of households derived less than 25% of total household income from saffron, and 92.6% derived less than half of total income from saffron. Only 2.6% of households reported deriving more than 75% of household income from saffron.

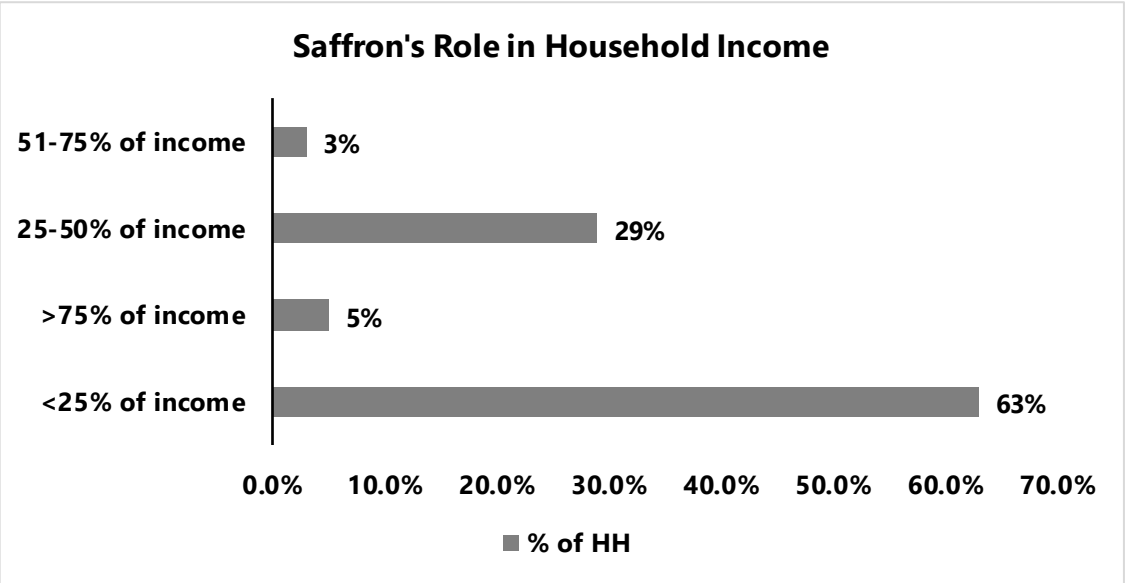


Figure 1 Saffron's share in HH income (N= 350)

These patterns indicate that saffron functions primarily as a supplementary livelihood integrated into household risk management. Perceptions of income change also align with this incremental pattern. 97.4% of households reported some increase in income compared to the pre-project period, however, 86.0% characterised this increase as "slight," and only 11.4% described it as "significant."

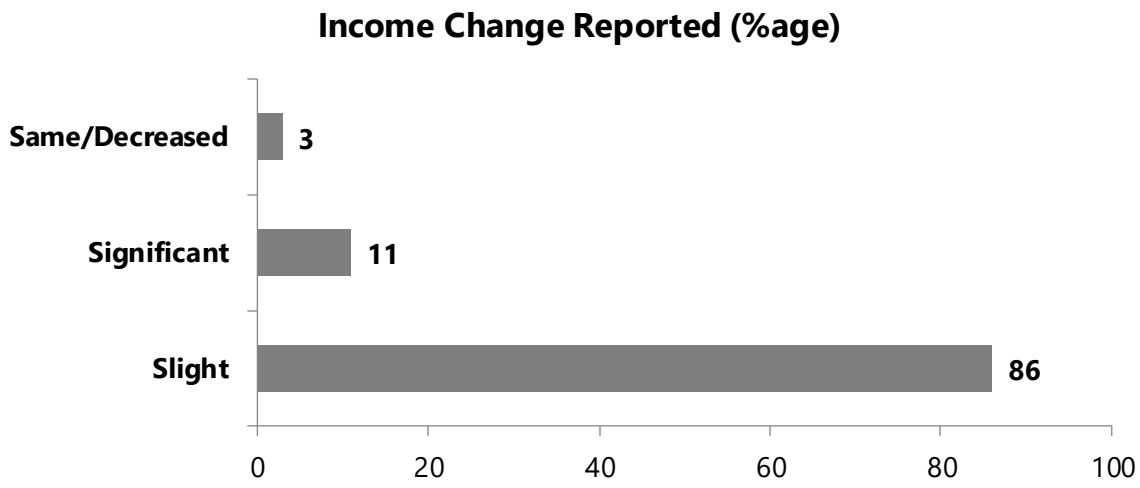


Figure 2 Income change reported by HH

This risk logic is also reinforced by the delayed income cycle associated with saffron production, which limited its usefulness for meeting immediate consumption needs. As one farmer explained:

"This income is not big, but it comes every year."- Male FGD participant, Chemtal

District-level variation was evident in the relative contribution of saffron to household income. The proportion of households deriving less than 25% of total income from saffron ranged from 75.7% in Chemtal, 56.8% in Nahr-e-Shahi, Chahar Bolak (64.2%), Dawlat Abad (60.9%), and Balkh (57.9%). The variation suggests uneven consolidation across locations, likely reflecting differences in local production maturity, climate exposure, and market dynamics. Market conditions continued to limit income predictability. Most households that sold saffron during the last season reported selling through associations (70.3%), followed by private buyers (16.3%) and local markets (9.1%). 17.4% reported not selling in the last season. In addition, most households (86.6%) did not receive advance payments.

