

**Applied Research Institute – Jerusalem
(ARIJ)**

**Final Evaluation Report
for the project:**

**Assist in improving the productivity and feasibility of livestock towards better food
security and livelihood in vulnerable areas of the West Bank**

From 1/11/2013 to 31/12/2016

**Implemented by
Applied Research Institute – Jerusalem (ARIJ)**

**Funded By
DanChurchAid (DCA)**

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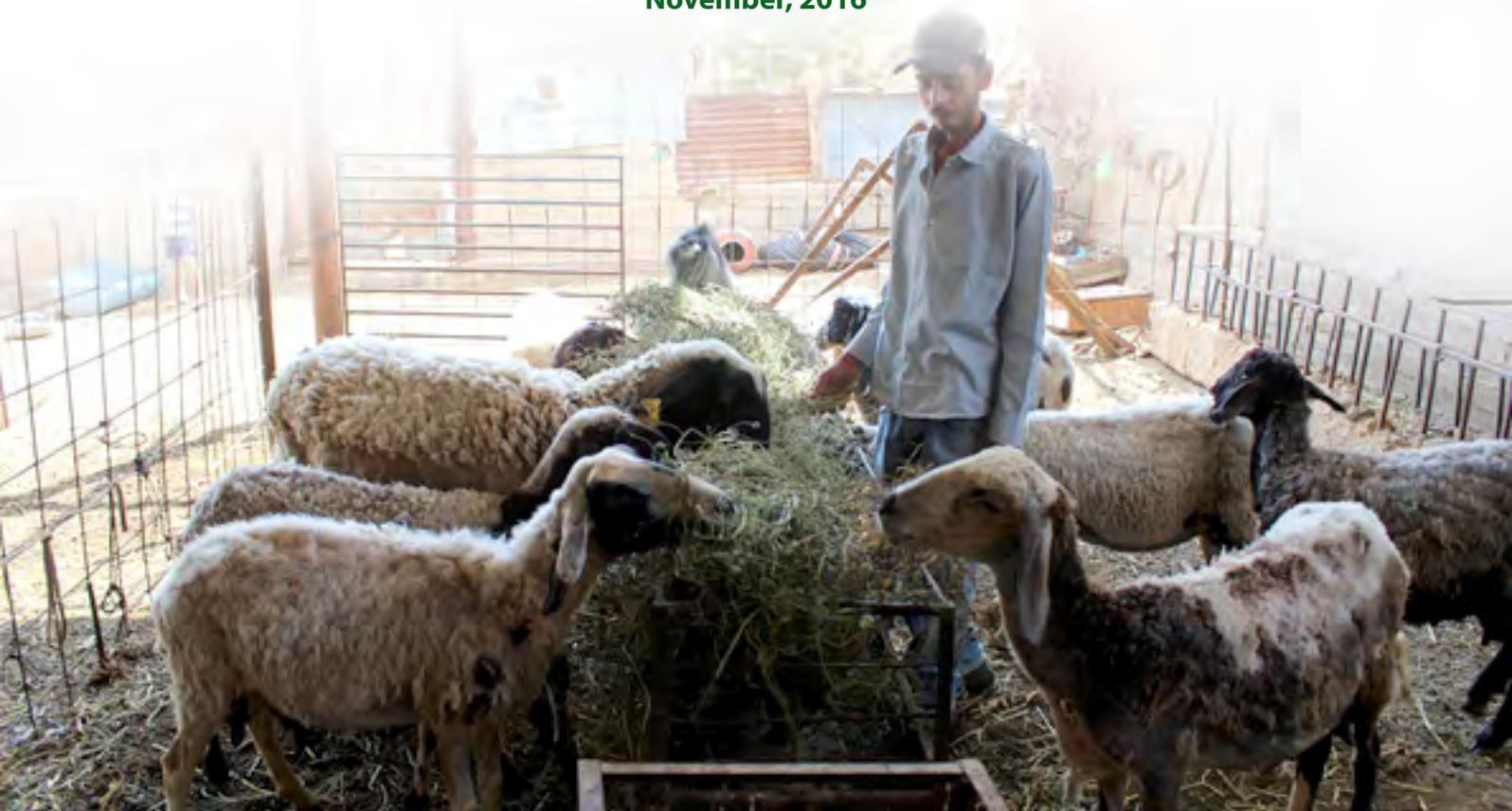


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Special Thanks to project field coordinator, which was ready to meet with the evaluation team and provide determined help throughout many steps of evaluation. We would like also to thank the entire project staff who greatly contributed to the success of this evaluation.

Special appreciation is also due to the project stakeholders, Bardala Society for Increasing Animal Wealth, Tubas Governorate, Ministry of agriculture and all beneficiaries, the individuals, and groups we had the opportunity to interact with, for their authenticity in sharing with us information, aspirations, and life experiences.

Last but not least, the evaluation team is thankful to Dan Church Aid (DCA) and ARIJ project leaders for giving us the opportunity to realize the importance and uniqueness of ARIJ's interventions for the development of the Agricultural Sector in Palestine through the generous financial support of DCA.

The Evaluation Team

2. Introduction:

The Jordan Valley is one of the main agro-ecosystems in the region. It contributes massively to the Palestinian food basket by the production of its crops and livestock production, irrigated agriculture, ground water. The large mix of urban, rural and a Bedouin community create a diverse region. However, these areas are targeted by the occupation practices through confiscating the farmers' lands, building settlements and identifying large areas as closed military areas. These practices have separated these communities from each other and isolated them from the close cities and main markets. These conditions have resulted in reducing production capacities, income, food security and livelihood of these communities. Furthermore, the access of such communities to public services has become limited, especially veterinary and agro-extension services. Leaving these farmers/herders and their families vulnerable to crisis and shocks. Bardala is a prominent of the Jordan Valley communities that faces these obstacles and constraints and its people's livelihood is negatively affected.

This project has targeted Bardala village in the northern part of the Jordan Valley which near an Israeli permanent checkpoint and enclave by the separation wall. Bardala's total area covers 20,000 dunums of which of 400 dunums are classified as urban areas and 10,000 dunums as arable lands. Since the year 2000, up to 2000 dunums have been confiscated (10% of the village land) and up to 200 dunums of the cultivated crops have been bulldozed by the occupation military forces. The village is enclave by the separation wall from the north; which isolates 2542 dunums of the village land (12.7% of the village land). With an 8,400 barbed-wire meter and passing through the village lands. See Map 1

Bardala is an agricultural village as 93% of the people are engaged in agriculture. Based on the PCBS census and estimates for the year 2012, Bardala population is 1954 people forming 325 families with an average family size of 6. This village is rich in livestock as it contains around 6,530 heads of sheep and goats and up to 550 heads of cows. 30% of the village populations breed local breeds of sheep, goats and cows (Source: Tubas Agricultural Directorate, 2012). See map 1

The livestock breeders are facing several problems including low fertility, low production of milk and a limited milking season. They face a problem in marketing their produced cheese in their community, as 20% of the village families have livestock, thus they have to transport their cheese for more than 15 km to sell it in Tubas city for a low price. Also, due to the warm conditions in the village area, part of their production is usually lost due to spoilage. Also, the hygiene levels for milking and milk processing are poor. Veterinary services within the village are also poor and the farmers are lacking knowledge to improve the management of their flocks.

Furthermore, the farmers they have to transport their produced cheese through the Israeli military checkpoint which is located between Jordan Valley and Tubas city. This checkpoint usually acts on delaying the movement of people and goods, especially when any political crisis happened. Thus this make the Bardala farmers milk product under threat of spoilage

due to the long stay on the checkpoint under high temperature and sometimes they found themselves are obligated to bring back their product to the village where they lost their production. Thus a resilience procedure should be done to protect these farmers and their production from the occupation practices and to make them more resilience to any imposed marketing crisis.

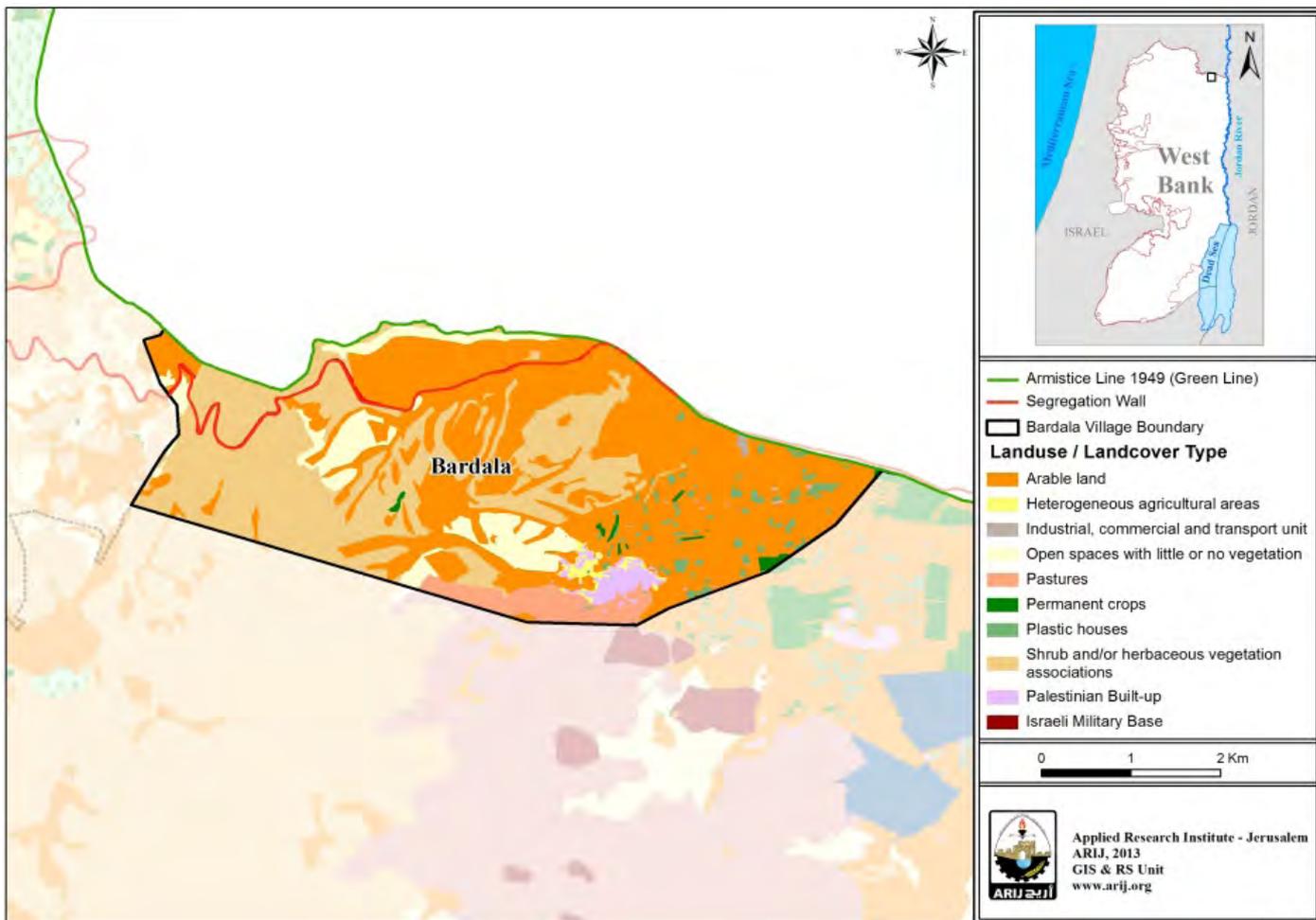
Furthermore, women are mainly responsible for milking (85% carried out by women), making cheese (100% carried out by women) and feeding the livestock (50% carried out by women) which is very time consuming and difficult to manage alongside the caring for family and children. Thus the herding women are using most of their time in managing the family, sheep and goats and processing the produced milk. Thus, the women need support to reduce their responsibilities regarding the sheep and goats as they need more time for themselves, their children, and to housework.

