

Project Evaluation Series

06/2022

**Terminal evaluation of the project
“Rehabilitation of Degraded Agricultural
Lands in Kandy, Badulla and Nuwara Eliya
Districts in the Central Highlands”**

**Project codes: GCP/SRL/063/GFF and
GEF ID: 5677**

Abstract

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Abbreviations and acronyms

FAO	Food and Agriculture Organization of the United Nations
FFS	Farmer field school
GAP	Good agricultural practice
GEF	Global Environment Facility
IFAD	International Fund for Agricultural Development
LADA	Land Degradation Assessment in Drylands
LUPPD	Land Use Policy Planning Department
M&E	Monitoring and evaluation
MTR	Mid-term review
NAP	National Action Programme
NRMC	Natural Resources Management Centre
PED	Payment ecosystem service
PLUDP	Participatory Land Use Development Plan
RDAL	Rehabilitation of Degraded Agricultural Lands
SDG	Sustainable Development Goals
SDG	Sustainable Development Goals
SLM	Sustainable land management
SRICAT	Sri Lanka Overview of Conservation Approaches and Technologies
TSHDA	Tea Small Holdings Development Authority
UNCCD	United Nations Convention to Combat Desertification

Executive summary

Introduction

1. The Rehabilitation of Degraded Agricultural Lands (RDAL) project was a joint effort of the Government of Sri Lanka, the Food and Agriculture Organization of the United Nations (FAO) and the Global Environment Facility (GEF). The project aimed to increase the provision of ecosystem goods and services and enhance food security through the promotion of sustainable land management (SLM) in the Central Highlands of Sri Lanka. GEF granted USD 1 344 657 to this project, while co-financing was committed (in-kind) from the Government of Sri Lanka for a total of USD 9,740 000, and FAO for a total of USD 120 000, accounting for a total budget of USD 11.2 million.
2. The FAO Office of Evaluation (OED) carried out the terminal evaluation of the project, with the purpose of promoting i) accountability to GEF; and ii) learning, feedback and sharing of results and lessons learned among GEF and its partners. The evaluation covered the design and implementation of the project (from 1 July 2016 to 31 December 2021), with a special focus on the post mid-term review (MTR) period (August 2019 onwards).
3. The terminal evaluation assessed project results and their value, the extent and magnitude of project outcomes to date, and the likelihood of future impacts, as well as the project performance and the implementation of planned activities and outputs against actual results. Lessons learned that may help in the design and implementation of future initiatives were collected and recommendations formulated to inform expansion, mainstreaming, scaling up and dissemination of project results, benefits and knowledge. Among the intended users of this evaluation there are GEF, FAO, the Government of Sri Lanka and other project partners.

Methodology and limitations

4. A participatory and consultative approach was used, including one-on-one meetings, focus group discussions (FGDs) and field visits to triangulate data. In addition to secondary data review through project-produced analysis, studies, assessments and other documents, the evaluation team interviewed a range of stakeholders including FAO, GEF, executing partner, selected partners (58 individual interviews) and direct beneficiaries (159 participants in FGDs) in several field locations across the three districts where the project was implemented. Evaluation criteria established by GEF and FAO were applied: relevance, effectiveness, efficiency, sustainability, monitoring and evaluation, and stakeholder engagement. Each criterion was rated on a six-point scale from highly satisfactory to highly unsatisfactory. Other dimensions evaluated were environmental and social safeguards, gender, co-financing, progress to impact, and knowledge management.
5. Limited baseline and end line data meant that results and change for some indicators could not be verified. The terminal evaluation took into consideration that the project implementation was significantly hampered by COVID-19 related lockdowns, restrictions on inter-district, interprovincial travel and meetings/gatherings.

Main findings

Unplanned/unexpected findings

6. **Models demonstrated by the project are being spontaneously disseminated and are generating demand for replication.** There was a growing demand from farmers and

agriculture extension services to expand demonstrated models for tea smallholding productivity improvement, seed potato production and good agricultural practice (GAP)-certified vegetables.

7. **Strengthened and invigorated government extension services.** Where the project was implemented, the agriculture and agrarian field extension services have benefitted tremendously from the project's approach and the training approach of farmer field schools (FFS), and more recently by delivering extension services and advice remotely through WhatsApp groups.
8. The introduction of digital learning media and WhatsApp as a coordination tool (introduced to adapt to the COVID-19 pandemic) has transformed the delivery of technology and knowledge: farmers, officials and even private sector were surprised and pleased with the way the digital communication media had transformed the extension and outreach provided by the project, and provided a platform on which the farmer groups networked and shared information with each other.
9. **The public-private partnership (PPP) model for private sector engagement has enabled new technology adoption and opened new markets for agricultural products.** The GAP vegetable model with Cargills has resulted in farmers adopting new and innovative technology that would not have been possible if not for the seamless support provided by the different partners to the project.
10. **Participatory Land Use Development Plans (PLUDP) have provided a national model for village level resource planning and a common coordination 'point' for village and divisional land use planning.** The PLUDP process, both in terms of development and implementation has provided a very viable platform for coordination of government stakeholders at village and divisional levels.
11. Overall, the project is rated as satisfactory.

Relevance

12. The project's overall design was technically sound, but there were several ground realities that were not fully considered during project design, including limited resources and the vast geographical coverage, resulting in 'overambitious' design and attempting to deliver too many outputs with limited resources. This led to loss of time and diversion of energies of the small project team during the critical first few years of implementation.
13. The overall strategic relevance of this project is high. The project is well aligned with the national development priorities in agriculture and watershed management, with the United Nations Sustainable Development Framework (UNSDF) for Sri Lanka and with various Sustainable Development Goals (SDGs), and remains relevant to the GEF programme strategies. SLM models developed and disseminated by the project are well received by stakeholders at different levels. Project relevance also promoted collaboration with other related projects (e.g. the International Fund for Agricultural Development, IFAD) and private sector.
14. The project has also been highly beneficial to the communities and government officers alike. The project's pilots demonstrated agricultural approaches that were highly relevant to national and regional policy targets.

Effectiveness

15. Through the four interconnected outcomes, the project sought to address several root causes for the continued and increased erosion and soil degradation in Sri Lanka's Central Highlands. Some significant outcomes were not as envisioned at design stage. Market-based incentives and technologies that save water, prevent soil loss and were more resilient to climate change made the project's SLM pilot very relevant to farmers and extension services, many of these having been co-created with government and farmers to respond to immediate needs of farmers and officials – namely, enhanced productivity and reduced chemical inputs.
16. Outcome 1 (enabling environment for institutional mainstreaming SLM) supported the institutionalizing of the participatory land use planning approach as one of the biggest achievements of the project. However, the mainstreaming of SLM into other related policies and strategies, informed through the ground implementation, was not as successful as envisaged.
17. Through Outcome 2 (demonstrate appropriate technologies for rehabilitation of degraded lands and scale up by strengthened extension networks), the project supported the implementation of Participatory Land Use Development Plans in nine mini/micro-watersheds and divisional secretariat-level development services. This included SLM pilots, farmer field schools, demonstration plots and demonstration sites. There are some positive signs of integration of the SLM models and best practices into the government's agriculture extension delivery. FFS and WhatsApp-based coordination among farmers and extension services have been formalized and accepted by the provincial agriculture services and the Department of Agrarian Development, and the Tea Small Holdings Development Authority (TSHDA).
18. Outcome 3 (develop and test out innovative funding stream for options such as from payment for ecosystem services [PES], agro-tourism, etc.). The lack of technical guidance and oversight for this component has led to ad hoc solutions, rather than a cohesive long-term strategic approach to innovative financing.
19. For Outcome 4, see section on knowledge management.

Efficiency

20. The project has demonstrated that SLM models are cost-effective, considering spontaneous scale-up of actions. The project's cost effectiveness was assessed in several ways and considering both direct and indirect results/benefits. The project had a late start and encountered some significant delays setting up the project management unit and in field implementation. Project management has been able to adapt to changing circumstances and overcome serious challenges (including COVID-19) to satisfactorily complete the project within the extension period. The project has concluded all major planned activities by the end of 2021, despite the slow field delivery up to mid-2018; dashboards showed over 97 percent financial delivery by the end of 2021.
21. Project team received high quality technical advisory support from the Lead Technical Officer and guidance from Funding Liaison Officer and FAO Country Office. But the lack of dedicated technical advisory support, and the project team's dependence on a few international and national experts on piecemeal basis, meant that key outputs would not be delivered in a coordinated manner.

Sustainability

22. Overall, the project has had a satisfactory catalytic effect on several Government of Sri Lanka initiatives for SLM and agricultural productivity, therefore project pilots are likely to continue beyond the end of the project. The project has provided strong impetus for the Government's drive towards sustainable, chemical-free agriculture, and demonstrated strong public-private partnership models which could be leveraged in the future. Tools and methods utilized to deliver the SLM models – such as farmer field schools, digital training material (videos, graphics) and digital platforms for training (zoom and WhatsApp) – have transformed the agriculture extension experience in these districts (and by extension, the provinces).

Progress to impact

23. Likelihood of impact from the project outputs and outcomes is rated satisfactory considering that:
- i. the project has strengthened and capacitated extension services in the three districts and facilitated their role for technology transfer and dissemination. The availability of digitalized and easy-to-access information and advisory services has improved the effectiveness of the service (video, zoom lectures, WhatsApp groups, etc.), and farmers have been unusually responsive to the digital training format and have adopted technology more readily than anticipated;
 - ii. efficiency and 'reachability' of the extension services and field officers has built more trust in the government system and farmers are more likely to adopt advisories;
 - iii. connection through WhatsApp groups empowers farmers. Farmers have access to the highest levels of the agriculture service network in the region (province) and can learn from each other. This created competition among beneficiaries to perform better and more effectively, improving the adoption rates of certain best practices.
24. The project's SLM pilots have demonstrated positive results that enhance food security in the Central Highlands. The pilots have demonstrated positive changes in ecosystem services for water and soil fertility. The project did not set out to demonstrate climate resilience, however many of the practices implemented in the field through the pilots have, in fact, supported resilience building at farm and watershed level.
25. The project has created an enabling environment to address the agriculture-based drivers of land degradation in the Central Highlands of Sri Lanka. These enabling conditions, when applied at scale can, arguably, support sector-wide transformation and address land degradation at a landscape level. However, the project period is too brief to evaluate the impacts from such (possible) scaling up.

Factors affecting project performance

Monitoring and evaluation and quality of execution

26. Functionality of monitoring and evaluation (M&E) system was below expectation and did not meet required standards. Project lacked a solid M&E plan with indicator definitions. There was no dedicated monitoring officer. Project team members that carried out M&E functions were also supporting other implementation tasks.

27. The project has adopted several recommendations made in the mid-term review in 2018. MTR recommendations required the project to redirect investments towards more successful models and demonstrations and improve private sector engagement. Some critical recommendations relating to project M&E were not adopted
28. Initial delays and setbacks in project start-up are well documented in the MTR. Additional setbacks during the first two years affected the quality and timeliness of project execution and compounded later by procedural delays relating to field execution and related payments, which have compromised the project timeline significantly. The execution agency could have moved quicker to resolve procedural issues.
29. The project team functioned under several constraints including lack of personnel to implement field activities in three districts in difficult terrain, and requiring different types of technical expertise. The project has managed implementation constraints adaptively and quite successfully in the field, but gaps in technical capacity are evident in the policy mainstreaming and innovative finance outputs.

Stakeholder engagement/Partnerships

30. The project built strong partnerships to deliver SLM models with government, other donors and with the private sector. These partnerships underscored the sustainability of project interventions and supported the RDAL project to capitalize on co-investments from both public and private initiatives.

Environmental and social safeguards

31. The project had no safeguards framework in design and in implementation, and there was no purposive targeting of vulnerable or marginalized communities or ethnic groups. The MTR had derived possible environmental threats that could be observed during implementation, but the evaluation team could not find evidence of such issues in the field. Environmental and social benefits were assessed positively at the end of the project.

Gender

32. The project design did not have a gender analysis or a gender action plan. However, the project has delivered strong gender results through implementation with a practical focus on activities that have enabled high rates of participation, access to knowledge, access to financing and increased social capital building amongst the female beneficiaries. The project has achieved considerable gender results but is not able to quantify them because of a lack of data.

Knowledge management (and Outcome 4)

33. A huge leg-up for outreach and communication occurred by leveraging WhatsApp for training and networking among beneficiary farmers and extension services. Devised to overcome COVID-19 related restrictions and meet delivery deadlines of the project, the use of WhatsApp as a grassroots communication and extension services tool has been one of the more lasting legacies of the project. Technical knowledge dissemination related to SLM pilots is above expectations but knowledge dissemination upwards to influence policy was weak. Knowledge management and upward integration into policies and strategies could have been addressed through stronger liaison with the United Nations Convention to Combat Desertification (UNCCD) National Action Programme (NAP) coordinating mechanism.

Co-finance

34. Co-financing reported by December 2021 exceeded the committed figure, but certain discrepancies need to be adjusted. Co-financing commitment should have factored in the contribution of beneficiary farmers who were required to pitch in with contributions of time and hard cash as co-contribution to each SLM pilot. This would increase co-finance contribution significantly.

Conclusions

Conclusion 1. The project remains highly relevant to Sri Lanka's national priorities and policies.

Conclusion 2. The project has managed to overcome early delays and COVID-19 related setbacks, demonstrating positive unintended outcomes while adapting to the pandemic restrictions.

Conclusion 3. Partial achievement of certain outcomes and outputs can hinder scaling up and policy influence.

Conclusion 4. Delivery could have been made more efficient by shorter process loops, faster decision-making and more delegation, especially in relation to field operations.

Conclusion 5. A geographical, land use-based site selection did not purposively target the vulnerable or women.

Conclusion 6. The project has generated positive gender results, and the majority of beneficiaries are women even if the project did not have a gender mainstreaming plan.

Conclusion 7. New and economically viable SLM models and partnerships were demonstrated through public-private partnerships.

Conclusion 8. Participatory M&E has not been successfully implemented.

Conclusion 9. Lateral dissemination of technology and peer-to-peer learning has been strengthened.

Conclusion 10. Participatory Land Use Development Plans targeting land degradation hotspots identified by the LADA assessment could form a coherent and evidence-based approach for future investments in SLM.

Recommendations

Recommendation 1. Strengthen role of the Steering Committee for effective policy and best practices mainstreaming (FAO and Government).

Recommendation 2. Develop a roadmap to use the LADA assessment to address the larger problem of land degradation in the Central Highlands (FAO and Ministry of Environment).

Recommendation 3. Projects trying to innovate conservation approaches beyond the traditional ones should receive dedicated, embedded technical advisory support (GEF project formulators).

Recommendation 4. The project should catalyse and showcase their knowledge management, training and outreach related innovations post COVID-19 (Project team, FAO and Ministry of Environment).

Recommendation 5. Long-term and innovative financing should be embedded into sustainable land use models in project and pilot design (GEF project formulators).

Recommendation 6. Use the capacities of local NGOs to improve delivery efficiency and leave behind local capacity (FAO and GEF project formulators).

Recommendation 7. Land use planning and development planning should not be disconnected (FAO, LUPPD and Ministry of Environment).

Recommendation 8. Extension and outreach approaches should be modernized in terms of processes, tools and material used, since farmers have shown a huge capacity to engage with technology (FAO and GEF project formulators).

Recommendation 9. Project monitoring should be better resourced with dedicated human resources and funding for impact indicator monitoring (FAO).

Recommendation 10. Integrate climate-smart agriculture recommendations to the different farmer field school modules to increase resilience building practices among farmers (FAO and GEF project formulators).

GEF criteria/sub-criteria	Rating ¹
A. STRATEGIC RELEVANCE	
A1. Overall strategic relevance	HS
A1.1. Alignment with GEF and FAO strategic priorities	HS
A1.2. Relevance to national, regional and global priorities and beneficiary needs	HS
A1.3. Complementarity with existing interventions	HS
B. EFFECTIVENESS	
B1. Overall assessment of project results	S
B1.1 Delivery of project outputs	MS
B1.2 Progress towards outcomes ² and project objectives	
Outcome 1	S
- Outcome 2	HS
- Outcome 3	MS
- Outcome 4	S
Overall rating of progress towards achieving objectives/ outcomes	S
B1.3 Likelihood of impact	S
C. EFFICIENCY	
C1. Efficiency ³	S
D. SUSTAINABILITY OF PROJECT OUTCOMES	
D1. Overall likelihood of risks to sustainability	Moderately likely
D1.1. Financial risks	Moderately likely
D1.2. Socio-political risks	Unlikely
D1.3. Institutional and governance risks	Moderately likely
D1.4. Environmental risks	Unlikely
D2. Catalysis and replication	S
E. FACTORS AFFECTING PERFORMANCE	
E1. Project design and readiness ⁴	MU
E2. Quality of project implementation	MS
E2.1 Quality of project implementation by FAO (BH, LTO, PTF, etc.)	MS

¹ See rating scheme at the end of the document.

² Assessment and ratings by individual outcomes may be undertaken if there is added value.

³ Includes cost efficiency and timeliness.

⁴ This refers to factors affecting the project's ability to start as expected, such as the presence of sufficient capacity among executing partners at project launch.

E2.1 Project oversight (PSC, project working group, etc.)	MS
E3. Quality of project execution For DEX projects	S
E4. Financial management and co-financing	S
E5. Project partnerships and stakeholder engagement	HS
E6. Communication, knowledge management and knowledge products	S
E7. Overall quality of M&E	MS
E7.1 M&E design	MUS
E7.2 M&E plan implementation (including financial and human resources)	MS
E8. Overall assessment of factors affecting performance	MS
F. CROSS-CUTTING CONCERNS	
F1. Gender and other equity dimensions	S
F2. Human rights issues/Indigenous Peoples	UA
F2. Environmental and social safeguards	HS
Overall project rating	S

1. Introduction

1. The project "Rehabilitation of Degraded Agricultural Lands (RDAL) in Kandy, Badulla and Nuwara Eliya Districts in the Central Highlands" (GCP/SRL/063/GFF, GEF ID: 5677) (hereafter "the project") was approved in January 2018. This was a joint effort of the Government of Sri Lanka, the Food and Agriculture Organization of the United Nations (FAO) and the Global Environment Facility (GEF). The project's main objective was to support the GoSL to increase the provision of ecosystem goods and services and enhance food security through the promotion of sustainable land management (SLM) in the Central Highlands of Sri Lanka.
2. This terminal evaluation was carried by the FAO Office of Evaluation (OED), following FAO and GEF evaluation guidelines. The terminal evaluation answered all the questions included in the terms of reference (TOR, Annex 1) and summarized in the evaluation matrix (Annex 2).

1.1 Purpose of the evaluation

3. The terminal evaluation assessed the relevance, effectiveness, efficiency, likelihood of impact and sustainability of project results, based on clear evidence and findings developed from the assortment of information and subsequent analysis to evaluate project performance, and to improve the future delivery of GEF projects. This evaluation covered the period from 1 July 2016 to 31 December 2021, with particular focus on the post mid-term review (MTR) period (August 2019 onwards). The terminal evaluation addressed the evaluation questions presented in brief below, which were structured to suit the specific context, results and objectives of the RDAL project.

1.1.1 Intended users

4. Intended users of this terminal evaluation report are the GEF Secretariat, the FAO Office of Evaluation (OED), Regional Bureau and Country Office in Sri Lanka for FAO and Government of Sri Lanka, especially the Ministry of Planning, Ministry of Environment, Department of Land Use Policy Planning, and Department of Agriculture.

1.1.2 Scope and objectives of the evaluation

5. The terminal evaluation assessed project results and their value to identified stakeholders in the country through the analysis of the inputs provided by the relevant actors for the project. The terminal evaluation looked at the relevance, effectiveness, efficiency of the project, sustainability of project results and the degree of achievement of long-term results (progress to impact). Mainstreaming gender in project interventions, impact to environmental services, and contribution to Sustainable Development Goal (SDG) outcomes and FAO country objectives were also assessed in the terminal evaluation. It also provides recommendations on the findings, and lessons learned from implementation to inform future project design and implementation.
6. The evaluation examined the extent and magnitude of project outcomes to date and determined the likelihood of future impacts. The terminal evaluation provides an assessment of the project performance and the implementation of planned activities and outputs against actual results; and synthesizes lessons learned that may help in the design and implementation of future FAO and FAO-GEF related initiatives, indicating future actions

needed to: i) expand on the existing project activities in subsequent phases; ii) mainstream and scale up its products and practices; and iii) disseminate information to management authorities responsible for related issues to ensure replication and continuity of the processes initiated by the project. The terminal evaluation collected all knowledge products produced by the project and, whenever possible, assessed their relevance, quality and outreach in advancing project objectives.

7. The evaluation responded to the following evaluation questions (see detailed evaluation matrix in Annex 2):

- i. Relevance: Was the project design appropriate for delivering the expected outcomes?
 - Was the project design congruent with the GEF and FAO Sri Lanka priorities, and coherent with SDG 15 and related SDGs?
 - Was the project relevant for the final beneficiaries?
- ii. Effectiveness: To what extent were the project environmental and development objectives and the planned outcomes achieved, and how effective was the project in achieving them?
 - Did the project produce any unintended/unexpected outcomes, either positive or negative?
 - Which and how have other factors and actors contributed to the results achieved?
- iii. Efficiency: To what extent has the project been implemented efficiently and cost-effectively?
- iv. Sustainability: What is the likelihood that the project results will continue to be useful or will remain even after the end of the project?
- v. Factors affecting performance: To what extent did FAO deliver on project identification and subsequent stages including oversight and supervision, and identification and management of risks?
 - To what extent did the expected co-financing materialize, and how did this affect project results?
 - To what extent are the project's results owned by the stakeholders involved?
 - Were the recommendations provided by the MTR implemented and which were the repercussions of the implementation (or lack of it) in the project implementation?
- vi. Cross-cutting issues: To what extent were gender and minority groups, and environmental and social issues considered in designing and implementing the project?
- vii. Progress to impact: To what extent is the project likely to contribute to the reverse and arrest land degradation in agricultural land, provision of ecosystem goods and services and enhance food security in Sri Lanka?
- viii. Lessons learned: Are there lessons learned from project implementation that have the potential to improve future actions by being broadly replicated or by being avoided?

1.2 Methodology

8. A participatory and consultative approach was used to conduct the terminal evaluation. In addition to secondary data review through project-produced analysis, studies, assessments and other documents, the evaluation team consulted the project team, representatives from FAO at headquarters, region and country, the GEF operational focal point (OFP) in Sri Lanka, the Ministry of Environment as the executing partner and selected partners involved

in design and implementation of the project to provide inputs to the design of evaluation questions during the inception phase. Data collection was planned in close cooperation and coordination with the project team, implementing partners, other stakeholders and direct beneficiaries in several field locations across the three districts.

9. When analysing and presenting the data collected in this report, evaluation questions have been clustered together to form coherent findings and to avoid overlaps and repetition. In addition, for better logic, certain evaluation questions may have been responded on different order than the original.

1.2.1 Data collection

10. The evaluation team reviewed a comprehensive package of documents on project progress, monitoring and evaluation (M&E) documents, consultancy reports, publications and knowledge products produced by the project, mid-term review reports, gender analysis reports, workshop reports and websites designed and developed by the project. Data collection tools were developed to address the evaluation questions targeting all project stakeholders. Gender and cross-cutting themes were taken into consideration in developing the tools. Semi-structured interviews guides were developed for data collection from key informants and focus group discussion (FGD) guide developed for beneficiary groups targeting farmers, community-based organizations and government officials.
11. Secondary data collected from literature reviews, project reports and documents were summarized based on the thematic areas of the evaluation matrix. The primary qualitative data collected from key informant interviews and focus group discussions were compiled to the response matrix. Secondary quantitative data was collected from reports, assessments and documents. Qualitative data collected were analysed based on the content and based on the thematic analysis. The findings were triangulated to reach ratings, conclusions and recommendations.

1.2.2 Site selection and sampling

12. The project covered territories in the districts of Kandy, Badulla and Nuwara Eliya. Purposeful sampling was applied to select sites that could be representative of different field approaches – farmer field schools (FFS), public-private partnerships (PPPs), good agricultural practices (GAP), Participatory Land Use Plan (PLUP) – implemented by the project. The selected sites from each district and divisions are listed below.

Table 1. Selected sites for field visits with focus group discussions

Secretariat Division	Village Location /	Farmer field schools conducted on				PLUP implemented	Technical package provided for SLM	PPP model executed	Executed diary integration model	Economic home gardens
		Seed Potato	Home Gardens	GAP	Tea					
Bandarawela	Watagamuwa		1			1				
Bandarawela	Bandarawela			1			1	1		
Walimada	Dambugas agala					1				
Walimada	Thennakonwela	1								

Haguranketha	Haguranketha			1			1	1		
Walapane	Nelugaha			1			1			
Doluwa	Pabadeniya		1		1	1		1	1	1

Source: Elaborated by the evaluation team.

13. The evaluation team conducted field missions to selected sites in Kandy, Badulla and Nuwara Eliya Districts where the project has its interventions. Field data collection was completed from late October to mid-November 2021, which provided opportunity for on-site validation of key tangible outputs and interventions, observational visits, focus group discussions and key informant interviews with stakeholders.
14. In total, 58 people were interviewed individually, and additional 159 people participated in focus group discussions. Key informants were selected based on: i) involved project development; ii) stakeholders involved in implementation/co-management; iii) member of Steering Committee, Project Task Force and Technical Coordinating Committees (TCC) of the project. At local level, key informants were selected based on: i) involved in execution of interventions /co-management; ii) being a beneficiary; iii) involved or engaged as partner for project interventions (private sector partners). List of stakeholders interviewed can be found in Appendix 1. Most of the interviews were conducted in person, but some were conducted over the phone or using web-based applications due to COVID-19 related travel limitations or time limitations.

1.3 Limitations

15. The evaluation team abided by COVID-19 guidelines in the entire evaluation process. The Government of Sri Lanka lifted travel restrictions between districts and provinces in early October; however, restrictions on meeting size and other social distancing rules applied. Therefore, the evaluation team was able to travel to the field locations but had to conduct smaller, separate meetings to overcome the restriction on meeting size. Masks and hand washing rules were applied at every meeting. Abiding by the health guidelines, the evaluation team managed to visit many field locations and conduct focused group discussions with key beneficiaries. Meetings in Colombo were also restricted to one or two key informants at a given time. A few interviews were conducted remotely through over the phone or using digital platforms.
16. Limited baseline and end line data meant that results and change for some indicators could not be verified. Such data is critical to compare the achieved results and changed to the baseline due to project interventions. The project has not consistently measured the indicators relating to soil loss on agricultural lands (target reduction by 10 percent) and improvement in soil productivity.

1.4 Structure of the report

17. Following this introduction, section 2 provides the background and context of the project. Section 3 presents the main findings. Some evaluation questions under these main themes have been grouped together for better clarity of presentation and to avoid duplication of findings. Section 4 focuses on gender and safeguards, followed by conclusions and recommendations in section 5, and lessons learned in section 6. The report is also accompanied by the following appendices:
 - i. Appendix 1. People interviewed

- ii. Appendix 2. GEF evaluation criteria rating table
- iii. Appendix 3. Rating scheme
- iv. Appendix 4. Results matrix
- v. Appendix 5. Case stories of SLM models

2. Background and context of the project

Box 1. Basic project information

- GEF Project ID Number: 5677
- Recipient country: Sri Lanka
- Implementing Agency: FAO
- Executing Agency: Ministry of Environment
- GEF Focal Area: Land Degradation
- GEF Strategy/operational programme: SO2: Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner. Organizational Outcomes 1 and 2.
- GEF Strategic Objectives: LD-1. Maintain or improve flow of agroecosystem services to sustaining the livelihoods of local communities. LD-3. Reduce pressures on natural resources from competing land uses in the wider landscape.
- PIF approved: January 28, 2014
- Date of CEO endorsement: 1 April 2015
- Date of PPRC endorsement: 26 October 2015
- Date of project start: 1 July 2016
- Execution Agreement signed:
- Execution Agreement amended:
- Initial date of project completion (original NTE): 30 June 2020
- Revised project implementation end date: 31 December 2021
- Date of Mid-Term Evaluation: 15 July to 30 August 2019

2.1 General context of the project

18. Sri Lanka is a relatively small island nation in the Indian Ocean. Measuring 65 610 square kilometres, it is divided into five topographical regions based on elevation and salient landforms. These regions are: i) the Central Highlands; ii) the Southwest Lowlands; iii) the East and Southeast Lowlands; iv) the Northern and North-Central Lowlands; and v) the coastal fringe. The country is characterized by a hot and humid climate year-round and a seasonal distribution of rainfall around the monsoons, creating four distinct rainfall seasons. The south-western region or Wet Zone experiences a well distributed rainfall throughout the year with short dry spells between monsoon periods, and the Dry Zone (mainly the lowlands in the south-east, north and north-centre) experiences a distinct bimodal rain pattern with two dry periods from February to March and May to September.
19. Sri Lanka's population is over 21.8 million and the population density is high for a country of its size. Over the past decade, following the country's 26-year internal conflict in 2009, the country's performance on growth and poverty reduction has been remarkable, positioning Sri Lanka as a lower-middle-income country with a gross domestic product (GDP) per capita of USD 3 852 (2019). The economy grew at an average 5.3 percent during the period 2010–2019, even though growth slowed down in the last few years due to many factors, including the 2019 terrorist attacks on Easter Sunday, and the COVID-19 pandemic in 2020 onwards. Sri Lanka's economy is moving from a predominantly rural-based economy towards a more urbanized economy oriented around manufacturing and services. The country's economy is dominated by services sector (57 percent) and industrial sector (24 percent), with agriculture contributing to around 13 percent to annual GDP. Extreme

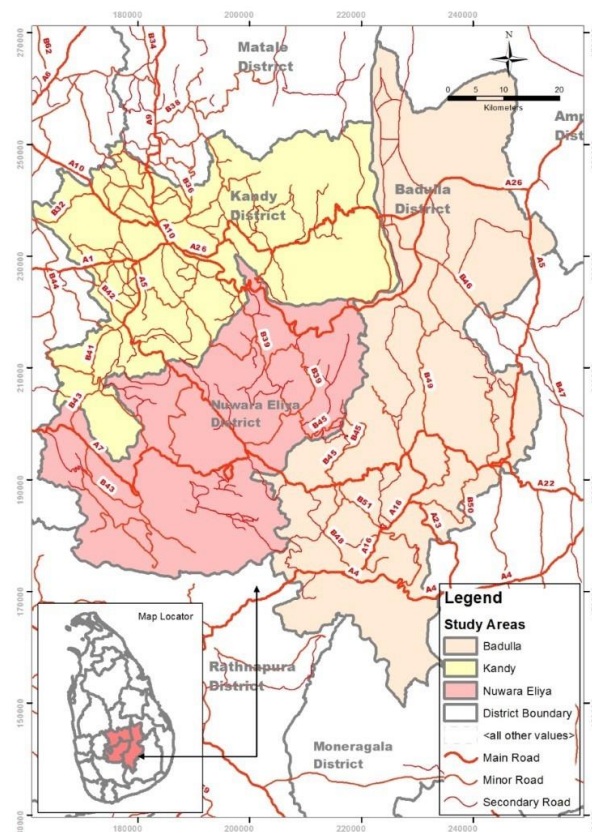
poverty is not typical, but it can cluster in some areas; however, a relatively large part of the population subsists on slightly more than the poverty line.⁵

20. The "Agriculture Sector" in Sri Lanka comprises: i) agriculture, livestock and forestry; and ii) fishing. Performance in the sector is vital as it directly accounts for over one-third of the national workforce, and in rural districts for half the workforce. Most agriculture holdings in Sri Lanka consist of smallholdings less than one hectare. However, agriculture is strongly dependent on seasonal rainfall and agroecological zones. There are two distinct monsoon periods associated with cultivation seasons: *Maha* (major) season from September to March (well distributed in the island; two-thirds of all crops are produced during this season), and *Yala* (minor) season from May to end of August (agriculture is mostly dependent on irrigation during this season).
21. There is a strong link between poverty and food insecurity and vulnerability of rural poor, 90 percent of whom are agriculture dependent. This makes it crucial to enhance agricultural productivity, income diversification and economic growth in rural areas. According to the food security assessment report of the Ministry of Economic Development, Hector Kobbekaduwa Agrarian Research and Training Institute (HARTI) and World Food Programme (WFP) (2011), 12 percent of the population in Northern, Eastern and North Central Provinces are severely food insecure and vulnerable to economic and political shocks, natural disasters or any other adverse event with impacts on food security.
22. Climate and climate change. Rainfall variability has increased significantly during recent decades, especially with respect to the north-eastern monsoon. Therefore, both extremes – water scarcity and excess water – have become recurrent problems endured by crop production in the country. Consequences of high temperatures (above 35°C) in crop production are becoming more common and visible, particularly impacting on rice production, the country's major food crop.
23. Several climate change scenarios have been modelled to predict climate trends in the country. The average annual rainfall by 2050 is predicted to increase by 5 percent to 14 percent (for different scenarios), according to the Intergovernmental Panel on Climate Change (IPCC) Special Report on Emissions Scenarios (SRES) respectively across the country, especially in the wet zone. During the southwest monsoon from May to September, rainfall across the country is predicted to increase up to 30 percent and southwestern regions, such as Nuwara Eliya District in the Central Highlands, will experience increases in rainfall, which subsequently will increase the risk for flooding and landslides. What has been more common, however, is the increase in the intensity of rainfall during monsoons or inter-monsoons.
24. Likewise, the average annual temperature is predicted to fluctuate between 1.2°C and 1.6°C. Higher temperatures will lead to increased evapotranspiration and increase the risk for soil moisture deficits that can lead to serious problems in agricultural activities. Lastly, climate change impacts are expected to exacerbate Sri Lanka's severe land degradation problems.