Climate variability was widely experienced but not uniformly decisive. 22.3% of households reported experiencing climate shocks (e.g., cold wave) in the past year. Despite this, continuation intent remained high. 98.3% of households stated they plan to continue saffron cultivation after project completion. This suggests saffron is perceived as sufficiently viable under constraint to sustain engagement, even when income gains remain modest. Taken together, these structural conditions shaped how households engaged with saffron rather than whether they engaged at all.

Across districts, saffron was described as relevant not because it replaced existing livelihood sources, but because it fit prevailing constraints: water scarcity, small landholdings, declining returns from staple crops, and seasonal unemployment. As one woman in Balkh noted:

"We work very hard, but our income is low." -Female FGD participant, Balkh

Women emphasised that saffron provided seasonal cash income for household needs but did not resolve year-round employment insecurity:

"Saffron work is only for one month; after that we are unemployed."- Female FGD participant, Balkh

These accounts reinforce the supplementary and stabilising role described above.

4.1.2. Gender Norms and the Boundaries of Agency

Women's participation in saffron cultivation and post-harvest processing was widespread across all five project districts. Qualitative evidence consistently shows women's heavy involvement in planting support, harvesting, stigma separation, drying, sorting, and basic packaging. Across districts, women were responsible for the majority of labour-intensive and quality-critical stages of production while selling, transport, price negotiation, and buyer interaction were predominantly managed by men.

Quantitative findings strongly confirm this gendered division of labour. Among female respondents (N = 172), 96.5% (166/172) reported that harvesting is carried out by women alone or jointly, and 95.3% (164/172) reported that processing/drying is carried out by women alone or jointly. In contrast, 95.3% (164/172) reported that saffron selling is managed primarily by men.