These constraints have big implications on the herder's ability to improve their breeding activities; the production and marketing of their milk produce (market limits). This situation has been causing big and continuous deterioration in their livelihoods.

Most of the livestock breeders are members of the registered Bardala Society for increasing animal wealth. The Society has 57 members who are breeding livestock (sheep, goats and cows). Another issue is the soar in the feed prices, where the farmers found themselves providing their heads with the minimal amount of feed to survive. This resulted in lowering the volume of milk produced and in shortening the milking season, which limits the productivity and profitability of such activities.

There is a need to restructure the existing livestock management system through creating a hygienic milking, processing and marketing system and to apply the feasible interventions to reduce feed costs, increase productivity, improve the hygiene and increasing marketing opportunities which will result in breeder's profitability and less time consuming for managing the flocks and processing their products as well as reducing the prices for the consumer (especially in the middle and southern parts of the West Bank).

Map (1): Badala village land use land cover analysis





3. Executive summary:

The project funded by the DanChurchAid (DCA) and implemented by the Applied Research Institute - Jerusalem (ARIJ) has, without a doubt, contributed to improving the quality of life of beneficiaries' households, and will impact, upon their recovery, through asset building, and livelihoods enhancement through very high standards of project design and implementation in Bardala Village, Jordan Valley, Tubas Governorate in active sharing with Bardal Society for Increasing Animal Wealth (BSIAW) and with cooperation with Tubas Governorate and the Agriculture department in Tubas.

As stated in the TOR, the primary purpose of the final evaluation is to assess mainly the impact, effectiveness and relevance of the project in relation to its stated purpose, objectives, target groups, partners and other affected parties. It is also to assess project progress towards its stated purpose and identification of constraints hindering such progress. The analysis of the results has been based on the criteria of Quality and Relevance of Design, Effectiveness, Efficiency of Planning and Implementation, Impact, and Potential for sustainability, replication and magnification. Moreover, the final evaluation identifies key lessons and experiences that have resulted from the project during the years of implementation. Linked to the findings under the above sections, overall conclusions will be drawn and listed in terms of importance. The evaluation is expected to make clear and detailed recommendations for the way forward: how to increase effectiveness of implementation if activities are to continue.

Results of the evaluation

The project has shown a high level of overall performance in a scale of 1 to 5 (5= Very high, 4= High, 3=

Normal, 2= Less than normal, 1= None). Below are the key results and conclusions about the project's performance from the assessment in line with the five standard evaluation criteria: Quality and Relevance of Design, Effectiveness; Efficiency; Impact; and Potential for sustainability, replication and magnification.

Standard evaluation criteria	Project performance key results
Quality and Relevance of Design	<p>Very high; Project relevancy at sector, national and international is very high and proves itself in:</p> <ul style="list-style-type: none"> - Palestinian Ministry of Agriculture (MoA) The vision of the national agriculture sector is presented in the general objective, which is to be achieved during the coming phase, the Agriculture Sector Strategy 2013 – 2016 and related national policies; - The strategic plan of the Cooperative Sector in Palestine (2011-2013) prepared by the Ministry of Labour. - ARIJ vision and mission, values and principles. - DCA vision, mission and values. - Also there is a deep linkage between the suggested interventions within the project with the Millennium Development Goals (MDGs).
Effectiveness	<p>Very high; Output Indicators are all achieved. During the years of the project time frame, all of the activities are done and all of outputs are achieved. In addition; the Project Goal and Purposes are very ambitious and have been met during the project time frame.</p> <ul style="list-style-type: none"> - The project provided farmers with disinfection materials and (60) electrical milking machines and 59 stainless steel jars. - New Farm Company (NFC) has successfully marketed (15,623kg) milk directly from the hygienic collection assembly unit in Bardala in addition to (3,000 Kg) home made cheese. - A series of (31) training workshops have been conducted for (1,305) project farmers (782 males + 523 females) on livestock management, feeding and providing the proper veterinary services. - With the support of the project team and Bardala Cooperative, and in cooperation of the veterinary doctor, (10) women found an encouraging environment to develop and establish of a veterinary pharmacy. - The Bardala veterinary pharmacy has provided services for (161) livestock breeders with (10,000) sheep from Bardala village and other surrounding villages. <ul style="list-style-type: none"> - The veterinary doctor conducted (104) working days with (1,168) field visits. - The breeding system of the targeted folks of sheep in Bardala has been improved through introducing artificial insemination for (995) of mother sheep owned by (99) farmers (78 males and 21 females). - Distributing (117 tons) of new milking feed mix, from which Bardala Cooperative has bought collectively (50 tons) from the mix for the benefit of (83) farmers through the project. - Vaccinations for intestinal poisoning have been applied to (12700) head of sheep owned by (100) farmers. - Conducted training workshops in milk processing, quality control and hygiene for 60 women. - 60 women received suitable tools to improve the quality of their processed milk and maintain the hygiene level. - Conducted training workshops for the Bardala Society on good governance, art of documentation and better management, and how to improve its support for the members and community. - Farmers continue practicing irrigated fodder cultivations to feed their flocks (28) dunums planted with green forages by (28) farmers. - The project team has created strong networking with the MoA, NGOs, and other actors, in order to maintain continuity and transfer the project idea to other areas of the West Bank to serve the largest possible number of livestock breeders

Efficiency	<p>Very high; Funds, time and human resources are used effectively. The total confirmed financial resources allocated to ARIJ \$ 549,352.80. Of the total financial resources in the project time frame, \$371,250.00 = 67.6 % were used to provide resources and services (equipment, supplies and training/consulting fees) and nearly less than 23.6% were used to cover staff costs during the project time frame, while the rest was allocated to other expenses.</p>
Impact	<p>Very high;</p> <ul style="list-style-type: none"> - Target group capacity and awareness are improved. - Increasing the selling price of one kg of local cheese to 20 NIS compared with 16 NIS for the livestock breeders who didn't benefit from the project activities. - The produced milk by the served heads of sheep and goats by the new feed mixes and green forages was increased by 0.6 kg/ head/day (by 40%) And the milking period increased from 140 to 170 days. - The obtained amount of milk increased from 1.4 to 2 kg per milking head/ day in targeted sheep by the new produced mixed fodder and green forage. - The percentage of succeeded natural insemination in the well fed on the green forages and concentrates that developed by the project increased by 25% compared with before the project interfere. - The project managed to reduce the costs that the livestock breeders pay for feeding and providing medical care to their flocks by 38% in the directly benefited sheep heads. - The total number of the sheep heads that are owned by the livestock breeders in Bardala in the year 2016 reached (5,400) heads based on the number of consumed vaccines by the project, compared with (5,200) heads in the year 2014. - By improving the nutritional status for the flocks, sheep fertility increased and apportion rate reduced by 25%.
Sustainability, replication and magnification	<p>Very high;</p> <p>We are fully trust that the project gained high level of sustainability and this model can be easily replicated in other locations with great success if the same approach of implementation is adopted again. In addition, building on the success of this project, continue the project expansion into phase 2 to magnify, empower and build on what have been achieved in phase 1, this will be a winning decision depending on concrete success base.</p>



4. Intervention description

The Applied Research Institute – Jerusalem (ARIJ) is about to complete the implementation of the project titled “Assist in improving the productivity and feasibility of livestock towards better food security and livelihood in vulnerable areas of the West Bank”, funded by the Jerusalem Office of DanChurchAid. The project is being implemented over a 38-month period, starting on 1 November 2013 and expected to finish on 31 December 2016. The overall objective of the project is to support and empower the existing 161 livestock breeders/herders in the Bardala village directly and indirectly with a focus on small/medium breeders/herders as well as providing the Bardala Society for Increasing Animal Wealth (BSIAW) with necessary emergency and technical agro-production inputs, knowhow, and resilience practices to protect and sustain the agro-production resources and income activities; the general focus of the project is on female breeders/herders. During the lifetime of the project, ARIJ team has worked to restructure the existing livestock management system in Bardala into a hygienic milking, processing, and marketing system. Meanwhile, the implementing body applied practical, feasible interventions which aimed to reduce livestock feed costs, increase productivity, improve the hygiene, and increase marketing opportunities in order to boost breeders’ profitability, reduce the time needed for managing the stocks and processing the produces, and bring down the prices for consumers. The project activities also allowed women to reduce their responsibilities in the livestock management system, while providing them with more time for themselves, their children, and housework and enhancing their economic role. These actions were targeted at achieving the specific objectives of the project, including:

- a) Assisting livestock breeders in improving and sustaining their livestock and dairy production, processing, and management system to satisfy both targeted herders and consumers;
- b) Building the capacity of farmers with regards to livestock management;
- c) Milk production, processing, and marketing; and
- d) Activating and building the capacity of the BSIAW in supporting herders’ livelihood and boosting women’s economic role.

The project has one main target group: namely, the vulnerable livestock breeders in the Bardala village, located in the northern part of the Jordan Valley in the West Bank, who are members of the BSIAW, with focus on women. The direct beneficiaries comprised the 161 livestock herders in Bardala. The BSIAW, as the umbrella organization under which Bardala herders work, is another direct beneficiary. Finally, consumers are indirect beneficiaries who will profit from better-quality dairy products at lower prices supplied by the Bardala farmers.



5. Evaluation purpose

The chief objective of the external evaluation is to analyze in an objective, critical, accessible, and transparent manner the progress and accomplishments of the project activities including:

- a) An overview of the project's outcomes with regards to the overall objective, the specific objectives, and the attained results in reference to the project proposal and other relevant documents;
- b) An assessment of the overall impact of the project focusing on the extent to which the project activities contributed to improving the value chain of small/medium dairy production in Bardala with respect to livestock management (feeding, breeding, and veterinary care system), dairy production, and marketing (including coordination and networking between the BSIAW as well as Bardala herders and New Farm Company and other private sector markets);
- c) Analysis of the explicit impact of the project on enhancing the role of female breeders with respect to breeding, milking, processing, marketing, and establishing and managing cooperatives;
- d) A measurement of the resulting socio-economic effects on the specific target group (vulnerable Bardala herders) as well as on the Bardala community as a whole;
- e) Appraisal of the sustainability of the project with regards to the BSIAW's capacity to manage itself efficiently and effectively after the end of the project;
- f) An evaluation of the overall appropriateness of the actions of the project in reference to the baseline needs of the Bardala farmers;
- g) A consideration of the general level of satisfaction of the target group with the project interventions, implementations, transparency, and accountability;
- h) A study of potential gaps, challenges, and risks which could affect the project sustainability and development of recommendations on how to reduce them;
- i) Identification of the lessons learnt; and
- j) Provision of recommendations for future actions and interventions within the herders' community in Bardala.

