ENVIRONMENTALLY SUSTAINABLE PRODUCTION PRACTICES IN COCOA LANDSCAPES PHASES I & II (ESP I & II)

GHANA

[PIMS UNDP.GHA.2020.144.I.C.]

FINAL REPORT

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Project and evaluation information details

Project/outcome Information		
Project/outcome title	Environmentally Sustainable Production Practices in Cocoa Landscapes Phases I & II (ESP Phase II)	
Atlas ID	00095425	
Corporate outcome and output	**UNDP Outcome (s): Outcome 6:** Urban and rural communities have access to affordable services, knowledge and tools to increase their resilience. **Expected Output(s): 6.3.** Communities have greater capacities and skills to adopt environmental conservation practices, such as climate-smart agriculture	
Country	Ghana	
Region	RBA	
Date project document signed		
Project dates	Start	Planned end
	May 1, 2013	December 31, 2020
Project budget	Phase I: USD 1,701,600; Phase II: 1,850,002.59	
Project expenditure at the time of evaluation	The budgets for both Phases I &II were fully utilized with a zero balance	
Funding source	Mondelēz International Cocoa Life Programme	
Implementing party	Ghana Cocoa Board (COCOBOD)	
Evaluation information		
Evaluation type (project / outcome / thematic / country programme, etc.)	Project	
Final/midterm review/ other	Terminal Evaluation	
Period under evaluation	Start	End
	May 1, 2013	December 31, 2020
Evaluators	Mr. James Acworth, Dr. Ruth Malleson; and Dr. Theophilus Adomako	
Evaluator email address		
Evaluation dates	Start	Completion
	February 2021	April 2021

List of acronyms and abbreviations

AWP	Annual Work Plan
CCB	Climate Community Biodiversity
CSSVDCU	Cocoa Swollen Shoot Virus Disease Control Unit
CEA	Community Extension Agent
CHED	Cocoa Health and Extension Division
COCOBOD	Ghana Cocoa Board
CPD	Country Programme Document
CFI	Cocoa Forest Initiative
CL	Cocoa Life
CRMU	Collaborative Resource Management Unit (part of the Forestry Commission)
CREMA	Community Resource Management Areas
CRIG	Cocoa Research Institute of Ghana
ESP	"Environmental Sustainability and Policy" Project
FC	Forestry Commission
FCPF	Forest Carbon Partnership Facility
FLEGT VPA	Forests, Law Enforcement, Governance & Trade Voluntary Partnership Agreement
GAP	Good Agricultural Practises
GCFRP	Ghana Cocoa-Forest REDD+ programme
GCP	Ghana Cocoa Platform
GCP	Global Commodities Programme (UNDP)
GEP	Good Environmental Practises
GIS	Geographical Information System
GoG	Government of Ghana
HIAs	Hotspot Intervention Areas
IDH	Sustainable Trade Initiative
IPs	Implementing Partners
ISSER	Institute of Statistical, Social and Economic Research, University of Ghana
LAP	Land Administration Project
LID	Living Income Differential
M&E	Monitoring and Evaluation
MAB	Man and Biosphere Programme
MESTI	Ministry of Environment, Science, Technology and Innovation
MTR	Mid-Term Review
MTS	modified taungya system
NDCs	Nationally Determined Contributions
NGOs	Non-Governmental Organizations
NRWG	National REDD+ Working Group
NTFP	Non-Timber Forest Product
OECD	Organisation for Economic Cooperation and Development
PDD	Project Design Document
PCR	Project Completion Report
PIMS	Project Information Management System
PMU	Project Management Unit
REDD	Reducing Emissions from Deforestation and Forest Degradation

RPF	Resettlement Policy Framework
RMSC	Resource Management Support Centre (part of the Forestry Commission)
SMART	Specific, Measurable, Achievable and Attributable, Realistic, & Time-Bound
SDGs	Sustainable Development Goals
SESP	Social and Environmental Screening Procedure
SFM	Sustainable Forest Management
SLM	Sustainable Land Management
TE	Terminal Evaluation
ToC	Theory of Change
ToR	Terms of Reference
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Program
UNEG	UN Evaluation Group
UNSCDF	United Nations Sustainable Development Cooperation Framework
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Voluntary Carbon Standard
WCF	World Cocoa Foundation
WD	Wildlife Division
WVI	World Vision International

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1. Executive summary

The final evaluation covers both the "Environmental Sustainability and Policy for Cocoa Production in Ghana" Project (ESP Phase I) and "Environmentally Sustainable Production Practices in Cocoa Landscapes" (ESP Phases II) which commenced in 2013 and ended in 2020.

The Overall Objective of ESP Phase 1 was to: "*Create the institutional systems, tools and policies to rehabilitate cocoa landscapes, conserve and expand forests, forest buffer zones and corridors and incentivize cocoa farmers to adopt environmentally friendly best practices*".

Phase 2 of the ESP was implemented to achieve two broad objectives, which were:

- Farmers in the Cocoa Life program adopt environmentally sustainable and climate change resilient cocoa production practices on their farms.
- Cocoa production landscapes in the Cocoa Life communities and districts are managed sustainably to conserve ecosystems and natural resources.

Phase 2 set out to achieve these broad objectives through a three-pronged strategy, to:

1. Mainstreaming of environmentally sustainable production practices into farmer extension trainings.
2. Ensuring long-term ecosystem protection at the district to community levels by establishing 3 Community Resource Management Areas (CREMA) in selected districts to govern local resources and ecosystem management in cocoa landscapes.
3. Policy engagement with government on land tenure and tree tenure rights.

The two phases of the project have, since 2013, worked at mainstreaming environmentally sound production practices through direct farmer engagements and training of Extension Staff of COCOBOD's Cocoa Health Extension Division (CHED) in the 12 project focal districts as well as engaging the communities in the sustainable management of their natural resources through the development of Community Resource Management Areas (CREMAs).

1.1. Purpose and objectives of the evaluation, including the audience for the evaluation and the intended uses.

The purpose of the evaluation is to provide the stakeholders of the project, that is, the UNDP, Mondelēz International Cocoa Life Program, the Government of Ghana, Ghana Cocoa Board (COCOBOD) and other stakeholders with an independent assessment of project's design, scope, relevance, performance and success, to identify early signs of potential impact and sustainability, to promote accountability and transparency, assess the extent of project accomplishment over the past seven years implementation, and to provide lessons that may help improve the selection, design and implementation of future UNDP activities, especially considering that a potential third phase of the project is being discussed.

1.2. Key aspects of the evaluation approach and methods.

The terminal evaluation report set out to provide evidence-based information that is credible, reliable and useful. Various sources of primary data and information were accessed and used. Both quantitative and qualitative evaluation methods were followed to promote triangulation of the findings. The evaluators accessed and reviewed all relevant project documents, scientific

literature, other documents and reports of relevant projects. The team conducted remote consultations with a range of stakeholders either implementing, or supported by the ESP Project, following a list of questions, drawn from the Evaluation Matrix. The National Consultant conducted direct observation and validation of tangible outputs, outcomes and activities of the project through key informant interviews, focus group discussions with men and women, beneficiaries and other stakeholders, combined with field visits to review key indicators identified in the Results Framework using questions outlined in the Evaluation Matrix.

1.3. Principal findings, conclusions and recommendations.

The ESP project design made a strategic choice to embed the capacity for delivery of training in environmentally sustainable cocoa production in the national institution responsible for delivery of cocoa extension services – notably the Cocoa Health and Extension Division (CHED) of COCOBOD. This has enabled ESP to integrate environmental sustainability into the heart of both the Cocoa Life Program, and COCOBOD, the mandated institution responsible for cocoa farmer extension, making it easier to scale up promising interventions to other landscapes and non "Cocoa Life Program" farming groups. While some of the environmentally sustainable practises promoted and rolled out by the CL funded ESP, including shade tree planting, were already part of the COCOBOD policy and farmer training curriculum, they have been strengthened by the ESP Program interventions, fully integrated into the CHED farmer training curriculum and the extension staff have been better trained to deliver the environmental component of the curriculum and not just the agronomic aspects.

Some good progress has been made with roll out of training on Good Environmental Practises (GEP), and tree planting, generally meeting planned targets. But the impact of ESP activities is still only being felt by some of the farmers who are members of the Cocoa Life Farmer Unions in the pilot districts that the project has managed to engage, and not every community member. The Ipsos (2019) Impact Survey reports that 57% of Cocoa Life farmers reported that they had participated in GEP Training and that most (89%) have made many changes to their behaviour. Scaling up will require engagement of all private sector and donor financed initiatives into coherent and coordinated programs in existing and new Districts and landscapes if efforts to reduce deforestation and degradation and achieve demonstrably sustainable cocoa production is to be achieved at country-level. However, COCOBOD are confident that their on-going programs will continue to reach farmers that request support.

Improved Land and Tree Tenure and incentives were from the outset identified as fundamental preconditions for sustainability, but at the close of both Phases 1 and 2, they still remain elusive. While the evaluators acknowledge that the ability to bring about Land and Tree Tenure reform lies beyond the mandate of ESP Project alone, the Project Documents of both Phases 1 and 2 explicitly set out to influence policy and establish financing mechanisms that would incentivise sustainable production systems. Until such time as necessary reforms are effectively secured, progress towards environmentally sustainable cocoa production risks being continually undermined. There is little incentive for smallholder farmers to plant and nurture shade and timber trees to maturity, if they have no ownership rights over them.

Some valuable work was done in the context of the VPA to draft amendment to the Trees and Timber Act by Client Earth[1] and Taylor Crabbe Ghana[2]. The hope was that it would be the starting point for vesting trees off-reserve in the landowner/farmers with an accompanying benefit sharing formula, but the Forestry Commission was not in favour of it since it would have deprived them of the benefits of managing the off-reserve timber resource. The evaluators recommend that this work be revisited with a view to building a stronger coalition of support and advocacy for the necessary reforms.

Progress with more fundamental, systemic land tenure reforms continues to be slow and frustrating. Proposed interim solutions include tree registration of planted trees in cocoa farms to secure the farmers' stake in the long-term value of timber trees planted as a form of incentive. At the request of the Ghanaian Authorities, the ESP developed and field-tested tree registration procedures and software in partnership with the Forest Investment Program (FIP). Forestry Commission requirements for the system were complex, but ESP partners set out to keep any tree registration system as simple as possible, making it more manageable and cost-effective for potential scaling up. After heavy investment of time and effort, the Forestry Commission and ESP contracted software developers experienced a range of difficulties in operationalising the software and GIS database, which remained problematic up to the end of Phase 2. The Ipsos (2019) Impact Study showed that only 23% of surveyed farmers have officially registered any of their shade trees.

Mechanisms for monitoring impacts of the ESP programme on key metrics (deforestation, on-farm tree cover and carbon stocks, cocoa yields, farmer incomes, etc), which should have been put in place under Phase 1, are still non-existent or too weak to support any quantitative analysis by the ESP programme itself. While the broader Mondelēz International Cocoa Life Program has conducted monitoring on these metrics / Key Performance Indicators, these are not all made public – not even to the ESP team (UNDP and Cocobod). Further, these are done on the basis of farmer recall during interviews and some farm visits, rather than direct measurement due to methodological challenges (see Section 5.4). Impact study results available is for one year only (Ipsos, 2019) following a new methodology and serves as a baseline - but does not yet provide analysis of impacts over time. The Evaluation Team was given confidential access to this Impact Study data very late in the evaluation process, requiring considerable adjustment of some of the earlier conclusions reached.

The presentation of financial information in quarterly reports against activities without any summary of cumulative expenditure per output and outcome did not facilitate analysis of expenditure per outcome our output by the Evaluation Team, or assessment of value for money. Observed weaknesses in monitoring and reporting must be addressed in any future phase.

Funding for forest conservation activities under both Phase 1 and Phase 2 was very limited. The project's strategy was to influence landscape management through the establishment, capacity building and operationalisation of multi-stakeholder governance structures of Community Resource Management Areas (CREMAs). One CREMA was established during Phase 1 and an additional two were established during phase 2.

[1] ClientEarth Ghana Program: https://www.clientearth.org/how-we-work/our-global-reach/africa/ghana/

[2] Taylor Crabbe Ghana https://taylorcrabbegh.com/

Progress on developing incentive-based mechanisms for farmers to plant and retain trees in cocoa farms, and the development of additional income sources for the CREMAs (such as through the gathering and/or cultivation of non-timber forest products) has been limited (while noting that community development and promotion of additional livelihood interventions, gender, women and youth empowerment were supported under a different pillar of Cocoa Life, championed by the WVI - and were not part of the current evaluation).

Preliminary feasibility analyses for developing a pilot voluntary carbon project concluded there was limited potential for direct payments to farmers due to the estimated high administrative costs and low carbon revenues for individual farms. Efforts have instead focused on collaborating with the Forestry Commission's Climate Change Unit to align ESP with the Ghana Cocoa Forest REDD+ Programme (GCFRP) in the hope that in the medium term it can generate carbon revenues from which benefits and services will trickle down to farmer groups. But roll out of the GCFRP has also been slow.

The National Cocoa Platform that was to be put in place by ESP Under Outcome 6 of Phase 1 was shifted to a separate program, managed by COCOBOD upon request from its senior management, with its own Project Document. A platform was established and was reportedly well-managed and popular with stakeholders, but after a promising start with much interest, foundered due to a decline of political will in circa 2017 under new Cocobod leadership. This is not a criticism of ESP – but the weakness of the national dialogue resulting from failure of the Cocoa Platform has made it more difficult to progress on important reform processes. Further discussions with COCOBOD reveal that one of the reasons that additional funds could not be raised for the operations of the Platform is that other donors were uncomfortable to finance a platform that was primarily funded by one private sector actor – Mondelēz Cocoa Life – if it was expected to operate as an independent, neutral platform. UNDP is currently exploring the viability of reviving a national cocoa platform, with full political support, in collaboration with the Swiss State Secretariat of Economic Affairs (SECO). Given the wide range of actors in the cocoa sector, each pursuing their own programmes with separate funding, a revived national cocoa platform will be essential to ensure dialogue and coordination across the sector, in particular to advocate for key systemic reforms, and improve the efficiency and effectiveness of ESP and similar initiatives. Recommendations are made below on alignment of national and subnational coordination mechanisms.

1.4. Conclusions

Strengths: Good progress has been made with building the capacity of CHED staff of COCOBOD, CEAs, staff of the Implementing Partners and project field staff to deliver a range of environmental sustainability training programs to farmers. In turn farmers reached by the ESP programme have improved environmental practices on cocoa farms including in particular the planting of economic shade trees and adoption of environmentally sustainable practises.

The Cocoa Life (CL) Programme is the largest private sector-funded cocoa sustainability program in the world - and in Ghana. Despite this, demand for training and materials by farmers enrolled in the Cocoa Life Program who benefit from ESP support, and those neighbouring farmers who observe, but are not yet enrolled in the CL program, outstrip supply. Farmers are motivated by access to free technical and material support with potential to increase yields and income.

Women have benefited from the project, with an increasing proportion of trainees and membership of Farmer Societies, and management positions in Cooperative Unions. But they still lag behind and require added attention in future.

Institutional capacity to support landscape-wide environmental management has grown, to a limited extent, through the establishment of CREMAs in two of the 12 target districts supported by the ESP though the Forestry Commission seems not yet fully supportive of their operations, and the CREMAs' activities remain heavily dependent on donor funding. Farmer Societies and Cooperative Unions have also benefited from capacity building provided by both ESP via training of trainers, who in turn train members, and other Cocoa Life partners.

Weaknesses: The rate of progress to establish and operationalise the CREMAs has been constrained due to lack of urgency among government institutions to legalise and empower the CREMAs - including letting them handle income-generating activities. The functioning of CREMAs and their impacts on actual landscape wide conservation still appear to be quite weak. Whilst there was some awareness raising on why it is important to conserve animals and forests, and evident enthusiasm to do so, there appears to have been little work to monitor the success of efforts to create community protected areas (Indicator 2.2.4) or to monitor percentage of forest degradation/ deforestation at cocoa frontiers avoided (Indicator 2.1.2).

Without the requisite land use plans to guide and regulate land use, and incentives for forest protection and tree planting being in place, institutional capacity alone will not ensure more sustainable outcomes. Work on many of these additional factors (land use planning, creation of incentive mechanisms) were planned in both Phases 1 and 2 (original project documents and/or revised workplans, but then either not done, pushed into the future, or hived off to other actors, resulting in a patchwork of interventions, managed by different programmes that have not yet added up to the intended 'whole'.

All project documents and analyses have clearly recognised that insecure land and tree tenure and unfair distribution of benefits from their use are the fundamental underlying cause of unsustainable cocoa farming practices. This is a long-standing issue. COCOBOD and the project implementing partners accepted the challenge to address this through the ESP but progress on overcoming these systemic challenges has been limited. Field tests of tree registration technologies and procedures have demonstrated the technical complexity, administrative capacity constraints and high costs to implement it at scale, with insufficient assurances of revenue sharing with farmers at harvest. The 2nd National Stakeholder Dialogue on Tree Registration (Koforidua, June 2019) highlighted many outstanding challenges, shared by multiple stakeholders, and drafted a roadmap to address them.

The Evaluators concur with the conclusion of other studies (O'Sullivan et al. 2018[3]; Hirons *et al*, 2018[4]) that individual tree registration is not a viable long-term solution and even as a shorter-term measure, it is probably not cost effective to roll out at scale – at least not as a standalone strategy. Instead the evaluators recommend that tree registration should be

[3] O'Sullivan et al. (2018), ibid. https://www.land-links.org/wp-content/uploads/2018/04/Session-08-06-OSullivan-585_paper.pdf

[4] Hirons, M., McDermott, C., Asare, R., Morel, A., Robinson, E., Mason, J., Boyd, E., Malhi, Y. and Norris, K. (2018) Illegality and inequity in Ghana's cocoa forest landscape: how formalization can undermine farmers control and benefits from trees on their farms. Land Use Policy, 76. pp. 405-413. ISSN 0264-8377 doi: https://doi.org/10.1016/j.landusepol.2018.02.014 Available at http://centaur.reading.ac.uk/75818/

bundled with land tenure documentation, including of customary tenure arrangements, which delivers immediately tangible and positive long-term impacts for farmers, and in itself, goes a long way to secure tree tenure security. However, the complex interaction between the statutory and customary land and tree tenure systems, and the impact it has on incentivising tree planting and retention highlighted by recent studies[5], requires careful analysis before any further work on land and tree tenure reforms is conducted.

Project supervision by the UNDP team seems to be adequate but establishing and following a consistent results framework at both the design and implementation of phase 1 and 2 of the project have been weak, particularly in phase 1. Attribution of impacts of ESP versus other interventions is difficult due to multiple actors operating in the same landscape and the lack of an M&E system that objectively monitors both target and control farms and communities to collect objective statistically credible evidence with which to assess real changes induced by the Project.

Observation: While the objectives of the ESP remain relevant, the format of delivery of support to cocoa farmers and community institutions in the field - by a set of disparate programs each funded by a public or private sector sponsor - risks leading to confusion and fatigue among project beneficiaries. Mechanisms for better coordination of the design and implementation of programs supported by multiple donors / private sector operators remain challenging and need clear consensus during design of any third phase. Recommendations are made below to this effect.

1.5. Recommendations

The Evaluators therefore recommend the following:

Credible independent monitoring and transparent reporting on key social and environmental commitments: ESP Project M&E framework is based on inputs and outputs, in accordance with UNDP norms - higher level outcomes being reported at country level. Given that the ESP output-level reporting is underpinning claims of sustainability of the Cocoa Life Program, a more robust Monitoring, Evaluation and Learning (MEL) framework needs to be in place for all interventions in priority districts and landscapes. Such a framework will need to go beyond ESP, and indeed the broader Cocoa Life Program and monitor key performance indicators objectively for all actors in the landscape. This will improve both efficiency and effectiveness of all actors and ensure improved transparency, accountability and inclusivity within the cocoa sector that can measure progress towards relevant targets on poverty, child labour policies and cocoa buying prices, as well as the slowing/reversal of deforestation trends. Such a monitoring system would support advocacy work aimed at linking fair price for cocoa to sustainable land use practices and due diligence by private sector re compliance to forest and labour laws. Reporting and indicators must be sufficiently disaggregated in order to ensure that the project has a clear grasp on how different socio-economic groups (women, migrant farmers, people with disabilities) benefit from project activities and outcomes, given that they have limited land tenure security and access to finance. The M&E system should not only be aligned with the existing Global Cocoa Life Key Performance Indicators (KPIs), but also

[5] Asaaga, F., Hirons M., Malhi, Y., (2020). Questioning the link between tenure security and sustainable land management in cocoa landscapes in Ghana. World Development 130 (2020) 104913. https://doi.org/10.1016/j.worlddev.2020.104913

harmonised with KPIs of other stakeholders, and include the ability to demonstrate the impacts of programme interventions in target groups as compared with non-targeted 'control' groups.

Advocacy: Further phases require stronger advocacy component to ensure improved transparency, accountability (particularly for the private sector) and inclusivity within the cocoa sector and progress on relevant deforestation reduction targets, poverty, child labour policies, cocoa buying prices, and perhaps most importantly working towards linking fair price for cocoa and sustainable land use practices and ensuring private sector compliance to forest and labour laws and due diligence.

Financial sustainability: There is need for more open discussion and transparency over how government funds (such as those accessed by COCOBOD), those generated by REDD+ programmes, such as GCFRP, as well as private sector contributions should be mainstreamed and shared in the long run to support sustainable cocoa production and forest management. This does not mean that UNDP must lead the discussion / process, but should make a concerted effort to initiate it. Some stakeholders estimate that some more years of external funding will be required before the CREMAs can sustain themselves, and even then, only if sufficient powers are devolved to them to generate revenues from a range of activities.

Land and tree tenure reform: The TE Team recommends continued concerted collaboration between interested parties and programs in supporting communities and civil society to collectively engage with the different agencies of the Government of Ghana, and traditional landowners and other vested interests, and advocate for a paradigm shift towards the necessary land and tree tenure reforms, thereby creating a critical mass for change. Any new phase must envisage addressing this issue at a national scale in a single, coherent and sustained process, led by a government mandated task force that engages all stakeholders, supported by facilitation of a neutral party (potentially UNDP), with blended funding and support from multiple sources and avoiding a fragmented approach by different stakeholders and initiatives. The Evaluators recommend a concerted revival of past efforts to amend the Trees and Timber Act by building coherent civil society, public and private sector support and advocacy for appropriate reforms. While such reforms are absent in Ghana's legal framework, any attempt for individual projects to change the tenure arrangement will struggle. Some valuable work was done in the context of the VPA to draft amendment to the Trees and Timber Act by Client Earth[6] and Taylor Crabbe Ghana[7]. The hope was that it would be the starting point for vesting trees off-reserve in the landowner/farmers with an accompanying benefit sharing formula, but the Forestry Commission was not in favour of it since it would have deprived them of the benefits of managing the off-reserve timber resource. The evaluators recommend that this work be revisited with a view to building a stronger coalition of support and advocacy for the necessary reforms. This will need to be a collective effort of multiple agencies and programmes including partners of the Cocoa & Forests Initiative and the Voluntary Partnership Agreement (VPA-FLEGT) process.

Landscape approach: The new initiative in the Asunafo North Hotspot Intervention Area (HIA), led by the Ghana Cocoa Forest REDD+ Program (GCFRP) sets out to bring together all the necessary factors to underpin sustainable landscape management into a coherent approach supported by all stakeholders including the Mondelez Cocoa Life and ESP partners. The

[6] ClientEarth Ghana Program: https://www.clientearth.org/how-we-work/our-global-reach/africa/ghana/

[7] Taylor Crabbe Ghana https://taylorcrabbegh.com/

Evaluators fully support further engagement by the Project Implementing agencies with this landscape approach, which builds on the CREMA concept. Reaching an early consensus on how to secure long-term sustainable financing of landscape wide initiatives and their governance institutions is key to ensuring that this approach can succeed at scale, beyond one or two pilot landscapes.

Coordination of Technical and Financial partner interventions: Coordination of finance at the national and landscape / HIA levels is essential, but difficult, given the multiple sources of funding and insistence on control of own funds by donors (Govt, International, Private). Prior to any future ESP Phase 3, all actors will need to agree on mechanism to better align and coordinate diverse initiatives. This puts additional emphasis on the need to re-establish and strengthen a National Cocoa Platform, led by the appropriate mix of Government Institutions and facilitated by a trusted, neutral body. It is also important that prior to an ESP Phase 3, key institutions, such as the Forestry Commission, Lands Commission and COCOBOD, need to agree to collaborate and coordinate their work much more closely and recognise the common issues, including deforestation and forest degradation, and pathways to solutions, such as securing land and tree tenure that need to be addressed and financially supported to ensure sustainable cocoa production and sustainable forest management in the long run. Any revived or revamped National Cocoa platform would need to be carefully **aligned**, or better **integrated,** with the existing structures and stakeholder platforms in place including:

- The Cocoa Forest Initiative (that aims to achieve similar goals as ESP).
- The Ghana Civil-society Cocoa Platform (GCCP); and
- The Swiss Platform for Sustainable Cocoa (SPSC).

A revamped national platform should include representatives of all the relevant Government Ministries and Agencies that have a bearing on the cocoa sector, and chaired by a representative of a Government structure mandated to assure inter-ministerial coordination to ensure national ownership by the institutions that have power to resolve pending challenges – in particular land and tree tenure. UNDP should consider what role that it can, and should play, respectively, in facilitating national and landscape level interventions and multi-stakeholder dialogue. To be seen as neutral and to have sufficient funds to operate, any coordination mechanism(s) would need to access non-partisan funding beyond the Mondelēz International Cocoa Life Program – if need be with pooled funds from multiple sources.

Planting material production and distribution: There is a need to review mechanisms for production and distribution of planting materials to farmers - inefficiencies resulting in late delivery and low survival of distributed materials. The ESP partners are encouraged to continue exploring both private sector and community nursery options to achieve the quantity, quality, and speed of delivery of planting material required for a national level program. Going forward, it is important that the production and distribution of planting materials is aligned as much as possible with changing seasonal rain patterns in order to increase tree survival rates.

Consistent monitoring of tree seedling survival rates and growth for several years after planting is essential to inform the seedling supply chain, and to support claims regarding increased carbon storage on cocoa farms and to underpin any future payments for environmental services.

Creating incentives to conserve forests and plant trees: Rollout of PES schemes was intended to be the mechanism by which farmers would be incentivized to plant trees both on their own

farms and in degraded forest reserves. Under Component 5 of ESP Phase 1 to explore potential Voluntary Carbon Market financing options, the ESP team and UNDP's Green Commodities Programme (GCP) conducted a feasibility study of carbon-based payments, and concluded that individual payments to farmers are not realistic, for several reasons: individual carbon storage (or avoided deforestation) per farm is very small (at prevailing carbon prices at the time) and would result in small carbon payments. The transaction costs of registering and monitoring thousands of small cocoa farms would exceed the modest payments at realistic carbon prices at the time. Instead the GCP Team concluded that carbon payments would be more realistic at an aggregated level and payments could be spent on e.g. farmer support systems or other services that would help a large number of farmers. This solution will largely depend on the effectiveness of the REDD+ program, and payments would only be generated in the longer term once the program is able to document reduction in deforestation and/or reforestation. UNDP continues to be a partner in this effort.

However, REDD+ progress remains slow, and while the ESP partners have a formal collaboration with the GCFRP, and a benefit-sharing mechanism has been developed[8], which includes farmers, as yet, no results-based payments have been made. Much, therefore, depends on farmers' confidence in the tree registration mechanism to guarantee that in the long term they may benefit from trees planted on farms. Further, the evaluators note that performance-based payments to jurisdictional authorities at the landscape level rather than to individual farmers does raise additional questions. If carbon payments finance farmer support systems across the landscape, it does not solve the problem of how to provide incentives to individual farmers, even if there are 'collective benefits'. 'Free-riders' will be happy with the public services but may not plant trees.

Tree Registration: While some trees have been mapped and registered, until the challenges with the rollout and long-term financing and governance of the scheme and tree and land tenure policy issues are resolved, these are likely to undermine long-term confidence of farmers that they stand to gain from their individual conservation efforts. The evaluators suggest that tree registration may not be a long term financially or technically sustainable answer to side-step the impasse for more fundamental land and tree tenure reform. While it may serve as a temporary measure it may distract attention from the bigger goal of tree tenure reform.

The Evaluation Team therefore recommends undertaking a thorough review of the costs, benefits and long-term practical and logistical feasibility of scaling up land and tree registration across the country, using existing technologies (including others trialled by ESP with RMSD, Agro-Eco and Meridia and any others), and explore options for long term financing of such an initiative. The evaluation team recommends that whatever the outcome of such a review, more concerted effort should be made to advocate for more fundamental land and tree tenure reforms, as outlined above, that would render individual tree registration unnecessary.

Climate change & related adaptation and mitigation strategies: ESP has provided significant contributions to a more climate resilient cocoa production model, including introduction of climate-smart agronomical practices and the re-introduction of shade trees on cocoa farms. ESP - and UNDP in general - collaborate extensively with the Forestry Commission's Climate

[8] Forestry Commission (Sept 2018) Advanced Draft Benefit Sharing Plan Ghana Cocoa Forest REDD+ Programme https://www.forestcarbonpartnership.org/system/files/documents/Ghana%20FCPF%20ER%20Program%20Advanced%20Draft%20BSP.pdf

Change unit. The Evaluation Team recommends continued focus on climate change & related adaptation and mitigation strategies for cocoa production and forest management. Future support should focus on the adoption of more innovative and nuanced climate smart practices that are adapted to projected specific climate change impacts and in sub-regions of Ghana and other challenges, such as poor pollination. For example, based on research carried out by Bunn et al. (2019)[9] site-specific cocoa production adaptation strategies can help to match the degree of climate change impacts to each agro-ecological zone. Better preparation for change can help cocoa farming communities reduce risks of losing their livelihoods and vulnerability to the impacts of drought, heat and erratic rainfall. Frimpong-Anin et al., (2015)[10] have provided some suggestions on practices that help conserve cocoa pollinators which could also be encouraged. Further, the older over-grown agroforests should NOT be rehabilitated, but instead the landowners / tenants encouraged to maintain the high accumulated carbon stocks and biodiversity found in such old farms. National ownership, and coordination with other climate change initiatives will be essential to achieve meaningful progress and impact on this.

Steering Committee Composition: While ensuring that the structure respects UNDP's Programme and Operations Policies and Procedures, the evaluators recommend adding the voice of an independent scientific advisor, mandated to provide inputs from research on sustainability of increased yields, long-term soil fertility, etc.

Modified Taungya System (MTS). The MTS as a mechanism for restoring degraded forest reserves faces a number of significant challenges according to independent reports and published research papers. The Evaluation team has provided a review of these challenges that UNDP / Cocobod / Mondelēz International Cocoa Life Program will need to address in any future phase, if they intend to promote MTS as a solution for forest restoration at scale. While the technical feasibility of the MTS, and the immediate benefits are evident, the medium to long-term benefits are more elusive, and the success of the "modified" system depends heavily on the transparent and respectful sharing of power and benefits by powerful state institutions with poor rural farming communities, with long-term legally enforceable agreements. The ESP partners have reported frequent concerns about the ambition to enact meaningful and timely reforms by these same state institutions during Phases 1 and 2. Full political commitment to address key challenges around implementing Taungya at scale must be secured from the relevant authorities as a prerequisite for any future investment.

In view of available scientific and socio-economic evidence on MTS systems, the evaluators recommend that, before Mondelēz International Cocoa Life and UNDP continue the roll out MTS, a thorough review of the pros and cons of the MTS system is carried out, including a long-term Cost Benefit Analysis, in order to identify the key criteria required that are essential to have in place for it to succeed and to assess whether these criteria are in place.

Use of Agrochemicals: There is need for continued caution about potential harmful effects of excess herbicides, particularly glyphosates and pesticides that are used in cocoa production. For instance, promotion of more active and direct measures to minimise the use of

[9] Bunn, C. Laderach, P. Quaye, A., Sander M., Noponen, R and Lundy M. (2019). Recommendation domains to scale out climate change adaptation in cocoa production in Ghana https://www.sciencedirect.com/science/article/pii/S2405880719300640)

[10] Frimpong-Anin et al. (2015). Some Facts About Cocoa Pollination https://www.researchgate.net/publication/318827628_SOME_FACTS_ABOUT_COCOA_POLLINATION#fullTextFileContent

agrochemicals and to encourage best practices as used in organic cocoa production from around the world should be encouraged to minimize the use of herbicides among farmers. Such approaches should be encouraged wherever possible, given the links with the decline in cocoa pollinators. Further research is required to determine the impacts of different options.

Use of a Human Rights Based Approach: in future phases the Project should focus more on using a human rights based approach, i.e. that all forms of discrimination in the realisation of rights must be prohibited, prevented and eliminated. It also requires the prioritisation of those in the most marginalised situations who face the biggest barriers to realising their rights. In the context of the ESP project, we recommend that in the next phase of the project, there is a much stronger drive to raise cocoa farming communities' awareness of their basic human rights, in relation, for example, to access to clean water, children's education and fair cocoa prices for their cocoa; and the importance of their role to advocate for these issues. In short, to provide support that contributes to the development of the capacities of 'duty-bearers' to meet their obligations and/or of 'rights-holders' (i.e. cocoa farmers and their communities) to claim their rights.

1.6. Lessons Learned

More scientific rigour in project design and monitoring and evaluation: More could have been done during both project design and implementation to learn from the lessons provided by other projects and scientific research and publications, though some of these have been published during the project lifespan. The evaluators make recommendations for specific research questions that should be addressed in future.

Further consideration of potential risks of Public Private Partnerships: The ESP is perhaps unusual in the portfolio of UNDP inasmuch as it is financed 100% by the private sector with co-financing and in-kind contributions from COCOBOD in terms of the use of its structures to support project implementation. In line with UNDP's own Programme and Operations Policies and Procedures (POPP) on Public Private Partnerships, the UNDP management needs to consider how it can bring its considerable convening power to guide the cocoa sector more purposefully towards long term sustainability on all fronts (social, economic and environmental) while also assessing, managing and monitoring all potential reputational risks for UNDP.

Reaching agreement on better institutional arrangements for coordination during any third phase of ESP: The cocoa and forest sectors in Ghana are a crowded space, with the Cocoa and Forest Initiative (CFI), Ghana Cocoa Forest REDD+ Program and other ongoing initiatives. UNDP is currently designing the 3rd phase jointly with the Mondelēz Cocoa Life Programme to ensure alignment with relevant objectives as aligned with UNDP's CPD and Mondelēz' obligations under the CFI. Before finalising the institutional arrangements for any next phase of ESP, the evaluators recommend a review of the current mechanisms for cross-sectoral coordination and scope for further adjustment and alignment of coordination mechanisms with all such initiatives in accordance with the Paris Declaration on Aid Effectiveness (2005) and the subsequent Accra Agenda for Action (AAA, 2008).

The evaluators' quality standards and assurance ratings are presented in Table 1 below.

Table 1: Evaluation Ratings

Criteria	Rating[11]	Basis for Conclusion
Monitoring & Evaluation • M&E design at entry	Phase 1 (3-MU) Phase 2 (4-MS)	Phase 1 began with no clear Results Framework (RF) and most outputs were dropped, or modified in 2014AWP in an effort to adapt / align ESP indicators and monitoring methodologies with Cocoa Life KPIs. Responsibilities for monitoring indicators were not made clear in project documentation. Phase 2 had a clear RF at entry, but indicators were not all SMART.
• M&E Plan Implementation	Phase 1 (3-MU) Phase 2 (4-MS)	Monitoring against the Cocoa Life KPIs was partial, and did not follow proposed methodologies (FY2014 AWP Section 5). Progress reporting in phase 1 focused on activity and input level reporting, and provided no objective evidence of outputs. M&E implementation in Phase 2 was improved, but there were frequent changes of output descriptions and activities, and then lack of reporting on some of them, making evaluation quite challenging.
Overall Quality of M&E	*Phase 1 (3-MU)* *Phase 2 (4-MS)*	
Implementation & Execution • Quality of UNDP Implementation / Oversight	Phase 1 (3-MU) Phase 2 (4-MS)	In Phase 1, a sub-standard project document was approved. As a result, many challenges arose, requiring 'adaptive management' during implementation. Workplans and reports focused on activity monitoring and bore no linkage to progress against the Results Framework. **Phase 2** oversight was more satisfactory with clear reports and regular supervision. However, a clearer strategic management response was needed from UNDP to address a number of longstanding systemic challenges, in particular tree tenure reform, that were persistently raised by the ESP team and other stakeholders, if ESP was ever to meet outcomes or higher level goals. This response was not forthcoming.