⁵ National statistics on the gender dimensions of poverty are not available.

25. The Central Highlands are an important area in Sri Lanka. With a total extension of about 1.1 million ha, the Central Highlands represent 16 percent of the total land area of the country. This area generates important ecosystem services for the country, for instance provisioning of water for downstream areas of the island, provision of critical habitats for biodiversity, including agrobiodiversity, food production and its contribution to the national economy, along with the high poverty level of the people living in these districts.

Figure 1. Location of the Central Highlands and the Districts of Kandy, Nuwara Eliya and Badulla



Source: Project document.

26. However, the area suffers from land degradation and related issues. Soil erosion and soil fertility decline are the two key land degradation issues distinguished in the Central Highlands. Other important issues include acidification, crusting and sealing, compaction and pollution. Because of this, nearly 50 percent of agricultural lands in the Central Highlands have been degraded. Land degradation has been threatening the ability of agro-ecosystems in the area to provide environmental benefits and to sustain economic activities and livelihoods of people depending on ecosystem goods and services. Severe erosion takes place on sloping lands under market gardens (vegetables and potatoes), tobacco, poorly managed seedling tea and chena (seasonal slash and burn) cultivation.
27. The main indirect drivers of land degradation in the Central Highlands can be summarized as lack of awareness on land degradation, high demand for agricultural land due to the lack of alternative income generating opportunities in other sectors in rural areas, insecurity of tenure, policy failures, including insufficient government commitment to mitigate land degradation, and lack of a government mechanism to provide incentives for SLM,

inadequate capacity of government organizations to implement a systematic programme on conservation and drought, and uncertain rainfall.

2.2 Description of the project, project objectives and components

28. The project "Rehabilitation of Degraded Agricultural Lands (RDAL) in Kandy, Badulla and Nuwara Eliya Districts in the Central Highlands" (GCP/SRL/063/GFF) was designed to tackle the above-mentioned challenges by targeting three key districts located in the Central Highlands, namely Kandy, Nuwara Eliya and Badulla, covering an area of approximately 579 384 ha (**Error! Reference source not found.**), with the objective of increasing the provision of ecosystem goods and services and enhance food security through the promotion of SLM.
29. The initiative was conceptualized under the GEF's fifth cycle of funding under the land degradation (LD) focal area. The GEF granted USD 1 344 657 to this project while co-financing was committed (in-kind) from the Government of Sri Lanka (USD 9 740 000) and FAO (USD 120 000) equalling a total budget of USD 11.2 million.
30. The project was overseen by a Project Coordination Committee (PCC) consisting of FAO Country Office and the Ministry of Environment. It was initially set-up as a four-year programme to run from July 2016 to June 2020. It was launched on 27 October 2016 with the inception workshop; field activities began in November 2017. The estimated end date was initially revised to June 2021. Movement restriction or lockdown measures to contain the COVID-19 pandemic in Sri Lanka, which resulted in suspension of field activities, further pushed the project's end date to 30 September 2021 and then to 31 December 2021.
31. The Project's Environmental Objective is to reverse and arrest land degradation in agricultural lands in Kandy, Nuwara Eliya and Badulla Districts in the Central Highlands of Sri Lanka. The Project's Development Objective is to increase the provision of ecosystem goods and services and enhance food security in the Central Highlands of Sri Lanka through the promotion of SLM. The project was designed to build on the existing institutional and regulatory frameworks in Sri Lanka, as well as on a series of field programmes and activities currently underway. GEF incremental support by component consisted of:
 - i. Component 1: Strengthening institutional, policy and regulatory frameworks for SLM.
 - ii. Component 2: Implementation of identified SLM and land restoration technologies.
 - iii. Component 3: Support to development and implementation of innovative funding systems to promote SLM.
 - iv. Component 4: Knowledge management, awareness raising and dissemination of best practices.
32. In correspondence with the components, four Outcomes and associated Outputs were designed to achieve the Project Objective:
 - i. Outcome 1: Enabling institutional policy and regulatory frameworks for SLM established and operational in accordance with Participatory Land Use Development (PLUD) principles.

- ii. Outcome 2: Appropriate technologies for rehabilitation of degraded lands demonstrated and scaled up by strengthened networks of training and extension institution.
- iii. Outcome 3: Capacity of developing innovative funding mechanisms established in both public and private sector.
- iv. Outcome 4: Enhanced national knowledge base for sustainable land management and project implementation based on adaptive results-based management.

33. The four components, outputs and key activities are listed below.

Table 2. Project overview- Outcomes and key outputs at end of project

<p>Outcome 1: Enabling institutional policy and regulatory frameworks for SLM established and operational in accordance with Participatory Land Use Development (PLUD) principles</p>	<p>1.1 Tested out Participatory Land Use Development Planning (PLUDP) approach in selected watersheds and developed generic guidelines for Land Use Policy Planning Department (LUPPD) to be adopted countrywide. These PLUDP guidelines has been consultatively developed and agreed among relevant stakeholder agencies. Divisional level land use planning guidelines have been updated based on this experience.</p> <p>1.2 Policy review for sustainable land management (SLM) conducted. The policy review focused on six sectoral areas where SLM standards could be fully integrated to existing policies and strategies.</p> <p>1.3 Policy dialog platform was created as a strategy to implement recommendations. As a result, field survey was conducted to study the potentials in promoting effective use of fertilizer.</p> <p>1.4 The information and communication technology (ICT) based information-sharing platform (SRICAT, 2019) was established following the modality of the World Overview of Conservation Approaches and Technologies (WOCAT). National level awareness campaign was conducted to introduce the platform.</p> <p>1.5 Land degradation assessment was completed and degradation map was prepared for all three districts.</p>
<p>Outcome 2: Appropriate technologies for rehabilitation of degraded lands demonstrated and scaled up by strengthened networks of training and extension institutions</p>	<p>2.1 Demonstration sites, pilots established to showcase sustainable land management and good agricultural practices (GAP) on marginal tea lands, highland vegetable cultivation, poorly managed home gardens, seed potato production, dairy farming, etc.</p> <p>2.2 Supported developing of 53 PLUPs. Using the experience LUPPD has developed additional 58 plans using other source of funds, reaching the total of 111 PLUPs.</p> <p>2.3 Farmer field school (FFS) training modules designed to support specific SLM models – GAP vegetables, hill country home gardens, improving marginal tea, seed potato and converting vegetable plots into smallholder tea lands, etc.</p> <p>2.4 Training of trainers to implement FFS programmes, trained farmers including young men and women.</p>
<p>Outcome 3: Capacity of developing innovative funding mechanisms established in both public and private sector</p>	<p>3.1 Developed guidelines for innovative financing for SLM.</p> <p>3.2 Workshops organized to conduct training of trainers including public officials and private sector on these guidelines.</p> <p>3.3 Workshops organized to create awareness on the innovative financing models.</p> <p>3.4 Financing partnerships developed with the private sector. Three new projects funded by innovative funding under public-private partnerships.</p>

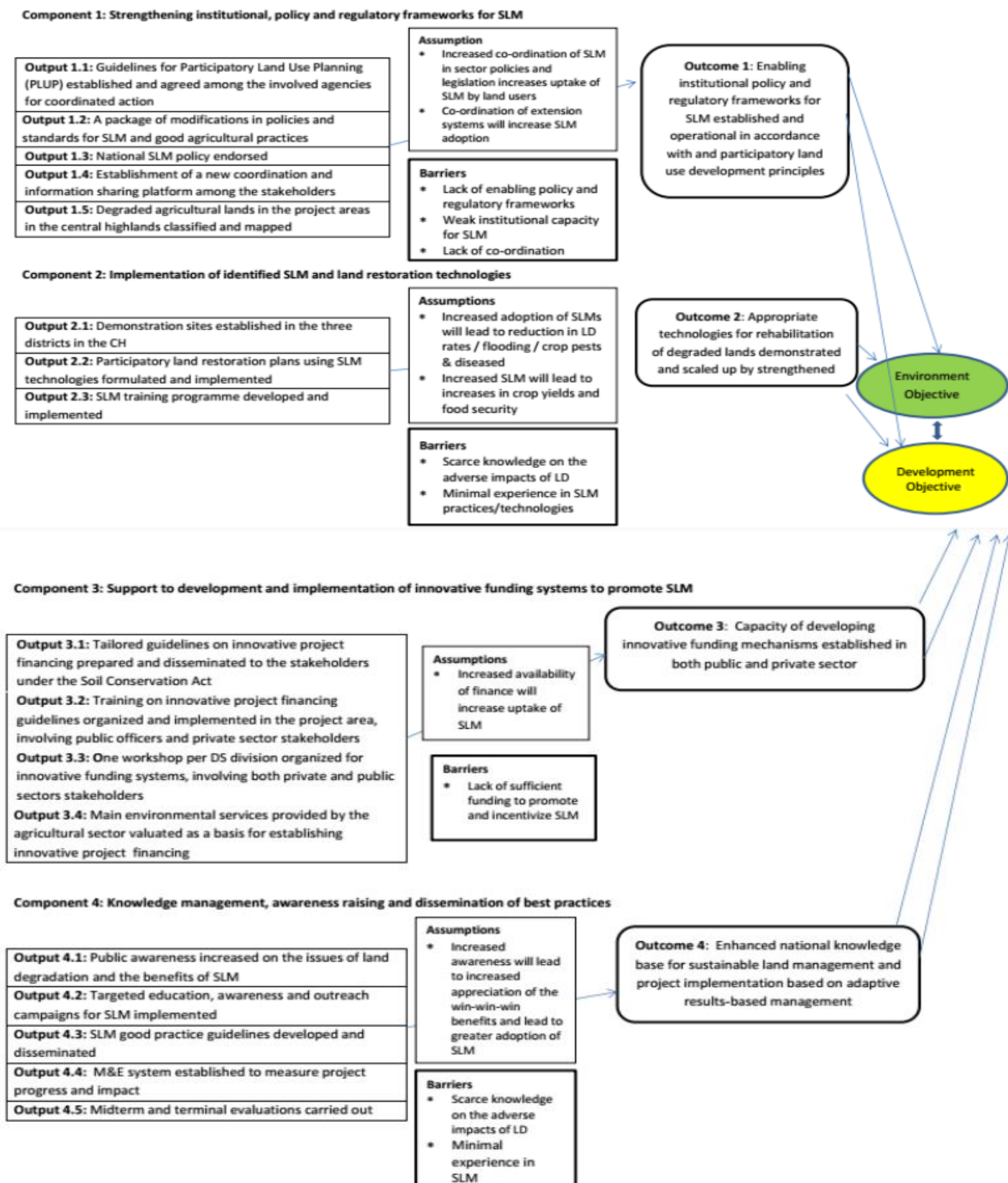
<p>Outcome 4: Enhanced national knowledge base for sustainable land management and project implementation based on adaptive results-based management</p>	<p>4.1 Produced project newsletters and organized outreach events. Develop technical leaflets on SLM best practices in the pilot demonstrations developed and published. Media campaigns on print and electronic media carried out to popularize the successful SLM pilots.</p> <p>4.2 SLM information platform designed and to be hosted by the University of Peradeniya.</p> <p>4.3 Drafting of SLM guidelines, finalization of SLM guidelines.</p> <p>4.4 System in place for annual M&E of SLM indicators, conducting annual monitoring and reporting.</p>
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Source: Elaborated by the evaluation team.

2.3 Theory of change

34. The theory of change (TOC) was developed with the mid-term evaluation of the project. In the TOC analysis, it was found that each outcome directly addresses a corresponding root cause identified in the design phase – e.g. root cause: Lack or inadequate policies for SLM – Outcome: Enabling institutional policy and regulatory frameworks for SLM established and operational in accordance with Participatory Land Use Development principles. The terminal evaluation team validated the assumptions, and the comments are incorporated in Table 3. The evaluation team also considered the causality of enabling condition to each outcome and assumption in the evaluation process.

Figure 2. Theory of change of RDAL Project



Source: RDAL Project. 2019b. Mid Term Review Report, Rehabilitation of Degraded Agricultural Lands in Kandy, Badulla and Nuwara Eliya Districts in the Central Highlands.

Table 3. Validation of the theory of change of RDAL project

Project's ultimate Objectives	Environmental objective: To reverse and arrest land degradation in agricultural lands in Kandy, Nuwara Eliya and Badulla Districts in the Central Highlands of Sri Lanka. Project development objective: To increase the provision of ecosystem goods and services and enhance food security in the Central Highlands of Sri Lanka through the promotion of SLM.		
GEF 5 Strategic Objectives	LD-1. Maintain or improve flow of agroecosystem services to sustaining the livelihoods of local communities.. LD-3. Reduce pressures on natural resources from competing land uses in the wider landscapes.		
	Pre-condition	Assumption	Comments from the evaluation team
Outcome 1: Enabling institutional policy and regulatory frameworks for SLM established and operational in accordance with Participatory Land Use Development (PLUD) principles.	Improve the enabling policy and regulatory frameworks for SLM. Improve the institutional capacity for SLM. Improve the coordination among institutions.	Increased coordination of SLM in policies and legislation increases uptake of SLM by land users. Coordination of extension systems will increase SLM adoption.	Project has influenced revisions to the land use policy and Soil Act triggering increased uptake of SLM. Efforts have been taken to mainstream the extension services (working together on a common plan/platform) through common approaches of PLUPs, FFS and demonstrations.
Outcome 2: Appropriate technologies for rehabilitation of degraded lands demonstrated and scaled up by strengthened networks of training and extension institutions.	Improve the knowledge of adverse impacts of land degradation (LD) Improve the experience on SLM practices/technologies	Increased adoption of SLMs will lead to reduction in LD rates/flooding/crop pest and diseases. Increased SLM will lead to increases in crop yields and food security.	Extension services have been provided with new capacity and knowledge. They are more committed and the trust between farmers and extension services is visibly stronger and more productive. The evaluation team witnessed that beneficiary farmers have improved knowledge and have adopted SLM practices which has reduced the LD rates. This has yet to be calculated by measuring of impact level indicators. The Impact assessment conducted by the project in November–December 2021 also verified that farmer awareness and knowledge has improved significantly in comparison to control of non-project farmers.. Increased SLM almost led to high yields and food security, e.g. beneficiaries of GAP programme, home gardens, etc
Outcome 3: Capacity of developing innovative funding mechanisms established in both public and private sector.	Improve sufficient funding to promote and incentivize SLM.	Increased availability of finance will increase uptake of SLM.	Public-private partnerships initiated through the project have produced significant benefits to farmers. They are convinced of the models and willing to invest in SLM practices.

<p>Outcome 4: Enhanced national knowledge base for sustainable land management and project implementation based on adaptive results-based management.</p>	<p>Improve the knowledge on adverse impacts on LD. Improve the experience in SLM.</p>	<p>Increased awareness will lead to increased application of the win-win benefits and lead to greater adoption of SLM.</p>	<p>Beneficiaries who were involved in implementation of Participatory Land Use Development Planning (PLUDPs), FFS and demonstrations have adopted SLM practices due to increased awareness. Lateral dissemination of SLM practices needs to be outreached through knowledge management platforms.</p>
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3. Main findings

Key Highlights

35. **1. Many models are being spontaneously disseminated and generating demand for replication.** The evaluation team observed that there was a growing demand from farmers and agriculture extension services to expand demonstrated models for tea smallholding productivity improvement, seed potato production and GAP-certified vegetables. These models make a very strong economic case for the farmer. Yields, product quality and profitability have all increased within one or two cultivating seasons. Farmers receive better prices for their products, such as in the case of GAP-certified vegetables for Cargills Supermarket Chain in Bandarawela, Walapane and Hanguranketha. Productivity improvements have been very strongly noted/observed in all these models, as well in other pilots aimed at improving home gardens, converting potato and vegetable fields into perennial tree cover and improved dairy farms. The replicability of these models/projects were observed in the field by i) demand from neighbouring farmers and farmer groups for the model (especially for tea and GAP and seed potato); ii) demand from agriculture and agrarian extension services to replicate these models in other areas and farm fields; iii) WhatsApp groups created to provide continued extension and coordination support have attracted a number of other 'followers' who are interested in converting their field practices.
36. This demand for replication is underscored by the recent change in government policy to favour organic agriculture and consumer awareness and demand for safe food. Government imposed a ban on chemical fertilizer in April 2021 and farmers came under severe pressure to convert their practices overnight. Farmers who had followed the GAP vegetable, improved seed potato and organic home garden models were at a distinct advantage in this constrained environment. Many of them already had experience in achieving high yields with just 10 to 20 percent of the chemical fertilizer input needed. Pesticide use was also reduced through mechanical and other interventions.
37. Another factor that supports replicability is that some models (tea improvement, seed potato, GAP vegetables) are based on government priorities and targets. The project's direct support to the government to achieve these programmes and demonstrate the viability of technology transfer through FFS has provided government with a process and platform (of trained and experienced field officers) for replication through state-funded or other donor programmes. Evidence of best practices (seed potato, for example) being integrated into funded programmes of other donors (the International Fund of Agriculture Development's [IFAD's] Smallholder Agribusiness Promotion Programme, SAPP) was also observed.
38. **2. Strengthened and invigorated government extension services.** In the project implementation areas, the agriculture and agrarian field extension services have benefitted tremendously from the project's approach and the FFS model, and recently by delivering extension services and advice through WhatsApp groups. The government extension services have been trained and capacitated to carry out FFS for some key cultivation areas – potato, high value vegetables and tea – and their extension services have been supported by new material, tools (such as soil testing kits) and the WhatsApp groups that enable transfer of knowledge from technical officials to farmers more effectively.

39. The extension service has embraced the FFS practice and process with great success and enthusiasm. The FFS provided a new vehicle of learning and knowledge updating for the entire extension services in these districts across the board, the government services in Agriculture (national and provincial), Agrarian Services (village level field support) and Tea Small Holdings Development. The FFS model is now fully integrated into the agriculture service's capacity building programme and will be expanded to cover other crops (Badulla) and more divisions (Nuwara Eliya, Kandy). Most field level agriculture staff interviewed said that FFS has been the best kind of training they have received in a very long time, sometimes in their entire career. Many had heard of FFS as a concept but had not experienced training through this mechanism. Therefore, the practical, cultivation cycle-oriented, farmer-engaged training modality was a novel experience and one which they can easily institutionalize and continue within the different departments.
40. **3. The introduction of digital learning media and WhatsApp as a coordination tool (introduced as a way to adapt to the pandemics) has transformed the delivery of technology and knowledge.** Across the board, farmers, officials and even private sector were both surprised and pleased with the way the digital communication media had transformed the extension and outreach provided by the project. Initially introduced as an emergency adaptation to unforeseen delays and travel/meeting restrictions imposed by COVID-19, the digital platforms for training delivery were viewed with some reservation and trepidation by the government services and farmers alike. However, 18 months down the road, this has become one of the project's showcase demonstrations endorsed by farmers, officials and other stakeholders to the project. A number of very successful FFS were carried out including for tea using WhatsApp and Zoom. Farmer groups were organized through WhatsApp and these groups linked the entire agriculture technical services – from the Provincial Director downwards – to farmers in a novel model creating accessibility and increasing trust in the services.
41. Several important results of this exercise were noted:
- i. The promotion of technology among farmers. Those who did not have smartphones invested in them, older farmers used their children or grandchildren's phones and sometimes groups shared phones or computers during FFS. Due to the online education delivery due to COVID-19, every home had at least one smartphone for their children's school education. This was leveraged by the project to introduce WhatsApp as a post training coordination platform.
 - ii. Technology delivery was made easier and the reach greater through using digital media. Even farmers in remote areas such as Malapola or Nelugala could access the same training as other farmers close to towns or agrarian centres.
 - iii. Increased participation of women and youth. The digital transformation attracted and encouraged more youth to participate and share knowledge. Evaluators met a number of young people who had returned/turned to agriculture from their current work in factories, shops or other businesses. Some now use the same WhatsApp Groups as marketing platforms for organic inputs.
 - iv. Farmers are now connected to the very top of the provincial agriculture system. The Uva Provincial Director and Deputy Director is in 27 different WhatsApp groups and farmers can directly reach them for technical/advisory support and marketing issues.

- v. The trust between farmers and agriculture extension services has improved and increased. Many described the digital platform as a 'game changer' that transformed a slow and sometimes unreliable extension service to one that is proactive and supportive. This has also improved the relationship between farmer and extension field workers, and more farmers are coming to them for advice rather than to private sector extension services who are in effect marketers for agricultural inputs.
42. **4. The public-private partnership model for private sector engagement has enabled new technology adoption and opened new markets for agricultural products.** The GAP vegetable model with Cargills has resulted in farmers adopting new and innovative technology that would not have been possible if not for the seamless support provided by the different partners to the project. Farmers had initially been unsure of investing in technology such as plastic mulch, insect proof nets, sprinkler and drip systems, etc. This is both due to the high cost of this technology adoption and the lack of confidence in the market for high value GAP certified vegetables.
43. The partnership between the private sector (providing technology and steady markets), the project (providing a modified FFS for high value vegetables with improved technology) and government extension support (providing GAP certification requirements and supporting the process) has proven to be an exemplary model and this can easily continue even after project lifetime. The technology package can be supported through low interest credit and the current pilots have proven that the payback period for this can be as little as six months.
44. Due to market stability and the instant results from the good agricultural practices and technology investments (including reduced labour, reduced chemical inputs and better yields), farmers are interested in investing their own finances to expand the area under GAP or develop new fields. Demand for replication has been created by other farmers (as reported in highlight 1) as was envisioned in adjoining fields during the observation visits.
45. **5. Participatory Land Use Development Plans (PULD) have provided a national model for village level resource planning** and a common coordination 'point' for village and divisional land use planning: The PULD process, both in terms of development and implementation has provided a very viable platform for coordination of government stakeholders at village and divisional levels. The PULD development guideline provides a national level guidance on how land use planning should take into consideration both farmer and community needs and technical advisory support, combining conservation needs (for watershed, sloping lands, disaster prone areas, environmentally sensitive areas) with development priorities (agricultural production, rural infrastructure and livelihoods). Having these plans in hand provide a basis for effective, scientific land use at the lowest level (farmer plots) and coordination of efforts at higher administrative level (Doluwa Divisional Land Use Plan). The evaluation team observed in the field that where the PULD was completed for micro-watersheds or GN divisions, the community was well aware of where land should be set aside for catchment conservation and riverine protection, households were aware of land use management interventions at plot level, and officials working in different development and conservation areas (Forestry, Mahaweli, Agriculture, Tea Small Holdings Development, etc.) were all well versed with the plan and its contents and could identify with the priorities therein. The PULD therefore provides the basis for a coordinated delivery of services to the farmers while keeping the larger objectives of watershed conservation, soil and land management and disaster prevention in mind. The PULD also provides a basis for Divisional Committees to monitor land uses, provide

approvals for larger development initiatives and projects, and streamline development assistance from other projects, diverting resources to the most needed and vulnerable areas.

3.1. Relevance

EQ 1. Was the project designed to address the key issues identified and related to land degradation in the Central Highlands? Were the proposed interventions (outputs and activities) logically organized to overcome barriers and to generate expected outcomes?

Finding 1. The project was designed to deliver important results that can transform land use planning and agricultural practices in the Central Highlands of Sri Lanka. However, given the limited resources and the vast geographical coverage, the terminal evaluation finds the project 'overambitious' in design and attempting to deliver too many outputs with limited resources. This points to limitations in understanding the context during the design phase. Therefore, while the project overall design was technically sound, there were several ground realities that were not fully considered during project design. This resulted in planning of certain activities that were found to be redundant and needed revisiting during implementation. This ultimately led to loss of time and diversion of energies of the small project team during the critical first few years of implementation as described below in EQ 21.

As such, project design is rated as moderately satisfactory.

46. The project's four components were designed to effectively deliver the expected outcomes and address the key barriers identified during design, thereby achieving the project's overall objective. The outcomes and outputs were designed to systematically respond to the barriers described in the project document and contribute, in an integrated manner, towards achieving the expected results and changes. Therefore, the evaluation team finds that the project's design to be technically thorough and to support the achievement of the results envisaged. This has been reiterated in the mid-term evaluation of the project in 2019.
47. The key barriers described in the revised theory of change (see Figure 2) pertain to: i) lack of enabling policy and regulatory frameworks, weak institutional capacity for SLM and weak coordination; ii) scarce knowledge on adverse impacts of land degradation and minimal experience in SLM; iii) lack of sufficient funding to promote and incentivize SLM; and iv) scarcity of knowledge and minimal experience in SLM. Project outcomes and outputs have been constructed to systematically address these barriers and create conditions for scaling up the practices piloted in Outcome 2.
48. However, when you factor in the financial and human resources at hand, the project was designed with too many outputs, making it difficult to manage for a small Project Management Unit. Considering the burden of management and reporting, the number of outputs should have been simplified. For example, Outcomes 1 and 4 had five outputs each.
49. In addition, certain outputs and activities were found to be redundant during implementation and other activities required adaptive management to make them more relevant to the context that evolved after the MTR. Among these, there is Output 1.2, which envisaged the development of a new national policy and policy instrument on soil conservation. During project implementation, many stakeholders agreed that the project did not need to craft 'yet another' policy and that existing policy and regulatory framework

needed to be strengthened and better coordinated for effective soil and land conservation. The project commissioned several reports on national policy landscape and opportunities/recommendations for integration of SLM into the current policy and legal frameworks. A national workshop was held to discuss policy integration options.

50. Other Outputs that required fine-tuning and modification during implementation were Outputs 3.3 and 3.4 on establishing innovative financing streams for land degradation (due to the overambitious nature of the described innovative financing mechanisms) and Outputs 4.1 and 4.3 on knowledge management (due to the need to rationalize knowledge platform development and build on existing initiatives instead of creating new knowledge management tools and dissemination options).

Rating is moderately satisfactory.

EQ 2 and EQ 3. What is the overall strategic relevance of the project *vis-à-vis* GEF focal areas/operational programme strategies, national priorities, especially the National Action Programme (NAP) for Combatting Land Degradation in Sri Lanka, United Nations Sustainable Development Cooperation Framework (UNSDCF) and FAO Sri Lanka programming frameworks? Has the project contributed to achieving SDGs and other international agreements, such as the Paris Climate Agreement?

Finding 2. Overall strategic relevance of this project is high. The project is well aligned to the national development priorities in agriculture and watershed management, with the United Nations Sustainable Development Framework (UNSDF) for Sri Lanka and with SDG 2, SDG 6, SDG 13 and SDG 15. The project remains relevant to the GEF programme strategies for land degradation, and the SLM models developed and disseminated by the project are well received by stakeholders in different levels. Project relevance also promoted collaboration with other related projects (e.g. IFAD) and private sector. The project's results are important to the GEF programme strategies for land degradation.

Therefore, the rating for overall strategic relevance is highly satisfactory.

51. **National priorities.** The project is well aligned to the national development priorities and to policies for agriculture and watershed management, and it is positioned to deliver some important outcomes that influence future policy directions for soil conservation, watershed conservation and land use planning. The project responds to the National Action Programme for Combatting Land Degradation in Sri Lanka (2014–2024), the country's official submission to the United Nations Convention to Combat Desertification (UNCCD). The project's outputs and activities respond to 16 out of 25 of the NAP's programme areas. The 25th programme is to develop an information management and outreach system for land degradation which is addressed by Component 4's information management website.
52. **UN and FAO priorities.** The project is aligned to the United Nations Sustainable Development Framework for Sri Lanka under the Outcome Area 4 on enhancing resilience to climate change and disasters and strengthening environmental management. The project also responds to the FAO programme priorities for Sri Lanka, especially Outcome 2: the environment, natural resources, forests and ecosystems are more sustainably managed taking account of climate change, and the resilience of the most vulnerable to shocks, natural disasters and climate variability is increased. The project responds to UNSDF indicators 4.2 and 4.3 on percentage increase in implementation of integrated water management systems and of nationally determined contributions (NDCs) to climate change under implementation. The revised NDCs submitted in July 2021 (Ministry of

Environment, 2021) outline adaptation needs for agriculture and water. The project is well aligned to agriculture sector adaptation that promotes climate resilient good agricultural practices and improved water retention/recharge in catchments using appropriate measures such as ecosystem restoration, tree planting, small ponds, check dams, etc.

