FINAL EVALUATION OF JOINT RESILIENCE BUILDING PROJECT (JRBP)

FINAL REPORT

The Development Fund of Norway

Ethiopia Country Office

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ACRONYMS

CAHWs	Community Animal Health Workers
CAV	Climate Adaptive Village
CCA	Community Climate Adaptation
CFW	Cash for Work
CS	Climate Smart
CSA	Climate Smart Agriculture
DF	Development Fund
DPPO	Disaster Prevention and Preparedness Office
DTM	Displacement Tracking Matrix
EPACC	Ethiopian Program of Adaptation to Climate Change
EPI	Expanded Programme on Immunization
ETB	Ethiopian Birr
EWS	Early Warning System
FGD	Focus Group Discussion
GTP II	Growth and Transformation Plan II
HH	Household
IDP	Internally Displaced People
ICRISAT	International Crops Research Institute for Semi-Arid Tropics
IOM	International Organization for Migration
JRBP	Joint Resilient Building Project
KII	Key Informant Interview
MoU	Memorandum of Understanding
NAPA	National Adaptation Program of Action
NCA	Norwegian Church Aid
NRC	Norwegian Refugee Council
NRM	Natural Resource Management
OECD-DAC	Organization for Economic Cooperation and Development – Development Assistance Committee
PC	Project Partner
PIF	Ethiopia's agricultural sector policy and investment framework
PWO	Pastoralist Welfare Organization
SDGs	Sustainable Development Goals
SACCO	Saving And Credit Cooperative
SPSS	Statistical Package for the Social Sciences
WASHCOs	Water Sanitation and Hygiene Committee

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The Development Fund Ethiopia country office has commissioned Excel Consulting Service PLC to carry out the final evaluation of Joint Resilience Building Project (JRBP) in selected districts of Somali and Oromia regions. Excel Consulting Service PLC would like to thank The Development Fund Ethiopia and consortium members (PC, AFD, NRC, & NCA) technical, administrative, and M& E staffs at country and field offices for investing their time and expertise and providing continuous follow up support throughout the entire process of this evaluation starting from the inception phase to preparing the evaluation report. The Development Fund of Norway Ethiopia country office and Excel Consulting Service PLC are grateful to Woreda level government offices that provided relevant information and time during the evaluation period. Salient appreciation is also extended to all the evaluation participants (Men and Women community members, beneficiaries of the different project interventions, and participants from the community level establishments) who provided all the necessary information during the evaluation period.

1. EXECUTIVE SUMMARY

The Joint Resilience Building Project (JRBP) was implemented in three woredas of Somali and Oromia regional states, aiming to contribute to improved livelihood of over 35,000 pastoralists and agro-pastoralists and 6000 IDPs. The project implementation period was from August 2017 to May 2021. A final evaluation was conducted from May to July 2021. The main objective of the evaluation was to assess the implementation and achievement of the project against its planned objectives and baseline figures; identify enabling and hampering factors contributing to the proper delivery of the results.

Evaluation Method: *The final evaluation followed a cross-sectional study design that employed quantitative and qualitative data collection and analysis techniques. The quantitative data generated from the household survey involved a descriptive statistical data analysis process to calculate percentages and averages tabulated by sample stratifies. The project's key indicator values at baseline were compared against the final evaluation results to examine the progress of the project. Data generated from the qualitative evaluation were analyzed using a thematic analysis approach and triangulated with the quantitative findings under the major evaluation thematic areas.*

Relevance: *This evaluation finding showed that the design and implementation of JRBP were highly relevant to enhance the resilience capacity of the community and the local system to withstand human and climate-induced disasters. The different climate smart agriculture practices and technologies introduced by the project, integration of natural resource management and disaster risk reduction/early warning interventions, and supports to improve the range of alternative income generation livelihood opportunities are relevant and appropriate to break the cycle of vulnerabilities. The design of JRBP project was in alignment with the existing government policy, program, and the country's needs with respect to climate smart agriculture, climate change adaptation efforts, and food security, and to the different agricultural adaptation and mitigation actions of the country.*

Effectiveness: *The JRBP is found to be effectively managed for results, with important, and in some cases, impressive results achieved, despite the fragile security context and considerable internal changes in the consortium arrangement. The JRBP brought a positive change in crop production and livestock management in the project implementation villages of Somali and Oromia regions. Due to better use of improved agricultural inputs, the average production of Maize (26.6 quintals to 51.1 quintal), and Onion (92.2 quintals to 104.27 quintals) showed a remarkable increase from the baseline values. Despite the overall change in main crop production, better results have been achieved in the Somali region compared to the villages in the Oromia region except for Haricot bean production. Similarly, the average milk production per day per local breed cow has increased from 2.2 liters to 5.3 liters at the final evaluation; successfully met the project target of reaching 4.6 liters. The JRBP contributed a lot in improving the animal health service in the intervention villages of Dollo Ado, Dollo Bay, and Dugda Dawa Woredas. Specifically, the CAWHs approach was well recognized by the beneficiaries and has effectively improved animal health services in the JRBP villages.*

Evidence of positive results was observed from the JRBP interventions in improving the range of alternative income generation opportunities in the implementation villages. Overall about 38% and 19% of households reported generating income from at least one and two alternative sources, respectively. Field visit and qualitative findings strongly suggest that as a result of the project supports to established groups and cooperatives engaged in the petty trade, milk collection and selling business, animal trading, and in the manufacturing of different home and office furniture have improved their income level as compared to the time before the JRBP.

The project also targeted to create 16 climate adaptive villages during the implementation period. To realize the CAV model multiple activities were carried out in the implementation period of the JRBP. However, the evaluation findings indicated that the project did not achieve the original target of creating CAVs in all project implementation districts.

The JRB project carried out several interventions to improve the natural resource management practices and local early warning systems in the project intervention villages. Evidence from the evaluation suggested that the JRBP NRM activities have contributed to creating the foundation for sustainable natural resource management practices. Moreover, the project enhanced the responsive capacity of the local early warning system, in particular in villages located in the Somali region through establishing & capacitating EWS committees and preparing community based contingency and preparedness plans.

Multiple driving and hindering factors influenced the performance of the project towards achieving the targets. The availability of a wide range of water resources and the high potential for irrigation in Dollo Ado and Dollo Bay districts were the major driving factors contributing to the better crop production in the villages found in the Somali region. On the other hand, the security challenge was the critical hindering factor that contributed to the unsatisfactory performance of the project. In the Somali region, the withdrawal of the PWO (Pastoralist Welfare Organization) from the consortium arrangement had also substantially affected the effectiveness and timeliness of the project.

Efficiency: *Given the circumstances that prevailed in the course of project implementation, it is possible to conclude that the project was efficiently managed, though efficiency varies across villages found in the Somali & Oromia regions. The costs of*

the project can be said reasonable in contrast to the benefits and results achieved, in comparison with similar projects and alternative approaches. For example, the evaluation findings indicated that furrow irrigation is quite efficient compared to other types of alternative irrigation schemes. Overall, the majority of the project activities were delivered during the evaluation period in the Somali region. However, in the Oromia region, a substantial amount of activities were delayed and implemented in the last project fiscal year mainly due to security related challenges.

Impact: *The JRBP has achieved its impact level indicators and there is strong evidence that the impact at the household level is compelling. The average annual income of households has increased from 12,701 ETB to 34, 762 ETB (over 58% gross increments) at the final evaluation. Likewise, the average weeks per year with sufficient food has increased from 35.5 weeks at baseline to 41.6 weeks in the final evaluation. Household income and availability of sufficient food are the main driving factor for households' resilience; therefore, the project has made a meaningful contribution in improving the abilities of households to cope up with climate related shocks.*

Sustainability: *sustainability was given proper attention in the design and implementation course of the project. Capacity building training, use of existing local structure, centering community participation, and preparing comprehensive exit strategy document were important approaches employed by the JRBP to ensure sustainability and local ownership. The project achievements under crop production, livestock management, natural resource management, and the majority of the alternative income generation business opportunities will have the potential to sustain in the future after the end of the project. However, sustainability treats such as lack of supply of agricultural inputs, close follow up and supervision, protracted security challenges, limited capacity of relevant local government sector offices, and the continuity of climate related hazards will likely influence the sustainability of the JRBP achievements.*

Coherence and Coordination: *The JRB project was designed in a way to create strong linkage, consistency, and integration across the spectrum of the major project components. There were strong concurrent effects and linkage across the project interventions under the agriculture and natural resource management component of the JRBP. Multi-level coordination platforms were also established by the project to facilitate collaboration and coordination efforts. However, the established coordination platforms were not strong enough throughout the project life and further weakened at the final year of the project implementation period. Also, the JRBP lacks a higher level strategy to deliberately promote reinforcement, linkage, and integration within the consortium arrangement and with other interventions.*

Cross-cutting themes*: Wwomen's rights and gender equality, climate and environment, and human rights issues were well incorporated in the design and implementation process of the JRBP. Women constitute a substantial proportion in the alternative income generation opportunities, SACCO groups, and in the established irrigation & multipurpose cooperatives. In the long run, it is believed that the project efforts to ensure meaningful representation of women in the different project activities will certainly enhance their economic empowerment.*

Conclusion: *The JRBP project interventions have tangibly improved the resilience capacity of the beneficiary households to withstand the different climate and natural related hazards. Overall findings illustrate that JRBP has played a role in improving households' food security status and economic well-being through increasing crop productivity and access to alternative income generation opportunities. The project created a strong foundation to sustainably adopt Climate Smart Agriculture (CSA) practices in the JRBP villages. Despite the improvement on the livelihood of the project beneficiaries; there is a limited result in creating a resilient system and community in the project implementation villages.*

Recommendation: *Climate-resilient agriculture such as CSA practices and livelihoods resilience interventions should remain a key focus of future project design. Capacitating the overall development system needs to be the priority in future similar projects; there seems to be the challenge of the continual cycle of climate related hazards as well as to realize the creation of Climate Adapted Villages(CAV). Creating CAV needs a significant long year investment & multiple efforts. Thus, a similar project design needs to examine and account for the compatibility between the implementation period and expected outcomes of the project.*

2. BACKGROUND[1]

Pastoral/ agro-pastoral systems are the most extensive farming systems in Ethiopia extending from the south Omo zone through the southern part of Borena, to the wider regions of Afder, Gode to Warder and Degehabur zones of the Somali region to the Afar regional state. Pastoral areas in Ethiopia are prone to frequent droughts that often affect the people and their livestock. Inhabitants of this farming system traditionally specialize in mobile or semi mobile pastoralism, which is commonly exposing them to frequent conflicts. They keep varieties of livestock species such as cattle, camels, goats, sheep and equines, along with few crops grown around riversides. These systems are commonly affected by animal diseases, water shortage, poor rangeland management and conflict related to common property resources that are under increasing pressure for development activities, such as the expansion of cultivation areas. Hence, the agro-pastoral population is often no longer able to practice traditional natural resource management. As there has been limited extension support for agro-pastoral communities, they depend mainly on traditional risk management strategies, rarely receiving improved drought and risk management technologies and practices. Hence crop failure and feed shortage has remained to be primal challenges.

Sequential seasons of poor or complete rainfall failure since 2015 exacerbated by the strongest El Niño phenomenon during the same year coupled with the worst drought in 2016 has been the major factors worsening the situation in different parts of the country mainly in these pastoral and agro-pastoral communities significantly affecting the lives and livelihood of the people. Inadequate rains received in the southern and eastern parts of Ethiopia have left 5.6 million people in need of humanitarian assistance in 2017[2]. Liben and Afder zones in Somali region were hit hard by the recurrent droughts resulting from unpredictable rainfall patterns and very low or poor groundwater recharge. Similarly, frequency and severity of droughts in Borena and Guji zones of Oromia Region has been increasing in recent years. In the past, droughts occurred in every 5 to 10 years, now the frequency increased to 3-5 years. With such short drought cycles, vulnerable communities are hardly left with sufficient time to recover from the impacts of previous severe droughts resulting in huge loss of herd capital, further impoverishment and depletion of the traditional coping strategies.

According to zonal level situation assessments in late 2016, pastoralists have been attempting to evade this deteriorating situation by migrating to other places in search of water and pasture. Unusual livestock migration from Kebele to Kebele, Woreda to Woreda has been observed. In relation to this, internal displacement has also been widespread within Dollo Ado and Dollo Bay Woredas currently having new IDP constituting pastoralists dropouts as reported in a joint assessment[3]. The IOM Displacement Tracking Matrix (DTM) conducted in March / April 2017, shows more than 12 000 IDP's in the two Woredas of DolloOdo and Dollo Bay, all of them displaced by the drought. In the two woredas in Oromia more than 2700 people are displaced by the drought.

The project areas in Somali and Oromia regions are mostly pastoral and some are experiencing agro-pastoralism though they haven't used the full potential in the area for farming. Their ways of life is highly dependent on the availability of rain and pasture to ensure their livestock can be productive and provide them food. Given that these areas are residing rivers, agro-pastoralism is a potential livelihood. However, the agro-pastoralists relay on traditional ways of production that fails to cope with the changing climate and that enable them produce an amount hardly enough for securing food year round. However, as a result of the re-current drought it is becoming evident that this total dependency on rain will not enable them to cope with the continuous change in climate. These communities face resilience challenge mainly

[1] Joint Norwegian Consortium Resilience Building Project in Ethiopia (JRBP) To Royal Norwegian Embassy in Ethiopia for the period from November 2017 to October 2020

[2] Humanitarian Requirement Document (HRD) – 2017

[3] *IDPs Dollo UN Joint Assessment Report – February 2017*

related to erratic rainfall, frequent drought, poor access to improved crop and livestock varieties, market linkages and value chain. It is clear that there is a need to give due attention to these challenges and work towards finding appropriate coping mechanisms that are likely to be different from the usual practices but can be developed using existing but unexplored potentials in the areas.

The Joint Resilience Building Project (JRBP) (JRBP) was designed to contribute to creating resilience communities and significantly reduce vulnerability to shocks. The project targeted the southern parts of Ethiopia; two woredas in Afder and Liben zones of Somali region and one woreda of the West Guji zone of Oromia region, which are among the most food insecure and frequently drought affected areas in the country. The selected woredas in Somali region, and to some extent in Oromia region, are also hosts to Internally Displaced People (IDPs) that contributes to the burden of already limited resources to be shared among the community. Despite the availability of water, land and other natural resources in these areas, the target communities were vulnerable to frequent natural shocks because of poor capacity to cope with the shocks due to lack of knowledge, skills, improved technologies, and inadequate access to extension services. Therefore, the project was initiated in response to these problems and needs to significantly contribute in building the capacity of the target communities and internally displace peoples (IDPs) to sustainably respond to the shocks.

Norwegian NGOs (DF, NCA and NRC) started their collaboration in response to the emergency needs of the country in 2016 complementing the government's efforts to save lives. The Joint Resilience Building Project expanded the joint effort, focusing more on building the resilience of the communities, aiming to bridge the gap between acute emergency responses and long-term development projects. DF, NCA , and NRC together with local implementing partners, work in synergy focusing on their core competencies to address common goals of improving the livelihood of target communities. The consortium also has technical advisory services from International Crop Research Institute for the Semi-arid Tropics (ICRISAT) ensuring application of different technologies and methods across the project areas based on their contexts.