In the evaluation of the project impact based on the above-listed features, the evaluation team will focus on such aspects as:

- a) Participation (whether direct beneficiaries and key stakeholders participated in the design, implementation, and evaluation of the project);
- b) Accountability (whether commitments were clarified to rights-holders);
- c) Non-discrimination (whether specific steps were taken to include vulnerable groups);
- d) Empowerment (whether rights-holders have become more capable of claiming their due rights); and
- e) Gender balance (whether women have received their fair share of participation and benefit from the project activities).

Moreover, the evaluation of the above aspects of the project will be based on the following overarching criteria:

- a) Relevance – to evaluate the extent to which the project design, interventions, and implementation addressed the baseline needs and priorities of the target group and the degree to which the project objectives and results serve the interests and strategies of ARIJ and DanChurchAid;
- b) Effectiveness – to assess the degree to which the project overall objective, specific objectives, and expected results have been achieved and what unforeseen, possibly negative effects the project might have;
- c) Efficiency – to measure the extent to which the conversion of resources and inputs into results was carried out in a cost-, time-, and human resources-efficient manner;
- d) Impact – to analyze the long-term positive and negative, primary and secondary, direct and indirect, intended and unintended effects of the project implementation and the degree to which the value chain of livestock production and management has been improved; and
- e) Sustainability – to investigate the expected long-term benefits to the target group and other direct and indirect beneficiaries beyond the implementation period and whether local ownership of the benefits has been established.

6. Evaluation methodology

In order to conduct the external evaluation assignment within the terms of reference provided by ARIJ and to achieve the desired results, the evaluation team together has designed an initial methodology based on the information supplied in the tender documentation. Upon the approval of this proposal by ARIJ, the evaluation team started to engage ARIJ and DanChurchAid in the further development of the evaluation methodology including the review tools and evaluation indicators in line with HRD's standard participatory approach which sees clients as partners.

6.1. Work Plan: Deliverables and Milestones

The ten-day evaluation timeframe involved both desk work and field work for the purpose of collecting data and information, started with staff meeting and the systematic review of all relevant documentation related to the project and provided by ARIJ. The applied methodology comprised of the following components:

• Desk work

In preparation for the field work, the evaluation team has performed the following activities:

- I. The evaluation team had a meeting with project staff at ARIJ premises in Bethlehem, discussed the project objectives, results and activities and they have handed the project documents to us.
- II. The next day, the evaluation team had another meeting with project field coordinator at ARIJ sub office in Tubas, the field coordinator explained for the team the progress of the activities from the first day of the project until now and the project future perspectives.
- III. Conducted a systematic review of all key documentation from 2013 to the present including the full project technical and financial proposal, budget, progress reports, annual technical and financial reports, project correspondence, monitoring and evaluation forms and report, project notes and minutes of meeting, an needs assessments, whether available in English or Arabic;
- IV. Designed and developed qualitative and quantitative data collection tools in Arabic language to carry out the evaluation in accordance with the project's objectives and expected results;
- V. The developed data collection tools have been sent to ARIJ staff and field coordinator for discussing and reviewing in accordance to participatory evaluation approach.
- VI. Developed a detailed field visits action plan for four days duration, sent to ARIJ staff for approval, and after getting the approval, the evaluation team lady started field visits to Tubas and Bardala for collecting qualitative and quantitative data.

• Field work

In selecting the sample for the field work, the evaluation team applied the criteria below:

- o Location: The location is Bardala village, where the project has been implemented and Tubas city where the Governorate, agriculture directorate and ARIJ sub office located.
- o Beneficiaries: Representative sample approach has been applied; the evaluation team has selected the participating beneficiaries according to the following criteria: Key stakeholders, gender, membership at the BSIAW, and vulnerability. Proportionately more female herders will be surveyed and interviewed in accordance with the project's focus on women empowerment.

Data collection tools included:

- o (3) Visits to project sites;
- o (31) Questionnaires completed;
- o (14) Semi-structured interviews with beneficiaries, ARIJ and DanChurchAid project staff, key staff members of the BSIAW and New Farm Company, and other stakeholders (local Agricultural Directorate, the Veterinary Department at Tubas Agricultural Directorate, Tubas Governorate, and local and international NGOs staff working on similar project interventions);

- o (2) Focus groups: the first one; targeted direct and indirect beneficiaries and other key stakeholders, and the second one; targeted lady benefited from veterinary pharmacy.
- o Review of relevant reports from the food security sector, agricultural and livestock cooperatives, dairy production value chain stakeholders, and public-private partnerships, especially those focusing on the marketing system in Palestine for sheep and goats dairy products.

• Reporting

After finalizing the field work, the evaluation team has prepared:

- o A detailed qualitative and quantitative analysis of the collected and verified data and information;
- o Debrief ARIJ and DanChurchAid on the research findings, conclusions, and recommendations for future actions;
- o Writing a draft report in English;
- o Collecting feedback including points for clarification and recommendations for improvement;
- o Preparing and submitting the final draft report with all requested information to ARIJ.



7. Findings

7.1. Relevance of the Project

7.1.1. Relevance to the Target Beneficiaries

The project worked on building the capacity of the cooperative, equipping it and building the capacities of its members. Workshops involving farmers were held in the target location in order to accurately assess needs and to identify gaps in sheep livestock sector. Further, meetings with the Ministry of Agriculture representatives have been held in order to ensure a clear picture of the needs and the relationship between local and central levels.

The project documents/processes provided a clear mechanism to ensure that the project support would fit the beneficiaries' core developmental needs in terms of improving the livestock production techniques and enhancing dairy products access to markets, as the criteria for selecting the beneficiaries required that each beneficiary should be involved in livestock production activities and marketing process of milk and milk products, so all services, interventions, equipment, tools, skills and productive assets that would be utilized in livestock production process would offer added value in terms of enhancing their production capacity, quality, market performance, competitiveness, and so forth. These are - without doubt- critical factors to ensure that the targeted community is in a better livelihood position, and is capable of effectively contributing to the nation's economic development. Empowerment of this sector in the Palestinian economy could be effective and efficient approach to promoting economic development and creating sustainable livelihood resources.

Almost all of the beneficiaries and local committee representatives interviewed or being parts of focus groups, gave very positive feedback on the project's effect on their performance, confirming that the project interventions were relevant to their needs. Most of the beneficiaries interviewed indicated to one degree or another that the project provided them with valued support that enabled them to adopt efficient production techniques, improve quality, reduce their production costs, or improve their income potential.

7.1.2. Relevance to National Priorities

The Palestinian Authority considers investing in the agriculture sector important to mitigating food insecurity, preventing confiscation of land, providing jobs and steady income to farmers, and contributing to export growth.

The vision of the national agriculture sector is presented in the general objective outlined below, which is to be achieved during the coming phase, the Agriculture Sector Strategy 2013 – 2016 and related national policies, the future vision for Palestinian agriculture is to have a sustainable and feasible agriculture sector that can compete domestically and externally; and can effectively contribute to enhancing food security and the connection between the Palestinian people and their land, while also enhancing Palestinian state-building efforts through resource sovereignty.

The future vision for Palestinian agriculture is:

“To have a sustainable and feasible agriculture sector that can compete domestically and externally; and can effectively contribute to enhancing food security and the connection between the Palestinian people and their land, while also enhancing Palestinian state-building efforts through resource sovereignty”.

It is clear and obvious the link between project objectives and the future vision for Agriculture Sector Strategy 2013 – 2016, regarding of having a sustainable and feasible agriculture sector that can compete domestically and externally and can effectively contribute to enhancing food security and the connection between the Palestinian people and their land, while also enhancing Palestinian state-building efforts through resource sovereignty

And the same we could say about the related policy and the proposed policy trend in which both policies have strong link with project objectives by targeting marginalized groups, small holder farmers and women in rural areas, and the achievement of food security at the household level in addition to providing jobs and additional sources of income for rural women and men.

Related Policy: Support and protect marginalized groups, especially smallholder farmers, impoverished people in rural areas, women and Bedouins.

Proposed policy trend: Implementation of this policy will include a set of activities that will contribute directly to the achievement of food security at the household level in addition to providing jobs and additional sources of income for rural women and men.

And the project targeting the cooperative has strong link with the strategic plan for cooperative sector in Palestine (2011-2013) prepared by Ministry of Labor focus on the following strategic goals:

1. To provide an institutional environment that enables the development and growth of the cooperative movement as one of the main economic sectors.
2. Increase the total value of current investment in the cooperative societies.
3. Improve the general performance of the current cooperative societies in accordance with the best practices in cooperative work.
4. Encourage new social initiative for establishing cooperative societies that are able to develop in themselves or develop al-ready established societies.

The evaluation team completely convinced that the project is relevance with strong evidence and links between the project objectives and the national strategy and priorities.



7.1.3. Relevance to the Stakeholders & Funders:

The stakeholders operate on the premise that efforts need to be made to streamline best practices in the targeted groups of the livestock producers value chain in Bardala; encouraging efficient complementary management, creating institutional hubs in a gender equity, producing quality milk and milk products, marketing, planting green forages, artificial insemination and the veterinary pharmacy. Since the beginning of the project, the project team managed to create a strong partnership with Bardala Society, the community, the beneficiaries, Agricultural Directorate of Tubas, veterinary department, Tubas Governorate, Beit Qad Agriculture research station and other active organizations in the area such as Care International, FAO, ICARDA, NARC, Good Governance program at ARIJ other related stakeholders and New Farm Company as private sector.

The created networks of communication, partnership and relationship with other stakeholders made them aware about the project activities and encouraged them to exchange their experiences with the project team toward better, sustainable and prolong impact. The direct involvement of the agricultural Directorate veterinary Doctor and the livestock breeding and management engineer in the project activities and the direct responses to their recommendations encouraged them to feel the ownership and the real partnership in the project and feeling the success achieved by the project is also due to their direct involvement in the project activities. This approach has created strong relations between the beneficiaries and the MoA staff which can guarantee this relation even after the project life.

The project is among the core element of the stakeholders' vision, missions, goals, values & principles, organizational cultures and experience. Without doubt, the project could be among the most effective and efficient approaches to ensuring livestock feasibility and promoting rural development.

The project objectives are clearly congruent with the stakeholders' strategy. This project focuses on food security, livelihood, sustainable agriculture and improving the livestock sector of Bardala village which fits with ARIJ's vision and mission as well as its developmental goals.;

ARIJ vision, Mission, values & principles are on line with project strategy and priorities.

See ARIJ website; <http://www.arij.org/>

ARIJ vision: Towards a Sustainable Palestine.

The main project objective is to create sustainable rural areas in Bardala in which in strong link with ARIJ vision.