53. **Sustainable Development Goals.** The project is aligned with SDGs on agriculture and food security (Goal 2), water (Goal 6), climate resilience (Goal 13) and biodiversity (Goal 15). The project NDCs/Sri Lanka's (draft) national policy and strategy on sustainable development (Switchasia, 2020) is explicit in promoting healthy food production and sustainable agriculture including good agricultural practices, protected agriculture, integrated farming systems, integrated pest management (IPM), Integrated Plant Nutrition Systems (IPNS) and improve nutrition across rural segments (Switchasia, 2020 – Policy Goal 2. Page 10). This Policy Goal also put onus on strengthening the existing extension system to disseminate technology more effectively and efficiently and fully leverage recent advances in information and communication technology (ICT) and increased mobile telephone penetration to provide information and technical solutions which save water, labour and agrochemicals. Under the Policy Goal 6 on water (Switchasia, 2020 – page 27) there are strategies to strengthen catchment protection and prevent ecosystem services deterioration and deforestation of watersheds.
54. **GEF Programme Strategies.** The project's results remain relevant to the GEF programme strategies for land degradation. In the fifth cycle of funding of the GEF, the project responds to the land degradation programming priority to maintain or improve flow of ecosystem services to secure livelihoods of local communities. The project ticks the boxes in almost all the outcomes expected under this area including an enhanced enabling environment in the agriculture sector, increased investments in SLM, sustained flow of services in agroecosystems and improved agricultural management. The project therefore delivers global environmental benefits of i) reduced vulnerability of agroecosystems and forest ecosystems to climate change and human induced impacts; and ii) improved quality and delivery of agroecosystem and forest ecosystem services. The evaluation team makes this assessment through focus group discussions and field observations as there has been no evidence generated of such ecosystem benefits through project tracking tools. It is the evaluation team's assessment that soil and water conservation measures introduced and successfully adopted by the farmers through project intervention led to climate adaptation benefits far beyond what was initially planned or envisaged through the project.

Rating is highly satisfactory.

EQ 4 and EQ 5. Was the project design relevant to the final beneficiaries? Is the project still relevant?

Finding 3. The project has been highly beneficial to the communities and government officers alike. Ample evidence of this has been gathered by the terminal evaluation team as well as through the impact assessment conducted by the project through a local university in October-November 2021. A detailed description of benefits is included the next section on effectiveness and in the discussion of results in this report. The project is well received in the field by both farmers and officials, especially extension services. The project's pilots demonstrated agricultural approaches that were highly relevant to national and regional policy targets. Therefore, the project is deemed to be relevant to its beneficiaries and this section is rated highly satisfactory.

55. **Land Use Planning Approach.** The project has tested out the Participatory Land Use Development Planning methodology and built capacity for it in the national system. The project then tested out approaches to mainstream the Participatory Land Use Development Plans (PLUDP) recommendations into the delivery of agricultural services (in Welimada) or Divisional Secretariat-level development services (in Doluwa DSD). These approaches involved high level of stakeholder collaboration and interagency cooperation resulting in a land use plan that is owned by community and endorsed by officials of multiple government services providing agricultural services to the field.

LUPPD has identified the hotspots of land degradation in Central Highlands based on their expertise and historical documents. Deputy Director, LUPPD, on the basis of mini watershed selection to develop participatory land use plans, terminal evaluation interview.

56. The planned and collaborative development of different crops – tea, vegetables, export crops and home gardens – in the watersheds has showcased the importance of the PLUDPs as a planning tool that brings together the different government services providing advisory and development services in the field. In that light, the project benefitted government officials and extension services.

I have seen many development projects, but this project provided an opportunity for our officers to work collaboratively and with strong cohesion. This resulted in the project gaining respect and acceptance from many different sectors and agencies and being able to leverage much more support for the community than was initially planned through project funding. In fact, the project prioritized farmers who were willing to put in their own time and investment and change practices. This provided an opening for local extension services to reach farmers with government incentive schemes creating multiplier benefits to community.

Government officer, Kandy District, terminal evaluation interview.⁶

57. **Farmer field schools.** The collaboratively developed farmer field school for seed potato is praised by provincial officers in charge of training interviewed by the evaluation team in the Badulla District. The project provided opportunity to produce targeted training material, train lead farmers and Extension Officers and deliver a successful programme for seed potato production in the Badulla District. This FFS resonated with a key target of the Provincial Department of Agriculture (PDOA) in the Uva Province. Similar sentiments were echoed by the Department of Agrarian Development officials interviewed by the terminal evaluation team in Badulla and Kandy Districts on home garden development and organic fertilizer production in pilot sites.

58. Farmers across the pilot locations were unanimous of the benefits of the project. These benefits ranged from improved and increased knowledge, having closer links to the agriculture extension services, improved practices and practical measures to tackle agricultural and water management issues, benefits of long-term land use change (from highly erodible vegetable cultivation to perennial crops such as tea, coffee, fruits, etc),

⁶ The project was open for all those willing to join and leveraged its activities with the farmers who were willing to contribute their time and effort. While there was no discrimination, the project focused investment on farmers and farming households that could co-invest.

benefits of certification (GAP), improved home garden produce and nutritious food intake, increased collaboration and information sharing between villagers, and improved access to training material and markets through WhatsApp groups.

59. **Supporting national and regional priorities.** The project continues to be relevant in the national and regional context. In the national context the project's successful demonstration of GAP practices for highly agrochemical-dependent cultivation such as high-grown 'up country' vegetables⁷ and seed potato, broadly demonstrated the potential to reduce agrochemical usage without compromising farmer incomes and productivity. As the government strongly commits to green agriculture and to wean the farming practice off agrochemicals, the lessons and learning from these pilots become highly relevant to influence national policy direction to promote GAP as an intermediary step that does not affect yields, income or national food security. At regional level, the project remains relevant for the Central Highlands land management, especially to target degradation hotspots in the hill country. The PULDP's developed by the project will provide a basis for collaborative and informed land use management in the hotspots identified by the Land Degradation Assessment in Drylands (LADA) study carried out by the Natural Resources Management Centre (NRMC) of the Department of Agriculture.

60. The drawback however is the limited scale of the PULDPs and successful SLM pilots and the supportive policy and the lack of appropriate financial mechanisms to support the scaling up of these pilots to cover a wider geographical area and more farming systems.

61. **Project partners and beneficiaries.** The evaluation team found that the SLM models developed and disseminated by the project are well received by stakeholders on the ground – farmers, national and provincial agricultural services, and field extension services. Collaboration with other related projects such as IFAD's Smallholder Agribusiness Development Project and private sector has been high because of the relevance of the project's approach to the objectives of these stakeholders. Assessment of these partnerships are further elaborated under section 3.5 on quality of execution. The project had significant gender related impacts as well. These are described in detail below. Significantly, the outreach to women farmers with agricultural and communication technologies has gone beyond what was initially envisaged in project design and demonstrated new pathways for livelihood and capacity improvement and SLM promotion.

Rating is highly satisfactory.

3.2 Effectiveness

EQ 6. To what extent were the project objectives (environmental and development objectives) achieved, and how effective was the project in achieving them?

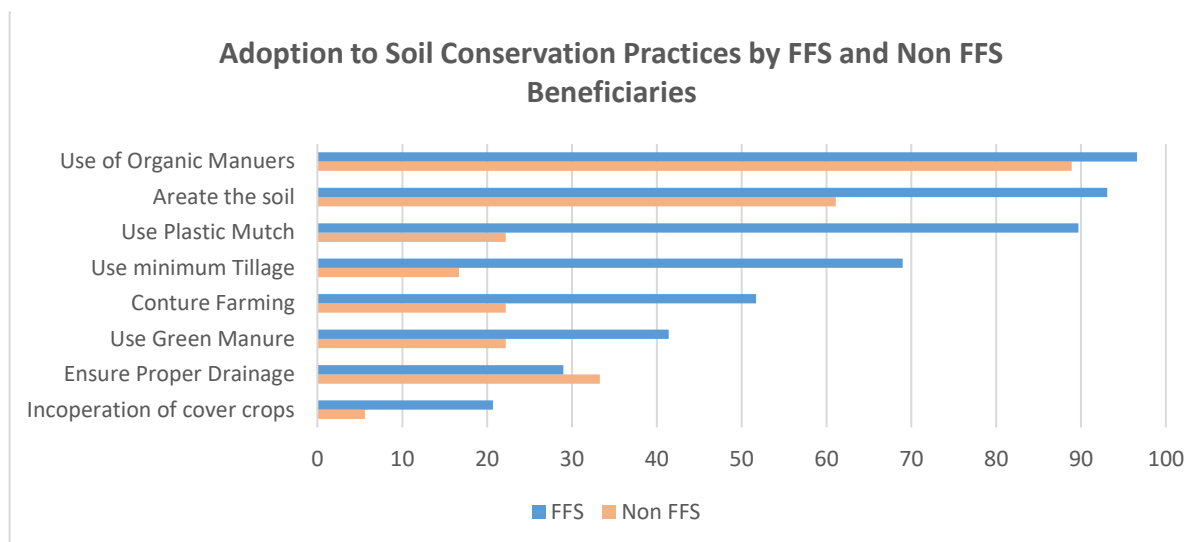
Finding 4. The project aimed to deliver sustainable land use models to address land degradation and soil conservation in Sri Lanka's Central Highlands. Through the four interconnected outcomes, the project sought to address several root causes for the continued and in fact increased erosion and soil degradation in this landscape despite years of investment by government and donors in conservation-related measures.

⁷ Vegetables (carrot, leeks, export veg,) grown at higher elevations and with higher market value.

62. Project has delivered considerable environmental and development benefits. Implementing the PLUDPs in the selected watersheds has brought tangible impacts on the environment, noticeable change in ecosystem services and food and income security for farming households. Chiefly the improved land and water management in the SLM pilot watersheds has shown tangible impacts within a short period. Anecdotal evidence and field observations, and the impact assessment conducted for the project in November 2021, provide a basis to conclude that the SLM pilots have effectively achieved environmental and development objectives. However, many of these impacts have not been systematically measured and monitored against a baseline. Therefore, the rating is satisfactory.
63. **Environmental impacts. The most visible environmental impacts of the projects are observed in two main categories:**
- i. **Offsite impacts:**⁸ chiefly reduction of erosion, runoff, chemical contamination of waterways and conservation of watersheds and land management through participatory land use management.
 - ii. **Onsite impacts** at farm level from reduced use of agrichemicals, soil conservation and from water conservation through rainwater harvesting. Soil testing kits procured by the project helped provide previously unknown information on soil condition and quality to farmers, and helped develop recommendations for precision agriculture and targeted soil inputs. This was an important deviation from the common and often unnecessary practice of applying excessive fertilizer and other soil amendments. Unfortunately, there is a dearth of data on the change attributable to the project, through continuous monitoring of soil erosion and water quality, for example. The effort to quantify these onsite and offsite impacts have been made through the impact assessment carried out by Uva Wellassa University. Some of these results are summarized below (Figure 3).
64. In addition, anecdotal evidence gathered by the terminal evaluation team from communities, farmer organizations point to increased usage of organic fertilizer, better soil quality and soil biota presence, more water yields in upland streams and rivulets, etc. It is however not possible to quantify these impacts or attribute them directly to the project, since there could have been other drivers for these changes such as heavy rainfall year (2021) and government policy on banning chemical fertilizer (2021).
65. Soil conservation measures were evident in practically every farm field visited by the terminal evaluation team, albeit at very different levels of adoption and technical compliance. Therefore, it can be safely assumed that soil erosion rates have been significantly reduced in the project pilot areas; however, in some villages farm field level best practices and soil conservation have been overturned by large scale, mechanized clearing of large forests or land plots with considerable tree cover for agriculture or construction – not within the control of the project. For example, in Panwilatenna Village in Doluwa DSD an old Pinus forest plantation of around 100 acres is now being cleared for development on a steep slope leading to excessive soil erosion upstream of some farm fields developed by the project.

⁸ According to qualitative data and evidence collected from key informant interviews, focus group discussions and direct observations by the evaluation team.

Figure 3. Soil conservation measures adopted by FFS beneficiaries and non-beneficiaries

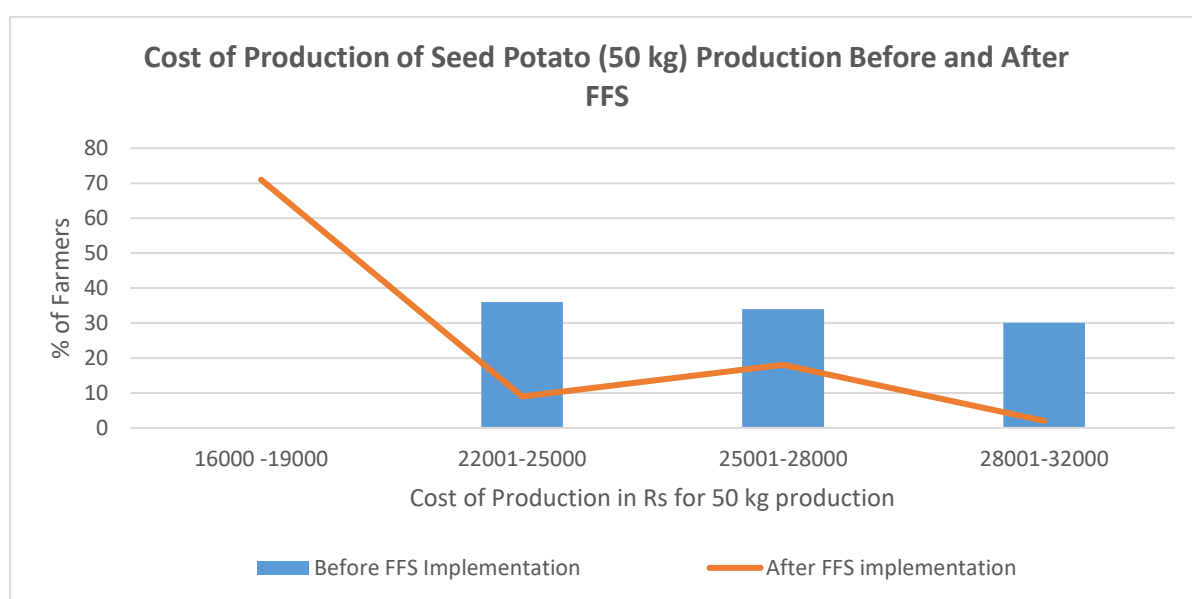


Source: RDAL Impact Assessment.

66. **Development benefits to farmers.** In terms of development benefits, the project has some tangible results to report.

- i. **Increase of farmers' income** and modernization of the agriculture practice through FFS. There has been considerable reduction in cost of production due to practices promoted by the FFS (Figure 4). Farmers who have been cultivating the same crop all their lives and were initially sceptical of the results of the good agricultural practices, now swear by it.

Figure 4. Cost of production before and after the farmer field school approach to produce 50 kg of seed potato



Source: RDAL impact assessment study 2021.

- ii. **Improved social networking and information sharing** among the groups formed for FFS has resulted in more social cohesion, and farmers benefiting from greater access to the agriculture and other development services of the government.
 - iii. Improved home gardening and nutritional information has disrupted the food practice and compelled families to **consume more leafy green vegetables**, vitamin-rich local fruits and organically cultivated vegetables.
 - iv. By collaborating on the planning and implementation of the PLUDPs, the **community receives information and awareness on the benefits of watershed conservation.**
67. However, while the 'heart' of the project, consisting of the SLM pilots and successful capacity building around farmer field schools remains strong, the project has not adequately projected these positive field level results to the policy or financing arena. Due to the lateness of pilot implementation, they were just coming to maturity when the project was near the end. As such, efforts to document and describe the benefits were undertaken only during the very last phase of the project. This has, in turn, a negative impact on the opportunity to influence policy and generate sustainable financing streams outside of the few successful public-private partnerships, and it was constrained by the lack of timely and quantified information.
68. **Technical assessments delayed.** A key supportive study for the site selection and scale up of the SLM pilots, the Assessment and Mapping of Land Degradation and Conservation in Kandy, Nuwara Eliya and Badulla Districts in Sri Lanka, using the Land Degradation Assessment in Drylands (LADA) tool, was produced by the Natural Resources Management Division of the NRMDC in September 2021, therefore during the last few months of project implementation. Despite their efforts, the project team and the Natural Resources Management Centre of the Department of Agriculture could not agree on the scope or modality of this assessment until early 2021, and even then only on the insistence of the FAO Lead Technical Officer. This product, if available earlier, would have better informed site selection for PLUDPs and SLM pilots. This assessment developed land use system maps in the three districts at a suitable scale to identify degradation hotspots. Locations that need more ground level assessment/mapping were identified by the PLUDP. This assessment and the database of maps generated through it would be highly valuable for scaling up of the approach of RDAL.

Rating is satisfactory.

EQ 7, 8 and 9. Did the project produce any unintended/unexpected outcomes, either positive or negative? Which other contextual factors and actors have contributed or hindered the achievement of results?

Finding 5. Some outcomes are important but not necessarily as envisaged in the project design. The project design expected to use advanced tools to map the degradation hotspots, and the evidence for policy development in SLM through demonstrating new technology and financing models. However, the project adaptively managed some of these outputs to deliver results that were more meaningful and timelier to the agricultural service delivery in the Central Highlands. Market-based incentives and technologies that save water, prevent soil loss and were more resilient to climate change made the project's SLM pilot very relevant to farmers and extension services – but many of these evolved during the implementation phase and were co-created with government and farmers to respond to immediate needs of farmers and officials – namely, enhanced productivity and reduced chemical inputs. Results have been strong and immediate, but with limited scale to influence the wider policies around soil, water and agriculture.

69. Some of the most significant results recorded from informants and observed in the field are:
- i. At farm level:
 - adopting soil conservation practices (such as establishing cover crops);
 - arresting the occurrences of bushfires and cattle grazing that caused land degradation;
 - increasing and stabilizing income of the farmers from potato, tea and intercrops, certified vegetables.
 - ii. At watershed level: the conversion of vegetable lands into perennial crops have been implemented in this very sensitive area of the Central Highlands. The shifting to perennial crops has resulted in several outcomes that will help restore these lands in times to come and prevent possible land degradation in the future. These are:
 - reduction in frequency of land preparation that leads to soil erosion;
 - reduction in excessive agrochemical usage that potentially contributed to water pollution and biodiversity degradation;
 - prevention of bushfire and cattle grazing during the following period;
 - ensure high and stable income for the farmers throughout the year.

EQ 11. To what extent has the project effectively enabled institutional policy and regulatory frameworks for SLM in accordance with Participatory Land Use Development principles?

Finding 6. (Achievement of Outcome 1). Outcome 1 set out to create the enabling environment for mainstreaming SLM which included policy, regulatory and practice tools, knowledge and practices for SLM. The outputs under Outcome 1 supported the institutionalizing of the Participatory Land Use Development Planning (PLUDP) approach as one of the biggest achievements of the project. However, the mainstreaming of SLM into other related policies and strategies, informed through the ground implementation, was not as successful as envisaged. The rating for the achievement of Outcome 1 is satisfactory.

70. Participatory Land Use Development Planning. The RDAL project supported the Land Use Policy Planning Department to develop the guidelines for Participatory Land Use Development Plans, including SLM principles. The guidelines developed by LUPPD have been endorsed and validated by stakeholders including Department of Agriculture, Department of Agrarian Development, Department of Export Agriculture and from Tea Small Holdings Development Authority (TSHDA). Under PLUDP principles, all requirements (agriculture, infrastructure, socioeconomic) pertaining to selected watershed were identified, and implementation plan was developed collaboratively with these stakeholders.
71. The PLUDPs were used to design development plans to demand services from other departments such as Land Commission. These guidelines will apply to all PLUDPs developed by the LUPPD in the future. Already around 111 new PLUDPs have been developed by the Department for the Central Highlands Districts (46 directly supported through the project and 65 by LUPPD with government funds). Using developed guidelines, the project has demonstrated executing 9 PLUDPs, whereas 46 were executed by Land Use Policy Planning Department. Participatory Appraisal Methods (cropping calendar, seasonal calendar, transect walk) actively involved beneficiaries and other stakeholders in the identification of the development needs of each watershed. The execution involved coordinated delivery by all stakeholder agencies and especially the extension services in the field. Land tenure issues are harder to resolve through a single project or intervention, however the PLUDP will influence land use and the implementation of necessary safeguards

- and monitoring of these through local committees comprising of different government agencies.
72. The PLUDPs were developed for catchments, micro-watersheds and in mini watersheds. Under the PLUDPs, each land parcel was mapped and required recommendations were provided through the technical agency (Department of Agriculture, Department of Agrarian Development, TSHDA) for promoting SLM practices – e.g. soil testing of each farm plot, integration of conservation measures, improving cropping patterns, demarcation and conservation of forest lands in the catchment, etc.
73. **SLM mainstreaming:** The project has conducted a detailed policy analysis to identify gaps in current policies, acts and regulatory measures related to SLM. Existing gaps related to policies and acts (e.g. Land Use Planning Policy, Soil Conservation Act) were identified and recommendations were made to fulfil the gaps to ensure sustainable land management. Findings were communicated to Natural Resource Management Centre, as the Soil Act is currently under revision.
74. In terms of mainstreaming SLM, the project supported wider application of site-specific fertilizer application which is a policy recommendation promoted through PLUDP implementation. Overuse of inorganic fertilizer is one of the key land degradation factors in this intensively agricultural area. The project has promoted site-specific fertilizer application. Extension services were strengthened with hardware (soil testing kits) and the required skills for officers of Department of Agriculture and Department of Agrarian Development (Department of Agriculture and Department of Agrarian Development). The public-private partnerships supported through the project increased farmer investment in SLM practices. Under PLUDP implementation, all farm plots were tested for soil parameters, and site-specific recommendations were provided to farmers, enabling them to cut down fertilizer inputs and associated labour costs. The project was able to mainstream some SLM practices through the FFS approach which has been integrated into the regular training apparatus of stakeholder agencies such as the Department of Agriculture, Department of Agrarian Development and Tea Small Holdings Development Authority.

Rating for Outcome 1 is satisfactory.

EQ 12. To what extent has the project effectively demonstrated appropriate technologies and approaches for the rehabilitation of degraded lands?

Finding 7. Achievement of Outcome 2: Appropriate technologies for rehabilitation of degraded lands demonstrated and scaled up by strengthened extension networks. The project supported the implementation of Participatory Land Use Development Plans in nine mini/micro-watersheds and divisional secretariat-level development services. This involved supporting SLM pilots in several distinct land use and agriculture models such as smallholder tea, high value vegetables, seed potato, dairy farms and home gardens. Developing and implementing PLUDPs, developing and mainstreaming FFS, investing in demonstration plots in the three districts and developing demonstration sites on government training sites were the main outputs of Outcome 2. There are some positive signs of integration of the SLM models and best practices into the Government's agriculture extension delivery, especially in the seed potato and tea smallholder models. As described above, FFS and WhatsApp based coordination among farmers and extension services have been formalized and accepted by the provincial agriculture services and the Department of Agrarian Development, and the TSHDA. The rating for implementation of Outcome 2 is highly satisfactory.

75. **PLUDPs form the basis of SLM demonstration.** The implementation of the PLUDPs required a high level of stakeholder collaboration and interagency cooperation, resulting in a land use plan that is owned by community and endorsed by officials of multiple government services providing agricultural services to the field; and has showcased the importance of the PLUDPs as a planning tool. The project directly influenced land use in 7 666.5 ha of lands managed under SLM using the approaches of executing 46 PLUDPs for selected micro-watersheds (2947 ha), SLM adoption through FFS (270 ha) and through demonstration plots (4 449.5 ha) executed by farmers (Appendix 4, last update October 31, 2021). Overall, the project exceeds the targeted number of farmers. However, due to small plot size of individual farms, the targeted number of hectares was yet to be reached by the time this evaluation was conducted.
76. The evaluation team found that LUPPD has developed additional 58 plans replicating the model for other selected locations in Central Highlands, such as Pupuressa, Masgolla, Wariyagala. The project targeted developing 64 PLUPs in collaboration with LUPPD, however it has been scaled up to 111 plans including developing a PLUDP for the entire Doluwa Divisional Secretariat.
77. Having a PLUDP was instrumental to attract other development assistance from national and international non-governmental organizations (NGOs), other United Nations agencies, private sector and other government departments. For example, the PLUDPs developed for Panwilatenna village in Doluwa DS division has leveraged additional support for vanilla cultivation, organic fertilizer, vegetable to tea conversion and dairy farming by public and private sector funded projects. The PLUDP developed for the entire Doluwa Division is being used for many administrative functions, as reported by the Divisional Secretariat:
- I am using the Participatory Land Use Development Plan of Doluwa Divisional Secretariat for many administrative activities, planning of water resource development and conservation, forest conservation activities, natural resource management and planning, and to monitor the encroachments of some of them.*
Divisional Secretary, Doluwa, terminal evaluation interview.
78. On the other hand, there are clear issues of how the PLUDP would be institutionalized and the divisional level model (which was very time and resource intensive) be replicated post-project. At the local level, the PLUDPs should be institutionalized through the district and divisional agriculture and land use committees. But the evaluation team found no evidence of efforts to support this mainstreaming. Evaluators found that land use planning and development planning at divisional level remain disconnected and that even in Doluwa DSD, where a complete divisional level plan was done, the process was not integrated with the planning process.
79. **Farmer field schools and SLM demonstrations.** The project's approach to SLM is commendable in that it was focused on agriculture models that would provide the farmers sufficient benefits to incentivize soil conservation and environmental management practices. Each core sustainable land use model was supported by a corresponding FFS module. This was later strengthened by the formation of WhatsApp groups for beneficiary farmer 'trainees' to continue networking and benefitting from knowledge products and services, and access to extension services. The main SLM models applied by the project were:

- i. high value vegetable production with GAP certification;

- ii. tea smallholder productivity improvement;
 - iii. converting vegetable lands on steep lands to tea or perennials;
 - iv. organic home gardens and commercial plots with rainwater harvesting and soil conservation;
 - v. seed potato cultivation with soil conservation measures;
 - vi. integrated dairy and organic farming model.
80. Farmer field schools were developed for each of these models and WhatsApp was introduced as an alternate way to communicate, as well as FFS delivery during COVID-19 lockdowns. SLM practices introduced through FFS increased knowledge and improved practices in the field. Both farmers and extension services provided evidence of uptake of these practices, showcasing the success of FFS as an extension tool. Instances of lateral dissemination of practices to farmers who were not part of the original FFS were observed by the evaluation team. The expanded WhatsApp groups supported best practices to be widely disseminated especially through tea smallholder groups in Doluwa and home gardening groups in Bandarawela and Pambadeniya.

As members of FFS group, we are practicing what we have learned in the sessions. After seeing our results, there were many requests from non-member farmers to join the group. We have disseminated the knowledge that we have gained.
Leader Farmers at Pambadeniya, terminal evaluation focus group discussion.

81. The project supported the Department of Agriculture to implement its good agricultural practice recommendations with 80 selected farmers. The evaluation team was able to reach more than 20 farmers (via FGDs and individual visits) and while only a few of them had actually reached certification level, almost all of them were practicing the GAP protocols which involves record keeping, adopting technology for pest control and irrigation, using fertilizer and inputs as required through soil testing, ensuring pesticides are rationally used, and pre-harvest intervals are maintained and post-harvest handling of produce that does not damage or spoil these high value vegetables. The impact assessment report provides more details of farmer adoption rates and quantified benefits. Seeing the results, many other farmers not involved in the project have applied for GAP certification as they need to be enrolled in the process. Many beneficiaries report significant reduction in application of inorganic fertilizer (sometimes as much as 80-90 percent) and report using more of organic fertilizer with better results.

I have reduced the cost of production by cutting down on inorganic fertilizer by five times. I mix inorganic and organic input to get a good harvest in last season.
Vegetable farmer at Rikillagaskada under GAP Programme, terminal evaluation interview.

82. Local production of seed potato production is a regional government priority to save foreign exchange on importation and to develop local cultivars/crop varieties that are cheaper for the farmer, more adapted to local field conditions and taste better. Together with the agriculture training institute and extension service, the project developed an FFS module to improve current practices in seed potato production and introduce simple technology improvements to overcome drought and manage sloping lands. Interviewed farmers, agriculture instructors and even the Provincial Director of Agriculture and her Deputy (Badulla District) were extremely pleased with the outcome of this experiment.

83. The project has almost reached 21 292 farmers (project document target was 20 000) in adopting SLM practices. Overall, 4 719.5 ha were covered under direct implementation (project document target was 10 000 ha which was revised at MTR 6 000 to as a more realistic target given the field implementation issues observed at mid-term, and given the budget and remaining time for project implementation). Yet another 65 PLUDPs are developed by LUPPD. However, implementing PLUDPs is not the responsibility of LUPPD, and a strong institutional framework is required for execution and monitoring of the developed PLUDPs.
84. FFS approach was replicated by the Provincial Department of Agriculture Badulla for seed potato production. Provincial Department of Agriculture has incorporated the FFS seed potato programme to their annual plan, and the FFS approach was replicated in Badulla District. The Provincial Department also internalized the FFS approach to their annual work plan. The Tea Small Holdings Development Authority Kandy has replicated the same FFS approach in Kandy and three additional groups were formulated. The project has just generated these results in the final year of implementation. However, additional time is required to scale-up the successes in the districts.
85. **Interagency coordination for PLUDP and SLM implementation.** The project enhanced coordination among different agencies delivering livelihood and agricultural support to the field, and also private sector stakeholders in the market value chain. The basis of this cooperation was either a strong model (GAP, for instance) or the PLUDP in that area. The examples from sites such as Dambugasara in Welimada, Badulla District and Doluwa in Kandy District showcase officials from diverse agencies coming together to provide extension services and livelihood support in a coordinated manner through the FFS and based on the land use management plan development by the project.
86. **Support government policy direction.** The Government's new policy direction towards 'green (chemical free) agriculture' has provided additional impetus to GAP practices promoted by the project. The Government of Sri Lanka has banned importing inorganic fertilizer from April 2020 and promotes/subsidizes organic farming. RDAL's support has been directed towards farmers who wish to convert their existing practices to more environmentally friendly means through soil testing in individual land parcels and recommended application of plant nutrients based on the crop requirement. Additionally, the project promoted and facilitated production and application of organic fertilizer and repellents for pests. The project approach was well accepted by the community as well as by all stakeholders.

Majority of the tea smallholder farmers are now using organic fertilizers and have received very few complaints about the lack of chemical fertilizer in the market. This is a significant achievement in 2021, when there is an inorganic fertilizer shortage in the market. This is totally due to promotion of organic fertilizer by the project.
Assistant Regional Manager, TSHDA, terminal evaluation interview.

Rating for Outcome 2 is highly satisfactory.

EQ 13. To what extent has the project effectively increased the capacity to develop innovative funding mechanisms for SLM in the public and private sectors?

Finding 8. Achievement of Outcome 3: This component has been complicated to implement for several reasons. During design, the outputs of Component 3 aimed to develop and test innovative

funding streams such as from payment for ecosystem services (PES), agrotourism and other market-based instruments and incentives to sustain the sustainable land management investments. The lack of technical guidance and oversight for this component has led to ad hoc solutions rather than a cohesive long-term strategic approach to innovative financing. It is hard to evaluate the impact of the capacity building on the constituents. Therefore, the achievement of Outcome 3 is rated moderately satisfactory.

87. Innovative funding opportunities. The International Union for Conservation of Nature and Natural Resources (IUCN) has conducted initial feasibility assessment and proposed three innovative financing models: corporate social responsibility (CSR), payments for ecosystem services and agrotourism. The PES model was designed to create a market for downstream water supply that will continuously fund upstream catchment conservation and farm-level soil conservation. However, establishing such a payment model was too complicated as it involved a host of different technical expertise and experience beyond the capacities of the project team. Therefore the project did not move to develop and formalize any of the financing models proposed through IUCN. Staff transition and prioritization of other project activities were some of the reasons for non-execution of innovative financing models.

PES, ecotourism and agrotourism could have been easily established as project intervention areas have high potential. However, PES model required detailed planning process, with rigorous regulatory mechanisms. IUCN was simply asked to study the potential. We were not tasked with developing the actual models. Former Programme Manager IUCN, terminal evaluation interview.