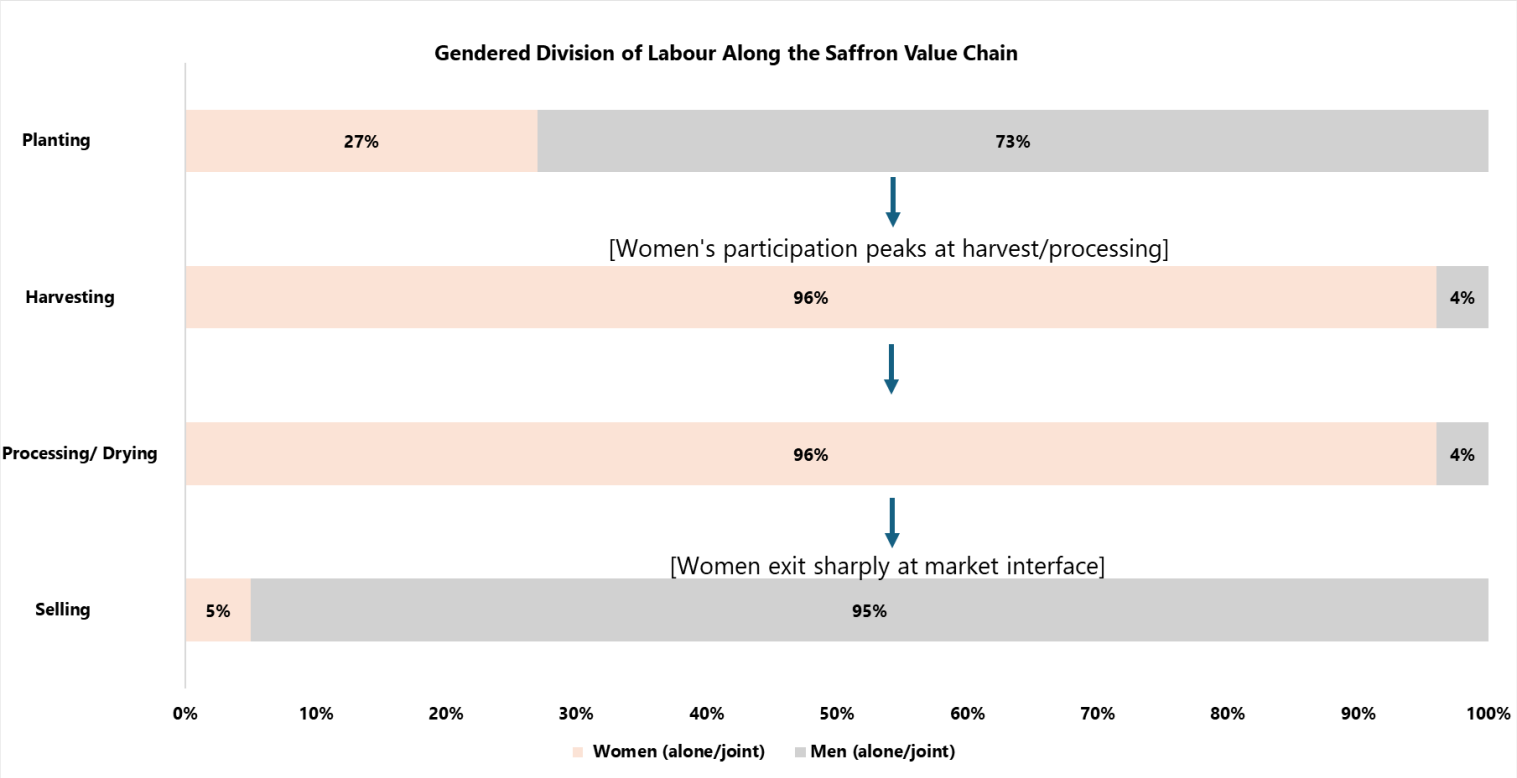


Figure 3 Gendered division of labour along the saffron value chain

From an effectiveness perspective, the project successfully expanded women's participation in production and post-harvest activities at scale. It was stronger in labour inclusion than in shifting control over market-facing roles.

Quantitative findings suggest district variations, which could mean minor differences in task-sharing, but they do not alter the overall structural pattern of male control over market-facing functions. Chemtal reported the highest proportion of joint harvesting (64.9%) and the highest level of joint selling (18.9%). In terms of decision making, (N = 350), Dawlat Abad (75.3%) and Balkh (69.3%) reported higher levels

of joint decision-making, whereas Nahr-e-Shahi reported the highest proportion of male-only decision-making (50.6%). Female-only control remained marginal across all districts (0- 4.5%).

Qualitative discussions indicate that "joint decision-making" frequently reflects consultation on household expenditure priorities rather than shared authority over sales, pricing, or reinvestment decisions. Women's influence was strongest in decisions related to food, health, and children's needs, and weakest in decisions involving markets and cash control. In impact terms, this indicates that while intra-household consultation increased, structural redistribution of economic authority did not occur.



Interpreting District Variation: Chemtal, which reported the highest proportion of joint harvesting and relatively higher joint selling, is characterised by smaller landholdings and stronger cohesion. In contexts where production scale is smaller and aggregation more structured, joint household management appears more feasible. By contrast, Nahr-e-Shahi, which reported the highest proportion of male-only decision-making, also showed stronger engagement with private buyers. Where households interact more directly with market actors, selling becomes more visibly transactional and male- dominated. These patterns suggest that where selling is more market-facing and individualised, male authority consolidates. District variation therefore reinforces the conclusion that gender outcomes are shaped not only by norms but by market interface structure.

Women's participation was also strongly conditioned by the location and visibility of activities. Household-based and village-level activities such as harvesting, drying, processing, and packaging were widely accepted and sustained even under restrictive conditions. Survey results indicate that women's economic participation is viewed as partially accepted by 74.3% (260/350) of respondents and fully accepted by 23.4% (82/350), suggesting normalization of women's production roles within negotiated social boundaries. Acceptance did not extend consistently to independent market engagement or leadership roles.



While the expansion of women's labour participation is robust and durable, the ceiling on control reflects **three** reinforcing structural mechanisms. ***First***, asset ownership remains male-dominated. Land titles, irrigation rights, and formal buyer relationships are overwhelmingly held by men. Even where women perform the majority of production and post-harvest labour, control over the asset base anchors authority in male hands. ***Second,*** market-facing risk exposure is gendered. Selling saffron requires mobility, price negotiation, and engagement in cash transactions. These activities carry reputational and social risk for women under current conditions. Households may accept women's production roles because they are home-based, market roles involve visibility and public interaction that activate stricter norms. ***Third***, cash control remains symbolically tied to male authority. Even where decision-making is reported as "joint," qualitative evidence suggests **consultation over expenditure rather than shared control over revenue flows.** It is also important to interpret reported male-only decision-making with cultural sensitivity. Publicly attributing decisions to husbands may reflect norms of respect rather than absence of influence. However, even accounting for this nuance, market-facing authority and cash control remain predominantly male-managed

4.2. Intervention Delivery and System Interaction

This section examines how project support translated into practical uptake on the ground. Rather than focusing on just the delivery outputs alone, it analyses which components were meaningfully absorbed into household livelihood strategies, where uptake plateaued, and how structural conditions shaped variation in results.

4.2.1 Delivery Effectiveness and Technical Uptake

Quantitative evidence confirms that core project components reached nearly all targeted households. Among surveyed households (N=350), 96% reported receiving saffron corms and 93% reported participation in cultivation training, indicating high delivery coverage across districts. Access and awareness were therefore not binding constraints at endline.

At BL (2022), saffron cultivation in Balkh remained limited and largely experimental, with minimal structured technical knowledge. By MTR (2024), input distribution and training coverage had expanded rapidly, though behavioural consolidation was still uneven. Endline findings suggest that this transition has largely been achieved. Technical practices are no longer newly introduced behaviours but appear embedded across production cycles.

Adoption of recommended agronomic practices was consistently high. **Respondents reported applying guidance on planting depth, row spacing, harvesting timing, and soil preparation**. Importantly, 78% of households rated their saffron quality as "high," suggesting that behavioural uptake translated into observable production outcomes rather than short-term compliance. As detailed in Section 4.1.2, women's participation in harvesting and processing remained above 95%, while selling remained predominantly male-managed, reflecting asset control rather than unequal exposure to training.