DanChurchAid is a faith-based and ecumenical, non-missionary organization rooted in the Danish National Evangelical Lutheran Church. DanChurchAid carries out its work with the objective;

"To help and be advocates of oppressed, neglected and marginalized groups in poor countries and to strengthen their possibilities of a life in dignity"

And it this objective of helping marginalized groups in poor countries and to strengthen their possibility of a life in dignity is bright clear evidence for the link between DanChurchAid objectives with the project objective.

DanChurchAid vision, mission and values the same are on line with the project strategy and priorities. See DanChurchAid website; <https://www.danchurchaid.org/>

The evaluation team completely convinced that the project is relevance with strong evidence and links between the project objectives and the stakeholders and funders.

7.1.4. Relevance to International Priorities

The Sustainable Development Goals (SDGs) have produced the most successful anti-poverty movement in history and will serve as the jumping-off point for the new sustainable development agenda to be adopted. The final SDG report confirms that goal-setting can lift millions of people out of poverty, empower women and girls, improve health and well-being, and provide vast new opportunities for better lives. Also there is a deep linkage between the suggested interventions within the project with the Sustainable Development Goals (SDGs), these are:

- » SDG 1: Eradicate extreme poverty and hunger
- » SDG 3: promote gender equality and empower women
- » SDG 7: Ensuring environmental sustainability
- » SDG 8: Develop a global partnership for development

The evaluation team completely convinced that the project is relevance with strong evidence and links between the project objectives and the international priorities.



7.2. Effectiveness: Achievement of Project Objectives & Results

Effectiveness is defined as the ability to achieve the results through the implementation of planned activities and carrying out the outputs. The chief objective of the external evaluation is to analyze in an objective, critical, accessible, and transparent manner the progress and accomplishments of the project activities.

The project main objective and results were developed based on the actual need of Bardala Community which is majorly considered as an agricultural community. This approach has encouraged the involvement of community members to apply to benefit from the project activities and to learn from the introduced new techniques. As the project is working with a conservative community (rural) one of the main challenges was how to enhance women participation in the different project activities as they are working in men led community.

The project structure focused on the involvement of different stakeholders including governmental and social bodies with main focus on the direct beneficiaries. Thus all the cooperative and community members were involved and informed about all stages/activities of the project, to be more transparent and to benefit the suitable households. The community committee is very active and contributing in beneficiary selection, providing the inputs and assets, and training as well. The community committee is involved in decision making concerning the different project issues and equipment and tools selection and specifications through the conducted meetings with the community and the advisory committees.

The feedback by the farmers and the technical committee are always taken into consideration, their concerns and questions are making decisions and planning activities that goes along with the beneficiaries' needs, culture and environment.

The result of stakeholders' direct involvement in managing the project was at very high level, the result was clear after analyzing the questionnaires and showing the level of beneficiaries' satisfaction of such project management procedure reaching more than 92% of very high and high results for all stakeholders management, the highest score were giving to ARIJ institution and its field coordinator 92% very high and 8% high.

Figure 1: Showing the level of assessing the stakeholders' management activities by project beneficiaries. See annex (1)



The project is designed to achieve the following objectives as the means to achieve the specific objective and the overall objective:

7.2.1. The first project objective:

Create a hygienic dairy collection-processing and marketing system for the benefit of the 60 sheep and goats breeders of Bardala Society (all members) for Increasing Animal Wealth (Society) in partnership with New Farm Company (NFC).

The first objective has been fully achieved.

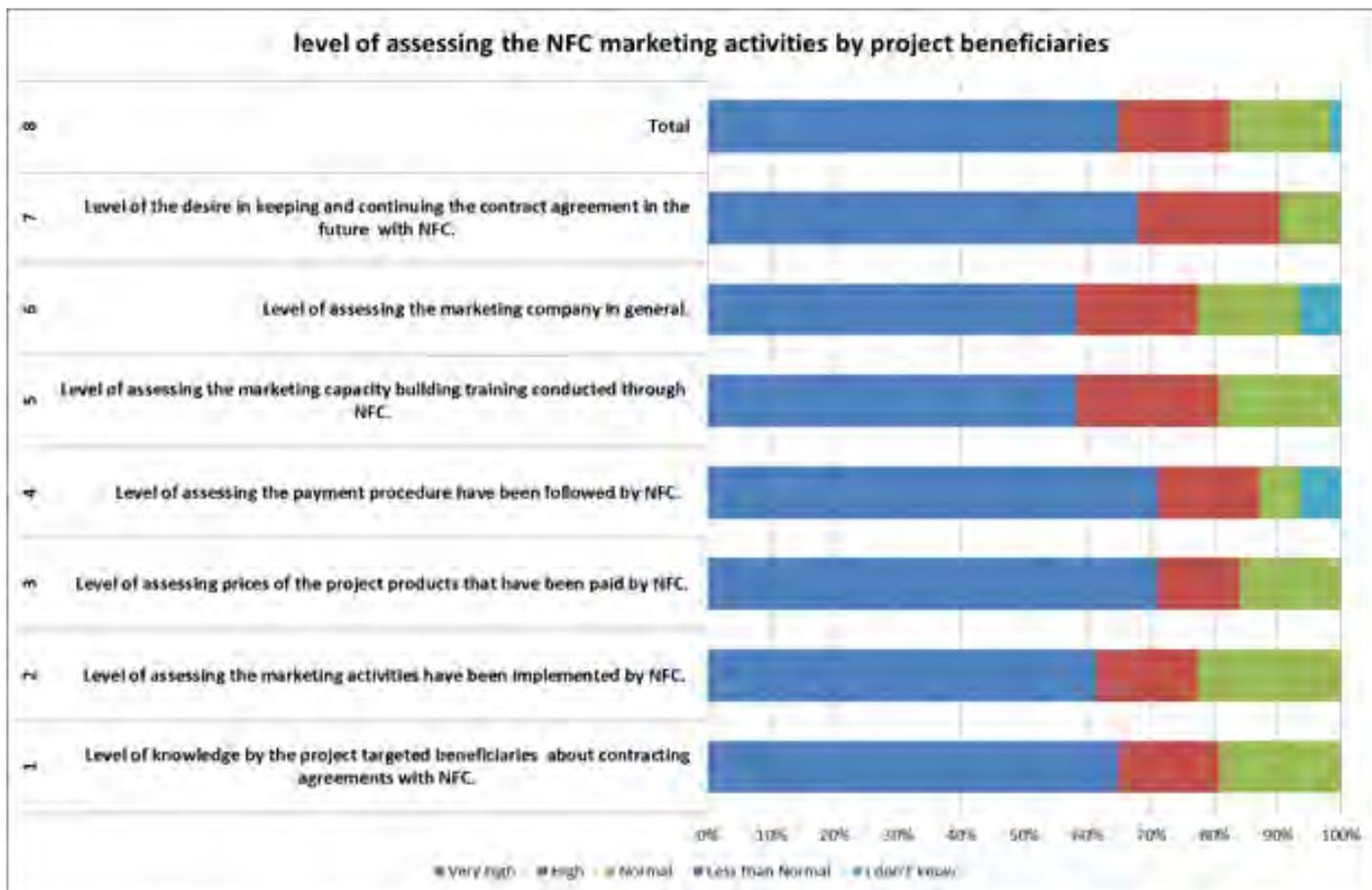
Outcome: The established milk collection, processing and marketing system is working and doing well. The milk collection center and the milk processing units both at Bardala Society and NFC became functioning.

The project provided farmers with disinfection materials and (60) electrical milking machines and nearly the same amount of stainless steel jars, they started using them to provide the milk collection assembly unit and to transfer the milk to their houses. All the collected and stored milk and cheese were delivered to New Farm Company (NFC). The NFC has successfully marketed (15,623kg) milk directly from the hygienic collection assembly unit in Bardala, where this amount of milk has been tested before being stored in the cooling milk tank, NFC has processed this amount of milk to yoghurt and into Labaneh

(creamy yoghurt), which packaged, labeled and sold locally and abroad. And NFC marketed (3,000kg) cheese prepared and manufactured by targeted women beneficiaries through using the improved stainless-steel piston has been distributed by the project to improve the quality and the hygiene of produced cheese by farmers' wives. The NFC managed to process, packing, labeling and marketing all the received milk and cheese through the milk collection unit at Bardala in more than (17) selling points in Tulkarm, Ramallah, Jerusalem and Bethlehem. New selling points were joint the marketing system which are the consumer cooperatives Deir AL-Ghsoun Coop and ARIJ employees Coop in Bethlehem. So these create the marketing concept from Cooperative to cooperative system (C to C).

Beneficiaries believe that NFC is doing great marketing job in Bardala livestock project, figure 2 gives clear details in assessing NFC marketing activities.

Figure 2: level of assessing the NFC marketing activities by project beneficiaries in Bardala. See annex No. (1)



7.2.2. The second project objective:

Building the capacities of sheep and goats breeders to improve and sustain their livestock management and production system.

This objective has been fully achieved.

Outcome: The farmers built their capacities and started implementing the trained livestock management and using proper techniques.

A series of (31) training workshops have been conducted for (1305) project farmers (782 males + 523 females) on livestock management, feeding and providing the proper veterinary services including the following subjects:

- Running and using the purchased equipment's (Milk center machines and Milking machines).
- Farm management, animal health, feasibility and marketing, recording and filing, feeding and feeds.
- Enterprise initiation and development.
- Sheep and goat breeding's and improvement.
- Food processing and food hygiene.

- Cooperative managed and development.
- Awareness against Brucellosis disease.
- Other.

Through the previously accomplished activities, the planned training workshops were conducted and the targeted 1305 trainees were achieved as well as the farmers who started applying and practicing the gained new know how and better practices.

7.2.3. Third project objectives:

Empowerment of women's livestock enterprise initiative, support farmers to improve the fertility and the health of their flocks, providing farmer women with hygienic milk processing tools to produce better cheese

This objective has been fully achieved.

Outcomes:

- 1- Assist women lead and poor families to establish collective/individual enterprises to generate income and to improve and diversify their livestock activities that lead to improve the livelihood of targeted families and community as well
- 2- The farmers are supported to improve the fertility and health of their flocks, pregnancy rate and the number of delivered new-born.

Outcome 1- The provided training about enterprise development for the selected women from the village of Bardala resulted in building their capacities to think of the benefit of their village rather than their individual benefit and to invest collectively rather than individually. With the support of the project team and Bardala Cooperative, and in cooperation of the veterinary doctor, (10) women found an encouraging environment to develop a proposal about the establishment of a veterinary pharmacy in Bardala which is directly responding to the need of their livestock and to that in Bardala village and the neighboring villages. The idea of starting such an investment was highly supported by different stakeholders as well as the farmers. Accordingly, the pharmacy was established along with a well-developed plan to provide medicines in addition to veterinary services and any other needed services. To guarantee the sustainability of this activity and the rights of the benefitted women, legal agreements were developed and signed by all parties. The applied activities of establishing the veterinary pharmacy assured the participation of the benefitted women in all stages, such as the bidding procedure, sharing system, distribution of benefits, and how to follow up the progress in the work of the pharmacy. It is worth mentioning that this was the first real opportunity for the women of Bardala to own such a personal investment.