88. However, the project has managed to formalize certain financing streams, including through public-private partnerships for high value vegetable crops, vanilla cultivation in home gardens, organic tea and, in a smaller scale, for dairy farming. By default rather than design, the project has demonstrated a PES-like innovative financing mechanism. Although conventional PES model was not implemented, the project's GAP certified vegetable farms could well be held up as a PES-like model where farmers are compensated for the high cost of adopting environmentally friendly practices through a higher market price. The project team does not describe this as a PES, but rather a successful public-private partnership through which the government and private sector has successfully provided the technology and finance for farmers to convert into a sustainable agriculture model. This kind of certification (GAP and organic) is described as PES-like model in literature (FAO, 2007).
89. IUCN and the project design recommended corporate social responsibility models. Based on this, the project has mobilized USD 213 022, implementing public-private partnership models with selected private sector companies. Many of these models go beyond the conventional CSR type of financing to corporate partnerships that are financially viable for the farmer and the private sector.
- i. The high-value vegetable cultivation model implemented with Cargills Ceylon Plc had a holistic approach. Conservation agriculture, combined with modern technology and improved agronomy, led to increase of farmer incomes and certification, which allowed farmers to access niche markets and sell produce at above-market rates.
 - ii. Vanilla cultivation promoted with Adamjee Lukmanjee PVT Ltd, has optimized the use of land resources, as Vanilla is being cultivated in unproductive, well-shaded lands. All organic wastes are being optimally utilized.

- iii. Livestock integration model executed with Fonterra Brands was a limited trial with five farmers in one micro-watershed – but the results are noteworthy, and the private sector company is using this experience to replicate elsewhere. The limited number of livestock farmers in selected catchment areas was the main reason to reach fewer farmers.
90. The project could have attempted to access climate change finance for mitigation (i.e. carbon sequestration and reduction of methane emissions from agriculture) and adaptation to scale the soil and water conservation agriculture practices to enhance the resilience of the agricultural sector. There is opportunity for a future project to leverage climate financing for very concrete adaptation benefits delivered through the project.

Rating for Outcome 3 is moderately satisfactory.

EQ 14 and EQ 15. To what extent has the project effectively enhanced national knowledge base for SLM to support adaptive results-based management? To what extent have the disseminated guidelines, knowledge and awareness been used by the targeted audiences?

Finding 9. Achievement of Outcome 4: The project aimed to create knowledge products from the implemented pilots to enhance the national knowledge base for sustainable land management and influence policy directions/mainstreaming. Knowledge management also aimed to strengthen project implementation based on adaptive results-based management. A huge leg-up for outreach and communication was gained by leveraging WhatsApp for training and networking among beneficiary farmers and extension services. Devised to overcome COVID-19 related restrictions and meet delivery deadlines of the project, the use of WhatsApp as a grassroots communication and extension services tool has been one of the more lasting legacies of the project. Technical knowledge dissemination related to SLM pilots is above expectations but knowledge dissemination upwards to influence policy was weak. Therefore, the achievement of Outcome 4 and knowledge management in general is rated as satisfactory.

91. Outcome 4 envisaged several key outputs such as a knowledge management digital platform (Sri Lanka Overview of Conservation Approaches and Technologies, SRICAT), WhatsApp groups based on FFS practices (home gardening, tea, seed potato) to manage regular communication with project beneficiaries, and the production of knowledge material as newsletters, technical brochures and audiovisual content.
92. **Knowledge platform.** The project developed an SLM-focused information portal modelled around the website of the World Overview of Conservation Approaches and Technologies. The Sri Lanka Overview of Conservation Approaches and Technologies is the national information-sharing platform on SLM of Sri Lanka. The evaluation team concurs that it is a bit too early to assess its success or its sustainability. While the evaluation was ongoing, the project team was in negotiations with the Soil Sciences Department of the University of Peradeniya (UoP) to host the platform. There is genuine interest with UoP soil sciences department to host and manage this knowledge management platform for learning among different institutions and other beneficiaries. However, this agreement is still at an initial stage and the project has requested for an extended timeline to complete this activity and handover to UoP. The evaluation team finds it impossible to make an informed judgement on the rating with the evidence available.
93. Some key informants, notably the head of the Natural Resources Management Centre questioned the need for additional knowledge platforms when WOCAT already exists. They strongly felt that developing a Sri Lanka page for WOCAT would have sufficed for a

knowledge platform for practitioners. Others, including academics at the Department of Soil Sciences of the University of Peradeniya, felt there is justification for a SRICAT and more localized and accessible information platform. Showcasing project best practices for the information of external audiences and for public consumption is highly important. Importantly, through the SRICAT the project aimed to create a 'storehouse' of sustainable land management best practices to inform the work of technical agencies and influence future projects. Some informants stated that SRICAT platform should not aim to transfer knowledge to farmers in the field, and instead should keep its focus on transferring SLM knowledge to technical agencies.

94. The Ministry of Environment strongly advocated for the SRICAT website and information portal, even though other project partners (NRMC, for example) have expressed their reservations about a new information portal *vis-à-vis* updating Sri Lankan information on the global WOCAT website. The Ministry is keen to promote a separate website through the project as this would support the country to achieve the 25th programme of the National Action Programme for UNCCD which is to establish an information sharing platform for SLM. The Soil Sciences Department of the University of Peradeniya has been tasked to work with relevant institutions to collect required information on SLM.
95. **Newsletters and knowledge management material.** The evaluation team found that a key to improve the process is to provide project stakeholders with regular updates on project activities, especially SLM pilots. Providing advisory services to farmers and technical information on sustainable land management, good agricultural practices and new developments in these areas are other best processors.
96. The project newsletters generally used information readily available with the government agricultural services and plantation advisory services at provincial or national level. In this case, the project's support was generally to assist dissemination of this information required for the practice changes associated with the SLM models promoted by the project, specifically on seed potato, home gardening, organic input manufacture, and the wider adoption of good agricultural practice standards with advanced agrotechnology. The evaluation team found these knowledge products such as posters, newsletters and short videos to be limited in their usefulness to reach the farmer level. Government officials and community-based organization leaders used posters and leaflets in their offices or for dissemination at community mobilization events. But in terms of knowledge transfer, these conventional media did not have a major influence on farmers. There was a tendency also to use 'traditionally available' information from published sources to compile these products. The most useful content created through this medium were the SLM guidelines co-developed with government agencies such as the Tea Research Institute (TRI) and Department of Agriculture; and the training curricula and training material for FFS.

The knowledge management platform should disseminate the knowledge gained by adopting SLM practices but not general technical information (e.g. soil conservation, soil fertility management) to farmers.
FAO Lead Technical Officer.

97. **WhatsApp and digital media.** Farmers acknowledged that they had access to the material, but when the evaluation team questioned farmers on where they received the guidance for their practices, the majority (90 percent or more) mentioned FFS and WhatsApp groups. Printed material was mentioned rarely. Some younger farmers access the digital content created for technology transfer by the project through YouTube. Only a handful of farmers

(less than 5 percent) admitted to that they were aware of information on the SRICAT platform.

98. The significant transformation in knowledge dissemination and technology transfer through the project came in the wake of COVID-19. The use of digital media for training, networking and knowledge exchange devised to overcome lockdowns and restrictions on physical meetings, created an entirely new knowledge ecosystem within the project. The impacts and outreach were far beyond the initial expectations of the Project Management Unit and government stakeholders, and it is not an exaggeration to say that the project transformed the knowledge transfer systems of the government's agriculture and plantation extension services. The evaluation team observed even older farmers accessing digital content with smartphones (often belonging to younger members of the household/school-age children) and more youth and women accessing content to digital delivery (using Zoom and WhatsApp). Farmers who did not have smartphones accessed the content through neighbours. Networking is strong among the small groups created to deliver the FFS. Some farmers stated they purchased smartphones just for this purpose and attended the Zoom training sessions aided by younger household members. Due to schooling being delivered through online platforms in 2020-2021, family members who went to school were familiar with this mode of learning.

We formed WhatsApp groups to support training and post-training knowledge transfer. But these groups became so much more successful at delivering our regular extension services especially during COVID-19 lockdowns when we could not visit farmers in the field. Today every farmer has a smartphone, at least every household has one, therefore technology was not really a barrier for this dissemination.
Agricultural Instructor, male, Hanguranketha, Kandy District, terminal evaluation interview.

The WhatsApp groups enabled us to seek solutions amongst ourselves. We would discuss our issues in the group, and those who are more tech savvy would look up the internet for solutions and share amongst the entire group. We also shared pictures and videos of how we implement the various best practices and techniques, learning and innovating amongst the group.
Female farmer, Welimada, terminal evaluation interview.

99. This unplanned, unexpected but significant contribution of the project is widely applauded by stakeholders met by the evaluation team. Already the WhatsApp groups are being scaled up by the government extension services. Digital FFS will be institutionalized within the training institutes for agriculture and tea sectors.
100. Critical factors that attest to the success of the digital platforms for training and technology transfer are: i) the stage for such transformation was already set in the field, with most young people having access to smartphones/devices and many of them already exposed to online education; ii) farmers were quick to adopt the training because they found it less complicated than travelling to a training institute in the district. Farmers could take the course in their own fields, as a group or individually. They had access to the training material after the lesson and, importantly, they could share their own experiences with the trainers and with peer farmers more effectively.
101. Following, some comments from the informants obtained during terminal evaluation interviews:

At training centres, it was more like school, and we rarely spoke or disturbed the trainer. But here, we freely shared our own experience and discussed issues amongst each other and the trainer. We found it more practical and applicable.
Female farmer, Bandarawela, Badulla District.

We are able to share the training material and videos on WhatsApp with other farmers. We have been able to influence others to follow these practices.
Male farmer practicing GAP-certified vegetable cultivation in Nelugala, Nuwara Eliya District.

The Zoom training was surprisingly well received. Initially we had so many doubts that farmers would be able to participate in this format. But now we are convinced that this transformation was needed to improve efficiency of technology transfer through extension services.

Deputy Director, Department of Agriculture, Central Province -Nuwara Eliya District.

As a woman, I find the WhatsApp groups and FFS through Zoom so useful. Sometimes we are not able to travel long distances and stay overnight at training centres. So, to have the training delivered to our own doorstep and the ability to access the material later is invaluable to *me.*

Female farmer, Naranhinna, Kandy District.

Earlier we could not even get the Extension Officer to visit our remote village once a year. But now, we are connected daily. We can ask questions, and if she does not know the answer, another officer in the group will respond. I even have the Provincial Director in my WhatsApp group. This is a huge empowerment for us.
Female Farmer, Malpola, Welimada, Badulla District.

Rating for Outcome 4 is satisfactory.

3.3 Efficiency

EQ 16 and EQ 17. To what extent has the project been implemented efficiently and cost-effectively? To what extent has the management been able to adapt to changing conditions to improve the efficiency of project implementation?

Finding 10. The project has demonstrated SLM models cost-effectively, considering spontaneous scale-up of actions. The project's cost-effectiveness was assessed in several ways and considering both direct and indirect results/benefits. The project had a late start and encountered some significant delays setting up the project management unit and in field implementation. These are described later under effectiveness. The evaluation team finds that the project management has been able to adapt to changing circumstances and overcome some serious challenges to satisfactorily complete the project within the extension period. This is especially significant given that the project actually began delivering the field-based demonstrations post MTR, in late 2018, and then implementation was hindered by COVID-19 related issues in 2020 and 2021. The project has concluded all major planned activities by end 2021, despite the slow field delivery up to mid-2018 and the dashboards showed over 97 percent financial delivery by end of 2021. Efficiency is therefore rated satisfactory.

102. **Cost effectiveness.** According to the records of the Project Management Unit, some 150 ha were directly supported by the project to demonstrate SLM best practices across several models – vegetables, home gardens, tea, vanilla and other export crops. The

amount disbursed for these models is around LKR 7.5 million (USD 37 000)⁹ which amounts to approximately USD 250 per ha, which is a fair cost considering the terrain and landform in these areas.

103. The PLUDP development was entirely handled through Letters of Agreement (LOA) with the Land Use Policy Planning Department. The USD 14 000 spent on the initial PLUDP development and testing in eight micro-watersheds by FAO has led to considerable scaling up across the Central Highlands. Some 111 PLUDPs were developed in total, and 46 implemented, the majority funded by the Government through Land Use Policy Planning Department. There has been considerable spillover benefit from the FFS model and the ancillary digital platforms – far greater than the actual cost of developing the FFS modules and facilitating their delivery. Similarly, the SLM demonstrations developed with the TSHDA and Provincial Departments of Agriculture in Uva and Central Provinces have resulted in effective training platforms for a greater number of farmers than directly influenced through the FFS or SLM models of the project. In that respect, although the hectareage of land directly influenced through the project (7 666.5 ha) remain small in comparison to the extent of degraded lands in the Central Highlands, the cost-effectiveness of the projects *vis-à-vis* direct and indirect impacts attributable to the project, remains satisfactory.
104. **Adaptive management.** The evaluation team finds that the project management has been able to adapt to changing circumstances and overcome some serious challenges to satisfactorily complete the project within the extension period. This is especially significant given that the project actually began delivering the field-based demonstrations post-MTR, in late 2018, and then implementation was hindered by COVID-19 related issues in 2020 and 2021. The project had a delayed inception, the initially recruited Project Manager left the project within one year, there were issues of cooperation with the key government technical agency (Natural Resources Management Centre) and finally when field implementation began, there were issues in making payments to the field, which significantly set back field-based activities of the project. In fact, the MTR in 2018 notes that the project has disbursed only over half (53.6 percent) of the available GEF funds despite having been operational for three of the planned four years, with a very low rate of delivery until the start of 2018, then a modest but improving rate of delivery. Timeliness of the project was impacted in the first three years. This can be attributed to the slow start-up, which was then compounded by the delay in fund transfers between FAO and LUPPD due to a change in government procedures, and the delayed payments to farmers in 2017 and 2018, all of which have had significant and deleterious impacts on project implementation. However, records show that the project has been able to ‘catch up’ on delivery over the last two years, and despite the COVID-19 related constraints, complete disbursements and expended budget to complete the project.
105. **Financial performance.** By December 2021, 97 percent of the funds were spent or committed. The project was provided with a further extension up to April 2022 to complete activities under Component 4 pertaining to the knowledge platform which is now being led by the University of Peradeniya.

⁹ Current conversion rate USD 1 =LKR 202.

106. Component-wise, the project records show over-expenditure for Outcome 2 by around 20 percent. The additional expenditure was for soil testing equipment, FFS for seed potato, GAP demonstrations with modern technology, etc. The reallocation of funding was backed by MTR recommendations and subsequent budget revisions approved by the Lead Technical Officer. However, due to urgency and time-sensitiveness of some of the field inputs and the long process for Budget Holder and Lead Technical Officer approvals, post-facto budget revisions have been affected.
107. The project's post-MTR implementation and management is efficient considering the following:
- i. financial and progress reports from stakeholders and partners were submitted timely under Budget Holder guidance;
 - ii. co-financing realized and additional supporters were leveraged;
 - iii. Adaptive management was resorted to prevent decline of implementation efficiency due to the COVID-19 outbreak and restrictions on movement and field activities;
 - iv. partnership arrangements between FAO and private sector and FAO and other related project (IFAD SAPP) has greatly improved results and replicability;
 - v. efforts were made to raise awareness about the SLM models and their efficacy by utilizing media.

Efficiency is rated satisfactory.

3.4 Sustainability

EQ 18 and 19. What is the likelihood that the project results will continue to be useful or will remain even after the end of the project? What are the risks that may affect sustainability?

Finding 11. Overall, the project has had a satisfactory catalytic effect on several government of Sri Lanka initiatives for SLM and agricultural productivity, therefore project pilots are likely to continue beyond end of project. The project has provided strong impetus for the Government's drive towards sustainable, chemical-free agriculture, and demonstrated strong public-private partnership models which could be leveraged in the future. Tools and methods utilized to deliver the SLM models – such as FFS, digital training material (videos, graphics) and digital platforms for training (Zoom and WhatsApp) – have transformed the agriculture extension experience in these districts (and by extension, the provinces). In this respect, the evaluation team concur that the catalytic impact of the project is satisfactory. It cannot be rated highly satisfactory due to the limiting factors described below under risks.

108. **Continuity of SLM models.** The project supported the Government of Sri Lanka to test out and mainstream good agricultural practices widely in the three districts, and provided support to the Government's proposed GAP villages. It is safe to state that the project 'field tested' the GAP village concept in Karaliyadda, Hanguranketha by supporting farmer clusters to achieve GAP certification, enabling production at 'sufficient scale' for export or Colombo markets. This SLM model also addressed a high input consumption and degradation, causing agriculture model (high value vegetables) to ensure that profit margins are retained while farmers adopted new technology and environmentally friendly practices.
109. The project's support to smallholder tea productivity improvement is strongly underlined by government policy and investment to increase tea production and improve exported

tea quantity. Instead of opening up new tea production lands, the project demonstrated converting existing smallholder plots into more productive units with decreased cost of production and increased/improved yields. The simple land and crop management practices introduced through the project, combined with increased use of organic inputs substituting chemical fertilizer and pesticides, have shown demonstrable results within a short period (one year), which generated demand for similar support from neighbouring smallholdings. The study "Impact Assessment of Rehabilitation of Degraded Agricultural Lands Project Kandy, Badulla and Nuwara-Eliya Districts of the Central Highlands" by University of Uva Wellassa, published in November 2021, reports that smallholder tea land management is more efficient under the pilots. This assessment finds that farmers' cost of production has lowered and yields increased due to improved management practices, including increased mulching to retain soil moisture, reduced overapplication of chemical fertilizer, reduced costs of labour by using plucking shears and shade trees of economic value to get more income from the land. The adaptations introduced by the project gave tea farmers a distinct advantage over other smallholders when the government moved to ban pesticides and chemical fertilizers in April 2021. Training materials, guidelines and demonstration plots developed by the project for the Tea Small Holdings Development Authority continue to promote these practices among a wider tea smallholder constituency in the Central Highlands. These farmers had already found adaptations for the fertilizer crisis (shortage of imported chemical inputs) that had severely disrupted agriculture since April 2021.

110. Another example for sustainability is the seed potato production model in Badulla and Nuwara Eliya Districts. This model, explained under section 3.2 on effectiveness (EQ 12), will self-replicate for two main reasons:-it supports a provincial agricultural policy target, and because the economic benefit is clearly demonstrated to the farmer, generating huge demand for the seed potato FFS the field. The IFAD-funded Smallholder Agribusiness Partnership Project entered into partnership with the Provincial Department of Agriculture and FAO in 2021 and pledged to support additional villages to expand the seed potato model demonstrated through the project. The evaluation team interviewed the regional coordinator for Smallholder Agribusiness Promotion Programme who expressed that the SAPP targeted to reach at 1 800 Mt of seed potato per year (reaching up to 1 500 selected farmers) by scaling up the FFS approach and funding the required inputs for local production of seed potato in Badulla and Nuwara Eliya Districts.
111. **Tools and approaches popularized by the project.** Tools and approaches such as farmer field schools, digital training material (videos, graphics) and digital platforms for training (Zoom and WhatsApp) have transformed the agriculture extension experience in these districts (and by extension, the provinces). There is sufficient evidence of these tools and best practices being widely adopted beyond the project period. The Tea Research Institute and Tea Small Holdings Development Authority developed and delivered the entire smallholder tea improvement programme with digital content and Zoom-based practical demonstrations. Both institutions are pleased with the outcome of this trial and to be able to use the same training content to reach a wider group of farmers. The Department of Agrarian Development and the Department of Agriculture at provincial level have improved their extension practices tremendously and this is described more fully under section 3.2 on effectiveness. Institutions have witnessed the success of these models and planning for scaling up at institutional level. In Uva Province, the seed potato FFS has been so successful that the Provincial Department of Agriculture is now considering developing additional FFS

for other economically important crops (e.g. maize), and in Nuwara Eliya District there is a hotline that scales up the WhatsApp based advisory services.

112. **Land use planning approach.** It has been heartening to note the scale-up of the PLUDP approach during the project period. This has been achieved by integrating the approach of PLUDP to the land use policy (under development) and the wider practice of PLUDP by the Land Use Policy Planning Department across the Central Highlands and nationally through recently approved PLUDP guidelines. This has been described in the response to EQ 1 and EQ 2; and EQ 11. It is important to note that the PLUDPs are another good example of the project responding to the Government of Sri Lanka and institutional priorities, therefore contributing to process development and field testing, leading to seamless integration into the wider practice of the national agency for land use planning.

1. Financial risks (moderately likely)

113. Despite efforts by the project, long-term, sustainable financing streams for SLM remain constrained. Government officials interviewed believed that the issue of land degradation was serious and intense in the Central Highlands, and degradation and erosion was happening at a faster rate than could be addressed by a single project. While many of the models demonstrated were successful on their own, in a confined geography, and are replicable through the government institutional machinery, the issue of scale (therefore financing at scale) remains a moot point. Despite the ambition described in the outcome statement of Component 3 to establish longer-term financing flows to address SLM on the ground, the project was not able to institutionalize the innovative models developed by IUCN, such as payment for ecosystem services or agrotourism, as earlier described in this report. Market-oriented private sector models do exist and were successfully executed by the project – the public-private partnerships for good agricultural practice certified vegetables and organic tea production, for example. However, these models, while important, are constrained by scale and the willingness of private sector to continue investing in an uncertain policy environment.¹⁰ Expanding models like tea and seed potato will require re-direction of public investments at scale to influence real transformation of the current agriculture practices in Central Highlands.

2. Sociopolitical risks (unlikely)

114. There is a high level of social acceptance for the models proposed by the project and the SLM solutions promoted. Even those initially viewed with scepticism – such as converting vegetable fields into tea in Badulla District, and GAP-related technology improvements (mulching, insect-proof nets etc) – were later enthusiastically promoted by farmers. Practice change demonstrated a quick return on investment (six months to two years) and created wider demand among other farmers and farmer groups.
115. The acceptance level is particularly high among younger farmers, especially young women farmers. There were recorded instances where young businessmen and women working in factories, shops, etc, were brought back to farm their lands through the knowledge received

¹⁰ The policy decision to support only organic agricultural inputs through government subsidies will impact the GAP, seed potato and tea production pilots that demonstrated an 'integrated' approach and using minimal chemical inputs, as required. The cultivation practices still require certain chemicals and artificial nutrients.

during the FFS and the technical support of the project. Evaluators interviewed at least five women entrepreneurs who have made a livelihood from producing organic inputs to tea and vegetable cultivation, improved vanilla cultivation, established processing plants and value chain along home garden products (spices, mushroom) and produced ornamental plants for sale. The project has empowered youth with new knowledge, tools and technology which have led to spontaneous acceptance, adoption and replication among young farmers. This is a very positive result of the project.

We used to see our parents working on the land without any tools or technology. We never wanted to do farming and moved out in to towns. We were home during the COVID-19 lockdown and participated in the FFS because it was delivered through Zoom, and therefore we now know how much better how to manage land. We now wear boots, gloves, use sprinklers and drip irrigation. We have learned to make and sell organic fertilizer for which there is a great demand these days. From that income, I have purchased a three-wheel vehicle.

Woman tea smallholder, 24 years old., Doluwa, Kandy District, terminal evaluation interview.

116. The government policy and political ambition to restrict/ban agro chemicals in April 2021¹¹ created conditions that were positive for replication and future sustainability of project interventions. Prior to the ban, while planning GAP vegetable and seed potato models, it was evident that farmers were using far more than the required amounts of agrochemicals and soil conditioning inputs. The project demonstrated how as little as 10 to 20 percent of the previous agrochemical volumes could bring higher yields when supplemented with organic inputs, right type and amount of soil amendments and scientific SLM. These practices were delivered through the FFS and by in-farm soil testing. Beneficiaries of the project-supported pilots were not as adversely affected by the agrochemical ban as conventional farmers as they had recourse to technical advisory services of the Government, organic inputs at hand, and were already informed of rationalizing chemical use in the fields. This has created new interest for replication among nearby farmers/farmer groups. This is an important finding endorsed by the Impact Assessment Study conducted in October–November–2021.¹²

3. Institutional and governance risks (moderately likely)

117. There are clear issues of how the SLM best practices would be institutionalized post-project. At the local level, the PLUDPs should be institutionalized through the district and divisional agriculture and land use committees. But the evaluation team found no evidence of efforts to support this mainstreaming. Evaluators found that land use planning and development planning at divisional level remain disconnected and that even in Doluwa DSD, where a complete divisional level plan was carried out, the process was not integrated with the planning process. At the national level, the project supported a Technical Coordinating Committee (TCC) for the National Action Programme (NAP) Steering Committee, but there is little evidence of project results influencing the larger policy space

¹¹ Since then, the Government of Sri Lanka has reconsidered the total ban and allowed private sector to import agrochemicals. Government subsidies, however, will only support organic inputs.

¹² Impact Assessment of Rehabilitation of Degraded Agricultural Lands Project Kandy, Badulla and Nuwara-Eliya Districts of the Central Highlands. University of Uva Wellasa

for SLM or the guidelines developed through the project being actively promoted and integrated into the recommendations of different agencies working on the ground in these districts.

4. Environmental risks (unlikely)

118. There are hardly any notable environmental risks associated with the models that have been promoted and piloted by the project. They have generated positive environmental results (soil conservation, reduction of chemical inputs, reduced use of water, catchment demarcation and conservation, etc.). Only minor issues such as lack of disposal solutions for plastic mulch were observed in the field. The evaluation team was assured by the Department of Agriculture and the private sector company that sustainable solutions are being sought for this as well.
119. While an Environmental and Social Safeguards Screening (ESS) was not applied at the time of project design, the MTR applied the existing ESS tool to the project and found a number of risks related to land use changes, introduction of new crops and improved, modified crop types. However, the project team did not find any evidence or cause for concern. All introduced crops and planting material were locally developed and tested in government agriculture farms. Sri Lanka has a strong plant protection and seed certification legal framework that does not allow invasive plants or animals to be introduced even if they have been tested for productivity or integrated pest management elsewhere in the world.
120. There are issues related to current and future climate risks that need to be addressed in all models such as water scarcity, rainfall variability, drying up of streams, intense rainfall causing landslides and severe erosion on sloping lands, etc. Longer dry periods and intense rainfall are predicted for this landscape under climate change models and could possibly erode some of the positive results from the best practices introduced. Evaluators observed in the field that most models have introduced possible climate change adaptation practices suggested in climate-smart practices and mitigation actions such as technology for water saving and soil moisture conservation, catchment conservation for stream sources and using minimal chemical nitrogenous fertilizer, and controlling the use of chemical inputs. However, climate risk analysis or even consideration of future climatic risks has not informed the design and implementation of pilot SLM models.
121. **The overall rating for sustainability is moderately likely.** Many of the positive results and their replication/integration within the agriculture system are compromised by the issues around sustainable and long-term financing for SLM and the governance/institutional issues mentioned above.

3.5 Factors affecting project performance/quality of execution

EQ 20. To what extent did FAO deliver on project identification, concept preparation, appraisal, preparation, approval and start-up, oversight and supervision? How well were risks identified and managed?

Finding 12. The project has adopted several recommendations made in the mid-term review in 2018. MTR recommendations required the project to redirect investments towards more successful models and demonstrations and improve private sector engagement. Some of the more critical recommendations relating to project M&E were not adopted leading to issues in ascertaining outcome and objective level indicators.

122. The recommendations adopted by the project include taking a more holistic approach to SLM by ensuring markets for farmer products through private sector involvement (RDAL Project, 2019b – MTR: Rec 2), supporting farmer field schools with a digital platform which was well accepted by all farmers and stakeholders (RDAL Project, 2019b – MTR: Rec 3), and allocating more budget to field demonstration including the GAP vegetable model (RDAL Project, 2019b – MTR: Rec 4). The GAP pilot is one of the most successful and financially viable SLM models that the project demonstrated.
123. The outstanding payments for land users was resolved (RDAL Project, 2019b – MTR Rec.5) and project hired the services of NGOs to support field operations (RDAL Project, 2019b – MTR Rec 6). However, the evaluation team witnessed that the workload for Project Management Unit was not delegated adequately. The project was extended by one year as per the MTR recommendation (RDAL Project, 2019b – MTR Rec. 7), creating the space to execute planned activities. The project was able to incorporate climate change adaptation and mitigation principles especially in executing PLUDPs and FFS, providing a more holistic understanding to beneficiaries than limiting it to SLM (RDAL Project, 2019b – MTR: Rec 1).
124. Establishing baseline for impact level indicators was not accomplished (RDAL Project, 2019b – MTR: Rec 8). The project team had conducted the initial discussions with University of Peradeniya and process is yet to be finalized. The project has initiated the participatory M&E system as recommended by MTR (RDAL Project, 2019b – MTR: Rec 9), however this process needs to be expedited.

EQ 25. Was the M&E plan practical and sufficient?

Finding13. Functionality of M&E system was below expectation and did not meet required standards. A solid M&E plan with indicator definitions was not found by the evaluation team. There was no dedicated monitoring officer. The project team members assigned to carry out M&E functions such as obtaining reporting from partner agencies, tracking co-finance and verifying data on lands managed under SLM, were also supporting other implementation tasks.

125. The Field Programme Management Information System (FPMIS) and an associated activity tracking system governed the project. The M&E system development for RDAL project using PIMS was supported by the Monitoring and Reporting Assistant at FAO Country Office at the initial stages of the project. Output and outcome indicators were measured and reported in annual and six-monthly progress reports. This included measuring and validating project assumptions and risks. Annual project implementation review (PIR) reports were prepared by the project team for submission to GEF.
126. The project implemented several SLM pilots in the field with national and provincial government agencies providing technical assistance (TSHDA, Provincial Department of Agriculture, Department of Agriculture, Department of Export Agriculture). Gathering data and information on extents of lands and number of farmers under different SLM approaches in the three districts (Kandy, Badulla, Nuwara Eliya) would have been improved by establishing a standard format and systematic approach. Verifying information on extents under each SLM should have been managed with a solid record management system. The project team spent significant amounts of time collecting information at the end of project. Additionally, it was found that the trained, assigned officer for M&E had left the project and current officer (at terminal) was simply overseeing M&E functions while performing other project duties and learning-by-doing.

127. The project undertook an Impact Assessment in November 2021 at end of project to understand the impact of the interventions, as impact level indicator data was not measured at baseline or at end line. However, the study was limited to identifying impact generated from the SLM models, particularly focusing on activities undertaken to deliver Outcomes 2 and 3 of the project (FFS, PLUDP, innovative financing models and public-private partnerships) The impact level contribution to development objectives and environment objectives were measured or assessed in the process.
128. The evaluation team assesses that the FAO internal data tracking system (PIMS) was not adequate to track and monitor the project effectively. A project-focused M&E system was not developed, and indicator tracking was not carried out as expected. This has led to being unable to verify achievements through empirical/measurable means and possibly underreporting of project's positive results, including gender results.

EQ 21 and 26. To what extent did the execution agency effectively discharge its role and responsibilities related to the management and administration of the project?

Finding 14. Execution impacted by early delays were compounded by process-related issues. The project had a late start and these initial delays and setbacks in project start-up are well documented in the MTR. Interviews conducted by the evaluation team have revealed additional setbacks during the first two years that affected the quality and timeliness of project execution and compounded later by procedural delays relating to field execution and related payments, which have compromised the project timeline significantly. The evaluation team feels that the execution agency could have had a better oversight of the delays and moved quicker to resolve procedural issues which were related to internal interpretation of guidelines.

