

**FARM ENTERPRISE DEVELOPMENT THROUGH INPUTS AND SERVICES (FEDIS)
PROJECT IN WARRAP STATE, SOUTH SUDAN**

FED/2018/403-863

END-TERM EVALUATION REPORT



Submitted to:

Vétérinaires Sans Frontières Germany

OCTOBER 2022



Acknowledgement

The evaluator is deeply grateful to the EU Technical Assistance Team based in Juba for sharing their invaluable perspective and insights regarding the FEDIS project.

Further appreciation goes to Tinega Ong'ondi, Regional Director, Willie Tuimising, Country Director, Daniel Olang, Country Programs Manager, Rumbidzai Sakwa, Monitoring and Evaluation Manager and Rhoda Bhonga, Project Coordinator- VSF-G for their tremendous support throughout the evaluation. We thank profusely Joshua Bundi Programs Manager-World Concern and Dr. Madhel the Executive Director of SEDA for their input. Special thanks goes to the farmers, community members, local leaders, local government officials and officers of NGO's active in Warrap for their continued support throughout this process.

We also extend our appreciation to the field assistants who were immensely helpful in engaging with community members and gathering their feedback and reflections regarding the project despite the logistical challenges emanating from floods.

Last but not least, sincere thanks to Sarah Atiling Maror, Bernard Mulei and Munaweza Muleji, the Upward Bound team who partook in the delivery of the evaluation assignment.

Upward Bound

October, 2022

DISCLAIMER:

The authors' views expressed in this report do not necessarily reflect the views of VSF Germany and or its partners, and European Union (EU) and or their agents.

Executive Summary

1. Purpose and Objectives

Vétérinaires sans Frontières Germany (VSF G) is an international Non-Governmental Organization, providing humanitarian aid and development assistance to pastoralists and vulnerable communities in areas where livestock is of importance. VSFG implemented a European Union funded Farm Enterprise Development through Inputs and Services Project (FEDIS) whose objective was to contribute to improved food and nutrition security for rural smallholder farmers of Warrap State, South Sudan. VSFG was the Lead Applicant in a consortium with two implementing partners namely World Concern(WC) and South Sudan Education and Development Association (SEDA), a local NGO. The implementing partners worked in close collaboration with the State Ministries of Agriculture and Forestry; Animal Resources and Fisheries; Water Resources, Cooperatives and Rural Development in Warrap State where it covered the three counties of Gogrial West, Gogrial East and Tonj North.

VSFG commissioned the final end-term evaluation (ETE) in line with the European Union's Evaluation Policy in order to assess the extent to which the project met its objectives over the 42-months' period. The evaluation adopted the OECD DAC¹ approach to assess the project relevance, coherence, effectiveness, efficiency, impact and sustainability in relation to meeting the set objectives. The evaluation also sought to identify and document lessons-learned and make recommendations for future interventions. This report, therefore, presents the findings of the ETE conducted in September 2022 by Onward Bound consultants.

2. Methodology

The ETE methodology was guided by the OECD framework for evaluation of development programs. To this end, a participatory mixed method approach encompassing qualitative and quantitative tools was adopted. These included Household interviews, Key informant interviews, Focus Group Discussions, observation and desk/literature reviews. The sampling techniques applied was cluster sampling method of 30x30 which resulted in a targeted sample size of 900 respondents, of which 854 households were reached. Upward Bound ensured that there was informed consent from each participant and the data was handled in accordance with the country laws in South Sudan and other relevant regulations including the General Data Protection Regulation (GDPR) 2016/679 regulation in European Union (EU) Law.

3. Key Findings

3.1 Overall Conclusions

Whereas FEDIS faced a lot of impediments in the course of its implementation, beginning with a 6month project delay necessitated by the revision of its logframe, COVID-19 as well as unprecedented levels of flooding in its final year, it still managed to make a substantive contribution towards meeting its objective of food and nutrition security. Across the four intervention areas, FEDIS managed to achieve or surpass its outcomes as evidenced through increased food access, adoption of climate smart practices, reduction in conflict incidences, livelihood diversification as well as increased incomes.

¹ <https://www.oecd.org/dac/evaluation/>

3.2 Relevance

FEDIS interventions contributed to SDG 1 (No Poverty), SDG 2 (Zero Hunger) and SDG 3 (Good health and Well-being). FEDIS was in compliance with EU policy for Development Cooperation. The ZEAT BEAD portfolio projects, of which FEDIS is a part, are consistent with the EU instruments. FEDIS was aligned with the Government of South Sudan Policy instruments to further strengthen the livestock and agriculture sector such as the Comprehensive Agriculture Master Plan (CAMP). The project objective of improving the food security and nutrition of vulnerable populations was also aligned to VSF-G Vision and Mission. The issues that FEDIS sought to address in its four outcome areas demonstrated the relevance of the project activities and objectives to local needs and priorities.

3.3 Appropriateness and quality of design

The design of the project effectively synthesized responses to local needs and problems, a strong understanding of the dynamics of the local context, solid anchoring in the national policy framework and an appreciation of the overall global context. The project interventions were built on sound and valid logic with the ultimate goal of contributing to improved food and nutrition security. FEDIS was innovatively designed to contribute to longer term sustainability by incorporating farm enterprise development and capacity building value chain actors in all outcome areas. This unique departure from conventional approaches to project formulation produced positive outcomes in some sectors as functional enterprise linkages were clearly evidenced. In certain instances, though, other external factors continue to impede proper development of enterprise linkages. These include weak policy environment, poor infrastructure and weak regulatory environment that discourage private sector engagement and participation. The project was also designed to support smallholder farmers and pastoralists, promoting food sovereignty by paying close attention to animal health alongside human health in healthy environments.

3.4 Efficiency

There was a 6-month delay in implementation (January to June 2019), to allow for revision of the logical framework as advised by the donor. The delay had a knock-on adverse impact on activity implementation. The initial time loss, however, was compensated at the end through a no cost extension. To enhance efficiency, the project management structure comprised of a steering committee at national level with membership drawn from the three implementing agencies. In Warrap, the project had an elaborate delivery structure, headed by a project manager and teams of competent project officers, their assistants and community facilitators. Close collaboration with government line ministries and mutual sharing of expertise further optimized efficiency. Partnership with University of Wau facilitated exchange of technical perspectives on the innovative approaches deployed by FEDIS. By the end of the project the project had a 99.9% burn rate (with Audit and Final evaluation as the only committed costs). Regarding cost-efficiency, FEDIS cost per beneficiary was 83Eur across the three years. FEDIS met its co-funding obligation in totality.

3.5 Effectiveness

In terms of output achievement, FEDIS was 86 per cent successful despite the challenges posed and shocks administered on project results by the unprecedented floods experienced during the final year of project implementation. The extent of output achievement was as follows:

- 6700 targeted households were reached with 98% activities implemented by the end-term. Pending activities related to project closure procedures such as the project audit as well as asset handover processes. Feedback received attested to adoption of FEDIS innovative practices with generally positive feedback from the community. In spite of the floods, volume of agriculture production had increased, with evidence of surplus production particularly of groundnuts. Key

standout was livestock productivity, which was not only limited to animal health service provision but increase in body condition as well as milk production.

- 20 shallow wells were constructed in Gogrial West, 10 Hafirs were rehabilitated in Gogrial East County and 8 value chain centers established. Livestock producers were supported with 30 Butana Heifers, 6 Butana bulls, 1,749 Kenbro chicken and 950 Reizat goats. 4867(1522M, 3345F) beneficiaries were supported with crop kits. 1,236 farmers were reached with for pay extension services, of these 1,077 were reached with cost-based vaccination of 59,687 animals whilst 159 farmers had their ox-ploughs repaired by the Community Ox-plough trainers. 9 agro processing cooperatives were supported with 3 grinding mills and 5 groundnut paste machines. 9 peace committees continuously supported non-violent conflict resolution.

3.6 Impact

FEDIS had a high positive impact as evidenced in the annexed stories of change. Overall, beneficiaries were able to meet their food and nutritional needs, increase household incomes, protect key livelihood assets as well as investment in alternate businesses and Income generating activities. 85% of FEDIS beneficiary households were food secure based on the Food Consumption Score, whilst 93%² of women received adequate dietary diversity as per the Minimum Dietary Diversity Score for Women (MDD-W). 24.5% of children had the Minimum Acceptable Diet, an increase from 16.5% at baseline. At project end, the average income raised by households was 1,514Eur, representing a seven-fold increase from baseline. Increased incomes at household level led to regular school attendance for children, improved ability to meet medical and other expenses, increase in household savings, and reduced domestic strife. Discussions in focus groups and information from key informants indicated that co-operation among community members, with the aim of improving their livelihoods, had notably improved. This is critical for the effective functioning of cost-recovery and the successful operation of market-led supply chains and delivery systems for farm inputs.

3.7 Sustainability

Sustainability was built from a foundation of strong ownership of the project by farmers and community members. FEDIS worked with community members to develop structures such as the peace committees and community associations that are led and run by community members and stand a clear chance of remaining active and operational long after the end of FEDIS. In addition, the introduction of new crop and livestock practices were adopted by a notable proportion of early adopters who, based on the lead farmer and demonstration farm approach used by FEDIS, will long continue to influence change of local crop and livestock practices. The change in household incomes arising from diversification of income streams provides a powerful incentive for other households to diversify income sources and will continue to build a local pool of demand and supply that will market linkages necessary to support commercialization of farm input supply chains and farm enterprises in the implementation areas. In addition, the project exit plan was implemented with transition steps and exit meetings that enabled other duty bearers, notably NGOs and government officers, to provide the support to the community necessary to sustain results of the project.

3.8 Lessons and Best Practices

Based on implementation of FEDIS, six key lessons emerge under each of the outcome areas, as follows

i) Non-violent conflict resolution and social reconciliation:

² FCS and MDD-W data were obtained from the FEDIS M&E Reports.

Sustainable peace initiatives - The involvement of leaders at all levels and the actors in the center of the conflict, together with harnessing all population groups including youth and women, facilitates success in brokering the peace agreements and ensuring that peace is sustained;

ii) Increased sustainable production and productivity of agriculture:

Small holder access to farm inputs - Due to market inefficiencies and infrastructure challenges, full reliance on private-sector supply chains and distribution networks to deliver farm inputs results in farmers being charged prices that are unviable for the small-holder. It is necessary to complement private-sector supply chains with supply by NGOs for the most vulnerable farmers;

Peer-to-peer skills transfer - Peer-to-peer learning played a notable role in the adoption of improved or new practices by farmers in the implementation areas;

Appropriate tools - The *maresha* plough works best in sandy soils and not as well in the clay and loamy soils. For such kind of soils, the all-metallic ox-plough needs to be considered but coupled with an element of cost recovery

iii) Diversified income sources:

Gender and diversification of income sources – Income-generating activities undertaken by community members congregate around those directly connected to agricultural value chains for women while for men such activities congregate around services with less direct linkage to agricultural value chains. In future programming the targeting and linkages to value chain systems should be strengthened.

iv) Improved community resilience:

Cascading DRR plans to boma level – This is successfully achieved where a Boma Disaster Risk Reduction Management Committee (BDDRM), with broad representation of local leaders and interest groups, is established to ensure implementation of the Boma DRR plan.

Critical success factors and learning

The success of the project was facilitated by a number of factors, including:

1. Relevance - The design of the project enabled it to respond to actual needs and local priorities of farmers and communities in the area of implementation;
2. Positive relations with duty bearers - VSF-G maintained cordial working relationships and sustained collaboration with government line ministries, the state and local administration;
3. Learning approach - The project regularly reviewed its performance, drew lessons to inform implementation and made changes necessary to ensure the objectives were achieved and outcomes attained;
4. VSF-G history - VSF-G has a long history of working in South Sudan, specifically in Warrap state and has an excellent organizational grasp of the context at national, state and county level;
5. Strong relationship with EU/TA - VSF-G has a strong, long-standing and excellent working relationship with EU who contributed regularly and positively with technical advice and assistance as necessary to support project implementation; and
6. Strong participation of local NGO - The strong participation of SEDA, a local NGO, in the consortium strengthened local ownership of the project and facilitated an efficient appreciation of the local socio-cultural landscape.

Best Practices

In each of the outcome areas best practice identified from implementation of the project was as follows:

i) Non-violent conflict resolution and social reconciliation:

Peace committees - The establishment of standing peace committees at community level that were involved in the peaceful resolution of conflict as and when the need arose had a remarkable effect in reducing conflict, far more effectively than peace campaigns;

ii) Increased sustainable production and productivity of agriculture:

- Local production of agricultural inputs – Supporting local production boosted access by the smallholder farmers, generated local micro-enterprises and created market linkages which provided new non-agricultural income-generating activities. These contributed to diversification of income sources for members of local communities;
- Viable community animal health service - The enlisting of commercially viable CAHWs for comprehensive support to develop capability to overcome operating obstacles and challenges yielded commercially viable CAHWs who were clustered in groups of 5 around an established agro-vet dealer. This best practice demonstrated a pathway for developing viable community animal health service (CAHS);

iii) Diversified income sources:

Supporting key market institutions – The support to market institutions to develop institutional capacity effectively supported the development an eco-system for competitive, inclusive and participatory marketing for small-holder farmers and the growth of market linkages for market-ready small-holder farmers.

iv) Improved community resilience:

Effective Boma-level DRR plans – The development of effective Boma-level DRR through a combination of community training and awareness, local institutional capacity, establishment of Boma Disaster Risk Reduction Management Committee (BDDRM) immensely contributed to achievements under this outcome area.