[11] **Outcomes, Effectiveness, Efficiency, M&E, Implementation/Oversight & Execution, Relevance** are rated on a 6-point scale: 6=Highly Satisfactory (HS), 5=Satisfactory (S), 4=Moderately Satisfactory (MS), 3=Moderately Unsatisfactory (MU), 2=Unsatisfactory (U), 1=Highly Unsatisfactory (HU). **Sustainability** is rated on a 4-point scale: 4=Likely (L), 3=Moderately Likely (ML), 2=Moderately Unlikely (MU), 1=Unlikely (U)

Criteria	Rating[11]	Basis for Conclusion
Quality of Implementing Partner Execution	Phase 1 (4-MS) Phase 2 (5-S)	ESP project was implemented based on UNDP's direct implementation guideline (National Implementation Modality - NIM) which restricted COCOBOD to only administrative roles. While COCOBOD capacity to implement the project in the field was limited by insufficient personnel this was overcome in the short term by additional financing from Mondelēz Cocoa Life to hire more staff. COCOBOD made significant effort to integrate sustainability into regular CHED protocols and training curricula, and trained over 400 Community Extension Agents and Lead Farmers. In both phases, coordination has been assured at national level by COCOBOD leadership, and by CHED District Officers report back to Research and M&E Dept. Coordinated planning and reporting between all implementing partners of the CL program at district level is observed to be strong. COCOBOD remains weak on data collection but is currently revising its data collection and management systems.
Overall quality of Implementation/Execution	*Phase 1 (3-MU), Phase 2 (4-MS)*	
Assessment of Outcomes • Relevance	Phase 1 (5-S) Phase 2 (4-MS)	The project objectives were relevant in Phase 1, and (perhaps over-) ambitious to address systemic issues at heart of cocoa sustainability. In phase 2, some of the ambition was reduced, to make project outputs (deliverables to Cocoa Life Program) more achievable but the systemic issues hampering sustainable cocoa production were not addressed so clearly in the design.
• Effectiveness	Phase 1 (2-U) Phase 2 (4-MS)	In phase 1, over half the planned outputs were dropped or not implemented. In phase 2, Planned activities were implemented and outputs were to a large extent delivered for most of the service delivery tasks. However, some key issues remain unresolved or remain in their very early stages of preparation.
• Efficiency	Phase 1 (4-MS) Phase 2 (4-MS)	Adequate systems were in place for financial oversight but were heavy, due to the need for constant approval. It was not possible for the evaluators to measure value for money due to the absence of adequate financial information by which to measure investments made per output or outcome against deliverables.

Criteria	Rating[11]	Basis for Conclusion
Overall Project Outcome Rating	*Phase 1 (3-MU)* *Phase 2 (3-MU)*	
Sustainability • Financial resources	Phase 1 (2-MU) Phase 2 (2-MU)	Financial sustainability of the project looks weak, due to high costs of interventions, and heavy dependence on Mondelēz Cocoa Life Program funding. More discussion and transparency required over how government funds, channelled through COCOBOD, combined with those funds in future generated by REDD+ programmes, as well as private sector contributions should be mainstreamed to support sustainable cocoa production and forest management
• Socio-political/ economic	Phase 1 (2-MU) Phase 2 (2-MU)	Costs of providing inputs and services and low prices for sustainable cocoa do not yet favour economic sustainability. Vested political and economic interests seem also to be retarding efforts to reform land and tree tenure with as yet no adequate strategy in place or being implemented to overcome them.
• Institutional framework and governance	Phase 1 (2-MU) Phase 3 (2-MU)	Institutional Frameworks (COCOBOD field Coordinators, CREMAs) unlikely to be sustained without substantial efforts to build a long-term financing mechanism to provide government services at adequate levels
• Environmental	Phase 1 (2-MU) Phase 2 (2-MU)	Lack of any consensus on a definition of what constitutes *environmentally sustainable* cocoa production or how to measure it. COCOBOD has spearheaded efforts to standardize definitions but this remains a work in progress. Key indicators on deforestation and long-term sustainability of the cocoa production model are not yet being monitored consistently to track progress.
Overall Likelihood	*Phase 1 (2-MU)* *Phase 2 (2-MU)*	

2. Introduction

2.1. Purpose and objective of the Terminal Evaluation

The purpose of the terminal evaluation is to provide the stakeholders of the project, that is, the UNDP, Mondelēz International Cocoa Life Programme, the Government of Ghana, Ghana Cocoa Board (COCOBOD) and cocoa farmers with an independent assessment of the results, impacts and key achievements of the project, as compared to the aims and objectives as outlined in the project proposal documents, over the past seven years' implementation of the project.

This terminal evaluation report also sets out to draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming, especially considering that a potential third phase of the project is being discussed.

2.2. Evaluation Scope

The report covered two phases of the ESP, and focused on issues related to the components of both phases of the project mentioned above. In addition, the terminal evaluation addressed how the intervention sought to strengthen the application of the rights-based approach and mainstream gender during implementation, as explicitly requested by our Terms of Reference, although it is important to note that this was not a specific key performance indicator for the project.

This was done by assessing project performance against expectations set in the project's results framework, among others as agreed with UNDP and evaluation stakeholders at the inception phase. Again, the review of the project aims to assess the expected outcomes and their sustainability and identify and discuss the lessons learned, through measurements of the changes in the set of indicators, summarize the experiences gained and recommend future policy dialogues and changes to the implementation structure.

While the TE Team learned at the Kick-Off meeting with the UNDP Country Team, that there was no expectation by Mondelēz International Cocoa Life Programme (donor) to conduct an evaluation, UNDP Ghana decided that it would be useful to conduct an evaluation after seven years of work – in consultation with COCOBOD and Mondelēz. The TE Team notes that current UNDP Monitoring and Evaluation policies would appear to require all regular and medium-sized projects (budget between $3-5 million), projects entering a second phase, and development initiatives being considered for scaling up, to *plan and undertake an evaluation.* Subject to reasonable justification, this requirement can be waived at the discretion of the Regional Evaluation Focal Point at the request of the country office[12].

UNDP is anticipating to start a 3rd program phase with Mondelēz, from 2021. The UNDP Ghana team felt that the evaluation and lessons learned can help refine the kind of activities and interventions that they can undertake with Mondelēz International. The UNDP Ghana team offered the TE Team some level of flexibility to provide an independent overview of what the ESP Project has achieved over the years.

[12] UNDP (2019): UNDP Evaluation Guidelines. http://web.undp.org/evaluation/guideline/

The purpose of a terminal evaluation at the end of a project's cycle is to assess the project's design, scope, relevance, performance and success, to identify early signs of potential impact and sustainability, to promote accountability and transparency, assess the extent of project accomplishment and to provide lessons that may help improve the selection, design and implementation of future UNDP activities.

2.3. Methodology

The terminal evaluation report set out to provide evidence-based information that is credible, reliable and useful. Various sources of primary data and information were accessed and used. Both quantitative and qualitative evaluation methods were followed to promote triangulation of the findings.

The Evaluators **accessed and reviewed all relevant project documents** including project proposal, project document (contribution agreement), results framework, programme and project quality assurance reports, annual work plans & budgets, close-out report and lessons, consolidated quarterly and annual reports, and results-oriented monitoring reports. The TE Team also accessed project board meetings, technical/financial monitoring reports, training materials and manual, project organogram, organogram of COCOBOD, reports from parallel initiatives in the cocoa sector funded by Mondelēz International Cocoa Life and other partners, sets of cocoa sustainability standards, and other independent evaluations of performance of farmers in the cocoa landscapes.

Rapid literature review - There are divergent views on the "sustainable intensification" debate that remains lively. In the evaluation phase of work we reviewed the range of scientific papers on the topic (compiled here) and prepared a summary of the scientific basis for the "Land Sharing" (higher shade / lower yield production systems) versus "Land Sparing" (higher yield and inputs on less land) strategies and determined how these have been tested in the Ghana cocoa sector. This review has informed our discussion on the logic of project interventions, analysis of likely impacts and future best practises.

A **list of basic questions, drawn from the Evaluation Matrix** was deployed with each stakeholder group. The TE Team conducted **remote consultations** with a range of stakeholders either implementing, or supported by the ESP Project, using "semi-structured interviews" with a set of evaluation questions that focused on relevance, effectiveness, efficiency and sustainability of the Project. These interviews took place using Zoom, or other VOIP technology, as preferred by interviewees.

Within the limits of time available for field visits (9 working days) and COVID-related travel restrictions, the National Consultant conducted **direct observation and validation of project tangible outputs, outcomes and activities** through key informant interviews, focus group discussions with men and women, beneficiaries and other stakeholders, combined with field visits to review key indicators identified in the Results Framework using questions the Evaluation Team outlined in the Evaluation Matrix.

Field visits were planned to meet a purposive sample of respondents from the regions (6), District Assembles (12) and cocoa growing communities (330), selected in consultation with the Project Implementing Partners. A sample of respondents from the six regions, 12 districts and 330 communities involving Cohorts 1,2, and 3 of the cocoa farmers were selected, guided by the COCOBOD, UNDP and Project Teams.

The goal of the visits to District headquarters of the Implementing Agencies and Partners and villages of project beneficiaries was to evaluate the impact of planned activities and not just to verify that they were conducted. Thus, the quantum of the impacts of the ESP Project focuses not only on the **number of cocoa farmers trained, but also assessed how they have applied the learned skills to generate the desired benefits.**

The TE team reviewed available evidence provided by Project Implementers regarding achievement of project indicators. The TE team notes that it was not able to collect any new data regarding progress towards these targets – but only cross checked data that has been provided by the Project Implementing Partners.

Data review and analysis of monitoring and other data sources and methods. In addition to review of project documents, workplans and progress reports, we also looked at other sources of data that could provide an indication of progress towards higher level impacts, in particular reporting of the UNDP Environment and Climate Cluster at the national level and the Cocoa Life Program's national monitoring of Key Performance Indicators. Where no such data existed, in particular for Phase I for which no formal Results Framework / Monitoring Framework was established, the TE Team noted the absence of data, but did not have time to compile or analyse such data. Instead the evaluators assessed how planned activities were implemented and the credibility of progress towards output level indicators. Measurement of outcomes and impacts were assessed from a review of UNDP Progress reports on Country Development Plan (CDP) indicators, and where possible, Cocoa Life Key Performance Indicators (where made public). The TE Team then assessed how coherently these impacts contributed to the intended Project Objectives and Goal.

Where possible, the TE Team ensured maximum validity and reliability of data (quality) through the triangulation of data sources; that is, comparing information from different sources, such as documentation reviews, personal interviews, key informant, focus group discussion, and field survey on the same subject from different stakeholders to corroborate or check the reliability of evidence.

Finally, the TE Team followed a participatory and consultative approach, as well as adopted sound ethical practices (anonymity, confidentiality, informed consent, etc) to ensure professional engagement among project managers, implementing partners and direct beneficiaries of the Project.

The areas covered by the terminal evaluation questions are outlined in Annex 5: Evaluation Criteria Matrix.

List of Stakeholders

The TE Team interviewed a representative sample of the under-listed ESP Implementing Partners, associated agencies, and beneficiaries of the project as follows:

- Project Team and UNDP staff;
- Members of the ESP Project Steering Committee;
- COCOBOD, CHED:
    - District Coordinators; Community Extension Animators (met in field);
    - The Cocoa Research Institute of Ghana (CRIG): not interviewed.

- Mondelēz International Cocoa Life Program:
    - M&E Team members (Ghana and Global teams);
    - Implementing Partners (representatives of World Vision International (WVI), Ghana National Fire Service, Abantu, AgroEco, CARE, Child Rights International, Olam, Solidaridad, Tree Global, Touton and Department of Cooperatives and the Farmers Unions);
- The Ministry of Lands & Natural Resources – Technical Director, Forestry Section;
- Regional Lands Commission – met in the field;
- Project beneficiaries – cocoa farmers and CHED staff, project coordinators, etc;
- Forestry Commission staff from the following departments:
    - Corporate Planning;
    - Director, Climate Change, National REDD+ Focal Point;
    - Monitoring and Evaluation Expert;
    - Forestry Services Department and Wildlife Department;
- World Cocoa Foundation - Program Manager for the Cocoa & Forest Initiative (CFI) in Ghana.

In the field, the following stakeholders were met:

- Cocoa farmers, cocoa pollinators, child labour committee members and nursery operators in the Cocoa Life Program or cocoa farmer societies;
- Cocoa farmers, fire volunteer groups and environmental club members in the Modified Taungya Systems (MTS);
- Women groups in the Cocoa Life Program, farmer societies and farmer unions;
- Executive members of the Cocoa Life Program, farmer societies;
- Executive members and managers of the farmer unions;
- Executive members of the Community Resource Management Area (CREMA);
- Management and/or representatives of the Implementing Partners (IPs) such as the World Vision International (WVI), Mondelēz International, Rights to Play, Cocoa Health and Extension Department (CHED) of the COCOBOD, Community Animators, UNDP-ESP field coordinators, Forestry Commission (Forestry Services Department and Wildlife Department), Ministry of Food & Agriculture (MoFA), Ghana National Fire Service (GNFS), Agro-Eco and Child Rights;
- Mim Traditional Council, Mim – represented by chiefs – "Kyidomhene", "Akyemeahemaa", "Ankobeahene" and Linguist;

A detailed list of stakeholders that the TE Team interviewed is presented in Table 2 and a full list of contacts in Annex 3.

In respect of time constraints of the TE assignment, a representative sampling of the total target population was interviewed. The information collected, including documentary evidence, interviews and observations, was compiled, processed and organized according to the questions asked in the assessment.

The TE Team assessed project performance against expectations set out in the project's Logical Framework/Results Framework (ToR Annex A – Phase II), as agreed with UNDP staff as per the ToRs and the methodology presented in the inception report.

2.4. Data Collection & Analysis

An Evaluation matrix was compiled using the main Organisation for Economic Cooperation and Development (OECD) criteria (Relevance, Effectiveness, Efficiency, Sustainability) and some additional criteria relating to cross-cutting issues, such as gender, that were proposed in the Terms of Reference. For each criterion, the Evaluation Team (ET) laid out a set of evaluation questions, and some indicators to help them to answer the questions, with proposed sources of information, and a set of evaluation methods and tools to gather and analyse the information.

Some stakeholders were interviewed remotely and some were interviewed face-to-face in their offices and in the field by the National Consultant - strictly following UNDP's COVID-19 safety protocols and rules.

The TE Team carried out the evaluation of the ESP Project over the period between January and April 2021 which covered preparatory activities of assembling project documents, identification of stakeholders for discussion, interview of relevant stakeholders, field mission, desk review and preparation and submission of the evaluation report, according to the guidelines stated in the Terms of Reference (Annex 1).

The schedule for the interviews and field visit conducted is presented in Annex 2. During the field visits, 298 stakeholders of the ESP Project were interviewed out of which 38.6% were females. Six cocoa farms and one modified taungya systems (MTS) in seven communities were visited, namely, Adwumam, Tiabante, Gyankotabuo, Sekyerekrom, Akwaduro, Anwianwian, Manso Abore, and New Apaaso.

2.5. Ethics

The TE Team followed the UN Evaluation Group (UNEG) Ethical Guidelines to conduct the terminal evaluation. Thus, the TE Consultants have signed the Evaluation Consultant Code of Conduct Agreement (Annex 10). The Evaluators ensured that everyone that was interviewed freely, with a good understanding of the role of the terminal evaluation. The Evaluators also ensured that they acted with care and in accordance with health and safety regulations, particularly in relation to the Covid-19 pandemic. The Evaluators maintained confidentiality and anonymity of all those interviewed. The TE Team aimed to interview both men and women farmers of different ages and from a range of different backgrounds.

2.6. Limitations to the evaluation

Lack of quantitative monitoring data: During the kick-off meeting the UNDP Team mentioned that ESP Phase 1 did not have clear M&E framework and monitoring under phase 1 was not comprehensive. This was to a large extent corrected in Phase 2 which had a clear M&E framework, though the evaluation team's analysis identified some weaknesses, notably that indicators were not measured or reported at Outcome level. Those presented at Output level did not, in the view of evaluators always measure the desired Output. For example, indicators for Output 1.3 "*Tree registration and tree tenure policies for the adoption of environmentally*

sustainable cocoa production practices improved" measure the "*number of CHED CEAs and farmer cooperative leaders trained on tree registration modalities*" and "*number of trees and farmers registered*" that are not a real measure of actual improvements in tree registration or tree tenure policy.

During ESP Phase II, comprehensive monitoring and reporting was done on a quarterly and annual basis. The annual reports provide yearly updates on each indicator and against approved work plans.

Further, ESP progress against indicators is reported in quarterly and annual reports against plans and targets for those quarters. The evaluators were not provided with any final reports showing total cumulative progress towards targets by project end. Thus real measurement of project impact remains difficult for some outputs, even in Phase 2. This issue is addressed in more detail in Section 4.3 Analysis of Indicators.

The International Consultants were unable to travel to the field due to time constraints, and COVID-19 related travel restrictions. Face to face meetings with ESP Implementing partners and stakeholders was therefore impossible. Instead, the TE Team made extensive use of online tools (Microsoft teams, Zoom, WhatsApp) for key informant interviews. The Team had to depend on a short field mission by one of the Evaluation Team members, and heavy dependence on the literature provided by the ESP team to the Evaluators. Another limitation was the representative sample size of the respondents relative to the time available to reach out to the desired sample size of the subjects. While the International Evaluators would have preferred to visit the field, the inability to meet stakeholders face to face and to conduct field observations, it has not materially limited the quality of the analysis.

The Mondelēz International Cocoa Life Program has multiple components and delivery partners, making the cocoa sector a crowded space, and more difficult for the evaluators to assess and attribute impacts resulting from ESP investments, as distinct from the broader impacts of the overall Cocoa Life Program, and indeed the initiatives of other Governmental and private sector programs operating in the same landscapes. Cocoa Life as an entity collects data, through their M&E team and also does some assessment of their work through Implementing partners. This broader level data is not shared with UNDP or other IPs. The evaluators therefore interviewed the CL M&E Manager for an overview of their M&E System and what it could tell us about ESP's contribution to achievement of broader CL Key Performance Indicators.

Some respondents met at the community level reported benefits of the broader Cocoa Life Program that cannot be attributed to the result of ESP interventions. For example, improvements in cocoa yields and livelihoods reported by farmers are the outcome of many CL interventions, including distribution of improved cocoa seedlings and greater use of agrochemicals and fertilisers delivered under other Pillars, and not just training in Good Environmental Practises (GEP) supported by ESP.

Field visits were conducted by the national consultant alone, who held focus group discussions and interviews with a representative sample size of the direct beneficiaries of the ESP and few staff of the collaborating partners (Mondelēz International Cocoa Life Programme, Agro Eco, World Vision International, Child Rights, CHED of the COCOBOD, etc) in the communities and district capitals (Juabeso, Goaso, Antoakrom and Effiduase, Ashanti). Prescribed World Health Organization and Ghana Health Service safety protocols (face mask, sanitization and social

distancing) were observed to avert the spread of the virus after the meetings. There was no serious limitation associated with the language barrier as the National Consultant of the TE Team held discussions with the direct beneficiaries of the ESP in the local dialect.

2.7.Structure of the TE report

The structure of the TE report is made up of seven (7) chapters. The first chapter introduces the purpose and the objectives of the TE report, which is followed by the scope, then the methodology, data collection & analysis, ethics, limitations and ends with the structure. The second chapter deals with the project description and comprises sub-sections of project duration, development context, the ESP alignment with other projects, problems to be addressed, objectives of the project, expected results, collaborating and implementing partners and ends with the Theory of Change. Thereafter, the findings of the TE is structured into five (5) chapters as outlined: (i) assessment of project design/formulation; (ii) assessment of project implementation; (iii) assessment of project results and impacts; (vi) other assessments; and (v) key findings, conclusions, recommendations and lessons learnt. The main findings of the seven chapters of the TE report is further explained below.

First, the assessment of the project design or formulation covers the analysis of the project logic, strategy and indicators were formulated based on best practice of problem analysis, stakeholder engagements, logframe and theory of change. Also the assessment of the project design was done in line with national priorities and country driven-ness, gender-sensitivity, social and environmental standards, lessons learnt from other relevant projects, linkages between the project and other interactions within the sector and lastly, relevant to appropriate management arrangements. Also included in this chapter is an assessment of how assumptions and risks were considered during the project design or formulation phase.

Second, assessment of project implementation focuses on how adaptive management, stakeholder participation and partnership arrangements as well as project finance & co-finance were identified, consulted and effective during project design & execution; and whether the monitoring & evaluation system was appropriate, responsive to change, comply with standards and offered learning opportunities during execution of the project. It also evaluated and rated the capacities of the UNDP's and the other implementing partners' oversight, support, supervision and collaboration were quality, adequate, and responsive during the project execution; and it also assessed whether the overall project implementation was done in line with best practice; and lastly, how project coordination and operational issues were handled and managed during the project execution.

Third, the assessment of project results and impacts include project activities, direct project outputs, short-term to medium-term outcomes, and longer-term impact, including benefits, country ownership, gender equality & women empowerment, cross-cutting issues, replication effects, etc. The projects results were evaluated and rated according to relevance, effectiveness, efficiency, overall outcome, sustainability and progress towards impact. Also, cross-cutting issues such as climate change, human rights, capacity development, south-south cooperation, knowledge management, volunteering, any impact from covid-19 pandemic and catalytic effects were evaluated on the results and impact of the projects. The assessment of relevance centred on the extent to which the activities of the project were suited to the local and national development priorities and organizational policies, including changes over time as well as how they are compatible with the UNDP's operational programmes. Effectiveness

refers to the extent to which the project objectives and outcomes have been achieved or how likely that they can be achieved by close of the project. Efficiency deals with the extent to which the results have been achieved at the least costly resources possible and also examines compliance with incremental cost concept and judicious use of funds. The assessment of sustainability assesses the likelihood that the project results will be sustained after Mondelēz International Cocoa Life Programme funding for technical assistance & support, institutional capacity building, collaboration & partnership, institutional framework & governance system, etc ceases. Progress towards Impact is an assessment of whether the project logical framework and theory of change will bring about results that will lead to long-term Impact in line with the assumptions and risks made as well as estimated intermediate states of Outputs and Outcomes.

Fourth, other assessments on cross-cutting issues such as climate change mitigation & adaptation, human rights, capacity development, south-south cooperation, knowledge management, volunteering, any impact form covid-19 pandemic, and catalytic/replication effects were undertaken by the TE Consultants also.

Finally, the TE report summarizes key findings of the TE, conclusions, recommendations and discusses best practices and lessons learnt which can be considered for designing, planning, implementation and evaluation of future UNDP projects or similar or related projects by other organizations.

3. Project description

3.1. Project start and duration, including milestones

Between May, 2013 and December, 2020, UNDP and the Ghana Cocoa Board (COCOBOD) have implemented Pillar V, the "Environment" pillar, of the Mondelēz International Cocoa Life Ghana program[13] under the "*Environmental Sustainability and Policy for Cocoa Production in Ghana Project*" (ESP). Pillar V aims to empower cocoa farmers, cocoa communities and cocoa institutions as the essential foundation for an environmentally friendly cocoa value chain to sustain the productivity and competitiveness of the cocoa industry globally.

The project has been implemented in two phases over the past seven years referred to as :

- "Environmental Sustainability and Policy for Cocoa Production in Ghana" (ESP Phase I) with a budget of USD $1.7million:
    - 1st May 2013 – 31st September, 2016; and
- "Environmentally Sustainable Production Practices in Cocoa Landscapes" (ESP Phase II) with a budget of USD $1.85million:
    - 1st October, 2016 – 31st December, 2020.

Over the 7-year period under review, the Mondelēz International Cocoa Life Program and her partners under Pillar V have committed over USD 3.5million, including technical assistance and

[13] Mondelēz International is a leading company in the world of confectionaries and its Cocoa Life Program aims to reach an estimated one million cocoa farmers across six (6) countries through her Cocoa Sustainability Programme in 2022, out of which Ghana is a beneficiary member country.

support as well as institutional strengthening of COCOBOD and farmer-based organizations to sustain the cocoa industry of the country. The Project has been implemented in selected districts and communities in six regions of Ghana, where the Cocoa Life Programme operates.

Under the supervision of UNDP, the project has supported COCOBOD, cocoa farmers and cocoa-growing communities in Ghana's cocoa value chain, to adopt environmentally sustainable production practices in the farms; aimed at increasing their yields and household income, conserving ecosystems and biodiversity, as well as building resilient cocoa institutions and tools to support the sustainable growth of the cocoa value chain.

3.2. Development Context

Ghana's economy is largely based on agriculture which contributed 19.7% of Ghana's GDP in 2018. Cocoa and forestry contributed 1.6% and 1.5 % respectively. But the expansion of agriculture and industry have come at a high environmental cost. Ghana's deforestation rate of approximately 3.56% per year (315,145 ha/year) remains one of the highest in Africa[14]. The forests of Ghana, especially in the southwestern part of the country, are a host to a wide range of wildlife species (MESTI, 1999). Several globally threatened, rare and endemic plant and animal species are harboured in these forests.

Cocoa production in Ghana has been carried out in two main ecological zones: the moist semi-deciduous forest (Eastern, Ashanti, Brong-Ahafo, Central and Volta Regions) and high rainforest (Western Region) agro-ecological zones. In these areas the production of cocoa, combined with other crops and non-farming activities, such as illegal mining and illegal logging, as well as low cocoa productivity, lack of cultivable land, limited capacity of Forestry Commission to enforce forest laws, insecure land tenure, and the actions of some chiefs, politicians and elites (Tropenbos 2019)[15] have driven deforestation and forest degradation over the past half century. This decline in the quantity and quality of forest cover has resulted in biodiversity loss, carbon emissions and deterioration of microclimatic and environmental conditions. Past policy interventions, such as "Operation Halt" have failed to halt cocoa encroachment in forest reserves due to interference from politicians and elites.[16].

The Government of Ghana has taken steps to boost cocoa production yields. In 2016, Ghana's Cocoa Board (COCOBOD) announced plans to more than double cocoa output to 1.6 million tons by 2026. With help of a $600 million AfDB credit facility[17], COCOBOD repeated its commitment to increase national production from the current harvest of around 900,000 Tonnes per annum to 1.5 million tonnes in the next five to seven years.

At the same time, Ghana has signed up to a number of national and international initiatives designed to mitigate and adapt to climate change and address deforestation. These include the Forests, Law Enforcement and Governance and Trade Voluntary Partnership Agreement

[14] https://partnershipsforforests.com/wp-content/uploads/2020/10/Unlocking-carbon-finance-in-Ghana.pdf

[15] Tropenbos International and Tropenbos Ghana. 2019. Drastic changes are needed in the cocoa sector to halt deforestation in Ghana. Policy Brief, November 2019. Wageningen, the Netherlands https://www.tropenbos.org/resources/publications/drastic+changes+are+needed+in+the+cocoa+sector+to+halt+deforestation+in+ghana

[16] Tropenbos International and Tropenbos Ghana. 2019. *ibid*

[17] Citi Business News (Oct 2020). COCOBOD targets 1.5 million tonne rise in cocoa production within five years. https://citibusinessnews.com/cocobod-targets-1-5-million-tonne-rise-in-cocoa-production-within-five-years/

(FLEGT VPA), the Cocoa and Forests Initiative (CFI) and the United Nations Framework Convention on Climate Change (UNFCCC) Reducing Emissions from Deforestation and Degradation (REDD+) programme. Increased production must therefore somehow be reconciled with reduced deforestation and forest degradation, primarily by achieving yield increases per hectare, combined with a set of forest protection initiatives.

i) Ghana started the REDD+ process in 2008 in order to reverse deforestation over the next 20 years, with funding from the World Bank's Forest Carbon Partnership Facility (FCPF). Initially small-scale REDD+ pilots were launched. Then Ghana adopted a jurisdictional approach to REDD+ implementation, initially focusing on the High Forest Zone and then with plans to scale up to cover the other ecological zones.
ii) There are currently five strategic REDD+ programs:
    a. Ghana Cocoa Forests REDD+ Programme (GCFRP);
    b. Ghana Shea Landscape Emission Reductions Programme;
    c. Togo Plateau REDD+ Programme;
    d. Transition Zone REDD+ Programme; and
    e. Coastal Mangrove REDD+ Programme.

The GCFRP aims to leverage private sector investment in cocoa and government funding as well as payments for emission reductions from the FCPF to deliver results. It is jointly coordinated by the REDD+ secretariat and COCOBOD in partnership with a broad set of public and private sector, civil society, traditional authority and community stakeholders. It aims to achieve 294 $MtCO_2e$ emissions reductions from deforestation and forest degradation in Ghana's high forest zone over a 20-year period, with an initial target of 10 $MtCO_2e$ emissions reductions over the first 5 year period of programme implementation (2018-2022). It aims to achieve this through implementation of five pillars that address forest conservation and sustainable cocoa production. The five pillars are:

i) Institutional coordination, measurement, reporting and verification;
ii) Landscape planning with Hotspot Intervention Areas (HIAs);
iii) Implementing Climate Smart Cocoa to increase average yields from 450kg to a minimum of 1,000 kg per hectare while also increasing sustainability through the adoption of climate smart cocoa production practises;
iv) Risk management and finance; and
v) Legislative and policy reform, including tree tenure.

A Memorandum of Understanding (MoU) was signed between UNDP, Forestry Commission of Ghana, Ghana Cocoa Board (COCOBOD) and Mondelēz Europe in December 2017, to provide a framework of cooperation and facilitate and strengthen collaboration between the parties in areas of common interest.

In November 2017, at the UNFCCC Convention of the Parties (COP) 23, the governments of Ghana and Côte d'Ivoire, cocoa and chocolate companies, NGOs and other stakeholders[18] signed up to the Cocoa and Forests Initiative (CFI), pledging to eliminate illegal cocoa production in protected areas, in line with stronger enforcement of national forest policies and

[18] Including World Cocoa Foundation, International Sustainability Unit (ISU), Sustainable Trade Initiative (IDH), and Donors including: UK's Department for International Development (DfID) through the Partnerships for Forests (P4F) Programme; the Dutch Ministry of Foreign Affairs; the Swiss State Secretariat for Foreign Affairs and the World Bank. http://www.worldcocoafoundation.org/cocoa-forests-initiative/

development of alternative livelihoods for affected farmers. The set of public-private actions include commitments on forest protection and restoration, sustainable cocoa production and farmer livelihoods. These actions, aligned to the Paris Climate Agreement, aim to play a crucial role in sequestering carbon stocks and address deforestation and climate change issues. The signatories of the CFI are committed to no further conversion of any forest land for cocoa production.

There has also been increasing alignment between Ghana and Côte d'Ivoire governments on external and internal cocoa policies. Both are developing a Climate-Smart Cocoa standard which the industry will be expected to comply with, but this has not yet been operationalized yet. Through the implementation of the Living Income Differential (LID)[19], Côte d'Ivoire and Ghana, through COCOBOD, increased the guaranteed cocoa farm price for the 2020/2021 season by 28% to $1,837 per tonne[20]. However, the cocoa sector still fails to deliver a living wage to smallholder cocoa farmers, who produce three-quarters of Ghana's cocoa.

The Forestry Commission has developed a Resettlement Policy Framework (RPF) under the REDD+ programme to resettle farmers and communities that may be displaced from Forest Reserves. The RPF has been integrated into the National Implementation Plan of the CFI but there has been little action[21]. Cocoa farmers in degraded forest reserves have been allowed to remain inside forest reserves for 25 years during which time they must incorporate trees using the modified taungya system (MTS). However, the MTS schemes have, to date, largely failed to restore any but a small fraction of the degraded forest reserves. Challenges to the effective scaling up of MTS relate largely to the unequal power relationship between the Forestry Commission and participating farmer groups. MTS is analysed in more detail later in the report. Past and present governments in Ghana have not dealt firmly with cocoa encroachment in forest reserves due to cocoa's contribution to the economy[22].

The United Nations Development Assistance Framework (UNDAF) (2012-2016) provided support to strengthen the capacity of Ghana to address energy and environmental challenges at national, regional, and local levels, by focusing on key priority areas, such as climate change, disaster risk reduction, energy and biodiversity.

The Project Document (Phase II) provided a clear summary of the challenges with sustainable cocoa production in Ghana, which we summarise below:

Technical factors: low tree shade in cocoa farms; absence of good agricultural practices resulting in low agricultural productivity; low adoption of environmentally sustainable practices, low yield of cocoa farms; lack of diversity of income generating activities, particularly for women, resulting in low disposal household income and low gender empowerment.

Environmental factors: a combination of low yields on existing farms has driven continuous conversion of forest into cocoa farms coupled with forest resource depletion through illegal

[19] Living Income is the net annual income required for a household in a particular place to afford a decent standard of living for all members of that household Living Income 2020 cited in Cocoa Barometer 2020 https://www.voicenetwork.eu/wp-content/uploads/2020/12/2020-Cocoa-Barometer.pdf

[20] Cocoa Barometer 2020 https://www.voicenetwork.eu/wp-content/uploads/2020/12/2020-Cocoa-Barometer.pdf

[21] Tropenbos International and Tropenbos Ghana. 2019. ibid

[22] Tropenbos International and Tropenbos Ghana. 2019. ibid

timber harvesting resulting in loss of biodiversity and increasing carbon emissions; clearance of land close to watercourses and careless use of agrochemicals and disposal of agro-chemical bottles has driven environmental degradation, in particular declining water quality; climate change and its impacts on local microclimate and agricultural productivity; the failure to improve cocoa productivity in an environmentally sustainable manner, the mainstay of the local community, further aggravates the poverty cycle of the farmers and the cocoa growing communities.

Social factors: very low agricultural productivity and household income leading to high incidence of poverty and poor livelihoods of the communities, characterized by dilapidated houses, high child labour, high school drop-outs of children, absence of school buildings, health facilities, water supply facilities, and community centres.

Economic factors: low prices for cocoa coupled with unavailability of affordable farm inputs (e.g. such as fertilizers, pesticides, fertilizers, spraying machines, personal protective equipment, cutlasses, pruning devices, etc.) of good quality on a timely basis and poor access to extension services and supplies of improved cocoa and economic tree seedlings has made cocoa farming more economically precarious;

Institutional factors: weak organisational capacity of farmers as well as farmer societies and unions;

Land and tree tenure: The Environmental Baseline Report (UNDP, August 2013) highlighted the key role of "*land and tree tenure as a significant driver of the lack of on-farm investment generally, which has constrained expansion of more environmentally sound production (i.e. greater shade). Current tenure arrangements give farmers very limited incentive to plant or maintain shade trees because of land tenure issues with landowners, and landowners have limited rights to naturally occurring trees on their land. There is also a lack of awareness about tree tenure rights. Tenure issues need to be resolved so that they are not a barrier to forest tree planting. Without suitable change it will remain difficult to encourage active planting and maintenance of trees on farms*." From the design stage, ESP therefore identified reform of land and tree tenure systems as prerequisites for long-term sustainability.

Customary land tenure agreements are often generalized as sharecropping agreements, misinterpreting the Akan words *abunu* (half share) and *abusa* (a third share). Abunu and abusa are often used in rural areas to describe a variety of customary land agreements that range from true sharecropping arrangements to land agreements that "create property in land" for the tenant or stranger farmer[23]. Unwritten abunu and abusa arrangements have evolved to govern farmer-landowner relations. As forests have become degraded and cocoa farms have aged, their ownership can be contested, terms reinterpreted, and conflicts can occur between landlord and farmer[24]. Of particular relevance for cocoa rehabilitation is the common abunu provision that landlords have the right to repossess land owned by stranger farmers once cocoa farms are cut for replanting[25].

[23] O'Sullivan, R., M. Roth, Y, Antwi, P. Ramirez and M. Sommerville. 2018 Land and Tree Tenure Innovations for Financing Smallholder Cocoa Rehabilitation in Ghana https://www.land-links.org/wp-content/uploads/2018/04/Session-08-06-OSullivan-585_paper.pdf

[24] Acheampong et al. 2014

[25] O'Sullivan, et. al. (2018) ibid

Policy and legal factors: low security of tenure for migrant farmers; lack of ownership of planted or retained natural trees; small farm sizes.

There are two relevant policy documents relating to tree tenure reform: the 2012 Tree Tenure and Benefit Sharing Policy and the 2016 Tree Tenure and Benefit Sharing Framework in Ghana. These are intended to encourage farmers to plan and conserve economic trees on their land. But these proposed reforms have three key disadvantages: (i) they do not include any powers over naturally occurring trees off-reserves (outside Reserved forests on Customary Land); (ii) they propose that all trees planted by farmers should be registered, which creates an arguably unnecessarily costly, bureaucratic and unworkable burden on the farmer and the Forestry Commission; and (iii) they do not recognise customary landowners' rights over "naturally" growing trees on fallow lands which means they are not entitled to revenues accruing from the logging of timber trees and have little incentive to conserve mature standing trees[26].