Environmental stressors, including drought and cold waves affected yield variability during the project period. However, they did not appear to undermine adoption decisions. Over 70% of respondents perceived saffron as less risky than alternative crops under water scarcity, reinforcing sustained behavioural commitment despite climatic volatility.

From an evaluation perspective, delivery effectiveness was strong. Technical uptake was durable where practices were low-cost, within household control, and visibly linked to plant survival and yield. Variation in outcomes appears driven more by household capacity and external risk exposure than by implementation gaps. In OECD-DAC terms, effectiveness of the technical components was high, while the depth of income impact depended increasingly on system-level factors beyond direct programme control.

4.2.2 Post-Harvest and Infrastructure Constraints

While cultivation practices consolidated successfully, post-harvest adoption plateaued. MTR findings had already identified drying and grading as weaker components relative to cultivation. Endline evidence confirms that this bottleneck persisted despite training coverage exceeding 90%. The limiting factor was not knowledge. It was infrastructure. Households reported uneven access to drying machines, calibrated weighing scales, and standardized packaging materials. Where drying equipment was available, notably in parts of Nahr-e-Shahi, respondents described improved colour consistency and reduced spoilage. Where drying remained household-based and improvised, quality gains plateaued.

While the project provided drying and processing equipment to farmers and associations, qualitative evidence suggests that access and utilisation were uneven across locations. In several districts, equipment was shared among multiple households or located at a distance from some producers, limiting consistent use during peak harvest periods.

As one association leader noted: *"One machine in a village is not enough. Mostly saffron is dried in homes and its quality gets affected."*

Similarly, farmers in Balkh and Chahar Bolak reported continued reliance on traditional home-based drying methods during peak harvest when shared machines were unavailable or difficult to access.

"Harvesting improved, but drying is still our problem. The drying machine is far from us."- Female FGD participant, Balkh

This indicates that the constraint is not absence of provision, but rather:

- Scale of equipment relative to harvest volume
- Geographic accessibility
- Limited availability of calibrated weighing scales
- Lack of standardised grading and packaging tools across all producers

Some even reported:

"The tools helped us start, but we still share machines. We also need a weighing scale." Charbolak FGD female

Training on grading and quality standards was delivered; however, without consistent access to:

- Digital weighing scales
- Moisture-controlled drying units accessible at cluster level
- Standardised grading trays and classification reference materials
- Sealed, traceable packaging materials

quality improvements remained partially dependent on household-level improvisation. This recurring observation across districts reinforces that the binding constraint has shifted from knowledge to infrastructure. While cultivation practices have stabilised, drying access and standardisation remain uneven.

4.2.3 Market Engagement and Institutional Performance

Market participation was substantial but mediated. Among surveyed households (N=350), 289 households (83%) reported selling saffron during the last season, while 61 households (17%), reportedly all male respondents, did not sell. Reported sales channels (multiple responses permitted) were as follows:

- Association-linked: 246 households (70%)
- Private buyer: 57 households (16%)
- Local market: 32 households (9%)
- Family/relatives: 22 households (6%)

The predominance of association-linked channels suggests improved access to buyers compared to baseline conditions. However, qualitative findings across districts indicate that associations primarily facilitated buyer contact rather than functioning as capitalized aggregators or price negotiators. Pricing remained predominantly buyer- led. Some leaders also expressed apprehension about formal buyer agreements (most of the agreements and negotiations are done informally, predominantly using WhatsApp), citing limited negotiation leverage and uncertainty about enforcement. While 86% of respondents reported receiving a "fair price," discussions revealed limited transparency regarding price formation and minimal negotiation capacity at the farmer level. Advance payment was reported by 13% of respondents, but qualitative evidence suggests that pre-financing arrangements were informal and irregular rather than predictable or contract- based. **Combined with limited drying and storage capacity, these likely shape the early post-harvest sales behaviour and reinforces buyer leverage**.

4.2.4 Drivers of Variation in Uptake

Variation in uptake depth was driven primarily by structural capacity and risk exposure rather than delivery quality.

First, income dependence shaped engagement intensity. 63 % of households derived less than 25% of total income from saffron, and 92.5% derived less than half. For most households, saffron functioned as a supplementary risk-buffering crop rather than a primary growth strategy.

Second, liquidity and storage constraints influenced market behaviour. Limited drying and storage capacity, combined with largely informal pre-financing, encouraged early post-harvest sales, reinforcing buyer leverage.

Third, gender norms shaped depth of agency. Women's participation in production was high, but absence from pricing and negotiation constrained their influence over market-facing decisions. This limited translation of labour participation into economic authority.

Fourth, climate exposure affected yields but was not the dominant constraint. Although 22% reported experiencing climate shocks, fewer than 20% cited climate as the primary driver of reduced production. Market instability was more frequently identified as binding.

Finally, infrastructure access moderated outcomes. Where drying equipment was available, post-harvest quality stabilized more effectively, demonstrating the role of complementary assets in amplifying technical gains.

Taken together, uptake patterns reflects that households adopted components that reduced risk, remained within their control, and required limited exposure to market volatility. Overall, delivery of core technical support was effective.