The project is ongoing from August 2017 to May 2021 aiming at contributing to improved livelihood of over 35,000 pastoralists and agro-pastoralists and 6000 IDPs. Following interruptions from COVID-19 and dalliance in implementation due to security issues in the project areas it is further extended up to May 2021 to accomplish the remaining activities. The project contributes to strengthening the resilience of the target population through the introduction of climate smart technologies that enhanced both crop and livestock productivity. The project also contributed in building the resilience of target communities through different interventions on natural resources management (water source development, soil and water conservation activities); promoting alternative income generation activities; improving information sharing; and improving early warning systems.

The overall goal of JRBP is to improve the livelihoods of the target communities found in the three project implementation Woredas. The project has two main result areas;

- Result 1: *Increased agricultural productivity as a result of CSA practices: increasing CSA farming practices and increasing CS livestock management.*

- Result 2: *Increased resilience to climate change: Enhancing natural resource management practices; increasing access to alternative income source and strengthening information sharing and early warning system.*

3. PURPOSE, OBJECTIVE AND SCOPE OF THE EVALUATION

This final evaluation was mainly carried out to draw lessons and recommendations which will offer inputs to improve the quality of designing of follow up project and/or similar projects in the future. The evaluation was assessed to what extent the JRBP implementing partners has addressed accountability procedures in terms of resource utilization and timely delivery of project outputs. The final evaluation was mainly followed and used the OECD-DAC evaluation criteria and generated evidences on important evaluation thematic areas such as coherence, coordination/collaboration and cross-cutting issues. The final evaluation was conducted to address two main objectives;

- Objective 1: Evaluate the relevance, effectiveness and efficiency of the JRBP project

- Objective 2: Evaluate the impact and sustainability of the prioritized areas

While in the process of addressing these two objectives, the results of the evaluation will serve for both learning and accountability purposes and identified;

- The key achievements made during JRBP project cycle management
- The challenges faced by the project and formulate appropriate recommendations for future actions.

Geographically, the evaluation was conducted in three project implementation Woredas; Dugda Dawa Woreda from West Guji zone of Oromia region and Dollo Ado and Dollo Bay Woredas of the Somali region of Ethiopia. The evaluation covered the entire project period from August 2017 to May 2021, and all activities planned in the project as defined by the project proposal.

4. EVALUATION DESIGN MATRIX AND METHODOLOGY

4.1. Evaluation Design Matrix

The evaluation design matrix was developed based on the information obtained from the de-briefing session with DF and consortium member technical team and review of relevant action/project related documents and the terms of reference prepared for the final evaluation. The evaluation design matrix which displays the evaluation questions and parameters along with the corresponding data sources, data collection and analysis/management approaches that was used for the evaluation is annexed at the end of this report *(Please see annex I)*.

4.2. Evaluation Design

In general, the final evaluation was designed in line with the baseline methods used for the baseline survey, and additional content areas were considered in this evaluation. In this regard, a cross sectional, community and institution based study design that employed both quantitative and qualitative data collection and analysis techniques were used. Data was scrutinized, analyzed, and presented against key project indicators stated in the project log-frame as well as under each key-parameters of the evaluation.

4.3. Study Area and Targets

The final evaluation was carried out in three Woredas found across two regional states; Dugda Dawa from West Guji zone of Oromia region, Dollo Ado and Dollo Bay from Liben and Afder zones of Somali regional states respectively. Primarily, the study units were households that reside in the project intervention villages of the evaluation woredas. Moreover, purposively selected key informants from the different institutions/stakeholders (such as participants from the government and community level structures/offices) and focus group discussants (such as women and men project beneficiaries) were also the study units for the qualitative part of the evaluation.

4.4. Sample size and sampling technique

4.4.1. Sample Size and Sampling techniques of the quantitative HH Survey

The final evaluation used the sample size and sampling techniques employed at the baseline survey. A total of 246 HHs were selected from the eight villages across DugdaDawa, Dollo Ado and Dollo bay Woredas. A two-stage cluster sampling techniques was used to select the targeted HHs in each project implementation Woredas and Kebeles/villages. Table 2 below shows the allocated sample of households to each Woreda and village/Kebele. The households were selected through the use of the modified EPI method by following the standard selection procedures steps.

Table 1: Allocated sample size to each project implementation woredas and Kebeles, May 2021

Region	Woreda	Kebele	Village	Sample HHs
Oromia	DugdaDawa	Welgehi Meddano	Ejerssa	31
		Burkuti Megeda	Hidda	31
		Mokonisa Megada	Berberessa	31
		Burka Arbicho	Medda	32
Somali	Dollo Ado	Sigalow	Sigalo	30
		Shambal	Shambel	31
	Dollo Bay	Waldeya	Bermado	30
		Kuraaley	Koralle	30

4.5. Qualitative data collection methods

Key Informants Interviews (KIIs): The KIIs were conducted with key informants purposively selected at national, woreda and Kebele administration level. Thus, a total of 31 key informant interviews were conducted. All interview information was tape recorded with consent from each participant.

Focus Group Discussions (FGDs): A total of 16 focus group discussion sessions were carried out with the different project targeted groups. In each session a maximum of six participants were included and all group discussions were tape recorded with consent from each participant.

4.6. Desk/document review and secondary data sources

The evaluation team reviewed different documents such as project proposal, baseline survey, different mission reports, policies & strategies, exit strategies, CAV planning documents, annual report, JRBP result framework, and other relevant documents. The review exercise was carried out at the different stage of the evaluation process to explore information to substantiate the findings obtained from the primary data sources and was triangulated with the primary data obtained from the field.

4.7. Data collection instruments & approaches

Household Survey: The main data collection tool used for household quantitative survey was via face to face computer-assisted personal interviewing (CAPI) using Kobotoolbox software. A structured household survey questionnaire used for the baseline survey with the necessary modifications was used for collecting quantitative data.

Key Informants Interview (KII) and Focus Group discussion (FGD) guides: Semi-structured interview and focus group discussion facilitation guides were developed after the critical review of the evaluation questions, objectives of the evaluation, and project intervention thematic areas.

Observation checklist: the observation checklist was used to gather information about the current status of the established business entities. In each district at least two business entities established under the project supported alternative income generation business opportunities were visited to capture the relevant information.

4.8. Data Safety Measures

Kobotoolbox takes the protection of data very seriously. Data from both servers was hosted by Amazon Web Services (AWS). Both servers were administered using best practice tools and mechanisms to keep data safe from intrusion or loss. Once the data was received on the server it was stored in accounts protected by usernames and passwords. All user passwords were only stored fully encrypted on the Kobotoolbox server, using the default open source framework. To protect from loss of data, Kobotoolbox do frequent system and incremental backups which were stored encrypted in various locations. To further protect the data, the login information was not shared to anyone except the evaluation team.

4.9. Data Management and Analysis

The quantitative household data collection and entry were accomplished at the same time, accurately and timely. The quantitative HH data was collected using tablet (Computer assisted personal interview) prepared on Kobotoolbox application. Data was transferred (exported) into SPPS version 21. Before the analysis, further data check-up such as Skewedness' and kurtosis were used to assess whether the entire data in the form of SPSS data set was free from outliers and appropriate statistical measurements were applied to correct few outliers. The second phase of the data analysis involved a major statistical data analysis process to calculate percentages and averages tabulated by sample stratifies. The outcome results at baseline were compared with final evaluation results to examine the difference. Qualitative data analysis involved thematic coding of the transcribed and translated in depth interviews and focus group discussions. Data was analyzed and compiled using a thematic approach by conducting an on-going content analysis of the transcripts. The constant-comparison method was used to create categories of relationship between data units. Data collected from the secondary data sources was used to construct relevant indicators and substantiated findings captured from the primary data sources. Finally, findings from the different data sources were triangulated and presented under each thematic and sub-thematic area.

4.10. Ethical Considerations

We took every measure to protect the rights of the human subjects who participated in this evaluation and to adhere to the ethical principles of respect, beneficence, and justice as defined by the National Public Health Institute of Ethiopia and also ensure the clearance of the institutional review board. To meet this end Excel Consulting Service PLC and all the survey team members solicited informed consent for taking audio of the discussion from each study participant prior to the data collection. Further communications were made to each government office before the actual data collection. Data generated for the purpose of this evaluation was organized and fully documented for use by those who are fully familiar with the evaluation and will be submitted to the DF Ethiopia.

4.11. COVID-19 Mitigation and Adaptation Plan

COVID-19 mitigation plan was developed and followed. Cognizant of the need to undertake the evaluation by following internationally agreed guidelines and recommendations to minimize and prevent the risk and exposure of the evaluation team and participants to COVID-19, Excel Consulting Service PLC has prepared an adaptation (mitigation) plan to inform and guide the evaluation implementation process. The adaptation plan was developed with reference to the National Comprehensive COVID-19 Management Handbook of Ethiopia. The adaptation plan outlines essential considerations and actions that need to be implemented at different phases of the evaluation, from design to data validation and reporting phase.

5. FINDINGS

5.1. Relevance

The findings of the final evaluation strongly indicate that the JRBP project activities and intervention thematic areas are relevant and valid to address the priority needs of the communities in the intervention villages. The project intervention Woredas both in the Somali and Oromia regions are characterized by the frequent occurrences of different natural and manmade hazards that were critically affecting the livelihood of the communities. Conspicuously, climate induced drought, flooding, and conflicts were making the intervention areas constrained in the different cycle of vulnerability risks as evidenced from the qualitative and desk review findings.

As revealed in the evaluation findings hydro-meteorological risks (i.e. droughts and floods) are the two main natural disasters risks in the project implementation villages. In fact, the existing natural and manmade risks vary across the project implementation villages of the Somali and Oromia regional states. In both cases, the project implementation villages were known by acute and chronic food insecurity and large segment of the people have been supported under the government led Productive Safety Net Program (PSNP). Before the JRBP project, the livelihood of most of the people living in the intervention villages were depending on food and non-food relief assistances provided by the different actors including the government. The people were used to be agro-pastoralist and pastoralist, but much of their livelihood was depended on small number of livestock resources they do have before the JRBP. The communities were quite vulnerable to climate induced risks such as drought and flooding. Any rain failure situation has been critically affecting the community and often, the communities require external interventions to maintain their livelihood. As a result of frequent occurrences of drought and other risks, high rate of malnutrition as well as livestock death was the characteristics of the intervention areas which subsequently contributed to the loss of property and household income. The JRBP targeted beneficiaries in villages found in the two districts of the Somali region have been also traditionally marginalized and has been excluded from the different available community resources and basic social services. As commented by the different key informants participated in the final evaluation, the people in the targeted intervention villages have been marginalized in the past. There were no people from the intervention areas who represent the community at the political & community structure of the Woredas and regional political structures. Therefore, their voices were not heard, as the result these areas were not the priority for many of the development interventions implemented by government and development partners, for the last many years.

Apart from the frequent occurrences of drought and flooding, use of improved crop and livestock production system was also limited in the project intervention villages. Beneficiaries were lacking skills and knowledge on better crop production system as well as had limited access to the different agricultural inputs and technologies. Livestock production was largely constrained by lack of pasture and water as well as had limited access to veterinary health services. The livelihood of the people in the project implementation villages were largely depended on ruminant production and small scale traditional crop production system which were characterized by low production and productivity. On the other hand, different manmade and natural hazards have been contributing to the depletion of the environment and the degradation of the available natural resources in the project implementation villages as well as impacted the local crop and livestock production system. As found in the qualitative findings, the farm and grazing lands were critically affected by the different kinds of erosion and invasive tree species. Besides, better natural resource management practices such as soil conservation practices, land clearing from the different invasive tree species, and area enclosure were not widely adopted by the local communities.

Availability of alternative livelihood opportunities in the project implementation areas were quite limited, though the extent was somehow varies across the villages found in the Somali and Oromia regional sates. Because of lack of alternative income generation opportunities, household's income source was very limited and small in amount to fulfill the basic livelihood needs of the communities and enhance their resilience capacity to the different climate related shocks.

The JRBP project was designed in alignment with the existing government policy, program and the country needs with respect to climate smart agriculture, climate change adaptation efforts, food security and to the different agricultural adaptation and mitigation actions of the country. The design of the project is consistent with the different government program and strategies; among the different program JRBP is relevant and contribute to the realization of the Sustainable Development Goals (SDGs) (i.e. *specifically relevant to SDG 1: No poverty, SDG 2: Zero hunger, SDG 3: Good Health and wellbeing, SDG 6: Clean water and sanitation, SDG 8: Decent work and economic growth, and SDG13: Climate action*), National Adaptation Program of Action (NAPA), Growth and Transformation Plan II (GTP II), Ethiopia's agricultural sector policy and investment framework (PIF), Ethiopian program of adaptation to climate change (EPACC), Climate resilient green economy strategy, National policy and strategy on disaster risk management, and Ethiopia climate-smart agriculture roadmap as well as the JRBP has continued relevance to the Ethiopia Ten Years Perspective Development Plan (2021 – 2030). The JRBP was consistent with the government attempts to improve the engagement of pastoralist communities to use better agricultural inputs and technologies to improve the local crop production system. Moreover, the JRBP was designed in a way to respond to the priority program thematic areas and development policy of the donor (Royal Norwegian Embassy in Ethiopia) which stipulate to realize the agenda of the Sustainable Development Goals (SDGs) of the country by 2030. Specifically, the JRBP interventions were relevant to most of the priorities given in Norway's development policy in Ethiopia (*Education, Health, Climate change, the environment and the oceans, Private sector development, agriculture and renewable energy, and Humanitarian aid are the five priority areas in the Norway's development policy in Ethiopia*).

In general, taking the previous circumstances of the intervention villages, the JRB project is relevant and consistent to the priority needs of the communities and fit with the local context of the villages. The different climate smart agriculture practices and technologies introduced by the project, integration of natural resource management and disaster risk reduction/early warning interventions, and supports to improve the range of alternative income generation livelihood opportunities are consistent and appropriate to break the cycle of vulnerabilities in way to contributes towards efforts to create resilient community.

5.2. Effectiveness

The effectiveness of the project was evaluated by scrutinizing as how well the project activities delivered the expected outcomes and outputs of the project, and measures the outcome of the activities with respect to the achievement of planned objectives and targets based on the evidences generated from the quantitative and qualitative data analysis. The effectiveness section provides evaluation findings mainly related to the project achievements against the project outcomes/outputs, targets, and the baseline values. The section also highlights the major drivers and hindering factors influenced the performance of the project, and how the project activities adapted with the evolving changes occurred in the external environment. The overall goal of the project is aimed to reducing climate vulnerability and improving the resilience capacity of the communities and local institutions/system so as to improve the livelihood of the targeted segment of the community members. To realize the overall goal of the project, multiple approaches were designed and implemented including efforts to create climate adapted villages (CAVs) and introduction of different Climate Smart agriculture practices. The project had two outcomes; (1) Increasing productivity of both crop and livestock through Climate smart Agriculture practices and (2) Building the resilience capacity of the community to climate change. The performance of the project under the two project outcomes are described below under the respective project thematic areas.

➔ Outcome 1: Increased agricultural productivity as a result of Climate Smart Agriculture Practices

Crop production using CSA Practices. The project to make realize outcome one of the project has implemented several project interventions during the lifetime of the project. As learned from the evaluation findings, the project implemented interventions that focus to improve crop productivity using wider adaptation of CSA technologies and practices to increase crop productivity in the intervention villages. The project carried out different interventions mainly supports to improve the adoption of CSA practices, the local capacity, access to agricultural inputs, and access to irrigation services. Overall, the project intervention brought a remarkable improvement in crop production by enhancing the adoption of a variety of climate smart agriculture practices, increasing access to improved seed varieties and agricultural inputs, building the capacity of the project beneficiaries, and establishing cooperatives along with the necessary provision of capacity building trainings, technical supports, water pumps with start-up fuel, improved seed varieties, fertilizer, and farming tools.