3.3. Problems that the project sought to address, threats and barriers targeted

This section outlines the problems, barriers or barriers that both phases of the ESP Project sought to address over a 7-year period in the project sites. The natural resources of the country, including forests, soils, river bodies, wildlife, cocoa farms, etc are under threat owing to considerable pressure from socio-economic development initiatives in the country.

Historically, cocoa has been cultivated under relatively dense forest and higher shade regimes that have declined over the decades as farmers have cleared more trees to reduce shade and intensify cocoa production. Progressive degradation and conversion of forests into cocoa fields, particularly in the Western Region, has contributed to rapid, and ongoing deforestation. Production of cocoa with less shade undermines the environmental sustainability of cocoa production and biodiversity conservation across many production landscapes.

Many have advocated for cocoa cultivation that maintains higher proportions of shade trees (cocoa agroforestry) as a sustainable land use practice that is environmentally preferable to other forms of agricultural activities in tropical forest regions because it contributes to biodiversity conservation. However, there are clearly trade-offs between higher and lower shade production systems in terms of yield per hectare and total area of land cultivated.

The Phase 1 Project Document lists four major environmental threats to sustainable cocoa landscapes, as identified in the Environmental Baseline Report (UNDP 2013)[27] on which the Phase 1 project design was founded:

Threat 1: Deforestation and habitat conversion: the country experiences the highest deforestation rate in Africa, estimated at 3.56% per annum which translates into 315,145 hectares per year. The high rate of deforestation is occasioned by felling of the forest trees for logging, agricultural activities, human settlement, mining, industrial and other land-use systems of the country. Thus, the continuous deforestation has adverse effects on the landscapes, ecosystems, biodiversity, agricultural productivity and livelihoods of the citizens of

[26] O'Sullivan, et al.)2018) ibid
[27] UNDP (2013). Environmental Baseline Report on Cocoa in Ghana. https://www.cocoalife.org/~/media/cocoalife/Files/pdf/Library/Environmental%20baseline%20report%20on%20cocoa%20in%20Ghana%20UNDP.pdf

the country. The loss of the forests also accelerates climate change and global warming and eventually, in turn affects the sustainability of natural resources management.

Threat 2: Conversion of sustainable cocoa to unsustainable intensified production system; Declining Cocoa Productivity and Livelihood of the Farmers: Ghana has almost the same size of farmlands put under cocoa production as her neighbour, Ivory Coast. However, the latter produces twice the total volume of cocoa and the variation between the two countries is basically due to low yield of cocoa farms in Ghana. For instance, evidence shows that the average yield of cocoa per hectare is 400 kg relative to 600 kg in Ivory Coast, 1,000kg in Indonesia and 2,000kg in Costa Rica. This development in the cocoa industry is of concern to policy makers and some actors of the cocoa value chain because the cocoa farmers reap very little meaningful return from their investment in the cocoa value chain. The Mondelēz International Targeted Good Agricultural Practises 364 trial farms show that the average cocoa yield in Ghana's cocoa farms can be raised from 667kg to 1,200 kg per hectare[28]. This shows that there is more room for improvement of cocoa yields.

Threat 3: Unsustainable Environmental Management of Cocoa Farms: Years back, cocoa farmers deliberately planted multipurpose trees in their cocoa farms to provide shade for the optimal growth, development and yield of cocoa in the country. Nevertheless, a few years ago, cocoa farmers were instructed by extension agents to maintain their cocoa farms with minimal amount of shade because the new hybrids of cocoa were sun-loving species, which would favour optimal yield to farmers. Therefore, farmers shifted from more to less shaded cocoa farms characterized by 28% of cocoa now managed under no shade; 42% under low shade; 25% under medium shade; and 5% under dense shade relative to shade level which favour optimal crop growth and productivity (ESP Phase I project document). Cocoa farmers found that in less shaded cocoa farming system, cocoa yields dropped significantly adversely impacting on their livelihoods. Thus, the need arose to advise for cocoa farmers to practise optimal shade cover in the cocoa farmers to mitigate against the climate change and environmental degradation militating against cocoa production in the country.

Threat 4: Land Tenure System and Tree Tenure and Rights: effective agricultural production system is beset with land tenure system, where conflict does arise between the tenant farmers and the landlord during the sharing of benefits accrued from the venture. The said challenge is yet to be resolved by any well-defined system either via law or traditional system. For tree planting, the biggest challenge is the land tenure system via ownership rights and sharing of benefit between the landlord and the tenant farmer. This challenge must also be resolved to motivate both the landlord and tenant farmers to invest and obtain full security over benefits in tree planting in cocoa farmers, ecosystems, degraded lands, waterbanks, etc.

The Environmental Baseline Report (UNDP 2013)[29] identified a number of barriers to the establishment of an environmentally sustainable cocoa sector, specifically:

[28] Mondelēz International Cocoa Life Program (March 2020). CFI Progress Report (Côte d'Ivoire, Ghana and Indonesia). https://www.cocoalife.org/~/media/CocoaLife/en/download//article/MDLZ_Cocoa_Life_CFI_Report-March_2020.pdf

[29] UNDP (2013) Environmental Baseline Report on Cocoa in Ghana. https://www.cocoalife.org/~/media/cocoalife/Files/pdf/Library/Environmental%20baseline%20report%20on%20cocoa%20in%20Ghana%20UNDP.pdf

- Barrier 1: Policy, regulatory and institutional frameworks support environmentally unsustainable cocoa production;
- Barrier 2: Lack of knowledge, information, and capacity building at local and farm levels;
- Barrier 3: Inadequate access to markets for tree products; and
- Barrier 4: Limited creation of incentives in international markets for adopting environmentally friendly cocoa practices nationwide.

These barriers and their root causes are described in detail in the Baseline Report.

Thus, the ESP Project was designed to address these four barriers or threats in the cocoa farming system aimed to enhance farmers' cocoa yields, incomes and livelihoods through mainstreaming and adoption of environmentally sustainable cocoa production practices in twelve communities of the country.

The ESP therefore set out to encourage maintenance and planting of economic trees on cocoa farms to ensure adequate shade. Farmer willingness to maintain, or increase shade is intricately related to land and tree tenure rights in Ghana - which remain precarious for most cocoa farmers. The ESP project therefore set out to address both land tenure system *and* tree tenure rights, noting that the challenge was beyond what UNDP alone could address. ESP implementing partners therefore opted to collaborate with other stakeholders to bring about reforms that would serve as incentives for farmers to plant and nurture shade trees on their farms. Willingness to maintain, or plant, trees is also closely related to the sharing of benefits from both cocoa and the trees that grow within cocoa farms.

3.4. ESP Objectives, Results, Outcomes and Outputs :

Phase II of the ESP project aimed to meet two broad objectives, which are:

1. Farmers in the Cocoa Life programme adopt environmentally sustainable and climate change resilient cocoa production practices on their farms; and
2. Cocoa production landscapes in the Cocoa Life communities and districts are managed sustainably to conserve ecosystems and natural resources.

The project phases have, over the period aimed at creating institutional systems, tools and policies to rehabilitate cocoa landscapes, helping farmers in the Cocoa Life Programme adopt environmentally sustainable and climate change resilient cocoa production practices and to conserve ecosystems and natural resources in cocoa landscapes. Environmentally sustainable production practices aim to guide cocoa farmers on how to sustainably manage and conserve the current production environment, for example: how to spray responsibly, how to ensure long-term productivity with overhead shade trees and soil cover and how to protect forests and water bodies for biodiversity and human use.

The project, since 2013, worked at mainstreaming environmentally sound production through direct farmer engagements and training of COCOBOD's Cocoa Health Extension Division (CHED) community extension agents (CEAs) getting communities involved in the sustainable management of their natural resources through various tools including the development of Community Resource Management Areas (CREMAs).

3.5. Expected results

The **expected results** from the successful implementation of the two phases of the Project have been to:

- Work with other stakeholders to strengthen national policies relating to sustainable cocoa production;
- Effectively mainstream environmentally sustainable cocoa production practices into farmer training and technical capacities of CHED CEA's mandated to provide farmer level trainings;
- Support farmers in the project districts adopt environmentally sustainable cocoa production practices on farms;
- Increase shade trees and carbon stocks on cocoa farms and in cocoa landscapes to provide short to long-term environmental and socio-economic benefits to farmers;
- The establishment of two[30] CREMAs to govern the use of natural resources at the landscape level including fire management; and water resources management; and
- Policy engagement with the government on land tenure and tree tenure rights.

The project aimed to deliver these results by meeting the following **overall objectives**:

- Create the institutional systems, tools and policies to rehabilitate cocoa landscapes, conserve and expand forests, forest buffer zones and corridors and incentivise cocoa farmers to adopt environmentally friendly best practices (Phase I);
- Farmers in the Cocoa Life programme adopt environmentally sustainable and climate change resilient cocoa practices in their farms (Phase II); and
- Cocoa production landscapes in the Cocoa Life Communities and districts are managed sustainably to control natural resources (Phase II).

The objectives of the ESP Phases were expected to be achieved by attaining the following Outcomes and Outputs.

3.6. ESP Phase I:

The Project document (2012) laid out 6 outcomes and 12 outputs as follows:

- **Outcome 1: Policies and institutions strengthened:**
  - **Output 1.1**. Strengthened land tenure systems;
  - **Output 1.2**. Strengthen tree tenure systems;
  - **Output 1.3**. Mass spraying programme strengthened;
  - **Output 1.4**. Environmental Indicators established for the cocoa sector; and
  - **Output 1.5**. Rapid Biological Assessments.
- **Outcome 2: Cocoa landscapes rehabilitated:**
  - **Output 2.1**. Rehabilitation of unproductive cocoa farms;

[30] The plan was initially to establish three CREMAs, but this was later revised to 2 during implementation based on discussions with the donor.

- Outcome 3: Forest conserved:
    - Output 3.1. Engage national REDD committee and REDD Initiatives in-country; and
    - Output 3.2. Sustainable Forest Management (SFM).
- Outcome 4: Cocoa Institutions and farmers knowledgeable on environmental best practices:
    - Output 4.1. Environment best practices.
- Outcome 5: Incentive based mechanisms in place:
    - Output 5.1. Carbon market (Voluntary); and
    - Output 5.2. Additional income sources from crops.
- Outcome 6: Public private sector coordination:
    - Output 6.1. Creation of national platform.

In the FY2014 Annual Work Plan[31], Outputs were re-grouped into two components and the numbering and wording of Outcomes and Outputs was adjusted as follows, though most of the same ambition was retained:

Component 1. Policy and institutional issues (*covering outcome 1 in original ProDoc.);*

- Outcome 1: Policies and institutions strengthened:
    - *Output 1.1 Provide support to national land tenure reform processes in cocoa communities;*
    - *Output 1.2 Strengthen national tree tenure process in cocoa communities;*
    - *Output 1.3 COCOBOD Mass spraying program strengthened;*
    - *Output 1.4 Develop environmental management systems for the cocoa sector; and*
    - *Output 1.5 Conduct a rapid biological assessments on biological diversity.*

Component 2. Pilot activities in selected cocoa landscapes and working with Cocoa Life Program in their communities to promote environmental sustainability (covering original outcomes 2, 3, 4 and 5 in the Project Document). Outcome 6 was repackaged as a separate standalone project.

- Outcome 2: Cocoa Landscape Rehabilitated:
    - *Output 2.1: Cocoa farmers adopt rehabilitation techniques;*
- Outcome 3: Forests conserved:
    - *Output 3.1: Align with REDD+ initiatives;*
    - *Output 3.2 Protect Community managed forest buffer zones and biological corridors to improve biodiversity conservation;*
    - *Output 3.3 Develop a land use plan for forest conservation in pilot landscapes (as part of CREMA development); and*

[31] Revised Implementation Strategy and Annual Work Plan Narrative *(January – December 2014)*

- ***Output 3.4*** *Monitor encroachment into protected areas.*

- Outcome 4: Cocoa Institutions and farmers knowledgeable in environmental best practices:
  - ***Output 4.1*** *Identify and fill research gaps for environmental best practices;*
- Outcome 5: Incentive based mechanisms established to promote environmental sustainability in cocoa landscapes:
  - ***Output 5.1*** *Build COCOBOD capacity and knowledgeable on carbon credit and REDD;*
  - ***Output 5.2*** *Pilot Voluntary carbon project at least 2 cocoa landscapes; and*
  - ***Output 5.3*** *Assist farmers to generate additional income sources from other tree crops apart from cocoa.*

Component 1 would involve working mainly with the Lands Commission through the Land Administration Project (LAP), the Forestry Commission and other statutory/policy regulatory bodies/institutions to try to formulate / reform policies and create an enabling environment for cocoa farmers to adopt environmentally friendly and sustainable practices in their work. Two policy issues that would be addressed by the project were those of land and tree tenure.

Component 2 activities would concentrate on working with COCOBOD and its subsidiaries such as CRIG and CSSVDCU to pilot relevant interventions at the community / farmer level to promote environmentally sustainable practices for cocoa production. This would be handled on two levels:

1. Landscape level pilot interventions in selected cocoa landscapes in the High Forest Zone of Ghana; and
2. Collaborative implementation with CocoaLife Program in its current communities to provide technical support for the adoption of environmentally sustainable practices.

According to the 2015 AWP, the results framework underwent further significant adaptive management actions since its inception which affected planned activities outlined in the original project document. Though some of the original activities were retained as per the various outcome areas, some were revised and others entirely removed - either being considered too ambitious or of no practical value.

Previous Outcomes were presented as Outputs, and Outputs were formulated more like Activities. ***No new or revised Indicators were defined for revised outputs or outcomes.***

Given the many different ways that the Results Framework has been presented in Phase 1, none of which were accompanied by a comprehensive Monitoring Framework, monitoring of progress against a planned and approved Results Framework has proven challenging for both the ESP team and the Evaluation Team.

3.7. Lessons Learned from Phase I

The following lessons were prepared by the ESP team itself and informed Phase 2 design. The Evaluators own lessons learned from both phases are presented in Section 7.4.

Under ESP Phase 1, it became evident that land tenure and, more recently, tree tenure, with sharing of ownership and benefits in planted trees as well as in other products of the farm may

incentivise farmers to plant trees. These issues raised concern about land tenure and its impact on land use and on natural resource management in Ghana. Also, without incentives, farmers may opt for production systems that provide short-term benefits.

Currently, there is an increasing preference for moving from shaded to non-shaded cocoa production especially in the Western Region where hybrid cocoa is being planted. This is due to the short-term benefits of increased yields. In spite of the environmental benefits of shaded cocoa, the area grown without shade has expanded largely at the expense of the primary forests which hold large stocks of carbon, play essential roles in absorbing CO_2, in stabilizing the climate, in maintaining the world's water cycle and have significant potential for carbon sequestration schemes.

Therefore, it was apparent that increasing cocoa production through farm expansion is no longer an option; however, the challenge was how to meet the dual goals of environmental sustainability and improvement of farmers' welfare through the adoption of sustainable production practices.

3.8. ESP Phase II:

A second phase of the project was therefore planned with two broad objectives

1. Cocoa Farmers adopt environmentally sustainable and climate resilient cocoa production practices on their farms towards increase in yields; and

2. Cocoa production landscapes in the Cocoa Life communities and districts are managed sustainably to conserve ecosystems and its natural resources.

The expected results from the successful implementation of the ESP Phase II were:

1. To effectively mainstream environmentally sustainable cocoa production practices into farmer training curricula by building the technical capacities of CHED CEAs mandated to provide farmer level trainings.
2. Farmers in the project districts adopt environmental sustainable cocoa production practices on farms.
3. Increased shade trees and carbon stocks on cocoa farms and in cocoa landscapes to provide short to long-term environmental and socio-economic benefits to farmers.
4. The establishment of three Community Resource Management Areas (CREMAs) to govern the use of natural resources at the landscape level including fire management; sacred groves protection and water resources management.
5. Policy engagement with the government on land tenure and tree tenure rights.

To achieve these results, the following set of outcomes and outputs were proposed (noting that the text was slightly revised during implementation to articulate them as outputs rather than activities).

Outcomes and Outputs:

- **Outcome 1:** Mainstreaming environmentally sustainable production practices into farmer level practices;

  - **Output 1.1.** Extension officers and Farmers trained and equipped in environmentally sustainable production practices;
  - **Output 1.2.** Farmers enhance trees and carbon stocks on cocoa farms; and
  - **Output 1.3.** Tree registration and tree tenure policies as an incentive for the adoption of environmentally sustainable cocoa production practices improved.
- **Outcome 2:** Natural resources and ecosystems management in cocoa production landscapes;
  - **Output 2.1**. An additional CREMA established;
  - **Output 2.2.** Two community fire prevention volunteer brigades established - preferably in the CREMAs ; and
  - **Output 2.3.** Capacities of traditional authorities and community opinion leaders built to enable them enforce traditional conservation practices to conserve biodiversity enhanced.
- **Outcome 3:** Identifying Funding Mechanisms:
  - **Output 3.1**. Additional funding mechanisms investigated and new funding proposals developed to complement current funding; and
  - **Output 3.2**. Donor dialogues in Ghana and globally with the support of UNDP Global Commodities Programme to be explored for other funding opportunities.

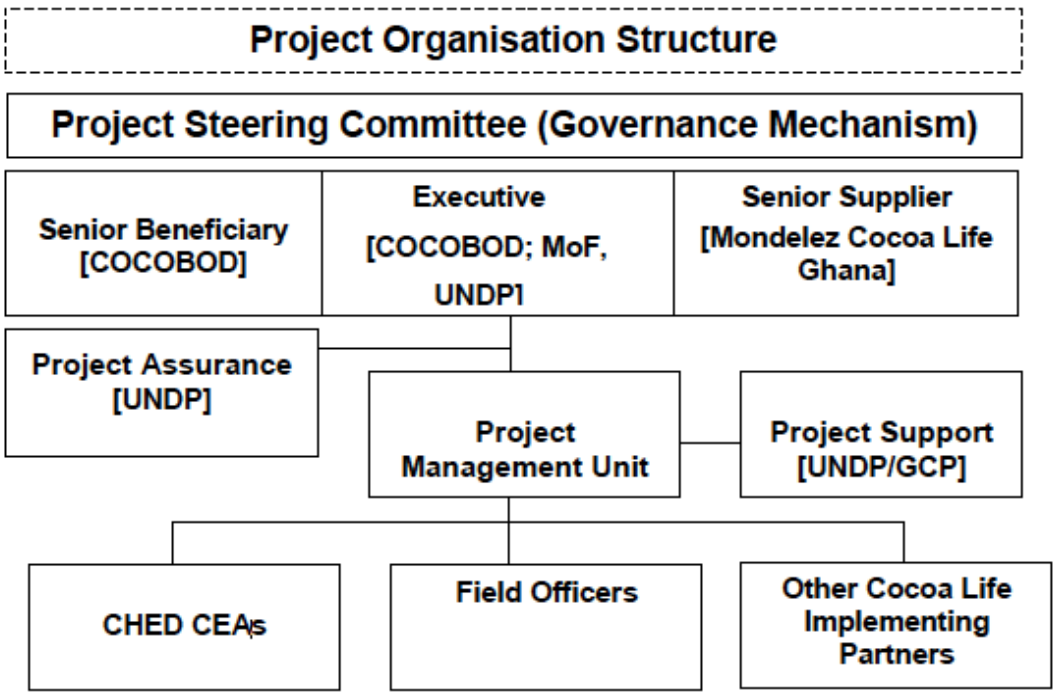
A copy of the Results Framework, complete with output indicators, baseline, targets, and means of verification was shared with the TE Team as part of the ToRs and is accessible online here. The evaluators used this RF to assess progress during Phase 2.

3.9. ESP Project Implementing Partners (IPs) and main stakeholders

The two phases of the project have been executed by the United Nation Development Programme (UNDP) with the Ghana Cocoa Board (COCOBOD) in partnership with farmer cooperatives/societies and NGOs in the implementation of five key pillars: (i) Farming; (ii) Community; (iii) Youth; (iv) Livelihoods; and (v) Environment. ESP focused on only one of the five pillars of the Mondelēz International Cocoa Life Programme, Pillar V "Environment". The project which has global support from UNDP's Green Commodities Program (GCP), aims to help farmers adopt and implement good environmental practices in cocoa landscapes, and support natural resources management and policy change to improve sustainability of Ghana's cocoa sector.

Project Governance and Organisation Structure: The Implementing Agency (COCOBOD) was responsible for the overall implementation of the ESP Phase II activities. The Project Management Unit reported to a steering committee. The chairman of the Steering Committee was the Deputy-Executive Director, Operations, COCOBOD. The steering committee was formed from a group of representatives from COCOBOD CHED and CRIG, UNDP, Mondelēz International Cocoa Life Ghana, Ministry of Lands and Natural Resources and its two implementing Agencies (Lands Commission and Forestry Commission), Ministry of Finance and Economic Planning (MoFEP) and Ministry of Food & Agriculture (MoFA).

Figure 1: Project Steering Committee/Board



ESP projects stakeholders and their roles and responsibilities are listed in Table 2 below.

Table 2: List of ESP stakeholders, and their roles and responsibilities

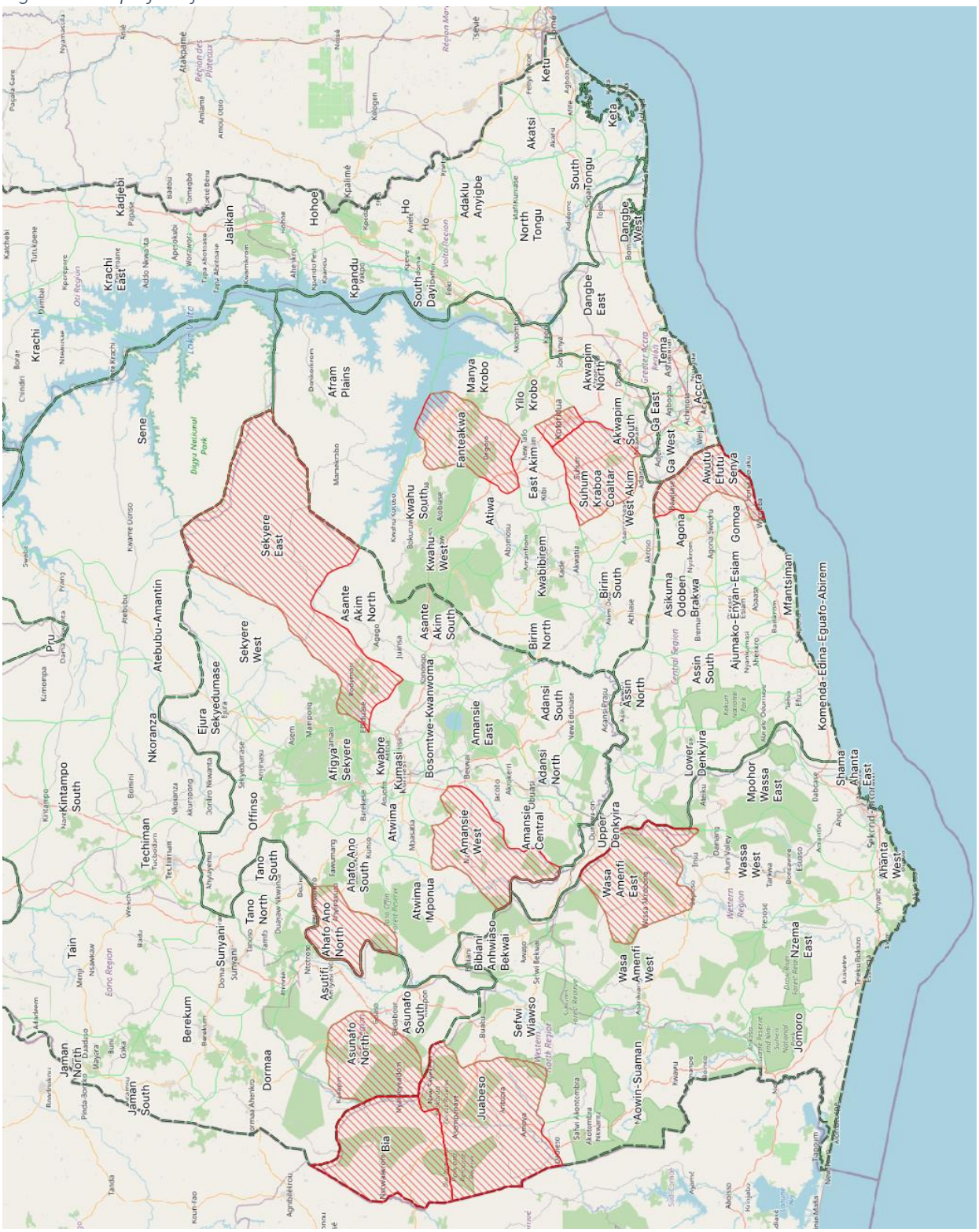
No.	*Stakeholder*	*Roles and Responsibilities*
1	*Ministry of Finance*	The Ministry represents the government and the state for all the bilateral and multilateral relationships with Development Partners and foreign agencies in the country.
2	*UNDP*	Agency responsible for the ESP Project in terms of its overall project planning, implementation, monitoring and evaluation, providing technical and administrative guidance and procurement support.
4	*Ministry of Land & Natural Resources (MLNR)*	*National Ministry that provides regulatory framework and policy direction as well as provides technical support and supervisory services for sustainable management of the forest reserves, wildlife and mining. It provided technical support to the ESP Project on land tenure and tree tenure issues, and regulations for tree registration and certification. The Ministry was expected to support gazettement of CREMA Bylaws and obtention of a certificate of devolution. It was represented on the project steering committee of the ESP project.*
5	*Forestry Commission (FC)*	*The FC is the Agency under the MLNR that supervises both the Forestry Services Department, the Resource Management Support Centre and the Wildlife Services Department to sustainably manage forest reserves and wildlife, game and tourist centres.* *The FC is the host of the **National REDD+ Secretariat (NRS)** that coordinates actions around environmental and natural resource governance and management of the REDD Process and the overall Cocoa Forests Initiative.*

No.	*Stakeholder*	*Roles and Responsibilities*
6	*Forestry Services Division (FSD)*	*The FSD is the FC Agency under the MLNR that provides technical support and supervises the sustainable management of forest reserves in the country. The FSD supported the ESP project in the communities by providing technical support, extension services and tree seedlings to the farmers for planting. They were also to facilitate the trees registration, database development, deployment of software and certification of farmers' trees in the cocoa farms, maintenance and harvesting and sharing of the benefits from the planted trees. The FSD is also assisting the farmers to enrol into the Modified Taungya System aimed to diversify their incomes and also rehabilitate degraded forests along the fringes of the communities.*
7	*Ghana Cocoa Board (COCOBOD)*	*The COCOBOD is a national agency under the MoFA that provides legal and regulatory framework and policy guidelines for the research & development, supply chain management, production, marketing, and processing of cocoa, shea nuts, coffee, cashew, etc. The COCOBOD serves on the project steering committee of the ESP, chaired all the meetings, housed board meetings, and supported her subsidiaries to provide technical assistance and support to the ESP Project beneficiaries in the communities.*
8	*Green Commodities Programme*	*Through the Programme the UNDP works with the Government of Ghana (COCOBOD, Forestry Commission, CRIG and FORIG), the private sector (Mondelēz International Cocoa Life Programme, Care International, Voluntary Service Overseas and WVI), civil society organizations and cocoa farmers to support dialogue, coordination and discussion to mainstream sound cocoa production practices in Ghana's cocoa sector by strengthening environmental policies and institutions, demonstrating landscape-wide community-based approaches to environmental conservation, mainstreaming sustainable environmental practices on farms and facilitating tree planting on cocoa farms.*
9	*Mondelēz International Cocoa Life Programme*	*The private sector entity that supports the ESP Project with financial resources via technical support, and assistance to collaborating partners, pays bonus in the form of premium to farmer societies and farmer unions for sustenance of improved livelihoods and community development. The company is a member of the project steering committee and has been supportive of the governance system of the ESP Project.*
10	*Lands Commission (LC)*	*The Lands Commission is an Agency under MLNR that takes custody of the land resources of the country, advises the President, local authorities and traditional authorities on policy framework for development of areas, land suitability and capability as well as facilitates registration of title to land. The Project Document envisaged the Lands Commission establishing an inter-institutional agreement with COCOBOD at national and subnational level to coordinate on land tenure issues in cocoa Landscapes. A Lands Commission representative was a member of the Steering Committee. At the inception meeting with the UNDP team, the TE team learned that contact at national level has been minimal, with more collaboration at Regional Level.*
11	*Project beneficiaries*	*Cocoa farmers at the farmer societies level, farmer unions level and CREMA level – in Cocoa Life focal districts - are the direct beneficiaries of the ESP Project. The direct benefit to them include increased cocoa yield, enhanced income level, improved shade in their cocoa farms, and adoption of environmentally sustainable management practices of their natural resources*

No.	*Stakeholder*	*Roles and Responsibilities*
		and ecosystem.
12	*Collaborating Partners*	*The collaborating partners are WVI, Agro ECO, Child Rights International, among others - and they work closely with UNDP field staff to implement the Mondelēz International Cocoa Life Programme and the ESP Project in the communities. Their collaboration focused on landscape approach, sustainable natural resource management as well as community development.*
13	*CHED of COCOBOD*	*It is one of the subsidiaries of the COCOBOD that provided technical assistance, support and cocoa extension services to the project beneficiaries on cocoa agronomy, nursery establishment and also supported sustainable environmental management.*
14	*CRIG of COCOBOD*	*This is one of the subsidiaries of the COCOBOD and worked on ESP Phase I only. They provided research and development and technology to support the ESP Project Phase I. However, the evaluators were informed that they have been inactive during the ESP Phase II.*
15	*Resource Management Support Centre*	*Department of the Forestry Commission, that provided technical assistance and support in the tree registration, database development and licensing of farmers who will grow trees in their cocoa farms.*
16	*Wildlife Services Department*	*Department of the Forestry Commission responsible for development of, and support to implementation of the CREMA model.*

Project target locations and beneficiaries: The Project has been implemented in twelve selected Cocoa Life districts and communities in six regions of Ghana: Eastern, Ashanti, Central, Western North, Western and Ahafo (see Figure 2). In all, twelve project Districts Assemblies and a total of 330 communities in Cocoa Life's cohorts 1, 2 and 3 have benefited from the project.

Figure 2: Map of Project Intervention Districts



4. Findings

4.1. Assessment of Project Design/Formulation

The ESP project was a continuation of the Cadburys Cocoa Partnership which had been running from 2008. The project document was constructed by the United Nations Development Programme (UNDP) in close collaboration with the Government of Ghana's COCOBOD and the Cadbury Cocoa Partnership (CCP).

The project document provided a collective vision of COCOBOD and UNDP for positioning an environmentally sustainable cocoa sector in Ghana. Its technical content was heavily guided by the 2013 Environmental Baseline Report which identified the threats to environmental sustainability, and a set of potential actions that could be taken to bring about change - as detailed in the preceding section. It provided a frank assessment of the risks and barriers to barriers limiting the adoption of sustainable practice by producers, governments and buyers. Specifically, the project was designed to tackle the four barriers that adversely affect farmers' productivity and livelihoods in the cocoa landscapes.

4.2. Analysis of Results Framework

Project logic and strategy: ESP Phase I did not have a well-defined results framework. Indicators, Outcomes, Outputs, Baselines, Indicators and Targets were defined, but they were inconsistent, were not laid out in standard format, and indicators were not SMART. Many Outputs were subsequently dropped (e.g. Land Tenure Reform; Mass Spraying Program; preparation of land use plans; development of Carbon markets; development of alternative crops;) or altered in FY2014 Annual Workplan (Section 5), reportedly for a number of reasons: a) to realign implementation activities to field realities and conditions and b) to align the Results Framework and indicators to the broader Cocoa Life Program at the request of the Donor (Mondelēz International). Further adjustment of the results Framework took place in the FY2015 AWP. However, no consistent new Results Framework was formulated that was used to monitor progress and proposed methodologies were not always followed. The ESP team referred to this as "*adaptive management*" of the project. As a result, tracking what activities were actually implemented and what was achieved, against a frequently revised set of outputs has proven extremely challenging for the evaluators.

Phase II had a Results Framework with well-defined indicators baselines and targets at Output level. However, planned activities and the description of outputs continued to be adjusted from year to year, and were often not reported on thereafter. At the outcome level, no indicators were defined or monitored in the Results Framework, which instead refers to outcomes defined in the UNDAF which is normal UNDP practise[32]. However, the ESP Project documents defined a set of Outcomes that were not then monitored at the National level.

Neither phase presented a clear Theory of Change (ToC) that satisfied the criteria provided by UNDP (see further analysis below in Section 4.5).

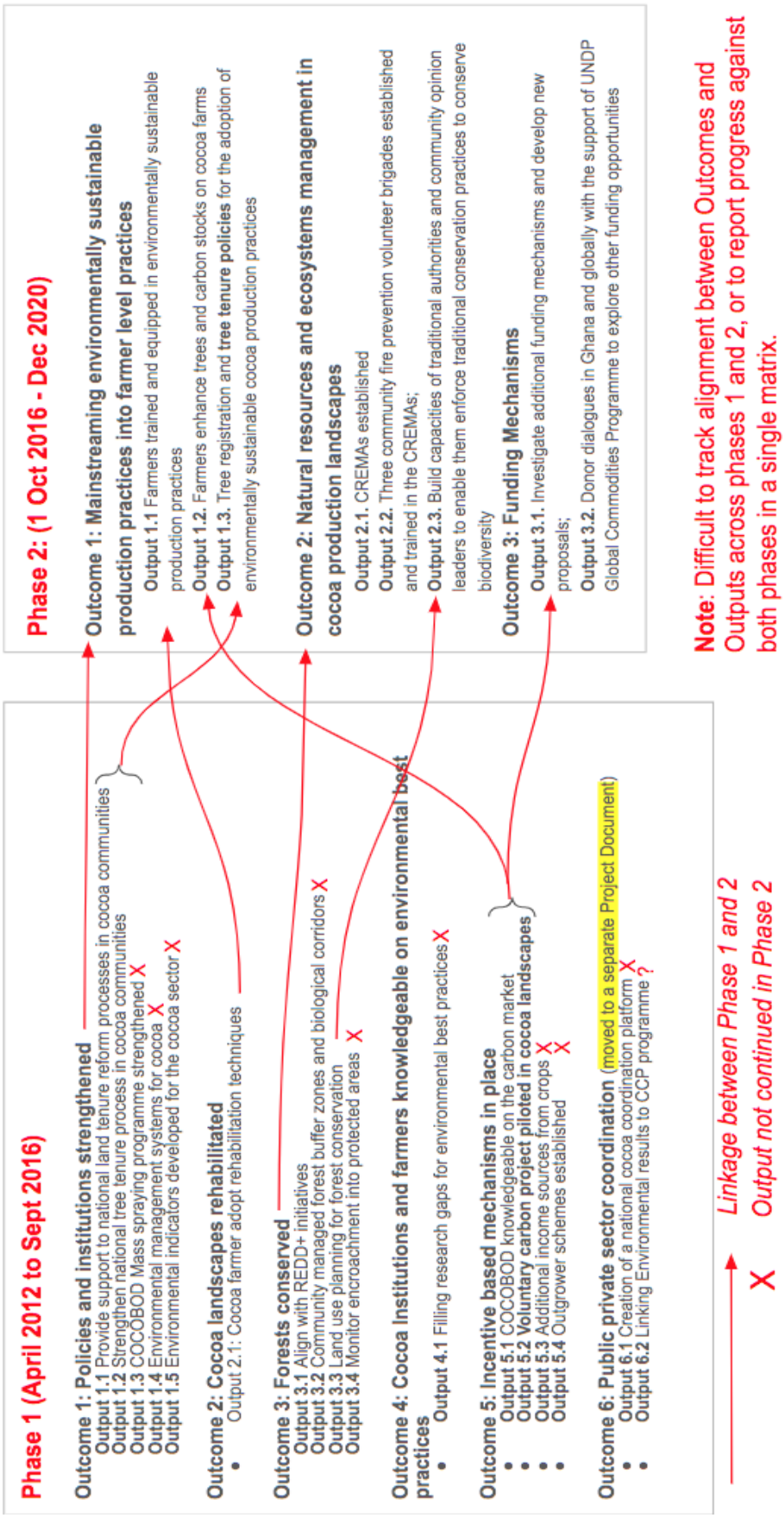
Analysis of Results Framework (Outcomes and Outputs): The evaluation required the team to review two phases of ESP, each with their own Results Framework. This was difficult due to

[32] According to UNDP PME Handbook (2012), Outcomes and accompanying outcome level indicators are defined at the National level in the UNDAF.

the only partial alignment between the Outcomes and Outputs across phases 1 and 2. The graphic on the next page shows the linkage between Outcomes and Outputs of both phases.