129. Project delays are summarized below:
- i. Delay in project start-up. This includes the delay in holding the inception workshop due to unavailability of officials, delays in setting up the Project Management Unit Office at the Natural Resources Management Centre in Kandy and perceived lack of support for the Project Management Unit from the Country Office (according to the MTR) and the NRMC (terminal evaluation interviews). Evidence gathered indicate that the NRMC worked very closely with FAO to design the project during the Project Perpetration Grant (PPG), however, there was a disconnect in starting up the project. Both current and former Directors of NRMC have shown lack of integration and engagement with Project Management Unit. The Project Manager at the time, and FAO Country Office, was unable to work closely with NRMC and other government counterparts to address these issues, leading to inevitable delays in start-up.
 - ii. Compounding this, the Project Manager changed in 2017 apparently due to poor performance. Hiring a new Project Manager through competitive process for a project already significantly behind schedule was deemed too time consuming by the FAO Country Office, and a direct contracting method was used to promote an existing project coordinator as the Manager. The process was relatively unusual, however justified due to the urgency of project implementation. With the new Project Manager, there is a notable improvement of relationship with government agencies at national and provincial levels, and with the private sector. Several innovative SLM models were developed for implementation.
 - iii. However, there were persistent issues with fund transfer modality to government institutions and payment for farmers to implement soil conservation measures. These

are well documented in the MTR. The complexity of FAO procedures for fund transfers to government and private sector was compounded by the Government of Sri Lanka's new financial procedures which determined that funds to government institutions must be diverted through Treasury. The halting of payments to farmers for work on their lands (demos and mini-watersheds) in early 2019 has broken trust between land users and the project, and government and the project, seriously affecting farmers and field level officials' willingness to participate in the project. The decision to halt this payment – on the premise (by Budget Holder) that GEF funds should not be directed towards actual field investments and incentives to farmers – affected the relationship between FAO and the Ministry of Environment for more than one year.

- iv. The field investments and SLM implementation in micro-watersheds were to be designed around a specific technical toolkit: Land Degradation Assessment in the Drylands conducted by the NRMC. Due to a number of issues, primarily attributed to the rocky relationship between the NRMC and project, this mapping was delayed and the Project Management Unit began micro-watershed selection and land use planning with the LUPPD. The process of micro-watershed selection and land parcel mapping was very detailed and time consuming, and as pointed out in the MTR, the time needed for this was probably underestimated during the design stage. There has been no collaboration between NRMC and LUPPD to find a common methodology and approach to target watershed selection, land use mapping and SLM recommendations. NRMC's LADA based land degradation assessment was commissioned in early 2021 and completed in September 2021, and did not influence site selection for SLM in any way.¹³

Finding 15. For a project with field implementation activities spread over in three districts in difficult terrain, the project team functioned under several constraints. Project management and technical guidance was under-capacity for a project that had four very distinct outcomes requiring different expertise. The evaluation team notes that the project has managed implementation constraints adaptively and quite successfully where field implementation is concerned, however the gaps in technical capacity are evident in the policy mainstreaming and innovative finance outputs.

130. The first Project Manager was assigned in August 2016 and left in mid-2017, and project start-up was not well established. The recruitment of the remaining project staff (Project Officer, Field Officer, National Finance, and Admin Assistant and Driver/Messenger) was completed by the end of September 2016. The project design underestimated the required capacity to effectively deliver the outputs, and this issue was not adequately rectified during inception of the project, nor post MTR, other than to recommend the recruitment of NGOs to carry out field implementation. The Project Management Unit functioned with one Project Manager, two Field Officers, a Monitoring Officer and one Administrative and Finance Officer up-to October 2021. In November and December 2021, the project managed without any field support, which is a huge challenge for a project with a wide range of field activities which were still at nascent stage. The project team and especially the Project Manager were personally involved in all the nitty gritty aspects of field implementation such as FFS design, PLUDP surveys, delivery of inputs for specific models,

¹³ Assessment of Mapping of Land Degradation and Conservation, Kany Nuwara Eliya and Badulla Districts of Sri Lanka, Natural Resources Management Centre and the Department of Agriculture, September 2021.

coordinating with Extension Officers, Provincial and District Agricultural and Agrarian Officials and private sector. This huge burden of field implementation upon the Project Manager meant that there was scant attention to the policy mainstreaming aspects, conceptual clarity and cohesion between outcomes and monitoring of higher levels results and impacts. The evaluation team sees a clear deficiency in the project design in terms of underestimating the capacity needs of the Project Management Unit and not allocating budgets for embedded or regular technical advisory support to implement the policy coherence and financing related outputs in Components 1 and 3 and the knowledge management aspects in Component 4.

131. The evaluation team notes that the project has managed implementation constraints adaptively and quite successfully where field implementation is concerned. The Project Management Unit overcame the lack of direct Unit capacity by working with civil society organizations on the ground, leveraging the government extension and village level field network, introducing digital communication and learning platforms which enabled faster knowledge transmission, monitoring and reporting, etc; and reduced the need for physical field visits. The project leaned on other projects with larger field budgets or on private sector to deliver certain extension services and inputs to the field. This is described more fully in section 3.2 on effectiveness.
132. Various national and international consultants have been recruited for the project, including a gender consultant (in 2017), an M&E consultant and a communication consultant (recruited from July 2018) as the project planned to start a communication campaign on SLM in the second half of 2018. But this support was ad hoc and short-term. There was no full-time or dedicated technical consultant/adviser available to guide the Project Manager and Project Management Unit. The evaluation team strongly believes that the challenges described above, combined with the COVID-19 issues in the last two years of implementation, has led to a 'fast-tracked' delivery of certain outputs which are disconnected from each other and affecting holistic outcomes envisioned in the design and certain aspects of project sustainability.

Finding 16. Decentralized execution support should have been timelier and more streamlined from both FAO and the Ministry of Environment. The project team received high quality technical advisory support from the Lead Technical Officer and guidance from FAO Country Office. But the lack of dedicated technical advisory support for the project, and the project team's dependence on a few international and national experts on piecemeal basis, meant that key outputs would not be delivered in a coordinated manner.

133. FAO as the Budget Holder provided technical direction through the programmatic Head and operational and M&E support to the project. Procurements and recruitments were handled directly by the Budget Holder at FAO Country Office. However, interviewees said that certain procurements were not backed up by timely budget revisions to back up decisions made by the Steering Committee or Project Management Unit.
134. The project Budget Holder was the FAO Country Representative and during the project period three different FAO Representatives (FAORs) held the position of Budget Holder, sometimes with differing policy perspectives on execution support. The Project Manager reported to the Head of Programme (Assistant FAO Representative), who liaised with the government, convened Steering Committee meetings and provided technical advice and direction to the project. Due to the heavy workload at the Country Office, however, systematic meetings with the Project Management Unit or field visits are not recorded.

There was a monthly programme meeting to which the Project Management Unit was expected to participate and provide progress update of ongoing activities.

135. The project Lead Technical Officer also changed during the project period (one Lead Technical Officer from 2016 to end 2018, and another from January to June 2019, and then again 2021 onwards). There were very few in-country missions of the Lead Technical Officer and the Funding Liaison Officer during the project period. However, the Funding Liaison Officer provided strategic support to the project during inception and especially during the mid-term review. The Funding Liaison Officer at the time, Sameer Karki, supported the project to design the new theory of change and held discussions with the government (primarily Ministry of Environment and Natural Resources Management Centre) to facilitate the payments for field activities which were held up for many months due to disagreement between FAO and government on the modality of fund transfer.
136. All project activities were whetted and technically improved by the FLO prior to being approved by LTO. The Project Manager and team report receiving adequate and timely technical inputs to improve the Sustainable Land Management models and partner engagement models (GAP vegetable model with the private sector and government, for example, has been discussed and improved with FLO assistance prior to being funded through the project).

Quality of project execution is rated satisfactory.

Finding 17. The quality of project implementation could have been improved by better coordination at the national level with related SLM institutions, and mechanisms should have been stronger to overcome gaps in Project Management Unit capacity. The project's SLM models and their sustainability could have been strengthened by a more proactive Project Steering Committee and NAP Technical Expert Committee (TEC) facilitating the upward integration, knowledge dissemination and sustainable financing aspects. The delayed start of field activities – especially SLM models – meant that many of the models are coming to maturity at end of project without sufficient time to investigate their positive or negative impacts or evaluate cost-effectiveness. This poses an issue for both knowledge management and upward integration into policies and strategies and planned programmes of related sectors, which could have been addressed through stronger liaison with the UNCCD NAP coordinating mechanism.

137. The Project Management Unit, while motivated and highly committed, lacked the necessary technical skills for a project of this nature. There were respondents who believed that the Project Management Unit should have had dedicated technical advisory support for SLM, especially as the Project Manager's time has been mainly diverted towards field-based activities and coordination. The project team received the required technical inputs from the Lead Technical Officer for the policy review workshop in 2019 which revisited the need to develop a separate SLM policy for the country, and deliberated on mainstreaming of SLM into other sectoral policies and strategies. There was substantial support extended to the project by the Lead Technical Officer and Funding Liaison Officer during the post-MTR period to rework the theory of change and project results framework. However, day to day technical advisory support for the project was clearly lacking and this has been somewhat moderated by engaging technical government institutions to deliver project outputs.
138. In delivering Component 2, the project has demonstrated strong partnerships with national agencies responding to policy priorities at the national and provincial levels pertaining to

land use (PLUDP design and field testing of the approach), plantation production (tea productivity improvement) and agriculture (seed potato and GAP promotion).

139. However, when it comes to Components 1, 3 and even some parts of Component 4, this synergy and coordination with existing mechanisms and programmes was not observed. This is where the critical gap between NRMC and the project is most evident. NRMC is the main line agency for implementing the Soil Act and plays a key role in the National Steering Committee for NAP implementation. NRMC's distance from the project's day to day implementation created a huge void for the effective delivery of Components 1 and 4. Similarly, the evaluation team tends to agree with interviewed stakeholders that Component 3 on financing should have been managed by technically adept third party for more effective delivery. The piecemeal approach to Component 3 resulted in technical studies, a few half-hearted attempts at new financing mechanisms, and several public-private partnerships based on existing private sector agricultural investments, which the project successfully leveraged (but were not necessarily project-driven).
140. The Project Steering Committee had a more functional role (e.g.. for essential decision-making such as project extensions) rather than providing guidance on SLM implementation, supporting to overcome interministerial cooperation issues or policy mainstreaming. The project's SLM models and their sustainability could have been strengthened by a more proactive Project Steering Committee and NAP TEC facilitating the upward integration, knowledge dissemination and sustainable financing aspects. There were very few Steering Committee meetings recorded. Annual meetings were held for essential project-related decision-making. Although some interviewees described a coherent link with the UNCCD NAP Steering Committee and its Technical Expert Group, the evaluators only found one instance when the project results were discussed in this committee. It is unclear how the Project Steering Committee and UNCCD NAP Committee interacted, if at all, how regularly. There is unrealized potential to influence sectoral policies and long-term financing for SLM through the Steering Committee and NAP TEC.
141. Despite these challenges, it must be put on record that the project performed exceptionally to deliver the achievements and results described in earlier sections. This is despite an almost two-year delay in initiating implementation and resolving early issues with fund transfer modality to government and to communities. Therefore, the adaptive management steps taken by the project, especially the efforts to overcome COVID-19 related travel and meeting restrictions, have to be commended. The unintended consequences and positive results of these steps have led to a whole new way of delivering technology and knowledge to farmers.

Overall Quality of Implementation is marginally satisfactory.

Financial management and mobilization of expected co-financing

Finding 18. Overcoming initial delays, the project has disbursed 97 percent of funds by December 2021. Co-financing reported by December 2021 exceeded the committed figure, but certain discrepancies need to be adjusted. Co-financing should have factored in the contribution of beneficiary farmers who were required to pitch in with card cash as co-contribution to each SLM pilot.

Table 4. Project expenditure report

Project Status Report as of 31 December 2021	
	USD
Budget	1 344 646.00
Total Expenses	1 303 479.00
Balance	41 167.00
Delivery Rate	97%
EXPENDITURE BY CATEGORY FOR FULL PROJECT	
	USD
Consultants	532 080.00
Contracts	283 276.00
Locally Contracted Labour	4 672.00
Travel	63 024.00
Training	58 663.00
Expendable Procurement	274 187.00
Non Expendable Procurement	18 083.00
General Operating Expenses	69 494.00

142. Table 4 shows that by end of December 2021, the project's financial delivery (including commitments) was up to 97 percent and many of the SLM models were being replicated by government and private sector co-finance. By the MTR, the project has disbursed just over half (53.6 percent) of the available GEF funds, and displayed a very low rate of delivery until the start of 2018.

Table 5. Deviation of Budget per Outcome/Component

OUTCOME/OUTPUT	ORIGINAL ALLOCATION	MIDTERM REVISION	FINAL EXPENDITURE	DEVIATION %
Component: Project Management	122,241	117,242	114,709.00	4%
Component 1: Strengthening policy, regulatory and institutional frameworks for Sustainable Land Management	200,000	211,924	269,773.00	-35%
Component 2: Implementation of the identified land restoration technologies in the affected areas of the three districts through a participatory process	842,364	845,135	663,425.00	21%
Component 3: Support to the development and implementation of innovative funding systems to promote SLM	95,000	66,864	66,331.00	30%
Component: Component 4: Knowledge management, awareness raising and dissemination of best practices	85,052	103,494	189,241.00	-123%
	1,344,657	1,344,659	1,303,479.00	

143. Budget deviations are justified by budget revisions approved by the Lead Technical Officer. Significant deviations were observed for Components 1 and 4, against the planned budget, however this is fully justified by MTR recommendations to focus on field implementation and strengthen the FFS model and develop more training and awareness material to

support the SLM practices, FFS curricula and training models. Budget deviations have been justified by explanatory notes approved by the Lead Technical Officer and Budget Holder and reviewed by the evaluation team.

144. Co-finance realization is much greater than envisaged during project design. At CEO Endorsement the project has letters of commitment for USD 9 859 100.00 in co-finance from nine national and provincial government agencies and FAO. At end of project, the project reports USD 13 232 395.87 in co-finance of which 90 percent or nearly USD 12 million is from the Ministry of Environment. This co-finance represents public expenditure on environmental projects in this landscape including the Ministry of Environment's programme to conserve major rivers and their watersheds. There is considerable co-financing attributed to technical staff and resource persons from the Ministry of Environment to support project implementation. The rest of co-finance comes from seven other provincial and national agencies including LUPPD, TSHDA and Provincial Agriculture Departments in the project districts. This is reflective of larger amounts of public investments in sustainable land management and sustainable agriculture than envisaged during design. FAO committed USD 120 000 but reports over double of that – USD 270 000 as their contribution to the project's precision agriculture efforts (soil testing equipment and related capacity building).
145. Some of the agencies that committed considerable co-finance at the design stage but did not actively engage in the project, or invest as planned in parallel during implementation, are Hadabima Authority (committed over USD 2 million but engaged with the project only to deliver field coordination support in Kandy District); Mahaweli Authority (committed USD 700 000 but did not actively engage with the project) and the Forest Department (committed USD 600 000 but did not actively engage with the project). As per the Table 6, it should be mentioned here that co-financing amounts reported as actuals in the 2021 project implementation report were commitments calculated by the government agencies. Therefore, certain co-finance at end of project (actuals as of 31 December 2021) is below the committed amount in June 2021.
146. The project leveraged considerable support from private sector to support SLM models. However, only modest amounts are reported in Table 6 on co-finance expected at the end of December 2021. The evaluation team believes that a larger portion of co-finance has been left undercounted and unaccounted. Further, the SLM models promoted by the project demanded farmer co-investment. Even home gardens were developed with actual cash co-investment from each farmer. Therefore, it is assumed (and deduced from evaluation team interviews in the SLM sites and from field observations) that each land plot developed under the project attracted between 25 to 75 percent co-investment from the farmer. A good example of this is the GAP vegetable model, where the farmer was required to invest almost 40 percent of the cost of the technology package. The Impact Assessment details that the entire cost of the model – USD 210 000 – was financed by three parties: private sector Cargills Ceylon Plc (USD 68 000), the RDAL project (USD 54 000) and the farmer (USD 88 000). This co-investment, unfortunately, has not been calculated as part of the co-finance. Therefore, it is safe to assume that the actual co-finance could be much higher than reported by the project.

Overall financial management and co-finance mobilization is rated satisfactory.

Table 6. Co-financing table (in USD)

Source of co-financing	Name of co-financer	Type of co-financing	Amount confirmed at CEO endorsement / approval	Amount reported at mid-term (confirmed by the review/evaluation team)	Amount reported as commitments as of 30 June 2021	Expected total disbursement by end of project	Innovative financing
National Government	DOA	In kind	5 720 000.00	286 127.60	415 286.00	367 286.43	
National Government	LUPPD	In kind	154 100.00	836 759.31	836 759.31	601 820.71	143 174.83
National Government	Forest Department	In kind	615 400.00				
National Government	Hadabima	In kind	2 087 700.00				
National Government	MOE&WR	In kind	168 500.00	955 972.45	955 972.45	10 009 095.48	
National Government	Irrigation Department	In kind	30 800.00				
National Government	PDOA - Uva	In kind	187 700.00	174 374.09	174 374.09	164 332.05	
National Government	Mahaweli Authority	In kind	701 800.00				
National Government	PDOA - Central	In kind	73 100.00				
	FAO	In kind	120 000.00	271 000.00	271 000.00	271 000.00	
National Government	Tea Research Institute- TRI			58 313.96	58 313.96	58 313.96	
National Government	TSHDA - Badulla			364 169.91	364 169.91	322 793.62	
National Government	TSHDA - Kandy			549 438.72	1 210 340.91	1 070 452.26	
	DDA N.Eliya					27 545.23	
	DDA Bidunuwewa					126 733.67	
	Cargills Ceylon						67 335.06
	Adamjee						2 512.56
		TOTAL	9 859 100.00	3 496 156.04	4 286 216.63	13 019 373.41	213 022.46

EQ 22, 23 and 24. Were there synergies between the project and other initiatives in the same region? If so, to what extent and how did the project build on such initiatives (e.g. by partnering)?

Finding 19. The project built strong partnerships to deliver SLM models with government, other donors and with the private sector. These partnerships underscored the sustainability of project interventions and supported the RDAL project to capitalize on co-investments from both public and private initiatives.

147. As described in section 3.2 on effectiveness, the RDAL project developed strong partnerships with government agencies at national and regional level, and with the private sector to deliver on successful SLM models. Among others, the RDAL project was successful in::

- i. Collaborating with national agencies such as Land Use Policy Planning Department to deliver an important policy output, the Participatory Land Use Development Planning guideline and its integration in o the National Land Use Policy.
- ii. Developed partnerships with plantation sector agencies such as Tea Research Institute (TRI) and Tea Small Holdings Development Authority to develop guidelines and training material for improved soil and crop management in the tea landscape in Central Highlands.
- iii. Worked with the Natural Resources Management Centre (NRMC) to develop the Land Degradation Assessment in Drylands study and Department of Agrarian Development, Department of Export Agriculture, Hadabima Authority, provincial departments of agriculture, divisional and district secretaries, civil society organizations in the villages (such as village development societies/farmer organizations/women’s organizations) to develop and deliver pilots for a range of conservation agriculture practices described above.
- iv. Farmer field schools were developed and delivered with training institutes at regional level. The project has also closely worked with local NGOs, other projects (SAPP, Upper Watershed Development Project) and with other UN agencies such as WFP and United Nations Development Programme (UNDP).

148. Some of the partnerships with the private sector are worth mentioning here. The GAP vegetable production model with supermarket chain Cargill Ceylon Plc has earned several mentions earlier in the report for its strong partnership model. The private sector partners was already planning a small GAP pilot in Badulla District. The RDAL partnership strengthened and scaled up this model to Badulla and Nuwara Eliya and included a larger number of farmers and villages. The private sector partner brought in technology, markets and concessional financing while the government extension services provided knowledge and technical advisory services to the farmers to achieve certification. The project provided finances, especially for new technologies being experimented, and facilitated the agricultural extension services delivery to the field. Smaller but significant pilots implemented with Fonterra Brands Lanka to improve dairy farming practices and Adamjee Luckmanjee Exporters to support vanilla cultivation in Kandy District showcase successful partnerships with strong potential for scaling up. Private sector representatives of these companies interviewed by the evaluation team clearly demonstrated their willingness to scale up such partnerships. The lengthy process of FAO approval for private sector engagement was mentioned as a drawback by government and private sector.

149. Another interesting partnership evolved around the seed potato production pilot in Badulla and parts of Nuwara Eliya Districts. The project was able to leverage financing from an IFAD project – Smallholder Agribusiness Partnership Project – to collaboratively invest in seed potato local production. RDAL’s FFS for seed potato and trained trainers/extension staff were used by IFAD’s Smallholder Agribusiness Promotion Programme to expand the seed potato model in 50 villages of these districts, subsequently. This model was highly commended by the Provincial Director of Agriculture Uva (Badulla District) where she reiterated that despite the time taken to develop this tripartite agreement between the two donor agencies and the Provincial Department of Agriculture, the model has yielded strong and immediate results which she is keen to expand into other crops in the province to include maize production. Seed potato and maize are currently largely imported, therefore encouraging local production saves foreign exchange. The project supported FFS and demonstrated how seed potato can be cultivated in a conservation-friendly manner, with reduced cost of production, higher yields and better incomes for farmers.
150. Some partnerships envisaged during project preparation did not fully materialize. These include partnerships with the Mahaweli Authority (Mahaweli River Basin Authority) and Hadabima Authority (established to conserve the Central Highlands or ‘heart of the country’). However, the project has adaptively managed partnerships with state and non-state actors to deliver a range of successful sustainable land management pilots and through these partnerships ensured that the pilots will be scaled up. As mentioned earlier, spontaneous scale-up of pilots is reported through both public and private sector.

Rating for stakeholder engagement and partnerships is highly satisfactory.

4. Gender and safeguards

4.1 Gender considerations

EQ 27. To what extent were gender considerations taken into account in designing and implementing the project?

Finding 20. The evaluation team did not find that the project was implemented with a particular focus on gender. The project design did not have a gender analysis or a gender action plan. However, the evaluation team finds that the project has delivered strong gender results through implementation with a practical focus on activities that have enabled high rates of participation, access to knowledge, access to financing and increased social capital building amongst the female beneficiaries. The project has achieved considerable gender results but is not able to quantify these, owing to lack of data.

151. The project document only cursorily mentions gender. "The project will tackle the gender issue by promoting participation of both women and men in PLUD raining activities, and by identifying SLM measures that can be implemented by women with no need to use heavy implements." There is one gender-disaggregated indicator for training events: "32 training events will be organized and the project will ensure that at least 50 percent of people trained are women and that attention be paid to gender division of labour and incomes from SLM."
152. To improve gender-related results, the project recruited a short-term gender consultant in 2017. The internal report "Guidelines for Mainstreaming Gender", produced by the project, highlights the lack of gender consideration in any pre-project baseline survey or project design. The report proposed strategies to mainstream gender at outcome and output level. However, the report also proposed a very modest target for gender inclusion in the project: 20-30 percent, compared to the 50 percent target for training included at project design.
153. The MTR reported that women were benefiting more than men from the project, with informants (mostly men) explaining that this is because many local men work away from home. Women actively contributed to all meetings and there was no risk of them being sidelined, especially in activities pertaining to project activities at farm level and during training. The MTR made a strong recommendation under cross-cutting themes to ensure that some activities on the ground are particularly designed to focus on the needs and interests of women (i.e. tailored for them), and others to attract young people.
154. The RDAL M&E records show that numbers of men and women attending training were being tracked and recorded, and that in most cases more women than men attended project training. However, there is no gender-disaggregated database for general beneficiaries of the project or by different SLM model, hence it is difficult for the evaluation team to analyse gender sensitivity in the design and implementation of these pilots, except anecdotally. The project conducted an Impact Assessment at end of project but the assessment team did not have a gender specialist, nor did their terms of reference expect them to closely examine gender impacts of the SLM pilots. The evaluation team considers this a missed opportunity to generate evidence of gender mainstreaming into the project outcomes and outputs as recommended in the 2017 report. The theory of change developed at mid-term also did not deal in detail with gender, possibly realizing by then

that project impacts were favourable to women. Therefore, the evaluation team concludes that there is no empirical evidence of targeted gender mainstreaming in the project.

155. Despite the above, the RDAL project has generated quite a few notable gender results which are presented anecdotally below, per outcome area. The extent of gender integration into overall M&E framework of the project is also assessed.
156. **Outcome 1** focused on strengthening the SLM policy and developing SLM mainstreaming tools. One of the main results is the development and rollout of PLUDPs. These plans have a technical land use approach and do not have poverty or gender analysis built into it. Therefore, the resultant PLUDPs developed by the project and scaled up by the LUPPD do not address gender issues in land use – ownership, practices, access to knowledge and livelihood opportunities. The project supported land use guidelines for tea, home gardens, seed potato, GAP vegetables, dairy, etc which do not incorporate gender considerations. They are developed in the assumption that technical application of these guidelines is gender-neutral.
157. **Outcome 2** produced strong gender results. This is not necessarily due to purposeful targeting or through gender-specific activities, but due the focus on home gardens and smallholder tea fields, which are generally run and managed by the female members of the family. The Impact Assessment points to the impacts and benefits on women. The evaluation team can also confidently report that there was sufficient evidence of women's participation, and empowerment through the project in the field.
158. This empowerment is not just evidenced in the women farmers and tea smallholders, but also within the extension services as well. Project sites were serviced by both male and female Extension Officers. However, nearly 60 percent of officers who benefitted from project-supported capacity building are female. Out of a total of 135 officers trained, 80 are women. Breakdown by district is as follows: Badulla District 29, Nuwara Eliya District 14, in Kandy District 47. Several (15) female extension and field officers were interviewed by the evaluation team, and all reported capacity development and knowledge acquisition through the project. Some of the most remote villages and sites for SLM models were supervised by female Extension Officers, who had to manage difficult terrain and weather conditions to deliver the FFS in these locations.

I worked in the field for over 12 years, but the training received by this project on the FFS for home gardening was the best training – and I also see how it has impacted the practices of farming households. It is very rewarding to visit the villages we have managed to transform through the project and the FFS. The concept of commercial home gardens where households derive an income from the land has been successful with high number of females participating.

Female village Extension Officer of the Department of Agrarian Development in Pambadeniya, Kandy District.

I suggested Malpola for the seed potato pilot. Mostly because of its remoteness and the interest of the farmers. There are many women farmers as well. Even though the site is so challenging for me to manage. There are no busses to the village. I would have to take a tuk from the last bus stop. The roads are so bad during rainy days that tuk tuks cannot get there. But working with the project has renewed my commitment to work with remote

locations like this.
 Female Agriculture Instructor in Welimada, Badulla District.

The WhatsApp groups have also helped us in other ways. We are more united as a community and help each other out – with seeds and other material – but also by contributing our time and labour to help each other's plots. We get together and help members who are sick, who have had a personal problem or cannot work for a period of time. We have learned how to improve nutrition at home by consuming more leafy vegetables, local fruits and organic vegetables.
 Female farmer, Sapugasulpotha, Badulla District.

159. Notable gender achievements are the high number of young women as project beneficiaries. Attracting young people for development projects is quite challenging in Sri Lanka's rural areas. However, the project attracted both young women and men. There are several reasons for this positive trend: the digital delivery of FFS and extension services attracted more youth to participate, and new technology made farming a more attractive livelihood for youth. In addition, COVID-19 lockdowns meant that many young people working in towns and cities returned to their villages and were available to work with the project. The evaluation team met several young women who had made successful enterprises of value addition by processing home garden produce, manufacturing organic inputs for farmers, producing seed potato, ornamental plants and tea plants for sale. Some of these young women were driving/riding around in their own two- or three-wheel vehicles as well.

160. **Outcome 3** does not have gender results to present.

161. **Outcome 4** was dedicated to knowledge management. The project produced several case studies on benefits to women through the project SLM pilots as described above. However, beyond the portrayal of women beneficiaries, the project reports more significant gender results in reaching a higher number of women through online FFS and WhatsApp groups. Beneficiaries interviewed by the evaluation team unequivocally attest to the positive outcomes of the online training format, including more women being able to participate as described above in the knowledge management section. WhatsApp groups are used for more than networking among farmer women and technology dissemination. The groups have increased collaboration amongst community members to exchange seeds, market information, nutritional information, and other important information within the community (including news on COVID-19 vaccination). Access to information and use of ICT has increased exponentially among the project target women in comparison to control groups in neighbouring villages.

I have been growing tea for 20 years now but never received any proper information or guidance on how to manage the crop. Through the FFS, I have learned so many things to improve the way I cultivate tea, the way to prune and manage the soil, when to fertilize and when to irrigate to get the best yields.
 Female tea farmer, Badulla District.

As young people, we did not want to get into agriculture. We would see our parents slaving away in muddy clothes and for very little income. I joined the FFS because I was not doing anything at home, But now, I have learned how to produce ornamental plants and flowers for sale with modern techniques and mechanical irrigation. I produce my own organic inputs at very low cost. I can even sell the surplus through the WhatsApp group. There is

always a high demand for organic inputs.
Young Female farmer, Panwilatenna Village, Kandy District.

From being an unemployed, secondary educated young woman simply idling at home, I have become an agroentrepreneur. I produce fertilizer and pesticides which are in high demand these days since the government banned pesticides. The income has enabled me to purchase my own three-wheel tuk.
Female young farmer, Panwilatenna Village, Kandy District.

162. According to the Doluwa Divisional Secretary, the participation has also been favourable for men. In her experience, development projects generally draw female participation as men do not want to go to many meetings, women are the majority in village societies and associations, and generally there is no faith in 'projects'. But this project attracted many male farmers as they considered the project to deliver useful results to them and because the process was transparent and practical.

EQ 28, 29 and 30. To what extent were environmental and social concerns taken into consideration in the design and implementation of the project?

Finding 21. The project had no safeguards framework in design and in implementation, and there was no purposive targeting of vulnerable, marginalized communities or ethnic groups. The MTR had derived possible environmental threats that could be observed during implementation but the evaluation team could not find evidence of such issues in the field. Environmental and social benefits were assessed positively at the end of the project.

163. The project did not have an environmental or social safeguards framework in place. There was no purposive targeting of vulnerable, marginalized communities or ethnic groups. During implementation, the project focused on technical aspects such as geographical features (watersheds and landform), and farmers who were able to co-invest were given priority during implementation to successfully demonstrate sustainable land use models. This may have led to unintentional marginalization of farmer households who were interested in implementation, but unable to invest their own funds during the project implementation period.
164. However, Agricultural Extension Officials have very good knowledge of the terrain and the socioeconomics of their areas. Due to their close engagement in site selection, remote and inaccessible villages were selected for piloting. Malpola in Badulla District did not have access to electricity until late 2021. Some villages, such as Nelugala in Nuwara Eliya, are inaccessible without a four-wheel vehicle.
165. With regard to environmental safeguards, as mentioned earlier in section 3.4 on sustainability under environmental risks, while the MTR pointed to several possible issues that could be generated from project implementation, both the terminal evaluation and impact assessment surveys (which were carried out in the field in all three districts) could not find any concrete evidence of these threat.