The Bardala veterinary pharmacy has provided services for (161) livestock breeders with (10,000) sheep from Bardala village and other surrounding villages (Kardala, Ein Al-Beida, Al-Farisya, Al-Hadida, and Al-Maleh). The veterinary doctor conducted (104) working days with (1168) field visits. The coop and through the established veterinary pharmacy and the project veterinary doctor and the livestock expert have cut the wool for (2000) sheep heads from Bardala village owned by (35) farmers and with (4 NIS) per head.

Outcome 2- The breeding system of the targeted folks of sheep in Bardala has been improved through introducing artificial insemination for (995) of mother sheep owned by (99) farmers (78 males and 21 females). Farmers managed to improve the fertility of their flocks through adopting the artificial insemination techniques in addition to the type of feed which provided for sheep and election new ewes which resulted from artificial insemination affecting the increase in pregnancy rate.

Some reasons for changing ram distribution activity with artificial insemination in 2016:

- The artificial insemination is faster than natural insemination in transferring genetic ally improved traits.
- The artificial insemination controls the possibility of diseases transfers and infections specially the abortion diseases (Chlamydia & Toxoplasma);
- The rams of which their semen is used for artificial insemination are already registered, and their genetic traits are well identified and usually have special medical treatment and veterinary record. Thus the transfer of desired improved traits to the offspring occurs in the first season crossbreeding.
- The transfer of required improved genetic traits from the purchased Rams to the farmers sheep through natural insemination is usually occur after three years of continuous flock inbreeding. Thus the certainty of transferring these traits (if presence) to offspring is based on the quality of purchased rams provided by the bid winners.

Outcome 2.1- The health of the pregnant and delivered newborns have been monitored and improved through the developed and provided the new mix of feed and distributing (117 tons) of new milking feed mix, from which Bardala Cooperative has bought collectively (50 tons) from the mix for the benefit of (83) farmers through the project. Additionally, the health of the newborns have been improved, due to the less numbers of occurred abortions, less percentage of died new born and the significant increase in the milk production achieved by the targeted livestock.

Outcome 2.2- Vaccinations for intestinal poisoning have been applied to (12700) head of sheep owned by (100) farmers, so as to prevent mothers and newborns from intestinal poisoning disease as a result of the transition from old diet to the new dieting system.



7.2.4. Fourth project objectives:

Improve women's knowledge and practices in milk processing and hygiene practices; support the society to build its management and good governance system through institutionalizing the provided inputs and empower its provided services to the village also, protection vaccines against the Brucellosis infection.

This objective has been fully achieved.

Outcomes:

- 1- Conduct training workshops in milk processing, quality control and hygiene for 60 women. The 60 women will receive suitable tools to improve the quality of their processed milk and its hygiene level (especially cheese processing).
- 2- Conduct training workshops for the Bardala Society on good governance, art of documentation and better management, and how to improve its support for the members and community.
- 3- Support farmers to cultivate fodder in their fields
- 4- Project exit strategy will be implemented in partnership with the society and other stakeholders to guarantee the sustainability and functionality of established systems and mechanisms.
- 5- Conduct end line survey to measure the impact of the project's activities on the livelihood of targeted households and Bardala village as targeted community. Accordingly, special report will be prepared and disseminated about this model and final workshop will be conducted for different stakeholders.

Outcome 1- The project targets Bardala village, which is considered an agricultural village facing critical restrictions on movement and violations of the Israeli Occupation. That imposes many difficulties on people's agricultural activities and hinders marketing and selling their dairy products as a source of living and exposing it to spoilage. Also, the village receives limited veterinary services and extension services about livestock breeding in addition to lack of capacity building on dairy food hygiene and to find ways to reduce the high costs of feed. The project aims at enhancing the resilience of the farmers and supporting them to practice their economic activity freely and effectively.

- As the women have the most significant role in milking, making cheese and feeding the livestock in addition to taking care of the household and family at Bardala village; the project targets the women of the cooperative (the wives of men members or the women members) through providing production inputs and tools that ease the process of dairy production, saving time and effort of the women to become involved in other activities, especially taking care of herself and giving more time to her kids, children and family. Also, special trainings are directed to the women to improve their awareness regarding the hygiene conditions, collective work and coordination presents their needs and share their expectations from the project. Also, women are always encouraged to participate in all project activities and they were always given the priority.

The project directly supported (60) women to establish dairy processing unit at their homes providing them with the suitable tools and equipment to enhance their work and improve the quality of their products; Stainless steel cheese piston, Stainless Steel cooker, Stainless Steel scoop, Stainless Steel severs, cloth for cheese shaping, and a thermometer, gloves, masks and head caps, robes, and stainless steel bowl. This will help women to reduce the allocated time for food processing and produce a clean and healthy food for their household in addition to producing competitive and marketable products for better income.

- On the second level, 10 women were supported to create their own business through investing in establishing a veterinary pharmacy in partnership with Bardala Cooperative for Livestock Development. This is going to assist these women in generating income where they can utilize it for their needs and for their family needs well. This investment will contribute in building the business experience, decision making skills, and social involvement of women.

Moreover, the project strategy toward involving the livestock society as direct partner through which the project activities are coordinated. The trust of the community people had increased significantly which encouraged ARIJ to focus in building the society management and good governance capacity through providing additional trainings through other projects.

Training workshops were held about food processing and food hygiene for 60 women. These women managed to improve their practical knowledge applying the safety and hygiene measures and standard from milking to processing the cheese. 66 persons had participated (53 women and 13 men).

Outcome 2- The Society committee built its managerial and administrative capacities and adopted that in the society system; in addition it started providing better services to its members and the community as well.

The Bardala livestock cooperative has utilized the generated profit during the project life to purchase the sheep wool cutters with a total cost of 16,000 NIS. This will help farmers to improve the management of the flocks with cheaper prices as currently they pay 6 NIS per head to cut the wool.

The coop and through the established veterinary pharmacy and the project veterinary doctor and the livestock expert to cut the wool for 2000 sheep heads from Bardala village and owned by 35 farmers and with 4 NIS per head.

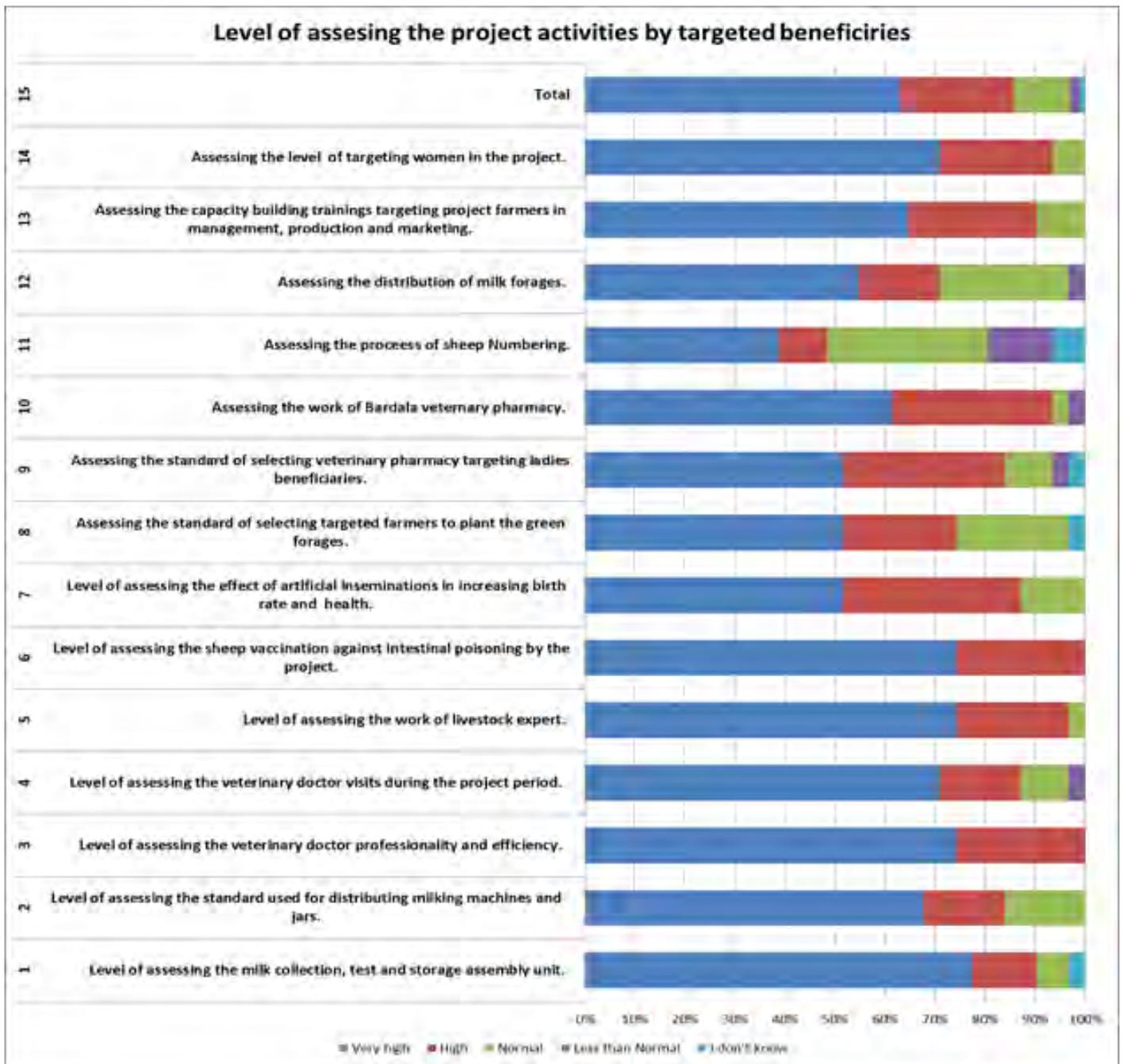
Outcome 3- Farmers continue practicing irrigated fodder cultivations to feed their flocks (28) dunums planted with green forages by (28) farmers. The total production was (197.5 tons) of green forages. Additional needy farmers benefited from the produce green forage by the coop land. This reduced the feeding cost by 31% and improved the nutritional status for the flocks. Sheep fertility increased and apportion rate reduced by 25%.

Outcome 4- The project team has created strong networking with the Ministry of Agriculture in order to maintain continuity and transfer the project idea to other areas of the West Bank to serve the largest possible number of livestock breeders, where the director of ruminants department at MoA, Engineer Mahmoud Fatafta, and the head of ruminants department in the Agriculture Directorate of Tubas Engineer Majdi Bisharat, had conducted a field trip to the project activities. They emphasis on the need to develop and sustain what is achieved in Bardala and to build on it to get to the full integrated model to serve the largest possible number of livestock breeders in the northern Jordan Valley and the governorate\ of Tubas area, and apply the

same model in other regions marginalized from the West Bank.