As a result of the substantially different layout of Outputs and Outcomes, it is difficult to track alignment between Outcomes and Outputs across phases 1 and 2, or to report progress against both phases in a single matrix.

Figure 3: Linkage between Outcomes and Outputs of ESP Phases 1 and 2



4.3. Analysis of Indicators

During the Inception Meeting call with the TE team, the UNDP Team confirmed that no standard format results framework was developed for Phase I. The Evaluation team notes that the Annual Work Plan laid out in Section IV of the 2012 Project Document for Phase I provided brief descriptions of baselines, indicators, targets and means of verification. These were completely revised in 2014 to align with Cocoa Life Key Performance Indicators (Section 5 of the 2014 Annual Workplan). However, no consistent new Results Framework was formulated that was used to monitor progress and proposed methodologies were not always followed. As a result, tracking what activities were actually implemented and what was achieved, against a frequently revised set of outputs has proven extremely challenging for the evaluators.

Overall Intended Outcome Indicator:

The ESP Phase 1 had no definitive results framework or indicators. The results framework was significantly improved during Phase 2, but while the indicators provided a means to measure progress in quantitative terms at the output level there was little description of their qualitative attributes against which to measure the quality of deliverables.

For Phase 1 for the **overall intended outcome** level, ESP used the UNDP Programme "*Proportion of districts, regions and national agencies supporting the implementation of the national policy on climate change and disaster risk reduction*". There was no indicator defined in the Project Document for this outcome, and none of the progress reports have provided measurement of progress towards this outcome.

Phase 2 Outcome statements were not presented as "*Short- to medium-term change in development situation*" in a format that satisfied the criteria prescribed in UNDP PME Guidelines (pp. 56-58)[33]. They read more like summary titles for the underlying set of Outputs but without really stating what is expected to change as a result of these outputs.

- **Outcome 1:** Mainstreaming environmentally sustainable production practices into farmer level practices;
- **Outcome 2:** Natural resources and ecosystems management in cocoa production landscapes; and
- **Outcome 3:** Funding Mechanisms.

No indicators were prepared or monitored for the project level "short-term" outcomes to show how they contribute to the UNDAF level outcome.

The TE team therefore requested the UNDP team to share monitoring reports of progress against the higher level UNDAF Strategy to verify what progress has been made, and how it has been measured. The Evaluation Team received an Annual UNDAF progress report for 2016 and extracts from 2019 and 2020 progress reporting against the Country Development Plan

[33] UNDP PME Manual (2012). Formulating the Outcome Statement: Outcomes are actual or intended changes in development conditions that interventions are seeking to support.

- An outcome **should be measurable using indicators**. It is important that the **formulation of the outcome statement takes into account the need to measure progress in relation to the outcome and to verify when it has been achieved**. The outcome should therefore be **specific, measurable, achievable, relevant and timebound (SMART)**.
- An outcome statement should **ideally communicate a change in institutional or individual behaviour or quality of life for people**—however modest that change may be.

(CDP). Taken together, these provided some information to assess progress against indicators for the intended outcome[34]. This is discussed further in Section 5 - Assessment of Project Impacts.

The non-alignment of Phase 1 and 2 outputs, outcomes and indicators, and revision of the text of activities in progress reports compared to the initial project document, made it hard for the Evaluation Team to track progress for both phases in a coherent manner. Specifically:

Phase 1 Indicators:

- Indicators were defined at activity and output level only, but not for outcomes.
- Activities in the original ProDoc were ambitious but then heavily revised during implementation (in particular the 2015 AWP - see Section 3.5), changing the level of ambition from e.g. tenure reform to production of policy review consultancy reports, organisation of workshops and advocacy work alongside other Programmes and agencies working on land and tree tenure reform.
- Descriptions of the Outcomes, Outputs and activities changed from one AWP to the next, making it increasingly difficult for the ESP team and the Terminal Evaluation Team to monitor or report progress against a definitive results framework.
- Indicators to measure progress towards the crucial high-level changes, relating to e.g. 'improved tree tenure policy" were not provided in the revised Results Framework.

Phase 2 Indicators:

- While there were indicators drafted for key outputs, such as improved tree tenure policies, they focused only on measuring the number of: farmers trained in tree registration, trees registered; and farmers registered…. but provided no indicator against which to measure higher-level policy improvement.
- There were no baseline indicators presented for some key output indicators and targets;

4.4. National priorities and country driven-ness

The Project was founded on a strong national commitment from COCOBOD, Mondelēz International Cocoa Life Programme and the Government of Ghana to mainstream environmentally sustainable production practices into cocoa production landscapes across Ghana.

The Government of Ghana (GoG) commitment to tackling deforestation and forest degradation across the country is evidenced by their adherence to various programs, including the National REDD+ process, the Forest Investment Program (FIP), the Ghana Cocoa-Forest REDD+ programme (GCFRP), the Cocoa Forests Initiative, and the UK funded Partnership for Forest (P4F) Initiative among others.

[34] After repeated requests for evidence of how the ESP contributed to the higher level UNDAF Outcome indicator, an extract was provided, after the evaluators' final report was submitted. This progress report makes claims "***these landscapes are gradually re-gaining their vegetative and tree cover***". While this may be true for cocoa farms on which the trees are planted, at the landscape level, this claim is not substantiated by the Global Forest Watch data which instead suggests that tree cover continues to be lost from all 12 target Districts (see Figure 7 on page 137 and explanatory text).

The commitment from various national stakeholders (Ministry of Lands and Natural Resources, Forestry Commission, Customary land owners) to initiate and bring to fruition some of the difficult reforms on land and tree tenure necessary to enable the above programmes to succeed were less in evidence at the design stage of the ESP project, being noted as one of the key risks that could hamper project success, and such commitment remain elusive.

4.5. Theory of Change

Theory of Change: The UNDP Project Document template Section entitled "II. Strategy" (p.6) recommends that "*it is good practice to include a theory of change diagram showing the linkages between the development challenge and the immediate, underlying and root causes*".

The Project Documents for Phases 1 and 2 did not present a Theory of Change (ToC) either in text form or diagram for the project.

- For Phases 1 and 2 the project's **overall aim** was to: *create institutional systems, tools and policies to rehabilitate cocoa landscapes, conserve and expand forests frontiers and to incentivize cocoa farmers to adopt environmentally friendly best practices to enhance biodiversity conservation and ecosystems rejuvenation.*"
- The baseline assessment identified **land** and **tree tenure systems** as barriers to the formation of sustainable and biodiversity friendly farming systems, unintentionally encouraging the unsustainable expansion of the cocoa sector into forest ecosystems.

While ESP did not expect to solve the land and tree tenure policy shortcomings alone, the project document did commit to achieving policy change as a prerequisite to incentivise environmental sustainability (see Section 6.5). The Evaluation team therefore looked, in particular, at how the project set out to address the issue of reforming land and tree tenure systems, as they lie at the heart of the theory of change required to address the root causes of unsustainable cocoa production.

Under the "Strategy" section of the ESP Phase II Project Document there is a presentation in text format of three key strategies that the ESP Phase II would apply (see Box 1). These strategy statements present some of the rationale for planned interventions but do not lay out a Theory of Change in standard diagram format, showing causal pathways and making underlying assumptions explicit.

Box 1: Key Strategies presented in ESP Phase II Project Document under "Theory of Change"

ESP Phase II was designed to build on results and lessons learned from phase 1, and scale up Pillar V activities to cover all Cocoa Life in 330 communities in 14 districts by adopting **three key strategies:**

1. Mainstreaming of environmentally sustainable production practices into farmer extension trainings. The main element of this strategy is to develop training modules on selected environmental sustainability practices and train CEAs and other IPs to enable them to also train farmers on the selected practices (using the trainer of trainers concept). The reasons for this strategy are: first, environmentally sustainable cocoa production practices stand the best chance of being adopted if they are presented to farmers as part of a package of practices that also have economic and social benefits; second, there is considerable overlap between good environmental practices and traditional cocoa agronomy, and the two should not be seen as separate. Sustainable production practices have to do with how farmers can sustainably manage and conserve the current production environment, for example: how to spray responsibly, how to ensure long-term productivity with overhead shade trees and soil cover and how to protect forests and water bodies for biodiversity and human use.

2. Ensuring long-term ecosystem protection at the district to community levels by establishing 3 Community Resource Management Areas (CREMA) in selected districts to govern local resources and ecosystem management in cocoa landscapes. While the farmer-based interventions will ensure change and improvements at the farm level it is crucial to sustain this at the landscape level. Hence, the CREMA establishment, a mechanism that allows communities to jointly manage natural resources of a larger ecosystem with relevant stakeholders will ensure long-term sustainability and scaling up of interventions.
3. Policy engagement with the government on land tenure and tree tenure rights. Securing tree tenure rights for farmers engaged in the tree plantings on cocoa farms by establishing a tree registration mechanism with the Forestry Commission will incentivise farmers to implement and scale up ESP practices. Already under ESP Phase I the project has almost completed the tree registration mechanism with the Forestry Commission and will roll out the registration activities which will serve as learnings for ESP Phase II.

4.1. Assumptions and risks

A clear analysis of assumptions, and how they will be managed, is a key part of a coherent Theory of Change.

The Phase I Project document (2012) did not include any identification of assumptions or risks. Instead, a task was assigned to the Inception Workshop to "Review and agree on the indicators, targets and their means of verification, and **recheck assumptions and risks**."

The Phase II Project Document (2016) left the section on Theory of Change and key Assumptions under Section II 'Strategy' (p.6) and where assumptions underlying the Theory of Change should normally be recorded[35] was left completely blank - though various risks and assumptions were implicit elsewhere in both project documents. The section on Risks and Assumptions (p.16) was also left blank.

The many assumptions underlying the rationale for the project were therefore not explicitly laid out, even though many are evident elsewhere in the text of the Project Document.

4.1.1. Assumptions:

The TE Team has identified a number of assumptions regarding the long-term sustainability of the project activities, some which were implicit in the Project Document, Baseline Study or analytical reports, and others which were not written but clearly must hold true if the project was to succeed. These are summarised below under thematic headings.

Cost Benefits of shaded cocoa production versus unshaded: The assumption made is that the adoption of biodiversity friendly (higher shade) cocoa production methods (through reduced application of agrochemical fertilisers and pesticides) will not reduce cocoa yields, will result in less inputs and thus financial savings. In the long term, lower-input, higher output cocoa production systems are expected to lead to more sustainable yields, less vulnerable to stress, while protecting biodiversity and ecosystem services within cocoa farms.

[35] Guidance provided in UNDP Project Document: *"State key assumptions about what will change, for whom, and how this will happen.* ***Assumptions should include consideration of internal factors*** *(relating to project design and implementation)* ***and external factors*** *(relating to other partners, stakeholders and context)* ***that will be critical for achieving expected changes. Cite best available evidence which supports these key assumptions in the ToC, including findings from evaluation and other credible research, as well as knowledge, good practices and lessons learned from previous work by UNDP and others, in this country and in other relevant contexts.****"*

The Environmental baseline report made an economic comparison of shaded versus unshaded or Partially Shaded Cocoa, based on experience in Sulawesi and Ghana. In Sulawesi, Steffan-Dewenter et al. (2007) estimated a 40% lower household income for low shaded agroforestry compared with unshaded cocoa (i.e. no economic return from the shade trees was considered). The authors suggested that compensation might need to be paid to farmers conducting agroforestry to encourage such systems.

In Ghana, a financial analysis of shaded hybrid cocoa versus unshaded hybrid cocoa and "traditional" cocoa (shaded Amelonado) was conducted by **Obiri et al. (2007)**[36] in the Ashanti region. Unlike the Sulawesi study, this analysis factored in an assumed return to the farmer from sale of the timber shade species. The results revealed a **marginal advantage** of unshaded hybrids of shaded hybrids after discounting is applied. Both systems using hybrid cocoa were more profitable than the traditional system (Table 5), but unshaded hybrid cocoa has a better benefit-to-cost ratio than shaded, even with the need to replant unshaded cocoa after 18 years instead of 29 years in a shaded production system. The Baseline Report concluded that if farmers are to be encouraged to maintain shade on their farms, they would need additional revenue from the shade trees either in the form of a return from the sale of timber, or fruits) or through PES.

Table 3: Summary of discounted cash flow cocoa with and without planted shade trees

Economic indicator	Traditional	Hybrid	Shaded hybrid
Benefit to Cost Ratio	1.57	1.74	1.71
Internal Rate of Return	31%	55%	46%
Max Net Present Value (·¢'000)	10,734	21,133	18,756
Max Land Economic Value (·¢'000)	10,825	24,127	19,437
Optimum rotation age	44	18	29

Source: Obiri *et al.*(2007). Financial analysis of shaded cocoa in Ghana

The project design includes exploration of payments for Environmental Services, though the evaluators note that these were not sufficiently pursued and did not result in any PES scheme being put in place during implementation. This economic analysis underlines the importance of ensuring that farmers have secure rights to harvest timber from mature shade trees (whether planted by the farmer, or not), or collaboration with a partner that is ready to make Payments for Ecosystem Services to participating farmers.

Land and Tree Tenure: A key assumption made by the Project was that customary authorities and government would be sufficiently committed to reform land administration and tree tenure in Ghana. In reality this commitment was overestimated but the project should have heeded lessons learnt from the Ghana Lands Administration Project (LAP). A further assumption was that recognition of rights over planted trees would incentivise farmers to plant trees in the long term, when there are many unresolved issues relating to tree tenure and benefit sharing when harvesting mature trees, including, for example, by devolving procedural control over trees on farms to local communities (i.e. farmers and traditional authorities), allowing them to govern tree harvests through their existing informal governance systems[37].

[36] Obiri et al. Financial analysis of shaded cocoa in Ghana. Agroforest Syst (2007) 71: 139–149 https://www.worldcocoafoundation.org/wp-content/uploads/files_mf/obiri2007.pdf

[37] Hirons, M., McDermott, C., Asare, R., Morel, A., Robinson, E., Mason, J., Boyd, E., Malhi, Y. and Norris, K. (2018) Illegality and inequity in Ghana's cocoa forest landscape: how formalization can undermine farmers control and

However, the project document, numerous progress reports, and various stakeholders interviewed acknowledge that long-term land and tree tenure reform are unlikely in the short to medium term, and instead opted to support the establishment of a **tree registration mechanism** with the Forestry Commission for farmers engaged in tree planting on cocoa farms. This option was selected in the full knowledge that it may prove not to be cost-effective or logistically feasible to register millions of trees at scale across the cocoa growing regions of Ghana. To date, Mondelēz International Cocoa Life Program, via ESP has financed all of the equipment and cost of training and mobilising a team of 43 tree enumerators.

Research by the USAID funded Tenure and Global Climate Change (TGCC) project highlights some of the challenges with operationalizing the tree registration mechanism[38].

Assessing and categorising trees into: (i) trees planted by a farmer or landowner - "*planted trees*"; and ii) trees determined to grow naturally (not planted) on a landowner's farm or on lands left to fallow - "*naturally growing trees*" - in practice has been challenging and involves huge monitoring and information costs. In addition, the TGCC project found that the administrative costs of registering trees are very high. Unlike land, which is fixed in place for perpetuity, trees incur frequent planting and cutting which require ongoing updating of records which complicates tree registration. In addition, there is risk of two overlapping and competing rights administration systems – one for land and one for trees – that are governed by different agencies (Lands Commission and Forestry Commission).

The system of tree registration as now proposed is confounded by problems of technical infeasibility, high costs, unclear benefit sharing from final harvesting revenues from naturally-occurring trees, and uncertainty over the institutional responsibilities of administering the system. It was further assumed that major issues over farmer ownership of old established timber species can be overcome.

Box 2 presents more details of the current proposals for tree tenure reform and the challenges arising. The evaluators since learned that another digital land tenure mapping and documentation system exists (developed and trialled by Agro-Eco and Meridia for Mondelēz Cocoa Life Program), which includes a tree mapping and registration tool, and potentially offers an integrated solution. Going forward, ESP partners should liaise with all other interested parties to review options for documenting land and tree tenure in the short term, while continuing to push collectively for the systemic reforms needed to ensure long term farmer interest in sustainable cocoa production with an optimal level of shade trees.

benefits from trees on their farms. Land Use Policy, 76. pp. 405-413. ISSN 0264-8377 doi: https://doi.org/10.1016/j.landusepol.2018.02.014 Available at http://centaur.reading.ac.uk/75818/

[38] O'Sullivan, R., M. Roth, Y, Antwi, P. Ramirez and M. Sommerville. 2018 Land and Tree Tenure Innovations for Financing Smallholder Cocoa Rehabilitation in Ghana https://www.land-links.org/wp-content/uploads/2018/04/Session-08-06-OSullivan-585_paper.pdf

Box 2: Current Proposals for Tree Tenure Reform

The Forestry Commission is aware of challenges with the current law and policy. New policy approaches are being considered and tested. Two important policy documents — the 2012 Tree Tenure and Benefit Sharing Policy, and the 2016 Tree Tenure and Benefit Sharing Framework in Ghana — are intended to incentivize farmers and forest-dependent communities to engage in sustainable forest management, and to plant and preserve economic trees on their farms. The most relevant proposed changes for cocoa farmers deal with trees planted off-reserve, which covers most cocoa farms. The current proposal states that:

a) A farmer has the right to negotiate benefit-sharing arrangements from trees that he/she plants/nurtures with the landowner;

b) A farmer has the right to dispose and gain economic benefit of trees that s/he plants and nurtures; and,

c) A decentralized land title registration will allow farmers to demarcate and register their lands and trees in the community/district to prove title.

While the current proposed reforms outlined above are a step in the right direction, they do not go far enough, and suffer from two main drawbacks:

- First, the maintenance of expropriating powers over naturally occurring trees off-reserves blunts the policy's effectiveness. Ownership of all trees off-reserve should reside with the relevant customary landowner(s) or farmers who would police trees themselves. Such policy direction would eliminate the need to send Forestry Commission staff into the bush to police illegal logging (and the corruption it entails), and would also eliminate the current confusing policy of categorizing trees into planted or naturally occurring trees, which then seems to warrant establishment of registers to enforce compliance.
- Second, the proposed creation of a tree tenure registry creates an unnecessarily costly, bureaucratic, and likely unworkable regulatory burden on farmers and the FC. **There is a significant burden to first create the registry and then maintain it over time. To be effective, the database will need to register millions of trees on hundreds of thousands of plots, and maintain this database over time. As trees may be grown and cut many times without a transfer of land tenure, keeping a registry of tree and land rights up to date will be particularly onerous.** This is concerning given that the customary land secretariats (charged with recording customary land titles) are non-functional in most of Ghana.
- **Third, customary landowners' rights over "naturally" growing trees on fallow lands need to be recognized.** Secondary forests of Ghana exist precisely because customary landowning families make a conscious land management decision to leave parts of their lands in fallow to regenerate with shrubs and trees. Timber policy should be tweaked to recognize customary landowning families' rights over all timber trees located on their fallow lands and make them entitled directly to revenues accruing from their exploitation. This may trigger a practice whereby instead of leaving nature to replenish fallow lands, landowners plant commercial trees as part of their land management practice

Source: O'Sullivan et al. (2018), ibid. https://www.land-links.org/wp-content/uploads/2018/04/Session-08-06-OSullivan-585_paper.pdf

Equal power relations: There is an implicit assumption that all smallholder farmers have equal power, with no distinction made between landowner farmers (who have relatively secure tenure and access to finance) compared to tenant farmers, with weak land tenure and limited access to finance.

Sustainable intensification: The baseline study identified conversion of sustainable cocoa to ***unsustainable intensified production systems*** as one of the major environmental threats to sustainable cocoa production landscapes. It notes that "*continued production of cocoa on nutrient-depleted forest soils coupled with poor tree maintenance have also steadily resulted in decreasing national yield per unit land area"*. The ProDoc (p.5) further notes that "*In the past,* ***low-shade or no-shade was recommended for hybrid cocoa****, leaving a highly unsustainable production system. The* ***weakness of the zero shade system was masked by the short-term yield increases driven by initially fertile forest soils****. However,* ***yields soon declined as forest soils were depleted of major nutrients.*** *The* ***practice of using zero shade production systems needs to be reversed.***"

However, the project then sets out to support the intensification of traditional cocoa production systems (with reported average yields of only 400 kg/ha) without being explicit about what will make the **well managed intensified cocoa cultivation practices** (that achieve yields of 1000kg/ha) more environmentally or financially sustainable than the pre-existing traditional cocoa systems. Soil fertility is unlikely to be sustained without substantial investment in mineral and/or organic fertilisers**.** The evaluators review evidence from the Cocoa Life Impact Report (Ipsos 2019) that fertilisers are not applied by many farmers (61%). Reasons given include a lack of money to purchase fertilizer (52%), fertilizer being too expensive (47%) or unavailable on the local market(22%).

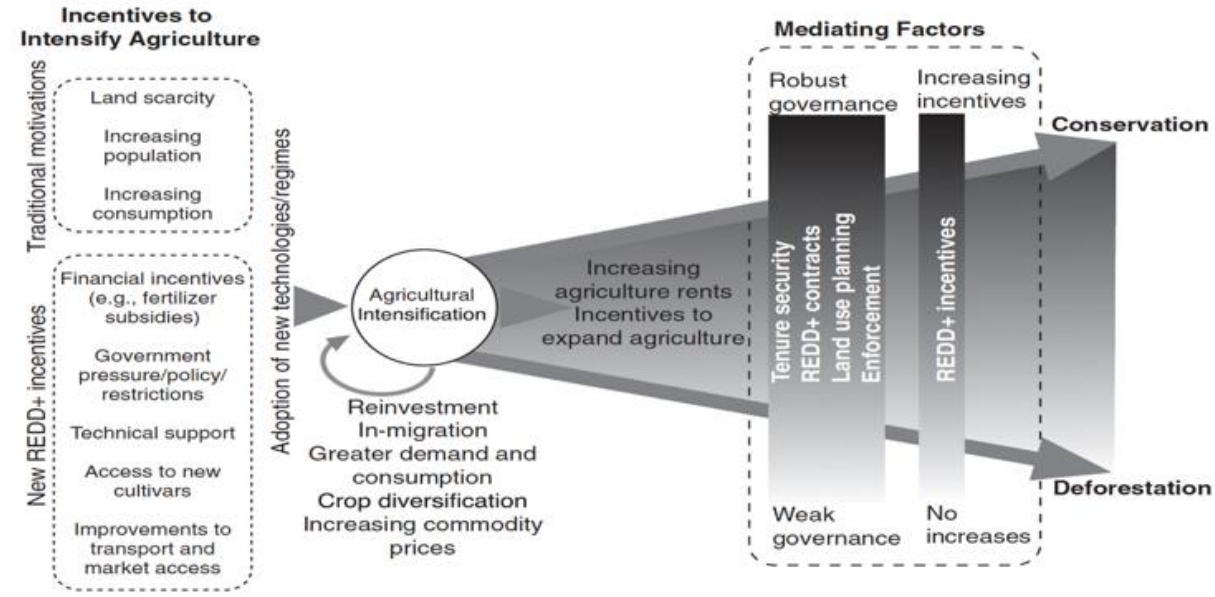
The additional assumption is that the intensification of cocoa production (greater yield per hectare) will reduce pressure on primary and secondary forests regardless of the size of forests left which is small and shrinking. It also assumes that farmers will accept to stay on the existing farmland rather than expand if they are making a profit. The assumption is also that farmers will make higher profits if there are higher yields due to sustainable environmental practices. If there are higher yields, without increasing farm sizes, there may not be the desire to expand to natural and secondary forests. **But** if COCOBOD continues to increase cocoa production targets beyond limits that enable sustainable cocoa cultivation and forest conservation, and there isn't better policing or incentives to protect natural and secondary forests, further deforestation will not be deterred.

Figure 4 explains why a number of essential mediating factors (tenure security, REDD+ contracts, land use planning, and law enforcement) and incentives (REDD+ payments or PES for conserving remaining forests) must be in place to constrain expansion of agriculture into forests when investment in sustainable intensification is stimulated by traditional and new incentives.

The Environmental Baseline Report (UNDP 2013) drew from analyses of the feasibility of "cocoa carbon" in Ghana and concluded that "*Preliminary results suggest that* ***carbon finance alone at current prices will not likely be the sole or even the primary means for persuading farmers to adopt higher shade cocoa systems****. It could however be an* ***enabling factor to encourage improved farming practices and productivity****. The models imply that* ***tree tenure reform, combined with policy, fiscal and institutional reforms*** *in the cocoa sector, will be important drivers of 'improved' cocoa farming practices, including increased shade*." This

analysis, done in preparation for ESP, underlines the importance of a multi-pronged strategy to promote sustainable intensification of cocoa production that leads to conservation, rather than more deforestation.

Figure 4: Relationship between REDD+ policies, agricultural intensification, and deforestation.



Explanatory notes: New REDD+ and deforestation-free commodity production policies are designed to drive agricultural intensification, which increases future agricultural rents and incentivizes forest clearing for agricultural expansion. A number of feedbacks (e.g. reinvestment, in-migration) create further incentives for expansion. Whether these result in deforestation or land sparing for conservation depends on two mediating factors: (1) robust forest sector governance and (2) whether REDD+ payments match future agricultural rents.

Source: Phelps et al. 2013. Agricultural intensification escalates future conservation costs. www.pnas.org/cgi/doi/10.1073/pnas.1220070110

In absence of implementing all these mediating factors together, simply increasing productivity and profitability of cocoa through technical and financial support may have the opposite effect of what was intended – i.e. accelerating deforestation rather than promoting conservation.

Another implicit assumption is that farmers will invest in shaded cocoa on their land rather than diversifying to other crops which do not require tree cover at all, or tree crops that harbour much less biodiversity than shade cocoa production - such as rubber and oil palm.

Sustainability of Community Resource Management Areas (CREMA): The project assumes that financial sustainability can be achieved through the (as yet not established) income generating activities of CREMA members and levying of members. However, there is little indication that such levies can be raised, or that they would be sufficient to cover long term operations of the CREMA. Whilst there are some examples of CREMAs in northern Ghana that are taking advantage of ecotourism to generate revenue for CREMAs without relying on external funding for over 10-15 years, stakeholders interviewed reported that CREMAs in the cocoa growing zones of Ghana would require external funding for some years to come before they could become self-financing. The ESP partners are encouraged to conduct the feasibility studies of realistic ways of securing long term financing for the CREMAs.

4.1.2. Risks:

The Phase I Project document (2012) did not include any risk analysis. Instead, a task was assigned to the Inception Workshop to "Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks."

The Phase II Project Document (SESP Attachment 1. Social and Environmental Risk Screening Checklist) identified no significant risks. However, the Annex entitled "*Social and Environmental Screening*" (p.47-52) identified a number of Social and Environmental risks that may threaten achievement of intended results, but certainly not all. The significance of identified risks were all rated as "Low". The Evaluation Team would assess many of these risks to be of moderate or high significance.

The No.1 Risk identified in the Phase II Project Document was as follows:

> ***Risk 1:*** *Current land and tree tenure policies* ***does not provide enough incentives to farmers to adopt environmentally sustainable production practices.***
>
> ***Significance****: Risk was rated to have 'Low' level of significance.*
>
> ***Management Measures****: ESP has carried out two separate studies on how the current land and tree tenure policies are imparting on farmers' ability to adopt environmentally sustainable production practices. Both reports made recommendations for future actions based on their findings and ESP is focusing most of its policy level work in 2015 on these recommendations. The land tenure review work for instance has revealed that* ***farmers with registered land or have security of*** *tenure are more likely to undertake conservation measures on their land including tree planting and other biodiversity conservation promotion measures that would lead to long term ecosystem health and services. The report's recommendations include the development of* ***Land Policy for cocoa farming that would ensure proper documentation and formalization of tenurial systems with clear benefit sharing agreements, farmer education on land registration, and proper acquisition of land as well as resolution of land disputes****.*
>
> *An analysis of the various policies and laws related to tree tenure and their implications for a sustainable cocoa production system on the other hand* ***also revealed key areas in which the policies and laws were deficient in dealing with the requirements to make farmers interested in undertaking sustainable practices to preserve the trees on the farms.*** *The report provided a detailed matrix showing* ***a list of the various policies and Laws, their impact on cocoa farmers, the recommended change required to promote sustainability on cocoa farms as well as proposed actions to support the required change. ESP is working to address these concerns****.*

But the analysis does not make reference to the risk that ESP's efforts to "*address these concerns*" may not bear fruit. In particular, the evaluation team notes that the *political economy* of the cocoa sector creates a high risk of political resistance to land and tree tenure reforms by stakeholders with a vested interest in maintaining the status quo. This political risk remains real, and has delayed progress on some of the necessary reforms.

The TE team has identified quite a number of additional risks that should in fact have been identified as relevant in the ProDoc, including: continued gender inequality, overuse of pesticides affecting biodiversity and ecosystem services, such as pollination, activities close to protected areas, activities increasing land use pressure and reducing area available for cocoa, including illegal mining (galamsey), sand mining and the production of alternative crops such as rubber, which are impacting on both cocoa production and forest conservation, etc and progress should have been monitored. These are detailed in the following sections.

4.2.Gender equality and women's empowerment

With reference to the "Social and Environmental Risk Screening Checklist", principles and screening criteria the following would appear to be a potential risk, but was not triggered in the Project Document:

Principle 2: *Gender Equality and Women's Empowerment,*

> ***Criteria 2:*** *the risk of perpetuating gender discriminations in cocoa farming communities;*

The Project Document notes:

> "*the Cocoa Life program – of which ESP is a component part, among other things, was designed to improve the lives of women and men engaged in cocoa farming at the community level which has resulted in considerable positive changes. There is some evidence of impact aligned with the 5 pillars of the project. However, if* ***fundamental structural barriers to women's leadership and agency (e.g. challenges such as land ownership, a greater and equal share of the value chain by women and as producers in cocoa communities in general)*** *are to be addressed, there will be the need to* ***consider working on some social norms at the community level and at policy advocacy at national and global level****. To address this,* ***ESP would work to link the women's empowerment interventions of the project pillars to the Gender Dialogue Platform of Ghana and engage stakeholders at higher levels of the value chain****. Further, women's leadership would be recognized as integral to advancing overall human development, not just the needs of women. Awareness, exposure, further training on communication, leadership, and negotiation are skills that many women can and should use in both personal sphere as well as public sphere*.

In the next section assessing Project Implementation, the TE Team therefore reviews what proactive efforts were taken to address existing discriminations and barriers to a greater leadership role and benefits for women in the cocoa sector

The TE Team understands that gender mainstreaming interventions in the cocoa sector was instead allocated to World Vision, another grantee of the Mondelēz International Cocoa Life Program.

4.3.Social and Environmental Standards (Safeguards)

With reference to the "Social and Environmental Risk Screening Checklist", principles and screening criteria the following would appear to be a potential risk, but were not triggered in the Project Document:

Principle 3: Environmental Sustainability:

Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management

> Criteria 1.2 "Project activities proposed *are* within or **adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park)**;
>
> 1.5 Risk of introducing invasive alien species:

- The project has distributed *Cedrela odorata* to farmers that is a known invasive species in Ghana[39]; and
- The project did engage in reforestation in degraded areas of Forest Reserves. No specific measures are mentioned on the project document to ensure avoidance of introducing invasive species.

Standard 2: Climate Change Mitigation and Adaptation:

2.2 Would the potential outcomes of the Project be sensitive or vulnerable to potential impacts of climate change?

- The Environmental Baseline study identified that cocoa production is highly sensitive to the impacts of climate change, in particular projected declines in rainfall and temperature patterns in the semi-deciduous and high rainforest zones of Ghana which may further lower crop yields.
- The Project Framework explicitly sets out to help farmers in the Cocoa Life program adopt environmentally sustainable and climate change resilient cocoa production practices but does not explain what will make the recommended intensified cocoa production systems *more resilient* to predicted climate changes. Instead, further intensification of cocoa production may risk accelerating soil fertility depletion.

Standard 7: Pollution Prevention and Resource Efficiency

7.4 Will the proposed Project involve the application of pesticides that may have a negative effect on the environment or human health?

- Output 1.3 of Phase 1 set out to strengthen COCOBOD's Mass spraying programme by collecting data on cocoa pests and diseases and using it to improve the effectiveness of COCOBOD's mass spraying programme as well as minimizing the environmental impact of the spraying programme. While references to the COCOBOD Mass Spraying Program was dropped in Phase 2, the Project document does acknowledge that agrochemicals, including toxic sprays, are used by farmers with potential risks for human health, and contamination of water bodies. Under Output 1.1, CHED CEAs were therefore expected to train farmers how to establish effective buffer zones / no-spray zones, and how to wash spray equipment away from water bodies.
- The evaluation team would therefore expect that efforts would be made to identify risks relating to pesticide and herbicide use and monitor progress towards reducing them.

For all the above criteria, the Project Document reported that there were no risks. This may have been because the project perceived that it was setting out to address these risks through its interventions, but they should still have been subject to monitoring. However, no updates on risks or risk management actions are provided in the Annual or Quarterly progress reports.

[39] Pennington TD, Muellner AN. (2010). A Monograph of Cedrela (Meliaceae). DH Books, 0953813479 Milborne Port, UK, 112 pp. ISBN.

Monitoring reports provided to the TE Team therefore did not monitor progress against the Social and Environmental Safeguards framework.

The following additional risks have been identified during the evaluation:

- Procuring the cocoa seedlings is critical because they comprise 25% of the planting costs and the right genetic stock drives future cocoa yield.
- Extreme weather or other force majeure events create additional implementation risks that become more relevant for scaling up. The geographic area and timeline for rolling out large-scale rehabilitation will increase exposure to these risks.
- Tenure security is a challenge for abunu farmers who risk losing their farms if they cut cocoa trees during rehabilitation efforts. Without clarifying and documenting rehabilitation rights any farm rehabilitation will be limited to farmers with more secure land tenure.
- That smaller tenant farmers, migrant farmers and women will not benefit to the same extent as landowner farmers since the former have limited land tenure security and limited access to finance.

4.4. Lessons from other relevant projects

The TE team reviewed documents from other projects dealing with similar issues such as sustainable cocoa production, reducing deforestation, and land and tree tenure reform in Ghana to draw lessons that either should have been taken into account during the design and implementation of ESP Phases 1 and 2, or should be applied to the design of a third phase:

Tenure and Global Climate Change (TGCC) project:

- **Land tenure:** private sector appreciated that land tenure issues are not just about engaging with national government, but projects could play a role in clarifying rights into extension services.
- **Land disputes are common between landowners and tenant farmers:** Community engagement and whether existing dispute resolution systems are robust and understood in a community contribute to successfully overcoming disputes.
- **Since the tree registration process is still not finalised, relevant existing laws are not in place[40] and costs are high the system may not be feasible:** A proposed alternative is to divest rights to both naturally occurring and planted trees to landowners and connect tree rights to land documents. This would allow one unified low cost rights administration system tied to each parcel of land.
- **Key decisions over land must be based on discussions with landowner, leaseholder and traditional chiefs:** The political will of traditional authorities will be necessary to strengthen landowner/tenant agreements to promote landscape rehabilitation.
- **Not all smallholder farmers are equal:** existing rehabilitation pilots are geared toward the privileged. Landowner farmers have sufficient security to replant improved varieties of

[40] For example the Concessions Act (Act 124) and the Timber Resources Management (Amendment) Act (617) restricts rights to natural occurring trees to the state (or the President). So one still needs to go through relevant processes to amend these laws.

cocoa and have access to finance. There are vulnerable (tenant) farmers who cannot participate. So interventions can increase inequality and social tensions. Current models are not financially viable or sustainable.

- Food security and nutrition are issues for poorer farmers due to seasonal fluctuations in cocoa income and insufficient diversification, limiting availability of food crops. There is need for enterprise diversification.
- Public private partnerships linking tenure documentation, dispute resolution, community engagement and financial modelling with cocoa rehabilitation was feasible.
- Scalability remains a challenge: outcomes linked with deforestation, cocoa productivity, environmental conservation and farmer livelihoods will not become apparent for many years. The costs involved in mapping and documenting rights currently too costly.
- Government's acceptance of formalisation of land tenure is questionable, since there is a complex set of government institutions involved in Ghana's cocoa value chain.
- Gender issues are not looked at sufficiently: what are the implications for female headed households, female migrant farmers and married women?

Sustainable cocoa systems require delivery of private and public goods and services. Since both public and private goods and services are poorly supplied, private companies focus on public goods which should be supplied by the government. Smaller tenant farmers and migrant farmers are at risk of being left behind without public interventions to improve tenure security.