3.9 Project Risks and Barriers to Implementation

FEDIS addressed operational risks – coordination among implementing partners and on uptake of new technologies; financial risks- delay in disbursement or about loss of financial resources; political risk relating to possible resistance to the project by community and political leaders; and environmental risk – relating to floods and drought. A review of how these operational, financial, political and environmental risks were addressed highlighted some challenges with managing risks related to deploying a few of the new techniques and in managing possible opposition among local and political leaders. Overall, a well-articulated risk analysis and mitigation strategy was built into the project design to address both internal and external risk factors; and the project risk register regularly updated. COVID-19 restriction resulted in constrained market supply routes, causing delays on project inputs procurements especially those that had to be sourced outside the country like groundnut paste mills. In addition, preventative measures such as restricting the number of participant per training, had a knock on effect on logistical costs.

4. Recommendations

- Although FEDIS made some efforts towards cultivating market linkages, there was still tremendous scope for further development which it is recommended that any future programming should pursue. Opportunities for further early results include dry season vegetable farming, delivery of veterinary products at affordable prices and improved linkages in supply and value-chains around the agro-vets.
- The introduction of cost-recovery basis for supply of farm inputs should be strengthened. However, to be successful, such changes will require extensive consultation and discussion with farmers and local leaders to reach a common understanding.

- C.** Strengthen Engagement with local government authorities- stronger engagement with local authorities should be done on a continual basis to promote project buy-in of new innovative practises such as the maresha particularly in Gogrial East County. Platforms such as quarterly update meetings could be a useful vehicle for early feedback and adjustment of approaches where necessary.
- D.** Peace committees- the establishment of Boma peace committees were instrumental in local level resolution at the smallest administrative unit. Where possible this should be replicated through linkages with committees in other states for harmonisation of approaches.
- E.** Strengthen documentation of impacts- FEDIS had a lot of impacts as a result of its interventions but these were not adequately captured for example the successes gained through the introduction of improved livestock breeds and how this has been embraced and adopted by non-beneficiary community members. An impact assessment would have adequately captured all relevant sections that may not have been captured by the interim reports.
- F.** Crisis modifier- the operational context of South Sudan remained very complex due to political, climatic and pandemic influences. Any future projects should include the crisis modifier budget component in order to better cushion beneficiaries in case of unforeseen events.
- G.** Although FEDIS made some efforts towards cultivating market linkages, there was still tremendous scope for further development which it is recommended future or successor interventions should pursue. Some of the opportunities for doing so are as follows:

The integrated WASH component of the project was noted to have multiple good impacts in providing water for multiple uses - domestic use, livestock and dry season vegetable farming. It is recommended that this could be scaled up and replicated in other projects. However, as more and more farmers adopt the activity as an economic enterprise, there's a likelihood of vegetable glut in the market hence to urgent need to tie the activity to market linkage and inclusive finance.

Some of the veterinary products, due to market inefficiencies, were too costly for local farmers to sustainably access. It is, therefore, recommended that the agro-vet store operators be linked to other key actors along the value chain so as to make the veterinary drugs better priced and more affordable to the farmers.

SUMMARY PROJECT FACT SHEET

Category	Information/Summary
Contract Number	FED/2018/403-863
Lead Implementing Agency	VSF Germany
Implementing Partners	SEDA, World Concern
Project Title	Farm Enterprise Development through Inputs and Services
Project location	Region: Warrap State, South Sudan Counties: Gogrial East, Gogrial West and Tonj North Counties Payams: 9 Bomas:60
Project duration	36 months
Project start date	27/12/2018
Original contract end date	27/12/2021
Project extension (months)	6 months
Project suspension (months)	N/A
Actual contract end date	27/06/2022
Date of evaluation	1 th to 30 September 2022
Date of evaluation report	30 th October 2022
Financial Data	
Overall project budget	€3,333,333
Funding by European Union (90%)	€ 3,000,000
Co-Funding by VSF Germany (10%)	€333,333
Funding received by project at evaluation date	€ 2,645,983
Expenditure incurred by project at evaluation	€3,329,562
Summary Conclusions (Scale A to E) *	
Relevance	A
Efficiency	C
Effectiveness	B
Visibility and communication	B
Learning	B
Complementarity and Harmonization	B
Sustainability	A

Note: A=Very good; B=Good; C=Inadequate; D=Serious deficiencies; E=catastrophic

TABLE OF CONTENTS

.....	Error! Bookmark not defined.
Acknowledgement	ii
Executive Summary	iii
Note: A=Very good; B=Good; C=Inadequate; D=Serious deficiencies; E=catastrophic	ix
List of Tables	xii
List of Figures	xii
Lists of Abbreviations and Acronyms	xiii
1.0 INTRODUCTION AND EVALUATION OBJECTIVES	1
1.1 Background	1
1.2 Country Context	1
1.3 Farm Enterprise through Inputs and Services (FEDIS) Project	2
1.4 Purpose, Scope and Evaluation Framework	2
1.5 Key Evaluation phases and chronology	3
2.0 METHODOLOGY	3
2.1 Mixed Research design	3
2.2 Specific Methods and Tools	3
2.3 Sampling Design	4
2.5 Data Collection and Analysis and Report writing	6
2.6 Limitations and Challenges	7
3.0 KEY FINDINGS AND ANALYSIS	8
3.1 Relevance	8
.....	8
3.1.1 Alignment with Sustainable Development Goals and EU Policies	8
3.1.2 Conformity with South Sudan Policies and Priorities	8
3.1.3 Connectedness with VSFG Policies	8
3.1.4 Alignment of Project Objectives to local needs	8
3.1.5 Relevance of Activities to local context and needs	9
3.2 Appropriateness and Quality of design	9
3.2.1 Program Design and Implementation	9
3.2.2 Background checks and feasibility tests	9
3.2.3 Project structure and validity and quality of Theory of Change	9
3.2.4 Beneficiary Selection and targeting	10
3.2.5 Risks Analysis and Mitigation	10
3.3 Efficiency	11
3.3.1 Preparation and Timeliness of Implementation	11
3.3.2 Implementation Approaches and methods	11

3.3.3	Project Management and Work Planning	11
3.3.4	Monitoring and Evaluation and Knowledge Management	12
3.3.6	Collaboration and Partnerships	13
3.4	Effectiveness	13
3.4.1	Summary attainment of indicator targets	13
3.4.2	Achievements on Objectives	14
3.4.3	Achievements on Result Areas	17
3.4.4	Progress on Project Outputs and Activities	18
3.4.5	Overall Remark for all Achievements	22
3.5	Impacts and effects	23
3.5.1	Food and Nutrition Security and Livelihoods	23
3.5.2	Agricultural and Livestock Productivity and Incomes	25
3.5.4	Diversified Incomes	26
3.6	Sustainability and Exit Planning	26
3.6.1	Signs of Sustainability	26
3.6.2	Exit Strategy	28
3.7	Coherence and Learning	28
3.8	Reporting and Visibility	29
4.0	LESSONS, BEST PRACTICES, RISKS & CHALLENGES IN IMPLEMENTATION	30
4.1	Key Learnings	30
4.2	Best Practices and Contributors to Implementation success	31
4.3	Risks, Challenges and Barriers to Implementation	33
4.3.1	Implementation challenges	33
5.1	Overall Conclusions	34
5.2	Relevance	34
5.3	Appropriateness and Quality of design	34
5.4	Efficiency of implementation	35
5.6	Effectiveness to date	35
5.7	Impacts and sustainability	36
5.8	Critical Success Factors	36

List of Tables

Table 1: Summary of sample by County	4
Table 2: Disaggregation by actors and beneficiaries	5
Table 9: Household hunger score	23
Table 12: Minimum acceptable diet for infants and young children	24
Table 13: Volume and farm yield – sorghum and groundnuts	25
<i>Table 16: Evaluation of management risks encountered</i>	33

List of Figures

Conversion Equivalents

1 *feddan* is approximately equal to 1.038 acres

1 Euro € is approximately equal to 203 South Sudanese Pounds (SSP)

Lists of Abbreviations and Acronyms

CAHWs	Community Based Animal Health Workers.
CBEWs	Community Based Extension Workers
CIIS	Community Intervention Information System- for South Sudan
CORPs	Community -Own Resource Persons
COVID-19	Coronavirus Disease of 2019
DG	Director General.
DRR	Disaster Risk Reduction
EU	European Union
FAO	The Food and Agriculture Organisation of the United Nations
FEDIS	Farm Enterprise Development through Inputs and Services
FFS	Farmer Field School
FGD	Focus Group Discussion
FHH	Female headed household
FSL	Food Security and Livelihood
GOSS	Government of South Sudan
HA	Hectare
HH	Household
IDPs	Internally Displaced Persons
IPC	The Integrated Food Security Phase Classification
Kg	Kilogram
KII	Key Informant Interview
LoP	Life of Project
M&E	Monitoring and Evaluation
MHH	Male headed household
MoU	Memorandum of Understanding
NCO	No Cost Extension
NGO	Non-Governmental Organization
PDM	Post Distribution Monitoring
PMU	Project Management Unit
SMAAR	State Ministry of Agriculture and Animal Resources
SSI	Short Structured Interviews
SSP	South Sudanese Pounds
TA	Technical Assistance to the European Union
ToR	Terms of Reference
UNIDO	United Nations Industrial Development Organization
VSF-G	Vétérinaires sans Frontières Germany
VSLA	Village Savings and Loan Associations
WASH	Water, Sanitation and Hygiene
WBeG	Western Bahr el Ghazal
ZEAT-BEAD	Zonal Effort for Agricultural Transformation - Bahr el Ghazal Agriculture Development

1.0 INTRODUCTION AND EVALUATION OBJECTIVES

1.1 Background

Vétérinaires sans Frontières (VSF) Germany is an international Non-Governmental Organization, providing humanitarian aid and development assistance to vulnerable pastoralist communities in areas where livestock is of importance. Within the Greater Horn of Africa Region, VSF- Germany implements activities in the Republic of South Sudan, Uganda, Sudan, Kenya, Somalia and Ethiopia focusing on animal health, agriculture, marketing, food safety, drought response and mitigation; but also developing the capacity of communities and governmental institutions or initiating peace and conflict resolution. Pursuant to the European Union contractual requirement for project final evaluation, VSF- Germany contracted Upward Bound firm to implement an end-line study of the FEDIS project. This end line report presents the evaluation findings, conclusions, lessons learnt and recommendations in line with the Terms of Reference.

1.2 Country Context

South Sudan has been long afflicted by armed conflict. However, under the Revitalized Agreement on Resolution of the Conflict in the Republic of South Sudan (R-ARCSS), there appears to be an imminent end to the major conflict between opposing factions. In response to the changing scenario, the humanitarian and development community, including donors, formed a Resilience Exchange Platform under the non-governmental organization (NGO) Forum. Consequently, the multi-agency, multi-sector Partnership for Recovery and Resilience (PfRR) was formed in 2018 and 2019 in preparation to shift from emergency lifesaving programmes to long-term developmental interventions.

The economy in South Sudan is heavily dependent on oil revenue, a situation worsened by the effect of COVID-19 on the global economy. Additionally, the management of public confidence in the local currency has had challenges, with an attempt by the government to introduce a new design leading to a steep decline of the value of the local currency in October, 2020³. Meanwhile, the governance system has deteriorated at both national and local level and has been unable to ensure essential functions such as agricultural extension services or social services. Local governance actors face challenges from scarce human and financial resources, weak collaboration between the state and its citizens and diminished social cohesion and trust between society and local governance. South Sudan continues to underinvest in sectors that would reduce poverty, build resilience and a stock of physical and human capital.⁴

During the period under review, South Sudan experienced an increased frequency, intensity, unpredictability and magnitude of climate and weather extremes such as drought, heavy rainfall and flooding. Climate change is expected to increase the risk of insufficient access to safe water and improved sanitation and food insecurity, as well as the population's vulnerability to certain climate-related health issues, including increases in illness and outbreaks of pests and disease. Increased drought, floods and a more unpredictable climate, when combined with rapid population growth and the expansion of farming fuels clashes over natural resources. According to the Food and Agriculture

³ The exchange rate moved from SSP165 at the beginning of the month to SSP172 by the end of the month representing a 5% decline in the span of a month. <https://tradingeconomics.com/south-sudan/currency>

⁴ <https://openknowledge.worldbank.org/bitstream/handle/10986/34664/The-Macroeconomic-Environment-for-Jobs-in-South-Sudan-Jobs-Recovery-and-Peacebuilding-in-Urban-South-Sudan-Second-Technical-Report.pdf?sequence=1&isAllowed=y>

Organization of the United Nations, up to 95 percent of South Sudanese rely on farming, herding, or fishing this includes Warrap state where the FEDIS project was being implemented.

In Warrap state, Gogrial West and Gogrial East counties are primarily constituted of flat grasslands and fall under the western floodplain sorghum and cattle livelihoods zone. The majority of communities in Gogrial West and Gogrial East are agro-pastoralist, engaged in animal husbandry, subsistence farming, and fishing. Planting is conducted during the rainy season and the main crops are maize, sorghum, sesame, groundnuts, vegetables and millet. In Gogrial West, high water table and swamps areas favour raising of livestock but can make access difficult, particularly in the rainy season. Two rivers cross through Gogrial West: River Jur flows north through the county before turning east through Gogrial East, and the River Lol flows across the northern part of Gogrial West from Northern Bahr el Ghazal. Tonj North, also in Warrap state, falls under the western floodplains sorghum and cattle livelihoods zone and is characterized by flat grassland and tropical savannah. Planting is conducted during the rainy season and the main crops are sorghum, simsim, millet, groundnut peas, okra and pumpkin. Seasonal floods periodically destroy local cultivation. The majority of communities in Tonj North are engaged in animal husbandry, subsistence farming, and fishing.