As per the finding of the evaluation, maize, sorghum, millet, haricot bean, and onion were the main reported crop and vegetable types produced in large volume in the JRBP project implementation villages found across the districts in the Oromia and Somali regions. The quantitative findings of the evaluation showed that the average yield of maize per hectare has increased from the baseline of 26.6 quintals to 51.1 quintal per hectare (50.6 and 51.7 quintals in Oromia and Somali villages respectively) at end of the project which is significantly exceeded and achieved the project target of reaching 42.5 quintals per hectare. A similar finding was also reported in the project annual reports regarding the improvement in maize production where 48 quintals per hectare was reported in the last annual report of the project. Similarly, the average yield of onion per hectare has increased from the 92.2 quintals at the baseline to 104.27 quintals in the final evaluation, but below the project targets of 161.7 quintals. The yield of sorghum and haricot bean per hectare also increased compared to the values reported in the baseline survey. As found in the quantitative survey result, the average yield of sorghum per hectare has increased from the 24.0 quintals at the baseline to 27.1 quintals (13.5 and 27.6 quintals in Oromia and Somali villages respectively) at the end of the project. The same increment was also observed in the production of haricot bean in the project implementation villages (10.3 quintals at the baseline versus 14.9 quintals in the final evaluation). The result achieved in increasing the average yield of Sorghum was marginally below the project target (27.1 and 27.9 quintals in the final evaluation and project target respectively). However, the achievement of the project in improving the production of Haricot bean and Tomato was substantially below the project targets. As found in the quantitative results, on average 14.9 quintals of haricot bean was produced per hectare in the project implementation villages which is below the project target of 18.8 quintals. The project also not achieved the target set for tomato production where on average 37.1 quintals per hectare of tomato was produced in this evaluation which is significantly below the project targets of reaching 73.7 quintals. Currently, the farmers specifically in the Somali region are more inclined to produce high value crops such as onion than tomato which is the main contributing factor for the difference observed on the baseline and final evaluation values on the average quintals of tomato produced per hectare in the JRBP intervention villages. The occurrence of disease that was affecting tomato planation was also the other important factor affected the production of tomato during the JRBP implementation period. Moreover, the performance of the project in increasing the production of main crop types is largely better in villages found in the Somali region compared to the villages in the Oromia region except for Haricot bean production as evidenced by the quantitative survey results of the evaluation. The average yield of Haricot bean per hectare was 15.2 quintals in villages found in Oromia region which is by far higher than the amount reported in the villages in the Somali region (only 4 quintals per hectare). Agro-ecological condition and trends of producing high cash value crops in the villages found in the Somali region were the main factors contributed to the low production of Haricot bean in the Somali region.

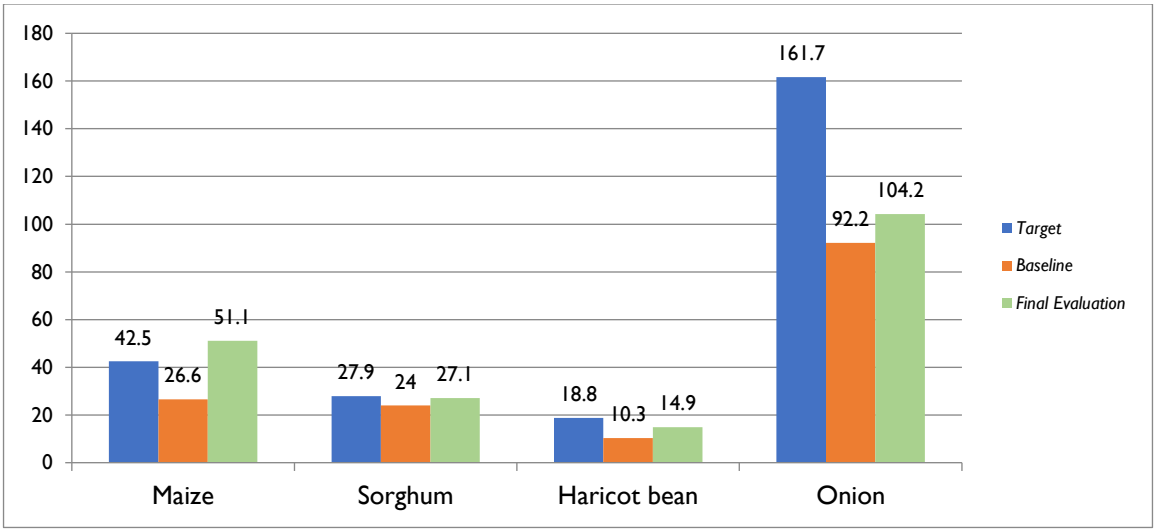

Figure 1: Comparison of average quintals of main crops per hectare, May 2021

The qualitative finding gathered from the different source was also consistent and strongly supports the above quantitative results regarding the improvement in crop production. The project followed multiple approaches and provided different supports to the targeted beneficiaries to enhance the production of crops in the JRBP implementation villages. Distribution of improved crop seed varieties, fertilizer, farming tools, water pumps, provision of different trainings and technical supports through the technical wing of the project (ICRISAT), and introduction & adoption of improved agronomic and irrigation practices have significantly improved crop production in the project implementation villages as learned from the evaluation findings. In fact the JRBP supports were context specific and somehow different across villages found in the Somali and Oromia regions regarding supports that have been provided to enhance the crop production.

In villages found in the Somali region, the project can be said effective in improving crop production in the intervention villages. During the project implementation period, 8 irrigation farmer cooperatives were established and supported during the implementation period of JRBP. Initially, each irrigation cooperatives had 50 members and engaged in producing different crops on 25 hectare of land. Later, the total land size was increased to 40 hectares and each cooperative added additional 37 members where a total of 696 individuals were benefitted under the established irrigation cooperatives across the four villages found in the two districts of the Somali region. While in the villages in Oromia region a total of 12 irrigation groups with 10-15 members in each group was established and provided with different project supports such as provision of technical supports, trainings, improved seeds and water pumps The use of furrow irrigation system and improved agronomic practices in the intervention villages is very impressive and successfully adopted by the established cooperative as well as by other project beneficiaries found across the four villages found in Dollo Ado and Dollo Bay districts. At present, the four supported villages are producing large volume of onion and maize compared to the period before the JRB project. Some of the households and cooperatives members are also engaged in the production of Soya bean, Sesame, millet, Green pepper, Potato, Cabbage, Quinoa, Tomato, Water melon, Papaya, and Banana as found in the qualitative findings, though the amount produced is quite limited compared to Onion and Maize production. Compared to the non-intervention villages, the JRBP villages are producing significant amount of maize and onion and became the main suppliers of these crop products to the different regions and districts as revealed in the qualitative findings.

> *"The JRBP intervention villages are now model villages in crop production compared to other villages located in the remaining 27 Kebeles (there are a total of 29 Kebeles in Dollo Ado district). Due to the provision of improved seeds and better use of new agronomic practices such as Furrow irrigation, there is an incredible*

increase of onion, tomato, and maize production in the JRBP intervention villages." (KII, Dollo Ado Agricultural office)

"Before four years ago, sometimes people were forced to purchase vegetables such as onion and tomato from Negele Borena town because of the limited production of onion and tomato in this district. Currently, there is no supply gap in the Woreda where large proportion of the supply is coming from the JRBP intervention villages for household consumption as well as large volume of onion have been marketed to other areas such as Addis Ababa and Tigray region." (KII, Dollo Bay Agricultural office)

Figure 2: Onion farm using furrow irrigation in shambel village of Dollo ado, Somali region, May 2021

Data generated from the primary and secondary sources have also demonstrated the result achieved by the project to increase the CSA farming practices across the project implementation villages. The quantitative HH survey result showed that about 98% of supported households are implementing different CSA farming techniques on their own land. The project through the technical supports of ICRISAT has trained a total of 598 project beneficiaries on different CSA methods and practices during the implementation period. As described in the focus group discussions and key informant interviews the different training topics provided by the project significantly helped the targeted beneficiaries to improve their knowledge and skills on different agronomic practices such as on furrow irrigation, use of improved seed varieties, pest management, post-harvest management, proper use of fertilizer, and on related CSA topics. Data from the project LFA report also indicated that 2484 farmers are already adopted different CSA farming practices in the JRBP implementation villages. The project achieved 64.3% of the target to train pastoralist and agro-pastoralist on CSA methods (project target was to train 930 pastoralist and agro-pastoralist on different CSA topics). The findings of the quantitative HH survey and secondary data obtained from the project documents also indicated that the project has made positive progress with regard to the coverage of land under irrigation and CSA farming practices in the project intervention areas compared to the baseline value. In this regard, the land covered through irrigation has increased to 1191.8 hectare of land from 865 hectare reported at the baseline survey as well as significantly higher than the project targets of 385 hectare. Data obtained from the JRBP LFA also revealed that a total of 856 hectare of land was covered by CSA which is by far surpassed the project targets of covering 530 hectare of land.

The evaluation findings demonstrated that the JRBP project interventions and activities have brought a tangible positive change on crop production through the adoption of different CSA practices. As revealed in the qualitative findings, the improvement in the crop production has significantly improved the income and the livelihood of the project beneficiaries as well as contributed to the shift in the mind-set of the pastoralist and agro-pastoralist communities towards farming activities.

The project couldn't meet all the targets under the crop production intervention area as demonstrated by the final evaluation findings. Multiple driving and hindering factors were affected the performance of the project towards increasing crop production through adoption of CSA approach and practices. These driving factors and constraints vary between the villages found in the Somali and Oromia regions. As indicated in the effectiveness section of this evaluation report, the performance of the project in increasing crop production through different CSA farming practices was remarkably better in villages found in the Somali region compared to the Oromia counterparts. In the first place, availability of a wide range of water resource and the high potential for irrigation in Dollo Ado and Dollo Bay districts were the major driving factors contributed to the better project effectiveness in the villages found in the Somali region. Besides, there were previous irrigation and farming experiences in Dollo Ado and Dollo Bay districts as compared to the districts found in the Oroima region which was also an important factors influenced the project achievement as commented in the key informant interviews with the different stakeholders. Security challenge was the critical hindering factor reported in Dugda Dawa Woreda which significantly contributed to the unsatisfactory performance of the project under outcome one. Because of security related challenges the implementation of several activities were delayed and implemented in the final year of the project. The provision of important agricultural inputs, training on CSA methods for the beneficiaries, and construction of water facilities were not happened as planned in the original project plan in villages found in the Oroima region mainly because of security related challenges. The security challenge has been also affected the monitoring activities of project and largely limited the provision of the technical supports that were supposed to be provided by the technical wing of the project in the villages found in Dugda Dawa Woreda.

In the Somali region, the withdrawal of the PWO (Pastoralist Welfare Organization) from the consortium arrangement (PWO was part of the consortium structure for the first year of the project and later replaced by PC (Pastoralist Concern) has substantially affected the effectiveness and timeliness of the project implementation under the crop production component of the project. The replacement of new project partner and the handover process took a significant number of months. While the new partner started to implement the project activities from the low trajectory which contributed to the overall performance of the project under the first outcome. Moreover, occurrence of drought, flooding, desert locust, COVID-19 pandemic, security challenge, political instability (specifically the 2018 political instability in the Somali region), and turnover of staffs (both in the project and government offices) were also affected the achievement of the project in improving crop production) in JRBP implementation villages.

Climate Smart Livestock Management. The project planned to increase climate smart livestock management through enhancing the wide use of improved forage varieties, innovative fodder production & feeding system, access to veterinary services, and introduction of improved livestock breed species. The evaluation findings indicated that the project brought positive improvement in increasing fodder production, milk production, and access to animal health services in the project intervention villages, although the overall improvement is largely originated from the villages located in the Somali region.

The quantitative HH survey result showed that the average milk production per day per local breed cow has increased from 2.2 liter at the baseline to 5.3 liters in the final evaluation. The value obtained in the final evaluation on average milk production successfully met the project target of reaching 4.6 liters which is surpassed the original target by 15%. Likewise, the average daily milk yield from goat has also increased from 2 liters at the baseline to 2.5 liters in the final evaluation. The overall increase of milk production at the end of the project was remarkably higher in the villages of the Somali region than villages found in the

Oromia region. In the quantitative survey result, 64.6% of the households have adopted at least one type of improved fodder production and feeding techniques. The result indicated that there was a significant difference among villages found in the Somali and Oromia region with regards to adopting improved fodder production practices where 87.5% of HH in the Somali villages adopted at least one improved fodder production and feeding techniques which is by far higher than the percentage reported in the Oromia region, only 41.6%. Although the project has shown significant improvement on farmer's adoption of improved fodder and feeding techniques from the baseline, it did not achieve the target it has set; the project achievement was less by 33.4% against the target of reaching 98%. Political instability in the first year of the project in the Somali region, widespread & continuous security challenges in the Oromia villages, internal change in the consortium arrangement, and inclination of farmers to produce high market value crops were the major factors contributed to the below achievements of the JRBP on the proportion of farmers who adopted improved fodder production and feeding system. Moreover, above 92% of the surveyed HH had access to animal health services which is a significant increase from the baseline value. Data from the secondary source also showed that the project reached 12610 agro-pastoralists by different animal health service which is largely higher than the project target of reaching 5850 agro-pastoralist.

Table 1: Comparison of the baseline and final values on CSA livestock practices, May 2021

CSA livestock practices adopted	Final evaluation		
	Oromia	Somali	Overall
% of supported HHs who practice one or more introduced fodder or feeding techniques	41.6	87.5	64.6
Number of agro-pastoralists that have improved livestock breed (cross-breed cow)	-	0	175
#agro-pastoralists that have adopted improved fodder production and/or feeding practices	320	700	1020
% of agro-pastoralists (HH) that have access to animal health services	87.2	98.3	92.7

The qualitative findings of the evaluation indicated that the project has been providing different supports to improve the CS livestock management practices in the JRBP implementation villages found in Dollo Ado, Dollo Bay, and Dugda Dawa Woredas. Delivery of capacity building trainings for project beneficiaries on different CS livestock management topics, provision of improved fodder seed varieties such as Sudan and Rhodes grass seeds, introduction of small scale hydroponic fodder production method, increasing access to veterinary services through CAHWs (Community Animal Health Workers), supporting livestock vaccination campaigns, and establishing fodder banks were the main activities implemented during the course of the JRBP implementation period.

The project contributed a lot to increase the production and use of drought resistance fodder types in the project implementation villages. The project provided improved seeds of different grass types such as Sudan, alpha-alpha, and Rhodes grass types. In particular in the Somali region, the community living in the intervention villages are now satisfactorily adopted the production of improved grass types and largely using for their own livestock consumption. But, people are not much motivated to engage in the production of different fodders as found in the evaluation findings. Because of the high market demand and the attractive income gained from production of onion and other crop types, project beneficiaries are less interested to produce large quantity of fodder. The project also supported the construction of two small fodder banks villages in the Somali region. The project provided the project beneficiaries with donkey carts to transport and stock different kinds of fodder. During the field visit the established fodder bank was not only used for stocking fodder but it is also serving as temporary storage for crop products. Besides, the donkey cart was also serving the community by transporting different goods and products to the neighboring markets which was reported as an additional income generation opportunity for the beneficiaries. However, as observed during the field visit quite small volume of fodder was stocked in the

established fodder banks which would not be adequate enough to serve as fodder source during the dry season. As revealed from discussion with the fodder bank management committee, the fodder stocked previously was distributed to the community during the recent occurrence of drought in the project implementation villages. At the time of the evaluation, the fodder bank management committee was waiting the next fodder harvest season to restock again the fodder to be used for the next dry season or when there is any future occurrence of drought. Moreover, the project effort to expand small scale hydroponic fodder production method was not successful because of low acceptance of the technology and limited technical capacity.