Lessons learnt from the Ghana Land Administration Project (World Bank, 2013)[41]

The Implementation Completion Report of the Ghana Land Administration project identified two critical risks that are relevant to ESP:

- Distribution of land and resource rents: Attempts to "harmonize" customary and statutory land tenure institutions will not be successful if the conflicts of interest over rent allocation are not addressed, and if priority is not given to distributing rents in accordance with the public good. In Ghana, the customary authorities exercise considerable leverage over the government, a circumstance that stymies attempts by the state to make land administration more transparent and more responsive to the needs of the nation at large. Formalizing land administration threatens the power of the chiefs to allocate, first and foremost in their own interest, the revenues they derive from land. Unless the government is prepared to tackle the issue of rent distribution, interventions by external development partners are unlikely to make much headway. There is a related matter that needs to be resolved before projects proceed. Any intervention is likely to confront questions about the terms of decentralization: should the revenues generated through land administration accrue to elected local governments or to neighborhood chiefs? The answer to this question will hinge on which of these authorities is best placed and best motivated to invest the proceeds in building and maintaining the infrastructure that the broader community needs.
- Land tenure reform calls for a long-term commitment by the government of Ghana and its development partners; this commitment may be facilitated by a programmatic

[41] Implementation Completion Report 2013. Ghana Land Administration Project http://documents1.worldbank.org/curated/en/805541474634688190/pdf/000020051-20140625080330.pdf

lending instrument but the commitment must precede the choice of instrument—the instrument by itself will not create the necessary commitment. Various people told IEG that the Land Administration Project should have been financed by an Adaptable Program Loan (APL), allowing for several tranches of assistance over a 15-20 year period. This was, indeed, the Bank's original intention but it changed its mind shortly before the loan was approved. While this assessment acknowledges that experience in other countries (most notably, Thailand) demonstrates that a 15-20 year program is needed, the evidence from Ghana suggests that even if the Bank had approved an APL, **for reasons of political economy, the various power holders were unlikely to make the necessary commitment.**

Lessons learnt from the Committee on Sustainability Assessment (COSA) report:

This report set out to reveal useful lessons in understanding the effects of efforts to develop more sustainability in the coffee and cocoa sectors in 12 countries. It drew a number of lessons that have been learned, that are relevant to ESP - particularly because the Phase 1 Project Document made direct reference to the COSA (2013)[42] work on environmental indicators as a foundation for the planned work on developing Environmental Indicators for the Ghana Cocoa Sector under Phase 1, Output 1.5 (later renumbered as Output 1.4):

- Food security is one of the single most important sustainability indicator;
- A critical component of sustainability is the relationship between productivity and environmental results. This is especially useful to use over time to test a common hypothesis that good environmental stewardship will result in more stable long-term productivity. There does seem to be a positive relationship between the environmental index and productivity. When disaggregated, this does not always hold true for individual farmers or groups and can thus serve to help target those for more appropriate interventions;
- There are high, and perhaps unreasonable, expectations for Voluntary Sustainability Standards (VSS) and associated initiatives. It is clear that they do not fulfil many expectations to be a complete solution for the planet's agricultural economic, social and environmental challenges. Sometimes the application or execution of their requirements results in only modest improvement. They can be costly for some farmers to apply both financially and in terms of altered practices in cultivation, management, and recordkeeping. The requirements can be especially challenging for the poorest farmers. In some cases, elevated standards without concomitant capacity building and financing will be likely to create barriers to entering markets. The VSS, like most initiatives, are not a magic formula and require a commitment to ongoing capacity-building and long-term investment if they are to improve the conditions of farmers and their communities;
- From a policy perspective, especially in a fast-changing agricultural landscape affected by diminishing resources, climate change, and population pressures, the dynamic qualities of VSS can provide a valuable advantage in the long-term. While the VSS can offer developmental value and public benefits, it is clear that only a small part of the financial value that they generate actually reaches producers thus debilitating their

[42] https://thecosa.org/wp-content/uploads/2014/01/The-COSA-Measuring-Sustainability-Report.pdf (p. 58)

effects. Improving the measurement of costs and benefits can introduce the necessary transparency to improve the effectiveness of VSS and related initiatives; and

- Sustainability initiatives such as the VSS can offer economic, social, and environmental benefits but at very different levels depending on existing conditions. In order to determine the probable outcomes, it will be important to understand the producers' starting point and the level of initial support that is available to cover the costs and compliance requirements. Providing access to consistent guidance and local institutional support from NGOs, government, and Producer Organizations is invaluable when undertaking new approaches that may entail a level of risk and change. For producers to make the best choices they need to first be clear about their objectives and expected trade-off s. For example, a farmer in pursuit of higher yields will have to understand the possible associated requirements such as adopting new cultivation practices, using more labour, and making greater investment in agricultural inputs such as fertilizer. Most importantly, expectations need to be set at realistic levels; the promises that circulate of insatiable markets and high premiums are not certain.

Lessons learned from Research into impacts of climate change on cocoa production:

- The Environmental Baseline Report (UNDP 2013) noted that "*Ghana is also subject to other factors that could hinder development in cocoa. For instance, it is considered very vulnerable to climate change; mean daily temperatures are expected to rise by 1.1ºC to 6.4 ºC by the end of the 21st century (IPCC 2007), with increasing seasonal and spatial variation, resulting in a higher frequency and intensity of droughts and floods, some of which may have major consequences for cocoa producers.*"

Given that the project's main aim is to both reduce the impacts of cocoa on forests and their associated biodiversity and carbon stocks it is important to assess both how cocoa production contributes to climate change by impacting on forests, and how cocoa farmers can adapt to climate change to sustain yields. It is therefore important to identify cocoa production systems that optimise sustainable yields against carbon emissions from the entire cocoa production system, and the wider landscape in which it is produced rather than maximising yields per hectare on farms:

- The projected impacts of climate change have been further highlighted by a study published in 2016 by Schroth et al[43] and underpin the rationale for the ESP's focus on tree planting in cocoa farms as a contribution to climate resilient farming systems. The authors conclude that maximum dry season temperatures are projected to become as or more limiting for cocoa as dry season water availability. To reduce the vulnerability of cocoa to excessive dry season temperatures, they recommend the systematic use of adaptation strategies like shade trees in cocoa farms, in reversal of the current trend of shade reduction. They note that there is a strong differentiation of climate vulnerability within the cocoa belt, with the most vulnerable areas near the forest-savanna transition in Nigeria and eastern Côte d'Ivoire, and the least vulnerable areas in the southern parts of Cameroon, Ghana, Côte d'Ivoire and Liberia. This spatial differentiation of climate vulnerability may lead to future shifts in cocoa production

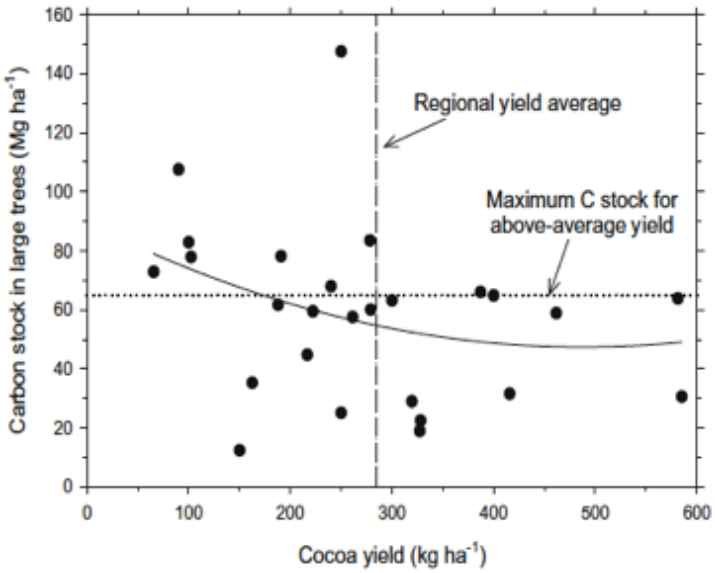
[43] Schroth G., Läderach P,. Martinez-Valle, A., Bunn C., and Jassogne L. (2016). Vulnerability to climate change of cocoa in West Africa: Patterns, opportunities and limits to adaptation. Science of the Total Environment 556 (2016) 231–241. http://dx.doi.org/10.1016/j.scitotenv.2016.03.024

within the region, with the **opportunity of partially compensating losses and gains, but also the risk of local production expansion leading to new deforestation.** They conclude that adaptation strategies for cocoa in West Africa need to focus at several levels, from the consideration of **tolerance to high temperatures in cocoa breeding programs**, the **promotion of shade trees in cocoa farms**, to **policies incentivizing the intensification of cocoa production on existing farms where future climate conditions permit** and **the establishment of new farms in already deforested areas.**

Climate change mitigation: Carbon emissions embodied in cocoa production result from both forest clearance and agrochemical production - notably nitrogen fertiliser that is an essential input into sustaining higher yielding cocoa production systems. There is an optimal level of tree cover on cocoa farms, whereby carbon stocks in cocoa farms are increased, cocoa yields are sustained in a warming climate by temperature-moderating shade, and carbon emissions embodied in fertiliser applications do not themselves outweigh the reductions in emissions from reduced carbon stocks on farms. Very limited research has been conducted into this optimization.

Another paper by Schroth et al.[44] (Jan 2016) on research in Brazil concludes that climate friendliness of cocoa agroforests is compatible with a productivity increase. The findings show that highest cocoa yields of up to 1000kg per hectare are achieved with less than 70 Tonnes Carbon in the tree overstory. However, productivity under heavier tree shade (>70tC/ha) can vary dramatically. There is a need for more research in Ghana's diverse cocoa production landscapes with older and younger farms to identify optimal shade for "low-carbon" cocoa production, noting that production on degraded soils with poor fertility may not be able to sustain higher yields without fertiliser applications.

Figure 5: Relationship between cocoa yields and aboveground carbon stocks in the large trees (>30 cm DBH) of 26 cocoa agroforests (cabrucas) in southern Bahia, Brazil.



Source: Schroth et al (Jan 2016).

[44] Schroth, G., Jeusset, A., da Silva Gomes A., Ciro Tavares Florence, Pinto Coelho, N. Faria D., et al. (Jan 2016). Climate-friendliness of cocoa agroforests is compatible with productivity increase. In: Mitigation and Adaptation Strategies for Global Change 21(1):67-80 DOI:10.1007/s11027-014-9570-7

4.5. Linkages between project and other interventions within the sector

4.5.1. ESP alignment with the UNDAF and CPRRF

Phase I: In line with the UNDAF's (2012-2016) emphasis on preservation of water bodies and afforestation, the ESP project proposed direct and indirect farmer-based interventions to assist cocoa farmers adopt environmentally sustainable cocoa production practices on farms while conserving ecosystems and natural resources in cocoa landscapes.

Phase II: Intended Outcome as stated in the UNDAF/Country Programme Results and Resource Framework:

- ***Outcome 3:*** *National systems and existing institutional arrangements for climate change mitigation and adaptation and for disaster risk reduction, as defined in the Hyogo Framework for Action at the district, regional and national level are functional.*

Outcome indicators as stated in the Country Programme [or Global/Regional] Results and Resources Framework, including baseline and targets: *Proportion of districts, regions and national agencies supporting the implementation of the national policy on climate change and disaster risk reduction.*

The UNDAF for 2018-2022, published half way through Phase II, also included Outcomes and Outputs to which ESP will have contributed. The 2020 annual monitoring reports from the Environment and Climate Cluster of UNDP, shared with the Evaluation Team, presents the following set of National level Outcomes and outputs to which ESP contributes and progress towards them (see Table 4).

Progress towards these indicators as reported in the 2020 Progress Report show good progress on training farmers. A distinction should be made between 'number of farmers trained" and "number of farmers adopting climate smart agriculture production" as it makes the untested but optimistic assumption that ALL farmers trained will go on to adopt new practises, whether or not the inputs (shade trees, equipment etc) and incentives (PES) are provided. There is no evidence to support this assumption. ESP's own M&E framework does not measure level of adoption, but only number of farmers trained. The Cocoa Life Program's Impact Assessment method attempts to collect objective data.

A significant area of land is reported to have been restored with UNDP support - in the new Pra-Subri CREMA (4,163ha) and other off-reserve restoration work in 10 districts covering 8,805 ha. It is not clear what has contributed to this restoration. The evaluators assume that it is referring to the area of cocoa farms rehabilitated, with new planting of improved hybrid cocoa and economic shade trees. Given that some of the 'rehabilitated' cocoa farms were old and over-grown (i.e. had too much shade), it is in fact possible that tree cover has been reduced to make way for new planting. No detailed description is provided of the status of the farms (tree cover, carbon stocks) before and after rehabilitation. This is an important point given that carbon stocks and biodiversity in old cocoa farms can be considerable, as noted by a number of reports.

The claim under CPD Indicator 2.1.3. that "*landscapes are gradually re-gaining their vegetative and tree cover providing the farms with better shade that is resulting in higher cocoa yields (and hence higher incomes), creation of habitats for wildlife, and protection of water bodies*." Is unsubstantiated by objective evidence from any monitoring system. All combined, the

Districts targeted by ESP have lost 211,000 hectares of tree cover each year on average between 2013 and 2019 (see Figure 7 and accompanying text on page 118).

There is quite limited progress reported by 2020 towards all other Outcome and output-level targets.

Table 4: Indicators in the 2018-2020 UNDAF / CPD towards which ESP contributes (extract only) – Progress reported (2020)

Outcome/output	Indicator	Progress reported at 2019	Progress reported at 2020
Outcome 1	Environmental governance at national and local levels is effective, efficient and coherent		
Output 1.2	***National institutions enabled to implement coherent policy and regulatory frameworks for conservation, sustainable use, access to and benefit-sharing of environmental resources in line with international conventions***		
CPD Output Indicator 1.2.1	*Extent to which gender-sensitive legal, policy and institutional frameworks are implemented for conservation, sustainable use, and access and benefit sharing of natural resources*	*No progress reported*	*2: very partially*
SP/IRRF Indicator 2.4.1.1	*Country has gender-responsive measures in place for conservation, sustainable use, and equitable access to and benefit sharing of natural resources, biodiversity and ecosystems* *A. policy frameworks* *B. legal and regulatory frameworks* *C. institutional frameworks*	No progress reported	*A. No* *B. No* *C. No*
Outcome 2	Urban and rural communities have access to affordable services, knowledge and tools to increase their resilience		
CPD Outcome Indicator 2.1	*Hectares of Degraded landscapes in off reserve areas restored through plantations development, community forestry, and natural regeneration*	*No progress reported*	*101,296 ha against target of 1.7million ha. The figure includes UNDP's support and restoration efforts in the new Pra-Subri CREMA (4,163ha) and other off-reserve restoration work covering 8,805 ha.*
Output 2.1	***Communities enabled to adopt systems for integrating climate change and environmental considerations into management of natural resources (e.g. forest and water) and livelihood activities***		
CPD Output Indicator 2.1.1	*Number of Community Resource Management Areas or similar landscape management structures established and operationalized*	*No progress reported*	*1 new CREMA (Ayum-Asuokow) established in 2016. Creation of Atobiase CREMA in progress*
CPD Output Indicator 2.1.2	*Number of women and men adopting climate smart agriculture production and/or sustainable energy practices*	*19,326 new farmers (39% F) in cocoa landscapes are gradually adopting good environmental practices on their farms. This is resulting in* ***the regeneration of the forest cover in a highly deforested area*** *and increased income for farmers.*	*Target of 50,000 exceeded.* *Total: 64,377 farmers trained on the multiple benefits of enhancing tree and carbon stocks and good environmental practises on cocoa farms of which* ***Women:*** *25,025* ***Men****: 39,352*

Outcome/output	Indicator	Progress reported at 2019	Progress reported at 2020
CPD Output Indicator 2.1.3	*Number of communities protecting and/or rehabilitating natural assets (e.g. water bodies, forest)*	*19,326 new farmers (39% F) were trained on the multiple benefits of enhancing tree and carbon stocks on farms and environmentally sustainable cocoa production practices. Field observations from the project team and the Steering Committee have shown that farmers are adopting most of the improved practices they have received training on. For instance, there is an estimated 80% adoption rate for soil improvement practices, and farmers appreciate why and how they should create buffer zones along water bodies and have knowledge of the dangers associated with the excessive use of agro-chemicals. As a result,* ***these landscapes are gradually re-gaining their vegetative and tree cover*** *providing the farms with better shade that is resulting in higher cocoa yields (and hence higher incomes),* ***creation of habitats for wildlife, and protection of water bodies.*** *Two important success factor were: a) build capacities on these issues for Community Extension Agents and Lead Farmers (428 – 45% F trained in 2019) and rely on them and their presence on the ground to transfer the knowledge and practices to other farmers; b) organize local forums to bring community members and their traditional rulers together to discuss common issues with respect to environmental sustainability and explore ways to join forces to improve the management of the ecosystem (1 dialogue with 80 farmers organized in 2019). This intervention is now directly contributing to a bigger government initiative, the Ghana Cocoa-Forest REDD+ Programme, which was launched this year and aims at reducing carbon emissions in the cocoa industry.*	*Total: 103 against target of 600.* *ESP contribution: 29 communities in Wassa East district were supported to protect and sustainably manage natural assets in the Pra-Subri CREMA*
SP/IRRF Indicator 1.4.1.2	*Natural resources that are managed under a sustainable use, conservation, access and benefit-sharing regime* *D. Area under sustainable forest management (hectares)* *E. Area of land under sustainable land management regime (hectares)*		*ESP contribution:* *D: 170ha of MTS initiated, against a target of 50,000ha* *E: 67,357ha of which UNDP work has contributed 4,163ha restoration in Pra-Subri CREMA, and 12,968ha of off-reserve restoration in 10 Districts*

4.5.2. ESP alignment with other components of the Mondelēz Cocoa Life Program

The Mondelēz International Cocoa Life Program was launched in 2012, and builds on the Cadbury Cocoa Partnership that was established in 2008. The goal of the program is to create empowered and thriving cocoa farming communities through the sustainable production of cocoa. The program mainly aims to increase cocoa yields, enhance thriving communities, improve livelihoods of farmers, empower the youth and enhance environmental sustainability in cocoa growing areas.

Coco Life's work was spread under 5 thematic areas or pillars[45] during ESP Phase I. These were:

- Pillar 1 Farming: Under this focus area, the Cocoa Life program seeks to enhance cocoa productivity by increasing net incomes derived from cocoa production. COCOBOD provides farmers with up-to-date information on good agronomic practices and efficient farming techniques (promoted by CHED and other IPs including Agro-Eco, OLAM, etc);
- Pillar 2 Communities: Cocoa Life provides business management and leadership training support to women to empower them and enable them to participate actively in decision making processes. The project also supports men and women to work together to transform their communities by developing action plans that can bring about changes to the communities in which they live - as well as the construction of community projects such as schools, clinics and recreational centres (championed by the World Vision International – WVI, CARE International, etc);
- Pillar 3 Livelihoods: additional livelihood intervention (soap, honey, sandals, susu mobilization and credit facilities, etc), implemented by World Vision International and other IPs; and
- Pillar 4 Youth: Cocoa Life supports the empowerment of young people in cocoa growing communities through school retention and after school programs. The project emphasizes the need to build the awareness on the importance for children to attend school classes and to create alternatives to avoid child labour (anchored by IPs including Child Rights and Child to Play).

Pillar 5 Environment: Cocoa Life provides training and support to farmers on environmentally friendly and sustainable farming practices. The project also provides support for forest conservation and sustainable ecosystem management in cocoa growing communities. adoption of environmentally sustainable practices by cocoa farmers, farmer societies and wider communities, and forest conservation and restoration – handled by UNDP via the Environmental Sustainability Project (ESP). Also under Pillar 5, CL supports forest, wildlife and water bodies conservation as well as mitigation against bushfires Under Phase II, CL re-classified its pillars into 3 – namely:

- Cocoa Farming as a business;
- Cocoa communities are empowered and inclusive; and
- Forests are conserved and restored – assigned to UNDP and other Implementing Partners (IPs) as appropriate.

[45] Mondelēz International Cocoa Life Program: https://www.wvi.org/sites/default/files/e-version%20cocoa%281%29.pdf

Each of the IPs prepare their own annual program. Specifically, since 2013, UNDP and COCOBOD were contracted to implement Pillar V - the "Environment Pillar", with the ambition to scale up Pillar V activities in 330 communities in 14 target Districts. ESP Project is integrated and linked with other components and activities funded under the Cocoa Life Program (financed by Mondelēz International) and other sponsors. At the field level, the ESP implementing partners have regular monthly coordination meetings at the District level with the IPs of the other Pillars to coordinate activities to ensure harmonisation of the program. Coordinators for each program are housed in the respective Districts' Cocoa Life offices.

COCOBOD also implemented its own program of free hybrid cocoa seedling distribution and mass spraying, each targeting the same beneficiary farmers being supported by ESP. At the field level, the ESP was implemented in coordination with the institutions leading the other pillars of the CL program, with regular coordination meetings between partners at the District level. Some of the institutions were also represented on the Steering Committee of ESP. The Steering Committee was tasked inter alia to *"ensure that project implementation is in line with the objectives of the Environmental Pillar V and is fully aligned and coordinated on a regular basis with the overall Cocoa Life Program." (see next section).*

4.5.3. ESP alignment with the Cocoa Forests Initiative

In 2017, the global cocoa sector announced a new platform against deforestation, the Cocoa and Forests Initiative (CFI), co-coordinated by the WCF and IDH Sustainable Trade Initiative. This platform of industry, major donors, and producing governments (currently Ghana, Côte d'Ivôire, Cameroon and Colombia) aims to provide a common framework to tackle deforestation. The CFI is a forest protection and restoration initiative that seeks to ensure that no protected areas are being farmed, encroached or destroyed.

With CFI now several years in, deforestation is starting to slow down, although the remaining forests in West and Central Africa continue to be threatened. National traceability platforms that were promised are behind on schedule. The implementation at national level is also running into snags, with inefficiencies and conflicts between ministries in producing nations causing major delays in roll out[46].

Mondelēz International Cocoa Life Program contributes to CFI targets also through ESP. In 2017 ESP team members participated in the national discussions under the Cocoa Forest Initiative to provide inputs into the development of a Joint Framework of Action to end deforestation and restore forest areas in Ghana. The 2020 progress report mentioned that Cocoa Life was working with the ESP in the context of the CFI to help restore depleted areas within the Ayum forest reserve using the Modified Taungya System (MTS). Progress is reported under Output 2.3 of Phase 2, which, at the request of Mondelēz International, was re-oriented to support MTS in circa 2019.

We also reviewed the Mondelēz (2020) report[47] on progress with implementation of the CFI.

[46] Fountain, A. and Huetz-Adams, F. (2020) Cocoa Barometer, 2020. The Voice Network. https://www.voicenetwork.eu/wp-content/uploads/2021/03/2020-Cocoa-Barometer-EN.pdf

[47] Mondelēz International Cocoa Life Program (March 2020). CFI Progress Report (Côte d'Ivoire, Ghana and Indonesia). https://www.cocoalife.org/~/media/CocoaLife/en/download//article/MDLZ_Cocoa_Life_CFI_Report-March_2020.pdf

4.5.4. ESP alignment with the Ghana Land Administration Project

In Phase 1 in relation to Outcome 1: policies and institutions strengthened: the project set out to work with the Lands Commission through the Land Administration Project (LAP), the Forestry Commission and other statutory/policy regulatory bodies/institutions to try to formulate / reform policies to create an enabling environment for cocoa farmers to adopt environmentally friendly and sustainable practices in their work.

Key Lessons learnt from LAP were that land titling is costly and that the design of the project failed to recognise the lack of commitment to reform by both the government and Ghana and the customary authorities. See quotes taken from the LAP final evaluation report [48]:

> *"the project made little contribution to clarifying land rights, because the comprehensive land bill was not passed and there was no discernible progress toward the project's objective of "harmonizing" statutory and customary authority over land. With respect to the (limited) progress in land titling, it remains to be seen whether those who received titles under the program of systematic adjudication will be willing to pay the fees associated with registration of subsequent land transactions. However, as land values continue to rise, the perceived value of registration is likely to increase proportionately, making it more likely that benefits accruing to project-provided titles will endure"*; and
>
> *There were significant shortcomings with the objectives and, to a greater degree, the design of the project.* ***Neither the objectives nor the design reckoned sufficiently with the political economy constraints on reforming land administration in Ghana, overestimating the commitment to reform by government and the customary authorities****. (There was no relevant Bank analytic work, specific to Ghana, on which the project could build).*

4.5.5. ESP alignment with the Committee on Sustainable Assessment COSA

In relation to Output 1.5 Development of Environmental Indicators (later renumbered as Output 1.4 in the 2015 work plan), the Phase 1 Project Document noted that Implementing partners would work closely with COCOBOD and the National Cocoa Platform[49] to develop a set of environmental indicators that would then be used to provide direction against development goals and environmental sustainability.

In consultation with COCOBOD, a common set of standardised indicators for Ghana's cocoa sector would be established. The Baseline report noted that NGOs such as the Committee on Sustainable Assessment COSA[50], that had by 2012 already "*developed a broad range of indicators through extensive research in West Africa i.e. water, pollution, soil, biodiversity, climate change and energy. In addition to indicators, a full set of survey tools, training programs, data analysis and database for the application of the indicator sets have been created. Indicator sets have been established through an international process and are able to form the basis for creating a comparative, broadly accepted indicator sets and system for application. At the time (2012) Cocoa specific indicators were being applied in Cote d'Ivoire and Ghana's cocoa sectors*".

[48] World Bank (October 2018). Implementation completion and results report for the Land Administration Project - Phase_2. Social, Urban, Rural And Resilience Global Practice Africa Region. Report No: ICR00004453. http://documents1.worldbank.org/curated/en/805541474634688190/pdf/000020051-20140625080330.pdf

[49] Initially this was Output 6.2 - an integral part of ESP, but was hived off and supported by a separate Programme with its own project document.

[50] https://thecosa.org/

The Evaluation team therefore assumed that COCOBOD intended to build on this COSA work. However, no further work was done (or at least was not reported on) in subsequent progress reports, and was dropped altogether in the Phase 2 Project Document. Meanwhile, valuable research into the impacts of interventions on cocoa yields, and various social and environmental criteria has been compiled by COSA partners, including the University of Ghana's Institute of Statistical, Social and Economic Research (ISSER). It is strongly recommended that researchers from institutions such as ISSER are placed on the Board of ESP in any future initiative to ensure that objective scientific rigour is applied both to the design and quantitative and qualitative monitoring of the interventions and their impacts, with the ability to demonstrate the impacts of such interventions in target groups as compared with non-targeted 'control' groups.

4.5.6. ESP alignment with REDD+ and the Ghana Cocoa Forest REDD+ Program (GCFRP)

There is widespread stakeholder recognition that issues of deforestation and productivity are common, widespread, and are often more difficult to address by one company alone. Addressing such issues requires collaboration among companies working together in a wider landscape. Furthermore, environmental and social challenges inherent in the production landscape are usually not limited to a single commodity or a sector. Therefore, it is prudent that a more holistic and inclusive approach, involving all relevant stakeholders, including government, is adopted to address them. A Memorandum of Understanding (MoU) was signed between UNDP, Forestry Commission of Ghana, Ghana Cocoa Board (COCOBOD) and Mondelēz Europe in December 2017 to provide a framework of cooperation and facilitate and strengthen collaboration between the parties in areas of common interest with regard to the implementation of the Ghana Cocoa Forest REDD+ Program (GCFRP).

4.6. Management arrangements

The Project has been implemented by COCOBOD with substantial involvement and supervision from the UNDP Country office. Extensive partnerships have been established with other agencies and farmer groups in the field.

The UNDP Country Office was tasked to provide technical assistance, and was responsible for coordination and implementation of the program including support in the following areas:

1. Overall program coordination and oversight in close coordination with project manager and key implementation partners including UNDP Country Offices;
2. Assist in operationalizing the program and contributing to ensuring highest programmatic technical quality;
3. Support and advise program implementation;
4. Drafting of internal and external reports, proposals, terms of reference, promote the exchange of best practices and innovative approaches; and
5. Administrative support through substantive and financial follow-up and reporting.

The Steering Committee has met frequently to approve annual work plans and budgets and discuss issues arising from implementation. The Steering Committee members were

interviewed, with a few exceptions (notably the Ministry of Lands & Natural Resources), and reported satisfaction with their role and oversight responsibility of the project.

Coordination at the field level has been assured by quarterly meetings of all Cocoa Life Partners. This has helped to eliminate duplication of activities and waste, which in turn, manifested in better cost-effectiveness, promoted ownership and improved governance and decision-making among the afore-mentioned stakeholders within the framework of the bigger Cocoa Life Program.

However, various stakeholders and reports noted that there has been a plethora of private and public sector initiatives and need for greater coordination between companies, and agencies and a recent move towards more coherent and streamlined landscape-wide and multi-stakeholder approaches to environmental management, such as the approach being promoted by the GCFFP in six Hotspot Intervention Areas (HIAs) including the Asutifi/Asunafo Landscape[51] in which the ESP intervenes. The ProForest analysis of the Asunafo-Asutifi Landscape[52] notes:

> "*Ongoing interventions aimed at cocoa sustainability in the Asunafo-Asutifi Landscape include the Mondelēz International Cocoa Life Program, Touton Cocoa Rehabilitation and Improvement Project (CORIP), and the COCOBOD Cocoa Artificial Hand Pollination. All these interventions are primarily aimed at helping farmers with the necessary ecological and economic investments to ensure sustainable optimum cocoa Production….*
>
> *These initiatives and interventions are limited in their scope, scale, and time, resulting in uneven impacts across communities within the landscape. Cooperation among the different interventions in the cocoa sector in the landscape appears non-existent, resulting in conflicting and inconsistent productivity and sustainability extension messages and practices across the landscape*."

This was both inefficient and unlikely to be effective at addressing the wider challenges of environmental management unless all companies agree to collaborate on pre-competitive investments to ensure that binding land use plans are prepared and adopted, institutional capacity of a landscape governance structure (modelled on the CREMA concept) is built, laws on forest protection are enforced, and incentives are put in place for protection of remaining forests, among other essential mediating factors and incentives. The evaluation therefore welcomes and ESP partner collaboration with the Asunafo-Asutifi landscape Programme[53] which leverages existing interventions, such as the Cocoa Life initiative, with the objective to

[51] Forestry Commission: Ghana REDD+ Hub. Asutifi/Asunafo Hotspot Intervention Area http://www.ghanaredddatahub.org/hia/details/4/#safeguardInfo

[52] Kudom-Agyemang, M.A. (2021). Developing a deforestation-free climate resilient sustainable cocoa landscape: process and approach. A case study narrative on Ghana's Asunafo-Asutifi Landscape programme https://www.proforest.net/fileadmin/uploads/proforest/Documents/Publications/Asunafo_Asutifi_case_study_Dec_2020.pdf

[53] The overall goal of the Asunafo-Asutifi landscape programme is to establish a **Landscape Governance Structure** (modelled on the CREMA concept) in collaboration with key landscape stakeholders and a consortium of private sector companies to implement a **Landscape Management and Investment Plan** to eliminate deforestation risk; adopt and implement climate-smart cocoa production standards; deliver cocoa agroforestry models including tree/carbon stock enhancement; deliver improvement in landscape-wide smallholder livelihoods; and address key landscape environmental and social challenges, using appropriate tools and approaches in the cocoa sector and through multi-stakeholder collaboration.

build a landscape governance structure (modelled on the CREMA concept) and scale up to other parts of the landscape for maximum impact.

4.7. Assessment of Project Implementation

The sub-headings of this section follow the guidance provided in the Evaluation ToRs.

4.7.1. Adaptive management

The ESP Results Framework went through substantial modification of outcomes, outputs and activities during Phase 1 in particular, as pointed out in Section 3.5. Reasons given were various - including the need to better align the program with the Mondelēz International Cocoa Life Program broader aims and objectives, and adapting to the realities of the field. While adapting to unexpected changes in circumstances is to be encouraged, many of the adjustments made to the results framework were as a result of information that was already available or issues that were already evident at the time of project design. Effectively half of the Outcomes and associated outputs were dropped from the Phase 1 Project Document.

The level of ambition on policy and legislative reforms was also substantially reduced, even though it is clear that in the long term it is essential that such reforms do occur.

Other key factors that have driven 'adaptive management' have been as follows:

- Mass spraying program: in phase 1 this was dropped as it was instead being addressed by COCOBOD and other partners. While no longer an ESP funded initiative, spraying is still being conducted on cocoa farms. The evaluation team has raised some questions regarding the potential implications for sustainability and environmental impacts of this in Section 4.6.2 Risks;
- Tree nurseries: the challenges with the timely production and distribution of economic shade trees to local farmers, leading to a decision to support community level nurseries, which is sensible, if standards can be maintained;
- Tree registration: slow rollout of the system due to difficulties with the software, administrative costs and institutional inertia have delayed progress; and
- Development of Environmental Indicators: this Output 1.4/1.5 of Phase 1 was dropped without any clear explanation as to why, with the consequence that there was subsequently no means to measure the outcomes of the ESP in terms of improved environmental sustainability.

However, there is still no definitive policy on tree registration and there are many technical and institutional risks that raise questions about the likelihood of farmers finally benefiting from planted trees by the time they are mature enough to harvest.

4.7.2. Actual stakeholder participation and partnership arrangements

Stakeholder participation has been generally high with positive feedback from the partners and beneficiaries in the field, as evidenced by the field mission. Support to the further strengthening and expansion of the Community Resource Management Areas (CREMAS) and their associated governance structures as an officially recognized participatory landscape management model that involves all local stakeholder groups and public institutions has helped to foster partnerships and stakeholder collaboration. The CREMAs are expected to engage local stakeholders in the management of the natural resources they need to maintain

their livelihoods and build stronger communities. However, their medium- to long-term success will depend on being able to sustain financing for their operations, funding which is not yet assured.

Most ESP partners are represented on the Project Steering committee. The Ministry of Lands and Natural Resources and Ministry of Agriculture have been less directly involved, but the project team affirms that they are satisfactorily represented by the presence of their technical agencies - the Forestry Commission and COCOBOD respectively. The Lands Commission has not been involved at the national or steering committee level - regular contact has been maintained only at the regional level. Given the important roles of both the Ministry of Lands and Natural Resources (MLNR) and the Lands Commission (LC) in dealing with the complex and linked issues of land and tree tenure reform, a greater level of involvement at national level may have resulted in more proactive engagement, better shared understanding of the issues, and timely progress towards solutions in the form of policy and legislative reforms.

4.7.3. Project Finance and Co-finance

The project has been exclusively financed by Mondelēz International through its Cocoa Life Program. Unlike e.g. GEF funding, there was no obligatory requirement for co-financing of the project and neither project document makes reference to any co-financing at the design phase. However, Phase 2 Project document explicitly set out to seek the potential for additional funding mechanisms to support farmer level initiatives or more systemic level initiatives such as carbon finance via REDD+ and land and tree tenure reforms under Outcome 3.

The project invested in preparing a fundraising pitching paper (Green Commodities Program, October 2019) although the version shared is entitled a "Draft for Discussion report on potential financing mechanisms. It proposes UNDP as a neutral broker, able to facilitate dialogue and collaboration between stakeholders to develop solutions that neither government nor private sector or civil society can achieve alone. The pitching paper seeks additional financing for implementation of REDD+ related activities to implement elements of the Ghana Cocoa Forest REDD+ Program (GCFRP) and complement this with additional finance. It also sought to raise funding for other initiatives such as a new "Ghana Shea Landscape REDD+ Project" and a new "Coastal Mangrove Landscapes" Project - neither of which offer direct co-financing support of the ESP.

The pitching paper itself does not clarify who it is targeting to provide financing and does not specify financing needs for additional support to the cocoa sector. UNDP GCP informed the evaluation team that the paper was not meant to be a detailed plan. Rather, it aimed for two things: first, to help steer an internal discussion among the UNDP team about opportunities that could be pursued, and second, to provide generic inputs about the ideas/offers/pitch of UNDP that could easily be adjusted to specific project opportunities, making it easier for UNDP to approach potential donors. As such, the pitching paper was one part of a larger process to help UNDP/Ghana to increase its portfolio of commodities and landscape project interventions. According to the UNDP team, this approach has been very successful. UNDP/Ghana received approval of major new projects that are complementary to ESP, and has a pipeline of new projects under development, such as a cocoa project with the Swiss State Secretariat of Economic Affairs (SECO). The Swiss SECO has given a green light to the development of a project proposal for cocoa and cocoa landscapes. An idea note was recently submitted to SECO, and the scoping process is ongoing.