1.3 Farm Enterprise through Inputs and Services (FEDIS) Project

VSF- Germany secured funding from the European Union (EU) for the implementation of the three year- Farm Enterprise Development through Inputs and Services (FEDIS) Project. The Project is part of a larger EU-funded programme known as Zonal Efforts for Agricultural Transformation - Bahr el Ghazal Efforts for Agricultural Development (ZEAT-BEAD) in South Sudan. The ZEAT-BEAD programme has five components: 1) facilitating, monitoring and regulating government structure; 2) sustainable supply of agriculture and livestock inputs and services through the private sector; 3) enhanced local value addition and strengthening value chains; 4) improved basic technical literacy and numeracy skills; 5) increased trade and marketing volume. To this end FEDIS implemented component 2 of the ZEAT-BEAD programme.

a) **Objective:** FEDIS sought to improve the food and nutrition security for rural small holder farmers through enhancing sustainable supply of agriculture and livestock inputs and services.

Specific Objective: To enhance a sustainable supply of agriculture and livestock inputs and services for 6,700 small holder farmers in Warrap State through the private sector by the end of 2021.

b) **Result Areas and Activities:**

FEDIS was expected to contribute to the following outcome areas

- i) **Outcome 1:** Non-violent conflict resolution and social reconciliation methods adopted by the warring communities in Warrap State
- ii) **Outcome 2:** Increased sustainable production and productivity of agriculture (livestock/cropping)
- iii) **Outcome 3:** Diversified income sources
- iv) **Outcome 4:** Improved community resilience

Target areas and beneficiaries: The project targeted 6,700 food insecure rural smallholder households from Gogrial East, Gogrial West and Tonj North counties in Warrap State.

1.4 Purpose, Scope and Evaluation Framework

The end line evaluation was designed to assess the extent by which the project met its agreed objectives through various activities, strategies and approaches over the 42-months' period. It carried out an appraisal of the impact, effectiveness, efficiency, sustainability and progress of the project

towards meeting its overall objectives. The evaluation also identified and documented the lessons-learned and made recommendations for future interventions.

The specific objectives of the end-term evaluation were:

- i. To assess the Theory of Change (TOC) by investigating the approaches adopted by the project as well as reviewing the alignment of the results framework to the project objectives and activities;
- ii. To assess the overall project performance based on achieved results against outputs, outcomes, and overall objectives, guided by the results framework and determining reasons why certain results occurred;
- iii. To measure the scope, quality and relevance of the project outputs produced in relation to the project theory and design;
- iv. To measure the positive and negative changes produced by FEDIS, directly or indirectly, intended or unintended and to provide evidence-based recommendations and lessons learnt to improve program design and strategies for future interventions; and
- v. To inform resource allocation for future funding as well as inform programming decisions on replication and/or scaling up.

1.5 Key Evaluation phases and chronology

The evaluation was conducted over a period of 24 days spread in 8 weeks. The assignment was completed in five phases, namely (i) entry and scoping meeting (ii) inception (desk review, methodology, sampling design, consultative partner engagements) (iii) field work (iv) data analysis and report drafting and (v) report review and finalization. Findings were shared with VSFG and its implementing partners with feedback received and addressed.

2.0 METHODOLOGY

2.1 Mixed Research design

To generate the required quantitative and qualitative data, the evaluation integrated quantitative cross-sectional survey approach and qualitative phenomenal design. Data was collected through a combination of methods which included review of documents relevant to the project; key informant interviews with different stakeholders; focus group discussions; and household surveys in the different project locations that were accessible.

2.2 Specific Methods and Tools

Systematic review of secondary documents was carried out. A matrix of the evaluation questions was prepared and populated as data was collected. The tool helped identify gaps as the data collection was being carried out. For primary data collection, key informant interviews which were semi-structured were used to elicit in-depth information regarding the different assessment issues related to the project as well as different crosscutting issues. Focus group discussions were used to solicit in-depth information to facilitate identification of critical issues, opportunities and challenges regarding the project. In addition, stories to capture the changes, challenges and successes of the project documenting how it changed and transformed the lives of beneficiaries, their households and the communities as a whole, and why the changes experienced are considered significant by the beneficiaries and the local community. Further, there was collection of data from households of beneficiaries by the use of a pre-tested structured questionnaire tool uploaded on mobile devices.

2.3 Sampling Design

Design: The end-line evaluation employed a mix of cluster sampling with systematic selection of project direct beneficiary population, including, for instance, input dealer and traders, service providers like CAHWs, farmers marketing groups, agro-marketing group representatives, among others. FEDIS project beneficiary registration systems with, at least, one household member registered as a beneficiary in any of the various FEDIS interventions formed the evaluation sample frame and basis for randomised sampling in each cluster.

Household survey

FEDIS project beneficiary registration systems were used for sampling. The raw lists of beneficiary HHs from each county were screened for completeness which involved checking for any missing data. To calculate overall absolute sample size for household interviews, the FEDIS project beneficiary population, totalling 6,700 households, was used as the sample frame.

Using the optimal design approach, to calculate sample size to compare prevalence estimates from two surveys, that is the baseline and the end-term evaluation, the following expression was used:

$$n = \text{DEFF} \times \frac{[1.96\sqrt{2p(1-p)} + 0.84\sqrt{\{p_1(1-p_1) + p_2(1-p_2)\}}]^2}{(p_1 - p_2)^2}$$

Where n=sample size for each survey

DEFF = design effect

1.96 = z value for significance level of 0.05

0.84 = z value of power of 0.8, that is, 80%

$p = (p_1 + p_2)/2$ (prevalence in combined surveys)

p_1 = prevalence in survey 1(baseline)

p_2 = prevalence in survey 2 (targetted at end-term)

The initial computation, using the expression above, is based on a design effect of 0.65; z-score for probability of committing type 1 error of 1.96; statistical power of 80%. This yields a sample size of 820, rounded to the nearest ten.

To adjust for non-response rate of 10% yields a sample size of 900 thus: $820 \times 1.10 = 900$

Table 1: Summary of sample by County

	Tonj North	Gogrial East	Gogrial West	Total
Targeted population (HHs)	1700	3300	1700	6700
PPS	0.25	0.5	0.25	1
Calculated size	205	410	205	820
10% Non-response margin	20	40	20	80
Total Sample	225	450	225	900

Disaggregation of sample by project actors and beneficiaries: Because of the multiplicity of FEDIS project activities and respondents targeted by the end-term evaluation, the calculated samples for each county was distributed to each category of project actors and beneficiaries, so that survey participants are spread proportionately across the different FEDIS activities. This is based on probability sampling: weighting the

calculated total sample per county, by the proportion of beneficiaries per activity and total project beneficiaries per county. Table 2 below summarises calculated samples for each activity and location.

Table 2: Disaggregation by actors and beneficiaries

Locations	Beneficiary households	PPS	PPS Sample
Tonj North			
Conflict mitigators – leaders	45	0.0201	5
Smallholder farmers	1656	0.7390	166
Agro-input dealers	10	0.0045	1
Pre-existing seed suppliers/producers	10	0.0045	1
NEW Seed suppliers/seed and planting material producers	10	0.0045	1
Banking institutions	20	0.0089	2
CBEA	20	0.0089	2
Agro-equipment makers	20	0.0089	2
Livestock related products producers	200	0.0892	20
Food processing & preservation groups	50	0.0223	5
Production credit providers	200	0.0892	20
Subtotal	2241	1	225
Gogrial West			
Conflict mitigators – leaders	45	0.0201	5
Smallholder farmers	1656	0.7390	166
Agro-input dealers	10	0.0045	1
Pre-existing seed suppliers/producers	10	0.0045	1
NEW Seed suppliers/seed and planting material producers	10	0.0045	1
Banking institutions	20	0.0089	2
CBEA	20	0.0089	2
Agro-equipment makers	20	0.0089	2
Livestock related products producers	200	0.0892	20
Food processing & preservation groups	50	0.0223	5
Production credit providers	200	0.0892	20
Sub total		1	225
Gogrial East			
Conflict mitigators – leaders	45	0.0201	9
Smallholder farmers	1656	0.7390	333

Agro-input dealers	10	0.0045	2
Pre-existing seed suppliers/producers	10	0.0045	2
NEW Seed suppliers/seed and planting material producers	10	0.0045	2

2.5 Data Collection and Analysis and Report writing

Upward Bound reviewed a number of documents, including, but not limited to project documents, reports from the community intervention information system (CIIS), annual project reports (APR), Project Implementation Reports (PIR), technical reports produced by the project and baseline and mid-line reports. A total of 32 key informant interviews were used to elicit in-depth information regarding the different assessment issues related to project as well as different crosscutting issues. The informants included representatives of (i) VSF-G (ii) World Concern (iii) SEDA (iv) Ministry of Agriculture and Forestry (v) Community leaders (vi) NGOs (vii) Payam administrators (viii) EU officials (ix) Ministry of Animal Resources and Fisheries (x) other stakeholders. A total of 40 focus group discussions (FGDs) were conducted covering all the four project outcomes with participants in the following categories of groups; (i) peace committee members (ii) Village Savings and Loan Association (VSLA) group members (iii) Disaster Risk Reduction (DRR) committee members (iv) traders and agro-processors (v) community members.

Upward Bound also captured the changes, challenges and successes of the project in the form of 8 Most Significant Change stories (MSC) which documented how the project changed and transformed the lives of beneficiaries, their households and the communities as a whole, and why the changes experienced were considered significant by the beneficiaries and the local community.

A total of 854 households were surveyed. Using the local administration and other community leaders, all households in the selected villages which fulfilled the survey criteria were visited until the sample size of 30 households in a cluster was achieved⁵. For quantitative data, mobile data collection devices with a standardized coding system were used and the codes reflected in the questionnaire and captured in a Coding Sheet. Information was disaggregated into categories such as age, gender, employment, marital status, income and geographical location. On completion of the household survey questionnaire, the data was uploaded to Survey CTO and then imported into Statistical Package for the Social Sciences (SPSS) for cleaning and analysis in line with different indicators of the project.

For qualitative data, the enumerators prepared data summary sheets from collected data. Qualitative data from key informant interviews and focus group discussions were typed in MS Word 2010 matrix before being analyzed. The data was coded into themes and the results compared and discussed. Layered analysis was then done to identify major themes and underlying causes and explanations of reported experiences and observations. Data was corroborated and triangulated for purposes of generating the evaluation report. The initial findings and recommendations were presented to the implementing partners and key stakeholders for review and validation. This also served as a platform to obtain additional feedback for enriching the final report.

⁵ Except for a few households that were not accessible due to excessive flooding that cut off entire road networks

A. **Ethical Considerations**

Upward Bound ensured there was informed consent from each participant before starting the interview or discussion, to confirm their willingness to participate. Confidentiality of the information collected was assured. Data was handled in accordance with the law in South Sudan and all regulations including the General Data Protection Regulation (GDPR) 2016/679 regulation in European Union (EU) Law on Data Protection and Privacy.

2.6 **Limitations and Challenges**

1. **Weather Conditions and Flooding during the evaluation:** Some areas were inaccessible due to heavy rains, subsequent flooding and damage to roads. In addition, some of the respondents had been displaced by the flood waters and moved from their homes. However, this was successfully addressed using the respondent replacement protocol as well as enlisting the help of the local leaders to direct the enumerators to areas where the families had sought shelter from the floods. More importantly the unprecedented flooding which by September, 2022 had displaced about a million persons, one fifth of them in Warrap State⁶, led to the submerging of extensive areas of the state and significantly affected productivity. This was worsened by a period of drought (actually prolonged dry spell) before the flooding, further lowering productivity. These conditions mean that the level of productivity, both crop and livestock, was significantly lower than would otherwise have been the case and disrupt effective comparison of evaluation productivity results at baseline and mid-term review points.
2. **Language Barrier:** Data was largely collected from local communities that do not speak English. To address this, local translators were utilized. To mitigate possible loss of key facts during translation, field assistants with good understanding of both English and the local language were deployed.
3. **Insecurity:** Some areas in Tonj North were inaccessible due to reported inter-communal conflict. Using a replacement protocol, data was collected from alternative respondents.
4. **Interviewee bias:** The majority of data collected from the household survey was self-reported. In addition, some of the data collected depended on the respondent's recall over a period of one year, one month and over a 24-hour period. This posed the danger of an error of self-reporting. However, this was minimised by triangulating data collection using multiple data collection tools. The survey was structured to obtain technical data from the respondents and there was a likelihood of the interviewers misinterpreting either the questions or the answers. A rigorous training was conducted which included role plays to ensure that, the interviewers correctly understood the questions and terminologies. In addition, daily reviews were conducted with the enumerators to find out whether any challenges had been encountered and appropriate solutions provided.

As a result of the mitigating actions taken, neither the quality of the data collected nor the validity of the report were compromised by the challenges highlighted above except for that of flooding which significantly depressed livestock and crop productivity results recorded during the evaluation.