Figure 3: plantation of Sudan grass (left) in Dollo Ado and Fodder bank constructed by JRBP support (Right), Dollo Bay, May 2021

The JRBP also contributed a lot in improving the animal health service in the intervention villages of Dollo Ado, Dollo Bay, and Dugda Dawa Woredas. In this regard, provision of capacity building training for CAHWs, different supports to the Woreda livestock development offices to improve access to livestock vaccination and treatment services, and establishing CAHWs veterinary drug shops by providing start up drugs have brought a satisfactory results and improved animal health services in the project implementation villages. The CAHWs veterinary drug shops also serving as an income generation opportunities for the trained community animal health workers which is encouraging CAHWs to provide the service in the future. Anecdotal evidences from the key informant interviews and focus group discussions indicated that the JRBP supports through CAHWs and the established veterinary drug shops, and logistic supports to the district livestock development offices during the livestock vaccination campaigns has contributed to the reduction of livestock diseases and death in the project implementation villages. But, the provision of different animal health services through CAHWs in villages in the Oroima region have been challenged due to security related problem and gap in the supply of essential veterinary drugs. As a result, the service was frequently interrupted in the project implementation villages of Dugda Dawa Woreda which was reported as an important factor affected the service provision through the CAHWs approach.

The project also provided improved livestock breed such as cows and goat for the organized groups and selected households in the project implementation villages of Dugda Dawa Woreda of Oromia region. As reported during the key informant interview with the project staffs, 400 improved goats were distributed to women groups (a total of 100 women) during the project implementation period. Additionally, cows ('Borena' species) were also provided for 75 different households mainly for women headed households, disabled individuals, and economically destitute women. However, the project efforts to improve the availability of more productive livestock breed brought unsatisfactory results and achieved less compared to the project target as evidenced by the qualitative findings and data obtained from the project document. As reported in the key informant interviews and focus group discussions, some of the provided livestock

breeds were died because of the existing climate condition which was not suitable for the introduced new breed species, lack of adequate fodder, and diseases. Other factors have been also influencing the performance and achievements of the project under CS livestock management component of the project. In villages found in the Oromia region, security problem was the main reported factor contributed to the late implementation of different CS livestock management activities so as contributed to the low performance of the JRBP with regards to improved fodder production and feeding practices as well as in increasing the availability of improved livestock breed. The provision of improved fodder seed was delayed and in some cases provided to the beneficiates after the right plantation season where some of the households are not yet utilized the provided fodder seed and waiting for the coming rainy season for plantation. Moreover, most of the CS livestock activities were carried out in the final year of the project which made difficult to see the contribution of the project in this final evaluation. Additionally, the high security risks in the past three years coupled with the widespread shortage of water for human and livestock in the villages located in the Oromia region were significantly contributed for the lesser achievement of the project in contrast to the project implementation villages in the Somali region.

➔ Outcome 2: Increased Resilience to Climate change

Creation of Climate Adapted Villages. As it's indicated in the original project proposal the CAV model is one of the main approaches designed in the JRBP to increase the adaptive capacity of agro-pastoralist and pastoralist communities living in the targeted villages of Dugda Dawa, Dollo Ado, and Dollo Bay Woredas. As learned from the key informant interviews, focus group discussions, and document review exercise, the CAV approach of JRBP was designed in a participatory manner and in close coordination with the local community and system in order to identify different adaptation options which are intended to impact the resilience capacity of the community. As part of the process, CCA (Community Climate Adaptation) plan was prepared for each project implementation villages which illustrated the existing challenges and available potentials along with the corresponding community action plan to address the challenges. Additionally, with the help of the technical wing of the project and full participation of the community representatives, village profile, gender profile, resource mapping, and social mapping documents were prepared to guide the implementation of project activities towards realizing the implementation of the CAV model. To realize the CAV model multiple activities were carried out in the implementation period of the JRBP which includes activities to improve ; the natural resource management, the CS crop production and livestock management, alternative income generation opportunities, access to water and veterinary services, the skill and knowledge of beneficiaries and relevant local institutions on CSA practices, the collective actions through organizing cooperatives and community level groups, and the local early warning system.

The project target was to create 16 climate adaptive villages by the end of the project from none at the baseline in the project intervention areas. Overall, the evaluation findings indicated that the project did not achieve the original target of creating CAVs in all project implementation districts. The ultimate goal of CAV is to increase the adaptive capacity of farmers and indigenous communities by strengthening knowledge of climate change in the communities and enhancing their capacity for planning and local governance[4]. Even though no clear criteria to declare the intervention villages as CAVs, the quantitative and qualitative findings of the final evaluation described under the effectiveness, impact and sustainability sections suggest that the resilience capacity of the communities in the intervention villages was not adequate enough to fully withstand to vulnerability risks in the future.

Nevertheless, the different JRBP interventions created a strong and favorable foundation towards creating the climate adapted villages in the future, though the project performance was not the same in the intervention villages of Somali and Oromia regions. As demonstrated in the final evaluation findings, the communities living in the JRBP villages have better knowledge on the impact of climate change and

[4] *Climate Adapted Villages (CAV), the Development Fund's Model For Local Climate Adaptation, Ethiopia, 2015*

variability as well as there is significant change in implementing different climate change adaptation practices. As it is indicated in the different sections of the final evaluation report, there is significant improvement in the production of different crop types in the project implementation villages which brought a positive improvement on household food security status and improvement in the nutritional status of the communities through improved access to, and consumption of diversified food groups. From the quantitative survey result, there is an improvement with regards to meeting household food need from own production where 90.2% of households get food from own production which is significantly higher than 50% reported at the baseline survey. Similarly, the baseline survey result indicated that more than 60 % of the respondents could be in food deficit for at least 3 months per year which is quite higher than the proportion reported in this final evaluation (only 14.7%).

Table 2: Major source of food and months of deficit, May 2021

Main source of food for the household	Woreda			Overall
	Dollo Ado	Dollo Bay	Dugda Dawa	
Direct food aid	-	-	1(0.8%)	1(0.4%)
From Market	31(51.7%)	31(51.7%)	5(4.0%)	67(27.3%)
From Own production	29(48.3)	29(48.3%)	114(91.2%)	172(90.2%)
Other source	-	-	3(2.4%)	3(1.2%)
Safety net program	-	-	2(1.6%)	2(0.8%)
Number of months without enough food	Oromia		Somali	Overall
With enough food	31(24.8%)		80(66.7%)	111(45.3%)
1 month	14(11.2%)		26(21.7%)	40(16.3%)
2 months	15(12.0%)		9(7.5%)	24(9.8%)
3 months	31(24.8%)		5(4.2%)	36(14.7%)
4 & above months	34(27.2%)		-	34(13.9%)-

Moreover, the project improved the engagement of agro-pastoralist and pastoralist segment of the community in the different alternative income generation businesses which is certainly contributing to improve the resilience capacity of the beneficiaries for climate related shocks. In general, becoming a climate adapted village requires many years beyond the project period, thus it is quite impossible to realize the creation of CAV within short project lifetime, which implies that the project from the beginning couldn't fully examined the required investment, timeframe, and context of the villages which are critical to create CAVs. Besides, the taking such kind of outcome indicator which may not be realistic and achievable within short project period can be mentioned as important gap observed in the design process of the JRBP.

Alternative income generation opportunities. The final evaluation findings indicted that JRBP project provided different interventions to improve the availability of a range of alternative income generation opportunities to improve the income and livelihood of the project beneficiaries. Availing of alternate income generation sources is instrumental for agro-pastoralists and pastoralist to increase their resilience capacity. The final quantitative survey report shows that overall about 38% of households reported generating income from at least one alternative income source and about 19% of households generate income from at least two alternative sources. The majorities of the households in Somali region as compared to those in Oromia region have been generating income from at least one and more alternative sources. The proportion of households supported by the project who have generated income from at least one new source did not show increment from the baseline value. As indicted in the project LFA, the JRBP achieved the target number of HH generating income from at least two sources and HHs started generating income from the established alternative sources. In this regard, 842 households were started

generating income from at least two sources which is significantly higher than the project target of reaching 530 households.

Table 3: Access to alternative income source, May 2021

Access to alternative income sources	Final evaluation		
	Oromia	Somali	Overall
% of households generating income from at least two alternative income sources	4.8	32.5	19.2
% of households generating income from at least one alternative income	16	60	38
Number of Households that started generating income	20	262	282
% of supported households who have generated income from at least one new source	-	30	30
Number of groups (households) with profitable business	-	-	11

On the other hand, findings generated from the qualitative data and field visits demonstrated that the JRBP interventions to improve access to alterative income generation opportunities have brought a tangible positive change in the lives of the beneficiaries. Indeed, the significant change was observed in villages found in the Somali region than villages found in the Oromia regarding the project achievements under the alternative income generation opportunities. Through the supports of JRBP, different cooperatives and business groups were established and engaged in the different alternative income generation businesses. The project provided different supports to the established cooperatives to receive the legal certificate from the relevant government offices. The JRBP provided start-up money to the established cooperatives along with the provision of different capacity building trainings and material supports such as different types of machines, kitchen utensils, modern bee hives, fuel-based grinding mill, refrigerator with solar power source, etc. During the implementation period of the project, 21 business groups were established and supported in the two project implementation Woredas of the Somali region. As a result of the project supports, majority of the established groups have started generating income in particular these business entities engaged in petty trade, milk processing business, and animal trading. The qualitative findings and the field observation revealed that the supported groups engaged in the petty trade, milk collection and selling business, animal trading and in the manufacturing of different home and office furniture have significantly improved their income and able to meet their basic livelihood needs in villages found in the Dollo Ado and Dollo Bay Woredas. Some of the supported specific alternative business groups of the project such as group engaged in the production of charcoal have also contributing to the natural resource management interventions of the project in the villages located in the two districts of the Somali region through removing and using Prosopis Juliflora tree species for charcoal production.

Different village level groups in particular women groups also received different kinds of supports to engage them in the different alternative income generation opportunities. The JRBP project provided start up kits, materials and money to the established groups working in the different income generating businesses. Solar powered refrigerators, fuel-based grinding mill machine, kitchen utensils, cutting machines (i.e. for charcoal production group), wood work machine and carpentry materials, fruit seeds to groups established under the nursery sites, and modern bee hives were some of the materials provided to the different groups. As revealed in the key informant interviews and focus group discussions, the JRBP interventions for the local established business groups (largely women groups) engaged in the milk collection and selling, petty trade, small scale restaurant, fishing and fish restaurant, furniture production, charcoal production, and grinding mill businesses have significantly improved the livelihoods of the group members compared to their previous situation. For example, previously women group engaged in the milk collection and selling business had a lot of challenges mainly due to lack of refrigerator; often the milk collected get spoiled after some time which made the group demotivated because of the unsatisfactory income generated from the business. After the project provided refrigerator and solar power source for the women group engaged in the milk collection and selling business, their income has increased

significantly from selling of milk and milk products as well as created additional opportunity to earn income from selling of different kinds of soft drinks, packed juice & milk, and bottled water.

Figure 4: Refrigerator with solar power source (Left) and fuel based grinding mill (right) provided to two different groups, Somali region, May 2021

Women SACCO groups were also established in the project implementation villages of Oromia and Somali regions. In villages located in Dugda Dawa Woreda, four SACCOs were established (with 60-100 members in each group) in collaboration with the Woreda cooperative office. After the establishment of the SACCO groups, the project provided 50, 000 birr as a revolving fund to each groups in addition to the provision of different trainings to improve the knowledge of the group members on saving, credit, and basic financial management concepts. As it was described in the qualitative findings, currently members of the SACCO are able to access loan with low interest rate from the initial seed money provided by the project to start their own alternative businesses. The project also supported the establishment of one business group and two multipurpose cooperatives in the project implementation villages of Dugda Dawa Woreda through facilitating the establishment process, provision of capacity building training for the group/cooperative members, and availed start-up money to the established group and cooperatives. Currently the established group and the multipurpose cooperatives are engaged in trading of basic consumable commodities like sugar, salt, oil etc and started to generate income from the businesses.

However, some of the alternative business supported by the project such as Bee Keeping was not that much successful in the intervention villages of the Somali and Oromia region as evidenced from the evaluation findings. In relative terms, the bee keeping business is better in Oromia villages than the Somali counterparts. The JRBP provided a total of 60 bees hive (40 transitional and 20 modern bees hive) for two cooperatives including provision of material such as mold, honey extractor, bee (beekeeping) suit, etc. As found in the qualitative findings, quite small numbers of households were produced small amount of honey during the project implementation period which is difficult to consider it as an income generation business for the beneficiaries. But the cooperatives to some extent have been engaged and generating small amount of income by collecting honey from the different villages and selling in the markets located in the neighboring towns The current existing ecosystem of the villages and the limited skills of the group members on modern bee keeping business were identified as the major contributing factors to the limited effectiveness of the bee keeping business.

Access to improved water sources. The JRBP project supported the construction of water schemes in the villages found in Dugda Dawa Woreda during the implementation period. Findings from the key informants and field visit showed that four different water schemes were constructed with the support of the JRBP. In addition, one Water Cistern with a capacity of 100m3 was constructed with the support of JRBP in one of the villages found in Dugda Dawa Woreda. In addition to the construction of the four water schemes,

a number of water points, reservoirs, cattle trough, and washing basins were constructed in the JRBP implementation villages of Dugda Dawa Woreda. In the Somali region, two water points were constructed through the support of the JRBP (i.e. 1 water point in Sigalow Kebele in Dollo Ado Woreda and 1-water point in Wledeye Kebele of Dolo Bay Woreda). Besides, expansion of a water pond with a capacity to hold 180m³ of water was carried out in Kurale village of Dollo Bay through cash for work approach and community participation to harvest rain water that is supposed to be used for human and animal consumption. The quantitative survey result showed that the proportion of households who have access to improved water sources has increased from 36% at the baseline to 95.5% in the final evaluation, which is also higher than the project target of 67%.

Table 4: Access to water in the project implementation villages, May 2021

Access to water sources	Final evaluation			Target
	Oromia	Somali	Overall	
% of households have improved access to water	95.2	95.8	95.5	67
Number of potable water sources constructed/rehabilitated	4	2	6	6
Number of potable water sources constructed/rehabilitated for household consumption	4	1	5	3
Number of potable water sources constructed/rehabilitated for household and livestock consumption	-	1	1	3

The qualitative findings generated from the villages found in the Oromia region indicated that there is recent improvement on access to improved drinking water sources for the communities in JRBP implementation villages, yet the improvement cannot be fully attributed to the project intervention. Given that the construction works of three of the four constructed water schemes were completed in the final year of the project (some of the final construction works has been carried out during the final evaluation period) which is difficult to evaluate the contribution of the project in improving access to drinking water for the communities. In Ejersa village of Dugda Dawa Woreda, water scheme fitted with solar based water pump along with the construction of three water points was completed during the project implementation period. In addition, PVC water reservoir (pioneer water tank) with a capacity of 20,000 liter was provided in Ejersa village of Dugda Dawa Woreda through the support of the JRBP. Shallow well was also constructed in Burka Arbicho Kebele and fitted with hand pump due to the low yield of the constructed water scheme. In Mekanisa Kebele shallow-well fitted with fuel based water pump along with the construction of four water points and reservoir with a capacity of 50,000 liter was also completed and started to serve the community. To ensure sustainable community based water management system, the project established WASCHOs for each constructed water schemes and provided the necessary training as per the national standard. Some of the trained WASCHOs were already undergoing important activities such as instituting local tariff system and started collecting monthly fees from the users which would contribute to the sustainability of the constructed schemes. However, as observed from the evaluation findings there seem to have limited capacity in few of the observed WASHCOs with regards to tariff setting and collecting fees from the water users which was largely due to the late implementation of WASH related activities in the Oromia villages.