4.2 Progress to impact

166. Likelihood of impact from the project outputs and outcomes is rated satisfactory considering the below:

- i. The project has strengthened and capacitated extension services in the three districts and facilitated their role for technology transfer and dissemination. The availability of digitalized and easy-to-access information and advisory services has improved the effectiveness of the service (Video, Zoom lectures, WhatsApp groups, etc.), and farmers have been unusually responsive to the digital training format and have adopted technology more readily than anticipated.
 - ii. Efficiency and 'reachability' of the extension services and field officers has built more trust in the government system and farmers are more likely to adopt advisories.
 - iii. The ability for beneficiaries and officials to remain connected through WhatsApp groups has proven to be an excellent way of empowering farmers. Farmers have access to the highest levels of the agriculture service network in the region (province) and can learn from each other by sharing best practices as photos and videos amongst the group. This created competition among beneficiaries to perform better and more effectively improving the adoption rates of certain best practices.
167. Likelihood of impact is positively influenced by the strong market focus of certain SLM models which will lead to spontaneous adoption by farmers through lateral dissemination. Private sector partnerships and market demand for tea and high-grown vegetables enabled farmers to adopt the recommended land use practice changes with some confidence. The success of these early adopters has led to greater interest among the community to invest in change. Availability of markets and quick results from investments in good agricultural practices/soil conservation technology (including reduced labour, reduced chemical inputs and better yields) has led to new demand from neighbouring farmers.
168. The drawback observed by the evaluation team is the disconnect in the way outputs under different components were implemented. The evaluation team concludes that the theory of change did not happen as planned leading to a lack of upward integration of SLM models. This has created gaps in policy level mainstreaming, financing options and knowledge dissemination for effective replication of these SLM models. The policy-level interventions implemented under Outcome 1 should support the wider adoption of SLM practices and strengthen soil conservation regulations to guide informed development planning through PLUDPs. The financing instruments developed in Outcome 3 should directly support the scaling up of the SLM models and even the land use planning approach. Knowledge products and platform should focus on this integrated approach and showcase the policy-practice-finance-knowledge continuum is demonstrated in the field. There are some successful examples (as in the GAP vegetables pilot) however, overall, the project's components and outputs appear to have been implemented independently of each other leading to several outputs that are important on their own but 'hang loose' in total picture. A good example is the Land Degradation Assessment under Outcome 1, which was to direct site selection and investments in soil conservation but was finally completed at the end of the project period.

EQ 31 and EQ 32. To what extent is the project likely to contribute to the reverse and arrest land degradation in agricultural lands in Central Highlands of Sri Lanka?

Finding 22. The project has created an enabling environment to address the agriculture-based drivers of land degradation in the Central Highlands of Sri Lanka. These enabling conditions, when applied at scale can, arguably, support sector-wide transformation and address land degradation at a landscape level.

169. Some of the key outputs of the project to support this transformation are:
- i. Land Degradation Assessment in Drylands.-The project pilot tested methodology for assessing land degradation in the Central Highlands (the LADA modelling in three project districts) to identify degradation hotspots and critical areas for priority localized action. This methodology, applied to all districts in the highlands, will provide a comprehensive view of the Central Highlands conservation needs.
 - ii. PLUDPs. A tested methodology to develop Participatory Land Use Development Plans at the local level and later elevating it to policy level. Ideally, the LADA assessment should identify the hotspots or 'where to work', and the PLUDP methodology can then be applied at a priority level to these hotspots and identified priority watersheds to facilitate local-level conservation needs informed planning. With both the assessment tool and the PLUDP testing out in these districts, the project has paved the way for faster application of the PLUDP to the priority 'hotspots' identified through LADA assessment.
 - iii. SLM models. Developed and implemented with the government and private sector partnership, SLM models have provided concrete evidence of 'market-based, economically viable and socially acceptable' agriculture production methods that meet conservation goals and are climate-resilient. The assessment of actual ground level impacts of these models and the socioeconomic impacts (attempted by the project through the RDAL Impact Assessment in 2021) will provide evidence to policymakers to invest further to scale them to achieve both agriculture production and farmer upliftment.
 - iv. FFS training curricula and delivery modality. The capacity building facilitated by the project through farmer field schools to support the SLM models, and the innovative ICT-based delivery of this capacity building has transformed agriculture training. The project has created a highly motivated cadre of Field Extension Officers, with most of them saying they had never received such a practical and well-designed training programme previously. Senior Extension Officers and Lead Farmers have been trained together as trainers and can promote the SLM models and the FFS concept to other areas and for other crops.
170. Due to its own financial constraint, the project was limited to a small geographical space in the Central Highlands, but it is safe to say that, within the districts, the RDAL project has created sufficient impact to be appreciated at the highest level of district and provincial decision-making. Due to gaps in policy mainstreaming/process mainstreaming and the inability to leverage long-term sustainable financing at the scale required, the project is unable to demonstrate a wider transformation at national level at end of project.

EQ 33. To what extent is the project likely to contribute to the increase in the provision of ecosystem goods and services and enhance food security in the Central Highlands of Sri Lanka?

Finding 23. The project's SLM pilots have demonstrated positive results that enhance food security in the Central Highlands. The pilots have demonstrated positive changes in ecosystem services for water and soil fertility. The project did not set out to demonstrate climate resilience, however many of the practices implemented in the field through the pilots have in fact supported resilience building at farm and watershed level.

171. The project's investments in home garden development directly support improved food security and nutrition at the household level. This is evidenced in the Impact Assessment report which documents that households who benefitted from the project's home garden development investments had a more diverse and nutrient rich diet which was low-cost. These families secured around 70 percent of their vegetable, fruit and green leaf needs from their gardens or the immediate community. This has been especially beneficial during COVID-19 lockdowns when markets were closed and procuring food from shops was expensive. SLM pilots on seed potato cultivation and GAP vegetables could, if scaled up, have a long-term positive impact on regional and national food security targets of the government. SLM models focused on rational use of chemicals which is cost-saving for farmers. This and increased incomes from crop diversification on sloping lands lead to better household food availability and higher living standards.
172. The project's interventions on water security are also important to mention here. By managing demand (by drip/micro-irrigation), improving availability (rainwater harvesting ponds) and ensuring conservation of catchments to increase water yields in streams and springs, the project has contributed with practical solutions to huge problems faced by farmers in the Central Highlands, such as high rainfall variability and longer drought. In several villages in Uva Province, the project supported construction of plot level rainwater harvesting ponds with safeguards against erosion and landslides. In one village, the Agriculture Department reports as many as 80 small plot levels ponds constructed to support farmers tide over dry seasons. These ponds combined with efficient irrigation systems enable farmers tide over longer droughts and make it possible to cultivate an additional season during the dry months.
173. There is anecdotal evidence of ecosystem services – water primarily and also soil fertility/productivity – improving through project intervention. Villagers in Bandarawela, Badulla District have reported increased water yields in their wells after catchment conservation efforts such as forestry and increased shade for the stream rivulets. The results are just beginning to emerge, and it is too early for accurate prediction and quantification. Early implementation has shown clear signs of soil fertility improvement, but improvements in water yields related to watershed conservation and improvements in soil health linked to reduction of soil degradation and erosion are long-term changes that are not quantifiable during the project implementation period. But interviews with beneficiaries in Dambugasagala in the Badulla District and Naranhinna mini watershed in Kandy District have provided anecdotal evidence that improved water yields is attributed to catchment conservation and reduction of forest fires in the watershed.

5. Conclusions and recommendations

5.1 Conclusions

Conclusion 1. The project remains highly relevant to Sri Lanka's national priorities and policies.

174. The project design and the generated results remain relevant and important in the current context. First, conservation of the Central Highlands has remained a policy priority for decades. The National Action Programme for Land Degradation prioritizes soil and water conservation measures focused on the Central Highlands, also known as the country's 'water tower' since all its major rivers emanate from this central mountain massif. Increased rainfall variability, land use change, depleted forest cover and demand for land and water has put tremendous pressure on this fragile landscape. Climate change has aggravated these baseline conditions. These districts record longer drought, unseasonal storms and intense rainfall events. Many villages in the upper catchments face regular drought conditions, making them dependent on government relief for drinking water. Efforts to curb erosion-causing vegetable cultivation is thwarted due to these uplands supplying 'high-value' vegetables to the local and export market. Government commitment to watershed conservation stems from the urgency of ensuring adequate flows to the Dry Zone where the Government has invested tremendously in large dams and irrigation expansion projects for cultivation of rice and other staples. Despite several projects and investments, practical, market-oriented mechanisms for soil and water conservation were not demonstrated previously. Hence, the project remains highly relevant in both design and process (SLM pilots, public-private partnerships, training through farmer field schools).
175. Certain trigger factors have increased the project's relevance: the Government's policy decision in April 2021 to ban agrochemicals and withdraw of subsidies for fertilizer, persuading farmers to grow organically. The project supported organic cultivation in home gardens and the farmer field schools for commercial crops supported good agricultural practices that used minimum chemicals. Project beneficiaries were able to demonstrate successful, commercially viable organic fertilizer and pesticide production as well as show improved yields using 10 percent of the previously applied fertilizer. The advantage of using minimum fertilizer and using mechanical and organic pest control to the extent possible was amply demonstrated in the field. These lessons were invaluable for both farmer-to-farmer learning, and the wider promotion through extension services.

Conclusion 2. The project has managed to overcome early delays and COVID-19 related setbacks, demonstrating positive unintended outcomes while adapting to the pandemic restrictions.

176. The project suffered several setbacks in the early years of implementation. These relate to delayed start, changed in Project Management Unit and in FAO management and advisory services (Lead Technical Officer, Funding Liaison Officer) and delay in making field payments to farmers for soil conservation measures. Hence, the bulk of field implementation commenced after the MTR in 2019. The following two years were affected by COVID-19 and travel and meeting restrictions imposed to control the spread of the pandemic. These seriously impacted the delivery of the project, especially Outcome 2 which set out to demonstrate practical measures to address soil erosion and watershed conservation. The restrictions on travelling and meetings, and lockdowns in certain districts,

prevented the project from rolling out the farmer field schools as initially planned. Out of this challenging situation, what might be the most lasting legacy of the project was borne. Together with agricultural training institutes and extension services, the project team developed video and online modules delivering the same practical in-person experience to farmers via Zoom and WhatsApp. Initial scepticism of this delivery mode to farmers and remote villages was soon overcome due to the enthusiasm in which this training was received in the field, and the spin-off benefits of using electronic training platform was soon evident. More participants could join the training, the material was available online for perusal after the training, feedback and active participation from the farmers was more evident, it was much easier/safer for extension services as travel was avoided, and more women and young farmers were able to participate. The agricultural services of Uva and Central Provinces have already formally adopted this form of training delivery and are replicating both training format and WhatsApp group-based communication for other areas/crops. Moving to an electronic platform enabled the project to reach more beneficiaries and conduct more trainings in remote locations than would have been possible otherwise, therefore it is safe to conclude that these 'adaptations' to a crisis situation have had the unintended outcome of increasing efficiency and improving gender/youth participation in the project.

Conclusion 3. Partial achievement of certain outcomes and outputs can hinder scaling up and policy influence.

177. The partial achievement of Outcome 1 and 3, in particular, the policy instruments and financing ambitions of the project could impact on the scaling up and outward dissemination of the project's land use approach. One of the most pertinent issues is the late completion of the LADA assessment of the Central Highlands to identify land degradation hotspots. Having this information too 'late' in the project prevented effective demonstration of PULDP and SLM model development and implementation in these hotspots. The more technically rigorous approach should have been to identify the hotspots through the assessment, and use the PULDPs as a tool to develop a collaborative land use plan that leverages development/social subsidies and extension services from the local and national governments. There is some debate on how much the project's approach and activities will influence a revised Soil Act, which is under the jurisdiction of the Department of Agriculture, and therefore the ability to integrate the lessons of this project into this strong legislation dedicated to soil conservation.
178. On the issue of financing, long-term innovative financing mechanisms were not established as envisioned in the project document. The project leveraged private sector interest and investment into viable partnerships to deliver certified agricultural and plantation products, but establishing the legal and institutional framework, or capacities for systematic accounting of ecosystem benefits generated through watershed conservation and soil conservation, and generating long-term financing flows through downstream 'buyers', was not achieved. Even the more 'low hanging fruit' of agrotourism was not developed even if some locations were ripe for such interventions (Malpola in Badulla District, Nelumgama and Harasbedda in Nuwara Eliya District).

Conclusion 4. Delivery could have been made more efficient by shorter process loops, faster decision-making and more delegation, especially in relation to field operations.

179. The issue of under achievement of certain outcomes/outputs directly links to the lack of capacity in the Project Management Unit and the extent of support and guidance provided

by FAO and the Ministry of Environment. The MTR details the early issues in project management, so this report only mentions the changes in the Project Management Unit in the first year (2016–2017) and the challenges thereafter in field implementation. From 2018, the Project Management Unit was entirely focused on field implementation. The Unit also had to overcome a critical challenge of fund transfers for soil conservation measures being delayed due to procedural errors, and discord in the field locations with farmers and officials making the working environment tough. The entire Project Management Unit was geared towards field-based implementation, and this is evident from the successful SLM pilots implemented in the field, as well as the extent to which the small team is fully aware of field matters and well networked in the local areas. However, this successful field implementation came at a price: insufficient time, focus on and resources for Components 1 and 3. The terminal evaluation concludes that this is an area that the Project Management Unit should have received much more strengthened support from both FAO and the Ministry of Environment. However, changes in management at FAO and Ministry, changes in technical advisory services at the FAO Regional Bureau and headquarters led to the project team being tasked with a larger implementation burden that they were equipped to handle with just four staff, two of whom were based permanently in the field. While consultants were hired for piecemeal studies and assessments, and to develop recommendations, there was no permanent technical adviser to the project or at least long-term (embedded) technical support to deliver the policy elements (Outcome 1) and financing plan (Outcome 3). The terminal evaluation also concludes that the National Steering Committee for the NAP for Land Degradation could have played a much more central role in providing guidance to the Project Management Unit to achieve Outcomes 1 and 3. The MTR recommended certain steps to strengthen project delivery and monitoring of impacts. However, there is little evidence of delegation of field operations to third parties in a way that would leave behind considerable local capacity post-project and would have effectively supported a resource constrained Project Management Unit to focus more on the upstream issues of policy coherence, policy-to-practice instruments and financing mechanisms.

Conclusion 5. A geographical, land use-based site selection did not purposively target the vulnerable or women.

180. The project’s approach to micro-watershed selection to develop PLUDPs was entirely geographical and technical. There were no criteria that considered social dimensions or vulnerabilities such as poverty levels, youth unemployment or women headed households. This does not indicate defective targeting, since the project set out to development and test PULDPs and replicable SLM models. The project and the participating extension services and private sector purposively targeted more ‘capacitated’ farmers with greater resources in hand to co-invest and with more knowledge and education/experience to test new technology and approaches. The GAP village in Bandarawela (Badulla District) is a good example of how farmers already in the Cargills supply chain network and already proven to be hardworking and resourceful were selected to trial new technologies (artificial mulch, insect proof net, irrigation systems). On the other hand, the project has worked in remote locations and villages with poorer communities and connectivity issues such as Malpola in Welimada (Badulla) and Nelungama (in Nuwara Eliya District) where the communities live with few services and poor connectivity. Malpola had received electricity just a month before the terminal evaluation visit in November 2021. These villages were selected by the agricultural extension services and divisional secretaries. Therefore, although social/economic vulnerability, gender or ethnic diversity were not criteria for site

selection, the project has invested in field level SLM in locations with vulnerability and with marginalized communities. Similarly, there was no gender bias in targeting farmers in the field; however by working on home gardens, smallholder tea, etc. that are primarily managed by women, the project has managed to count over half of its total beneficiaries as female. This is further discussed in Conclusion 8.

Conclusion 6. The project has generated positive gender results, and the majority of beneficiaries are women even if the project did not have a gender mainstreaming plan.

181. The project did not have a gender mainstreaming plan or even gender targets, but it has successfully targeted women in the field through several activities. Importantly, the project has managed to engage younger women and provide support for livelihood improvement for youth and young females in rural areas with very little income opportunities. The terminal evaluation concludes that despite the lack of a gender mainstreaming plan or gender-related indicators in the results framework, the project has successfully delivered gender-sensitive results through selected activities and the process of delivering knowledge. Working with women primarily in home garden improvement, the project has successfully demonstrated technology uptake, increased food, increased incomes (from selling extra crop), improved nutrition and better networking among the community through the project. Women consistently and across project sites in all three districts found the training and support to be highly practical and useful. Women tea smallholders and vanilla cultivators have been able to link to extension services and markets. Women working as Extension Officers in remote locations of these mountainous districts have been empowered through the farmer field school training as well as ability to deliver through Zoom/WhatsApp. This has been a transformational change in the way extension service delivery is conducted. WhatsApp groups have made it possible for more women to participate in trainings without undertaking long and arduous journeys to district training centres. Although technology could be considered a barrier during 'normal' times, a positive outcome of the COVID-19 related school closures is that every household had to invest in one or more smartphones to facilitate children's online education. This meant that the IT devices were already within their reach. Several women farmers have demonstrated considerable aptitude in adopting from technological innovations and developing income opportunities from cultivation, value addition or the production of inputs (organic pesticides, fertilizers, planting material etc). It is unfortunate that the Impact Assessment undertaken at end of project did not consider assessing gender results as part of its scope.

Conclusion 7. New and economically viable SLM models and partnerships were demonstrated through public-private partnerships.

182. The terminal evaluation team concludes that one of the most important outcomes of this project pertains to the economically viable soils and water conservation practices demonstrated through the SLM models. It was long understood that the cost of soil and water conservation measures, especially mechanical conservation measures, are prohibitive and will not be viable for farm level adoption unless subsidized through grants or other support mechanisms. This is the premise on which the Soil Act enables farmers to receive payment for soil conservation measures such as stone bunds, contour drains and sloping land agriculture technology (SALT) measures such as live fences. Many soil rehabilitation measures are built into subsidy schemes (e.g. tea rehabilitation) or into new certification schemes (rainforest alliance for tea and GAP for vegetables). The project successfully demonstrated both cost-effectiveness of soil and water conservation practices in conventional farming; and new, niche markets for products of such improved practices. The

GAP vegetable model with Cargills has resulted in farmers adopting new and innovative technology, despite the high initial investment due to measurable decrease in cost of production and improvement in yields and incomes. The technology package was supported through low interest credit and the current pilots have proven that the payback period for this can be as little as six months. Due to market stability and the instant results from the good agricultural practices and technology investments (including reduced labour, reduced chemical inputs and better yields) farmers are interested in investing their own finances to expand the area under GAP or develop new fields. Demand has been created by other farmers as was envisioned in adjoining fields during the observation visits. Badulla District's seed potato experiment is another good demonstration of impressive return on investment (ROI) for farmers adopting new technology, improved SLM practices disseminated through the farmer field school. This pilot has demonstrated strong government backing and a steady market can transform farmer practices and improve incomes over a very short period, making it profitable to invest in sustainable land management.

Conclusion 8. Participatory M&E has not been successfully implemented.

183. The project has a number of parallel, on-the-ground field implemented activities that required close coordination with a multitude of government, civil society and private sector partners to obtain data for effective monitoring of progress and impacts. The project design did not initially incorporate a theory of change. This was developed post-facto after the MTR. Even after the MTR, a strong data collection protocol was not put in place for indicator tracking, especially objective level indicators for which data is required at this stage in order to describe the environmental benefits. The project had a centralized data portal at the FAO Country Office (FPMIS) which was limited to compliance management and reporting, however, the finalizing of M&E plan, verification of indicator data could have been attended by trained experienced official at the level of FAO Country Office. The project has accepted all MTR recommendations and 10 out of 12 are well executed. However, hiring NGOs to support implementation and monitoring of impacts (RDAL Project, 2019b – Recommendation 6) has not delivered the expected results. The terminal evaluation team concludes, in tandem with Conclusion 4 above, that the Project Management Unit was under-capacitated to deliver and monitor the project. As such, the opportunity to leverage local civil society and NGO and delegate some the organizing and managing of field activities, training sessions, awareness raising sessions, etc. was not exploited to the extent expected of the MTR recommendation. Therefore, the project depended mostly on information flow from direct partners and government systems to the Project Management Unit. The project has attempted to set up the retrospective baseline (RDAL Project, 2019b – MTR, Recommendation 8) with the University of Peradeniya, but the execution of a participatory M&E system (RDAL Project, 2019b – MTR, Recommendation 9) was not attempted.

Conclusion 9. Lateral dissemination of technology and peer-to-peer learning has been strengthened.

184. The project's knowledge dissemination has been most successful at the ground level where online farmer field schools and WhatsApp groups have enabled faster dissemination and peer-to-peer learning. This has been an incredibly empowering experience for the communities and window of opportunity for an entirely new way of working for extension services in the three districts. Knowledge sharing among farmer groups has led to a number of unintentional results. Farmers generate their own knowledge through practical

application of technology and searching for new innovations to improve these practices. GAP farmers in Bandarawela had adjusted their drip systems themselves for more effective irrigation, farmers shared their experience in constructing rainwater harvesting ponds enabling follower farmers to learn from cost- and time-saving measures and innovations of their peers, local entrepreneurs producing planting material and organic inputs have a ready market platform through the WhatsApp groups. Since all these groups are connected to the local and provincial agricultural service network, including the Provincial Director, farmers from different groups learn from each other and extension services are able to cross-pollinate newer groups with information and best practices from the project-supported WhatsApp farmer groups and the information generated therein. The terminal evaluation concludes this form of learning has been more effective and immediate than the training material, guidelines and information brochures published by the project using (sometimes) outdated extension information derived from existing agriculture sector publications and resources.

Conclusion 10. Participatory Land Use Development Plans targeting land degradation hotspots identified by the LADA assessment could form a coherent and evidence-based approach for future investments in SLM.

185. Even at the very last stage, the LADA assessment has been completed and degradation hotspots have been identified in the Central Highlands. If the LADA assessments had have completed at early stage of the project, there would have been a systematically identified land degradation hotspot where the entire Central Highland would have short-term and long-term land degradation mitigation plans. Even now, it is recommended to engage the Department of Agriculture, Natural Resources Management Centre to plan for a systematic way to integrate these findings into the plans and projects of development agencies working in the Central Highlands – including agriculture, water resources, power and energy, forestry, settlement and urban planning, plantation development, roads and other infrastructure. At least, FAO and the Ministry of Environment should use the results of the LADA assessment to influence site selection for future PLUDPs developed by the Land Use Policy Planning Department.

5.2 Recommendations

Recommendation 1. Strengthen role of the Steering Committee for effective policy and best practices mainstreaming (FAO and Government).

186. Project Steering Committees that bring together senior officials from across different ministries and agencies, could play a much more proactive role to support policy and practice mainstreaming. The Project Steering Committee should also link project outcomes to policymaking, national plan formulation and monitoring processes that are ongoing through other ministries and agencies. This would enhance the scope of the Project Steering Committee and ensure that the project's policy related outputs do not 'standalone' and are well integrated into the relevant agencies. Best practice guidance materials developed based on the successful SLM models should be integrated into technical agencies and influence field interventions and future programmes. Hence, it is recommended that future Steering Committees are constituted to support the project in policy and financing aspects that are critical for sustainability but difficult for the Project Management Unit to handle on its own. This provides a solution to Project Management

Unit capacity which is restricted by both GEF guidelines and financial regulations of the Government of Sri Lanka.

Recommendation 2. Develop a roadmap to use the LADA assessment to address the larger problem of land degradation in the Central Highlands (FAO and Ministry of Environment).

187. One of the most important assessments for the project was completed only at the very end of the project's implementation period. This report, however, provides a valuable insight on land use in the Central Highlands and points to degradation hotspots that have the most impacts on watersheds, landslides, downstream impacts on hydropower and drinking water, etc. The findings of this assessment should not remain as a report on a shelf simply to 'tick a box' in the project activities. It is recommended to engage the Department of Agriculture, Natural Resources Management Centre to plan for a systematic way to integrate these findings into the development plans and projects by agencies working in the Central Highlands – including agriculture, water resources, power and energy, forestry, settlement and urban planning, plantation development, roads and other infrastructure. At least, FAO and the Ministry of Environment should use the results of the LADA assessment to influence site selection for future PLUDPs developed by the Land Use Policy Planning Department.

Recommendation 3. Projects trying to innovate conservation approaches beyond the traditional ones should receive dedicated, embedded technical advisory support (GEF project formulators).

188. The project design should have envisaged that implementing the more non-conventional outputs relating to policy, partnerships, SLM pilots and financing would require long-term, embedded technical advisory services. A chief technical adviser was not part of the Project Management Unit, during design or during implementation. A technical adviser would have been able to ensure the connectivity between outcomes and outputs, and monitor the project theory of change at the outcome and objective level. As pointed earlier, this project only had ad hoc and short-term technical consultancies. Recognizing the practical drawbacks of depending on the GEF agency or the government executing entity for this support on a continued basis as required by the project, this support should have been built into the project at the design stage, or at least post-MTR. A technical adviser could have liaised with the National Steering Committee for Land Degradation NAP and convened the Technical Coordinating Committee to build bridges between the project and the national policy arena.

Recommendation 4. The project should catalyse and showcase their knowledge management, training and outreach related innovations post COVID-19 (Project team, FAO and Ministry of Environment).

189. This is an important lesson and case study for development projects struggling to deliver in very challenging circumstances as COVID-19 continues to impact on movement and field-based activities. The project faced an almost impossible task as field delivery was just beginning to pick up when COVID-19 induced country-wide lockdowns and travel restrictions between districts. This setback was eventually transformed into one of the project's most lasting legacies and best practices. The terminal evaluation recommends a detailed documentation of the process followed to translate the farmer field school into an online format and the delivery of different FFS modules with government agencies. The establishment of WhatsApp groups to follow-up on the training, the peer-to-peer

information exchange that was triggered by the access to online learning material, etc. would be invaluable for other projects in Sri Lanka and also similar interventions in other countries. The lesson that very practical agricultural and plantation crop management training could be delivered purely through online sessions and platforms was a novel experience for extension services and farmers. The project's knowledge management has taken a leap of its own since the introduction of the online content and new media platforms. There are so many good lessons to be gained from this experience and should be widely shared across development projects and FAO networks.

Recommendation 5. Long-term and innovative financing should be embedded into sustainable land use models in project and pilot design (GEF project formulators).

190. Rehabilitation of Degraded Agricultural Lands is a long-term process for which continuous application of SLM practices over a long period of time will be necessary. Thus, in order to seize the real (consolidated) impacts of the project interventions, it is recommended that impact assessment be carried out systematically to support both policy influence and financing of future scaling up. The project would have had more success with the introduction of innovative financing mechanisms if these were already considered when developing the scope of the project design and the specific sustainable land management (SLM) pilots. GAP vegetable production with the private sector investment and technical assistance from the Department of Agriculture is a good example of such a solution. The SLM aspects of this initiative were strengthened through project intervention, however access to financing and markets (through Cargills) will be the catalyst that takes the initiative to other farmers/areas in the country. The entire pilot was co-designed with the financing mechanism and private sector partner. Similarly, the SLM approaches piloted in the seed potato cultivation pilot had a strong financing partnership through IFAD's Smallholder Agribusiness Promotion Programme with the Provincial Department of Agriculture mediating between the agencies. It is clear that the more successful and sustainable pilots were the ones that did not separate the technical development from the financing modality. It is recommended to treat financing mechanisms as part of the pilot design and not seek financing options post-facto to sustain investments already made in technical design and field implementation.

Recommendation 6. Use the capacities of local NGOs to improve delivery efficiency and leave behind local capacity (FAO and GEF project formulators).

191. It is strongly recommended that capacities of local NGOs and civil society is leveraged to support project execution. The Project Management Units established by UN agencies and government for implementation of field-based projects should provide the overarching guidance and technical advisory support and ensure that both government and non-government extension networks are used for last mile dissemination, community mobilization and training workshop organization. The mid-term review also recommended this approach specially to overcome the obstacles of transferring funds to support farm level soil conservation measures. It is strongly recommended that Project Management Units not take up the space of local actors and NGOs working in the field and with years of experience in field delivery, and instead should use this opportunity to capacitate NGOs and field level development networks with technical knowledge and new tools/financing opportunities. The design of future GEF projects should seriously consider execution support by local organizations right at the design phase. It is important to ensure that NGOs are not merely means to channel funds to the local communities but a part of the scaling up process. Increased local capacities will enable lateral replication of SLM models

and training tools/material. Engaging local organizations at the design phase, with a view to delegate execution responsibility, will build trust between government and NGOs in the conservation and development landscape.

Recommendation 7. Land use planning and development planning should not be disconnected (FAO, LUPPD and Ministry of Environment).

192. The sustainability and success of the Participatory Land Use Development Plans depend on integration into development planning. If not well integrated into the divisional and local development plans and processes, the PLUDPs run the risk of 'hanging loose' and being disconnected from local development-related decision-making which can negatively influence and even overturn recommendations of the PLUDP. The test run of a divisional level PLUDP in Doluwa, Kandy District demonstrated that these plans are an excellent tool – both technically and procedurally to bring together government services and communities around the table for a common planning effort. However, the implementation and monitoring of these plans need wider reach beyond the LUPPD and agriculture sector. It is recommended that PLUDPs should be developed in close collaboration with the divisional and district planning units, and not just with technical agencies engaged in soil conservation. PLUDPs should lead to sustainable land management within the local development plan addressing the different drivers of degradation (roads, settlements and other infrastructure programmes) and integrate ways to mitigate land degradation and erosion. In this respect, this recommendation ties with Recommendation 2 that a more systematic approach is required to develop and implement sustainable land management policies and practices in these districts and divisions based on the scientific evidence and approaches promoted by the project.

Recommendation 8. Extension and outreach approaches should be modernized in terms of processes, tools and material used, since farmers have shown a huge capacity to engage with technology (FAO and GEF project formulators).

193. The project amply demonstrated that farming communities, even those living in the most remote villages in the Central Highlands, can use modern technology and online learning platforms to obtain new knowledge and improve their practices. The project has, in this respect, demonstrated a 'turning point' in capacity development and technology transfer methods for farmers. FAO's farmer field school concept has been adapted and taken to a new (and arguably, vastly improved) space through digital content and online delivery. This is an important breakthrough and should be seriously considered in future project development. Many capacity building initiatives have not thought 'out of the box' and adopts the same content and training methodologies. This is true even of NGO or private sector supported project. One of the best lessons of this project is the success rate of the online delivery and the readiness of the community, even the older farmers, to embrace such technological innovation and even become content creators through the WhatsApp groups. Modern technology, online delivery and updated content has attracted many youth and young farmers to the training programmes and even brought back youth working in towns and cities, to farming. Therefore, it is recommended that future projects seriously consider replicating the digital FFS modules, WhatsApp groups and online training experience, combined with the right amount of field-based mobilization support.

Recommendation 9. Project monitoring should be better resourced with dedicated human resources and funding for impact indicator monitoring (FAO).

194. Despite the anecdotal success of the SLM models and the results of the impact study conducted at the end of project implementation, the project is missing data that will provide a clearer picture to evaluators of the extent of environmental and social benefits accrued due to the project. Therefore, it is highly recommended that project development should pay greater attention to and allocate sufficient resources to build partner capacity for monitoring of longer-term impacts and results at the outcomes and objectives level. In this case, the necessary capacities and skills (and possibly equipment) for monitoring longer-term changes in the biophysical parameters and agricultural practices could have been integrated into partner organizations implementing SLM models and the NRM. It is prudent to engage stakeholders (government, NGO and private sector) in all stages of the project life cycle – from developing a coherent and risk informed theory of change and M&E plan at designing stage, assigning of human resources to execution of M&E functions including conducting baseline, systematic data collection and verification, management and reporting during project implementation. It was difficult for the terminal evaluation team to find evidence of participatory M&E approaches or regular data flow from implementation partners.