⁶ Flooding in impacted the lives of over 900,000 people across 9 states in [South Sudan](#) and in the southern part of the Abyei Administrative Area, the UN Office for the Coordination of Humanitarian Affairs (OCHA) reports. The UN said areas of Warrap State have also been severely flooded, impacting 208,000 people. [https://floodlist.com/africa/south-sudan-floods-update-october-2022#:~:text=Flooding%20in%20impacted%20the%20lives,Humanitarian%20Affairs%20\(OCHA\)%20reports.](https://floodlist.com/africa/south-sudan-floods-update-october-2022#:~:text=Flooding%20in%20impacted%20the%20lives,Humanitarian%20Affairs%20(OCHA)%20reports.)

3.0 KEY FINDINGS AND ANALYSIS

3.1 Relevance

This section examines the relevance of the intervention of FEDIS from the prism of sustainable development goals and EU policies. It examines the FEDIS alignment with Government of South Sudan policies and priorities and with the policies of VSF-G itself. It also explores the extent to which FEDIS responded to local context and needs at community level.

3.1.1 Alignment with Sustainable Development Goals and EU Policies

FEDIS interventions contribute to SDG 1 (No Poverty), SDG 2 (Zero Hunger) and SDG 3 (Good health and Well-being). FEDIS was in compliance with EU policy for Development Cooperation. The ZEAT BEAD portfolio projects, of which FEDIS is a part, are consistent with the EU instruments, namely: (i) Article 177 of the EU Treaty (ii) the Framework of EU's Special Fund for South Sudan (iii) European Union Emergency Trust Fund for Africa and (iv) EU Policy Framework on Food Security. The project was conducted in line with EU requirements on disbursement of funds, reporting, review and evaluation and use of logo and branding. The evaluation was also carried out in compliance with requirements of the European Network for Rural Development (ENRD).⁷

3.1.2 Conformity with South Sudan Policies and Priorities

FEDIS is in conformity with Vision 2040 which seeks a diversified South Sudan economy driven by agriculture, industry, mining, tourism, and services. The document also seeks to consolidate peace in South Sudan. In addition, the objectives of FEDIS were aligned with those of the National Development Strategy (NDS) and with National Action Plan 2015-2020. Further, FEDIS was aligned with the Government of South Sudan policy to further strengthen the livestock and agriculture sector and with Comprehensive Agriculture Master Plan (CAMP). FEDIS also contributed to realization of the aspirations of the government as set out in the National Agriculture and Livestock Extension Policy Framework (NALEP).

3.1.3 Connectedness with VSF-G Policies

VSFG's mission is to save lives and reduce suffering and to improve the well-being and resilience of vulnerable communities by protecting and promoting the health and productivity of their livestock within a healthy environment. FEDIS objective of improving the food security and nutrition of vulnerable populations was, therefore, in compliance with VSF-G mission.

3.1.4 Alignment of Project Objectives to local needs

The relevance of the project objectives to local needs and priorities is demonstrated by the extent to which each of outcomes map onto each of the four categories of community challenges as follows: (a) conflicts, cattle rustling and related disruption was addressed by Outcome 1: Non-violent conflict resolution and social reconciliation methods adopted by the warring communities in Warrap State (b) compromised farm productivity and reduced yields together with weak farm enterprises and low capacity at community-level were addressed by Outcome 2: Increased sustainable production and productivity of agriculture both livestock and cropping (c) multi-dimensional poverty was addressed by Outcome 3: Diversified income sources and (d) shocks such as floods and drought and the effects of unpredictable weather was addressed by Outcome 4: Improved community resilience. The activities were also aligned with the overall objective of the project to contribute to improved food and nutrition security for rural smallholder farmers of Warrap State specifically in the counties of Gogrial West, Gogrial East and Tonj North.

⁷ <https://enrd.ec.europa.eu>

3.1.5 Relevance of Activities to local context and needs

The challenges the communities cited at baseline including the effects of multi-dimensional poverty were addressed by the activities that FEDIS carried out. The activities included facilitating access to agricultural inputs, introduction or expansion of adapted agricultural production methods and diversified crops, establishment of demonstration units for new technology - innovative crop farming, food handling and cooking, energy saving, post harvesting and animal breeding, technical training to community-based extension workers - CAHW's, lead farmers, demonstration farmers. These served to address compromised crop production and productivity.

The activities of FEDIS included conducting consultative forums and meetings with various stakeholders on local level conflict triggers and trends; establishment of peace building committees at state, county and payam levels; review and mapping of livestock migratory routes and shared grazing areas; and establishment of resource-based conflict resolution and compensatory mechanisms. These activities served to address conflicts, cattle rustling and related disruption. The activities of FEDIS included support to provision of other basic services - notably WASH, adult literacy and numeracy and health education - and nutrition-sensitive programs including dietetics and diversification awareness. There was also support to community-based organizations such as farmers' associations, fisherfolk's association, traders' associations and poultry breeders' association; together with strengthening the role and capacity of local institutions. These activities served to address weak farm enterprises and low capacity at community-level.

There was also support to expansion of non-agricultural income generating opportunities, including development of financial literacy, community-level savings and loan groups and micro-finance units. These activities served to enhance access to finance, address capacity gaps at local level and tackle multi-dimensional poverty at household level.

3.2 Appropriateness and Quality of design

3.2.1 Program Design and Implementation

The design of the project effectively synthesized effective responses to local needs and problems, a strong understanding of the dynamics of the local context, solid anchoring in the national policy framework and an appreciation of the overall global context. A review of the project proposal, logical framework and other project documents also showed that there was clear analysis capturing all the required elements and interpretation of root causes. There was clarity of the results chain from intervention to the outcomes and ultimately the project goal.

3.2.2 Background checks and feasibility tests

The performance indicators were in line with the cluster and national level reports such as the Integrated Phase Classification (IPC) reports as well as the Crop and Food security reports. The design was also cognisant to adopt recommendations and lessons learnt from the previous projects such as the previous VSF G EU funded project-FESAP.

3.2.3 Project structure and validity and quality of Theory of Change

A. Components and Theory of Change

The FEDIS theory of change was well grounded in context of the vulnerable smallholder farmers in Warrap State and sought to blunt the effects of common household shocks while leveraging enablers for increased livestock and crop productivity; it took into account and developed interventions to address the barriers of

conflict, lack of farm enterprise outlook and weak market linkages; and was based on a plausible causal linkage from resolution of conflict which was an important variable in production and income, to increased agricultural production and productivity, diversification of income that all lead to improved food security and income for rural smallholders of Warrap State, South Sudan. The logframe and indicators were interlinked across the different outcome levels whilst the results were realistic and achievable within the project timelines hence the Theory of Change was valid.

B. Implementation Approaches and Methods

FEDIS adopted practical and feasible approaches that included peer to peer extension modalities (through the lead farmer and TOT approaches), demand driven cost-recovery concept as well as a holistic one health approach that integrated human health, environmental health and livestock health. At grassroots level the implementation was community driven with active dialogue and community feedback missions to ensure appropriate response to needs.

C. Monitoring and evaluation

The monitoring and evaluation plan captured the key elements of the project Theory of Change. The indicators were SMART, targets were realistic and aligned to project intervention areas and target populations. The data flow was clear, with a well-defined and budgeted evaluation schedule. In addition, outputs were time bound highlighting specific dates for expected achievements.

3.2.4 Beneficiary Selection and targeting

FEDIS had a well-defined beneficiary selection and targeting strategy, with detailed selection criteria for the various beneficiary categories. Targeting was gender specific and informed by needs assessments and programme objectives. The targeting system had inbuilt mechanisms to define target groups, methods, eligibility criteria as well as the ability to monitor targeting decisions. With regards to geographic targeting, FEDIS was mapped along the EU constructed market linkage road network (Warrap-Wau-Kuajok) and synchronised with other EU funded organisations such as World Vision International, HARD and NRC in order to harmonise approaches as well as avoid duplication of efforts. To cater for its non-violent conflict resolution outcome, FEDIS was also mapped along county and state border areas as these were identified as conflict hotspot zones during the conflict baseline survey. FEDIS also specifically targeted previously supported community based extension officers who worked on cost-recovery in order to maximise impacts. Overall, there was generally positive feedback regarding the targeting criteria as noted in the focus group discussions as most respondents alluded to the participatory and consultative nature of beneficiary selection.

3.2.5 Risks Analysis and Mitigation

FEDIS addressed operational risks – coordination among implementing partners and on uptake of new technologies; financial risks - delay in disbursement or perceived loss of financial resources; political risk relating to possible resistance to the project by community and political leaders; and environmental risk – relating to floods and drought. A review of how these operational, financial, political and environmental risks were addressed highlighted some challenges with managing risks related to deploying a few of the new techniques and in managing possible opposition among local and political leaders. Overall, a well-articulated risk analysis and mitigation strategy was built into the project design to address both internal and external risk factors; and the project risk register regularly updated.

3.3 Efficiency

This section examines the efficiency of FEDIS in terms of its adherence to its implementation timelines, its project management and work planning and the cost effectiveness and quality of its outputs.

3.3.1 Preparation and Timeliness of Implementation

Timeliness in delivery of the project was adhered to despite a number of challenges during implementation. Within the first three months of inception, FEDIS and its partners had a full staff compliment. However, there was a 6-month delay in implementation, lasting from January to July 2019, to allow for revision of the logical framework as advised by EU. The delay had a ripple effect on activity implementation, with one cropping season being missed. It also led to a 6-month no-cost extension period of the project from January to June 2022. During implementation of the project, the Covid-19 pandemic caused logistical challenges such as the timely procurement of project inputs due to closure of road and air networks and supply pipelines. FEDIS also aligned its activities according to the seasonal calendar ensuring early preposition of inputs before the wet season when road networks are often cut due to floods. Despite these setbacks the project was delivered within the anticipated no cost extension period and came to a close in June 2022.

3.3.2 Implementation Approaches and methods

Regarding implementation approaches, FEDIS adopted cost efficient methodologies in delivering services. These included cascading on gains made from linkages of the CAHW network with Agrovet dealers in Wau through the cost-recovery system. This ensured continued access to veterinary drugs outside the project timeline as witnessed during the end term evaluation. The use of peer to peer extension service through change agents such as the community based extension workers who worked in collaboration with the blacksmiths allowed for efficient community reach. FEDIS also adopted the One village approach, in which holistic interventions across the four outcome areas were implemented within a single village in order to maximise impacts. To this end, each category of beneficiaries was part of a VSLA group as a social safety net against household shocks.

3.3.3 Project Management and Work Planning

FEDIS had a well-defined and operational Project Management Unit comprised of technical experts in food security and veterinary services who provided overall project oversight and guidance to the implementation teams. The project was led by a Consortium Coordinator (VSFG) who was supported by a Program Manager (World Concern) and Field Coordinator (SEDA). The Program Manager was in turn supported by 4 Project Officers and a team of 12 Field Officers. In addition, the project had an M&E specialist who worked in coordination with a Communication and Documentation specialist to enhance learning and knowledge management. The project also had Administrative Staff who provided field administrative, finance, logistics, data management, fleet management and security services. The project benefited from program and operations support from the VSF-G team based in Juba. There was also program, operations and internal audit and compliance support from the Regional Office based in Nairobi. Occasionally staff from the international office would provide technical support to the project. The project had a detailed implementation plan that was updated on quarterly basis with the participation of all the relevant stakeholders. There was a clear communication and reporting system with tasks and responsibilities of the teams clearly outlined, monthly coordination meetings with relevant line ministries and food security cluster meetings at State level in Kuajok, as well as use of simple and standardized reporting formats which facilitated effective monitoring and timely reporting. This arrangement enabled

the partners to work jointly and effectively in delivering the project while focusing energies at the interface with the beneficiaries.

3.3.4 Monitoring and Evaluation and Knowledge Management

FEDIS had a well-defined M&E framework with data capturing and tracking guided by the Monitoring and Evaluation Plan (containing the Performance Indicator Reference sheets), Situation Report (for field level output data) and Indicator Tracking Table. The European Union's Community Intervention Information System (CIIS) was adopted for collation and storage of data. FEDIS also used VSFG's online monitoring system (WEBMO) with data routinely collected using mobile data collection applications such as ODK and Kobo toolbox. The integration of mobile and online systems enhanced quality and efficiency due to reduced encryption errors as well as a quicker turnaround time. The M&E unit was led by an M&E specialist supported by the Communication and Documentation officer who was responsible for knowledge management. FEDIS had two evaluations done, the baseline evaluation at inception from which indicator benchmarks and targets were developed as well as a mid-term evaluation which appraised the projects progress towards meeting its objectives. In addition, FEDIS also had 2 EUTA monitoring missions as well as 1 ROM mission. The evaluation noted that to a larger extent, the project addressed and adopted the recommendations from these reports into its programming. The limitation with the M&E system, as noted in the MTE, relates to gender disaggregation in reporting. Whereas the FEDIS targeting strategy ensured that all gender groupings were specifically targeted, this was missed in the beneficiary data reporting with data reporting limited to males and females only.

Learning forums

Learning forums included weekly and monthly forums at the project level; quarterly, biennial and annual review meetings as well as other Quarterly Review Meetings hosted by the EU Technical Advisors (TAs). Other learning forums included the monthly cluster meetings covering food security, livestock and nutrition.

3.3.5 Financial management and Utilization

A. Budget management

FEDIS project adhered to EU and VSFG's procurement and financial guidelines in its implementation indicating efficient budget management and sound cost control. By project end, FEDIS had an expenditure of €3,329,562 against a project budget of €3,333,333 denoting 99.9% attrition. The expenditure distribution was mostly within the forecasted thresholds. Regarding cost categories, FEDIS expenditures were spread across human resources, equipment and supplies, travel, local office, activities and other costs and services. Attrition was highest for other costs and services (122%) due to the high audit and evaluation costs and lowest for travel (79%) due to travel restrictions experienced during the COVID-19 pandemic. Notwithstanding, savings on travel lines offset the over expenditure on the other costs and services line.