4.3 Market and Institutional Performance

This section examines how markets functioned in practice and the role associations played within that system. The analysis focuses on power, risk distribution, and institutional capacity rather than on the mere existence of sales.

4.3.1 Access to Buyers and Sales Channels

By endline, market participation was substantial. As outlined in Section 4.2.3, 83% of households reported selling saffron, predominantly through association-linked channels. This marks clear progress

relative to BL (2022), when market access was described as fragmented, irregular, and dependent on opportunistic trader visits. MTR findings (2024) documented improved buyer linkage through facilitation done by the associations and their engagement. Endline results confirm that buyer access is now widespread and seasonally reliable. However, improved access did not translate into diversified market engagement. As outline in sub- section 4.2.3, the concentration of sales through association-linked channels suggests improved coordination but limited expansion of competitive buyer choice. Market participation therefore became more predictable than at baseline, but not more strategic.

4.3.2 Pricing, Negotiation, and Market Power

Perceptions of pricing were generally positive. 303 respondents (87%) reported receiving a "fair" price, while 6% reported unfair pricing and 7% were uncertain. Endline evidence indicates that perceptions of price stability have improved significantly relative to project start. However, qualitative discussions across districts consistently describe pricing as largely determined by buyers rather than negotiated by farmers.



"The buyer decides the price; we just agree." -Female FGD participant, Charbolak

This statement captures the structural asymmetry underlying otherwise "acceptable" price perceptions. Perceived fairness appears shaped by comparison to alternative crops and prior instability rather than by strengthened bargaining power.

While 86% reported receiving a fair price, negotiation capacity remains limited. Farmers described prices as "acceptable compared to wheat," but noted limited ability to negotiate or understand how prices were determined.

4.3.3 Finance, Risk, and Transaction Dynamics

Access to working capital remains one of the least changed structural constraints across baseline, midterm, and endline phases. At endline, 47 households (13%) reported receiving any advance payment, while 87% operated without pre-financing, self-financing production and absorbing short-term liquidity risk.

Liquidity pressure continues to shape transaction timing. Many households described selling shortly after harvest to meet immediate cash needs. The fact that 17% of households did not sell during the last season further reflects how storage capacity, liquidity needs, and localized buyer conditions influence sales decisions.

Across the value chain, risk remains concentrated at household level. Production risk, price risk, and liquidity risk are not redistributed through scalable institutional mechanisms.

4.3.4 Institutional Role of Associations

Associations played a visible stabilizing role throughout implementation. Relative to BL informal coordination, MTR findings documented strengthened mobilization and more structured engagement. By endline, associations appear administratively stabilized and capable of facilitating:

- Farmer mobilization
- Training coordination
- Harvest scheduling
- Buyer contact

However, their economic role remained limited. Although 70% of households reported selling through association-linked channels, qualitative evidence indicates that associations primarily functioned as facilitators of buyer contact rather than as collective price negotiators with independent leverage. The evidence did not demonstrate:

- Structured risk-sharing mechanisms
- Formal contract negotiation capacity
- Independent price-setting authority
- Working capital sufficient to buffer market shocks

Gender Within Institutional Structures: Gender-disaggregated analysis reveals differentiated market pathways. Among female respondents:

- 156 reported selling through association-linked channels
- Only 8 reported selling to private buyers

All households reporting non-sale during the last season were male respondents. Women were disproportionately represented within association-linked channels, suggesting that their market participation is more structured and mediated. Men were more likely to report engagement with private buyers. Qualitative evidence further confirms that women remained central to production and post-harvest quality, but less visible in transactional and pricing roles.



Market and Institutional Performance in Practice: Farmers could sell saffron reliably, but not strategically. Markets functioned, but pricing remained buyer- led. Associations facilitated coordination and reduced transaction friction but did not become economic intermediaries.



"The association helps us connect to buyers, but it does not set the price." -Male FGD, Balkh

As a result, saffron operated primarily as a supplementary and risk-buffering livelihood rather than a scalable growth pathway. Across baseline, midterm, and endline phases, market and institutional evolution followed a clear trajectory:

Baseline: fragmented access, weak coordination, high price uncertainty
Midterm: improved buyer linkage and stabilization of coordination structures
Endline: widespread access (83% selling), high perceived price fairness (87%), but persistent concentration of pricing power and liquidity risk at household level.

Therefore, markets now function more reliably than at project start. Institutions have stabilized operationally. However, structural power asymmetries and liquidity risk remain largely unchanged.

4.4. Outcome Trajectories, Contribution Pathways, and Risk to Continuity

This section synthesizes how household livelihoods, income dynamics, and gender relations evolved over the project lifecycle, and examines the pathways through which change occurred. The analysis considers how technical support interacted with household capacities, gender norms, market structures, and climatic conditions to produce differentiated and uneven results.

4.4.1 Contribution Pathways

Viewed longitudinally, contribution pathways intensified over time rather. At BL, the binding constraints were lack of quality corms and limited technical knowledge. By MTR, behavioural adoption was

accelerating but income effects remained emerging and fragile. By endline, technical adoption had consolidated, while system-level constraints such as market leverage, financing mechanisms, and institutional bargaining power have remained the primary limiting factors. The following are some pathways derived from the evaluation:

Technical inputs + practical training= Sustained cultivation adoption: Where inputs were tangible and practices were low-cost, observable, and within household control, adoption was durable. Cultivation practices stabilized across cycles, and quality perception improved accordingly. Technical effectiveness was therefore high at production level.