Outcome 5- On going

Figure 3: Showing level of assessing the project activities by targeted beneficiaries. See annex No. (1)



7.3. Efficiency

7.3.1. Funding and Budget Allocation

By the end of December 2016, of the total confirmed financial resources allocated to ARIJ (\$ 549,352.8) \(\$371,250.00) \ 67.6 % were utilized to provide resources and services (equipment, supplies and training/consulting fees) and less than 23.6% were utilized to cover staff costs, while the rest was allocated to other expenses.

Project budget and actual expenditures (US\$) by main budget line items and percentage distribution

Expenses Incurred by ARIJ		
Budget Item	Total	
	US\$	%
Personnel	129,502.8	23.60%
Equipment	321,450.00	58.51%
Capacity Building	49,800.00	9.07%
General Administration	48,600.00	8.85%
TOTAL	549,352.80	100

As shown in the above table, a substantive portion of the budget was allocated for provision of physical or technical support services to the target beneficiaries, while a bit less than 23.60% of the project budget was spent on salaries. This could be a relatively normal rate in comparison to similar projects and the project long interval period; thus, the budget structure is believed to be relatively adequate. It is believed that the allocation of funds to the main budget items was cost effective in delivering the intended results. It is worth indicating that the engagement of the local community in project implementation may have reduced the pressure on the project's human resources in terms of their engagement in community mobilization and selection of beneficiaries.

The project's cost-effectiveness is in evidence, since the funds disbursed for core infrastructure services, such as electrical milking machines and stainless steel jars, milk store and assembly unit, feed distribution inputs, purchasing equipment tools and assets to NFC, and so forth would result in long-term positive returns for the beneficiaries. The same can be said with respect to the target groups capacity building and training, which in turn led to positive sustainable outcomes for the beneficiaries and the entire local community. Finally, it is the opinion of the evaluator that the project budget was well allocated, since it efficiently directed the financial resources to the main expenditure line, specifically the final value received by the beneficiaries.

7.3.2. Organizational Structure, Human Resources, Planning and Management

At the basic level of the overall organizational structure of the projects, the project team did implement what was originally envisaged in the project design. The structure envisaged the ARIJ directorates to be responsible for the overall supervision and monitoring of the projects. Within ARIJ a core team leader oversees the implementation of the project in their respective regions.

ARIJ institution was constituted to be the highest monitoring and evaluation reference in the structure. ARIJ directorates were active and have performed its role as the highest policy and guidance unit for the project. According to ARIJ directorates members interviewed, ARIJ institution functions included high-level liaison, approval of the selection of the target communities, and approval of the broad decisions made by the Executive Committee. In practice, however, the ARIJ directorates focused mainly on high-level project supervision.

The evaluation team believes that the partners (Bardala livestock cooperative, New Farm Company, Veterinary pharmacy) have the necessary technical, organizational, and logistical capacity to be involved in the projects' activities and components. The evaluation team believes that there is a clear definition of the roles and responsibilities of each partner organization,

which facilitated the implementation of the project in addition to contract agreements between the partners. The project's management structure is believed to have been suitable for the scope and scale of activities. The expertise of the project staff was found to be well in-line with what is needed and their qualifications and responsibilities were commensurate with each other. This partnership between integrative women veterinary pharmacy created positive synergy through cooperation on a very detailed technical level. According to the project coordinator interviewed, the expatriate expertise coupled with effective interaction with the local expertise played a major role in delivering customized skills on both administrative and technical levels.

The evaluation team observed that the project coordinator clearly understood his respective responsibilities and his roles in contributing to the projects' high level of successful implementation. The coordinator was in contact on a daily basis. Anecdotal evidence suggests that the communication was effective for continuous discussion and follow-up of project issues, sharing experiences and obtaining advice/guidance from each other.

Financial documentation and reporting overall were also well-designed, well-kept and well followed.

7.3.3. Beneficiary Targeting

Based on the documents reviewed, the field visits and interviewing the Bardala Livestock Cooperative representatives, MoA representative, Governorate representative and ARIJ project coordinator, the selection of targeted beneficiaries was based on Bardala cooperative members and on socio-economic criteria, targeting more women willing to be involved in the project. The criteria followed were practical and consistent with the project objectives of protecting the livelihoods of vulnerable people, male or female, in rural area.

The overall observations developed through site visits, discussions with project coordinator and interviewed with local committees indicate that the beneficiaries met the criteria and the targeting process did not have any noticeable weaknesses.

7.3.4. Monitoring and Evaluation

The projects' design included the main objectives, outcomes and activities that were to be monitored for efficiency, effectiveness and impacts:

Reportedly, in most cases the project coordinator controls the monitoring of the activities. He maintains updated information on the activities for which they are responsible and submit narrative reports to their respective project managers. The team leader consolidates the reports and submits them for overall progress monitoring and reporting to the donors. In addition, ARIJ Monitoring and Evaluation Department monitored the project through following the progress of the project performance and collecting all the means of verification. In addition, the Department conducted field visits to ensure the achievement of the project's results. This simple system, along with the financial tracking system, worked relatively well for monitoring the basics in terms of the services and financial inputs and outputs.

It is worth noting that monitoring data on the project results and inputs is readily available, including documentation of the findings of regular monitoring of the activities implemented. Regular monitoring reports were developed by ARIJ. These reports reflected the progress of actual implementation against activities planned, obstacles faced, and corrective measures taken.

7.3.5. Achievement of Planned Outputs/Results

The efficient implementation of the activities, create positive effect at the whole project implementation.

7.3.6. Adequacy of Procurement Process

Based on the reviewed documents and interviewed with the project procurement and financial staff, it is evident that the bidding process was transparent and strived to optimize the use of project resources to impact the target enterprises.

Based on the findings of the interviewed regarding the revision of a sample of the bidding and purchasing documents, discussions of the bidding process with project coordinator and relevant staff and feedback from the committees, it is believed that the partners selected the suppliers for different services in a transparent and efficient manner, and that this can be tracked in the relevant documents. ARIJ paid for the suppliers directly, in compliance with the agreed-upon procedures, which included

provision of the contractual documents and invoices that were required for authorization of payment. It is commendable that ARIJ are very strict in compliance with the criteria and with paying against the verifying documents.

The evaluation team observed that the relations with respect to procurement and financial management were clearly verifiable and went smoothly. None of the parties interviewed raised any major concerns in this regard. It is commendable that the financial transactions were strictly followed up in a clear and transparent documentation process.

7.4. Impact

7.4.1. The project impact at Bardala cooperative level:

- 1- During the project time period, Bardala cooperative has possessed shares at New Farm Company (NFC) worth of (\$42,930.15), this will put the Bardala cooperative on line in future milk products marketing activities, and it will help in finding new marketing channels for its members, as well as to generate income through the profits achieved by NFC.
- 2- The cooperative has made a profit of (\$5972) through selling milk to NFC from the milk collecting assembly unit in Bardala as shown in the table below:

Season	Milk sold in Kg. through assembly unit	Cheese sold in Kg. through assembly unit	Net profit in US\$
2014	3970	0	1472
2015	6653	0	2000
2016	5000	3000	2500
TOTAL	15623	3000	5972

- 3- Bardala cooperative has sold to NFC 4% of total milk and cheese produced in Bardala in competitive prices sold through 15 selling points in Tulkarm, Ramallah, Bethlehem and Nablus.
- 4- The project contributed in inviting young volunteer and involving them in project activities and participating in workshops trainings by 25%.
- 5- The cooperative used the profit to buy: - 2 sheep wool cutters and – Buying 2 shares at Veterinary pharmacy and – Cover financial and administrative expenses.

7.4.2. The project impact at Bardala farmers:

- 1- The Number of mother sheep has increased during the project period by 3%, and this because of high quality of nutrition feeds, veterinary extension services and reduction of the production cost, that lead the farmers to keep the female new born sheep, as shown in the table:

	2013	2016	Increased in No.	Selling Value in US\$ (\$360/head)
Mother sheep No.	5200	5400	200	\$72,000 (\$1200/farmer)

- 2- Increasing of new born sold by 7% during project period and this because of high quality of nutrition feeds for pregnant sheep, veterinary extension services reduces the mortality rate and the reduction of diseases infection of intestinal poisoning and other diseases and the availability of artificial insemination improved the sheep strains and twins numbers, as shown in the table below:

	2013	2016	Increased in No.	Selling Value in US\$ (\$200/head)
No. of new born	6916	7400	484	\$96,800 (\$1600/farmer)

- 3- Milk production has been increased by 20% and this because of the new feeding mix prepared by project team and using the planted green forages as shown in the table below:

	2013	2016	Increased in No.	Selling Value in US\$ (\$1.05/Liter)
Milk during season	585,000L	702,000L	117000 Liter	\$122,850 (\$2047/farmer)

- 4- The profit from selling cheese has been increased up to 30% and this because of distributing stainless steel piston for high quality cheese making and the farmers trained in how to produce it in hygiene conditions made their cheese sold at higher prices, as shown in the table below:

	2013	2016	Increased in No. \$	Cheese sold through NFC and through Farmers in Kg	Increase in Selling Value US \$
Cheese price \$ /Kg.	\$ 3.4-4.2	\$ 4.7 – 5.2	\$ 1.15	46285 Kg.	\$ 53,228

- 5- The veterinary Pharmacy has contributed during its applied services (Medication, Vaccinations, Sheep wool cutter and paid field extension services) in reducing these activities cost by 20% during the project period, as shown in the table below:

	2013	2016	Saving \$ /head/year
Sheep wool cut/head/year in US \$	\$ 1.31	\$ 1.0	\$ 0.31
Vaccinations/head/year in US \$	\$ 10.5	\$ 8.5	\$ 2.0

- 6- The collective feed buying contributed in reducing the feeding cost up to 6.5% during the project period, as shown in the table below:

	2013	2016	Saving \$/ton
Feeding cost in \$/ton	\$ 470	\$ 439	\$ 31

- 7- Reduction of farmers' expenditure total cost on his sheep by 30% and this due to planting irrigated green forges and the availability of veterinary medications and extension services in Bardala village and collective buying through the cooperative all together reduced the cost.