Table 4: End-term Funds Utilization

	Budget (€)	Expended (€) at ETE	Balance (€)	Attrition rate (%)
EU grant	3,000,000 € (90%)			
Matching grant from co-funds	333,333 € (10%)			
Human Resources	1,194,330	1,213,557	-19,226	102%
Travel	58,400	46,391	12,009	79%
Equipment & Supplies	133,440	121,652	11,748	91%
Local Office	137,374	137,133	241	100%
Other Costs, Services	72,800	88,738	-15,938	122%
Project Activities	1,518,960	1,504,269	14,691	99%
Indirect Cost	218,068	217,822	247	100%
Total	3,333,333	3,329,562	3,772	99.9%

Source: FEDIS Final Financial Report, 2022

B. Cost efficiency

FEDIS managed to reach its targeted 6700 households, with the cost per beneficiary at ETE being 83Euros as was projected at baseline. The evaluation however noted a 33% replication of innovative practices from non-beneficiary households particularly regarding improved livestock breeding making FEDIS highly cost efficient.

C. Fund leveraging/co-funding

FEDIS managed to meet its 10% co-funding obligations. Through VSFG and World Concern, funds were leveraged from complimentary sources such as FAO, GFFO and UNICEF. FEDIS also received in-kind support through the FAO vaccine pipeline, cold chain system as well as livestock feeds.

3.3.6 Collaboration and Partnerships

The project collaborated with government line ministries at State, County and Boma levels. FEDIS and the relevant line ministry officers shared expertise which served to optimize efficiency in the delivery of the project interventions. These included ministries of agriculture and forestry, animal resources and fisheries, cooperatives and water. FEDIS worked with the Ministry of Agriculture and Forestry regarding crop productivity, the introduction of improved varieties and integrated pest management. With the Ministry of Animal Resources and Fisheries, FEDIS collaborated with them on delivery of veterinary services and on the introduction of improved breeds of cows, goats and chicken. The collaboration between FEDIS and Ministry of Co-operatives related to supporting community level associations while with the ministry of water the collaboration related to shallow wells that were used for dry season vegetable farming interventions. FEDIS also collaborated with academic institutions, notably the University of Wau. This relationship centered around exchange of perspectives around technical cropping and animal husbandry practices. It allowed FEDIS to benefit from existing knowledge on viable techniques and enabled the academic institutions to harvest information, for possible use by the academic institution and other actors, on the performance of the innovative approaches that were deployed by FEDIS.

3.4 Effectiveness

This section examines extent to which the project met its objectives and how the approaches employed by FEDIS contributed towards the achievement of its objectives.

3.4.1 Summary attainment of indicator targets

Based on its performance indicators, FEDIS managed to achieve 86% of its targets.

Table 5: FEDIS Performance indicator achievement

Impacts/Outcomes/Outputs	Performance on Targets			
	# Indicators	Exceeded	Met	Missed
Overall Objective: To contribute to improved food and nutrition security of targeted households in South Sudan	3	2	0	1
Specific Objective: To enhance a sustainable supply of agriculture and livestock inputs and services for 6700 small holder farmers in Warrap State through private sector by end of 2019	N/A	N/A	N/A	N/A
Outcome 1: Non-violent conflict resolution and social reconciliation methods adopted by the warring communities in Warrap State	4	0	4	0
Outcome 2: Increased sustainable production and productivity of agriculture (livestock/cropping)	4	2	1	1
Outcome 3: Diversified income sources	2	1	1	0
Outcome 4: Improved community resilience	1	0	1	0
Output 1.1: Community knowledge in conflict resolution mechanisms enhanced	6	0	6	0

Output 2.1: Knowledge on agronomic and animal husbandry practices improved	3	2	1	0
Output 2.2: Access to agricultural and livestock inputs enhanced	3	1	0	2
Output 3.1: Knowledge on livelihoods diversification opportunities enhanced	3	3	0	0
Output 3.2: knowledge on business skills and technology improved	2	0	1	1
Output 3.3: Access to markets and market information improved	2	1	1	0
Output 3.4: Capacity of local institutions strengthened	1	1	0	0
Output 4.1: Awareness on resilience mechanisms availed	1	0	1	0
Output 4.2: Access to basic services improved	1	0	1	0
Total	36 (100%)	13 (36%)	18 (50%)	5 (14%)

3.4.2 Achievements on Objectives

A. **Overall objective:** To contribute to improved food and nutrition security of targeted households in South Sudan

Three impact indicators were used to measure the overall objectives as follows:

- i) Proportion of targeted households with acceptable Food Consumption Score increased from 33% at baseline to 85% at end-term. This indicator target (48%) was met and surpassed.
- ii) Proportion of targeted Women of Reproductive Age(WRA) with Minimum Dietary Diversity (MDD-W) rose from 58% at baseline to 93% at ETE. This end of project target (68%) was met and surpassed.
- iii) With regards to Infants and Young Children, the proportion of children with Minimum Acceptable Diet marginally rose from 16.5% at baseline to 24.5% at ETE. Although this project target (30.5%) was not met, there was a positive change of 8%. This could be attributed to addition of supplementary milk to the children's diet as a result of the improved livestock breeds provided by the project.

Table 6 below outlines the achievements of objectives and result areas.

Table 6: Progress on objectives and Results

	<i>Results chain</i>	<i>Indicator</i>	<i>Baseline</i>	<i>Current value*(ETE)</i>	<i>Target</i>	<i>Achievement %</i>
Impact (Overall objective)	To contribute to improved food security and Nutrition security for rural small holders of South Sudan	<i>Proportion of targeted households with acceptable Food Consumption Score (FCS)</i>	33%	85%	48%	Exceeded
		<i>Proportion of targeted Women of Reproductive Age (WRA) that with at least Minimum Dietary Diversity (MDD-W)</i>	58%	93%	68%	137%
		<i>Proportion of Infants and Yong Children (IYC) in targeted households with at least Minimum Acceptable Diet (MAD)</i>	16.5%	24.5%	30.5%	80%
Outcome (s) (Specific objective(s))	Outcome 1: Non-violent conflict resolution and social reconciliation methods adopted by the warring communities in Warrap State	<i>1.1. Number of targeted Traditional Leadership groups develop & employing institutional conflict handling strategies (institutional)</i>	0 groups	9 groups	9 groups	100%
		<i>1.2. Number of targeted youth leadership groups develop & employing appropriate responses to conflict situations (behavioral)</i>	0 groups	3 groups	3 groups	100%
		<i>1.3. Number of targeted women's leadership groups develop & employing appropriate conflict handling behavior (attitudinal).</i>	0 groups	3 groups	3 groups	100%
		<i>1.4. % reduction in number of conflicts reported in project areas</i>	0 %	83%	20%	Exceeded

Outcome 2: Increased sustainable production and productivity of agriculture(livestock/cropping)	2.1. Number of farmers practicing sustainable agriculture (5climate smart agriculture practices)	1,428 farmers	4623 farmers	3060 farmers	151%
	2.2. Yearly volume of household agricultural production (metric tonnes)	Sorghum 0.76 MT	0.5 MT	Sorghum 1.6 MT	74%
		Groundnut 0.25MT	1.08 MT	Groundnut 1 MT	108%
	2.3. Average yield per hectare, disaggregated by type of crop.	Sorghum 554 Kg/ha	0.394 Kg/ha	Sorghum 750 Kg/ha	53%
		Groundnut 354 Kg/ha)	0.86 t/ha	Groundnut 450 Kg/ha	197%
	2.4. Number of farmers adopting at least three promoted better practices, disaggregated by agriculture and livestock.	1024 farmers-agriculture	4623 farmers ⁸ -agriculture	3000 farmers - agriculture	154%
		717 farmers-livestock	2950 farmers-livestock-	3000 farmers - livestock	98%
	Outcome 3: diversified income sources	3.1. % of beneficiaries engaging in at least 2 livelihoods by end of project	20%	58%	50%
3.2. Income levels raised by beneficiaries on an annual basis		282 Eur	1,514 Eur	400 Eur	Exceeded
Outcome 4: Improved community resilience	4.1. Number of DRR plans produced	0 plans	3 plans	3 plans	100%

3.4.3 Achievements on Result Areas

Outcome1- Non-violent conflict resolution and social reconciliation methods adopted by the warring communities in Warrap State

The project achieved all its Outcome 1 indicators. 9 traditional leadership groups were employing institutional conflict handling strategies. Of these, 1 Council of Traditional Authority Leaders(COTAL) group was established at state level and 8 other groups were at payam level. 3 youth leadership groups were employing appropriate behavioural responses to conflict situations whilst 3 women's groups were employing appropriate attitudinal behaviour. Focus group discussion with these groups exhibited the functionality of the established system, with well documented cases of conflict resolution captured. Key to note was how these groups were also cascaded down to the Boma level. There was an 83% reduction in the number of conflict incidences reported from 30 at baseline to 5 at end term.

Outcome 2-Increased sustainable production and productivity of agriculture(livestock/cropping)

The project achieved 3 of its 4 Outcome 2 indicators. 4623 farmers are practising sustainable agriculture practices exceeding the project target by 151%. The yearly volume of household agricultural production was 0.5 MT for sorghum and 1.08 MT for groundnuts. This denotes a 108% achievement for groundnut. The average yield per hectare was 0.394 t/ha for sorghum and 0.86 t/ha for groundnut. This indicator was not met due to the impact of floods that submerged vast areas of farmland in the last year of project implementation. However, at Mid-term Evaluation, this had been met. 4623 farmers adopted three promoted agriculture practices whilst 2950 livestock farmers adopted three promoted livestock practices.

B. Outcome 3: Diversified Income sources

All the indicators under Outcome 3 were achieved. 58% of project beneficiaries were engaging in at least 2 livelihoods, a 30% increase from baseline. The mean annual income raised by beneficiaries was 1514 Eur, a sevenfold increase from Baseline figures of 282 Eur. This attests to the gains made by FEDIS in promoting diversified livelihoods.

D. Outcome 4:

Outcome 4 had one indicator relating to the production of DRR plans. The project has met its target of producing 3 DRR plans - one per county. The project continued to build capacity of households on resilience and disaster risk reduction with 85% of the households indicating that they experienced disasters or emergencies over the year preceding the evaluation. The most common type of disaster that was identified by the respondents was floods *'the flooding is severe this year compared to three years ago, 3 years ago, crops had grown and resisted floods and dykes were ⁹created but this year there's no solution'*. During floods, men create dykes, women prepare food and wine, women also level the compound and make bumps to prevent water from entering the house. The response to floods has been relocation of victims, renovation of houses and approaching solidarity groups and NGOs for support.

⁹ FEDIS end-term evaluation case study

3.4.4 Progress on Project Outputs and Activities

	<i>Results chain</i>	<i>Indicator</i>	<i>Baseline June 2019</i>	<i>Target Dec 2021</i>	<i>Current value*(MTE)</i>	<i>%Achievement</i>
Outputs	Outcome 1: Non-violent conflict resolution and social reconciliation methods adopted by the warring communities in Warrap State Output 1.1: Community knowledge in conflict resolution mechanisms enhanced	<i>Number of targeted Traditional Leadership groups supported to augment traditional norms, customs and models of conflict resolution</i>	0 groups	9 groups	9 groups	100%
		<i>Number of targeted community youth leadership groups trained in alternative means of resolving conflict</i>	0 groups	3 groups	3 groups	100%
		<i>Number of targeted women's leadership groups trained in addressing economic motivation to conflict</i>	0 groups	3 groups	3 groups	100%
		<i>Number of livestock migratory routes mapped</i>	0 maps	3 maps	3maps	100%
		<i>Number of peace committees at state, county and payam levels established</i>	0 groups	9groups	9groups	100%
		<i>Number of resource based conflict resolution/compensatory mechanisms established</i>	0 mechanisms	3 mechanisms	3mechanisms	100%

Outcome 2: increased sustainable production and productivity of agriculture(livestock/cropping)	Output 2.1. Knowledge on agronomic and animal husbandry practices improved	<i>Number of community extension workers (AHWS, Lead farmers, freelancers), demonstration farmers,) trained on commercial extension service provision</i>	18 CBEWs	60 CBEWs	81 CBEWs	81 BEWs
		<i>Number of farmers trained on agronomic and animal husbandry practices.</i>	1895 (37%) trained on agronomic practices 1485(29%) trained on animal husbandry practices	3000 (60%) trained on agronomic practices 3000(60%) trained on animal husbandry practices	3344 trained on agronomic practices, 1485 trained on animal husbandry	80%
		Number of farmers that are reached with for-pay extension service	0 Farmers	1530 (30%) reached with on pay extension service provision	1236 farmers	81%
	Output 2.2. Access to agricultural and livestock inputs enhanced	Number of farmers receiving agricultural and livestock inputs, disaggregated by type of inputs& gender	0 Farmers	5,100 farmers	4687 project beneficiaries received agriculture inputs in 2020. Of which all received crop kits(2malua sorghum, 2malua groundnut), 30 beneficiaries received 30cows, 44 beneficiaries received 88goats.	94%