"We learned how to grow saffron, but the market is still not in our hands."- Male FGD participant, Balkh.

This reflects the structural asymmetry detailed in Section 4.3.2, technical gains outpaced shifts in bargaining power.

Household-based + female engagement= Sustained participation under restrictive norms: By embedding production within culturally accepted spaces, the project enabled high female participation without triggering social backlash. Women's labour participation and technical skill expanded substantially, particularly in harvesting and processing. However, this pathway generated stability in participation rather than shifts in authority. Women entered production but did not enter market negotiation or pricing control. Agency expanded within boundaries.

Limited structural shift: Associations improved coordination and access but did not transition into price negotiators. Market power remained largely buyer- driven. Production improvements therefore outpaced institutional leverage.

Post-technical training= Diminishing returns: Once knowledge gaps were closed, additional training produced limited incremental gains without complementary infrastructure and market reform.

4.4.2 Income, Production, and Livelihood Stability

At BL, saffron contributed minimally to household income. By MTR, income effects were emerging but uncertain. By endline, saffron was embedded in nearly all participating households' livelihood portfolios, but mainly as a secondary income stream.

Income improvements were widespread but moderate in magnitude. Based on survey data, the average saffron income per household in the most recent season was AFN 18,134 (approximately USD 277). The households described gains as "slight," while only a minority described them as significant. Across districts, respondents consistently described saffron income as predictable and timely, particularly during agricultural off seasons, rather than transformative. The key shift over time was from income uncertainty to moderate income stability.



Was the Income Gain "Enough"?: The coexistence of modest income gains and near-universal continuation intent requires interpretation. Most households described income improvements as "slight," and saffron remains a minority share of total income for the majority. However, persistence is not driven by magnitude alone. It is driven by reliability, timing, and compatibility with existing livelihoods. Saffron generates seasonal cash at predictable intervals, requires limited water, and can be cultivated on small plots without displacing staple crops.

For liquidity-constrained households, this predictability reduces vulnerability during agricultural off-seasons. From a household perspective, the threshold for continuation is not transformative gain, it is positive net contribution with manageable risk. By this standard, saffron meets the persistence threshold even if it does not necessarily meet the transformation expectations.

4.5 Durability of Outcomes and Forward Risks

This section assesses the extent to which observed changes are likely to persist beyond the project period. Rather than assuming linear sustainability, the analysis distinguishes between practices that have become behaviourally embedded and those that remain structurally dependent on external systems. It also identifies the primary risks that may undermine continuity.

4.5.1 Behavioural Durability

Continuation intent is exceptionally high. N=350 surveyed households, 344 (98%) reported plans to continue saffron cultivation after project completion. No respondents reported definite plans to discontinue. This high intention reflects more than optimism. It reflects integration. As discussed in Section 4.4.2, saffron has been integrated primarily as a supplementary, risk-buffering crop. Core practices that are likely to persist:

- Small-plot cultivation (over 75% of households)
- Adoption of planting depth and spacing techniques
- Harvest timing and stigma separation discipline
- Household-level post-harvest drying
- Women's participation in harvesting and processing

Technical confidence, evidenced by high self-reported quality and training coverage (see Section 4.2.1), reinforces durability.