Recommendation 10. Integrate climate-smart agriculture recommendations to the different farmer field school modules to increase resilience building practices among farmers (FAO and GEF project formulators).

195. The FFS have been tremendously successful in delivering practical and up-to-date capacity building to both extension services and farmers. This vehicle can be used by the Department of Agriculture to promote the wider adoption of climate resilience practices as promoted in the Climate Smart Agriculture Guideline developed by the Ministry of Agriculture and the nationally determined contributions of Sri Lanka. The current climate-smart guideline is particularly for the Dry and Intermediate Zones of the country, and not aimed at the Central Highlands. Therefore updating these guidelines based on the climate change resilience practices promoted by the project, such as efficient irrigation, watershed conservation, erosion control, improving soil organic content, improving shade in tea fields and rainwater harvesting in farm fields, and integrating these into the training package would be an excellent value addition to ensure that farmers are equipped to deal not just with the current rainfall variability but also future climate change.

6. Lessons learned

196. Lessons learned from the design and implementation of the GEF RDAL project are presented below, categorized according to the new GEF requirement for lessons learned (2021) and are drawn from the observations of the terminal evaluation team and the findings presented above:

Project design, appraisal and planning

Lesson learned 1. Project design should factor in the required technical expertise for implementation of a technically diverse and challenging project. This project required strong technical inputs and guidance in a number of areas including policy review and integration, land degradation assessment, capacity building, sustainable financing, gender and knowledge management, and it required technical oversight to successfully leverage these different inputs to deliver the project cohesively. The project design had not envisaged such a full-time technical support role and this in turn became a huge challenge for the Project Management Unit. Therefore, a very important lesson learned is to envisage the need for and build in project resources to support a near full-time technical capacity to guide project managers on the integrated delivery of a complex GEF project. This technical advisory capacity should ideally be the technical liaison between government committees, FAO technical services, international technical expertise procured by the project, etc.

Non-grant instruments/Innovative financial mechanism and co-financing

Lesson learned 2. The project has demonstrated that market-based SLM models are possible, with a high degree of acceptance among farmers. This provides a whole new outlook for replicable SLM models that go beyond the conventional soil conservation practices that depend on subsidies, pay-outs or punitive measures.

Lesson learned 3. In discussing innovative financing and public-private partnerships, the project should have considered the investment made by farmers as well. In all SLM models, community investment was high – either collectively to support land conservation to implement PLUDPs or at individual farm level. Both men and women have contributed finances, time and knowledge to making the SLM pilots a success. There should be a way to count in this investment and extend the partnership model to public-private-community partnerships.

Gender equality

Lesson learned 4. Positive gender results are not solely dependent on having a robust gender analysis or gender action plan. This project did not have either but delivered strong gender results by default. A gender-sensitive development approach (that considers the differential needs of men and women) and enabling social safeguards, will be just as successful in a country where the basic conditions for female participation (mobility, education, literacy and IT use) are already fulfilled. However, any project must develop ways to measure such outcomes and contribute to gender-disaggregated data.

Knowledge, collaboration and learning

Lesson learned 5. Knowledge management for agriculture must move beyond the traditional scope and conventional media. The project has provided very concrete lessons in using non-conventional and new media for knowledge dissemination and innovative learning tools. New projects must build on this success and deliver knowledge and technology transfer through digital media and new tools – especially aimed at a new generation of farmers.

Monitoring and evaluation

Lesson learned 6. Successful demonstrations in the field can be constrained in terms of replicability due to lack of analysis and documentation on methods, approaches and cost-benefit. While there is a great deal of anecdotal evidence and qualitative information, the lack of systematic data gathering on baselines and impacts of SLM pilots could inhibit policy influence and scaling up.

Scale-up

Lesson learned 7. Demonstrations and investments that involve investment and technical partners right from the design and roll-out stage will stand a much better chance of being sustainable and will lead to 'spontaneous or automatic' scaling up when the project investment ends. This project amply demonstrated this scalability factor through a number of the pilots that involved strong partnerships from design to monitoring as described under EQ 22.

Political/institutional challenges

Lessons Learnt 8. Practice-to-policy influence needs more careful planning and execution and this often goes beyond the realm of the Project Management Unit. FAO as Budget Holder and Ministry of Environment as Executing Agency should lead on policy integration of best practices across sectoral policies that influence land use and agriculture practices.

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Appendix 1. People interviewed

Surname	Name	Position	Organization	Location
Key informant interviews				
Amarasinghe	Upula	M&E Assistant	FAO Country Office	Colombo
Amaratunga	Janaki	Director International Relations	Ministry of Environment	Colombo
Chandrapala		Deputy Director	NRMC Office	Peradeniya
Dandeniya	Warshi	Senior Lecturer, Department of Soil Science	University of Peradeniya	Peradniya
Dayarathne	W.G.Y.P	Divisional Secretary	Divisional Secretary Office	Doluwa
Dharmakeerthi	S.	Professor, Department of Soil Science	University of Peradeniya	Peradniya
Fernando	Haridas	Group agribusiness Manager	Cargill's PVT LTD	Colombo
Gunasena	Nimal	Project Manager	RDAL Project, FAO	Peradeniya
Gunawardana	Nimal	Senior Professor	Policy Analysis Unit Department of Agriculture	Peradeniya
Gunawardana	Ayesha	Provincial Director - Uva Province	Provincial Department of Agriculture	Badulla
Gurusinhe	G.A.A	Assistant Director	Provincial Department of Agriculture	Badulla
Hapuarachchi	Sisra	Deputy Director	LUPPD Office	Colombo
Hettige	Dihan	Operations AR	FAO Country Office	Colombo
Illangmage	A.S.	Director General	LUPPD Office	Colombo
Jayawardena	Anil	Regional Project Manager	Smallholder Agribusiness Promotion Programme	Badulla
Kadupitiya		Director- NRMC	NRMC	Peradeniya
Kahadawala		IOC	Tea Research Institute (TRI)	Kandy
Kakaulandara		Agriculture Instructor	Provincial Department of Agriculture	Nuwara Eliya
Kalubululanda	Ravindra	Economic Development Officer	Divisional Secretariat Office	Walimada
Kapila	S. B	Agriculture Instructor	Provincial Department of Agriculture	Attalapitiya
Karki	Sameer	FAO Task Force	FAO Regional Office	Bangkok
Lianchawii	C.	FAO Task Force	FAO Regional Office	Bangkok
Mahagamage	Dammika	Assistant Regional Manager	Tea Small Holdings Development Authority	Peradeniya
Malawathathtri	Annanda	Country Director	IUCN	Colombo
Mangalika	A.	Agriculture Production & Research Assistant	Department of Agrarian Service	Bandarawela
Manoj	A.	Manager	Cargill's – PVT LTD	Bandarawela

Surname	Name	Position	Organization	Location
Mohomad	Fazal	Project Specialist / M&E	RDAL Project, FAO	Peradeniya
Munasinghe	Kapila	Consultant	Policy Analysis Unit Department of Agriculture	Colombo
Munasinghe	Thusani	Assistant Director of Agriculture	Provincial Department of Agriculture	Bandarawela
Narangoda		Agriculture Instructor	Provincial Department of Agriculture	Keppitipola
Padamasiri		Divisional Officer	LUPPD Office	Badulla
Punyawardena		Former Director	NRMC	Colombo
Rajapaksha	Anusha	Project Manager	Adamjee Rukmanjee Pvt LTD	Matale
Rajapaksha	A.	Agriculture Instructor	Provincial Department of Agriculture	Lunugala
Rajapaksha	Anusha	Agriculture Instructor	Provincial Department of Agriculture	Keppitipola
Rangana		Deputy Director	Provincial Department of Agriculture	Nuwara Eliya
Ranjith	A.	Tea Instructor	Tea Small Holdings Development Authority	Uva Paranagama
Rathnasinghe	Disna	Director	Seed Certification Unit Department of Agriculture	Peradeniya
Rathnayake	Aruna	Extension Officer	Hadabima Authority	Doluwa
Roshan	A.S.M.	Assistant Director	Agribusiness Division Department of Agriculture	Peradeniya
Sanjima	S.	Development Officer	Department of Agrarian Service	Bandarawela
Senevirathne	Chandra	Assistant Director	LUPPD Office	Kandy
Senewirathne	S.A Iroshani	Agriculture Research and Production Assistant	Department of Agrarian Service	Doluwa
Silva	Ajith	Former Additional Secretary	Ministry of Environment	Colombo
Tharindu Jayasinghe	J. M	Agriculture Instructor	Provincial Department of Agriculture	Bandarawela
Udaynagani		Assistant Director of Agriculture	Provincial Department of Agriculture	Keppitipola
Vimlendra	Sharan	FAOR	FAO Country Office	Colombo
Werasinghe	Ajtith	Manager Supply Relations	Fonterra Brands Pvt LTD	Colombo
Wickramaarachchi	Nilmini	Deputy Director	Provincial Department of Agriculture,	Badulla
Wickramaarachchi	Nilmini	Project Director	Ministry of Environment	Colombo
Wijerathane	D.	FAOR Programs	FAO Country Office	Colombo
Withanage	Shamen	Former Programme Manager	IUCN	Colombo

Completed focus group discussions			
Event	Location	Head count (Total /Male / Female)	Remarks
FGD with beneficiaries of miniwatershed at Dambugassagala	Kalubululanda, Walimada	32 (male 5/ female 27)	
FGD with seed potato FFS group	Thennakonwlea - Walimada	15 (male 10/ female 5)	
FGD with beneficiaries at Sapugaulpotha miniwatershed on PLUDP implementation.	Watagamuwa, Bandarawela	27 (male 12/ female 15)	
FGD with beneficiaries of FFS of home gardens	Watagamuwa, Bandarawela	30 (male 6/ female 24)	
FGD with GAP beneficiaries	Bandarawela	12 (all male)	
FGD with Nelugaha GAP Farmer Field School beneficiaries	Nelugaha, Walapane	6 (all male)	
FGD with GAP Farmer Field School beneficiaries	Adhikarigama	2 (01 Male / 01 Female)	
<i>FGD with beneficiaries of FFS, Home gardens</i>	Pabadeniya, Doluwa	12 (male 5/ female 7)	
<i>FGD with beneficiaries of PLUP, PPP</i>	Pabadeniya, Doluwa	10 (male 7/ female 3)	
<i>FGD with beneficiaries of ICT, FFS Tea</i>	Pabadeniya, Doluwa	13 (male 3/ female 10)	

Appendix 2. GEF evaluation criteria rating table

GEF criteria/sub-criteria	Rating	Summary comments
A. STRATEGIC RELEVANCE		
A1. Overall strategic relevance	HS	<p>The project is well aligned to the national development priorities in agriculture and watershed management, with the UNSDF for Sri Lanka and with SDG 2, SDG 6, SDG 13 and SDG 15.</p> <p>At regional level, the project remains relevant for the Central Highlands land management, especially to target degradation hotspots in the hill country. The PULDP's developed by the project will provide a basis for collaborative and informed land use management in the hotspots identified by the LADA study carried out by the Natural Resources Management Centre (NRMC) of the Department of Agriculture.</p>
A1.1. Alignment with GEF and FAO strategic priorities	HS	<p>The project remains relevant to the GEF programme strategies for land degradation, and the SLM models developed and disseminated by the project are well received by stakeholders at different levels. Project relevance also promoted collaboration with other related projects. The project's results are important to the GEF programme strategies for land degradation.</p> <p>In the fifth cycle of funding of the GEF, the project responds to the land degradation programming priority to maintain or improve flow of ecosystem services to secure livelihoods of local communities. The project ticks the boxes in almost all the outcomes expected under this area, including an enhanced enabling environment in the agriculture sector, increased investments in SLM, sustained flow of services in agroecosystems and improved agricultural management.</p> <p>The project also responds to the FAO programme priorities for Sri Lanka, especially Outcome 2: <i>The environment, natural resources, forests and ecosystems are more sustainably managed taking account climate change, and the resilience of the most vulnerable to shocks, natural disasters and climate variability is increased.</i></p>
A1.2. Relevance to national, regional and global priorities and beneficiary needs	HS	<p>The project is well aligned to the national development priorities in agriculture and watershed management and is positioned to deliver some important outcomes that influence future policy directions for soil conservation, watershed conservation and land use planning. The project is aligned to the UNSDF for Sri Lanka under the Outcome Area 4 on <i>Enhancing resilience to climate change and disasters and strengthening environmental management.</i></p> <p>The project responds to UNSDF indicators 4.2 and 4.3 on % increase in implementation of integrated water management systems and % of nationally determined contributions (NDCs) to climate change under implementation. The project is well aligned to agriculture sector adaptation that promotes climate resilient good agricultural practices and improved water retention/recharge in catchments using appropriate measures such as ecosystem restoration, tree planting, small ponds, check dams, etc.</p>

<p>A1.3. Complementarity with existing interventions</p>	<p>HS</p>	<p>The project has demonstrated complementarity with existing initiatives for land use, crop and plantation productivity improvement and sustainable agriculture. In this regard, the project tested out the Participatory Land Use Development Planning (PLUDP) methodology and built capacity for it in the national system, enriching the land use planning approach of the LUPPD.</p> <p>The seed potato production and smallholder tea productivity improvement projects directly supported sector plans and regional targets. The project also provided support to the fledgling government-private sector partnership promoting good agricultural practices (GAP) in vegetable production.</p> <p>The project’s support to develop and popularize alternatives to chemical inputs has directly supported farmers efforts to cope with the sudden policy decision to withdraw chemical fertilizers and other inputs. Organic home garden development has improved nutrition and household income alongside government programmes to promote the same.</p>
<p>B. EFFECTIVENESS</p>		
<p>B1. Overall assessment of project results</p>	<p>S</p>	<p>The project has delivered considerable environmental and development benefits. Implementing the PLUDPs in the selected watersheds has brought tangible impacts on the environment, change in ecosystem services and food and income security for farming households.</p> <p>Chiefly the improved land and water management in the SLM pilot watersheds has shown tangible impacts within a short period. Farmer incomes have improved. Agricultural production and product quality has improved.</p> <p>Anecdotal evidence and field observations, and the impact assessment conducted for the project in November 2021, provide a basis to conclude that the SLM pilots have effectively achieved environmental and development objectives. However, many of these impacts have not been systematically measured and monitored against a baseline.</p>
<p>B1.1 Delivery of project outputs</p>	<p>MS</p>	<p>The project’s four components were designed to effectively deliver the expected outcomes. However certain outputs and activities were found to be redundant during implementation and other activities required adaptive management to make them more relevant to the context that evolved after the MTR. The Interconnectedness showcased in TOC was not demonstrated in project implementation.</p>
<p>B1.2 Progress towards outcomes¹⁴ and project objectives</p>		

¹⁴ Assessment and ratings by individual outcomes may be undertaken if there is added value.

- Outcome 1	S	<p>Outcome 1 set out to create the enabling environment for mainstreaming SLM which included policy, regulatory and practice tools, knowledge and capacities for SLM.</p> <p>The project supported the institutionalizing of the participatory land use planning (PLUDP) approach as one of the biggest achievements of the project. However, the mainstreaming of SLM into other related policies and strategies, informed through the ground implementation, was not as successful as envisaged.</p>
- Outcome 2	HS	<p>The project supported the implementation of Participatory Land Use Development Plans (PLUDP) in nine mini/micro-watersheds and divisional secretariat-level development services.</p> <p>Involved supporting SML pilots in several distinct land use and agriculture models such as smallholder tea, high value vegetables, seed potato, dairy farms and home gardens.</p> <p>There are some positive signs of integration of the SLM models and best practices into the government's agriculture extension delivery, especially in the seed potato and tea smallholder models.</p> <p>Farmer field schools (FFS) and WhatsApp based coordination among farmers and extension services have been formalized and accepted by the provincial agriculture services, the Department of Agrarian Development and the TSHDA.</p>
- Outcome 3	MS	<p>During design, the outputs of Component 3 aimed to develop and test out innovative funding streams such as from payment for ecosystem services (PES), agrotourism and other market-based instruments and incentives to sustain the sustainable land management investments. The lack of technical guidance and oversight for this component has led to ad hoc solutions, rather than a cohesive long-term strategic approach to innovative financing. It is hard to evaluate the impact of the capacity building on the constituents.</p>
- Outcome 4	S	<p>The project aimed to create knowledge products from the implemented pilots to enhance the national knowledge base for SLM and influence policy directions/mainstreaming, and aimed to strengthen project implementation based on adaptive results-based management.</p> <p>The project quite unexpectedly gained a huge leg-up for outreach and communication by leveraging WhatsApp for training and networking among beneficiary farmers and extension services. Although devised to overcome COVID-19 related restrictions and meet delivery deadlines of the project, the use of WhatsApp as a grassroots communication and extension services tool has been one of the more lasting legacies of the project.</p> <p>Top down and lateral technical knowledge dissemination related to SLM pilots is above expectations but knowledge dissemination upwards to influence policy was weak.</p>
Overall rating of progress towards achieving	S	Overall rating is satisfactory

objectives/ outcomes		
B1.3 Likelihood of impact	S	<p>Project has strengthened and capacitated extension services in the three districts and facilitated their role for technology transfer and dissemination.</p> <p>Efficiency and 'reachability' of the extension services and field officers has built more trust in the government system and farmers are more likely to adopt advisories.</p> <p>Ability for beneficiaries and officials to remain connected through WhatsApp groups has proven to be an excellent way of empowering farmers.</p> <p>Likelihood of impact is positively influenced by the strong market focus of certain SLM models which will lead to spontaneous adoption by farmers through lateral dissemination.</p>
C. EFFICIENCY		
C1. Efficiency ¹⁵	S	<p>Project management has been able to adapt to changing circumstances and overcome some serious challenges to satisfactorily complete the project within the extension period. The project had a late start and encountered some significant delays setting up the project management unit and in field implementation. These are described later under effectiveness. This is especially significant given that the project actually began delivering the field-based demonstrations post MTR, in late 2018 and then implementation was hindered by COVID-19 related issues in 2020 and 2021. The project concluded all major planned activities by end 2021, and despite the slow field delivery up to mid-2018, the dashboards showed over 97 percent financial delivery by end of 2021.</p>
D. SUSTAINABILITY OF PROJECT OUTCOMES		
D1. Overall likelihood of risks to sustainability	Moderately likely	<p>Many of the SLM models have been replicated or adopted by the agriculture system. The evaluation team observed that there was a growing demand from farmers and agriculture extension services to expand demonstrated models for tea smallholding productivity improvement, seed potato production and GAP-certified vegetables. These models make a very strong economic case for the farmer. The replicability of these models/projects were observed in the field by i) demand from neighbouring farmers and farmer groups for the model (especially for tea and GAP and seed potato); ii) Demand from agriculture and agrarian extension services to replicate these models in other areas and farm fields; iii) WhatsApp groups created to provide continued extension and coordination support have attracted a number of other 'followers' who are interested in converting their field practices.</p>

¹⁵ Includes cost efficiency and timeliness.

		Many of the positive results and their replication/integration within the agriculture system are compromised by the issues around sustainable and long-term financing for SLM and the governance/institutional issues.
D1.1. Financial risks	Moderately likely	<p>Despite efforts by the project, long-term, sustainable financing streams for SLM remain constrained.</p> <p>The project was not able to operationalize the innovative models developed by the International Union for Conservation of Nature (IUCN), such as payment for ecosystem services or Agrotourism, as earlier described in this report. Market-oriented private sector models do exist and were successfully executed. However, considering the scale and urgency of the problem of land degradation in the Central Highlands, financing is still a major constraint for scalability.</p>
D1.2. Socio-political risks	Unlikely	<p>There is a high level of social acceptance for the models proposed by the project and the SLM solutions promoted. The acceptance level is particularly high among younger farmers, especially young women farmers.</p> <p>The government policy and political ambition to restrict/ban agrochemicals in April 2021 created conditions that were positive for replication and future sustainability of the project.</p>
D1.3. Institutional and governance risks	moderately likely	<p>There are clear issues of how the SLM best practices would be institutionalized post-project. At the local level, the PLUDPs should be institutionalized through the district and divisional agriculture and land use committees.</p> <p>Land use planning and development planning at divisional level remain disconnected even in Doluwa DSD, where a complete divisional level plan was supported.</p> <p>At the national level, the project supported a Technical Coordinating Committee (TCC) for the National Action Programme (NAP) Steering Committee, but there is little evidence of project results influencing the larger policy space for SLM or the guidelines developed through the project being actively promoted and integrated into the recommendations of different agencies working on the ground in these districts.</p>
D1.4. Environmental risks	Unlikely	<p>There are hardly any notable environmental risks associated with the models that have been promoted and piloted by the project.</p> <p>There are issues related to current and future climate risks that need to be addressed in all models such as water scarcity, rainfall variability, drying up of streams, intense rainfall causing landslides and severe erosion on sloping lands, etc.</p>
D2. Catalysis and replication	S	<p>GAP, seed potato, TEA, organic input manufacture has catalysed additional investment and interest of government and private sector.</p> <p>Provincial Department Agriculture, Uva internalized the models; FFS being expanded to other crops, scale up of WhatsApp groups to hotlines.</p> <p>Replication potential is high in the SLM models for tea and seed potato as well as GAP villages.</p> <p>PULDPs are also being currently replicated by LUPPD in other areas of the Central Highlands</p>

E. FACTORS AFFECTING PERFORMANCE		
E1. Project design and readiness ¹⁶	MU	<p>The outcomes and outputs were designed to systematically respond to the barriers described in the project document and contribute, in an integrated manner, towards achieving the expected results and changes, Therefore the evaluation team finds that the project’s design is technically thorough and supports the achievement of the results envisaged. This has been reiterated in the mid-term evaluation of the project in 2019.</p> <p>However, the evaluation team concludes that the project design did not have adequate provision for the necessary capacities needed to deliver a complex set of outputs in the field in three districts of the Central Highlands. These capacities, such as the need for dedicated technical advisory support and embedded capacities for monitoring and evaluation, gender and knowledge management, were not incorporated during the inception phase either. The project did not have the expected support, at the beginning of implementation, from key government agencies such as the Natural Resources Management Centre (NRMC) despite being hosted within this very institution.</p>
E2. Quality of project implementation	MS	<p>The project had a late start and these initial delays and setbacks in project start-up are well documented in the MTR. Setbacks of the first two years that have affected the quality and timeliness of project execution and compounded later by procedural delays relating to field execution and related payments, which have compromised the project timeline significantly.</p> <p>Execution agency could have had a better oversight of the delays and moved quicker to resolve procedural issues which were related to internal interpretation of guidelines.</p>
E2.1 Quality of project implementation by FAO (BH, LTO, PTF, etc.)	MS	<p>DEX Execution support should have been timelier and more streamlined from both FAO and the Ministry of Environment. The Project Team received high quality technical advisory support from the Lead Technical Officer and guidance from FAO Country Office. But the lack of dedicated technical advisory support for the project, and the Project Team’s dependence on a few international and national experts on piecemeal basis, meant that key outputs would not be delivered in a coordinated manner.</p>

¹⁶ This refers to factors affecting the project’s ability to start as expected, such as the presence of sufficient capacity among executing partners at project launch.

E2.1 Project oversight (PSC, project working group, etc.)	MS	Project's SLM models and their sustainability could have been strengthened by a more proactive Steering Committee and NAP TEC (Technical Expert Committee) facilitating the upward integration, knowledge dissemination and sustainable financing aspects. The delayed start of field activities- especially SLM models- meant that many of the models are coming to maturity at end of project (EOP) without sufficient time to investigate their positive or negative impacts or evaluate cost effectiveness. This poses an issue for both knowledge management and upward integration into policies and strategies and planned programmes of related sectors, which could have been addressed through stronger liaison with the United Nations Convention to Combat Desertification (UNCCD) NAP coordinating mechanism.
E3. Quality of project execution For DEX projects: Project Management Unit/BH;	S	<p>The evaluation team notes that the project has managed implementation constraints adaptively and quite successfully where field implementation is concerned. The PMU overcame the lack of direct capacity by working with civil society organizations on the ground, leveraging the government extension and village level field network, introducing digital communication and learning platforms which enabled faster knowledge transmission, monitoring and reporting etc; and reduced the need for physical field visits. The project leaned on other projects with larger field budgets or on the private sector to deliver certain extension services and inputs to the field. This is described more fully in the effectiveness section and stakeholder section..</p> <p>Due to the heavy workload at the Country Office however, systematic meetings with the PMU or field visits are not recorded. There was a monthly programme meeting to which the Project management Unit (PMU) was expected to participate and provide progress updates of ongoing activities. There were respondents who believed that the PMU should have had dedicated technical advisory support for SLM, especially as the Project Manager's time has been mainly diverted towards field-based activities and coordination.</p>
E4. Financial management and co-financing	S	Co-financing reported by December 2021 exceeded the committed figure, but certain discrepancies need to be adjusted. Co-financing should have factored in the contribution of beneficiary farmers who were required to pitch in with card cash as co-contribution to each SLM pilot.
E5. Project partnerships and stakeholder engagement	HS	Project built strong partnerships to deliver SLM models with government, other donors and with the private sector. These partnerships underscored the sustainability of project interventions and supported the RDAL project to capitalize on co-investments from both public and private initiatives.
E6. Communication, knowledge management and	S	The project's envisaged knowledge management was 'conventional and traditional' consisting of newsletters, and a web-based information platform (SRICAT etc) - but due to the technology transfer and use of digital media that was adopted as a solution to a crisis situation.

Appendix 2. GEF evaluation criteria rating table

knowledge products		The significant transformation in knowledge dissemination and technology transfer through the project came in the wake of the COVID-19. The use of digital media for training, networking and knowledge exchange devised to overcome lockdowns and restrictions on physical meetings, created an entirely new knowledge ecosystem within the project. The impacts and outreach were far beyond the initial expectations of PMU and government stakeholders, and it is not an exaggeration to say that the project transformed the knowledge transfer systems of the government's agriculture and plantation extension services. The evaluation team observed even older farmers accessing digital content with smart phones (often belonging to younger members of the household/ school-going children) and more youth and women accessing content to digital delivery (using Zoom and WhatsApp).
E7. Overall quality of M&E	MS	
E7.1 M&E design	MUS	Outputs and outcomes were measured and reported in project implementation reports (PIRs) and six-monthly reports. Activity monitoring is set at frequent intervals. Indicator data verification was done for the majority of indicators but some key indicators were missed out. No clear indicator definitions or monitoring and evaluation (M&E) plan was not found.
E7.2 M&E plan implementation (including financial and human resources)	MS	Frequent data collections were completed however, data verification and storing systems need to be improved. Transition of M&E personnel of RDAL project was badly affected for the execution of M&E functions. Playing the dual role of assigned M&E office has less attention due to workload.
E8. Overall assessment of factors affecting performance	MS	The project has adopted several recommendations made in the mid-term Review. MTR recommendations required the project to redirect investments towards more successful models and demonstrations and improve private sector engagement. Some of the more critical recommendations relating to project M&E were not adopted leading to issues in ascertaining outcome and objective level indicators.
F. CROSS-CUTTING CONCERNS		

F1. Gender and other equity dimensions	S	The evaluation team did not find that the project was implemented with a particular focus on gender. The project design did not have a gender analysis or a gender action plan. However, the evaluation team finds that the project has delivered strong gender results through implementation with a practical focus on activities that have enabled high rates of participation, access to knowledge, access to financing and increased social capital building amongst the female beneficiaries. The project has achieved considerable gender results but is not able to quantify these owing to lack of data.
F2. Human rights issues/Indigenous Peoples	UA	NA
F2. Environmental and social safeguards	HS	There are hardly any notable environmental risks associated with the models that have been promoted and piloted by the project.
Overall project rating	S	

Appendix 3. Rating scheme

[See instructions provided in Annex 2: Rating Scales in the “Guidelines for GEF Agencies in Conducting Terminal Evaluations for Full-sized Project”, April 2017.]

PROJECT RESULTS AND OUTCOMES

Project outcomes are rated based on the extent to which project objectives were achieved. A six-point rating scale is used to assess overall outcomes:

Rating	Description
Highly Satisfactory (HS)	“Level of outcomes achieved clearly exceeds expectations and/or there were no shortcomings.”
Satisfactory (S)	“Level of outcomes achieved was as expected and/or there were no or minor shortcomings.”
Moderately Satisfactory (MS)	“Level of outcomes achieved more or less as expected and/or there were moderate shortcomings.”
Moderately Unsatisfactory (MU)	“Level of outcomes achieved somewhat lower than expected and/or there were significant shortcomings.”
Unsatisfactory (U)	“Level of outcomes achieved substantially lower than expected and/or there were major shortcomings.”
Highly Unsatisfactory (HU)	“Only a negligible level of outcomes achieved and/or there were severe shortcomings.”
Unable to Assess (UA)	The available information does not allow an assessment of the level of outcome achievements.

During project implementation, the results framework of some projects may have been modified. In cases where modifications in the project impact, outcomes and outputs have not scaled down their overall scope, the evaluator should assess outcome achievements based on the revised results framework. In instances where the scope of the project objectives and outcomes has been scaled down, the magnitude of and necessity for downscaling is taken into account and despite achievement of results as per the revised results framework, where appropriate, a lower outcome effectiveness rating may be given.

PROJECT IMPLEMENTATION AND EXECUTION

Quality of implementation and of execution will be rated separately. Quality of implementation pertains to the role and responsibilities discharged by the GEF Agencies that have direct access to GEF resources. Quality of Execution pertains to the roles and responsibilities discharged by the country or regional counterparts that received GEF funds from the GEF Agencies and executed the funded activities on ground. The performance will be rated on a six-point scale:

Rating	Description
Highly Satisfactory (HS)	There were no shortcomings and quality of implementation or execution exceeded expectations.
Satisfactory (S)	There were no or minor shortcomings and quality of implementation or execution meets expectations.
Moderately Satisfactory (MS)	There were some shortcomings and quality of implementation or execution more or less meets expectations.
Moderately Unsatisfactory (MU)	There were significant shortcomings and quality of implementation or execution was somewhat lower than expected.
Unsatisfactory (U)	There were major shortcomings and quality of implementation was substantially lower than expected.
Highly Unsatisfactory (HU)	There were severe shortcomings in quality of implementation or execution .
Unable to Assess (UA)	The available information does not allow for an assessment of the quality of implementation or execution .

SUSTAINABILITY

The sustainability will be assessed taking into account the risks related to financial, sociopolitical, institutional, and environmental sustainability of project outcomes. The evaluator may also take other risks into account that may affect sustainability. The overall sustainability will be assessed using a four-point scale:

Rating	Description
Likely (L)	There is little or no risk to sustainability.
Moderately Likely (ML)	There are moderate risks to sustainability.
Moderately Unlikely (MU)	There are significant risks to sustainability.
Unlikely (U)	There are severe risks to sustainability.
Unable to Assess (UA)	Unable to assess the expected incidence and magnitude of risks to sustainability.