The ESP 2019 Annual Report notes that internal discussions within the UNDP / ESP team identified a set of potential donors to which the note could be pitched, and potential areas of collaboration including the UK funded Partnership for Forests (P4F), the World Bank, Green Climate Fund, and SECO.

The ESP final 2020 progress report does not report on approaches made by UNDP to partner with these donors, or progress with mobilising additional funding specifically for the ESP[54]. This is in part due to the fact that discussions took place after the end of the reporting period. The evaluators were informed that UNDP spent considerable time and resources to pursue a project with P4F, which resulted in a series of concept papers and project designs. But due to P4F's shifting priorities and also to uncertainty about P4F's continued operation the effort was unfortunately fruitless.

A Shea project funded by the Green Climate Fund has been approved and is going forward. This will be UNDP/Ghana's flagship project, and while it will not work specifically with cocoa, it is anticipated that it will address systemic issues that are highly relevant for ESP, including support to Ghana's REDD+ strategy, strengthening of the Forestry Commission and support to the strengthening of the CREMAs at a systemic level.

The January-December 2020 progress reports that "*a proposal on a possible phase 3 project was submitted to Mondelēz*" in 2020. This proposal is focused on scaling up the Modified Taungya System in degraded parts of Forest Reserves. Since the first submission in 2020, successive versions of the proposal have been under discussion with Mondelēz. This discussion is still ongoing and UNDP expect approval soon. It is focused on supporting Mondelēz to meet its obligations under the CFI to restore degraded land in the Forest Reserves using the Modified Taungya System. The evaluators note that this would not qualify as 'co-finance' (as per the indicator) but rather a continuation of existing funding sources.

4.7.4. Monitoring & Evaluation:

As reported elsewhere (Sections 4.3 - analysis of Indicators) the Results Framework for Phase 1 at the design phase did not follow a standard format. The two revisions of the results framework in 2014 and then 2015, to align it with the Cocoa Life KPIs were not accompanied by revised indicators. The revised RF was not consistently reported on, and the Cocoa Life monitoring methodologies described in the 2014 Annual Workplan were not followed as proposed. The lack of an adequate results framework was acknowledged as a weakness of Phase 1 by the UNDP team during the Inception call with the Terminal Evaluation Team.

Monitoring and evaluation improved in Phase 2, with a better Results Framework in the Project Document and more rigorous monitoring of indicators, but there were still some weaknesses observed in the quality of indicators, which measure the implementation of activities rather than the objective measurement of the level of achievement of intended outputs or outcomes resulting from these activities. For example, the number of trees distributed, planted and registered under Output 1.2 does not automatically translate into higher carbon stocks on farms if the initial status of the beneficiary cocoa farms is not considered. Some farmers are

[54] The ESP final Annual Progress report 2020 mentions that the UNDP Green Commodities Programme new global project, Sustainable Commodity Production and Trade project was approved in 2020 to be funded by the Swiss Secretariat for Economic Affairs (SECO). The project, among other things, aims to scope out new project opportunities with Ghana being one of the key focus areas. But it is not clear how this will be aligned with ESP.

rehabilitating old unproductive cocoa farms and reducing shade by felling older trees and replacing them with younger ones, or removing *undesirable* tree species. Net impacts on carbon may even be negative. There is also not yet any monitoring of overall carbon stocks in the wider landscape. The failure to develop any environmental indicators (the intention of Output 1.5 – later renumbered 1.4 in 2015 AWP of Phase 1 Project Document) means that there is no objective data against which to evaluate the impacts of the project on **environmental sustainability** - the whole raison d'être of the ESP, and indeed its title. Overall, M&E could and should have been much stronger at the design and implementation phase.

Based on this evidence the Evaluation team rated the M&E Plan as "*moderately unsatisfactory*" in terms of design at both entry and during implementation for Phase 1, improving to "*moderately satisfactory*" at design and during implementation for Phase 2.

4.7.5. UNDP implementation/oversight

The analysis in this section is based on an evaluation against the UNDP quality standards for programming[55] which address the strategic contribution, and relevance of investments to higher level goals, adherence to core UN principles, and the efficiency, effectiveness and sustainability of project design, management, supervision and monitoring.

The ESP Phase 1 project document was approved despite being below UNDP standards for project appraisal. While there was a clear analysis of the systemic problems to be addressed, it fell short in many other respects as summarised in Section 4. The quality of the project design document, in particular the analysis of risks, and drawing lessons learned from other sources, and the M&E framework of the ESP Phase 1 was weak. Subsequent adjustment of the Phase 1 results framework aligned it with the Cocoa Life KPIs, but monitoring and evaluation of indicators, outputs and outcomes using the evidence-based methods proposed in the revised framework remained below standard. The quality of Phase 2 design was better, and oversight was satisfactory with clear reports and regular supervision.

Protocols were followed for regular meetings and reports, but the contents of these ESP level reports often do not shed light on progress towards higher level outputs, outcomes or impacts of the program, and record largely operational issues and challenges. These were compiled at the national level through UNDP's Result Oriented Annual Report (ROAR). Over the past 3 years (new period of CPD and UNDAF), results from ESP were used by UNDP Ghana to report on progress towards higher level outputs and outcomes. A thorough analysis by the evaluators of progress towards outcomes and impacts at the national level is presented in Section 5.4.

The Evaluators review positively the fact that frank assessments of the fundamental challenges were routinely repeated in progress reports, under Project Implementation Challenges, Lessons Learned, and Recommendations sections of progress reports. These acted as reminders to all stakeholders. Some proposed solutions have been implemented, but the program has failed to make substantive progress on many of the 'systemic issues' (tree tenure security, land use plans, incentive mechanisms) after 8 years of investment. By resigning itself to the conclusion that tree tenure reform is 'beyond the ability of ESP partners alone to change', UNDP management appears to be missing an opportunity to bring about

[55] UNDP Evaluation Guidelines (pages 10-11). The UNDP quality standards for programming.

transformational changes in policy, of the type that UNDP elsewhere sets out to achieve[56]. A revised strategy to advocate for transformation policy reforms through stronger collaboration with other programs and stakeholders is gradually evolving (see Section 4.5). A clear overarching framework will be essential to overcome decades of inertia on advancing key reforms. In this regard, UNDP efforts to revive the National Cocoa Platform are viewed positively.

While there are strong arguments for UNDP to enter public private partnerships, there are also risks, which seem not to have been fully assessed following the UNDP guidance available[57] (see Section 7.4 Lessons Learned, subsection "**Further consideration of potential risks of Public Private Partnerships"** for analysis).

Based on the available evidence, the evaluation team rated the Quality of UNDP Implementation/Oversight as "*moderately unsatisfactory*" in Phase 1 and improving to "moderately satisfactory" in Phase 2.

4.7.6. Implementing Partner execution

ESP was implemented under National Implementation Modality (NIM), with Cocobod as the implementer and a PMU (based at Cocobod) hired to support day-to-day implementation. The modality was slightly varied to "Full Country Office Support to NIM" when Cocobod objected to fiduciary assessment of its systems. This meant that UNDP played a lead role in administrative and logistical arrangement but at all times the implementer of the ESP program on the ground was COCOBOD.

Coordination at the national level was assured by the Steering Committee which is chaired by COCOBOD. At the start of the program the main policy goal of COCOBOD was to increase production of cocoa, and COCOBOD had historically promoted the expansion of full sun cocoa, with limited understanding of, or institutional capacity to roll out initiatives at scale to ensure the environmental sustainability of cocoa production. The ESP has therefore had to invest heavily in developing and delivering training programs for front line extension staff (Community Extension Agents) that in turn train farmer societies and unions in good agricultural practises (GAP), tree planting and environmentally sustainable practises (ESP). These practises have now been mainstreamed into COCOBOD CHED's national training programs, contributing to wider national-scale impact. That said, COCOBOD has clarified that the process of developing a harmonised guideline for Climate Smart Cocoa has taken account of experiences from many other programs, and did not depend solely on the influence of the ESP developed training manual or experiences.

While some of the environmentally sustainable practises promoted and rolled out by the CL funded ESP, including shade tree planting, safe handling of chemicals, optimal pruning practises etc were already part of the COCOBOD policy and farmer training curriculum, they

[56] UNDP (2011). Supporting Transformational Change. http://www.undp.org/content/dam/undp/library/Cross-Practice%20generic%20theme/Supporting-Transformational-Change.pdf and UNDP Strategic Plan: 2014–17. Changing with the World.

[57] UNDP (2016): Private Sector Partnerships https://popp.undp.org/SitePages/POPPBSUnit.aspx?TermID=a843cfef-088c-4a81-b797-ea33f77a089e&Menu=BusinessUnit and https://popp.undp.org/UNDP_POPP_DOCUMENT_LIBRARY/Public/Partnerships_Private%20Sector%20Partnerships.docx

have been strengthened by the ESP Program interventions, fully integrated into the CHED farmer training curriculum and the extension staff have been better trained to deliver the environmental component of the curriculum and not just the agronomic aspects.

The terminal evaluation field mission observed good planning, coordination and teamwork towards implementation and periodic review of key activities and realization of ESP project results in the communities visited. Delivery of trainings and distribution of tree seedlings were routinely recorded and disaggregated by District, farmer group and gender.

At the subnational level, monthly coordination meetings were held between all implementing partners of the Cocoa Life Program to plan, implement and review the ESP Project activities in coordination with other CL activities. The evaluators heard evidence that the teamwork approach applied at the levels of the farmer societies, farmer unions, CREMA, MTS, communities and organizations has significantly and positively contributed towards effective participation of the ESP Project's direct beneficiaries for the realization of the project results. Further, the coordination among the IPs of the ESP Project also eliminated duplication of activities and waste, improved cost-effectiveness, promoted ownership and improved governance and decision-making.

Anecdotal evidence from progress reports and the terminal evaluation field mission confirm that farmers appreciate this initiative and most are applying the improved practises as recommended in trainings given and plant tree seedlings distributed to them. However, COCOBOD makes limited quantitative measurement of impacts in terms of changes in cocoa yields, trees planted and surviving and changes in carbon stocks on farms, or longer term changes in soil fertility as evidence to underpin claims of environmental sustainability - either at the farm level, or at the wider landscape level.

In Phase 1, the responsibility for developing and implementing environmental indicators for the cocoa sector was assigned to the Cocoa Research Institute of Ghana (CRIG), under COCOBOD but the activity did not progress, and was then dropped. Development of Environmental Indicators was not included in Phase 2 planning. However, COCOBOD informed the evaluators that they are working on defining a harmonised standard for climate smart cocoa (though apparently not in the context of ESP).

Further analysis of monitoring impacts of the ESP is presented in Section 5.4.

The Quality of Implementing Partner Execution is also evaluated as "*moderately satisfactory*" in Phase 1 and improving to "*satisfactory*" in Phase 2.

4.7.7. Overall quality of project implementation/execution,

Due in large part to the weaknesses in defining a clear Results Framework with respective indicators and targets, Phase 1 was difficult to execute.

The evaluators rated project implementation in Phase 1 as moderately unsatisfactory, improving to moderately satisfactory (4) in phase 2.

4.7.8. Coordination, and operational issues

As noted above, a Memorandum of Understanding (MoU) was signed between UNDP, Forestry Commission of Ghana, Ghana Cocoa Board (COCOBOD) and Mondelēz Europe in December 2017 to provide a framework of cooperation and facilitate and strengthen collaboration between the parties in areas of common interest.

5. Assessment of Project Results and Impacts

5.1. Progress towards objective and expected outcomes

- *Progress towards objective and expected outcomes, where possible based on achievement of outcomes against indicators by reporting on the level of progress for each objective of the project at the time of the TE by noting final achievement;*

This section summarises progress towards delivery of Outputs and Outcomes. For each Outcome, progress towards Outputs is summarised first, and concluded with a summary of how these have contributed towards achievement of the higher level Outcome, as land out in the Project Documents for Phase I and Phase II respectively.

5.2. ESP Phase 1 – assessment of project results and impacts

The original Outcomes and Outputs for Phase 1 are detailed and discussed below; however it is important to point out that ESP underwent significant adaptive management actions in Phase 1 since its inception, which culminated in changes to some of the planned activities outlined in the original project document. This, according to the final phase 1 report, became necessary in order to align project outcomes and outputs with field level circumstances, that is with the Cocoa Life Program, for greater impact.

For ease of implementation, planned project activities were categorized by the ESP team into two main components as follows:

> Component 1: Policy and institutional issues - Outcome 1;
>
> Component 2: Activities in the Asunafo Pilot Landscape and working with the other Cocoa Life (CL) Program Implementing Partners (IPs,) especially the Cocoa Health and Extension Division (CHED) of COCOBOD, to promote environmental sustainable practices in the 7 CL focal Districts - which were Outcomes 2 and 3;

Component 1 involved working mainly with the Office of the Administrator of Stool Lands, the Forestry Commission, COCOBOD and other statutory/policy regulatory bodies/institutions to try to reform some aspects of current policies to create an enabling environment for cocoa farmers to adopt environmentally sustainable farming practices. Much of ESP's work under this component focused on issues surrounding tree and land tenure in cocoa growing areas of Ghana (Outputs 1.1 and 1.2).

Component 2 activities concentrated on working with CHED and the other CL IPs to pilot relevant interventions at the community/farmer level to promote environmentally sustainable practices for cocoa production. This was handled on two levels:

1. *Landscape level pilot interventions focusing on the Asunafo Pilot Landscape; and*
2. *Mainstreaming/integrating ESP field activities with CHED and the other CL IPs using the Trainer of Trainers' (ToTs) model by developing training modules and training Extension Agents affiliated to the CL Program and other CHED field level staffs from the program focal districts, in selected environmental sustainable farming practices. The ToTs also covered the leadership of the Farmer Cooperative Unions formed under the CL program.*

These activities fall largely under the originally proposed Outcome 3: Cocoa institutions and farmers knowledgeable on environmental best practices. An integrated landscape approach

was adopted in piloting field level interventions in the Asunafo Pilot Landscape to build overall community capacity in managing natural resources for sustained production and protection of natural resources using the CREMA tool.

Outcome 1: Policies and institutions strengthened

Outputs as presented in the original Project Document for Phase 1 are listed below, with the corresponding achievements *in italics*. Baselines, Indicators and targets to monitor progress were presented in the first Annual Workplan annexed to the Project Document for Phase 1. These are presented in light blue as a basis for assessing progress, along with a presentation of some of the planned activities and the logic of how these would contribute to delivery of the output and contribute to each of the Outcomes.

Output 1.1. Provide support to national land tenure reform processes in cocoa communities

Baseline: Phase I outcomes & lessons-learned
Indicators: Customary Land secretariats functional at the community level
Targets: Detailed work plan to be formulated and agreed on target communities
Means of Verification: Customary Land secretariats database

Establish Community Land Secretariats to review, harmonize and streamline customary practices, usages and legislations to govern land holding, land acquisition, land use and land disposal, including the streamlining of short term land rental and land hiring agreements so that care takers can be authorised to financially benefit from crops (including timber sales) other than cocoa:

- *The ESP team worked with the Customary Stool Land Secretariat at the offices of the Mim Traditional Council that had already been established as part of the Land Administration Project. It is not clear from progress reports how much additional progress was achieved with the Mim Secretariat to register land.*

Establish National Cocoa Coordination Platform Work with the Ministry of Lands and Natural Resources and other stakeholders to resolve and minimize land tenurial disputes and to support legislation to require stool, clan, family and other landowners to survey and demarcate their land boundaries with the assistance of the Survey Department and Regional Lands Commission.

- *See report on progress against Outcome 6.*

Produce key policy papers on advising on the desired policy changes required are produced and disseminated.

Two Policy Review reports were produced and validated under Phase 1, published and widely distributed:

- *Quaye, Ampadu & Onumah (Nov 2014). Review of the Existing Tree Tenure Policies and Legislations and their Implications for the Cocoa Sector in Ghana*

- *Proven Ag Solutions (Feb 2014). Review of Existing Land Tenure Arrangements in Cocoa Growing Areas and their Implications for the Cocoa Sector in Ghana*

Both reports have been distributed to all relevant stakeholders (especially those who participated in the two validation workshops). To give it wider readership/circulation, the land tenure report was published in the African Journal of Science, Technology, Innovation and Development[58]. The Community dialogue series on Land Tenure issues in Cocoa Landscapes and how they can be addressed to facilitate the adoption of sustainable practices on farms were also based on the recommendations made by the report.

Dialogue with the Ministry of Lands and Natural Resources to speed up title registration to cover all interests in land (allodial, leasehold etc.) in cocoa communities

- *Based on the findings and recommendations of both Land and Tree Tenure studies, ESP initiated a number of actions to get the relevant state institutions/standard bearers to work towards land and tree tenure policy reforms.*

Output 1.2. Strengthen national tree tenure process in cocoa communities

Baseline: Phase I outcomes & lessons-learned
Indicators: Tree registration system in place
Targets: Detailed work plan to be formulated and agreed on target communities
Means of Verification: National monitoring system

The logic of this intervention, as presented in the project documentation was that: Smallholder cocoa farmers' tenure of shade trees (both newly established plantings and existing old forest timber trees) would be clarified and made more secure. **Tree Registration would be rolled out,** through the engagement of relevant stakeholders (Forestry Commission, Ministries of Lands & Natural Resources; Food & Agriculture,: Local Government & Rural Development; Trade & Industry, as well as COCOBOD, District Assemblies, Traditional Authorities, Farmer representatives) to provide farmers with an avenue to secure the use and disposal of trees established on their farm, some revenue from felled trees and compensation for damage sustained to economic plant species on-farm:

- *The tree tenure report (a product of Output 1.1.) provided the basis for the current collaboration between ESP and the Forestry Commission (FC) to establish modalities of tree registration in Ghana. As a result of this collaboration, ESP organized a national workshop of key stakeholders, co-financed by Solidaridad, to discuss and develop modalities for the registration of planted trees in off-reserve areas, including a tree registration form for use by farmers. The form was undergoing further internal reviews at the FC by the end of Phase 1, with the intention to roll out for use in 2017.*
- *The project carried out training on shade tree planting, with a total of 940 farmers (184 women and 756 men) trained. Community extension agents (CEAs) were also trained on forest laws, social responsibility agreements (SRAs) with a total of 1,140 participants (no breakdown by gender was specified) from 278 communities.*

Phase 1 reporting indicates that, tree planting on farms has progressed:

- *2014 Planting season: 283,600 seedlings planted by 3,160 farmers from 166 communities;*

[58] *Report published under the title: Does the current land tenurial arrangement in Ghana incentivize adoption of environmentally sustainable cocoa production practices? A case study of four selected cocoa growing districts in Ghana. http://dx.doi.org/10.1080/20421338.2015.1082366.*

- *2015 Planting season: 536,100 seedlings planted by 4,655 farmers from 428 communities;*
- *2016 Planting season: no planting took place;*
- ***Total number of trees planted in Phase 1 – 819,700;** and*
- ***8,600 hectares of forests along waterways and protected areas rehabilitated (2016 Phase 1 Closeout Report).***

In the absence of any monitoring of trees established on farms during phase 1, there is no data available on the tree survival rates or whether best practice models were rolled out and if so, the effectiveness of the models. The Ipsos (2019) Cocoa Life Impact Study report confirms that the average shade tree density on cocoa life participants main farms is 9.1 trees per hectare – half of the 18 trees per hectare being recommended by ESP as "good environmental practise".

Link tree certification program to the cocoa farmers' passbooks as a national monitoring tool for the cocoa sector.

- *2014 Workplan stated: "As part of the environmental management system, it was originally proposed that the **current farmer's passbook system be re-designed to, among other new features, measure farmers' adoption of environmental best practices**. But upon further analysis of the feasibility of this proposal and due to the current challenges with the pass book system, the project would limit itself to only working with COCOBOD to **create a GIS data base for the cocoa sector in collaboration with COCOBOD and its Division** to improve cocoa sector data collection, storage and usage.*
- *No further progress was reported on development of either the Passbook or a GIS Database – activity dropped?*

Coordinate tree certification and tree tenure policy changes with the Customary Land Secretariat at community level

- *No progress reported – dropped?*

Output 1.3 COCOBOD Mass spraying programme strengthened

Baseline: Phase I outcomes & lessons-learned
Indicators: Improve efficiency and effectiveness of mass spraying programme
Targets: All cocoa growing regions
Means of Verification: National monitoring system on pest and disease presence

The logic of this intervention, as presented in the project documentation was that: Private-public pest and disease inspection programme would be developed. Private sector companies would collect and share information with COCOBOD's research unit (CRIG), to improve the efficiency and effectiveness of the mass spraying programme as well as minimizing its environmental impact by developing a private/public pest and disease inspection programme.

In the 2014 Workplan it was proposed that ESP through the Cocoa Life Program and the implementation IPs would concentrate on field level efforts to improve agrochemical application and usage to improve safety and also train farmers on integrated crop management practices:

- *In Q1 2015, ESP reported that in view of the challenges facing the COCOBOD mass spraying program, it planned to "Pilot support to community spraying enterprises to commercialize their*

operation in the Asunafo pilot landscape to improve farmers' access to quality and safe agrochemical application services in view of the challenges facing the COCOBOD mass spraying program". During Q1 2015 ES reported *"Potential entrepreneurs were identified to establish commercial spraying gangs. ESP worked with them to develop simple business plans to commence operations in the next quarter"; and*

- *Thereafter, no further progress was reported, nor reason for stopping work.*

Output 1.4 Develop Environmental management systems for the Cocoa Sector:

Baseline: No national indicators have been established for cocoa;
Indicators: National environmental, economic and social indicators established;
Targets: All cocoa growing regions;
Means of Verification: National monitoring system;

The logic of this intervention, as presented in the project documentation was that Implementing Partners would work with COCOBOD and the National Cocoa Platform to develop and agree on set of indicators:

- While the 2013 Progress report notes "*preliminary discussions [were held] with the Research Division of COCOBOD, CRIG and CSSVDCU on methodology and type of environmental indicators to include in the environmental management system, the tools required for data management and how it would be used and illustrated for environmental reporting".* The 2014 ESP Implementation Strategy reported "*the redesign of farmers' pass book to record environmental data is not practical at this point in time as the pass book system has its own challenges. Emphasis would be on defining environmental indicators for the sector and how these indicators would be linked to a GIS database*." The task was assigned to the Research Division of COCOBOD. But no further mention is made of this work to develop environmental indicators in subsequent progress reports, and no further reference was made to these indicators in the Phase 2 project document.

Output 1.5. Conduct a rapid biological assessments on biological diversity

This output was modified in 2014 but with no baseline or indicators.

The logic of this intervention, as presented in the project documentation was that the biological assessment would be done as part of the REDD baseline. ESP would work with the FC and other forest sector stakeholder to compile data on cocoa farm expansion into forest reserves starting from Cocoa Life Program Districts. This would form the basis of determining the extent of the challenge and would guide in the design of actions to solve it.

Summary of progress towards Phase 1 Outcome 1: Policies and institutions strengthened

In relation to Outcome 1, progress in Phase 1 focused on some activities proposed under Outputs 1.1 - 1.2 which aimed to contribute to the outcome of strengthening tree or land tenure policy. Reviews of Tree and Land Tenure were completed and workshops were held. However, little or no progress was made, during Phase 1 on Outputs 1.3 - 1.5.

From the very start, ESP identified inadequate land and tree tenure policies as a major driver of forest clearance and unwillingness to invest in shade trees on established farms. Reform of land and tree tenure systems is seen as a prerequisite for long-term sustainability. The

Environmental Baseline Report (UNDP, August 2013) highlighted the key role of "*land and tree tenure as a significant driver of the lack of on-farm investment generally, which has constrained expansion of more environmentally sound production (i.e. greater shade). Current tenure arrangements give farmers very limited incentive to plant or maintain shade trees because of land tenure issues with landowners, and landowners have limited rights to naturally occurring trees on their land. There is also a lack of awareness about tree tenure rights. Tenure issues need to be resolved so that they are not a barrier to forest tree planting. Without suitable change it will remain difficult to encourage active planting and maintenance of trees on farms*."

By the close of Phase 1, desktop reviews of land and tree tenure had been completed but no significant reforms had materialised. The 2016 close-out report concluded that "*the project worked with the Office of the Administrator of Stool Lands the Forestry Commission, COCOBOD and other statutory/policy regulatory bodies/institutions to try to reform some aspects of current policies to create an enabling environment for cocoa farmers to adopt environmentally sustainable farming practices"*.

The 2016 Lessons Learned Report, under the "shortcomings" section, emphasised once again that:

> "*Current land and tree tenure policies do not provide enough incentives for farmers to adopt environmentally sustainable production practices and the lackadaisical attitude from state standard bearers to initiate meaningful reforms to incentivize farmers to adopt best practices".*

This was the observation made in the Environmental Baseline Report and the Project Document for Phase 1. Little seems to have changed in terms of policy as a result of phase 1, despite the intended role and convening power of UNDP to bring these state institutions to the table to address fundamental challenges of sustainable development.

Outcome 2 Cocoa Landscape Rehabilitation: an economic and field review undertaken to determine the optimum approach for the rehabilitation of old unproductive farms in different farm situations.

Output 2.1 Cocoa farmer adopt rehabilitation techniques:

> Baseline: 30% of cocoa farms are degraded and require rehabilitation
> Indicators: 10% of farmers adopt rehabilitation practices
> Targets: Three cocoa growing regions
> Means of Verification: National monitoring system

The logic of this intervention, as presented in the project documentation was that: a report would compare and analyse cocoa rehabilitation costs for different cropping situations and identify other crops that are complementary to cocoa production (i.e. timber and fruit).

- *No data collected or progress reported by ESP, but some data compiled by Cocoa Life Impact monitoring systems.*

Rapid rehabilitation experiments carried out to bolster desktop information

- *No progress reported.*

Workshop to discuss findings and scale up revised cocoa rehabilitation techniques with cocoa industry to make recommendations.

- *No progress reported.*

Recommendations included into the national cocoa curriculum and farm training module

- *A Climate Change Education Campaign in 17 selected Junior High Schools and Communities in the Asunafo pilot landscape was carried out. However it is not clear how this contributes to the output - being adoption of rehabilitation techniques by farmers.*

CRIG developed training programme for national extension officers on different rehabilitation techniques:

Report on past rehabilitation efforts:

- *No progress reported.*

Rehabilitation efforts incorporated into COCOBOD' environmental management system and use for reporting:

- *No progress reported.*

Initiative linked with Outcome 5 incentive mechanism

In relation to the Outputs proposed in the Phase 1 report under Outcome 2, there was no progress reported.

Summary of progress towards Phase 1 Outcome 2: Cocoa Landscape Rehabilitation

In the Phase 1 proposal, the key deliverable under Outcome 2 was a review to determine the optimum approach for the rehabilitation of old unproductive farms in different farm situations. There was some work carried out by CRIG and the manual produced provides some information on the cocoa rehabilitation techniques that were rolled out under Component 2 (under Outcome 4). However, the information disseminated did not provide sufficient detail on the preferred species or planting arrangements to ensure that farmers planted the most appropriate tree species in the optimum arrangements.

The total number of trees distributed to farmers in Phase 1 was 819,700, across 12 districts.

- 2014 Planting season: 283,600 seedlings planted by 3,160 farmers from 166 communities; and
- 2015 Planting season: 536,100 seedlings planted by 4,655 farmers from 428 communities.

However, there is no data on how many trees have survived. ESP progress reports quantifying the number of trees planted and hectares of shade trees established is based on a simple assumption that all distributed trees are actually planted in cocoa farms at a density of 18 trees per hectare, and that all survive. 100% survival is never the reality of tree planting, even in commercial plantations. Farming communities reported 65% survival rates for transplanted tree seedlings at the time of establishment. While the sample size was small (7 cocoa farms visited) the evaluation field mission estimated between 7-10 economic trees of 3 to 6 years

old surviving per hectare – less than half the target density of 18 trees per hectare. The Ipsos (2019) Cocoa Life Impact Study report confirms that the average shade tree density on cocoa life participants main farms is 9.1 trees per hectare – half of the 18 trees per hectare being assumed. Claims on the total hectares of forest rehabilitated by ESP, and repeated within the CPD Progress reports and Cocoa Life Annual Reports, are therefore likely to be substantial over-estimates.

Component 2: Activities in the Asunafo Pilot Landscape and working with the other Cocoa Life (CL) Program Implementing Partners (IPs,) especially the Cocoa Health and Extension Division (CHED) of COCOBOD, to promote environmental sustainable practices in the 7 CL focal Districts

As mentioned above, Component 2 activities focused on some of the activities outlined under Outcomes 3 and 4 of the original Phase 1 proposal. The original Outputs for these Outcomes are listed below, with the corresponding achievements *in italics*.

Outcome 3 Forests Conserved

Output 3.1. Align with REDD+ initiatives:

> **Baseline:** REDD readiness plan not fully developed;
> **Indicators:** Yearly report;
> **Targets:** One report per year; and
> **Means of Verification:** Reporting.

The plan was to achieve this through liaising with REDD working groups in Ghana, especially the REDD steering group. Key products of this output was attendance at the national REDD+ steering committee meetings and a report highlighting key learnings on different REDD initiatives and how they align with the overall objectives of the environmental programme.

- *No progress reported by close of Phase 1.*

Output 3.2 Protect Community managed forest buffer zones and biological corridors to improve biodiversity conservation:

> **Baseline:** 90% of forests not engaged in sustainable management plans;
> **Indicators:** A further 10% of Forests function under SFM plans;
> **Targets:** 2-3 communities engage SFM plans; and
> **Means of Verification:** Reports from community based monitoring.

The logic of this intervention, as presented in the project documentation was that: CREMAs would be established in off-reserve zones, which will be linked to **community forest action plans** and will incentivise communities to conserve forest areas in cocoa landscapes. CREMAS will increase local control and participation in natural resource management and improve farmers' rights over established forest trees.

Key activities and products proposed under this output were:

- Incentive based mechanisms in the form of REDD financing, voluntary carbon market and the production of Non Timber Forest Products (NTFPs) to diversify income will ensure sustainability;

- Organisational structure for the CREMAs, including Management Advisory Boards (MABs);
- Sustainable Forest Management Plans and NTFP activities to promote additional livelihoods and help conserve forest resources; and
- Creation of forest corridors between forest patches and forest reserves.

In terms of progress made, there is no evidence that REDD+ financing has been secured to incentivise farmers, nor evidence that NTFP activities have been initiated to diversify income.

The development of the ***Ayum-Asuokow Community Resource Management Area*** *(CREMA) and its integration with other project activities using the "Landscape Approach" was another flagship activity carried out during project implementation in Phase 1. At the Phase 1 project closeout, the CREMA development process had been completed with the relevant governing structures at all levels, Bye-laws and constitutions approved and gazetted by the Asunafo North Municipal Assembly. The CREMA had been formally inaugurated and the Certificate of Devolution issued by the Ministry of Lands and Natural Resources through the Wildlife Division (WD) of the Forestry Commission (FC). The certificate of devolution gives authority to the CREMA for the management of natural resources within its jurisdiction/boundaries.*

There does not appear to have been any progress made on the other planned activities under this Output. The Ayum-Asuokow CREMA Management Plan was prepared in June 2016 by a consultant. However, the plan remains general, recommending lots of good practises.

The CREMA Management plan is supported by a Medium-Term Action Plan that lists more detailed activities, responsibilities, resources and budgets required, but without any spatially explicit map of what should happen where. The extent of financing made available for the implementation of the plan seems to be limited to supporting their regular monthly management meetings and an AGM. There are no reports of the extent to which the CREMA Medium-Term Action Plan has been implemented by the end of the Project, although it appears that some activities have been implemented by in-kind contributions by CREMA members.

Apart from the very general CREMA Management plan, no detailed sustainable forest management plans have been prepared, and there is no report that forest corridors have been created between forest patches and forest reserves with project support. The CREMA Management Plan simply recommends "*Restoration of wildlife lost through forest degradation by human activities and fires by creating wildlife corridors and buffer zones within the CREMA*", with no detail of where, by whom or how this will be achieved.

Output 3.3. Develop a Land use plan for forest conservation in pilot landscapes (as part of CREMA development):

Baseline: none provided;
Indicators: none provided;
Targets: none provided; and
Means of Verification: none provided.

The logic of this intervention, as presented in the project documentation was to: Produce a review of the institutional systems and tools to better understand how forest frontiers are

being protected and to make recommendations on the level and type of assistance to minimise deforestation, encourage national and use planning and maintain appropriate levels of law enforcement.

While the ESP Implementation Strategy and workplan for FY 2014 discusses best ways of supporting land use planning for forest conservation in pilot landscapes (as part of CREMA development), the revised activity under this Output stops short at "*Produce an accurate and up-to-date land cover/land use maps for all CocoaLife districts – both the 7 current ones and the 10 new ones, to generate accurate data on the extent of forests encroachment in cocoa farms and where such an encroachment is taking place… to* ***serve as a guide for land use planning for forest conversation***." The plan notes that the most efficient way to produce these maps is through the classification of satellite imagery. The ESP Annual Work Plan for 2015 proposed to continue work started in FY2014 on a land cover map, but there is then no further reporting on progress. Neither a land cover map, nor any land use plan were prepared, either in FY2014 or subsequently. Instead, the Phase 1 Close-out Report which covers the period May 2013 to September 2016 recommends that *"COCOBOD and other stakeholders in the sector should* ***work to adopt a system of land use planning and tenure that incorporates natural resource management and biodiversity conservation objectives".***

In a report[59], not prepared in the context of ESP, it is reported that *"a GIS and land cover analysis of the Asunafo-Asutifi landscape to map out the different land use/land cover types and their spatial distribution within the landscape"* funded by the 8 cocoa and chocolate companies (including the Mondelēz International Cocoa Life Program) and commissioned by the World Cocoa Foundation as part of a wider baseline landscape study. However, this was not an ESP product.

The Ayum-Asuokow CREMA Management Plan was prepared in June 2016 by a consultant. The Evaluation Team had understood that the CREMA Management plans would constitute a form of land use plan for the CREMA to underpin better conservation. However, Section 3 identifies several opportunities for improving the resource situation, and recommends that when the CREMA *becomes fully operational, the CMP should result in proper land use planning, development of business contracts and issuing of permits – based on the authority granted through the CREMA devolution process."* Given that preparation of a land use plan was an intended output of Phase 1, land use planning should have advanced during Phase 1, and not remained simply a recommendation at the end.

Output 3.4 Monitor encroachment in protected areas:

Baseline: none provided;
Indicators: none provided;
Targets: none provided; and
Means of Verification: none provided.

[59] Proforest (Dec 2020). Developing a deforestation-free climate-resilient sustainable cocoa landscape: process and approach. A case study narrative on Ghana's Asunafo-Asutifi Landscape programme. Chapter on "Asunafo & Asutifi Landscape Programme - How Government and Companies Engage." Prepared under Production Landscape Programme. Briefing Note 4.
www.proforest.net/fileadmin/uploads/proforest/Documents/Publications/Asunafo_Asutifi_case_study_Dec_2020.pdf

The logic of the intervention, as presented in the Project Document was to: *Work with Ghana Forestry Commission to monitor forest encroachment, through collecting information from institutional records, private sector aerial photographs etc. If forest encroachment is determined to be high, remedial action will be proposed by the project steering committee.*

- *No progress reported.*

Summary of progress towards Phase 1 Outcome 3: Forests Conserved

This Outcome aimed to reduce deforestation and forest degradation, improve the protection of forest buffer zones and enhance the mobility of species via forest corridors, through supporting the development of REDD+ initiatives, build sustainable community forest management plans and work with communities to establish Community Resource Management Areas (CREMAs) and Conservation Management Advisory Boards to improve community livelihoods, coordinate community conservation plans that encourage the rehabilitation and protection of forests and watersheds.

By the end of Phase 1, at the Landscape level, institutions have been strengthened in some key landscapes - notably in Ayum-Asuokow using CREMAs, which are envisaged as an innovative natural resource management and landscape-level planning tool for community initiatives, giving communities the right to manage and benefit both economically and environmentally from their natural resources. The Ayum-Asuokow CREMA had developed bye-laws and has gradually begun supporting community resource management activities in its jurisdiction, ensuring compliance with bye-laws.

However, there is less clear evidence on the contribution that the ESP project made to CREMA related activities (strengthening Traditional Authorities for forest and wildlife conservation), forest restoration using the Modified Taungya System (MTS), fire prevention; etc or to the development of sustainable forest management plans, NTFP activities or the creation of forest corridors.

While farmer societies or cooperative unions are still very important, there is not much reported on strengthening them as local farmer institutions.

Furthermore, the aim of CREMAs is to ***increase local control and participation in natural resource management*** and ***improve farmers' rights over established forest trees***, so although there is some evidence that the creation of local byelaws have contributed to increased local control and participation in natural resource management, there is no evidence to indicate that farmers rights over established forest trees have been strengthened.