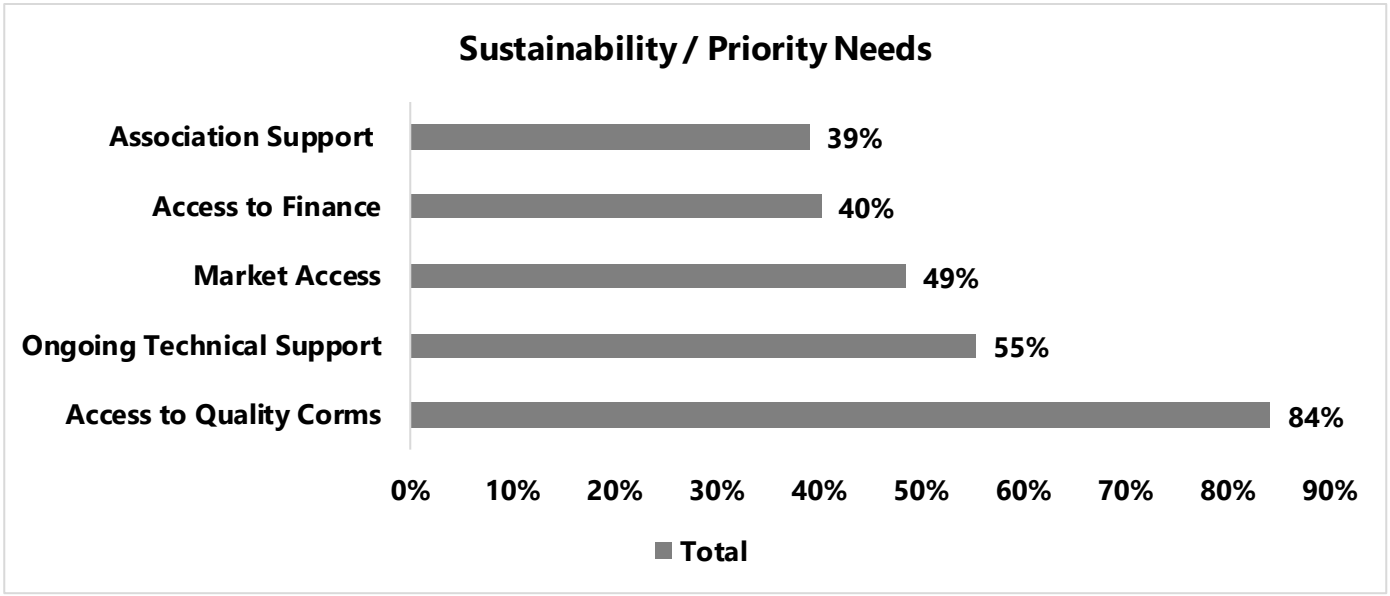


As one participant explained: *"Even if the project ends, we will continue because we know how to grow it now."*- Male FGD participant, Dawlat Abad

4.5.2 Conditional Sustainability: System Dependence

While behavioural intent is strong, continuity remains conditional. When asked what is needed to sustain production:

- 295 households (84%) prioritised continued access to quality corms
- 194 (55%) identified ongoing technical support
- 170 (49%) prioritised market access
- 141 (40%) cited access to finance
- 137 (39%) highlighted association support



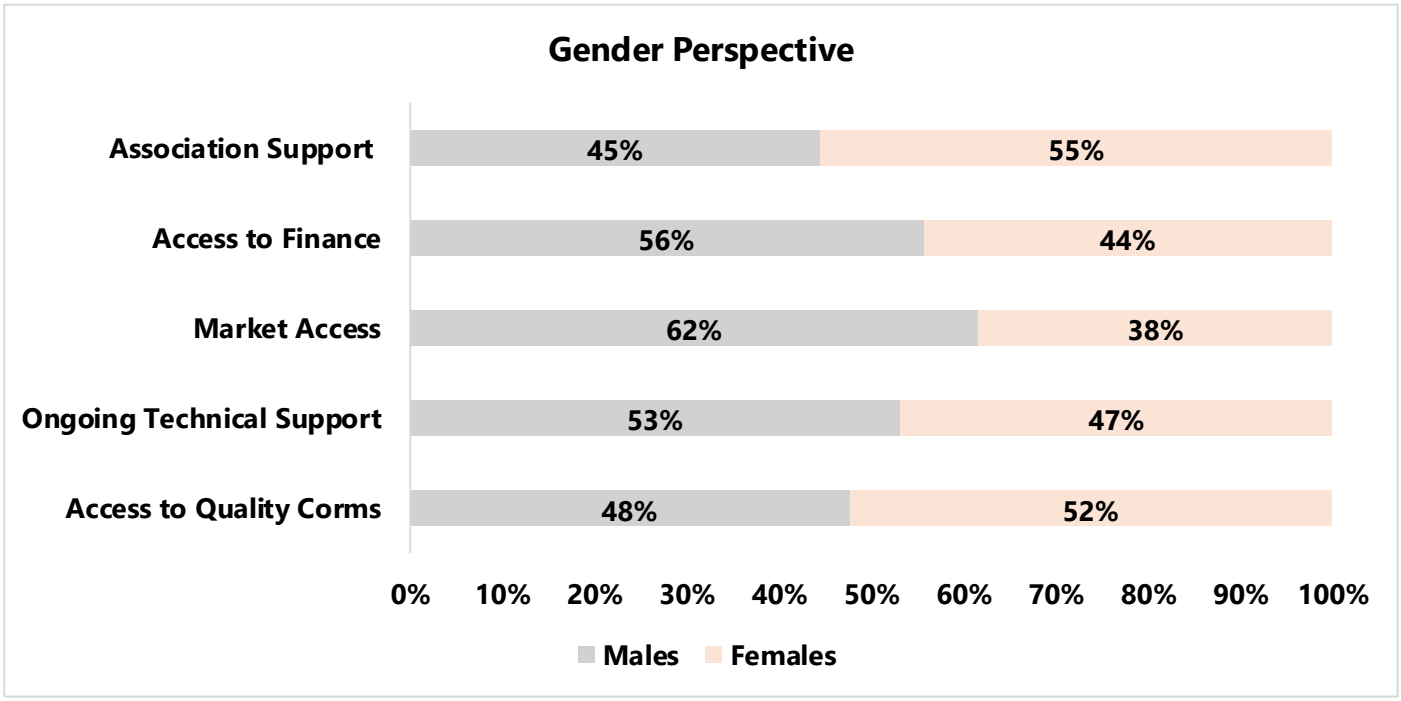


Figure 4, 5 Sustainability Needs & Priorities, Gender disaggregated

The prominence of quality corm access (84%) is particularly significant. Even where technical knowledge is strong, yield stability and expansion depend on continued access to healthy planting material. Without reliable corm supply chains, production gains may plateau. Similarly, market continuity and liquidity remain decisive.