		Number technological input producers, service providers and suppliers equipped & or trained	0 Input suppliers	179 (70%) Input suppliers supported	80 input suppliers trained.	45%
		Number of community based organizations trained	0 community based organizations	6 (60%) trained	8 farmer organizations trained	133%
	Outcome 3: diversified income sources	Number of alternative IGAs introduced	0 IGAs	2 IGAs	53 VSLAs formed	Target exceeded
	Output3.1: Knowledge on livelihoods diversification opportunities enhanced	Number of beneficiaries trained on alternative IGAs, including market gardening.	0 HH	600 individuals	938 individuals	156%
		Number of households receiving support for different IGs (tools, seeds, equipment, etc.)	0 HH (June 2019)	600 individuals	1594 individuals	Target exceeded
	Output 3.2: knowledge on business skills and technology improved	Number of demonstration units for new technology (crop farming, food handling and cooking, energy savings, post harvesting animal breeding) established	0 Demos	27 Demo units	37Demos	137%
		Number of private input supply schemes (agro vet dealers, local seed producers, local blacksmiths, poultry producers, ox plough trainers, etc.)	300 Suppliers	915 Suppliers	576 suppliers	63%
	Output 3.3 Access to markets and market information improved	Number of community infrastructure (village stores, threshing yards, protected water	4 structures	12 structures	20structures	167%

		sources) constructed.,				
		Number of farmers' organizations/farmers linked to markets.	0 Groups/farmers-	9 groups	9groups	100%
	Output 3.4: capacity of local institutions strengthened	Number of community based institutions supported (community level savings, and loan groups, microfinance units, farmers associations, traders associations, poultry breeders associations, etc.)	11 Groups	30 groups	82 groups	Target exceeded
	Outcome 4: Improved community resilience Output 4.1: Awareness on resilience mechanisms availed	Number of communities groups trained on DRR	0 Groups	9 communities groups	9 Communities	100%
	Output 4.2: Access to basic services improved	Number of basic services introduced- WASH, adult literacy, health education, nutrition sensitive programmers and awareness on diversification awareness.	0 services	5 services	5 services	100%

Output indicator achievements are summarised as follows:

- a) 9 leadership groups in Warrap State adopted and practiced the new skills from FEDIS aimed at complementing their traditional approaches to conflict resolution and peace building. In total, the traditional leadership groups comprised of 135 members (90 Males, 45 Females). 3 Youth Leadership Groups received basic training as well as refreshers on alternative means of resolving conflicts. All the targeted Women Leadership Groups (45 members) were trained on peace building and conflict resolution. 3 livestock migratory routes and shared grazing areas were mapped meeting the end of project target.
- b) 81 community based extension workers were trained on cost-based commercial extension service provision comprising of 66 (55 M, 9 F) Community Animal Health Workers and 15 Community Ox-plough Trainers (COTs). 3344 farmers were trained on agronomic practices (surpassing the target of 3000 farmers) and 1485 farmers were trained on animal husbandry practices
- c) 1,236 farmers have been reached with for-pay extension services. Of these, 1077 (896 M, 181 F) farmers were reached with for-pay animal health services through the vaccination at-cost of 59,687 livestock (49,708 cattle, and 9,979 shoats) at a cost of 0.15eur per head of animal vaccinated. 159 male farmers had their ox ploughs and hand tools repaired at a cost by the local artisans and Community Ox-plough Trainers trained by the project
- d) 4687 beneficiaries received livelihood kits as follows: 2,239 (260 M, 1,979 F) in Gogrial East received staple crop seeds comprised of 4,478 maluas of sorghum and 4,478 maluas of groundnuts. Of these, 1,314 farmers (917 M, 397 F) in Gogrial West received 2,628 malua of sorghum and 2,628 malua of groundnuts. In Tonj North, 1,314 farmers (275 M, 1,039 F) also received 2,628 malua of sorghum and 2,628 malua of groundnuts. Of the 4,867 beneficiaries, 861 of them also received livestock inputs as follows: 30 (22 M, 8 F) received 1 improved cow breed each (*Butana heifer*) while 475 received 2 Reizegat goats each and 350 received Kenbro chicken (3 hens and 2 cocks each). 6 Butana bulls were distributed to 2 households per county as primary custodians.
- e) 53 VSLA groups have been formed with 1,594 (1,028 F, 566 M) members and provided with a VSLA kit each composed of a metal box, record books, pens, calculators, inkpads, padlocks and sitting mats. These VSLA's have given rise to other businesses such as Vegetables growing and selling, Retail shops, Groundnut paste making, tea shop and milk vending.
- f) 20 protected hand dug wells have been constructed, 37 demonstration plots established and 82 community based associations formed.
- g) DRR training has been established to 9 community groups. 5 services have been introduced namely WASH (protected hand dug wells and WASH facilities at the value chain centers), adult literacy (as part of VSLA group training), health education, nutrition sensitive programs and awareness on diversification awareness

3.4.5 Overall Remark for all Achievements

FEDIS had an overall indicator achievement of 86%, of which 36% of these indicators were surpassed. Key to note was the impact of unprecedented flooding on crop production and productivity during the final year of

the project as well as during the evaluation itself. Hence the inability of FEDIS to meet 100% of its indicator targets is largely due to external factors.

3.5 Impacts and effects

FEDIS has been implemented in 42 months and the following preliminary impacts were noted during the evaluation:

3.5.1 Food and Nutrition Security and Livelihoods

85% of the households were food secure and had an acceptable food consumption score greater than 35, a three-fold increase from the baseline figures of 33% of households. Only 15% had poor food consumption score. 93% of women received adequate dietary diversity as per the Minimum Dietary Diversity Score for Women (MDD-W) compared to 58% at baseline. However, there was a marginal 8% increase in children with Minimum Acceptable Diet from 16.5% at baseline to 24.5% at end-term.

Household hunger

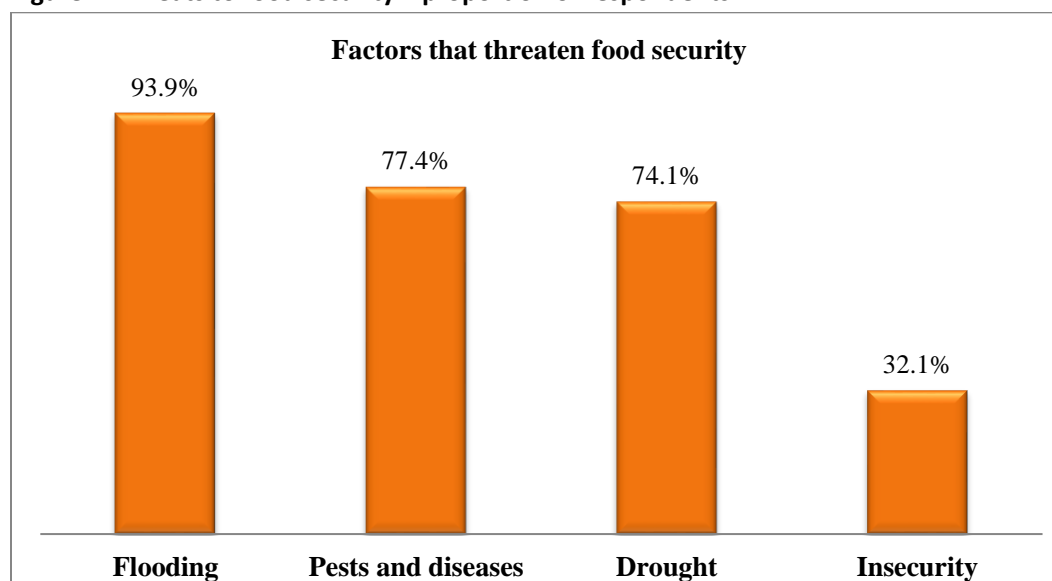
The challenges with hunger were reflected in the hunger scale which showed that one out of three households (33.5 per cent) in the project implementation counties experienced severe hunger due to floods. This means that in the month preceding the evaluation, in a third of households, there was almost no food to eat of any kind in the household because of lack of resources to get food. The household survey was carried out in September after the 'hunger months' period and when access to food should have markedly improved. In discussions with key informants it was noted that the floods that had affected the area contributed to the notable level of hunger at household level since there were no active relief interventions.

The respondents identified the main threats to food security in their area as flooding (93.9 per cent), followed by pests and diseases (77.4 per cent), drought (74.1 per cent) and insecurity (32.1 per cent).

Table 3: Household hunger score

Household hunger score	Profile	Percentage of households
0-1	Little or no household hunger	33.7%
2-3	Moderate household hunger	32.8%
4-6	Severe household hunger	33.5%

Source: FEDIS end-line evaluation, 2022

Figure 1: Threats to food security – proportion of respondents

Source: FEDIS end-line evaluation, 2022

Dietary diversity and meal frequency

The types of food groups consumed by a majority (93.7 per cent) of households were cereals (posho, rice, bread) or any other foods made from sorghum, millet, wheat, rice or maize. Other food groups were local cheese, yoghurt, milk and other milk products (46.8 per cent); fresh or dried fish (43.6 per cent); beef, lamb goat, rabbit, wild game, chicken, duck or other birds, liver, kidney, hear or other organ meats (33.9 per cent); any food made with oil or fat (24.3 per cent); vegetables (23.8 per cent); potatoes, cassava or other foods from roots and tubers (16.2 per cent); and eggs (14.9 per cent).

For infants and young children (IYC), it was established that only one out of four (24.5 per cent) had a minimum acceptable diet (MAD). When the findings were compared to baseline the largest improvement was in Gogrial East – from 11.7 to 20.0 per cent- followed by Gogrial West – from 28.8 to 33.0 per cent- and then Tonj North where there was no change – Table 12.

Table 4: Minimum acceptable diet for infants and young children

	Period	Gogrial East	Gogrial West	Tonj North	Combined
Households with children with minimum acceptable diet		4	33	8	45
Households with infants and young children 6-23 months		20	100	89	209
End line Evaluation	Sept 2022	20.0%	33.0%	9.0%	24.5%
Baseline	June 2019	11.7%	28.8%	9.0%	16.5%

Source: FEDIS end-line evaluation, 2022

In most households at least there was one person aged 50 years and above who consumed 3 meals in a day. Out of the 3 persons aged 15-19 years, 2 of them consume 3 meals in a day. All of the 2 children aged 2-14 years present in most households had 3 meals a day. There was at least one infant of 6-23 months in each household, such an infant received 3 meals in a day.

3.5.2 Agricultural and Livestock Productivity and Incomes

The project sought to increase crop production and productivity. Households reported that they grew cereals (97.7 per cent) – mainly maize, sorghum and millet; followed by legumes (85.9 per cent) – mainly beans, cowpeas and groundnuts; then vegetables (13.2 per cent) - onions, tomatoes, green pepper; leafy vegetables (12.0 per cent) and tubers (3.1 per cent). The acreage under crop production was 3 feddans¹⁰. The productivity of the land varied from crop to crop but there were minimal changes from baseline due to the effect of the unprecedented floods that covered a significant part of the implementation sites. The United Nations Office for the Coordination of Humanitarian Affairs (OCHA) noted in a briefing note in October, 2022 that South Sudan had experienced four consecutive years of flooding, with the disaster now affecting nine out of ten states. "Reportedly, the floods destroyed livestock and crops; washed away roads and bridges; destroyed homes, schools and health facilities; and submerged boreholes and latrines thereby contaminating water sources and risking outbreaks of waterborne diseases,".¹¹

Table 5: Volume and crop yield – sorghum and groundnuts

	Annual volume per household (metric tonnes)			Crop yield (MT/Ha)		
	Evaluation	Baseline	Change	Evaluation	Baseline	Change
Sorghum	0.5	0.76	(0.26)	394	554	(160)
Groundnuts	1.08	0.25	0.83	860	354	506

Source: FEDIS end-line evaluation, 2022

At household level, the yield of sorghum dropped from 554 Kg/ha at baseline to 394 Kg/ha and the annual volume per household dropped from 0.76MT at baseline to 0.5MT. However, for groundnuts yield doubled from 354kg/ha at baseline to 860 kg/ha and the annual volume per household increased from 0.25MT at baseline to 1.08MT.

Half (50.2 per cent) of households recorded less crop productivity in their farms in the year preceding the evaluation while 30.5 per cent noticed no change at all. Only 17.8 per cent had more crop productivity in their farms. Reasons advanced for the decrease in crop productivity were floods (72.4 per cent), pests and diseases (52.0 per cent), drought (48.9 per cent) and insecurity (15.4 per cent).

In a corroboration of the perspective of the farmers, the changes in production and productivity were attributed by focus group participants and by key informants to a number of factors including the adoption by farmers of promoted practices, the fertility of the land, access to farm inputs and the improved market linkages for farmers to sell their produce. Further, at the time of the evaluation, despite the unprecedented floods, 51.7 per cent of the households were practicing at least three of the promoted crop farming practices. The animals in the households included goats, poultry, cattle and sheep reported by 63.2 per cent, 60.6 per cent, 58.1 per cent, 49.2 per cent of households respectively. A small proportion of 6.1 per cent reared rabbits and a very small proportion of 0.8 per cent kept bees.

¹⁰ 1 Feddan = 1.04 Acres = 0.42 Hectares

¹¹ <https://www.france24.com/en/africa/20221011-nearly-1-million-people-affected-by-south-sudan-floods-as-rains-destroy-homes>

Regarding changes in animal production in the period of 12 months preceding the evaluation, 20.6% said there was an increase. The leading reasons for increase in animal production were adequate pasture and fodder (34.7 per cent) and use of improved breeds (23.4 per cent).