- 8- Financial Analysis of the project:

Activity	Input Values US \$	Depreciation values US \$				Input values after depreciation US \$	Remarks
		2013	2014	2015	2016		
Milk unit assembly	13703	0	1370.3	1233.27	1109.943	9989.487	Yearly depreciation = 10%
Distributing milking machines	28050	0	2805	2524.5	2272.05	25497.45	33 distributed in 2014
	9350	0	0	935	841.5	7573.5	31 distributed in 2015
	13600	0	0	0	1360	12240	16 distributed in 2016
Distributing Stainless steel jars	5709	0	570.9	513.81	462.429	4161.861	33 distributed in 2014
	1903	0	0	190.3	171.27	1541.43	31 distributed in 2015
	2595	0	0	0	259.5	2335.5	15 distributed in 2016
Cheese equipment	14250	0	0	1425	1282.5	11542.5	25 distributed in 2015
	19950	0	0	0	1995	17955	35 distributed in 2016
Sterilizing materials	2936	0	0	0	0	2936	
Vet Dr. extension visits	7463	0	0	0	0	7463	
Livestock expert visits	5165	0	0	0	0	5165	
Milk fodder	51434.3	0	0	0	0	51434.3	
Irrigated forages	6464	0	646.4	581.76	523.584	4712.256	8 farms established 2014
	8888	0	0	888.8	799.92	7199.28	11 farms established 2015
	7272	0	0	0	727.2	6544.8	9 farms established 2016
Artificial insemination	19038	0	0	0	0	19038	
Veterinary medicine	17164.14	0	0	0	0	17164.14	
Veterinary pharmacy	10000	0	0	0	0	10000	
Total						224493.5	



The project outputs values in US \$ at the end of 2016:

A- Cooperative level:

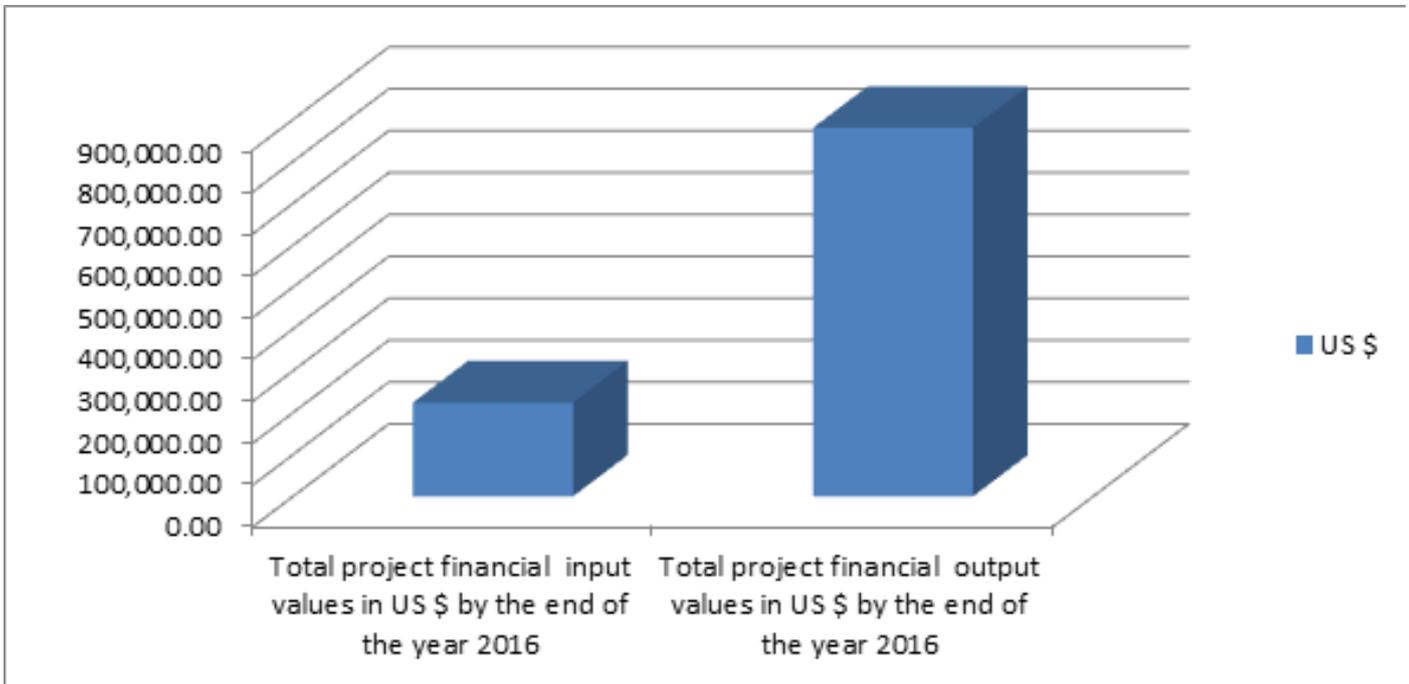
Activity	Total revenue US \$
Milk and cheese revenue through milk assembly unit	5972
Revenue from veterinary pharmacy	170
Sheep wool cut and other veterinary services	790
Total	6932

B- Beneficiaries level:

Activity	Total saving US \$	Remarks
Sheep mothers increased	98,000	- During project period sheep mothers increased by 200 head - Average mother sheep price (\$490)
Increasing in new born sheep sold	96,800	- New born sold 484 head - Average new born price (\$200)
The amount of milk production increased	122,850	- The amount of milk production increased by 117,000 liter - Average milk price (\$1.05/liter)
Cheese revenue increased	53,228	- Cheese sold through NFC and through Farmers 46,285 Kg - The increased in sold price (\$1.15/kg)
Annual sheep feeding cost reduction	49,250	- 28 dunums planted irrigated forages - Total forages produced 197 ton - Average price for green forages (\$250/ton)
Cost reduction in sheep wool cut	620	- 2000 sheep head cut their hair through cooperative - Saving (\$0.31/head)
Cost reduction for needed vaccination and medication	10,800	- The total sheep numbers at the end of 2016 = 5400 - The amount of saving (\$2/head)
Fodder cost reduction	1,550	- The cooperative bought collectively 50 ton - Collective buying saved (\$31/ton)
Bardala veterinary pharmacy revenue	850	
Total	433,948	

C- The project financial impact summary:

	US \$
Total project financial input values in US \$ by the end of the year 2016	224,493.50
Total project financial output values in US \$ by the end of the year 2016	880,440

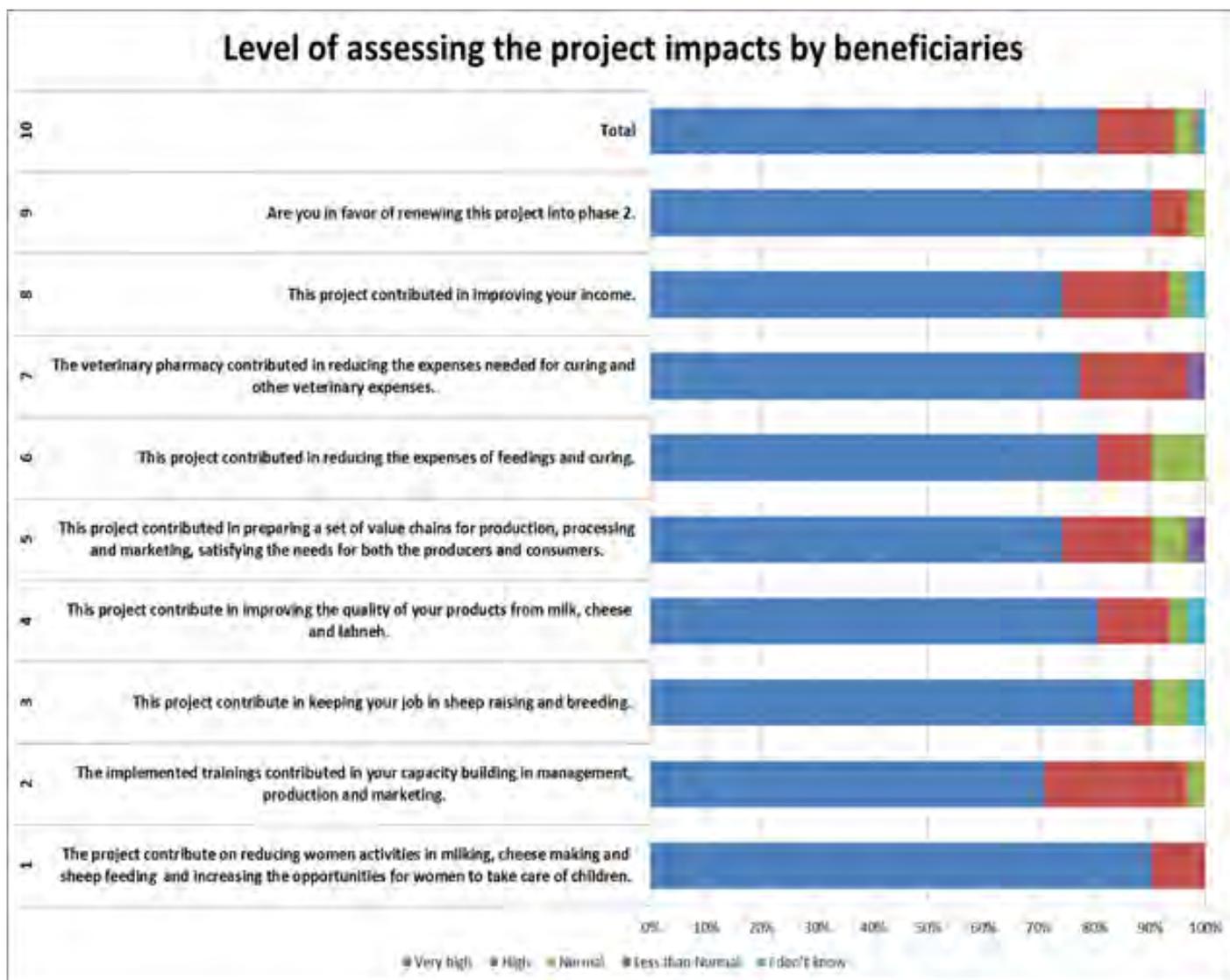


7.4.3. The project impact at women level:

- 1- Women contributed in increasing the milk and cheese quality by 51% and this due of using electrical milking machines and using the stainless steel piston in cheese home manufacturing.
- 2- The electrical milking machines contributed in saving 29% of traditional milking time and 33% milking needed effort.
- 3- Increasing of women attending meeting, workshops and trainings by 40% due to time saving.

7.4.4. The project impact by targeted beneficiaries: the level of assessing the project impact by beneficiaries very high and high are up to 93%