Gender differences in forward priorities are moderate but instructive:

- Women have slightly prioritised more association support.
- Men have prioritised access to finance and market.

Sustainability therefore depends less on farmer capability and more on the resilience of surrounding input and market systems.

4.5.3 Institutional Durability

As discussed in Section 4.3.4, associations demonstrate administrative durability but limited economic intermediation capacity. Although 246 households reported selling through association-linked channels, qualitative findings confirm that associations primarily facilitate buyer contact rather than negotiating prices or providing structured pre-financing. Fewer than 5% of women anticipated direct involvement in selling or price-setting. Market-facing authority remains male-dominated.

4.5.4 Exposure to External Risks

Market Fragility: Market structure remains the most significant forward risk.

- More than 80% of households reported buyer-determined pricing.
- 87% reported no advance payment.
- 17% did not sell in the last season.

Even where production quality improved, bargaining power did not shift substantially. Stakeholders have distinguished clearly between tolerable and intolerable risk.



"We can manage frost, but if there is no buyer, we cannot continue."- KII participant

Climate shocks are seen as manageable. Market discontinuity is not. This distinction explains why saffron is perceived as agronomically resilient but economically fragile.

Climate Variability: Climate risk affects yields but not engagement. 22% (78 households) reported experiencing climate shocks in the past year. Of these, 54 reported reduced yield, and only one reported complete crop loss. Continuation intent remained above 98% despite these shocks. Climate variability therefore does not undermine participation decisions.

Political and Social Restrictions: Restrictions affecting women's mobility are likely to persist. The project successfully embedded production within culturally accepted spaces, enabling sustained female participation. However, progression into market-facing or leadership roles remains constrained.

Section V- Recommendations

The recommendations below derive directly from evaluation findings and stakeholder perspectives collected across female and male farmers, association leaders, market actors, extension officers, and project staff.

Across categories, respondents expressed high satisfaction with technical training and production improvements. However, they consistently emphasized that sustainability risks now lie beyond cultivation skills, rather in market reliability, infrastructure gaps, and institutional fragility.

The central strategic shift required is therefore clear: The next phase of programming must strengthen systems, not just production.

RECOMMENDATION 1: Improve post-harvest infrastructure access and quality control

The evaluation confirms that technical knowledge is strong, but infrastructure bottlenecks during peak harvest reduce quality consistency.

Suggested actions:

- Establishing 2-3 more strategically located drying units per district. This will reduce drying delays and increase proportion of higher-grade saffron without expanding household-level risk.
- Providing moisture meters, calibrated scales, grading trays, and simple reference guides to each association. Training 2- 3 members per association to apply standardized grading before buyer aggregation.
- Implementing publicly visible booking systems during harvest to prevent informal capture of shared equipment.

RECOMMENDATION 2: Strengthen market predictability and price transparency

Suggested actions:

- Mapping active buyers in Balkh and negotiating simple MOUs with 3-5 reliable traders outlining indicative pricing bands, quality expectations, and payment timelines. Facilitate quarterly buyer–association meetings.
- Disseminating weekly price updates during harvest via SMS, notice boards, or meetings. Where feasible, share information with both spouses to reduce information asymmetry.
- Testing small pre-harvest advance schemes (e.g., 30% payment against committed volume) with selected buyers and households.

RECOMMENDATION 3: Secure sustainable corm supply

Corm access was identified by 84% of respondents as the primary sustainability condition.

- Identifying 2-3 reliable suppliers (Herat or Balkh nurseries) and negotiate bulk procurement arrangements through associations to reduce cost and improve quality assurance.
- Support selected lead farmers to establish multiplication plots under technical guidance.

RECOMMENDATION 4: Increase women's economic benefit without increasing risk

Women perform the majority of processing tasks but control minimal independent decisions.

Suggested activities:

- Providing in-kind incentives (processing tool kits, packaging inputs, discounted quality corms) to women responsible for high-grade processing. Deliver benefits at household or women-only distribution points and frame them as productivity support.
- Reducing information asymmetry: providing transaction receipts indicating grade, quantity, and price.

RECOMMENDATION 5: Enable year-round income through complementary activities such as:

- Kitchen Garden Commercialization: Support seed packages and simple aggregation mechanisms for surplus sale at village level.
- Poultry Production (Targeted): Provide small starter packages (10–15 hens) for selected households and link to veterinary services.
- Structured Corm Sales: Allow controlled sale (maximum 25–30%) of multiplied corms during July–August to address pre-harvest liquidity gaps.
- Pistachio Processing Feasibility (Conditional): Assess whether sufficient pistachio production exists in Balkh to support home-based sorting/grading pilots.

RECOMMENDATION 6: Introduce digital tools for information parity (not market substitution)

Digital tools cannot replace structural mobility constraints but can reduce information gaps.

- SMS price alerts and transaction confirmations: Provide weekly saffron price updates and send sale confirmations (grade, quantity, price) via SMS where feasible.

RECOMMENDATION 7: Plan a managed transition instead of abrupt exit

- Linking associations to private input suppliers and trader networks before project closure.
- Train 2-3 lead farmers per district as local resource persons.



Data Collection- HH survey



Field Observation



Field Observation



Data Collection- Qualitative, Field Observation