Natural resource management. Multiple activities have been carried out by the JRB project to improve the natural resource management practices in the project intervention villages. Clearing of land from invasive tree (i.e. Prosopis Juliflora), different watershed management practices such as soil conservation interventions, and area enclosure based on Cash for Work (CFW) approach as well as provision of different capacity building trainings were the major interventions implemented during the JRBP implementation period to improve the natural resource management practices in the targeted villages.

The quantitative survey of the evaluation revealed that about 58.8% of the surveyed households were applying at least one natural resource management practices in the past three years. Moreover, a total of 722 hectare of land was covered with different NRM practices in the project implementation areas. However, the data from the secondary source indicated that the project didn't achieve the NRM target where only 96 hectare of land was covered by the different NRM practice which is below the project target of 160 hectare of land. In addition, the majority of the NRM activities were carried out in the Somali region than the Oromia counter parts mainly due to security related problems that limited the implementation of the activities.

The project supports to improve the NRM practices brought encouraging results in the project implementation villages of the Somali region as evidenced form the field visits and qualitative findings of the evaluation. In villages found in the Somali region, as a result of the land clearing activity from invasive tree species, indigenous vegetation species were regenerated, and in some villages people are using the land for farming activity and livestock grazing purposes. Some of the supported specific alternative business groups of the project such as group engaged in the production of charcoal have also contributed the land clearing efforts of the project in the villages located in the two districts of the Somali region by removing and using Prosopis Juliflora tree species for charcoal production.
Findings from the field visit and qualitative findings generated from the key informant interviews and focus group discussions, the area enclosure activity of the project has also contributing to improve the sustainable natural resource management practices in the project intervention villages. As a result of the area enclosure practices, the enclosed land is able to regenerate different kinds of indigenous trees and vegetation. Nowadays, people have access to dry season grazing for their livestock as well as avoided encroachment of the conserved areas. In villages located in the Somali region, project beneficiaries were able to access the grazing land for their small ruminants from the protected areas during the recent occurrence of drought. Moreover, different soil conservation activities were also implemented in the project implementation villages. Soil bund, stone bund, construction of check dams and gabion were the main activities carried out by the project to conserve the soil and reduce the impact of soil erosion and flooding. As revealed in the qualitative findings, the different soil conservation structures that were carried out in the project implementation villages have significantly counteracted soil erosion, flooding of farming areas, and minimized the formation of gully erosion. The improvement in soil and water conservation practices also contributing to crop production by reducing the risk of flooding of farm lands and plantation.

The JRBP improved the rehabilitation of the degraded land and the environment which provided multiple benefits to the intervention villages. In the previous period, there was frequent occurrence of flooding and high rate of soil erosion affecting the farming land and the existing road infrastructure. The soil bund, stone bund, and check dam constructed by the support of the project has significantly reduced soil erosion and contributing to the rehabilitation of the faming lands and minimized further damage to the existing road infrastructure. However, the project did little in increasing plantation of different types of trees so as to contribute to the afforestation efforts of the government as per the comments of representatives from the Woreda level government stakeholders.

Figure 5: Area enclosure (left) and soil conservation (right) through JRBP support in sigalow village of Dollo bay woreda, May 2021

Strengthening early warning system. The JRBP provided different interventions to strengthened climate information and early warning system for climate resilience development and adaptation to climate change to prevent, reduce, mitigate, and cope with the impact from natural hazards. Related to these activities the project has made positive progress against on two output areas. The JRBP strengthened 14 EWS committees and linked from village to district which has surpassed the project target of reaching 6 EWS committees. The project produced a total of 6 community based contingency and preparedness plans by the end of the project, and has achieved its target. However, the project planned to prepare a total of 2 documents on practices of climate smart/adaptive village (CVA) was not executed because of late implementation of a number of project activities due to security challenges and the occurrence of COVID-19 pandemic.

Table 5: JRBP performance on information sharing and early warning system, May 2021

Information sharing and early warning system	Final evaluation			Target
	Oromia	Somali	Overall	
Number of EWS committees Strengthened and linked from village to district level	0	14	14	6
Number of community based contingency and preparedness plans produced	-	-	6	6
Number of documentations on climate smart/adapted village (CAV) practices	0	0	0	2

Findings from the key informant interviews and focus group discussions revealed that the project significantly enhanced the local early warning system, in particular in villages located in the Somali region. The project intervention on local early warning system has brought an improvement on the knowledge of the beneficiaries and improved their ability to respond to risks and improved their preparedness to the occurrence of the different natural risks such as flooding, drought, and desert locust invasion. Capacity building training to the Kebele administration staffs, Woreda office staffs, and establishment of early warning committees coupled with provision of mobile apparatus to the early warning committees have significantly improved information dissemination to the communities on desert locust and flooding which brought significant positive improvement. During the project implementation period, TOT was given on climate information sharing and community-based Early warning System which was important to improve the capacity of the local system and praised in the key informant interviews with the different stakeholders.

As a result of the project interventions in the villages found in the Somali region, communities living in the intervention villages were able to avoid potential damages that could be caused from flooding and desert locust invasion. The communities in the intervention villages were regularly receiving early warning information from the committees and Kebele administration offices before the occurrence of flooding and

any other natural disasters. As a result, the communities were able to save their farming tools (e.g. water pumps) before they would get swept away by floods. The early warning information that has been provided in the intervention villages also helped the communities to avoid losses of livestock by the occurrence of flooding. After the communities received the early warning messages from the committees, often they were able to move their livestock away from the river banks to prevent the swept away of their livestock by floods. The same early warning information sharing approach has been also practiced in the intervention villages when there was an invasion of desert locust during the project implementation period which avoided losses of crop plantation.

5.3. Efficiency

The JRB project mainly designed Climate Adaptive village (CAV), Climate Smart Agriculture (CSA), Multi stakeholder, Participatory, and Capacity Building approaches to realize the main project outcomes. As per the evaluation findings, the project made the right selection of implementation approaches to efficiently deliver the expected results. The efficiency of the project differs across the project implementation villages. Given the circumstances prevailed in the course of project implementation, it is possible to conclude that the project was managed better in the Somali region compared to the Oromia region. Recruitment and deployment of skilled human resources, availability of dedicated technical wing (ICRISAT), strategic use of different delivery mechanisms to respond to changes of recurrent contexts, and the use of innovative CSA practices enhanced the efficiency of the project. Findings from the key informant interviews with the different stakeholders revealed that the allocated budget and human resource were generally allowed the implementation of a significant number of project activities. The costs of the project can be said reasonable in contrast to the benefits and result achieved, in comparison with similar projects and alternative approaches. Effort was also made to mobilize communities to contribute locally available materials and labour during the implementation of project activities such as NRM related interventions, hence enhanced the efficiency of the project.

The JRBP introduced some new agronomic practices such as Furrow irrigation and Hydroponic fodder production system. The evaluation findings indicated that furrow irrigation is quite efficient compared to the previously used irrigation schemes by the community as well as when compared to other types of surface irrigation system (i.e. Basin irrigation, uncontrolled flooding, and border irrigation systems). In the first place, the introduction of furrow irrigation has significantly reduced wastage of water and recirculating irrigation runoff water was also possible as commented by the key informants participated in this evaluation. Compared to the previous basin type of irrigation system used by the JRBP beneficiaries, the furrow irrigation avoided flooding the entire farm land which contributed to reduce loss of water. Moreover, the availability of a perennial stream (river) that can provide continuous water supply to the farmlands made beneficiaries to easily implement and adopt the furrow irrigation system. Moreover, unlike other types of irrigation system that need construction works which requires huge monetary investment and longer time period, the use of furrow irrigation though PVC pipe extension was instituted within short period of time with low operational cost to produce high value crop varieties such as onion. Focus group discussants also mentioned that previously traditional basin type of irrigation system was mostly used in the project implementation villages of Dollo Ado and Dollo Bay district which is significantly contributing to loss of water. The furrow irrigation was also easily adapted by the project beneficiaries and only required capacity building and willingness of the community members which was successfully brought through demonstration and awareness creation events. Evidences generated from the key informant interviews with participants from the agriculture office revealed that the furrow irrigation certainly contributed to higher crop yields as well as minimized chemical leaching as compared to the previous irrigation practices.

The cost of the water pumps provided to the beneficiaries was also reasonable and had equivalent cost with other types of water pumps. As revealed in the qualitative findings, the water pumps distributed by the JRBP have also better capacity to cover large farm size as compared to other types of irrigation pumps.

The water pumps distributed by the JRBP have an added advantages compared to other brands in terms of fuel efficiency, availability of spare parts, and can be easily maintained by the available local skills as per the opinion of the project beneficiaries and key informants participated in this evaluation. As per the findings from the key informant interviews with representatives from the Woreda agricultural offices, most water pumps previously purchased and distributed by the government are now non-functional due to lack of spare parts and skill limitation to handle the different maintenance need of the water pumps. Moreover, the provided machine and materials such as refrigerator, water pumps, and solar-based power supplier were cost efficient and easily managed by the available local skills. Moreover, the alternative business opportunities were also efficient in terms of the initial required investment. Materials such as refrigerators provided for groups engaged in milk collection and selling business and petty trading were mostly feasible and identified based on the local context and the available market demand as revealed from the evaluation findings.

Overall, majority of the project activities were delivered timely in the Somali region. At the time of the evaluation period, the last 10 water pumps including the start-up fuel was the only remaining activity of the project which was under distribution to the selected beneficiaries. The different activities under the natural resource management and alternative livelihood opportunities were implemented timely in the project implementation villages of the Somali region before the 'no cost extension period'. However, in the Oromia region, substantial amount of activities were delayed and implemented in the last project fiscal year mainly due to security problem. Distribution of improved seeds and other important agricultural inputs, delivery of improved livestock breeds, construction of water schemes, and NRM related interventions were significantly delayed in the villages located in Dugda Dawa Woreda which resulted to extend the project to the no-cost extension period. In the Somali region, the withdrawal of the PWO affected the timeliness of the project implementation. The replacement of new project partner (i.e. PC) and the handover process took a significant number of months. While the new partner started to implement the project activities from the low trajectory which contributed to the late implementation of some activities as well as contributed to the overall efficiency of the project. PWO has discontinued from the consortium after the first year of the project and NRC was taking care of all the activities until DF identify another implementing partners. Originally, NRC was mainly responsible to implement natural resource management (NRM) and alternative business opportunity creation activities. As a result, it was the NRC that was taking care of all the project activities for about seven months until the new consortium member get onboard in the consortium arrangement. The transition period which includes identification of new consortium member and the hand over process was not smooth and took a couple of months which affected the intensity and trajectory of the project implementation. Security and political instability were also the critical challenges in the first year of the project in the Somali region which made postponement of project activities to subsequent project implementation period. Moreover, the high turnover of staffs both in the project and in the local government sector office has been the observed challenge which eventually affected the timely achievement of the project targets and outcomes. The MoU signing process with the different government stakeholders in the Somali region was also affected the timeliness of the initial implementation process of the project.

Potential risks were also identified at the design stage of the JRBP project to proactively reduce their influence on the efficiency & effectiveness of the project. Drought, flooding, lack of adequate market, and occurrence of crop diseases were among the risks identified in the JRBP project. Strengthening the capacity of the community and Woreda level local entities including the early warning system was one of the risk mitigation strategy identified in the design and implementation process of the JRBP project. Specifically, the project supported the establishment of early warning committees at the Kebele level to closely monitor the risks and timely adapt to the changing circumstances.

The occurrence of COVID-19 has been affecting the implementation of the different capacity building training that was planned in the project implementation period. Some of the capacity building trainings were temporarily suspend by the project to prevent the transmission of the pandemic. The project also

assigned staffs and engaged in improving the awareness of the project beneficiaries on COVID-19 transmission and prevention measures to minimize the pandemic impact on the performance of the project. Desert locust and flooding have been also influencing the implementation of the project. Though the project brought significant positive improvement in reducing the impact of flooding, the occurrence of flooding has affected some part of the crop plantation of the project beneficiaries. The project was supporting the affected beneficiates by providing additional improved seeds to reduce the impact of the flooding and encouraged the affected beneficiaries to continue engage in the farming activities.

5.4. Impact

The short term and long-term likely impacts of the project were evaluated based on assessing improvements in the impact indicators of the project from the baseline, likely impact in building resilience and its contribution to other development goals of the region/country. The project has two outcomes – (1) increasing productivity of both crop and livestock through Climate smart Agriculture practices, and (2) building the resilience capacity of the target communities.

Average annual income and average weeks per year with sufficient food were the two project indicators used to measure extent of livelihood improvement among the communities living in the JRBP implementation villages. The quantitative survey result showed that the average annual income of households (gross income) has increased from 12701 ETB at baseline to 34, 762 ETB (over 58% gross increments) at the final evaluation which also surpassed the project target of 16,810 ETB. The average income of households in the Somali region was immensely larger compared to Oromia region where the average household income in Somali region appeared to be over fivefold of the Oromia region. Moreover, the average weeks per year with sufficient food has increased from the baseline value of 35.5 weeks to 41.6 weeks in the final evaluation (which is 100.2% of the project target (41.5 weeks)).

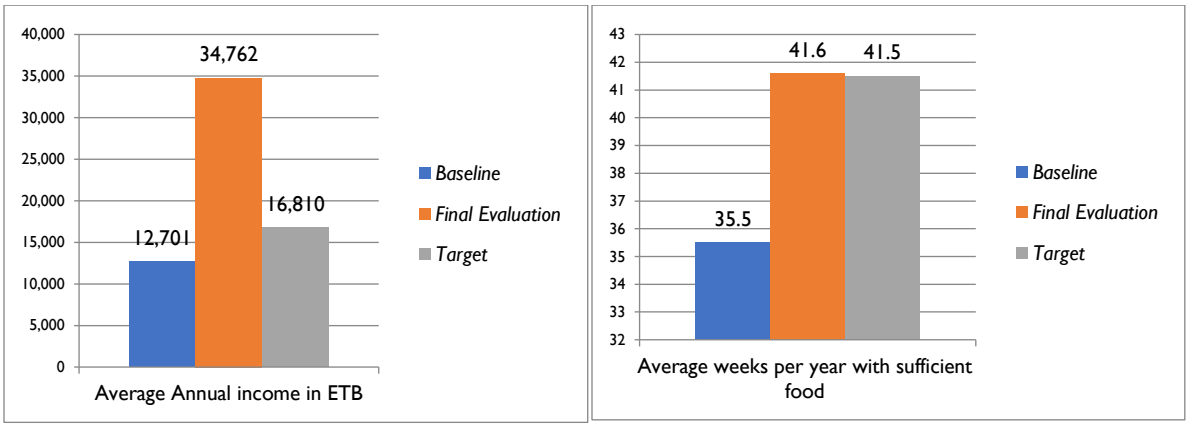

Figure 6: Average annual income in ETB and weeks per year with sufficient food, May 2021

Household income and availability of sufficient food are the main driving factor for households' resilience; therefore, the various activities undertaken by the project demonstrated that the project has made meaningful contribution in improving the livelihood of the target community, and this denotes that the target households' ability to cope up with climate related shocks has potentially showed an improvement in the JRBP implementation villages.