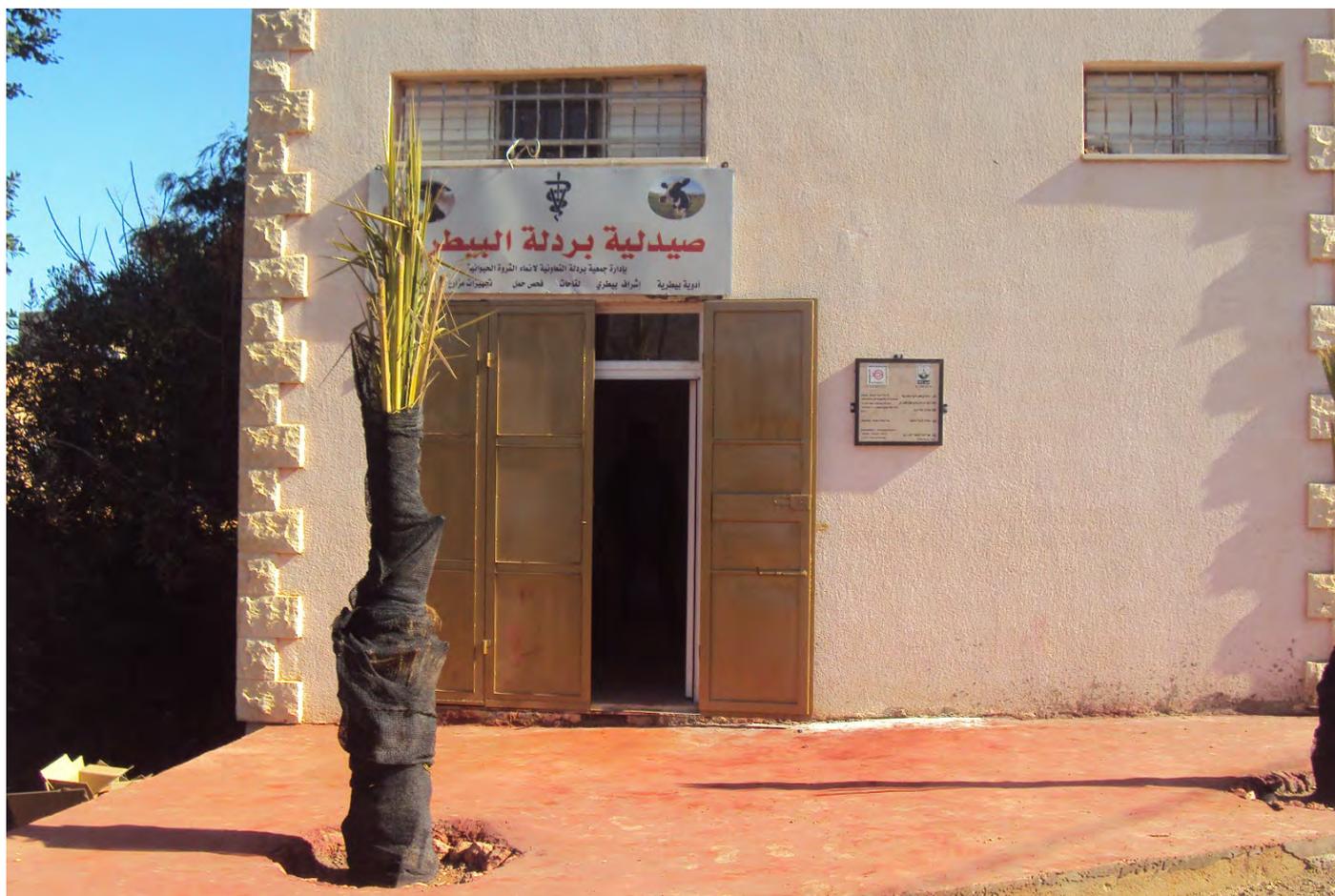
Figure 4: Showing the level of assessing the project impacts by targeted beneficiaries. See annex (1)



8. Conclusion:

- » The project idea and project implementation are innovative and can contribute to the economic expanded opportunities (development) in Palestine.
- » Women involvement and women success in this project and in the targeted area were brilliant and remarkable.
- » The project is considered as one of the most successful projects that have been implemented in the region, this because of its impact on the socioeconomic lives of beneficiaries and its positive affect on community behaviors, efficiency and sustainability.
- » The project as designed presented a comprehensive, multi-dimensional approach to promoting and developing a livestock best practices approach at the different stakeholder levels. The identification of the value chain and hence the objectives that were developed accordingly, were complementary and presented a complete picture of what needs to be done to achieve such development.

- » The evaluation team believes that in general the design, the implementation process and the explanation of the resources needed have been well structured.
- » The overall satisfaction of beneficiaries was tremendous for the efficiency of implementation of project activities.
- » The level of assessing the milk collection, test and storage assembly unit was very high and high up to 90%.
- » The level of assessing the work of Bardala veterinary pharmacy was very high and high up to 92%.
- » The level of assessing stakeholders' management activities by beneficiaries were very high up to 92%
- » Monitoring and Evaluation component relied on the involvement of different stakeholders.
- » The project smartly addressed the needs and priorities of the intended target groups and beneficiaries.
- » The project objectives were appropriate in regard to the socio-cultural setting of Palestine in general and the target groups in particular.
- » The project has exceeded or achieved all of the planned outputs in all project components.
- » The real in need capacity building trainings have been effectively generated knowledge and atmosphere of trust for men and women.
- » The level of assessing the veterinary doctor visits during the project period was very high and high up to 88%.
- » The project effectively introduced new agricultural techniques and successfully promoted hygiene and quality for milking and milk products in Bardala.
- » The project effectively contributed to protect folks of sheep stock from decline in Bardala and surroundings.
- » Beneficiaries were happy with the technical qualifications and level of expertise of the technical trainers of the project.
- » The level of assessing the NFC marketing activities by project beneficiaries was very high and high up to 90%
- » The veterinary pharmacy is considered a qualitative leap for the northern Jordan Valley area, this is not only because it has saved the farmers transportation costs and time, but because 10 women have created their own business through investing in establishing a veterinary pharmacy in partnership with veterinary doctor and Bardala Cooperative for Livestock Development.
- » The interviewed targeted beneficiaries agreed that the project implementation succeeded even more than the originally planned.



9. Recommendations & lessons learned

9.1. Recommendations:

- » The project should be adopted as a successful model pilot project and it is recommended to be circulated to other locations and regions, as it has a footprint and a real impact at the socioeconomic management, the level of women's empowerment and enabling farmers.
- » Building on the success of this project, it is recommended to continue the project expansion into phase 2 to magnify and empower and build on what have been achieved in phase 1, this will be a winning decision depending on concrete success base.
- » Involvement of project stakeholders in the project design phase will ensure better results of the outcomes.
- » Focus on involving women in future projects activities that fit and comply with their needs.
- » Improve farmers' efficiency through training courses and capacity building in subjects where they were dispirited in need for them.
- » More focus on marketing activities on promotional campaigns and public awareness for promoting high quality milk products produced by Bardala cooperative will assist in more success and encourage other farmers to follow Bardala cooperative procedure.
- » Identifying results, outputs, activities, and setting indicators in the design phase will limit the modifications during implementation.
- » Advocacy and formulation of national policies are important to be considered in future interventions.

9.2. Lesson learned:

Regarding the implemented project; everyone interviewed agreed that this is the first project targeting women in proper and effective procedures, implemented in efficient way to achieve real results, and has a positive impact on women life. The project targeted and involved all the women's categories in justice, fair, and transparent way to give them equal opportunities compared with men, which enhanced the participation of women in all activities, and made them eager to be involved and discuss their views, and express their opinion, and the imposition of their presence, and that was the results of supporting the appropriate educational training through project capacity building activities that raised the level of women thinking and their style and personality,

And ARIJ has developed a procedure in this project differs from other projects in targeting rural women because it has worked on:

- » Employing a lady in the established milk collection assembly unit and as she used to join ARIJ staff and the specialists through the conduction of technical visits, selection process, on field training and her visits have encouraged the participation of females in these activities and she assists in flowing the given recommendations and better management and practices by the targeted farmers.
- » Encouraging women in producing nearly double of high quality hygiene milk and cheese because of using electrical milking machines and stainless steel piston for cheese manufacturing and save more time for children and household activities.
- » Encourage women to participate the meeting and training workshops during project period in which they said that this is the only project women participation reach up to 100% in all project activities and their participation was active and fruitful and this because of time saving 33% through using electrical milking machines.
- » Women Economic Empowerment by project activities of planting green forages, artificial inseminations and milking forages and the outcomes was higher percentage of birth rate and higher percentage amount of milk and for longer milking period.
- » The 10 women have been supported to create their own business through investing in establishing a veterinary pharmacy in partnership with veterinary doctor and Bardala Cooperative for Livestock Development. This is going to assist these women in generating income where they can utilize it for their needs and for their family needs well. This investment will contribute in building the business experience, decision making skills, and social involvement of women.

- » ARIJ requested according to the willing of local community in Bardala that the field visits external evaluator should be a lady.

9.3. Success story:

Mrs. Nisreen Sawafta

Mrs. Nisreen Sawafta lives with her husband and his sisters in a humble house in Bardala village. The 32 heads of sheep are the main source of living for this family.

Mrs. Nisreen's husband and his sister suffer from a chronic disease, the matter that put the burden on Mrs. Nisreen to support the family. During the previous years, Mrs. Nisreen had \$3,000 accumulated debts for fodder suppliers in addition to paying \$1,400 to the vet annually for his services. This made her sell some of her sheep in the end of 2013 to be able to pay her debt and look for an alternative source of income to her family.

Mr. Nisreen's husband is a member of Bardala's Cooperative for Livestock Development, and they were targeted by the project. Mrs. Nisreen says that "with this project I was looking forward to start a new journey". She was provided with a milking machine and a stainless steel jar, and benefitted from all of the project services and training workshops.

Mrs. Nisreen expresses that "I depended on the irrigated forage crops I planted in my land for feeding my sheep as I produced 2 tons of fodder in 2015. This reduced the cost of feeding the livestock by 40% spending \$1,400 instead of \$3,500". She also noticed an increase in the amount of milk produced by 20% because of the good nutrition and fodder mix provided to the livestock saving \$250 annually from buying formula milk for the newborn sheep.

Mrs. Nisreen added that "I now have enough information on the different diseases, how to prevent them and cure them, and I can diagnose any occurring simple diseases in my sheep. We now have all medication needed available in a nearby pharmacy with good prices, the matter that reduced my spending on medication by 30% annually".

During the project life, Mrs. Nisreen could pay 50% of her debt and didn't have to sell her sheep; she's looking forward to increase the number of sheep in her farm in the coming years.



10. Special recommendation for future intervention

We should build on the previous factors made this phase of the project successful ...

Conducting Need Assessment:

The active stakeholders including active women and the donor prepare themselves for need assessments focus group meetings until reach for preparing proposed objectives results and activities for phase 2 and this should be reviewed from experts in the field and get their approval.

We did hear these activities for phase2 during our field visits, interviewed and focus groups:

Work on livestock value chain, Marketing and promotions, Planting forages, Artificial insemination, Feeds for Milking, Milking assembly unit, Capacity building training and field exchange visits, Veterinary doctor extension visits, Sheep wool cutter,

Collective buying, Software for different activities, Encourage new members, Sheep hangers, Movable Water tanks, Model farm, Sheep for meat breeding, Pumps, sprinklers, pesticides and fertilizers, Pregnancy test machine.

Working on a mechanism to increase the marketing of New Farm Company proportion of milk production as the NFC marketing does not exceed 4% of the milk production, and looking forward to work on marketing other products such as cheese, yoghurt and labaneh etc., and work to promote the project to attract new marketing companies.

Looking forward to repeat of the project activities and in particular “the cultivation of irrigated fodder, artificial insemination and the distribution of mix feed milk” with the same mechanism and should take into account the increase in beneficiaries segment and increased volumes and spaces.

The milk collection unit capacity should increase to triple the current capacity by purchasing of new units.

Increase the Number of veterinary Dr. visits to beneficiaries’ and continue building farmers capacity by training courses in management of their farms and taking care for their sheep.

Buying wool scissors in addition to the existing to increase association revenue.

The adoption of collective purchase of feed that will lead and ensure getting competitive prices and sell them to members

Software for the computerized system of the pharmacy veterinary accounts and employee training on how to get benefit of the software

11. Annexes

1. Annex 1 (Excel sheet for questionnaires analysis).
2. Annex 2 (Output financial impact)
3. Annex 3 (Field visits by the lady external evaluator report in Arabic)
4. Annex 4 (Success story)















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