3.5.4 Diversified Incomes

The indications regarding the impact of the project include higher household income based on higher farm productivity and diversification of income sources at household level. Increased incomes at household level led to regular school attendance for children, improved ability to meet medical and other expenses, increase in household savings, and reduced domestic strife. There was also raised level of initiative and willingness amongst community members to work collectively towards improving their livelihoods. Discussions in focus groups and information from key informants indicated that co-operation among community members, with the aim of improving their livelihoods, had notably improved. The benefits of the work of the project on diversification of income were numerous. As a local administrator noted, *“The FEDIS project has influenced many good changes in this community. It encourages other members of the community to work like the others who are participating in the FEDIS projects. People want to work hard and improve their lives. They want to get training that can help them. They are willing to cooperate with other members of the community in achieving tasks.”*

58% of beneficiaries have been engaged in more than 2 livelihood activities, a 30% increase from baseline figures of 28%, whilst the average annual household income was 1514Eur, up from 282Eur. A notable proportion of households (36.5 per cent) had an income generating activity. Nearly a third (29.2 per cent) started their income generating activity within the past 12 months, 28.2 per cent started more than 3 years ago, 26.6 per cent of the respondents started their business more than 2 years ago and lastly 16.1 per cent began business more than a year ago. This means that most of the businesses (71.8 per cent), that is seven out of ten businesses were started during the 42-month duration of the FEDIS project.

3.6 Sustainability and Exit Planning

The end-term evaluation noted clear indications of project sustainability with particular regards to the cost-recovery concept, community ownership as well as knowledge and skills transfer.

3.6.1 Signs of Sustainability

FEDIS worked with community members to developed structures such as the peace committees and community associations that are led and run by community members and stand a clear chance of remaining active and operational long after the end of FEDIS. In addition, the introduction of new crop and livestock practices were adopted by a notable proportion of early adopters who, based on the lead farmer and demonstration farm approach used by FEDIS, will long continue to influence change of local crop and livestock practices. The change in household incomes arising from diversification of income steams provides a powerful incentive for other households to diversify income sources and will continue to build a local pool of demand and supply that will market linkages necessary to support commercialization of farm input supply chains and farm enterprises in the implantation areas.

Technological sustainability

The project ensured sustainability through investing on simple, acceptable and adaptable innovative technologies. The technologies used were locally produced, integrated and serviced that went into ensuring that labour, time and effort was significantly reduced but at the same time yielding results. The project also invested in resource persons e.g. CAHWs and extension agents that will ensure continuous uptake and utilization of skills by farmers

Institutional sustainability

The project invested in capacity building of local institutions including CBOs, Associations and Cooperatives who have been identified as the main development drivers. Furthermore, there were deliberate efforts by the project to work closely with relevant line ministries and departments such as SMARF/SMAF through joint and coordinated activities

Financial sustainability

Efforts were made to empower communities financially through the establishment of VSLA groups that were trained on financial and business management and marketing skills. As a key informant noted *“The VSLAs are the most successful component and the members will continue benefiting beyond the project life time.”* Another key informant said that *“Most people are members of VSLA and now they know how to manage money, save and take loans. A saving and borrowing culture has been born, unlike previously where money used to be held in peoples’ hands, now the money is saved in VSLAs where it is loaned at 30% for group members and 50% for non-members.”* The communities were trained on livelihood diversification for sustainable incomes at the household level through engaging in income generating activities and focus on more market oriented production. The farmers were trained on value addition on crops and livestock products at the local level. Further, the project invested in incorporating basic literacy and numeracy skills to a population that is highly illiterate. Strengthening of local financial service providing institutions such as South Sudan Community Bank was also undertaken.

Environmental sustainability

This was done through the promotion of smart farming techniques that included Zai pit that enhances moisture retention and ridge farming during flooding periods. The households were supported on energy saving cook stove production and utilization has demonstrated reduced demand for wood fuel. There were efforts in investing in gender based labour and time saving technologies such as hand dug wells.

Transfer of appropriate skills and knowledge

Results that will go beyond the project include; vegetable farming, VSLA, the high yielding crop and livestock, and the knowledge gained by the farmers in improved agronomic practices. The key informants indicated that the skills imparted on the farmers and the staff will continue even after the closure of the project. The participants indicated that the results achieved by FEDIS will last as the community will continue to make use of the skills that they received from FEDIS and provision of tools. The community will continue achieving results because more people are learning the benefits of agricultural modernization and gardening. The dry season farmers indicated that *“We have the skills and seen the benefits” and that the kids and youths have learnt through trainings and are likely to emulate”*. They also added that young persons were helping in irrigation and will also learn and adopt the footsteps of the elders in practicing agriculture and using improved tools.

The VSLA group indicated that they look forward to train more members of the community on the skills that they had learnt. The goats' committee members pledged to continue implementing the lessons that had been taught. The peace committee indicated that community is hopeful to continue with or without support because they had learnt and they had seen improvements in their lives - that the Peace Committee helped resolving a dispute between ethnic Dinka clans. The peace committee indicated that they are instilling a culture of dialogue to the community as a better method of solving disputes and VSLA Groups are helping women to raise their household income. The energy stoves group indicated that the community members have benefitted and willing to continue despite challenges posed by the effects of natural disasters.

Infrastructure

The infrastructure – namely, hand dug wells, flour millers and ground paste making machines - will also continue being of use to the community even after close of FEDIS. Due to the introduction of high yield animal breeds, production has increased and this will have both medium term and long terms impacts as the progeny of these animals continue to produce more than the local breeds.

3.6.2 Exit Strategy

A project exit plan with detailed guideline on transition steps as part of the project close-up phase existed. The project exit plan was implemented with transition steps and exit meetings that enabled other duty bearers, notably local NGOs and government officers, to provide the support to the community necessary to sustain results of the project. The key stakeholders as well as the beneficiaries were all aware about the project end.

3.7 Coherence and Learning

A. Internal Coherence

FEDIS was internally coherent with other VSFG and World Concern's food security and livelihoods projects. In the first year of implementation, FAO provided crop and vegetable seeds to FEDIS beneficiaries as the initial project design did not have direct seed provision. In addition, in year 2, FAO provided in-kind support in form of supplementary livestock feed for the improved Reizegat goats as well as veterinary vaccines. In Tonj North County, VSFG with funding from UNICEF, successfully reintegrated into society children that had been displaced due to conflict, which is in tandem with FEDIS Outcome 1.

External Coherence

FEDIS project was part of the ZEAT-BEAD project portfolio, which provided a platform for knowledge sharing with NPA, VSF Suisse and HARD. External Coherence was also noted with HARD in peace initiatives along the state and county border areas. VSFG is a member of the Livestock working group which is a key information sharing source with regards to livestock interventions in South Sudan. FEDIS was also coherent with the interventions of other major donors and actors in livelihoods space such as USAID and World Vision. For instance, FEDIS was in coherence with USAID's Sustainable Agriculture for Economic Resiliency and Resilience through Agriculture in South Sudan whose activities are building resilience at the household and community levels to help South Sudanese communities that are affected by economic, conflict, or environment related shocks.

B. Learning

The establishment of both crop and livestock demonstration plots at community level as well as the main state ministry level enabled cross learning among peers as well as for the community as a whole. Other key learning avenues included Quarterly Review meetings hosted by the EU TAs, Agriculture and Livestock Trade fairs hosted by FAO and the Ministry of Agriculture, coordination with other EU funded organisations such as World Vision as well as monthly food security and livelihood cluster meetings.

3.8 Reporting and Visibility

The evaluation noted good reporting and documentation. The presence of a fulltime communication and documentation staff ensured that qualitative aspects of the project were captured through most significant stories which have been routinely shared with EU through the EUTA's. The project had well-defined reporting schedules with monthly reports feeding into quarterly reports which then fed into the Annual donor reports. The project had a communication and visibility plan which guided visibility implementation ensuring that donor and partner logos were adequately marked on project documents, sign posts, vehicles as well as other visibility items such as T-shirts and banners. The evaluation team noted the presence of FEDIS signposts at infrastructure places such as the value chain centres as well as at demonstration plots.

4.0 LESSONS, BEST PRACTICES, RISKS & CHALLENGES IN IMPLEMENTATION

4.1 Key Learnings

This section outlines the key learning and best practices from implementation. It also looks at the risks that the project was exposed to and the challenges encountered during implementation.

Based on implementation of FEDIS, seven key lessons emerge.

Non-violent conflict resolution and social reconciliation

1. Sustainable peace initiatives

The involvement of leaders at all levels and the actors in the center of the conflict facilitates success in brokering the peace agreements and ensuring that peace is sustained. Secondly, involvement of all population groups, including youth and women recruits the energy of the youth and commitment of women to peace efforts and contributes to the sustainable success of peace initiatives.

Increased sustainable production and productivity of agriculture

2. Small-holder access to farm inputs

Due to market inefficiencies and infrastructure challenges, full reliance on private-sector supply chains and distribution networks to deliver farm inputs results in farmers being charged prices that are unviable for the small-holder units while supply is erratic and often at a miss-match to the requirements of farmers to respond in a timely manner to seasonal conditions. It is necessary to complement private-sector supply chains with supply by other actors for the most vulnerable farmers.

3. Peer-to-peer skills transfer

It is apparently clear that the proportion of farmers reporting adoption of promoted practices is higher than the proportion of those who reported being trained, highlighting the fact that peer-to-peer learning played a notable role in the adoption of improved or new practices by farmers in the implementation areas.

4. Appropriate tools

The *maresha* ox-plough works best in sandy soils and not as well in the clay and loamy soils. For such kind of soils, the all-metallic ox-plough needs to be considered but coupled with an element of cost recovery. The *maresha* ox-plough does well with working soil for sorghum and simsim planting since it doesn't go deep but it is not suitable for preparing ground for groundnut planting. It has also been learnt that in farms where grass is too tall, the *maresha* will not plough the ground well.

Diversified income sources

6. Gender and diversification of income sources

Income –generating activities undertaken by community members congregate around those directly connected to agricultural value chains for women while for men such activities congregate around services with less direct linkage to agricultural value chains. When those who own businesses are disaggregated according to gender, females are involved in food kiosks (96.4 per cent), food and vegetable vending (76.2 per

cent), tailoring (100 per cent) and salon/barbershop (100 per cent). Males are involved in carpentry (100 per cent) and shop keeping (97.7 per cent).

Improved community resilience

7. Cascading DRR plans to boma level is successfully achieved where a Boma Disaster Risk Reduction Management Committee (BDDRM), with broad representation of local leaders and interest groups, is established to ensure implementation of the Boma DRR plan.

4.2 Best Practices and Contributors to Implementation success

Contributors to implementation success

The success of the project was facilitated by a number of factors, including:

1. **Relevance:** The design of the project enabled it to respond to the actual needs and local priorities of farmers and communities in the area of implementation. The project did not just address livelihood issues but incorporated a component on peaceful conflict resolution and peace-building.
2. **Positive relations with duty bearers:** VSF-G maintained good working relationships and sustained collaboration with government line ministries, the state and local administration.
3. **Learning approach:** The project regularly reviewed its performance, drew lessons to inform implementation and made changes necessary to ensure the objectives were achieved and outcomes attained.
4. **VSF-G history:** VSF-G has a long history of working in South Sudan, particularly in Warrap state and has an excellent organizational grasp of the context at national, state and county level.
5. **Strong relationship with EU:** VSF-G has a strong, long-standing and good working relationship with EU/TA who contributed regularly and positively with technical advice and assistance as necessary to support project implementation. For instance, the donor contributed to a revision of the logframe at the beginning of the project and was accommodating with a no-cost extension at the end of the project period.
6. **Strong participation of local NGO:** The strong participation of SEDA, a local NGO, in the consortium strengthened local ownership of the project and facilitated an efficient appreciation of the local socio-cultural landscape which was very useful in overcoming cultural barriers, such as around gender equality aspects, which would have otherwise hindered implementation.

The success of the project was also facilitated by the willingness of the project leadership to take advantage of recommendations arising from baseline and mid-term review exercises. These were responded to and incorporated in the implementation of the project.

Best practices

Non-violent conflict resolution and social reconciliation

1. Peace committees

The establishment of standing peace committees at community level that were involved in the peaceful resolution of conflict as and when the need arose had a remarkable effect in reducing conflict. They also played a pre-emptive role in promoting social reconciliation. The use of peace committee was far much more effective than peace campaigns which provide short-term, intermittent results in reducing conflict.

Increased sustainable production and productivity of agriculture

2. Local production of agricultural inputs

Supporting the local production of agricultural inputs boosted access by the smallholder farmers, generated local micro-enterprises and created market linkages which provided new off-farm income- generating activities. They also contributed to diversification of income sources for members of local communities. This was accompanied by transfer of skills building the pool of local skills to support sustainable increase in production and productivity of agriculture. Where there were challenges that required change of design or approach in use of the inputs, such as in the case of *maresha*, the changes required were better appreciated by the local producers.

3. Commercial viability of community-based animal health service

The enlisting of commercially viable CAHWs for support with business development capacity building, institutionalization for legal standing, mass vaccinations, access to capital, and gainful linkages with input dealers and institutional clients rendering support within the livestock sector yielded enterprising CAHWs with capability to overcome operating obstacles and challenges. Such CAHWs were clustered in groups of 5 around an established agro-vet dealer. This best practice demonstrated a pathway for developing viable community animal health service (CAHS).

Diversified income sources

4. Market institutions

FEDIS supported five key market institutions – including Market Traders' Association and the Chamber of Commerce - in the operational areas to develop institutional capacity for effective management of market operations, fair trade, security and peace, hygiene, standards and regulations, smallholder inclusion and representation. The support comprehensively developed an eco-system for competitive, inclusive and participatory marketing for small-holder farmers and the growth of market linkages for market-ready small-holder farmers.