The evidence generated in this evaluation showed that there is an encouraging improvement in the crop production, livestock management, Natural resource management, local early warning system, and creation of alternative income generation business opportunities in the project implementation villages. However, the observed improvement in the different project component is widely differ from region to region. The significant positive change made by the project was largely observed in the villages found in

the Somali region and had the larger share and contribution to the overall project outcome and achievement.

Overall, JRBP evidence of impact is strong. The evaluation indicated that the JRBP has achieved considerable impact at the household, community and institution levels. Impacts at the household level are perhaps the greatest and provide the strongest evidence of how the lives of project beneficiaries have changed as a result of their direct participation in the project. They include evidence of strengthened and diversified livelihoods, improved agricultural practices through adoption of different CSA practices, and access to weather and seasonal climate information, improved protection of key assets (including livestock and farm land), and women empowerment. The evaluation findings indicated that the JRB project supports significantly improved the engagement of pastoralist and agro-pastoralist in the crop production and in the different alternative business opportunities. There is impressive motivation in both direct JRBP beneficiaries and other households in the implementation villages to engage in the different farming activities; nowadays the trend of renting out farmland to other people is significantly declined as compared to the period before the JRBP implementation. Qualitative findings generated from the different sources witnessed that beneficiaries are now able to access different basic social services such as education and health services for their families and children. Before the implementation of the project, beneficiaries were not able to buy basic educational materials and cover associated costs for their children which were a challenge to the project beneficiaries to send their children to schools. Besides, the project intervention on to fodder production and the NRM activities of the project have potential to improve access to fodder and availability of pasture during the dry season and occurrence of drought in the future.

The project contributed to improving food security and the health and nutrition of the community through improving the productivity of rain-fed agriculture by efficient irrigation system, adopting improved crop varieties, and management practices, by adopting sustainable natural resource management practices, and by introducing different alternative income generation opportunities. The JRBP interventions can contribute to making farming systems more resilient to climate change by restoring productive natural resources and thereby increasing food production and enhancing food security. The adoption of crop varieties and forages with increased resistance to drought would reduce climate change impacts. The project created a strong foundation to sustainably adopt Climate Smart Agriculture (CSA) practices in the project implementation villages which would contribute towards realizing Climate Adapted Villages (CAV) and resilient community.

Moreover, the evaluation findings did not indicate any unplanned negative effects of the project so far on the target communities living in the JRBP implementation villages. Instead, various actual and potential positive benefits of the project were identified, as perceived by most of the beneficiaries. The high motivation of the direct JRBP beneficiaries and other households to engage in crop production was found to be the key unintended positive effect observed in the final evaluation.

However, looking at these sorts of final outcomes is not sufficient to tell about the project's full impact on resilience. Most of the project activities were carried out lately and in the final project implementation year, so it's difficult to see the project effects on the livelihood of the community in this final evaluation. On the other hand, the capacity of the relevant local level sector offices is still limited and constrained with different factors such as high staff turnover and limited government budget. In particular local institutions lack adequate capacity in reducing risk, supporting positive adaptation, and ensuring equitable access to essential services both in the normal time and in times of shocks; which would directly influence the resilience capacity of the community. As evidenced from the qualitative findings, there is limited skill and knowledge on the concept of climate smart agriculture and climate adapted villages among the technical staffs working in the relevant Woreda level government offices which might be attributed to the high turnover of staffs and limited project efforts in capacitating the Woreda level stakeholders around CSA and CAV.

Despite of the JRBP brought positive improvement on the livelihood of the project beneficiaries; there is a limited outcome in creating a resilient system and community in the project implementation villages. The majority of the key informants described the project as a transition phase project towards creating resilient community and local institutions. As noted in this evaluation, the JRBP interventions can be considered as a foundation for future similar projects towards building a resilient system and development. At present, the community asset-base, food security status, livelihood, and production system were not strong enough to withstand to climate related hazards.

5.5. Sustainability

The final evaluation has attempted to assess sustainability of this project in terms of continuity of the project achievements and interventions, factors influencing sustainability, approaches applied to ensure sustainability, and the main exit strategy of the project. As learned from the evaluation finding, sustainability was given proper attention in the design and implementation course of the project. At the outset, the project incorporated mechanisms to ensure institutional, technical, and financial sustainability of the project results and intervention after the end of the project. Capacity building training, use of existing local structure, and centering community participation were important strategy employed by the JRBP to ensure sustainability and local ownership. Besides, the project prepared comprehensive exist strategy document before the end of the project and shared to the relevant sector offices. The exit strategy clearly depicted the key milestones of the hand over process, identified potential sustainability risks, and proposed feasible sustainability actions after the phase out of the project. The final evaluation has learned that members of the target community, Kebele administration offices, and the district level government offices were highly involved in problem identification, design, planning, implementation, and monitoring during the implementation course of JRBP. The participation of the local stakeholders in key phases of the project have provided opportunity to closely and adequately know the project, which will be an asset for the sustainability of the project. The collaboration that was in place with key government stakeholders can be also a driving factor for the long-term sustainability of the project interventions. Besides, strong sense of ownership among the project beneficiaries and availability of the necessary institutional arrangements can serve as foundation to project sustainability.

Final evaluation showed that the project achievements under the crop production and alternative income generation business opportunities will have a potential to sustain in the future after the end of the project. Availability of high market demand for the crop products such as onion will potentially drive the sustainability of the project outcomes made under the crop production. There is also a positive shift on the mind set of these project beneficiaries and the JRBP activities brought a significant encouragement among the project beneficiaries to continue engage in the production of different types of crops in the future, hence contributes to the continuity of the project results. The activities introduced to enhance crop production such as water pumps and furrow irrigation were technically viable and could easily be managed by the project beneficiaries and government offices in the future.

The project activities and positive outcomes under the livestock management in particular on access to veterinary service will be continued in the future as found in the evaluation findings. The trained CAHWs have started providing services to the community and linked with the Woreda livestock offices to ensure their sustainability. Besides, CAHWs were also generating income from the established veterinary drug shops which was serving as incentive for them to continue to provide the service to the community.

As observed in villages found in the Somali region the alternative business opportunities such as the petty trade, grain milling, milk collection and selling, fishing and fish restaurant, SACCO groups, camel women group and other business opportunities will certainly sustain in the future after the end of the JRBP project, since majority of the beneficiaries have strong motivation and positive mind shift as well as making reasonable profit so as ensure the continuity of the business. However, there is uncertainty on the sustainability of the created alternative business opportunities in villages found in the Oromia region.

Mostly, the protracted security problem in the Dugda Dawa Woreda was continued as a critical challenge and likely affects the sustainability of the established business entities.

There was also evidence that shows the sustainability of the project positive outcomes made under the Natural resource management in villages found in the Somali region. The beneficiaries were demonstrating that the different natural resource management related activities such as area enclosure as one of the means to reduce the impact of climate related hazards as well as consider it as important practices to bring community level resilience. The communities living in the project targeted villages of Dollo Ado and Dollo Bay created feasible management system such as creation of NRM committee and informal bylaws (e.g. setting the amount of money that an individual is supposed to pay when his/her livestock invade the protected area) which are certainly enhance the sustainability of the activities. Moreover, the availability of similar NRM activities in the JRBP implementation village's under the government led PSNP program will strongly back the project NRM positive outcomes and activities after the end of the project.

However, there were some sustainability issues generated in this final evaluation. The sustainability treats were mostly revolve around the supply of agricultural inputs, close follow up and supervision, and community level management of the constructed water facilities which are largely sourced from the limited capacity of the relevant government sector offices. Indeed the JRBP placed approach to encourage established cooperatives to save money that is used for procuring improved seed varieties and other agricultural inputs for the subsequent farming seasons as part of ensuring the sustainability of supplying important agricultural inputs to the beneficiaries. However, the rapid increment of prices of agricultural inputs elsewhere in the country is critically challenging the benefitted cooperatives to afford the important inputs. As per the opinion of key informants from the agriculture offices, the sustainability of supplying improved seed, fertilizer, and farming tools will be affected after the end of the project. In many cases, limited capacity of the agricultural offices and high rate of price increment of improved seed and other agricultural inputs were the reported factors that will likely affect the sustainability of the supply of important agricultural inputs. Moreover, the evaluation findings showed that the result achieved by the project through supports provided to the established cooperatives would potentially be affected after the end of the project. As revealed in the key informant interview with representatives from the agricultural offices, the project supported cooperatives need additional technical and material supports such as on financial management, saving, and overall cooperative management skills to ensure their sustainability. Given the current financial capability of cooperatives, it would be also difficult for the cooperatives to cover all the costs associated with agricultural inputs in particular the cost of improved seed varieties and fertilizer without additional assistance.

Evaluation findings also indicated that the sustainability of the constructed water schemes in the Oromia region will potentially experience sustainability challenges after the end of the project. Even though the project achievement on establishing new WASCHOs is satisfactory, their capacity and level of commitment remained a gap to ensure sustainability.

Even though there is comprehensive and feasible JRBP exit strategy, the hand over process of the project outputs and activities to the relevant stakeholders was not smooth across the JRBP project implementation areas. In both regions, project activities were not fully handed over to the relevant government sector offices as stipulated in the project exit strategy, which might be emanated from the late implementation of some project activities and high staff turnover in the government sector offices.

5.6. Coherence and Coordination (Collaboration)

The creation of a resilient community and system requires engagement of multiple actors and reinforcement & linkage of interventions to enhance collective and sustainable impact. The evaluation finding showed that relevant government sectors such as agriculture, livestock, cooperative promotion, and DDPO offices were the major actors closely working with the JRBP. There were evidences that demonstrate the reinforcement of JRBP activities and that of the government led PSNP which were

potentially contributed to the project outcomes. In the NRM activities of the JRBP, selection of beneficiaries, planning and implementation of activities were carried out in close coordination and collaboration of the Woreda level PSNP which avoided duplication of resources as well as had effect towards building the resilience capacity of the community. Moreover, NRM related project supports by other development partner such as weir construction (e.g. World Bank support project) in some of the villages in the Somali region was an added advantage and contributed to the achievement of the project with regards to soil conservation and reducing the impact of flood. However, there is limited linkage and reinforcement of JRBP activities with other actors, because most of the existing actors work in separate Kebeles as well as there was limited information sharing practices with other actors in JRBP implementation period.

The JRB project was designed in way to create strong linkage, consistency, and integration across the spectrum of the major project components. As evidenced from this evaluation there was a strong concurrent effects and linkage between the project interventions under the agriculture and natural resource management component of the JRBP. The different natural resource management interventions of the project such as area enclosure, clearing of invasive tree (i.e. Prosopis Juliflora), soil conservation and other similar activities of the project have contributed to improve crop production in the intervention villages. The same trickledown effect and complementarity were also observed across the alternative income generating business, crop production, and natural resource management activities of the project.

Multi-level coordination platforms were established by the project to facilitate the collaboration and coordination in the consortium arrangement as well as with the different stakeholders. During the project implementation period, national steering and technical committees and Woreda level steering structure were created to smooth the coordination effort. At the beginning of the project, regular review meetings with the relevant Woreda level government stakeholders have been carried out during the project implementation period to periodically review the performance of the project and address any encountered challenges.

However, the established coordination platforms were not strong enough throughout the project life and further weakened at the final year of the project implementation period. Security problem, COVID-19 pandemic, turnover of project and government sector office staffs, termination of one of the consortium member in the Somali region and other associated factors were the major challenges affected the coordination and collaboration efforts of the project. Moreover, there was a gap in the consortium arrangement in a way to bring collective efforts, synergy, and complementarity in the implementation course of the JRBP. Joint implementation arrangement and resource and information sharing practices were not satisfactorily happened in the consortium structure as evidenced from the qualitative findings. Besides, the consortium structure was not identified as a strong learning platform in the JRBP implementation period with limited efforts for exchange of best practices and experiences.

5.7. Cross-cutting themes

The project design mainly included women rights and gender equality, climate and environment and human right issues as cross-cutting factors which are important towards improving the overall livelihood of the communities. The project had worked on mainstreaming the identified crosscutting issues to implement the majority of the project activities.

Final evaluation findings indicated that, the project was adequately gender sensitive and contributing to improve women economic empowerment. This was demonstrated in terms of involving women in the different project activities. In this regard women constitute substantial proportion in the alternative income generation opportunities, SACCO groups, and in the established irrigation & multipurpose cooperatives. In the long run, it is believed that the project efforts to ensure meaningful representation of

women in the different project activities will certainly enhance their economic empowerment so as contributes to improve their livelihood.

The project activities and implementation approaches were also environmentally sound and sensitive to climate change and variability. Most of the natural resource management JRBP activities such as clearing of invasive trees, area enclosure, and soil conservation & gully treatment activities brought tangible results in reducing the degradation and depletion of the natural resources. The CSA activities carried out during the project implementation period adequately managed the environmental and climate trade-offs through different adaptation options.

6. CONCLUSION AND RECOMMENDATION

6.1. Conclusion

Evaluation findings imply that the JRBP project components and activities were quite relevant to the targeted households to break the cycle of vulnerability and enhance their resilience capacity to withstand climate hazards. The project design and implementation approaches are also relevant and appropriate to realize the project outcomes. The JRPB inputs, outputs, and expected outcomes were designed in an integrated and consistent way to achieve the overall project goal. It appeared that climate-induced shocks are still remains the major hazards affecting the livelihood of the community in the project implementation areas. With respect to designing the JRBP, it appeared that there was mismatch between the project timeframe and the time needed to realize resilient households and Climate Adapted Villages (CAV).

The project was successful in achieving substantial number of the project targets depicted under the two JRBP outcomes. The overall JRBP implementation model through expanding CSA knowledge and practices and CAV approach appears to have been quite successful in improving the productivity and resilience capacity of the households. The JRBP efforts to improve the adaptation of new CSA practices in the project implementation villages and provision of agricultural inputs and technologies tangibly enhanced the households' abilities to cope with climate related hazards. The JRBP beneficiaries were highly recognized the improved agricultural inputs such as improved seed varieties that have the potential to make crops more resilient to climate hazards. At the end of the project, it was observed that the different supports provided to the beneficiaries have significantly improved the yield of Onion, Maize, and other types of crops compared to the time before the JRBP. The improvement in crop production was more pronounced in villages found in the Somali region than Oromia. Despite these gains, climate-related crop loss and crop diseases remain major threats to household food security in the JRBP implementation villages.

The project brought positive result in increasing fodder & milk productions, and access to animal health services in the project intervention villages, although the overall improvement is largely originated from the villages located in the Somali region. The JRBP effectively strengthened and improved access to veterinary services provision through CAHWs approach and partnership with the Woreda livestock development offices. The cost recovery and income generation system used for the CAHWs coupled with collaboration with the relevant government sector offices is key to the likelihood of the sustainability of the animal health service provision in the JRBP implementation villages, though better performance and sustainability prospect were observed in the Somali villages than the Oromia counterparts.