Appendix 4. Results matrix – Updated until October 31st, 2021

Outcomes and outputs	Indicators	Baseline	End of project Target	Project progress as of 31 October	MOV	Level of Achievement	Comments from evaluation team
Component 1: Strengthening policy, regulatory and institutional frameworks for sustainable land management							
<p>Outcome 1: Enabling institutional policy and regulatory frameworks for SLM established and operational in accordance with Participatory Land Use Development (PLUD) principles</p>	<p>50 000 ha of agricultural land of the Central Highlands managed under sustainable land management (SLM) methods</p> <p>Mainstreaming of SLM in planning and budgetary processes</p>	<p>The enabling environment for SLM in Sri Lanka is weak and fragmented, and does not properly integrate PLUD principles, which impede the scaling up of SLM</p>	<p>50 000 ha of agricultural land of the Central Highlands managed under SLM methods</p> <p>SLM mainstreamed into three-four sector plans and budgets (Agriculture and Fisheries, Water Supply and Sanitation, and Forestry)</p>	<p>Project has directly supported 7 666.5 ha of lands managed under SLM using the approaches of implementing 46 PLUPs for selected micro-watersheds (2 947 ha), FFS (270 ha) and demonstrations (4 449.5 ha) executed by farmers. However, the project has facilitated developing PLUPs for 7 925 ha in Central Highlands through LUPPD. (Total plans developed: 15 592 ha). The land degradation assessment and mapping conducted by NRM (October 2021) has identified the potential lands to be rehabilitated in the Central Highlands.</p> <p>Project findings and experience were used by the Ministry of Environment (MOE) to develop strategies for National Environmental Action Plan (NEAP) where strategy 3 is totally on sustainable land use in agriculture.</p> <p>Ministry of Mahaveli Development and Environment has used the field implementation approach of RDAL to plan and execute of Integrated Watershed and Water Resource Management Project (IWWRMP) to conduct SLM in 30 000 ha in Central Highlands.</p> <p>PLUP guidelines were acknowledged by all stakeholders and being implemented at national level. National Land Use Policy is being finalized by</p>	<p>GEF LD Tracking Tool, PIR, mid-term and final evaluations (MOE & RE, FAO)</p> <p>National and district level land-use plans (NRM)</p>	Satisfactory	Despite achieving the indicator targets, the project has mainstreamed the SLM process by enabling policy and regulatory frameworks

Outcomes and outputs	Indicators	Baseline	End of project Target	Project progress as of 31 October	MOV	Level of Achievement	Comments from evaluation team
				the LUPPD and PLUP is considered a key tool for SLM and a vehicle for binding all stakeholders.			
Output 1.1: Guidelines for Participatory Land Use Planning (PLUP) established and agreed among	PLUP guidelines developed PLUP guidelines	Guidelines from the Land Use Policy and Planning Department (LUPPD) already exist, but need to		PLUP guideline was developed and validated with divisional, district and national level stakeholders in December 2020	Draft PLUP guidelines report	Highly Satisfactory	Process completed and target achieved

Outcomes and outputs	Indicators	Baseline	End of project Target	Project progress as of 31 October	MOV	Level of Achievement	Comments from evaluation team
the involved agencies for coordinated action	agreed among stakeholder agencies Existing guidelines from LUPPD revised	be revised and updated			Stakeholder meeting report Final PLUP guidelines Report		
Output 1.2: A package of modifications in policies and standards for SLM and good agricultural practices	SLM standards agreed Recommendations to amend land management related policies	No SLM standards have been agreed at national level and the policy framework is full of loopholes – e.g. trade and import substitution policies result in increased land degradation due to cultivation of unsuitable crops (potatoes & tobacco) on steep slopes	Revision of existing policies in six areas to integrate agreed SLM standards Adoption of policy revisions in agreed areas to fully integrate SLM standards	Recommendations developed are validated and agreed by stakeholders	Policy documents, minutes from meetings - amendments to six policy areas	Highly Satisfactory	Process completed and target achieved
Output 1.3: Strategy to align related policies with SLM	Endorsed strategy to align related	No coherent and effective Land Use Policy is in place taking into	Strategy to align related policies endorsed and	Policy dialogue platform was created as a strategy to implement recommendations. As a result, field survey was conducted to study the potentials in promoting effective use of fertilizer	Validated policy recommendation	Satisfactory	Process completed on for selected sectors

Outcomes and outputs	Indicators	Baseline	End of project Target	Project progress as of 31 October	MOV	Level of Achievement	Comments from evaluation team
endorsed by concerned sectors	policies with SLM	account the role of land rights and the importance of protection of critical areas. Should be based on the six areas identified under 1.1.2	adoption of strategy on SLM		endorsed the strategy Strategy is creation of policy dialogue platform		
Output 1.4: Establishment of a new coordination and information sharing platform among the stakeholders	Coordination and information sharing platform 15 agencies join the platform Technical Coordination Committee (TCC) established for agriculture-related activities	The NAP 2015–2025 recommends the establishment of TCCs and enhanced information sharing on SLM, but the recommendations have not been operationalized	Enhanced information sharing on SLM across sectors	The ICT based information-sharing platform (SRICAT) was established following the modality of WOCAT as the coordination information sharing platform National level awareness campaign was conducted to introduce the platform. More than 80 participants from government agencies, private sector and universities participated and agreed to collaborate. Agencies joined the platform, as Department of Agrarian Development, National Water Supply and Drainage Board, Land Use Policy Planning Department, Road Development Authority, Department of Survey, Hadabima Authority, Water Resources Board, Land Commissioner General's Department, Central Environment Authority, Ministry of Plantation, University of Peradeniya, Uva Wellassa University, Wayamba University, Rajarata University, Industrial Service Bureau, TRI, Mahaweli Authority, Sugar Cane Research Institute and Department of National Botanical Garden, etc.	Annual Progress Reports Minutes of Meetings TCC meeting minutes, budget assigned for SLM	Moderately Satisfactory	TCC established with stakeholders; however. the functionality of TCC is moderate. The Letter of Agreement (LOA) is yet to be signed with University of Peradeniya. Functionality of SRICAT as a coordination and information sharing platform is yet to be witnessed.

Outcomes and outputs	Indicators	Baseline	End of project Target	Project progress as of 31 October	MOV	Level of Achievement	Comments from evaluation team
				TCC was established and meetings were held with stakeholders.	TCC operations Land degradation maps		
Output 1.5: Degraded agricultural lands in the project areas in the Central Highlands classified and mapped	579 384 ha of land classified and mapped according to level of land degradation	No maps indicating degradation available	Lands in the Central Highlands classified and mapped according to level of LD	Land degradation assessment was completed by NRMCC (September 2021). Land degradation map was prepared for all three districts (covering 654 200 ha) by NRMCC.	Land degradation maps	Satisfactory	Process completed
Component 2: Implementation of the identified land restoration technologies in the affected areas of the three districts through a participatory process						Level of achievement	Comments from evaluation team
Outcome 2: Appropriate technologies for rehabilitation of degraded lands demonstrated and scaled up by strengthened networks of training and extension institutions	20 000 farmers benefitting (disaggregated by gender) from enhanced capacity of the three district training units providing consistent training and	Farmers in Kandy, Nuwara Elyia and Badulla have scarce knowledge of the adverse impacts of land degradation and climate change on agricultural productivity and sustainability, and minimal experience in SLM	20 000 farmers benefitting from SLM training and technology transfer 6 000 ha of agricultural land	Farmer capacity building and knowledge development were implemented through different approaches. Four common demonstration sites established in government centres. To disseminate SLM, technical packages and training were implemented. Altogether, 21 292 farmers (13 415 male and 7 877 female) directly benefitted.	GEF LD tracking tools, PIR mid-term and final evaluations	Highly Satisfactory	Project has demonstrated and disseminated technologies and met the expected targets

Outcomes and outputs	Indicators	Baseline	End of project Target	Project progress as of 31 October	MOV	Level of Achievement	Comments from evaluation team
	transfer of technologies to farmers 6 000 ha of agricultural land restored and under SLM	technologies and approaches. They therefore continue old land management practices that exacerbate soil erosion and cause other LD problems	restored and under SLM	4719.5 ha of land managed by farmers who benefitted from SLM implemented through RDALP. 2947 ha were covered through PLUP implementation in micro-watersheds by RDALP.			
Output 2.1: Demonstration sites established in the three districts in the Central Highlands	120 demonstration sites	There are no demonstrations of SLM in marginal tea land and vegetable cultivations on steep slopes. Only the Kandyian forest gardens have demonstrations of good management practices, but land and water management has to be better integrated into the models	120 demonstrations established on:	110 individual demonstration sites, 4 common demonstration model in government sites and 8 micro-watershed based landscape models established	Report on SLM options, participatory monitoring reports of SLM, meeting and attendance reports from FFS, food balance sheet (FBS), field survey reports	Highly Satisfactory	114 demonstrations completed

Outcomes and outputs	Indicators	Baseline	End of project Target	Project progress as of 31 October	MOV	Level of Achievement	Comments from evaluation team
Output 2.2: Participatory land restoration plans using SLM technologies formulated and implemented	48 plans formulated and 50 000 ha covered	No SLM land restoration plans exist in the Central Highlands	48 plan formulated and implementation and 50 000 ha of land in the Central Highlands covered	RDAL project directly supported developing of 53 PLUPs and using the experience LUPPD has developed additional 58 plans using other source of funds reaching the total of 111 PLUPs. The total 111 PLUPs targeted 15 592 ha, whereas 2947 ha are under SLM practices by implementing the PLUPs.	Technical reports from participating Districts and Divisions on SLM and land restoration planning	Highly Satisfactory	Target achieved
Output 2.3: SLM training programme developed and implemented	80 training events 2 000 farmers trained, disaggregated by gender	Availability of information on SLM is limited and the capacity of land users to access this information is very low	Total of 80 training events organized and 2 000 farmers trained, including 1 050 women by end of project	Curriculum and training manual on FFS for four farming system were developed. Total of 102 FFS training were implemented and altogether 2 194 farmers (707 male and 1487 female) benefitted	Reports from trainings, including attendance, awareness survey, PPR	Highly Satisfactory	Target achieved
Component 3: Support to the development and implementation of innovative funding systems to promote SLM							
Outcome 3: Capacity of developing innovative funding mechanisms established in both public and private sector	Increased resources flowing to SLM from diverse sources such as social responsibility funds and other	At present, there are a number of ongoing funding mechanisms for SLM with different organizations such as, GEF SGPs, state companies, Dept. Export Agriculture – soil conservation	A total of USD 1 million mobilized by end of project	USD 12 012 142 mobilized for co-financing and USD 213 022 mobilized as innovative financing during the implementation of the project	Amount of funds mobilized	Moderately Unsatisfactory	Target was not achieved; however, the project mobilized funds under public-private partnership (PPP) which is not innovative.

Outcomes and outputs	Indicators	Baseline	End of project Target	Project progress as of 31 October	MOV	Level of Achievement	Comments from evaluation team
	innovative funding systems (e.g. CSR, PES, PPPs developed through GEF SGP, other PPPs, etc.)	measures in Tea lands, Hadabima. Further, with regard to the Soil Conservation Act, budgetary allocations are directed to identified soil erosion areas in the project Provinces					Proposed innovative finance models proposed (PES, CSR Agro tourism) were not being capitalized
Output 3.1: Tailored guidelines on innovative project financing prepared and disseminated to the stakeholders under the Soil Conservation Act	Guidelines on innovative project financing available to key stakeholder groups (public officers and private sector stakeholders)	No guidelines on innovative SLM project financing exist	Guidelines developed	Guideline for innovative financing and ecosystem services assessment report was prepared and promoted among stakeholder agencies	Published guidelines	Moderately Unsatisfactory	Guidelines were drafted and shared among stakeholders
Output 3.2: Training on innovative project financing guidelines organized and implemented in the project area, involving public officers and	10 (2 training of trainers (ToTs) + 8 trainings) training events on innovative project financing organized	No trainings on innovative SLM project financing exist	Two provincial level ToT and eight trainings for private and public sector participants	One ToT was conducted and 35 participants trained One national level awareness and two district level training were conducted, and 153 public and private sector participants were trained.	Meeting and attendance reports from eight DS divisions in Kandy, Nuwara Elyia and	Moderately Unsatisfactory	Lack of having proper guidelines for innovative financing hinders the process

Outcomes and outputs	Indicators	Baseline	End of project Target	Project progress as of 31 October	MOV	Level of Achievement	Comments from evaluation team
private sector stakeholders	50 ToT trained 250 public and private sector participants				Badulla Districts		
Output 3.3: One workshop per DS division organized for innovative funding systems, involving both private and public sectors stakeholders	Eight workshops on innovative funding systems 250 participants from private and public sectors, respectively		Eight DS divisional level workshops organised	DS Divisional representatives were also included in the district level training and separate training was not able to conduct due to COVID-19.	Meeting and attendance reports from eight DS divisions in Kandy, Nuwara Elyia and Badulla Districts	Moderately Unsatisfactory	Lack of having proper guidelines for innovative financing hinders the process
Output 3.4: Main environmental services provided by the agricultural sector valued as a basis for establishing innovative project financing	Identification of five innovative project funding mechanisms		Three new projects funded by innovative and novel sources of SLM funding	Three PPP models were implemented in collaboration with private and government institutions. Integrated livestock-crop model with Fontera, Economic home garden with vanilla cultivation with Adamjee and GAP certified vegetable cultivation with Cargills Ceylon	Approved project documents	Moderately Unsatisfactory	Three PPP models were financed by the project
Component 4: Knowledge management, awareness raising and dissemination of best practices							

Outcomes and outputs	Indicators	Baseline	End of project Target	Project progress as of 31 October	MOV	Level of Achievement	Comments from evaluation team
<p>Outcome 4: Enhanced national knowledge base for sustainable land management and project implementation based on adaptive results-based management</p>	<p>National knowledge base on SLM to support adaptive results-based management and monitoring of SLM upscaling resulting from the project</p>	<p>No SLM knowledge base or M&E system in place</p>	<p>Strengthened national SLM knowledge base</p> <p>Adaptive results-based M&E</p>	<p>Number of national level awareness programme, trainings and communication campaigns implemented.</p>	<p>Questionnaire survey</p>	<p>Moderately Unsatisfactory</p>	<p>Technical knowledge transfer on SLM supported through FFS, PLUDP implementation and scaled up in Central Highlands. Improving of extension service and knowledge dissemination is an unintended outcome of the project. However, TOC and RFW expected a national knowledge base</p>
<p>Output 4.1: Public awareness increased on the issues of land degradation and the benefits of SLM</p>	<p>Project website</p> <p>Nine project newsletters</p> <p>Seven awareness/outreach events organized</p> <p>Five leaflets developed</p>	<p>PPG survey demonstrated low awareness of SLM</p>	<p>Nine project newsletters</p> <p>Seven outreach events</p> <p>Five technical leaflets developed</p>	<p>In referring to Output 1.4, SRICAT was established following the modality of WOCAT. LOA to be signed with Department of Soil Science, University of Peradeniya to manage the technical role of the website and the Ministry of Environment will manage the coordination role</p> <p>Three project newsletters published in all three languages</p> <p>Nine outreach events conducted</p> <p>Two technical leaflets developed</p>	<p>Statistics of website visitors</p> <p>Leaflets, Newsletters</p>	<p>Moderately Unsatisfactory</p>	<p>Project has disseminated the technical knowledge using many approaches</p>

Appendix 4. Results matrix

Outcomes and outputs	Indicators	Baseline	End of project Target	Project progress as of 31 October	MOV	Level of Achievement	Comments from evaluation team
	Five paper articles published per year		15 paper articles published	11 paper articles published 10 Video documentaries developed (https://www.youtube.com/channel/UC300qkIBJniWt79ctG3XZnQ/videos)			
Output 4.2: Targeted education, awareness and outreach campaigns for SLM implemented	Increased awareness among land users and policymakers of SLM	PPG survey demonstrated low awareness of SLM		Nine outreach events conducted In addition, three Radio Programme, two TV programs and four webinar conducted TV Programme: https://www.youtube.com/watch?v=qChXPYnb0Wc https://www.youtube.com/watch?v=z3Z7AvwQtdw	Report on evaluation of awareness campaign	Moderately Unsatisfactory	Project has disseminated the technical knowledge using outreach campaigns
Output 4.3: SLM good practice guidelines developed and disseminated	Guidelines available Guidelines disseminated to 20 stakeholder groups	No SLM guidelines for Sri Lanka available, only global guidelines, such as WOCAT	Dissemination of SLM guidelines through Project website, etc.	SLM guideline for five farming systems such as Tea, High in-put vegetables, home garden, paddy and rain-fed vegetable developed and disseminated to following agencies through project activities, Project Steering Committee, technical coordination committee and with provincial coordination committees	Published SLM guidelines	Moderately Unsatisfactory	Project has achieved the targets
Output 4.4: M&E system established to measure project progress and impact	Baseline and targets for project indicators refined Annual PIR reports submitted to	0 0	Annual monitoring report	No baseline was conducted and four annual reports were submitted.	PIR Reports		Project has achieved the targets

Outcomes and outputs	Indicators	Baseline	End of project Target	Project progress as of 31 October	MOV	Level of Achievement	Comments from evaluation team
	GEF Secretariat Six monthly project progress reports						
Output 4.5: Midterm and terminal evaluations carried out	Mid-term and final evaluation reports	0	Terminal evaluation	Terminal evaluation is in progress	Evaluation reports		MTR and terminal evaluation report submitted

Appendix 5. Case stories of SLM models

Scaling up SLM models: replication potential and gaps to be addressed

1. Farmer field school for GAP certified vegetable farming

Model description: Leveraging the Agriculture Modernization Project jointly carried out by Cargills (Ceylon) PLC and the Department of Agriculture, RDAL strengthened and expanded this strategic partnership to promote good agricultural practices (GAP) to farmers and work towards certification of farmer fields. The model takes advantage of growing consumer demand for certified and (chemically) safe food and an assured market and better price for vegetable growers. The project demonstrated a strong partnership with the private sector (technology, value addition, markets and finance) while the Government (especially the GAP division of Department of Agriculture, Provincial Departments of Agriculture, Uva and Central) provided the necessary technology transfer and training through farmer field schools (FFS). The Department of Agriculture supported farmers to obtain GAP certification. The RDAL project has contributed by developing the FFS module, training of trainers and providing new technology/inputs such as insect proof nets and plastic water tanks. The total investment for the model is INR 42.6 million in which the Cargills has contributed INR 13.6 million, the RDAL project of FAO has contributed INR 10.8 million and the contribution of beneficiary farmers has been INR 18.2 million (**Impact Assessment of Rehabilitation of Degraded Agricultural Lands Project Kandy, Badulla and Nuwara-Eliya Districts of the Central Highlands. University of Uva Wellassa**). Farmers were selected based on their previous engagement with Cargills or the government, their ability to invest and their interest in trailing new technology options. Farmlands around Cargills vegetable collecting centres in Haguranketha, Nuwara Eliya, Bandarawela and Boralanda have been selected for the programme.

New technology and adaptations: Farmlands were managed through mechanical and systemic improvements. Following the principles of integrated pest management (IPM) and integrated plant nutrition systems (IPNS) chemical usage was brought to a minimum by controlling pests and diseases through mechanical and other means. Micro-irrigation systems, use of liquid fertilizer, insect-proof nets, plastic mulch to prevent evaporation and greenhouses were necessary; these farms have demonstrably improved their productivity, both in quantity and quality. Cost of production has been brought down considerably and although initial investment has been high, farmers believe that they can recover the investment in two to three cultivation seasons. Chemical fertilizer application has been reduced to around 20 percent of the previous applied quantities. Farmers maintain records and are thus able to quantify their investments and benefits. Storage of chemicals and implements are systematized. Many farmers use plastic crates for packing and transporting produce, minimizing post-harvest losses.

Replication potential (HIGH): Farmers observed immediate benefits, such as reduction in labour, water usage, application of pesticides and fertilizer and therefore reduction in cost of production. Product quality improved. They received better prices from Cargills. This created an interest among participating farmers to increase the area under GAP certification, and interest among neighbouring farmers to transform their own fields. It has created new demand in peripheral farming communities. The model's benefits in terms of very low use of fertilizer and pesticides has increased demand among farmers and confidence among the extension services to promote it.

The Government is keen to promote the concept of GAP villages in other areas of the Central Highlands. The Department of Agriculture has allocated budgets to scale up the model. The partnership model has provided valuable lessons for scaling up, showcasing the successful combination of government policy, public investment and technical backing, and private sector financing and marketing channels.

SLM benefits: Soil erosion and loss of soil moisture is prevented with the plastic mulch. Drip irrigation saves water. Farms are terraced and managed better. Chemical application is reduced. According to the survey conducted for the Impact Assessment, sustainable land management (SLM) practices specific to this model were plastic mulch (90 percent), minimum tillage (69 percent) and contour farming (52 percent). The survey compared the practices of non-FFS farmers and GAP FFS farmers. The use of organic fertilizer, crop rotation and aerating the soil of techniques were used by both groups. Use of green manure or growing legumes in the fields was common to both groups. Sprinkler and drip irrigation was much greater among the GAP farmers. 87 percent of FFS farmers have stated that they can now cultivate crops even during off seasons because of the low water requirement.

Social/economic benefits: The majority of surveyed GAP FFS farmers reported:

(Impact Assessment of Rehabilitation of Degraded Agricultural Lands Project Kandy, Badulla and Nuwara-Eliya Districts of the Central Highlands. University of Uva Wellassa)

- i. 50-60 percent reduction on water usage compared to manual watering;
- ii. 70 to 80 percent reduction of chemical fertilizer due to fertigation and adoption of IPNM;
- iii. 30 to 40 percent reduction of agrochemical usage from insect proof nets and IPM;
- iv. 30 to 40 percent reduction of labour usage (both family labour and hired labour) mainly due to minimum tillage, reduced weeding, watering and fertilizer application;
- v. 10 to 20 percent yield increment (use of quality seeds/plating materials, IPNM, IPM, and Irrigation, etc.);
- vi. FFS-GAP farmers frequently referred to co-benefits like “increase water efficiency, reduced labour cost, reduced fertilizer cost, improved product quality, improved fertilizer efficiency, which are closely linked to improved soil condition and productivity;
- vii. FFS-GAP farmers mentioned that the quality of their produce has improved remarkably and they receive a premium price (usually about Rs. INR 10-15 more per kilo).

Environmental benefits: Soil and water conservation. Reduction in chemical fertilizer application reduced threats of pollution and eutrophication downstream. Organic fertilizer application improved soil biodiversity and health. Climate resilience is improved with protected agriculture.

Interviews:

Director at the Agribusiness Development Division, Department of Agriculture (certification body for GAP):

“The project has demonstrated that good agricultural practice certification, high-value agribusiness and sustainable land management can complement each other. This is very important, and the demonstrations in Karaliyadda, Nelugala and Bandarawela have yielded positive benefits to farmers, extension services and the market. Group certification has been trailed successfully. The GAP Village concept, which is a government priority, has been initiated in Karaliyadda village in Kandy District.”

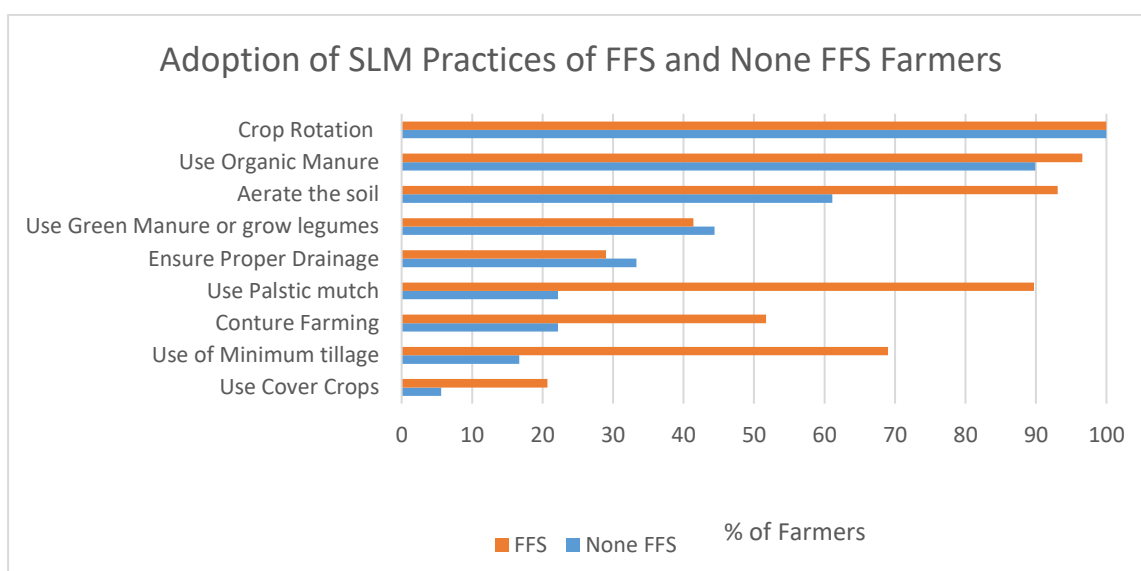
“Overall, the GAP model has demonstrated three important policy objectives of the agriculture sector in Sri Lanka. Introduction of technology packages to reduce costs and improve product quality; resource optimization through rational use of inputs and water and maintaining or even improving yields through chemical-free (or highly reduced) agriculture.”

“What is missing now is improved consumer awareness to promote markets for GAP certified vegetables as safe, chemical-free and environmentally-friendly products. We hope we can

implement other public private partnerships to promote the enhanced use of certified agriproducts.”

Agriculture Instructor (AI) at Department of Agriculture, Nelugala, Nuwara Eliya. “The farmer field school (FFS) has helped to improve farm practices such as planning, record keeping, proper storage of farm implements and chemicals, safety in handling chemicals, pre-harvest intervals for chemical application, mechanical and biological control of pests, application of organic fertilizer and post-harvest handling of produce. The FFS has been immensely successful in motivating this community living in a remote area in Nuwara Eliya. They transport their vegetables to the Cargills purchasing centre collectively, saving costs. Plastic crates and used. The farmer will get a better price for this. Overall, their knowledge and income levels drastically changed over the piloting period.”

Nelugala Farmer Society: “We want to expand the GAP model beyond the 0.25 acres supported by the project. We cultivate other lands in the regular manner. We clearly see the advantages of the GAP practices and the knowledge imparted through the FFS. We would like therefore to expand this model to the rest of our fields- at least to 05 acre. Even if the initial cost is high, many of us have recovered the investment in one or two harvests (within one year).”



Source: Impact evaluation report RDAL Project.

Gaps and challenges:

- i. High initial investment can discourage farmers, even if the SLM pilots demonstrate that investment can be recovered within one or two seasons.
- ii. The components of the technology package (insect proof nets, irrigation system, plastic mulch) are all imported and therefore likely to become more costly with time or even unavailable with the current economic crisis in Sri Lanka.
- iii. Safe disposal of waste material from these models -especially plastic mulch, nets and irrigation components -is yet to be addressed.
- iv. Availability of AIs for GAP extension, especially sufficient technical support for technology issues, may be too limited to scale the model widely across the Central Highlands Districts.

Scaling up SLM models: replication potential and gaps to be addressed

1. Developing and executing Participatory Land Use Plans

Model description

The RDAL project supported revision of existing Land Use Policy Planning Development (LUPPD) guidelines and Participatory Land Use Planning (PLUP) guidelines. Once finalized, it was agreed among relevant agencies and upgraded divisional level PLUP guidelines. Using the guidelines, the project has supported developing PLUPs in Central Highlands through SLM practices. Land Use Policy Planning (LUPPD) Department led the process with the support of the Department of Agriculture, Department of Export Agriculture, Tea Small Holdings Development Authority, Tea Research Institute, Divisional Secretariats, communities and with the private sector involvement. Watersheds were selected to develop PLUDPs which is more effective than selecting administrative boundaries. Using participatory approaches (PRA) need identifications were conducted and catchment components were identified and mapped. Present land use map, land parcels map, land degradation map, land management map and soil erosion map were developed in the process. Using the data proposed land use plan have been prepared for the catchment. The proposed map was presented to Divisional and District Agriculture Committees, the highest committees that take legally binding decisions in agriculture.

New technology and adaptations:

The project has directly supported 7 666.5 ha of lands managed under SLM using the approaches of implementing PLUPs of micro-watersheds, FFS and demonstrations executed by farmers. However, project has facilitated developing 111 PLUPs targeting 15 592 ha in overall. The approach was used to take SLM to many type of beneficiaries (Tea, home gardens, GAP). With the SLM approach soil conservation activities such as cultivation based on contours, terracing, application of organic fertilizer, using of cover crops, mulching, intensive use of land, and promoting of IPM methods were promoted. Additionally the coordination among stakeholders who are responsible for extension services were coordinated from the process and farmers have received better service as per the demand.

Replication potential (HIGH): The project has derived following impacts. LUPPD has decided to continue the participatory land-use planning approach in their planning activities and have developed and implanted. The prepared PLUDPs have been accepted and sanctioned by the Divisional and District Agriculture Committees, and Divisional Secretaries have accepted the responsibility of implementing the action plans with all stakeholders. The project approach and interventions have been able to link and network the stakeholder institutions whose works are related to the SLM, yet who have not been worked collaboratively. The RDAL project has contributed to the capacity building of the employees of implementing partner organizations on the SLM, participatory approach in land use planning, and how to use the LUPs for decision making. Accordingly, a total of about 34 officers of partner organizations have been trained through the project. The Director General of LUPPD stated that the PLUDPs can be developed to resource plans and can be improved as a resource plan later.

Evidence for success: Sapugasulpotha in Bandarawella DS division is an environmentally sensitive area in the Central Highland. Participatory land use planning was done at the Sapugasulpotha with the guidance and facilitation of the RDAL project. According to the dwellers and officers involved in the process, it has been a novel and invaluable experience where they have been able to reflect upon their lands and landscape characteristics in a different perspective. Sharing the

experience of the process and the output of the process, Agriculture Research and Development Officer said that the PLUDP prepared for Sapugasulpotha area by the RDAL Project has several advantages part from implementing SLM programs of the RDAL Project. The detailed PLUDP developed for each land plot of the village will be very useful in implementing other development programs. The informant further shared that when new project or program related to agriculture are launched in the Bandarawela Divisional Secretariat Division, Sapugasulpotha gets priority, because they have the details to select beneficiaries and lands for the appropriate project.

A Director at LUPPD-Kandy, and a Land Use Planning Officer at Kandy stated that, RDAL project is very relevant to their organizational tasks; thus, it helps to strengthen their activities and they highly recommended the PLUP approach. Using the PLUDP process, 33 PLUDP plans have been developed for Doluwa Divisional Secretariat division and distributed to all relevant officials (DS office, Grama Niladhari, Agriculture Research and Development Assistant, Samurdhi Officer, Economic Development Officer, Land Use Planning Officer) for their internal use. The assistant director mentioned that they are intended to continue PLUDP approach and it has been included into the next year plan too. She has stated that LUPPD has been able to secure a grant funding from World Bank by submitting a proposal incorporating the PULP approach. They strongly recommended that this process should be replicated in all GNDs of the country and to make it obligatory to the use LUPs in development and other land use activities.

Gaps to be addressed: A comprehensive and collaborative approach should be adopted due to engagement of high number of stakeholders. Legitimacy of the execution of PLUDPs need to be institutionalized. Building the capacities of relevant implementing partner organizations is vitally important.

Annexes

Annex 1. Terms of reference for the evaluation

Annex 2. Detailed Evaluation Matrix