At the national level, there is evidence that inter-institutional coordination has improved. However, further improvements and streamlining of the multiple initiatives targeting the forest and cocoa sectors (REDD+, CFI, Cocoa Life, etc) are both necessary and were recommended by various stakeholders.

Outcome 4 Cocoa Institutions and farmers knowledgeable on environmental best practices

The Project aimed to work with the CRIG to address research gaps in environmental best practice identified during the baseline review, including gaps in relation to the identification of best forest shade trees, best soil and water management practices. Short term research on

these activities were to be funded. Work would also include the development of a training module on carbon sequestration for farmers, training on wildlife laws for extension officers and cocoa farmers.

Output 4.1 Identify and fill research gaps for environmental best practices

Baseline: 70% of farmers implement some form of environmental best practices;
Indicators: Farmers implementing all CRIG recommended environmental best practices;
Targets: 40% farmers adopt all environmental best practices; and
Means of Verification: National monitoring system.

However, it was noted that in the Phase 1 end of project report that the project decided to work on mainstreaming interventions with Cocoa Life and collaborated with CHED on in relation to Output 4.1., as summarised below:

Cocoa Life Mainstreaming & Collaborative Implementation with CHED

1. Instead of trying to set up a parallel cocoa extension structure and also to ensure project impacts were felt longer after implementation, ESP decided to work with CHED through capacity building in environmental sustainability and good agricultural practices for extension staff as well as the various farmer cooperatives and their leadership;
2. Farmer sensitization and education campaign in CL intervention districts including the Asunafo pilot landscape, on forestry policies and regulations to create awareness on farmers' rights and responsibilities under the existing laws; and
3. Planting and registration of recommended economic trees by cocoa farmers to increase both tree & carbon stocks on farms.

In phase 1, CRIG developed best practice models for forest shade trees, soil and water management practice, some aspects of which were incorporated into national training.

A detailed training manual "*Learning about Sustainable and Climate Friendly Cocoa Production*"[60] (97pp) was produced for COCOBOD and other extension workers along with a very simple brochure and flipchart for farmers to advise them on shade tree planting and other good agricultural practices. ESP staff reported that **500 copies** of the manuals had been distributed to COCOBOD frontline staff.

Summary of progress towards Phase 1 Outcome 4: Cocoa Institutions and farmers knowledgeable on environmental best practices:

No national monitoring system of farmer adoption of environmental best practices was reported in subsequent progress reports.

The Closeout report (Oct 2016) does not report progress on output 4.1 and makes no mention of "environmental best practices" or progress with research, or adoption of best practises by

[60] Nene-Osum Azu, J. (March 2016) Sustainable and Climate-Friendly Cocoa Production and Biodiversity Conservation in Cocoa Landscapes - A Trainer's Guide

farmers. Furthermore, there are no data available on tree survival rates, so although there are records of the number of trees planted, there is no indication of the number of trees that survived.

OUTCOME 5: Incentive based mechanisms in place

Output 5.1 Build COCOBOD capacity and knowledge on carbon credit and REDD

Baseline: none provided;
Indicators: none provided;
Targets: none provided; and
Means of Verification: none provided.

- *No progress was reported in Annual progress reports for Phase 1. However at some point (timing not clear), Mondelēz requested the UNDP GCP team to analyse the possibility of securing carbon payments to farmers and concluded it was not realistic – see more analysis below.*

Output 5.2 Pilot voluntary carbon project in at least 2 cocoa landscapes

Baseline: Cocoa farmers are not attached to any schemes for the payment of environmental services;
Indicators: Enhanced carbon sequestration in soil and vegetation across landscape in project demonstration sites;
Targets: 2-3 communities; and
Means of Verification: Reports from national monitoring system and field surveys.

- *No progress reported in Annual progress reports. But see more analysis below.*

Output 5.3 Assist farmers to generate additional income sources from other tree crops apart from cocoa

Baseline: Farmers generate limited income from additional sources;
Indicators: Farmers improve income from additional crops that compliment cocoa;
Targets: 10% of overall farmers; and
Means of Verification: National monitoring scheme.

- *No progress reported in Annual progress reports.*

However, the 2019 Ipsos Impact study that track the impact of the overall Cocoa Life Program (without attributing changes to one component (such as ESP) or another of the CL program) indicated that 87% of farming households have a non-cocoa source of income (71% being sale of other non-cocoa crops). However, 72% of farmer household income still comes from cocoa. Those farmers who benefited from income generation training tended to earn more (+25%) from their non-cocoa activities than those who did not.

Output 5.4 Outgrower schemes established

- *No progress reported in Annual progress reports. Output dropped?*

Summary of progress towards Phase 1 Outcome 5: Incentive based mechanisms in place

Rollout of PES schemes was intended to be the mechanism by which farmers would be incentivized to plant trees both on their cocoa farmers own farms and in degraded forest reserves. Upon request from Mondelēz the UNDP team analysed the possibility of securing carbon payments to farmers under Voluntary Carbon Market financing options. The ESP team and UNDP's Green Commodities Programme (GCP) conducted a feasibility study of carbon-based payments, and concluded that individual payments to farmers would not be realistic, for several reasons:

- Individual carbon storage (or avoided deforestation) per farm is very small and would result in small carbon payments;
- The transaction costs of registering and monitoring thousands of small cocoa farms would exceed the modest payments at realistic carbon prices at the time; and
- Due to commitments under the FCPF (see below), individual companies within the Hotspot Intervention Areas (HIAs) cannot currently offset carbon via performance at individual farm level, as it would result in double accounting.

Instead the ESP/GCP Team concluded that carbon payments would be more realistic at an aggregated level and payments could be spent on e.g. farmer support systems or other services that would help a large number of farmers. The success of this proposed solution will largely depend on the effectiveness of the National REDD+ program, and payments would only be generated in the longer term once the program is able to document reduction in deforestation and/or reforestation. UNDP continues to be a partner in this effort. However, progress with rolling out National REDD+ mechanisms by those responsible (not ESP) remains slow.

The Evaluators are aware that the Cocoa REDD+ Programme has been set up to produce deforestation free and sustainable cocoa in return for carbon payments, under the Ghana Cocoa Forest REDD+ Programme (GCFRP). While the ESP partners have a formal collaboration with the GCFRP, and a benefit-sharing mechanism has been developed[61], payments that may flow to Ghana are results-based, so the country must first qualify by showing reduced deforestation or carbon absorption through reforestation before any finances can flow to Ghana and downwards to farmers. UNDP continues its support to these processes, but it is not within the control of a single project such as ESP to make payments happen at a systemic level.

GCFRP is being delivered in partnership with private and public-sector actors and has been approved by the World Bank's Forest Carbon Partnership Facility (FCPF). Due to commitments under the FCPF, companies cannot currently offset carbon, although there are efforts to develop climate smart labelling and farmers are expected to benefit from carbon through a mechanism determined by the management boards of the CREMAs/HIAs. There are also opportunities to inset within the sector e.g. reduce emissions within the cocoa supply chain. Barry Callebaut, for example, is working in partnership with Gold Standard to become 'carbon and forest positive by 2025'. Pilot initiatives to develop sustainable cocoa production are being supported by Verra's impact monitoring through Landscale as well as by Nestle and Ecom. Going forward, it is recommended that the project assess the feasibility of these

[61] Forestry Commission (Sept 2018) Advanced Draft Benefit Sharing Plan Ghana Cocoa Forest REDD+ Programme/ https://www.forestcarbonpartnership.org/system/files/documents/Ghana%20FCPF%20ER%20Program%20Advanced%20Draft%20BSP.pdf

different offsetting and insetting initiatives to secure carbon payments for farmers and develop a clear strategy on how best to develop this work area.

It is also essential to assess the net impact of the rehabilitation of old cocoa farms. As noted in the lessons learned section of the ESP Phase 1 Close-out report:

> *"Lesson # 2: Abandoned cocoa farms and forest regeneration: From the perspective of biodiversity conservation, it is more profitable for farmers to employ more intensive management practices on their cocoa farms for greater productivity* ***rather than reclaiming abandoned cocoa farms, which may be on their way to forest regeneration in heavily degraded landscapes. Biodiversity conservation therefore provides a window of opportunity for farmers who engage in practices that promote the protection of abandoned old cocoa farms that are located near protected forest frontiers and corridors to be rewarded to serve as an incentive for farmers to avoid deforestation."***

If the ESP project is supporting tree planting into full sun cocoa farms, then there could be a net gain in carbon stocks. But if some of the farms being rehabilitated are old, overgrown and unproductive cocoa farms, that are first cleared, and then replanted with hybrid cocoa and young economic shade trees, there may in fact be a net decrease in carbon stocks and loss of biodiversity, even after the young shade trees grow, as optimal shade management may result in lower tree density and carbon stocks than the abandoned cocoa plantations. More research work is required on this topic, whether or not carbon credits are to be claimed, as the net impact of rehabilitation efforts will affect Ghana's overall progress towards the REDD+ targets, as monitored by its Monitoring Reporting and Verification system.

With the recent inclusion of the cocoa sector in the national Carbon emission accounting budgets of Ghana, and the development of the Ghana Cocoa Forest REDD+ Program[62] the need to quantify the carbon sequestered in cocoa ecosystems is urgent[63]. In addition to measuring the amounts of carbon stored in cocoa and shade tree biomass in the cocoa systems, the soil organic carbon content needs to be determined. Globally, the amount of carbon stored in soils is estimated to be 1.5–3 times more than in vegetation. Thus, if Ghana is to include the carbon sequestered in the cocoa sector in its proposal for developing a national carbon accounting strategy, the C quantities stored both in the vegetation and the soils of the cocoa ecosystems must be included, and the impacts of rehabilitation on carbon stocks must be taken into account. **High shade cocoa system is classified as "forest"** under the Ghana forest definition for the purposes of REDD+ carbon accounting[64] and thus rehabilitation of old cocoa agroforests

[62] Forestry Commission. The Ghana REDD+ Datahub: Hotspot Intervention Areas http://www.ghanaredddatahub.org/ecozone/details/1/

[63] Mohammed, A., Robinson, J., Midmore, D., and Verhoef, A. (2016). Carbon storage in Ghanaian cocoa ecosystems. Carbon Balance Manage (2016) 11:6 DOI 10.1186/s13021-016-0045-x

[64] Monitoring forests for REDD+ necessitates a clear forest definition. Ghana has consequently defined its forest as any piece of land with a minimum area of 1 hectare, with a minimum canopy cover of 15% and with trees that have the potential to reach or have reached a minimum height of 5 metres at maturity in situ. Cocoa trees, rubber trees, oil palm plantations, and other tree-crop plantation trees (mango, citrus, cashew, etc.) are not considered as forest under the definition. This is because they represent the "business-as-usual" deforestation and degradation scenario and cannot be considered as being "additional", which is a prerequisite for REDD+. **However, land use systems that integrate tree crops with a significant shade canopy of forest trees can qualify as a forest if the shade trees meet the forest definition; an example being a high shade cocoa system.** Source: Government of Ghana (December 2015). Ghana National REDD Strategy, p.54. https://www.forestcarbonpartnership.org/system/files/documents/Ghana%27s%20National%20REDD%2B%20Strategy%20Dec%202015.pdf

to system with higher yielding cocoa hybrids with lower density of shade trees than 'traditional' agroforestry may in fact qualify as 'deforestation'.

In summary, at the end of ESP Phase II, no Incentive Based Mechanism is yet in place. Responsibility for establishing one has been largely deferred by ESP to larger programs with which ESP partners are collaborating. Going forward, there is scope to streamline approaches and efforts to ensure that incentives are translated into real benefits for participating cocoa farmers.

Farmers have a strong incentive to register their land ownership or tenure arrangements. As reported under progress with Tree Registration, some progress has been made with land registration by other programs, notably an initiative funded by the Netherlands Enterprise Agency (RVO) as part of the Sustainable Development Goals Partnership (SDGP) implemented by Agro-Eco and Meridia)[65]. At the same time as registering land tenure, the Meridia software and process has been adapted to allow data collection on trees within land parcels. The incremental cost of measuring trees on farms while registering land boundaries and tenure status is far less than the cost of one-off tree registration done alone.

Support to register land (and tree) tenure is a big incentive for farmers and could be a means by which both public and private finance are blended to support a scaling up of land registration. The incentive for famers would therefore be to register both their land and trees growing within it, during which process their achievement of a minimum tree density per hectare can be evaluated and documented, thereby qualifying them to benefit for e.g. a 'climate-smart' cocoa premium or other reward through a differential cocoa pricing mechanism, rather than through the payment of performance based payments for environmental services or "carbon finance" with all the associated complexity of on-farm carbon stock monitoring at small scale. However, the complex interaction between the statutory and customary land and tree tenure systems, and the impact it has on incentivising tree planting and retention highlighted by recent studies[66], requires careful analysis before any further work on land and tree tenure reforms is conducted.

Outcome 6: Public private sector coordination

Output 6.1 Creation of a national cocoa coordination platform

The Project Document stated that this activity was initially planned for 2012-2015 but under Milestones states: "See separate Project Document". This outcome was moved to a separate Project Document (copy shared by UNDP) prepared specifically for the development of a cocoa platform. The new project was entitled "Support for Development and Operation of COCOBOD's Ghana Cocoa Platform" with a budget of US$1.3million. The $100,000 for ESP Output 6.1 was then used to support operational costs of the platform.

UNDP supported the establishment of Ghana's National Cocoa Platform in 2013 with a solid endorsement from COCOBOD's CEO at the time. The cocoa platform advanced well, but

[65] Meridia: Launch of ASASE Project in Ghana to Support Climate-Smart Cocoa and Thriving Forests https://www.meridia.land/asase

[66] Asaaga, F., Hirons M., Malhi, Y., (2020). Questioning the link between tenure security and sustainable land management in cocoa landscapes in Ghana. World Development 130 (2020) 104913. https://doi.org/10.1016/j.worlddev.2020.104913

changing leadership in COCOBOD and shifting priorities in the organization led to COCOBOD requesting to take over the management of the platform, in approximately 2017. Therefore, the success of the platform process has been out of UNDP's hands for a number of years.

Those interviewed during the evaluation report that the original Ghana Cocoa Platform (GCP) platform collapsed and efforts to revitalise it have not really worked. While not a reflection on ESP performance (that was no longer responsible for animation of the platform), it is important to note that the collapse of the GCP has limited the potential to move forward with multi-stakeholder dialogue around systemic land and tree tenure policy and legal reforms. New COCOBOD executives and many other stakeholders have expressed interest in a revival of the cocoa platform, and UNDP is currently exploring its viability through its partnership with SECO.

It is important to note that there are several other Cocoa Platforms in Ghana, including:

i) the Ghana Civil-society Cocoa Platform (GCCP) which is an independent campaign and advocacy platform for civil society actors in the cocoa sector – comprising of civil society organizations, non-governmental organizations, community-based organizations, farmer-based organizations, farmer associations, media and interested individuals. The main aim of the platform is to advocate and influence cocoa sector policies and programmes;
ii) Cocoa and Forests Initiative: A CFI Platform, hosted by MLNR and co-facilitated by WCF and idh is reported not to have adequately filled the gap left by the collapse of GCP https://www.idhsustainabletrade.com/initiative/cocoa-and-forests/ ;
iii) the Swiss Platform for Sustainable Cocoa (SPSC), which is a joint initiative of the Swiss chocolate industry, SECO, academia and civil society to promote sustainability and resilience along the entire cocoa value chain. In the frame of its co-financing facility, the program supports in Ghana four innovative public-private partnership projects (see https://www.eda.admin.ch/dam/countries/countries-content/ghana/en/factsheet-spsc_EN.pdf).

The evaluators recommend that the project partners explore and assess the viability of these different platforms before then deciding how any new or revamped platform would align with, or integrate with other existing platforms to create a functional, well supported platform (or network of stakeholder representation groups) that can again engage on the key policy and legal reform process.

Output 6.2 Linking Environmental results to CCP programme

At the inaugural Steering Committee, the Mondelēz representative reported that "*the trajectory of changes that has occurred at the Cadbury Cocoa Partnership (CCP) resulting in birth of the Cocoa Life program*". No further reports on progress on this output were provided in ESP progress reports. The TE team therefore assumes that this output became redundant, instead requiring alignment with the Cocoa Life program.

5.3. ESP Phase 2 – assessment of project results and impacts

ESP Phase 2 consisted of 5 Expected Results:

1. **To effectively mainstream environmentally sustainable cocoa production practices into farmer training curricula by building the technical capacities of CHED CEAs mandated to provide farmer level trainings.**

The training of trainers under Output 1.1 for ESP II were geared at training Cocoa Health Extension Division officers to mainstream environmental sustainability practices in the extension services they provide to cocoa farmers within the Cocoa Life catchment area. It is expected that COCOBOD through its Research Division (which is the focal unit for this project)

will use these extension officers to replicate this elsewhere.

The 2020 ESP Progress Report summarises the outcome of an internal monitoring exercise that assessed the extent of training of extension workers. The manuals were used as material for Training of Trainers (ToT) sessions for extension workers and Lead farmers in all 12 focal districts – for both Cocoa Life and mainstream CHED CEAs as well as ESP Field Coordinators (FC) Community Animators (CA), Cocoa Life (CL) Community Extension Agents (CEAs) and lead farmers at society and district levels. While it reports that target groups were trained in each district, the monitoring does not provide quantitative data on the number of staff trained. Knowledge of farmers on ESP and Good Agricultural Practises (pruning, weeding, mistletoe, fertilizer application, pest and disease control), disposal of empty chemical containers etc.) was reported to be good in all districts. The trained Extension workers also organize direct training programs for the CL famers and invite cooperative members to trainings.

Whilst the manual covers most topics, it lacks sufficient detail on certain key topics. For example, there is only limited information provided on recommended indigenous agroforestry, cocoa shade species. Some indigenous tree species are listed, but there is very limited information on how to grow or obtain these species and on care and maintenance. The Evaluation Team recommend that it would be useful for farmers to have some guidance on care and maintenance of trees, since tree planting is only the first step in tree growing and care and maintenance is essential to increase tree survival rates. There is no discussion on issues of land and tree tenure that significantly affect farmers' practices in relation to retaining mature trees and growing new trees. Further, the registration of both land and tree tenure is one of the key mechanisms envisaged by the Project to create the incentive for farmers to plant trees in the first place. The absence of any discussion on this key topic in the manual misses the opportunity to address the constraints to tree planting, which are much more related to the future ownership of the planted trees and how future benefits from harvesting timber trees will be shared , than to the technicalities of 'how' to plant trees.

The materials actually shared with farmers were very basic with low quality pictures, and did not provide comprehensive information. For example, while recommendations on specific tree species to be grown as shade trees, or on planting arrangements are provided in the Training manual for the trainers, it does not seem to be available in a format that would be handed over to farmers (e.g. the handout on shade trees).

The evaluation field mission noted that there is a limited number of staff (community extension agents) in the districts visited relative to the workload and felt needs of the communities coupled with the rising demand for ESP Project services by the new communities. For instance, in Juabeso district, District Coordinator of the Cocoa Health and Extension Department of the COCOBOD suggested that an additional ten communities can be enrolled in the next phase of the ESP Project.

2. Farmers in the project districts adopt environmentally sustainable cocoa production practices on farms

The ESP Project has promoted soil improvement practices such as the application of organic and inorganic fertilizers, erosion control, and proper use of agrochemicals to control weeds, disposal and management of farm waste, zero tillage, etc. According to progress reports (2019) "*farmers are adopting most of the improved practices they have been taught during trainings, as observed by* ***field monitoring visits*** *of the both the Country Office and the Steering Committee*". Field observation and interactions with farmers have shown some level of

adoption is occurring. The ESP reports claim that 80% of trained farmers have adopted such practices by 2019 (cumulative from the start of the Project). This estimate was reported to be based on personal communication/focus group discussions/field observations). The TE team field visits showed evidence of practises being adopted on farms of participating farmers. However it is not clear what quantitative methodology ESP staff have used to assess farmer adoption rates as no M&E data recording system was shared with the evaluators.

Mondelez Cocoa Life International did kindly[67] provide the evaluators with access to a summary of the Ipsos (October 2019) Impact Survey results that shows that there is good evidence or at least *some* evidence that 90% of farmers are now applying at least some of the Good Agricultural Practises (GAP) more often, in particular: weeding, pruning shade trees and cocoa bushes; removal of parasitic plants (mistletoe), and removal of dead and diseased pods.

However, only 39% of farmers reported using fertiliser in the preceding year. Reasons for not using fertiliser are primarily due to having no money to invest in it (52%), fertiliser being too expensive (47%) or not available (22%). Only 11% reported that they did not use fertiliser because they did not see the need for it. This indicates that access to fertiliser is a financial challenge for farmers.

With regard to Good Environmental Practises (GEP), the Ipsos Impact study reports that 57% of Cocoa Life Farmers have been trained in GEP, and of these 89% of farmers made many changes in their behaviour and 11% made some changes to their behaviour. Specifically, 46% of Cocoa Life participant farmers adoption of improved soil health management practises – having evidence of sufficient soil health management, 45% with evidence, but insufficient measures taken, and 8% with no evidence.

Evidence from IPSOS report does indicate that farmers are expanding their farms. The average farmer has 4.2 hectares and 27% of surveyed farmers reported clearing 0.95 ha of new land for cocoa in the past year, 17% of land cleared was forest and 55% of it shrubs. Those clearing land reported felling an average of 5 canopy trees in the process. This is compared to less than half who report having replanted or rehabilitated their existing farms in the past 5 years and 31% who have done so in the past year. Reasons given for not rehabilitating old farms relate to the short term loss of revenue from felled cocoa trees while newly planted ones grow, which underlines the observation that knowledge of what to do is not always the only prerequisite for changing behaviours, due to the financial implications.

Only 10% of farmers are aware of protected land near their farms, compared to 39% of village leaders who are aware of protected land in their community.

While the evaluation team heard a number of verbal anecdotes of impressive cocoa yield improvements reported by farmers, these are not supported by any rigorous measurement or comprehensive record keeping that was seen by the TE. The Ipsos (2019) Impact Assessment report, which is also based on farmer recall of historical crop production rather than direct measurement, suggests much more modest increases in yield, from the national average of 400kg per hectare to 476kg/ha on average for farmers participating in the Cocoa Life program with reported cocoa yields being higher among farmers who have been in the program the longest. This 20% increase in yield per hectare is a positive improvement, but not sufficient to

[67] Ipsos (December 2019). Impact Study Report. Shared with the Evaluators on 14 June, after the end of the evaluation, requiring adjustment of many observations and conclusions made beforehand in absence of this data.

meet the ambitious 66% increase in national production proposed by COCOBOD[68] from the current harvest of around 900,000 Tonnes per annum to 1.5 million tonnes in the next five to seven years without expanding the area cultivated under cocoa. Cocoa will therefore likely remain a driver of land use change. The Ipsos (2019) Impact survey reports that clearing new land remains a small, but entrenched problem. 27% of farmers have cleared new farms in the past year and on average, these farmers cleared 0.95 hectares, felling an average of 5 canopy trees in the process. This will certainly register in any national REDD+ forest monitoring and reporting system as deforestation and/or degradation. If cocoa continues to replace forest, or old overgrown cocoa farms are brought back into production, this is likely to increase, not reduce tree cover loss. It is thus essential that the cocoa sector stakeholders work together to produce and publish objective data on land cover trends for cocoa landscapes. This monitoring capacity is only now being established, with a first National Land Cover Map being published[69] in 2021 serving as a baseline against which future land use changes can be monitored.

Anecdotal reports received during Sept 2020 ESP monitoring mission suggested that most farmers who were not adhering to good environmental practises production and good agronomic practices were not members of the Cocoa Life program. However, the Ipsos (2019) Impact Study indicates that not all CL participants have adopted good practises for a range of reasons.

3. Increased shade trees and carbon stocks on cocoa farms and in cocoa landscapes to provide short to long-term environmental and socio-economic benefits to farmers.

The indicator in ProDoc was "*Number of shade trees planted on cocoa farms in the project districts*". Target was 800,000 trees on 44,000 hectares (approximately 18 surviving trees per hectare) on 40,000 farms by project end. Progress reports note that 336,170 trees were distributed, and planted on 21,000 ha in 2017 but there are no records of the number of surviving trees at farm level.

However, ESP progress reports noted high seedling mortality due to late delivery of planting materials in phase 1 and further observations about late delivery/poor survival in 2017.

This was confirmed by farmers during the evaluation field mission who reported that they could not get adequate stock of cocoa and economic tree seedlings for planting into their cocoa farms. Some seedlings were transported over long distances resulting in large stock becoming weak and unhealthy and therefore leading to low survival rates of the transplants. Stock was also often delivered late, just at the onset of the dry season, resulting in further mortality.

While efforts have been made to shift seedling production closer to communities by supporting community nursery operators, the latter cited lack of inputs which constrained the production of adequate and healthy cocoa and economic tree seedlings for cocoa farms.

They concluded that adequate logistics and capacity building of the community nursery operations should be aggressively pursued by the UNDP ESP Project to enable them to raise and supply adequate and healthy economic shade tree seedlings to cocoa farmers in a timely

[68] Citi Business News (Oct 2020). COCOBOD targets 1.5 million tonne rise in cocoa production within five years. https://citibusinessnews.com/cocobod-targets-1-5-million-tonne-rise-in-cocoa-production-within-five-years/

[69] Ecometrica (January 2021). Ghana Launches National Map of Forests and Land Use. https://ecometrica.com/ghana-launches-national-map-of-forests/

manner.

No shade/economic trees were procured & distributed in 2019. Instead, the ESP project focused on addressing seeding acquisition and registration challenges. By the project end, community nurseries were reported to be raising better quality, cheaper seedlings.

The 2020 Annual Report reports 198,397 seedlings were successfully raised in 12 Districts and distributed to 8,072 farmers from 271 communities for planting that has since been completed.

4. The establishment of three **Community Resource Management Areas (CREMAs)** to govern the use of natural resources at the landscape level including fire management; sacred groves protection and water resources management.

Being result of ***Outcome 2: Natural resources and ecosystems management in cocoa production landscapes***

The stated intent of this Outcome was to build on successful establishment of a pilot Community Resource Management Areas (CREMA) in the Asunafo landscape during Phase 1. Phase 2 set out to consolidate efforts to engage and build capacities of traditional authorities and community opinion leaders to enable them to enforce traditional conservation practices, thereby helping conserve natural resources, natural ecosystems and biodiversity in cocoa landscapes. Importantly, the CREMA is a formally recognized entity (see Box 3), which has the opportunity to become self- financing and thereby was perceived to be potentially sustainable beyond the project lifetime.

Output 2.1 Community managed **forest buffer zones** and **biological corridors established** (CREMA).

By the end of Phase 2, the Output had been rephrased to simply "CREMAs established". Operations of the CREMAs were developed by a set of activities under Outputs 2.2 and 2.3. The revised focus of activities under Output 2.1 related to establishment, legalisation and capacity building of the CREMAs.

Box 3: CREMAs, Definition, Legal Basis and Governance

Definition: CREMA denotes a geographically defined area endowed with sufficient resources or has the potential for enhancing the condition of the natural resources and where the people have organized themselves for the purpose of sustainable management of their natural resources for their mutual benefits. The aim is to encourage local people to integrate natural resources management into their farming and land management systems as a legitimate land use option. It is important to note that the CREMA Model is not about strict protection of wildlife and other natural resources available on community lands.

The legal basis of CREMA is enshrined in the section 1 of the Wild Animal Preservation Act, 1961 (Act 43). Section 1 gives the Minister responsible for Wildlife, authority to confer Game Wardenship on ordinary people of Ghana. This is the basis of the issuance of Certificate of Devolution by the Minister to CREMAs. However, comprehensive provisions have been incorporated in sections 16 – 18 of the draft Wildlife Resources Management Bill. The Bill is yet to be passed by the Ghanaian Parliament to enable the President sign it into an Act.

The governance system of the Community Resource Management Area (CREMA) concept comprises three levels: (i) community level – community resource management committee, (CRMC); (ii) cluster

community executive committee (CCEC); and (iii) CREMA executive committee (CEC) comprising 9 members, the apex level, consisting of representatives from each community, local chiefs, and representatives from public agencies.

The role of the Executive Committee is to create consensus and identify joint action for the broader cocoa production landscape, which is an important complement to on-farm sustainability. Particularly, the CREMA structure can be instrumental in ensuring monitoring and addressing problems related to expansion of cocoa activities into forests.

The governance structures of CREMAs is intended to facilitate awareness creation, education and training and build the capacities of the communities at each of the three levels to protect the natural resources and ecosystems of the cocoa farms, water bodies and forest reserves in their vicinity, against environmental degradation using the landscape approach.

Source: ESP Project Documents and 2020 National Review of CREMAs[70]

ESP Phase 2 successfully established 2 new CREMAs (Pra-Subri and Ayum-Asuokow) with strengthened governance structures and regular activities (meetings etc). Considerable work has gone into the development of the Pra-Subri CREMA. All key activities prior to the issuance of a certificate of devolution by the Minister of Lands and Natural Resources were completed by December 2018. It then took quite some time for the Wildlife Division, Forestry Commission, to recommend issuance of a certificate of devolution to give full authority to the CREMA to operate. The certificate was issued on February 6, 2020. A formal inauguration event to officially hand over the certificate to the CREMA and to make its operation official was delayed by COVID-19 restrictions, but was finally held on November 3, 2020 at Atobiase.

The Community Resource Management Area (CREMA) concept is now practiced by 36 communities of the Asunafo North Municipality. Stakeholders interviewed during the evaluation field mission provided a positive assessment that CREMAs serve as a replicable model. The Mim Traditional Authority fully supports the CREMA concept as a strategy towards restoration and conservation of the cocoa landscape in the Asunafo North Area. All the CREMA bodies (farmer societies, farmer unions and CREMA governance bodies) visited in the communities now have byelaws and constitutions that govern their activities, have bank accounts that facilitate their governance system and also aid financial transactions. They meet monthly to deliberate on activities and resolve issues, involve women in their governance system and promote additional livelihood interventions among the members. In addition, CREMAs have established fire volunteer groups to prevent bushfires and also promote responsible charcoal production using the landscape approach (see Output 2.2).

Members reported having received cocoa seedlings and economic trees seedlings for planting in their cocoa farms. They have received training in good agricultural practices and environmentally sustainable practices including protection of the forest and wildlife against degradation, control of bush fires in the farming ecosystem, creation on buffer zone of 10 meters along riverbanks, etc. They have also been trained in additional livelihood interventions, and gender and women empowerment. Women groups were reported to be very active in the CREMA activities. CREMAs have proven a popular concept, and membership has grown substantially recently.

While CREMA bodies reported positively about their increased capacities, and provided

[70] Agyare A., Yakubu, M, and Kumordzi B. (October, 2020). National Review of Community Resource Management Areas (CREMA). Report of: Shared Resources Joint Solutions and Green Livelihood Alliance.

anecdotal evidence that this training has translated into improved environmental outcomes, these are not yet backed by any objective monitoring data to measure performance. The importance of objective monitoring of socio-economic and environmental impacts is addressed elsewhere in this report.

However, challenges remain to render CREMAs financially sustainable with no other stakeholders yet willing to contribute to operational costs despite ESP efforts to fundraise for the CREMA from the private sector, and donors.

The ESP 2019 Progress report noted:

> *"the implementation of the CREMA concept is fraught with several field level challenges – key among them is the issue of sustainability. ESP has observed that most CREMAs are only active during the period when donor funds are available to support them both technically and financially. Several of them become defunct once this support dries up. In the light of this, we recommend that the* ***entire CREMA concept be re-examined and re-designed if possible to ensure they outlive the donor support period****.*

The ESP 2020 Progress Report noted that:

> *"a full-time Administrator was recruited to lead the fund raising efforts. contacts were made with various interest groups in the landscape including over 15 timber processing firms to contribute to support the CREMA but none has so far made any donation. Similarly, all the major cocoa licensed cocoa buying companies were written to including the cooperative union for support but with no positive results."*

The 2019 ESP Progress report also questioned the role of the FC and its understanding of the CREMA concept and willingness to allow it to work, with operational misconceptions and differences of opinion between the Wildlife and the Forest Services Divisions of the FC.

The Project document and progress reports suggest that IGAs can support members' livelihoods, and levies may finance CREMAs in the longer term. But neither the Income Generating Activities, nor the successful collection of a levy from them to finance the CREMAs are yet demonstrated or proven.

Output 2.2. Three community fire prevention volunteer brigades established and trained in the CREMAs:

The Ayum-Asuokow CREMA area in Asunafo North District was identified as a priority fire-prone area. In 2017, a Community Fire Volunteer (CFV) brigade was inaugurated comprising 200 members drawn from all the 36 CREMA communities, and then trained and equipped to lead on fire prevention and control efforts in the area. The 2020 Annual Report claimed there were no recorded fire outbreaks in the landscape since the brigade began operations in 2017. GlobalForestWatch data https://gfw.global/31yzpA8 confirms that fire events are rare in Asunafo North District, even during the dry season (Dec - April) but the evaluators recommend that an analysis is conducted to compare fire occurrence to other Districts and before/after establishment of the CREMA to confirm the significance of its impact.

In future, the Evaluation Team recommends that the capacity to conduct remote fire monitoring should be built within the CREMA governance structures and agencies. They should be trained to review and record how their CFV teams respond when fires occur. Global Forest Watch Fires Tools[71] allow users with limited training to set up an alert for an identified area,

[71] Global Forest Watch "Fires" tools https://www.globalforestwatch.org/topics/fires/

which then sends an email alert to designated person(s) when a fire event is detected, typically a couple of days after the event. Tools also allow monitoring of the frequency of fires in a given region, over time. The Program M&E framework for any future phase (or that of the recommended larger independent monitoring program) could include an indicator on the monitoring of fire and compare results in CREMAs with a baseline and comparable non-CREMA locations. The costs should be covered by a financing mechanism for each District / Landscape.

Output 2.3. Build capacities of traditional authorities and community opinion leaders to enable them enforce traditional conservation practices to conserve biodiversity

A target of 30 Dialogues were planned. This target was subsequently reduced to 3.

- The 2017 Annual report mentions 36 communities participated in the 1st dialogue.
- The 2018 Annual report mentions 36 communities participated in the 2nd dialogue.
- The 2019 Annual report mentions 35 communities participated in the 3rd dialogue.

The Evaluators were informed that there are no formal reports or minutes from these dialogues – only summaries as reported in ESP Progress reports, which provide a limited insight on the outcomes of such meetings, reporting simply what topics were covered.

The dialogues covered issues relating to biodiversity conservation, and have increased understanding of the issues and the capacities of these traditional authorities to enforce traditional practices to conserve biodiversity.

The 2019 Progress Report reports that these bodies have subsequently promoted economic tree planting in cocoa farms; protection of forest and wildlife against degradation; establishment of buffer zones along waterways; the control of bush fires in the farming ecosystem, and have built the capacity of fire volunteers to educate the communities on bushfires management. 20 **water bodies had been identified & protected in 5 districts by planting economic trees along the waterways.**

Under Indicator 2.1.4 in the 2019 Progress Report, it is reported that an additional 18,000 farmers adopted and are practicing sustainable ecosystem management practices in 2019. However, it noted that this estimate is based on "**field observation, personal communication and through focus group and individual interactions" and that "a formal survey would be conducted at the end of ESP II to specifically establish the rate of adoption".** This is assumed to be a reference to the **Cocoa Life Impact Assessment** (see Section 5.4).

During the evaluation field mission, respondents interviewed in the Asunafo North Municipality, who are also cocoa farmers, acknowledged that their motivation to adopt the CREMA concept is to overcome the low cocoa yield they harvest from aged cocoa trees coupled with threats of environmental degradation, climate change & global warming, dwindling forest cover, loss of wildlife and game, etc that also have serious adverse effects on cocoa yield and household disposable income. Since joining the ESP Project, cocoa farmers have been supplied with economic trees seedlings (and cocoa seedlings supplied by other IPs)[72] for planting in their cocoa farms; they have been trained in good agricultural practices and environmentally sustainable practices, wildfire management, additional livelihood

[72] The IPs have developed an integrated team approach to community development and women empowerment targeting the cocoa farmers, farmer societies and farmer unions and CREMA executives and animators. Farmers are thus not always aware of which activities are provided by ESP or other Implementing Partners (IPs)

interventions, gender and women empowerment. Women's' groups are reported to be very active in CREMA activities.

Interactions with the executive membership of the CREMA at Kasapin in the Ahafo region during the evaluation field mission revealed that ESP Project has supported the 36 communities since 2016 and created awareness on governance at the three levels (CRMC, CECC and CEC).