The JRBP intervention improved the availability of a range of alternative income generation opportunities in the project implementation villages. The JRBP interventions to improve access to alterative income generation opportunities have brought a tangible positive change in the lives of the beneficiaries. Indeed, the significant change was observed in villages found in the Somali region than villages found in the Oromia region regarding the project achievements under the alternative income generation opportunities.

The project supports to improve the NRM practices also brought encouraging results in the project implementation villages of the Somali region. The NRM activities of the project such as land clearing from invasive tree species and the different soil and water conservation interventions that have been implemented in JRBP villages created foundation for sustainable NRM practices and have also contributed to enhance productivity in the areas. With all these positive NRM related positive outcomes in the JRBP villages, NRM related challenges such as soil erosion, flooding, and existence of invasive tree species are continuing as key factors affecting the communities and the households.

The JRBP has achieved considerable impact at the household, community and institution levels. Impacts at the household level are perhaps the greatest and provide the strongest evidence of how the lives of project beneficiaries have changed as a result of their direct participation in the project. In this evaluation, average households' income and weeks per year with sufficient foods showed increment between the baseline and final evaluation. Overall findings illustrate that JRBP has played a role in improving households' food security status and economic well-being through increasing crop productivity and access to alternative income generation opportunities. The project created a strong foundation to sustainably adopt Climate Smart Agriculture (CSA) practices which will likely contribute towards realizing Climate Adapted Villages (CAV) and resilient community. Despite of the JRBP positive improvement on the livelihood of the project beneficiaries; there is a limited result in creating a resilient system and community in the project implementation villages.

Given the circumstances prevailed in the course of project implementation, it is possible to conclude that the project was managed efficiently to meet the project targets. Recruitment and deployment of skilled human resources, availability of dedicated technical wing (ICRISAT), strategic use of different delivery mechanisms to respond to changes of recurrent contexts, and the use of innovative CSA practices enhanced the efficiency of the project. The allocated budget and human resource were generally allowed the implementation of a significant number of project activities. The costs of the project can be said reasonable in contrast to the benefits and result achieved, in comparison with similar projects and alternative approaches.

Sustainability was given proper attention in the design and implementation course of the project. At the outset, the project incorporated mechanisms to ensure institutional, technical, and financial sustainability of the project results and intervention after the end of the project. Capacity building training, use of existing local structure, and centering community participation were important strategy employed by the JRBP to ensure sustainability and local ownership. The majority of the project achievements under the crop production, alternative income generation business opportunities, and improved access to animal health services will have a potential to sustain in the future. On the other hand, the hand over process of the project outputs and activities to the relevant stakeholders was not satisfactory across the JRBP project implementation villages. In both regions, project activities were not fully handed over to the relevant government sector offices as stipulated in the project exit strategy, which might be emanated from the late implementation of some project activities and high staff turnover in the government sector offices.

6.2. Recommendation

Crop and Livestock production

- *More investment is required to improve the livestock value chain and crop production through expansion of small scale irrigation schemes, access to agricultural inputs, improved livestock breed and veterinary services. In addition, the design of similar project needs to prioritize investments to improve access to pastures and market linkage for livestock and livestock products.*

- *Improving crop diversification practices in the intervention areas should be the focus in similar project in the future. The project intervention areas in particular villages located in the Somali region has a good potential to produce large volume of fruits and other crop products.*
- *Since uncertainty exist on the continuation of agricultural inputs to the beneficiaries, it's imperative in the future to strengthen multi-purpose cooperatives and local agro-dealers to play important role as major suppliers of inputs.*

Alternative income generation businesses

- *Given the high demand of alternative livelihood options, alternative income generation business interventions should be the focus areas of similar resilience building projects in the future.*
- *The design of alternative income generation business opportunities in the future need to fully consider the existing socioeconomic and ecological condition of the areas in order to bring better achievements.*
- *Similar project need to include strategies to enhance the role of local microfinance institutions through strengthening and promoting collaboration between relevant local government sector offices and the microfinance institutions.*

Natural Resource Management and EWS

- *There is a need for additional natural resource management interventions to further mitigate the impact of flooding and drought on crop production and soil erosion in the project intervention villages.*
- *As it is an important problem of the community, there is need for further promotion and support of rangeland clearing from invasive trees and rehabilitation of degraded lands. Future interventions should consider a more integrated approach that include biological and physical soil and water conservation measures such as reseeding and enriching the grass species.*
- *There is a potential in the future to further strengthen the linkage between the natural resource management interventions and creation of alternative business opportunities. Specifically, introducing innovative technologies that will use invasive tree species such as Prosopis Juliflora tree species as an input (raw material) to produce different products such as charcoal and other consumable products would be a possible intervention to enhance the linkage between NRM and alternative business creation interventions.*

Resilience capacity of the community to climate change

- *Climate-resilient agriculture such as CSA practices and livelihoods resilience interventions should remain a key focus of future project design.*
- *Consider similar projects to have long project duration in order to able to have more impact and provide the flexibility often required for external changes. Capacitate the overall development system need to be the priority in future similar projects; there seem to be the challenge of the continual cycle of climate related hazards as well as to realize the creation of Climate Adapted Villages.*
- *Creating Climate adapted villages (CAV) need a significant long year investment; both at the community and institutions level. Similar project design needs to examine and account the compatibility between the project implementation period and expected outcomes and activities of the project.*

Other/Overall

- *The JRBP was implemented in a very limited number of villages across the three Woredas found in the Somali and Oromia regions. Therefore, there is a need to provide additional investment to scale up the JRBP activities*

to other villages to realize community level resilience and bring wider impact at the community and Kebele levels.

- *Project implementation strategies to ensure coherence and reinforcement of project activities with other similar interventions need to be guided by clear operational guidance to deliberately enhance reinforcement and synergy.*
- *In order to ensure their sustainability and realization of their impacts, most of the activities accomplished under outcome two deserve close follow up. Close follow up and monitoring of the established cooperatives, business groups, and community level committees should be the priority in the future in order to sustain the achievements made by the project. The effort of the relevant government sector offices is important to improve access to agricultural inputs such as improved seeds to the project beneficiaries.*
- *Close follow and monitoring of the established WASHCOs is required from the relevant government sector offices to ensure the sustainability of achievements and results obtained through the construction of new water schemes.*
- *Future project design need to consider higher level strategies to enhance better collaboration and cross-project coordination in the consortium arrangement through regular coordination, collaboration, and learning events, beginning at the design phase and continuing through implementation and evaluation.*

ANNEX I: EVALUATION DESIGN MATRIX

Evaluation Design Matrix

ANNEX II: DATA COLLECTION TOOLS

STRUCTURED HOUSEHOLD SURVEY QUESTIONNAIRE

Final HH Questionnaire_May 1

KEY INFORMANT INTERVIEW AND FOCUS GROUP DISCUSSION GUIDES

Introduction and Informed consent

Hello, my name is _____ and I am here on behalf of DF and its partners to collect data for the final evaluation of Joint Resilience Building Project (JRBP) that have been implemented in selected districts of Somali and Oromia regional states. The project has been implemented since 2017 in Dugda Dawa, Dollo Ado, and Dolo Bay districts. This interview is intended to collect information that will inform DF, project consortium members, partners, and donors on the project performance in achieving the desired outcomes. The evaluation will assess the achievements of results to contribute to accountability. The findings from the evaluation will also contribute to learning by understanding what have been the factors that made possible or created obstacles to the achievement of results (their focus

is therefore on why, not only on what); and by identifying any key lessons that would lead to improve resilience building interventions/projects in the future.As participation in this interview is voluntary, please let us know your decision whether you want to take part in this evaluation as an informant or not. Please be informed that we will be using voice recorders to capture the discussion; but this is only used for this evaluation purpose to make sure that we don't forget the most important points you share during the discussion and will not be shared to anyone outside of the evaluation team. We would like to thank you for your time and willingness to participate in this discussion and please be informed that all the information you provide will be confidential and will not be shared to anyone else except the evaluation team. Your name, or any other identifying information, will not be used in a final report or in any other document available to the public. Your participation is voluntary, and you are not obliged to answer any questions you do not want to. The discussion will take about 60 minutes to complete.

Are you willing to take part in the study? (Circle)

1. Yes 2. No

I read the aforementioned information and procedures to each evaluation participants. I asked if the evaluation participants have any questions and tried to address all of them to the best of my capacity. Each person is willing to take part in the evaluation.

Do you have any question before we start our discussion?

Name of Interviewer/Facilitator			
Date of Interview			
Start time		End Time	
Signature			

Region/ Zone		Woreda	
		Kebele	
Age			
Sex			
Name of Organization represented			
Position/Responsibility of interviewee			
Telephone number of interviewee			

KEY INFORMANT INTERVIEW GUIDE FOR NATIONAL AND PROJECT LEVEL STAFFS

Relevance	▪ In general, what was the situation in this area at the beginning of JRBP? What triggering factors were there for the design of this project? **Probe for**; - *Context in general (e.g. drought situation level of vulnerability, HH food security status, coping capacity of the community to natural disasters, malnutrition/disease related morbidity & mortality, irregular migration & displacement/IDPs, overall livelihood, accessibility and coverage of basic services etc)* - *Resilience capacity of the community and institutions(e.g. food security, availability of diverse livelihood opportunities &lcoping strategies, capability to respond to shocks & stressors etc) and local institutions (government sector offices) (e.g. to respond to shocks /disasters, technical, financial and manpower capacity etc)*

	▪ How would you assess the relevance of the project? **Probe for :** - To what extent the project identified and addressed the different needs and priorities of the target communities in the different interventions? Probe for the relevance of the project for the targeted vulnerable segment of the community members (men and women) and local institutions & establishments in terms of addressing their needs on the following areas: ✓ *Crop and livestock production* ✓ *Alternative livelihood opportunities* ✓ *Access to information and actions that reduces their vulnerability and well-being (e.g. EW, monitoring and forecasting etc)* ▪ Are the activities and outputs of the project consistent with the overall goal and the attainment of its objectives? ▪ Does the project design respond to the priorities of the country as well as donor's priorities? Probe for: ✓ Is the project designed in a way to align with government &donor policies, strategies and priorities? ▪ Has the risk analysis been strong enough and monitored regularly? Has the project been adapted to changing risk-environments? Probe for: ✓ What risks were identified and monitored during the JRBP implementation period? ✓ What mechanisms were applied to monitor the risks? Did the mechanism worked well? ✓ To what extent the project was flexible and adaptable to emerging circumstances? What examples can be mentioned in this regard? ✓ What changes took place in the implementation process of the project differed from the original design? ▪ How can future similar project improve their planning process to address internal and external challenges and constraints?
Coherence	▪ To what extent the project interventions have linkage and integration with other interventions carried out by implementing partners? Probe for; - *Such as linkages and integration with the joint emergency project, school feeding program, etc* - *What approach and mechanisms were used to enhance the linkage and integration? Did the linkage and integration enhance the effectiveness of the project? If so, how?* ▪ To what extent the project interventions were consistent with other actors' interventions in the same context? Probe for: - *Consistency with government program such as PSNP, with other climate and resilience building related activities/project etc* - *To what extent was coherent with other actors and any significant overlap and duplication of project activities with other similar interventions which could otherwise result in unnecessary wastage of resources?* ▪ Has the communication/ collaboration between the partner and DF been adequate? Probe for: - *Strength and weakness of the communication/collaboration* - *Established communication/collaboration platform and level of adequacy*
Effectiveness	▪ To what extent are the objectives (outcomes and outputs) of the program being achieved compared to the planned target based on the existing data? What are the major factors influencing the achievement or non-achievement of the objectives? **Probe for:** - Please describe for us how the project were able to meet the objectives & targets and contributed to the outcomes and outputs (*provide evidence on drivers and hindering factors on the performance of the project in each result areas/project components and also if there is any exceptional experiences/achievements*):

	✓ ***Increasing productivity of both crop and livestock:*** *CSA practices, capacity building training, facilitating inputs including access to irrigation, seeds, fertilizer, tool etc, and Climate smart livestock management (such as introduction of high yielding and drought resistant forage types, improved fodder production and feeding practices, new and more productive livestock breed and access to animal health services)* ✓ ***Improving NRM practices:*** *(e.g. capacity building and technical supports, soil and water conservation, access to alternate income generation opportunities, increasing access to information and early warning system, monitoring and forecast, filling infrastructure gaps for EWS, Community based climate smart adaptation plan/Climate Adapted Village/ etc* ▪ To what extent are the target groups and beneficiaries reached? **Probe for:** - *In what ways the communities were engaged to have access to information about their rights and entitlements?* - *Did they participate in decisions that affect them?* - *What beneficiary targeting approach was used during the project design and implementation process? Did the approach effective? How?* ▪ What is the level of satisfaction among direct beneficiaries on the project interventions? **Probe for:** *opinion of beneficiaries on the project components, targeting criteria, implementation process, level of satisfaction and dissatisfaction, reasons for their satisfaction or dissatisfaction etc* ▪ If the program has not achieved some results, investigate why not and the barriers to success? **Probe for:** (*provide evidence on drivers and hindering factors on the performance of the project in each result areas/project components and also bottlenecks and barriers that hinderer the success of the project*)
Efficiency	▪ How do you assess the efficiency of the project in terms of timely delivery of outputs, human resource use and other management and administrative issues? ▪ Do you think the project made appropriate and timely adaptations in response to changes in the external environment? How? What examples can you mention? What measures were taken to prevent delays? ▪ What innovation introduced by the project do you think is cost effective and needs to be scaled up? (***Probe for*** *: project implementation strategy, monitoring mechanisms, collaboration with partners etc*) ▪ Which of the innovation (implementation strategy and interventions) introduced by the project do you think are cost effective and needs to be scale up? Which ones are costly & needs to be looked into? Do you think there were modalities or alternative approaches to make the project more efficient? Please give us some examples ▪ Was the technology deployed helped to improve efficiency? To which extent the technology used improve efficiency? Could the project's efficiency have been increased using other technology or alternative implementation approach? (e.g. *water pumps, irrigation schemes, innovation and technology used in CSA practices (to create CAV)etc*) ▪ In general what was the weakness and strength of the project in terms of its efficiency and effectiveness?