Improved community resilience

5. Boma-level DRR plans

The combination of community training and awareness, local institutional capacity, establishment of Boma Disaster Risk Reduction Management Committee (BDDRM) ensures the development and implementation of Boma DRR plans.

4.3 Risks, Challenges and Barriers to Implementation

4.3.1 Implementation challenges

FEDIS experienced various challenges from inception to end of project as follows:

A. Covid-19 restrictions

COVID-19 restriction resulted in disruption of market supply routes which had a knock-on negative effect on project input procurement particularly relating to Outcome 3 procurements such as the sorghum grinding mills which could only be sourced in the final year of the project. Field travel was equally constrained due to the limit in number of people who could be trained in one seating thereby resulting in cost implications.

B. Resistance to some innovative approaches

The maresha technology had mixed uptake. The most vulnerable beneficiaries who could not afford ox-ploughs appreciated the tools whereas the better off beneficiaries preferred the traditional ox-plough. This coupled with the suitability of the maresha to sandy soils rather than clay loam soils, resulted in a slow uptake of the technology. In the final year, based on community feedback, the project remodified the maresha implements to suit the loam soils somewhat improving the uptake of the technology.

C. Context specific challenges

Tonj North was mostly inaccessible due to interstate revenge killings as well as the disarmament exercise. During the evaluation access was also limited due to flooding, affecting overall implementation in this county and in turn reducing the project's efficiency.

Projected risks at design stage were addressed as follows:

Table 6: Evaluation of management risks encountered

	Risks	Possible Effects	Mitigation	Evaluation
	Operational			
1	Weak coordination among implementing partners	Delivery of the project uncoordinated, delayed or aborted	Establishment of an effective structure that incorporates all implementing partners combined with consultation and regular reporting	FEDIS had strong co-ordination among its partners including a steering committee comprising members from the VSF-G, WC and SEDA
2	Poor uptake of new technologies by farmers and community members	Hampered delivery of increase in farm production and productivity	Deploy effective management of change from previous to new or improved approaches and technologies	Uptake of <i>maresha</i> and adoption of cost recovery approach for farmers to access farm inputs required stronger engagement.
	Financial			
1	Delay in remittance of funds	Delay in implementation of the project	Donor requirements to be met within agreed timeframe	FEDIS effectively met donor requirements within agreed timelines
2	Loss of financial resources	Failure to implement parts of the project	Establishment of a strong accounting system together with regular monitoring and robust internal audit	Losses of financial resources were detected and addressed in a timely manner

	Risks	Possible Effects	Mitigation	Evaluation
	Political			
1	Resistance to project by community and political leaders	Failure to implement parts of the project	Building a good rapport at the entry point with the political leaders as well as the community	The development and maintenance of positive relation with local and political leaders was initially weak. This seemed to have been addressed by end of evaluation.
	Environmental			
1	Floods	Loss of increased crop and livestock production	Early warning mechanisms which enables at-risk individuals, communities and organizations to prepare and act appropriately and in sufficient time.	The unprecedented and extensive flooding in 2022 was far more than could be reasonably anticipated based on recent history
2	Drought	Loss of increased crop and livestock production	Deployment of dry farming techniques	Dry farming techniques were effectively deployed by FEDIS

5.0 CONCLUSIONS

5.1 Overall Conclusions

FEDIS interventions are appropriate and meet the needs of the vulnerable small holder farmers, with initial outcomes attaining to improved food security and livelihoods in the target areas.

5.2 Relevance

FEDIS interventions contributed to SDG 1 (No Poverty), SDG 2 (Zero Hunger) and SDG 3 (Good health and Well-being). FEDIS was in compliance with EU policy for Development Cooperation. The ZEAT BEAD portfolio projects, of which FEDIS is a part, are consistent with the EU instruments. FEDIS was aligned with the Government of South Sudan Policy instruments to further strengthen the livestock and agriculture sector such as the Comprehensive Agriculture Master Plan (CAMP). The project objective of improving the food security and nutrition of vulnerable populations was also aligned to VSF-G Vision and Mission. The issues that FEDIS sought to address in its four outcome areas demonstrated the relevance of the project activities and objectives to local needs and priorities.

5.3 Appropriateness and Quality of design

- a) The design of the project effectively synthesized responses to local needs and problems, a strong understanding of the dynamics of the local context, solid anchoring in the national policy framework and an appreciation of the overall global context. The project interventions were built on sound and valid logic with the ultimate goal of contributing to improved food and nutrition security. FEDIS was innovatively designed to contribute to longer term sustainability by incorporating farm enterprise development and capacity building value chain actors in all outcome areas. This unique departure from conventional approaches to project formulation produced positive outcomes in some sectors as functional enterprise

linkages were clearly evidenced. In certain instances, though, other external factors continue to impede proper development of enterprise linkages. These include weak policy environment, poor infrastructure and weak regulatory environment that discourage private sector engagement and participation. The project was also designed to support smallholder farmers and pastoralists, promoting food sovereignty by paying close attention to animal health alongside human health in healthy environments. The results framework captured the key elements of the Theory of Change. Key strengths include; well quantified and SMART result areas and activities; performance targets that are reasonably justified for outputs and outcomes; targets that are realistic considering intervention areas and target population; desired levels of achievement (targets) well specified for indicators of outputs and results and program milestones that were appropriate and sufficient to track progress and foster management towards outputs and outcomes indicators.

5.4 Efficiency of implementation

There was a 6-month delay in implementation, lasting from January to July 2019, to allow for revision of the logical framework as advised by the donor. The delay had a knock-on adverse impact on activity implementation. The initial time loss, however, was compensated at the end through a no cost extension. To enhance efficiency, the project management structure comprised of a steering committee at national level with membership drawn from the three implementing agencies. In Warrap, the project had an elaborate delivery structure, headed by a project manager and teams of competent project officers, their assistants and community facilitators. Close collaboration with government line ministries and mutual sharing of expertise further optimized efficiency. Partnership with University of Wau facilitated exchange of technical perspectives on the innovative approaches deployed by FEDIS. By the end of the project the project had a 99.9% burn rate (with Audit and Final evaluation as the only committed costs). Regarding cost-efficiency, FEDIS cost per beneficiary per year was 83uer as projected at baseline. FEDIS met its co-funding obligation in totality.

5.6 Effectiveness to date

In terms of output achievement, FEDIS was 86 per cent successful despite the challenges posed and shock administered on project results by the unprecedented floods experienced during the final year of project. The extent of output achievement was as follows:

- 6700 targeted households were reached with 98% of the activities implemented by the end-term. Pending activities related to project closure procedures such as the audit as well as asset handover processes. Feedback received attested to adoption of FEDIS innovative practices with generally positive feedback from the community. In spite of the floods, volume of agriculture production had increased, with evidence of surplus production particularly of groundnuts. Key standout was livestock productivity, which was not only limited to animal health service provision but increase in body condition as well as milk production.
- 20 shallow wells were constructed in Gogrial West, 10 Hafirs were rehabilitated in Gogrial East County and 8 value chain centers established. Livestock producers were supported with 30 Butana Heifers, 6 Butana bulls, 1,749 Kenbro chicken and 950 Reizat goats. 4867(1522M, 3345F) beneficiaries were supported with crop kits. 1,236 farmers reached with for pay extension services, of these 1,077 were reached with cost-based vaccination of 59,687animals whilst 159 farmers had their ox-ploughs repaired by the Community Ox-plough trainers. 9 agro processing cooperatives were supported with 3grinding mills and 5 groundnut paste machines. 9 peace committees were continuously supporting non-violent conflict resolution.

5.7 Impacts and sustainability

FEDIS had a high positive impact as evidenced in the annexed stories of change. Overall, beneficiaries were able to meet their food and nutritional needs, increase household incomes, protect key livelihood assets as well as investment in alternate businesses and Income generating activities. 85% of FEDIS beneficiary households were food secure based on the Food Consumption Score, whilst 93% of women received adequate dietary diversity as per the Minimum Dietary Diversity Score for Women (MDD-W). 24.5% of children had the Minimum Acceptable Diet, an increase from 16.5% at baseline. At project end, the average income raised by households stood at 1,514Eur, representing a seven-fold increase from baseline. Increased incomes at household level led to regular school attendance for children, improved ability to meet medical and other expenses, increase in household savings, and reduced domestic strife. Discussions in focus groups discussions indicated that co-operation among community members, with the aim of improving their livelihoods, had notably improved. This is critical for the effective functioning of cost-recovery and the successful operation of market-led supply chains and delivery systems for farm inputs.

5.8 Critical Success Factors

The success of the project was facilitated by a number of factors, including

- 1.Relevance - The design of the project enabled it to respond to the actual needs and local priorities of farmers and communities in the area of implementation;
- 2.Positive relations with duty bearers - VSF-G maintained cordial working relationships and sustained collaboration with government line ministries, the state and local administration;
- 3.Learning approach - The project regularly reviewed its performance, drew lessons to inform implementation and made changes necessary to ensure the objectives were achieved and outcomes attained;
- 4.VSF-G history - VSF-G has a long history of working in South Sudan and in the Warrap state and has an excellent organizational grasp of the context at national, state and county level;
- 5.Strong relationship with EU - VSF-G has a strong, long-standing and excellent working relationship with EU who contributed regularly and positively with technical advice and assistance as necessary to support project implementation; and
- 6.Strong participation of local NGO - The strong participation of SEDA, a local NGO, in the consortium strengthened local ownership of the project and facilitated an efficient appreciation of the local socio-cultural landscape. There was internal and external coherence between FEDIS and other food security and livelihoods projects implemented by VSFG. FEDIS project is part of the ZEAT-BEAD project, which provides a platform for knowledge sharing with NPA, VSF Suisse and HARD. Coherence was also noted with HARD in peace initiatives along the state border areas as well as with FAO in provision of livestock vaccines. This coherence has the potential to further strengthen impacts.

6.0 RECOMMENDATIONS

- A. Although FEDIS made some efforts towards cultivating market linkages, there was still tremendous scope for further development which it is recommended that future programming should pursue. Opportunities for further early results include dry season vegetable farming, delivery of veterinary products at affordable prices and improved linkages in supply and value-chains around the agro-vets.
- B. The introduction of cost-recovery basis for supply of farm inputs should be strengthened. However, to be successful, such changes will require extensive consultation and discussion with farmers and local leaders to reach a common understanding.
- C. Strengthen Engagement with local government authorities- stronger engagement with local authorities should be done on a continual basis to promote project buy-in of new innovative practises such as the maresha particularly in Gogrial East County. Platforms such as quarterly update meetings could be a useful vehicle for early feedback and adjustment of approaches were necessary.
- D. Peace committees- the establishment of Boma peace committees were instrumental in local level resolution at the smallest administrative unit. Where possible this should be replicated through linkages with committees in other states for harmonisation of approaches
- E. Strengthen documentation of impacts- FEDIS had a lot of impacts as a result of its interventions but these were not adequately captured for example the successes gained through the introduction of improved livestock breeds and how this has been embraced and adopted by non-beneficiary community members. An impact assessment would have adequately captured all relevant sections that may not have been captured by the interim reports.
- F. Crisis modifier- the operational context of South Sudan remained very complex due to political, climatic and pandemic influences. Any future projects should include the crisis modifier budget component inorder to better cushion beneficiaries in case of unforeseen events
- G. Although FEDIS made some efforts towards cultivating market linkages, there was still tremendous scope for further development which it is recommended future or successor interventions should pursue. Some of the opportunities for doing so are as follows:

The integrated WASH component of the project was noted to have multiple good impacts in providing water for multiple uses - domestic use, livestock and dry season vegetable farming. It is recommended that this could be scaled up and replicated in other projects. However, as more and more farmers adopt the activity as an economic enterprise, there's a likelihood of vegetable glut in the market hence to urgent need to tie the activity to market linkage and inclusive finance.

Some of the veterinary products, due to market inefficiencies, were too costly for local farmers to sustainably access. It is, therefore, recommended that the agro-vet store operators be linked with other key actors along the value chain so as to make the veterinary drugs better priced and more affordable to the farmers.

REFERENCES

- FEDIS-Logframe
- FEDIS YEAR 1& 2 INTERIM REPORT
- FEDIS Final Narrative and Financial Reports
- FEDIS Project Proposal
- FEDIS Project Budget
- Communication and Visibility plan
- Community Intervention Information System-South Sudan-CIIS (online)
- EU TA Monitoring Reports (3)
- FEDIS Sitrep and Beneficiary Database
- FEDIS case studies and success stories

Appendices:

Appendix 1: Terms of Reference



End-term Evaluation
ToR

Appendix 2: Evaluators



Upward Bound
Company Limited



Munaweza Muleji



Bernard Nthiwa Mulei

Appendix 3: Evaluation method and tools



Evaluation method
and tools

Appendix 4: Logical framework



Updated
Logframe-Dec 2021.c

Appendix 5: Map of project area

Appendix 7: Literature and documentation consulted



Literature and
documentation consulted

Appendix 8: Stories of change



Story 1- Improved
Poultry Breed



Story 2 - Hand Dug
Well



Story 3 -
Diversification of Income



Story 4 - Impact of
VSLA



Story 5 - Community
Banks



Story 6 - Dry Season
Farming



Story 7 - Household
Health and Relationships

Appendix 9: Picture gallery



Picture Gallery