Impact	▪ In your opinion what are the significant changes made due to the implementation of this project? **Probe for** - *What was the performance against the stated indicators?* - *Please provide us some real examples on the change observed on the livelihood of the community and the direct project beneficiaries* - *What are the likelihood effects of the project on resilience building (e.g. at the HH, community and institutional levels)? Are the communities and people affected by drought realizing better prepared and less at risk because of the project? How? Provide use some real experiences* - *What factors do you anticipate that affect the long term impact of the project?* - *Has the increase in crop productivity and improvement in livestock management lead to improve livelihoods of the targeted beneficiaries? If yes how? If no, what has been missing?* - *Are the natural resource management activities undertaken by the project demonstrating meaningful contribution to increasing climate resilience of the community? If yes how? If no, what needs to be improved?* - *To what extent has the project contributed to any unintended impacts or effects, positive or negative (e.g. social, economic, environmental, or other)?* ▪ How can future similar project improve their planning process to address internal and external challenges and constraints? ▪ Did impact vary for different targeted areas, households, or individuals? If so, how and why?
Sustainability	▪ To what extent would the benefits of the project continue after donor funding ceases? **Probe for:** - In your opinion, which project activities/interventions do you think could the community and government at all levels take over and implement without the project support? - Why and how? - Which ones cannot be sustained and need further support? Please provide evidence and justification. ▪ To what extent did the project utilize established institutions/mechanisms to ensure sustainability at the end of the project? Are the project measures implemented adequate to guarantee sustainability and improve resilience? ▪ What were the major factors which influence the sustainability of the project? please state factors that positively or negatively influence the sustainability of the project ▪ In your opinion, what lessons learned could be used beyond the project area? What does this project do that others don't do to ensure sustainability? How have the approaches applied contributed to the sustainability of the project achievements? ▪ Are alternative or additional measures needed to ensure sustainability and resilience at all level, and, if so, what is required to ensure continued sustainability and positive impact? ▪ To what extent has the project achieved sustainability allowing for project outcomes to be sustained? ▪ Does a sensible exit strategy exist for transfer of responsibility and activities to other stakeholders (local government, communities)?
Coordination/collaborations among different components/partners	▪ To what extent have different components operated by different actors reinforced each other to contribute to the project overall objectives? ▪ What were the strengths and weakness of coordination and collaboration? ▪ How actively were organizations involved in the coordination? What effects did the coordination have on project? ▪ Which factors have restricted the coordination, and which factors have supported it?
Cross-cutting issues	▪ To what extent was the project aligned with the differing needs and priorities of men, women, and other key stakeholders? ▪ To what extent the gender sensitive approach impacted the differing needs and priorities of gender groups?

	▪ Have environmental factors been considered adequately in the project design? Were mitigation measures put in place? ▪ To what extent have good environmental practices been followed in implementing the project? ▪ To what extent and how are we delivering appropriate and effective programming for persons with disability?

KEY INFORMANT INTERVIEW GUIDE FOR WOREDA LEVEL GOVERNMENT OFFICE REPRESENTATIVES

(***Pastoralist and Agriculture office (including NRM and EWS units), Pastoral development office, Water, mines and energy offices, DPPO, and Livestock development)***

Name of Interviewer/Facilitator			
Date of Interview			
Start time		End Time	
Signature			

Region/ Zone		Woreda	
		Kebele	
Age			
Sex			
Name of Organization represented			
Position/Responsibility of interviewee			
Telephone number of interviewee			

Relevance	▪ In general, what was the situation in this area at the beginning of JRBP? What triggering factors were there for the design of this project? **Probe for**; - *Context in general (e.g. drought situation level of vulnerability, HH food security status, coping capacity of the community to natural disasters, malnutrition/disease related morbidity & mortality, irregular migration & displacement/IDPs, overall livelihood, accessibility and coverage of basic services etc)* - *Resilience capacity of the community and institutions(e.g. food security, availability of diverse livelihood opportunities &lcoping strategies, capability to respond to shocks & stressors etc) and local institutions (government sector offices) (e.g. to respond to shocks /disasters, technical, financial and manpower capacity etc)* ▪ How would you assess the relevance of the project? **Probe for :** - To what extent the project identified and addressed the different needs and priorities of the target communities in the different interventions? Probe for the relevance of the project for the targeted vulnerable segment of the community members (men and women) and local institutions & establishments in terms of addressing their needs on the following areas: ✓ *Crop and livestock production* ✓ *Alternative livelihood opportunities* ✓ *Access to information and actions that reduces their vulnerability and well-being (e.g. EW, monitoring and forecasting etc)* ▪ Does the project design respond to the priorities of the country? Probe for:

	✓ Is the project designed in a way to align with government policies, strategies and priorities? ▪ To what extent the project was flexible and adaptable to emerging circumstances? What examples can be mentioned in this regard? ✓ What changes took place in the implementation process of the project differed from the original design? ▪ How can future similar project improve their planning process to address internal and external challenges and constraints?
Coherence	▪ To what extent the project interventions have linkage and integration with other interventions carried out by implementing partners and government sector offices? Probe for; - *Such as linkages and integration with the joint emergency project, school feeding program, etc* - *What approach and mechanisms were used to enhance the linkage and integration? Did the linkage and integration enhance the effectiveness of the project? If so, how?* ▪ To what extent the project interventions were consistent with other actors' interventions in the same context? Probe for: - *Consistency with government program such as PSNP, with other climate and resilience building related activities/project etc* - *To what extent was coherent with other actors and any significant overlap and duplication of project activities with other similar interventions which could otherwise result in unnecessary wastage of resources?*
Effectiveness	▪ To what extent are the objectives (outcomes and outputs) of the program being achieved compared to the planned target based on the existing data? What are the major factors influencing the achievement or non-achievement of the objectives? **Probe for:** - Please describe for us how the project were able to meet the objectives & targets and contributed to the outcomes and outputs (*provide evidence on drivers and hindering factors on the performance of the project in each result areas/project components and also if there is any exceptional experiences/achievements*): ✓ ***Increasing productivity of both crop and livestock:*** *CSA practices, capacity building training, facilitating inputs including access to irrigation, seeds, fertilizer, tool etc, and Climate smart livestock management (such as introduction of high yielding and drought resistant forage types, improved fodder production and feeding practices, new and more productive livestock breed and access to animal health services)* ✓ ***Improving NRM practices:*** *(e.g. capacity building and technical supports, soil and water conservation, access to alternate income generation opportunities, increasing access to information and early warning system, monitoring and forecast, filling infrastructure gaps for EWS, Community based climate smart adaptation plan/ Climate Adapted Village /CAV/ etc* ▪ To what extent are the target groups and beneficiaries reached? **Probe for:** - *In what ways the communities were engaged to have access to information about their rights and entitlements?* - *Did they participate in decisions that affect them?* - *What beneficiary targeting approach was used during the project design and implementation process? Did the approach effective? How?* ▪ What is the level of satisfaction among direct beneficiaries on the project interventions? **Probe for:** *opinion of beneficiaries on the project components, targeting criteria, implementation process, level of satisfaction and dissatisfaction, reasons for their satisfaction or dissatisfaction etc* ▪ If the program has not achieved some results, investigate why not and the barriers to success? **Probe for:** (*provide evidence on drivers and hindering factors on the performance of the project in*

	each result areas/project components and also bottlenecks and barriers that hinderer the success of the project)
Efficiency	▪ How do you assess the efficiency of the project in terms of timely delivery of outputs, human resource use and other management and administrative issues? ▪ Do you think the project made appropriate and timely adaptations in response to changes in the external environment? How? What examples can you mention? What measures were taken to prevent delays? ▪ What innovation introduced by the project do you think is cost effective and needs to be scaled up? (***Probe for*** *: project implementation strategy, monitoring mechanisms, collaboration with partners etc*) ▪ Which of the innovation (implementation strategy and interventions) introduced by the project do you think are cost effective and needs to be scale up? Which ones are costly & needs to be looked into? Do you think there were modalities or alternative approaches to make the project more efficient? Please give us some examples ▪ Was the technology deployed helped to improve efficiency? To which extent the technology used improve efficiency? Could the project's efficiency have been increased using other technology or alternative implementation approach? (e.*g. water pumps, irrigation schemes, innovation and technology used in CSA practices (to create CAV)etc*) ▪ In general what was the weakness and strength of the project in terms of its efficiency and effectiveness?
Impact	▪ In your opinion what are the significant changes made due to the implementation of this project? **Probe for** - *What was the performance against the stated indicators?* - *Please provide us some real examples on the change observed on the livelihood of the community and the direct project beneficiaries* - *What are the likelihood effects of the project on resilience building (e.g. at the HH, community and institutional levels)? Are the communities and people affected by drought realizing better prepared and less at risk because of the project? How? Provide use some real experiences* - *What factors do you anticipate that affect the long term impact of the project?* - *Has the increase in crop productivity and improvement in livestock management lead to improve livelihoods of the targeted beneficiaries? If yes how? If no, what has been missing?* - *Are the natural resource management activities undertaken by the project demonstrating meaningful contribution to increasing climate resilience of the community? If yes how? If no, what needs to be improved?* - *To what extent has the project contributed to any unintended impacts or effects, positive or negative (e.g. social, economic, environmental, or other)?* ▪ How can future similar project improve their planning process to address internal and external challenges and constraints? ▪ Did impact vary for different targeted areas, households, or individuals? If so, how and why?
Sustainability	▪ To what extent would the benefits of the project continue after donor funding ceases? **Probe for:** - In your opinion, which project activities/interventions do you think could the community and government at all levels take over and implement without the project support? - Why and how? - Which ones cannot be sustained and need further support? Please provide evidence and justification.

	▪ To what extent did the project utilize established institutions/mechanisms to ensure sustainability at the end of the project? Are the project measures implemented adequate to guarantee sustainability and improve resilience? ▪ What were the major factors which influence the sustainability of the project? please state factors that positively or negatively influence the sustainability of the project ▪ In your opinion, what lessons learned could be used beyond the project area? What does this project do that others don't do to ensure sustainability? How have the approaches applied contributed to the sustainability of the project achievements? ▪ Are alternative or additional measures needed to ensure sustainability and resilience at all level, and, if so, what is required to ensure continued sustainability and positive impact? ▪ To what extent has the project achieved sustainability allowing for project outcomes to be sustained? ▪ Does a sensible exit strategy exist for transfer of responsibility and activities to other stakeholders (local government, communities)?
Coordination/collaborations among different components/partners	▪ To what extent have different components operated by different actors reinforced each other to contribute to the project overall objectives? ▪ What were the strengths and weakness of coordination and collaboration? ▪ How actively were organizations involved in the coordination? What effects did the coordination have on project? ▪ Which factors have restricted the coordination, and which factors have supported it?
Cross-cutting issues	▪ To what extent was the project aligned with the differing needs and priorities of men, women, and other key stakeholders? ▪ To what extent the gender sensitive approach impacted the differing needs and priorities of gender groups? ▪ To what extent have good environmental practices been followed in implementing the project? ▪ To what extent and how are we delivering appropriate and effective programming for persons with disability?

FOCUS GROUP DISCUSSION (FGD) FACILITATION GUIDE FOR WOMEN/MEN BENEFICIARIES GROUP/COMMUNITY GROUP *(Note: please include the different project beneficiaries (e.g. from beneficiaries in the income generating opportunities, Kebele level committees, irrigation user committees etc) as much as possible in the FGD to capture the project activities and performance in the different project components.*

Introduction and Informed consent

Hello, my name is _____ and I am here on behalf of DF and its partners to collect data for the final evaluation of Joint Resilience Building Project (JRBP) that have been implemented in selected districts of Somali and Oromia regional states. The project has been implemented since 2017 in Dugda Dawa, Dollo Ado, and Dolo Bay districts. This discussion is intended to collect information that will inform DF, project consortium members, partners, and donors on the project performance in achieving the desired outcomes. The evaluation will assess the achievements of results to contribute to accountability. The findings from the evaluation will also contribute to learning by understanding what have been the factors that made possible or created obstacles to the achievement of results (their focus is therefore on why, not only on what); and by identifying any key lessons that would lead to improve resilience building interventions/projects in the future. As participation in this interview is voluntary, please let us know your decision whether you want to take part in this evaluation as an informant or not. Please be informed that we will be using voice recorders to capture the discussion; but this is only used for this evaluation purpose to make sure that we don't forget the most important points you share during

the discussion and will not be shared to anyone outside of the evaluation team. We would like to thank you for your time and willingness to participate in this discussion and please be informed that all the information you provide will be confidential and will not be shared to anyone else except the evaluation team. Your name, or any other identifying information, will not be used in a final report or in any other document available to the public. Your participation is voluntary, and you are not obliged to answer any questions you do not want to. The discussion will take about 1hr and 30 minutes to complete.

Do you have any question before we start our discussion? Can we start our discussion now? (*Note to the moderator: obtain verbal consent from each participant before you proceed to the discussion*)

Background information

Participant	District	Kebele	Sex	Age	Education	Occupation
P1						
P2						
P3						
P4						
P5						
P6						

Guiding Questions

- What was the situation in this area before the implementation of this project with respect to malnutrition/disease morbidity and mortality, Food security, access to water, rainfall patterns (drought), household food security, natural and manmade disasters, livestock and crop production situation etc in general?

- What kind of interventions does the project have been implementing in your community? Probe for:
  - ***Increasing productivity of both crop and livestock:*** *CSA practices, Climate Adapted Village , capacity building training, facilitating inputs including access to irrigation, seeds, fertilizer, tool etc, and Climate smart livestock management (such as introduction of high yielding and drought resistant forage types, improved fodder production and feeding practices, new and more productive livestock breed and access to animal health services)*
  - ***Improving NRM practices:*** *(e.g. capacity building and technical supports, soil and water conservation, access to alternate income generation opportunities, increasing access to information and early warning system, monitoring and forecast, filling infrastructure gaps for EWS, Community based climate smart adaptation plan/CAV/ etc*
  - ***Creating alternative income generating opportunities***

- What changes has been made after the implementation of the above interventions on the overall livelihood of men and women community members as well as IDPs? Youth and Children? Probe for:
  - *HH food security*
  - *Livestock and crop production and management*
  - *Alternative livelihood opportunities*
  - *Skill and capacity*
  - *Climate Adapted Village*
  - *etc*

- Are there any unplanned outputs/unintended situation that arise from the project so far? Please explain us the reasons, if any

- In your opinion, what are the strength and weakness/gaps on the project interventions/activities/ and technology deployed by the project? (e.*g. water pumps, irrigation schemes, fodder types, crop and livestock types etc*)
- How do you explain the participation and engagement of the community members/ beneficiaries in the different project implementation activities? Did you participate in decision making? How? What was the weakness and strength of the community participation and decision making process during the project implementation period? Please provide us some examples
- After the implementation of the project activities, do you think you are now better prepared and less at risk of any kind of disasters (e.g. flood, drought, etc)? How? What is your general opinion on the current status of the community?
- What factors do you anticipate that affect the long term impact of the project? Are there any unplanned positive or negative effects (impact) of the project?
- In your opinion, which project activities do you think could the community and the government will continue the project initiative without the project support? Why and how? Which ones cannot be sustained and need further support? How are going to support (contribute) in order to sustain the project activities?
- Do you think the project covered all the needy people? For example, do you think that all the vulnerable community members including IDPs in your community are identified and get the appropriate service timely? Please explain on the strength and limitation of the project in terms of geographical coverage and targeting of the beneficiary.
- In your opinion, what is your general recommendation in the future to improve the livelihood of the community? What specific and practical recommendation do you have in terms of improving the crop and livestock production, improving diverse livelihood opportunities and creation of viable economic opportunities for men, women and youth community members?
- Anything else that you would like to add

KII GUIDES AND OBSERVATION CHECKLIST FOR BENEFICIARIES ENGAGED IN ALTERNATIVE INCOME GENERATING BUSINESS OPPORTUNITIES

Name of the Woreda:_____

Type of business:_____

Observation points	**Remark/Comments/Responses**
List of supports provided by the Project	

Overall conditions of the business areas (e.g. working equipments, customers etc)	
Do you have saving bank account?	
What changes brought in your overall livelihood after you received the project support? (e.g. income, living conditions, family support etc)	
Is the business opportunity you engaged profitable? What are the challenges you experienced during the project implementation period? Please explain the challenges	
Any challenges you are currently encountered to run your business? (e.g. market related challenges, financial constraints, skills, inputs etc)	
Do you think you will continue in this business? What are your short and long term plans?	
What were the overall gaps of the project supports?	
Did the project and government staffs provide you continuous support and mentoring? In what ways? What are the gaps in this regard?	
What is your general recommendation in the future to improve your business?	
Anything else that you would like to add	
General reflection of the observer	