The 2019 Progress report also reported observing a sharp decline in illegal logging as farmers are now aware of the roles and regulations pertaining to logging and would no longer stand-by and allow the illegalities to continue. It also claims that there is less pollution and destruction of water bodies and better wildlife protection. To triangulate sources of information on the impacts of these conservation measures, the evaluators attempted to access data collected by Cocoa Life Program as part of its Impact Assessment (see section 5.4).

Satellite derived data on tree cover loss (see Figure 7 on page 118) indicate that there is still a rapid decline in tree cover loss in all project districts. While not all tree cover loss is permanent deforestation, and there are some issues with interpretation of Global Forest Watch data to determine temporal trends, the data still suggest that annual tree cover loss still outweighs tree planting efforts of farmers and CREMAs.

Reforestation / Forest Restoration Programs piloted (Modified Taungya System)

In its quest to minimize deforestation in its supply chain, Mondelēz International Cocoa Life has signed up to the Cocoa Forest Initiative (CFI). The CFI is a forest protection and restoration initiative that seeks to ensure that no protected areas are being farmed, encroached or destroyed. To meet its obligations under the Cocoa & Forests Initiative (CFI), Mondelēz International Cocoa Life Program, requested UNDP GCP to shift the focus of Output 2.3 towards restoration going forward, and explore the scope of MTS systems to bring farmers benefit from reforestation efforts.

In the 2020 Annual Progress report, the wording of Output 2.3 was therefore adjusted to "**Reforestation and forest restoration programs promoted (pilot)**" after discussion and approval by the project steering committee. Under this revised Output, an activity (2.3.1) for 2020 set out to implement PES/afforestation initiative in the degraded Ayum Forest Reserve in Asunafo North through the commencement of key activities, including community selection, entry & sensitization, site preparation, community nurseries for both economic tree seedlings and plantain suckers, **drafting and signing of MTS contracts with participating farmers,** allocation of plots, etc.

Box 4: The Modified Taungya System – key features

Taungya is an age-old forest plantation practice in many parts of the world. Land is cleared and initially planted with both food crops and tree seedlings (which, when grown, are harvested for timber). It has been practised in Ghana since colonial times to restore degraded forest lands, ensure a supply of commercial timber and produce food crops. The practice stopped in 1984 because it was not effective or equitable; the communities involved had **no tree ownership**, **financial benefits** or **decision-making power in management**.

The taungya practice was reviewed and in 2002 was relaunched as the **Modified Taungya System (MTS).** Key elements of the '**modified'** taungya system took into account financial benefits for farmers and other stakeholders involved and transferred ownership of the trees from a single entity (the government) to multiple owners (farmers, local communities, government and land-owners).

MTS has been identified as one initiative that could help accelerate adaptation to climate change and facilitate forest restoration and at the same time, reduce the vulnerability of socio-ecological systems to climate and non-climate stresses and provide services including firewood and food crops, for both subsistence and commercial uses. Other services include improvement of soil fertility, control of water and soil erosion, regulation of water quality, and prevention of desertification.

The 2020 ESP Progress report notes that for the 2020 planting season, 170 hectares had been cleared by 198 registered farmers who have planted major food crops along with 160,000 selected economic tree seedlings procured by the ESP program, equivalent to a density of 1,000 trees per hectare.

From interviews with field staff during the evaluation field mission, the Evaluation Team notes that contracts with the Forestry Commission have not yet been signed – though this is to be verified with the ESP team.

Mondelēz's own 2020 report on Cocoa Life contribution to the CFI records only 11 hectares of forest area restored in both Ghana and Côte d'Ivoire by 2019, and a target for forest restoration in Ghana is set at a very modest 100 hectares by 2022[73]. Mondelēz's ambition will need to be dramatically scaled up to meet the need to restore significant areas of forest.

The evaluators have made an assessment of the prospects for further development of MTS under a new phase of funding under the "Findings" and "Recommendations" sections.

Strong Technical Potential to deliver benefits: From a technical point of view, the agroforestry system envisaged under the MTS is both feasible and effective. This potential is highlighted by a number of publications, notably Fobissie (2009)[74], Fobissie et al (2011)[75], CIFOR (2011), and Asare-Kissiedu (2014)[76].

Success of MTS depends on devolution/sharing of power and benefits. However the same body of literature also highlights that genuine involvement by all stakeholders, with clearly defined roles, and **secure guarantees to a share of the long-term benefits** of trees planted are all key to the success of the ***modified*** taungya system. This depends on the nurturing of an equal, respectful and transparent relationship between farmer groups planting trees under MTS and government authorities, notably the Forestry Commission. Establishment of modified taungya

[73] Mondelēz International Cocoa Life Program (March 2020). CFI Progress Report (Côte d'Ivoire, Ghana and Indonesia). https://www.cocoalife.org/~/media/CocoaLife/en/download//article/MDLZ_Cocoa_Life_CFI_Report-March_2020.pdf

[74] Fobissie, K. (2009). The Modified Taungya System in Ghana's Transitional Zone. In: Environmental Management and Sustainable Development (2020), Vol. 9, No. 3; www.researchgate.net/publication/264976551_The_Modified_Taungya_System_in_Ghana's_transitional_ zone

[75] Fobissie K., Aidoo, R, Nkem, J., Ajayie, O., Kanninen, M., Luukkanen, O and Idinoba, M. (2011). Modified taungya system in Ghana: a win–win practice for forestry and adaptation to climate change? Environmental Science & Policy. Volume 14, Issue 5, August 2011, Pages 519-530. www.sciencedirect.com/science/article/abs/pii/S1462901111000451?via%3Dihub

[76] Asare-Kissiedu, E. (2014). Contribution of Modified Taungya System to Forest Cover and Livelihoods of Forest-Fringe Communities. A Case Study of Worobong South Forest Reserve in Ghana. Thesis(MPhil) – University of Ghana, 2014. http://ugspace.ug.edu.gh/handle/123456789/8955

groups (MOTAGs) is intended to create the requisite democratic space for community representation of members of MOTAGs in forest governance[77].

Fobissie et al., (2011) conclude that MTS is a profitable venture and has a high potential to reduce vulnerability due to short-term food production and long-term plantation establishment. Resource management in MTS is promising in the short term, but challenges remain to meet livelihood and adaptation needs in the medium and long term.

All analyses highlight the long time (50+ years) between establishment of MTS and the likely generation of any timber revenues that can be shared with farmers, most of whom will have already passed on. This further underlines the importance of legalization of all contractual arrangements that registers a clear sharing of benefits to future generations, coupled with continuous monitoring, evaluation and improvement.

Osei-Wusu Adjei et al., (2018) based on field research into the actual experiences of MTS highlight some of the potential challenges associated with MTS implementation likely to be faced also by a new phase of ESP. For example:

- The limited benefits and incentives for farmers to be involved in such MTS schemes;
- The lack of regular income generation and benefit sharing mechanisms;
- Major limitations on the types of crops that can be grown;
- Failure of the Forest Commission (FC) acting as intervening agent, to transfer adequate decision-making power and resources to communities;
- Disregard for policy and implementation guidelines; and
- A dearth of arable lands for local people's livelihood security.

Collectively the above challenges, if not addressed, risk contributing to disgruntled representation of the local people in forest management.

Research by Acheampong et al., (2016)[78], indicate that:

> "*the lack of regular income from timber until tree harvesting, the delay in signing MTS agreements, the absence of a clear mechanism for sharing the 40 % timber benefits among individual farmers, restrictions on tree and crop species allowed under the MTS, and inadequate support and supervision from the implementing agency demotivate farmers to invest labour in farm maintenance*".

The above reviews suggest that the promise of MTS will only be delivered if strong investment is made in nurturing a respectful, transparent and legally binding relationship between cocoa farmers participating in MTS and the relevant Forest Authorities.

The Evaluation Team notes that in the final ESP 2020 Annual Report, the ESP team highlight a number of challenges, notably:

> "***Lack of support/cooperation from Governmental Institutions – especially the Ministry of Lands & Natural Resources and the Forestry Commission***".

[77] Osei-Wusu Adjei et al (2018). Decentralized forest governance and community representation outcomes: analysis of the modified taungya system in Ghana. Environment, Development and Sustainability . www.researchgate.net/publication/327291865_Decentralized_forest_governance_and_community_representation_outcomes_analysis_of_the_modified_taungya_system_in_Ghana

[78] Acheampong E., Insaidoo, T., and Ros-Tonen, A. (2016). Management of Ghana's Modified Taungya System: Challenges and Strategies for Improvement. Agroforest Syst (2016) 90:659–674 DOI 10.1007/s10457-016-9946-7

To address this going forward, ESP (2020) reports that:

> "*The implementation of some key project activities* ***depends largely on certain critical actions required from the FC but unfortunately, this is not forthcoming*** *and have been* ***characterized by long delays****. For instance,* ***support for the CREMA work and tree registration has not been the best – resulting in delays and frustration for project staff and farmers.*** *ESP tried to provide a solution through the co-sponsorship of various national round table discussions to improve the policy environment and ensure that there is action on several outstanding technical, operational and administrative issues –* ***but with little progress****.*

These are strong reminders that any future roll out of the MTS will be faced with similar challenges, as reported in the literature by other non-ESP initiatives.

Any future initiative will need to establish the necessary institutional arrangements and secure political commitment to the long-term success of any scaling up of MTS as a prerequisite for investment.

5. Policy engagement with government on land tenure and tree tenure rights

(being the result of **Outcome 1 "Mainstreaming environmentally sustainable production practices into farmer level practices**")

Phase II Project Document observed that:

> "*land tenure and, more recently, tree tenure, with sharing of ownership and benefits in the candidate trees as well as in other products of the farm may incentivise farmers to plant trees. These issues raise concern about land tenure and its impact on land use and on natural resource management in Ghana. Also, without incentives, farmers may opt for production systems that may provide short-term benefits. Currently, there is an increasing preference for moving from shaded to non-shaded cocoa production especially in the Western Region where hybrid cocoa is being planted*".

However, the focus of ESP Phase II work has been on tree registration rather than on more fundamental tree or land tenure reform.

Tree Registration: New software and protocols were developed by a Ghanaian IT Company (ImageAd) for tree registration by the Forest Investment Program (FIP) and tested at scale, supported by ESP (among others). This was reported to have been a useful exercise, throwing up technical and procedural issues to resolve. The software was generally well received, pending some refinements. A National Dialogue was organised / facilitated by the World Cocoa Foundation to share experiences of tree registration. This brought top govt officials around the table to discuss how to bring Tree Registration to reality. The key recommendation coming from this workshop was that stakeholders should move the process forward at policy level and address the issues of a system to house registration data - in particular, how to collect data from the field and store data nationally.

The absence of data on surviving trees in 2017 suggests that the Tree Registration program was still not functional for this period. After some considerable delays, tree registration rollout has subsequently made modest progress, recording 48,124 trees registered in 2019 and 12,800 trees in 2020 in 2 pilot districts (Suhum & Asunafo North) against a target of **1,600,000 trees registered** in the Results Framework (1.3.2 Number of trees registered). The ESP internal monitoring mission (Sept 2020) noted that in these pilot districts, farmer knowledge of tree registration was reported to be good, and interest remains high.

The final (Dec 2020) Annual Progress Report notes that:

> "*despite multiple software updates, the platform at a point in time began to deteriorate to the extent that most of the registration data that was earlier captured were all lost. The company contracted to develop the application have not yet been able to resolve the technical issues and by project close, all efforts to get them to do so yielded no positive results. The long delay from the FC to complete the validation of the data to pave way for the registration forms to be printed for signature by the 2 District Managers was another contributing factor that made it impossible to complete the exercise*".

Based on discussions with the donor and looking at the delay of roll-out of the tree registration policy the decision was taken by ESP not to continue with mass registration of the trees planted until the MLNR and the Forestry Commission comes out with a clear roadmap on the roll out. This is still not available at the moment.

Different tree registration systems are being piloted by different programs. One had already been developed by the Forestry Commission with private sector service providers using proprietary software[79], and was launched in 2018[80]. It is not clear to the Evaluation Team why another Tree Registration system was required. While it may be pragmatic to develop and pilot various software solutions, it implies that the FC will now need to integrate data from multiple systems into a definitive tree registration system, adding to the complexity.

From the Evaluation field mission, farmers were reported to have no written record of the number of trees received nor of the number of tree seedlings replaced on the farms. It is thus not clear how many of the trees were planted or registered by the end of the project lifetime.

While there was a positive initial response to the tree registration software and process, the feedback from farmers and stakeholders has raised all the same questions about tree tenure that the project set out to address, e.g. ownership of naturally occurring versus planted trees on farms, benefit sharing and how to cover the cost of tree registration. This has not yet translated into tree tenure or land tenure reforms which have been promised for at least 20 years. The ESP aimed to contribute to this reform, however the actual reform can only be ensured by the lead government entities.

From interviews with stakeholders and from reports, the evaluators learned that tree registration costs are unsustainably high due to the extensive work and related costs required for community representatives and government officials to visit each farm, and measure each tree. Given that some trees may be planted, die and be replanted every year, this will call for extensive re-visits to farms to capture adequate data over time. This seems logistically impractical, and potentially unaffordable to most farmers. In absence of hefty external subsidies for a very long time, the evaluation team remained unconvinced that the costs of collecting data on planted trees on farms across the country, and maintaining the database and administering the system will be sustained, or finally recompensed by the value of planted trees captured by the respective actors.

[79] The World Cocoa Foundation has worked with the Forestry Commission and private company Meridia to develop and test tools for tree registration: https://www.worldcocoafoundation.org/press-release/cocoa-farming-breakthrough-in-ghana-farmers-granted-first-time-ownership-of-timber-trees/

[80] WCF (2018) Tree Registration Guide A Field Guide for Field Officers to assist Cocoa Farmers with the Registration of Shade Trees on Farms. https://www.worldcocoafoundation.org/wp-content/uploads/2018/12/Field-guide-to-tree-registration-Final-DEC18.pdf

The ESP 2019 and 2020 Annual Reports note that:

> "***Current land and tree tenure policies do not provide enough incentives for farmers to adopt environmentally sustainable production practices***. *The lackadaisical attitude and lack of commitment from state agencies such as the FC to initiate meaningful reforms to incentivize farmers to adopt best practices is not helping the situation".*

This was the very same observation made in the Environmental Baseline Report and the Project Document for Phase 1 and again in the 2016 Annual Progress Report. Little seems to have changed in terms of policy as a result of phase 1 or 2, despite the intended role and convening power of UNDP to bring these state agencies and private sector to the table to address fundamental challenges of sustainable development.

Political inertia to progressing more rapidly towards more fundamental land and tree tenure should not come as a surprise. As pointed out early in phase 1 by the Tree Tenure Review[81]:

> *"The political elite and technocrats in charge of public institutions and resources may be driven by motives of serving their private interests resulting in corruption, and weakening of public institutions. Since they benefit from the status quo they may oppose desirable patterns of change. Pressure groups from private business that are benefitting from the status quo prevail on policy-makers. Although they understand the need for change and the types of policy reforms required to reverse the current situation, they are guided and motivated by their parochial interests. For instance, various studies have documented that the forest fees are below the actual willingness to pay for the timber. This means that a share of the actual value is distributed to the industry, rather than being captured in the form of forest fees. The low pricing of the resource is suspected to be a result of industries' influence ("lobbying") on the forest fiscal regime (policy and implementation)".*

Specifically the report suggested that "*in order to engender dialogue among all stakeholders, there is the need to support the development of a multi stakeholder platform for continuous consultation, discussion and dialogue to find a long term solution to current and potential off-reserve timber management problems.*" The project proposal for the Ghana Cocoa Platform included a suggestion that the platform would support any necessary land tenure reform processes in cocoa communities, in order to facilitate an equitable access to land. But this seems not to have yet borne fruits.

Going forward, there is a need for continued concerted action between interested parties and programs (FLEGT VPA; REDD+; climate smart cocoa; and the Natural Resources, Environment and Governance Platform (NREG) platform; among others) to collectively push for appropriate land and tree tenure reforms, to create a critical mass for change.

Any new phase must envisage addressing this issue at a national scale in a single, coherent and sustained process, led by a government mandated task force that engages all stakeholders, supported by facilitation of a neutral party (potentially UNDP), with funding and support from multiple sources and avoiding a fragmented approach by different stakeholders and initiatives. Being just one of many stakeholder groups, with a primary interest in cocoa and enhancing on-farm tree shade and carbon stocks the partners of ESP should not lead, but instead contribute to such an initiative.

[81] Proven Ag Solutions (February 2014). Review of the Existing Tree Tenure Policies and Legislations and their Implications for the Cocoa Sector in Ghana. **P.51: Drivers of change structures and actors in policy formulation.**

Outcome 3: Identifying Funding Mechanisms.

Output 3.1. Investigate additional funding mechanisms and develop new proposals

- Phase 2 ProDoc identified the need to liaise with FC to investigate REDD+ financing and performance based payments.
- In 2019, a strategic fundraising note (Pitching Paper)[82] produced by ESP and UNDP Green Commodities Program (GCP) to identify funding sources to supplement the current funding from Cocoa Life. The version shared is entitled a "Draft for Discussion". It proposes UNDP as a neutral broker, able to facilitate dialogue and collaboration between stakeholders to develop solutions that neither government nor private sector or civil society can achieve alone. The pitching paper seeks additional financing for implementation of REDD+ related activities to implement elements of the Ghana Cocoa Forest REDD+ Programme (GCFRP) and complement this with additional finance. It also sought to raise funding for other initiatives such as a new "Ghana Shea Landscape REDD+ Project" and a new "Coastal Mangrove Landscapes" Project neither of which offer direct co-financing support of the ESP. The pitching paper does not clarify who it is targeting and does not specify financing needs for additional support to the cocoa sector. The assessment by the Evaluation Team is that the pitching paper is incomplete, weak in detail and unlikely to elicit additional financing without substantial more effort invested in improving it.
- Progress reports do not mention that any additional funding was mobilised specifically for the ESP (at least not under UNDP management), except for one year where some co-financing was secured from the UNDP REDD+ Programme.
- The January-December 2020 progress reports that "a proposal on a possible phase 3 project was submitted to Mondelēz". The Evaluation Team have not seen this. It would not qualify as 'co-finance' but rather a continuation of existing funding sources.
- Other potential sources of funding were explored by the UNDP team (World Bank's Forest Investment Program; Ghana Cocoa Forest REDD+ Program; Green Climate Fund and the UK funded Partnership 4 Forests (P4F). UNDP Green Commodities Program reported that while substantial efforts were made to mobilise P4F funds, the team finally opted not to pursue it further, due to the overly complex and bureaucratic application process. While discussions with the fund managers of these initiatives did not result in any new financing directly for the UNDP ESP, some alignment between programmes was achieved through negotiation of at least one Memorandum of Understanding - specifically to align ESP with the GCFRP. UNDP did successfully raise funds for a $30m Green Climate Fund (GCF) Shea Project, also working with FC, also supporting the CREMA approach, but further to the North. UNDP believes that having a larger portfolio will give it more influence / leverage and serve as an entry point into a more nationwide initiative to a) address systemic problems of outmoded policy and legal framework and b) push for the final adoption of CREMA legislation to support sustainable landscape governance models in multiple locations.

[82] UNDP Green Commodities Program (3 October 2019). Rural Development and Sustainable Productive Landscapes in Ghana - DRAFT FOR DISCUSSION. As shared with the Evaluation team.

- Plans (AWP 2017) to raise funds to revive and mainstream the Coordination Platform and explore the economic feasibility of a REDD+ scheme in cocoa landscapes as an additional/alternative funding mechanism, but no evidence provided in 2020 Annual Report that these proposals resulted in additional funding. Discussions are on-going in 2021 with SECO to finance the relaunch a National Cocoa Platform (see Output 3.2).
- At close of Phase 2, there are still many pending issues relating to how to secure long-term funding for activities currently supported by ESP.
- As yet no economic analysis of whether ERP or other carbon finance will be sufficient to sustain interest of farmers in e.g. tree planting / maintenance on farms, especially since ownership and benefit sharing from future carbon revenues or other PES mechanisms is still not certain.
- In 2020, a proposal on a possible phase 3 project was submitted to Mondelēz - but *The TE Team notes that this is not additional to existing funding but continuation of the same source of funding.*

The UNDP's Green Commodities Programme team informed the Evaluation team that the ESP team asked the GCP team to assess the feasibility of carbon-based payments to individual farmers. They concluded that individual payments to farmers would not be realistic, for several reasons:

- Individual carbon storage (or avoided deforestation) per farm is very small and would result in small payments;
- Transaction cost would exceed the modest payments that in theory could be generated; and
- Monitoring of very small farm areas would be extremely challenging.

The ESP/GCP team concluded that carbon payments would be more realistic at an aggregated level and payments could be spent on e.g. farmer support systems or other services that would help a large number of farmers. They concluded that this solution will largely depend on the effectiveness of the REDD+ program, and payments would only be generated in the longer term once the program is able to document reduction in deforestation and/or reforestation. UNDP continues to be a partner in this effort.

This conclusion raises a number of questions for the evaluators. First of all, it once again pushes the responsibility for addressing the key challenge of creating incentives to plant trees to a third party, over which UNDP has limited influence. Second, the reasons given by GCP for NOT pursuing individual payments raise the exact same concerns that the Evaluation Team has raised about the inordinate cost and complexities of tree registration.

One of the main costs of establishing individual payments per farmer would be the measurement, and registration of the cocoa fields and trees within them, and subsequent monitoring of them. But the same data is required for Land and Tree Registration, (a pre-requisite for longer-term benefits from potential timber sales), so small early payments would at least partly compensate the costs of data collection and monitoring while awaiting longer term benefits to materialise. In absence of the early direct incentives to farmers to plant and maintain trees, the evaluation team are concerned that any long-term benefits of a share of timber felling fees will be so diminished by discounting over the long time to tree maturity as to render the Net Present Value insufficient incentive for farmers to plant timber trees. That

said, the Evaluation team does recognise that one of the direct benefits of shade trees is the improved sustainability of the cocoa production system itself. However, the Environmental Baseline Report did note that these benefits were not sufficient to outweigh the costs of shade tree establishment without an incentive to do so. This incentive must be created somehow, even if through an obligation to plant a target density of shade trees in order to qualify for a premium cocoa price. This would however still require some monitoring of tree density (an indicator of ESP that has not been convincingly reported on), which thus still requires some measurement and monitoring of shade trees at farm level.

The Evaluation team recommends a thorough analysis of the costs and benefits of tree registration, and the subsequent short and long term revenue streams from carbon payments and eventual timber sales under different land and tree tenure scenarios. This may provide the necessary argumentation for more fundamental tree tenure reform and a simplification of tree registration requirements – notably to register the land, and then assume that the registered owner / tenant has a share of the future value of all trees within that land parcel, without having to create a geo-referenced database of all trees, which appears to be inordinately complex and expensive.

Preparation for a third phase of the ESP project must include a review of the means by which incentives are distributed between jurisdictional authorities, the various CREMA institutions, land owners and tenant cocoa farmers.

Output 3.2. Donor dialogues in Ghana and globally with the support of UNDP Global Commodities Programme to explore other funding opportunities.

The 2020 Progress Report records 2 separate dialogues were held in Ghana:

- Discussions with the Forestry Commission, Mondelēz and COCOBOD has led to the development of an MOU and action plan to establish a collaborative partnership to implement the Ghana Cocoa Forest REDD+ Programme (GCFRP); and
- ESP team members participated in the national discussions under the Cocoa and Forests Initiative to provide inputs into the development of a Joint Framework of Action to end deforestation and restore forest areas in Ghana.

The final ESP Annual Progress Report (2020) also mentions that the UNDP Green Commodities Programme's (GCP) new global project, Sustainable Commodity Production and Trade project was approved in 2020 to be funded by the Swiss Secretariat for Economic Affairs (SECO). The project, among other things, aims to scope out new project opportunities with Ghana being one of the key focus areas, but it is unclear what this will cover. The Evaluation team learned that at the time of Terminal Evaluation, this project design process is still in a very early stage, but is progressing according to plans.

5.4. Monitoring overall impact of ESP interventions

The ESP Results Framework did not include indicators or establish monitoring systems for measuring outcomes and impacts. Instead, outcomes and impacts are monitored at the national level against the UNDAF / Country Program Document indicators, and for the Cocoa

Life Program overall, by a range of monitoring tools[83].

The implementation of the ESP planned activities is monitored by the donor (Cocoa Life Programme) via their Proof of Performance (POP) monitoring framework. The POP only measures inputs and outputs as delivered against contracted targets by Implementing Partners such as COCOBOD/UNDP on a quarterly basis – for example "*number of trainings delivered*" and "*number of trees distributed*".

The Impact Assessment methodology[84] commissioned by Mondelēz International Cocoa Life and conducted by IPSOS, does record estimates of adoption of environmental practices, as reported by farmers and communities during interviews and focus group discussions. This study is used to see what is going on across the full farmer population and as a result it can be difficult to isolate any attribution to ESP or other individual project components. Mondelez International uses these presentations to align with their country program partners and to discuss orientation for future strategy. UNDP also typically participates in those meetings, but the report is not public.

Note that reported impacts are based on farmer recall triangulated by field observations. Further, there were many methodological and data collection challenges in the early years of CL impact monitoring, rendering impossible any comparison of impacts in Communities supported by Cocoa Life, as compared with control groups[85]. Mondelēz International is also working to develop methods for monitoring deforestation in natural forest in the context of the Cocoa Forest Initiative.

As a result, the methodology for impact evaluation of the Cocoa Life Program changed during project implementation. The 2019 IPSOS impact evaluation took a new approach, with a nationally representative sample of farmers, and measured how impact and outcomes of Cocoa Life have been pushed forwards by service providers through interviews with farmer household surveys, farmer spouse surveys, Village Leader / Society Executive interviews and on-farm observation. Results are disaggregated by main service Provider (by which CL mean suppliers such as Barry Callebaut and OLAM, who are contracted to provide some services to farmers under the CL Program) and farmer Cohort (year of joining SL program), but do not give any breakdown that would allow measurement of ESP's contribution to the overall progress towards CL Program's Key Performance Indicators (KPIs).

The summary of all such reports is presented in Cocoa Life Progress Reports (see e.g. the Cocoa Life Impact Dashboard[86] which summarizes progress for Ghana up to 2020 under Pillar 3 "Forests are conserved and Restored" (see Figure 6).

So far only one impact assessment (2019) has been done with the new method, which serves

[83] The evaluators note that these high level outcome and impact monitoring reports were only shared after persistent requests, late in the timeframe of the evaluation.

[84] Ipsos (September 2019) Factsheet : Impact Assessment Methodology for Cocoa Life: https://www.ipsos.com/sites/default/files/ct/publication/documents/2019-09/factsheet-impacting-assessment-methodology-cocoa-life.pdf

[85] Jones M., et al (June 2019). Applying experimental and quasi-experimental methods in cocoa sustainability program evaluations. A joint report by Ipsos and Mondelēz International Cocoa Life.

https://www.ipsos.com/sites/default/files/ct/publication/documents/2019-06/quasi-experimental-methods-cocoa-sustainability-program-evaluations-v2.pdf

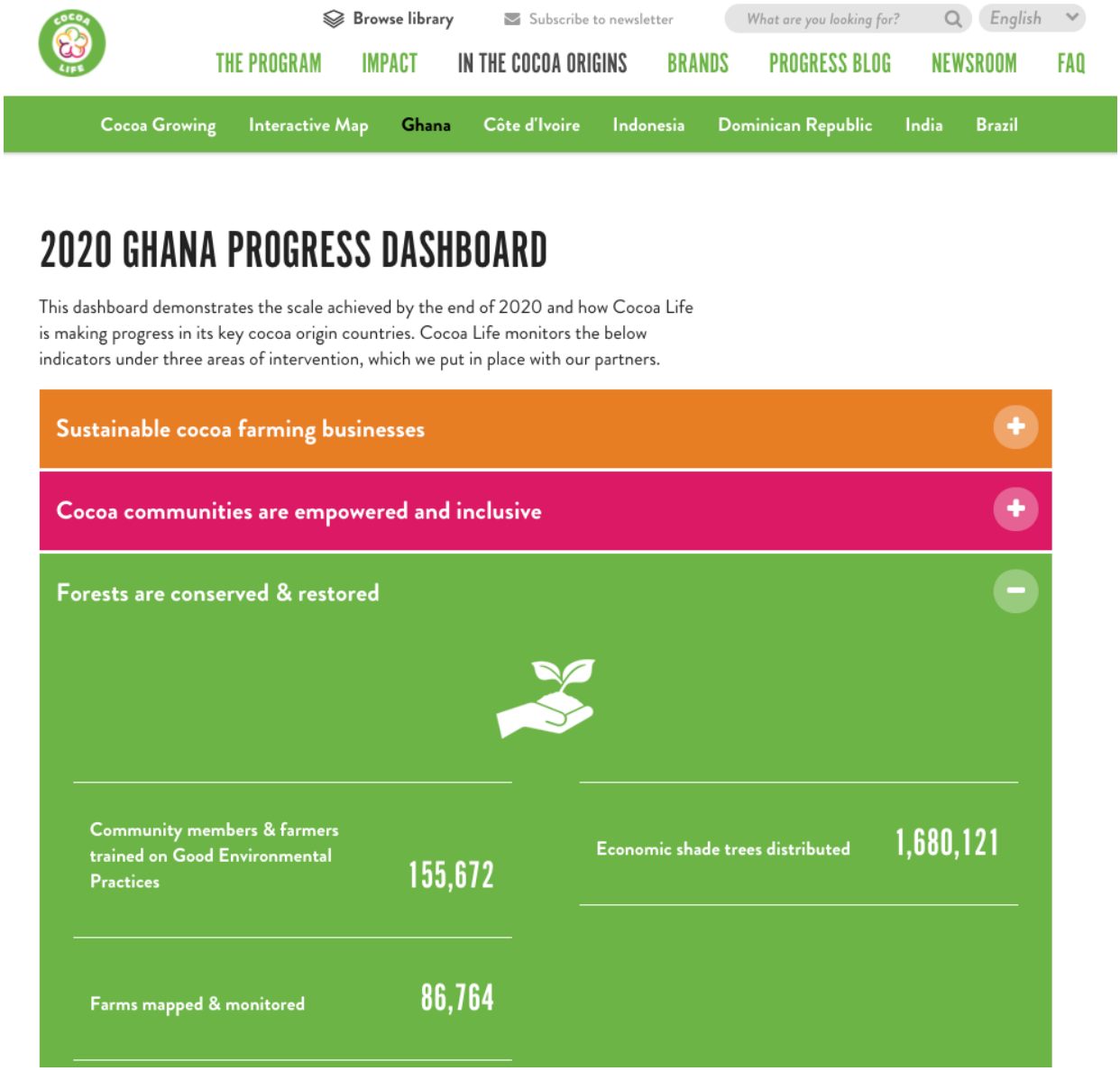
[86] https://www.cocoalife.org/impact#

as a baseline for the future. However, temporal trends in impacts cannot yet be analysed.

Further, one cocoa company's monitoring program, results of which are not all public, does not substitute for a national objective monitoring system to track the environmental sustainability and impacts of the cocoa sector.

Robust and objective monitoring would have been more likely achieved if the project team had pursued the further development and monitoring of the Environmental Indicators (Output 1.5 of Phase I) by COCOBOD to underpin its efforts to demonstrate environmental sustainability of Ghanaian cocoa to an increasingly sceptical world market. In future, we recommend that COCOBOD ensures that all projects by companies, donors, NGOs, etc report into a centralized system so improvements in standardised KPIs can be monitored at a systemic level.

Figure 6: 2020 GHANA PROGRESS DASHBOARD



Note (from Mondelēz International website): *This dashboard demonstrates the scale achieved by the end of 2020 and how Cocoa Life is making progress in its key cocoa origin countries. Cocoa Life monitors the below indicators under three areas of intervention, which we put in place with our partners.*

Source: *https://www.cocoalife.org/in-the-cocoa-origins/cocoa-life-in-ghana#dashboard*

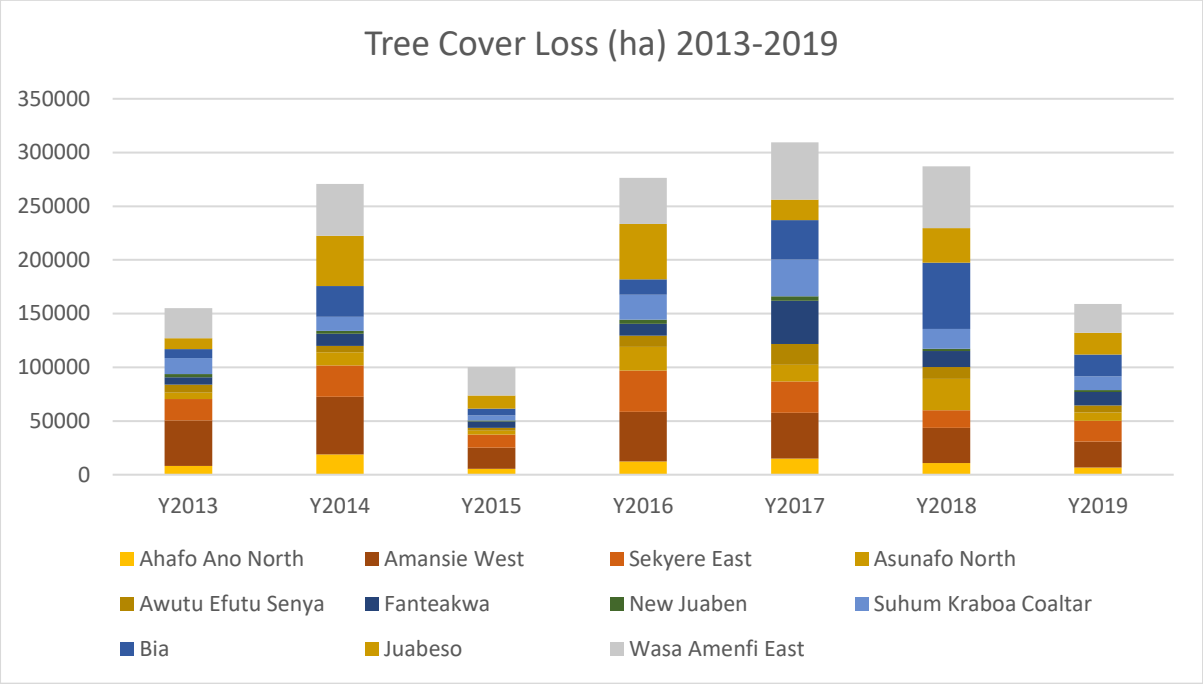
The evaluators note that the overall Cocoa Life key performance indicators (KPIs) for demonstrating impact as shown on the Ghana dashboard still depend on a) reports of inputs provided by e.g. ESP, and b) farmer verbal reports to IPSOS, and not direct measurement of impacts, such as sampling of on-farm shade trees, carbon stocks or reduction of deforestation. They also uphold the incorrect assumption that all distributed trees are planted, survive, are maintained as they get bigger, and increase on-farm carbon stocks.

The 2014 Workplan envisaged that "*ESP would work with the Cocoa Life Program, FC and other forest sector stakeholder to begin the process of compiling data on the extent of encroachment by cocoa farmers into forest reserves, initially focussing on Cocoa Life Districts*". This data was intended to serve as a guide for Output 3.3 "Develop a land use plan for forest conservation in pilot landscapes (as part of CREMA development)". Output 3.4 explicitly set out to monitor encroachment into protected areas with the following milestone for June 2015: "*Monitoring system for encroachment into Protect Areas and forest reserves in place using MAB*" (Project Document, and Evaluation ToRs). This output seems to have been dropped as no further progress was reported on this.

The Evaluators' own assessment of deforestation trends in the ESP target districts (Figure 7) suggest that the rate of deforestation has not noticeably slowed during the project lifespan, with an average of 211,000 hectares of forest lost in the Project Target Districts per annum. The evaluators are careful not to draw conclusions on trends regarding the rate of deforestation before / after 2015 due to the way that Tree Cover Loss data has been collected and analysed, as advised by the data providers (Global Forest Watch, WRI). Further, this tree cover loss is driven by many other factors than cocoa farming. That said, efforts to plant trees on cocoa farms, along waterways and in degraded forest reserves do not yet compensate for the current rate of tree cover loss at the landscape scale. Without substantial additional work, the Evaluation Team has not been able to disaggregate the rate of tree cover loss on- or off-Reserve. However, forest loss within Krokosua Hills Forest Reserve in Juabeso was 17% since 2001 according to Global Forest Watch (see Figure 8), and tree cover loss in Tano Offin Forest Reserves from 2010 -2019 is reported to be over 30%[87].

[87] Tropenbos International and Tropenbos Ghana. 2019. Drastic changes are needed in the cocoa sector to halt deforestation in Ghana. Policy brief, November 2019. Wageningen

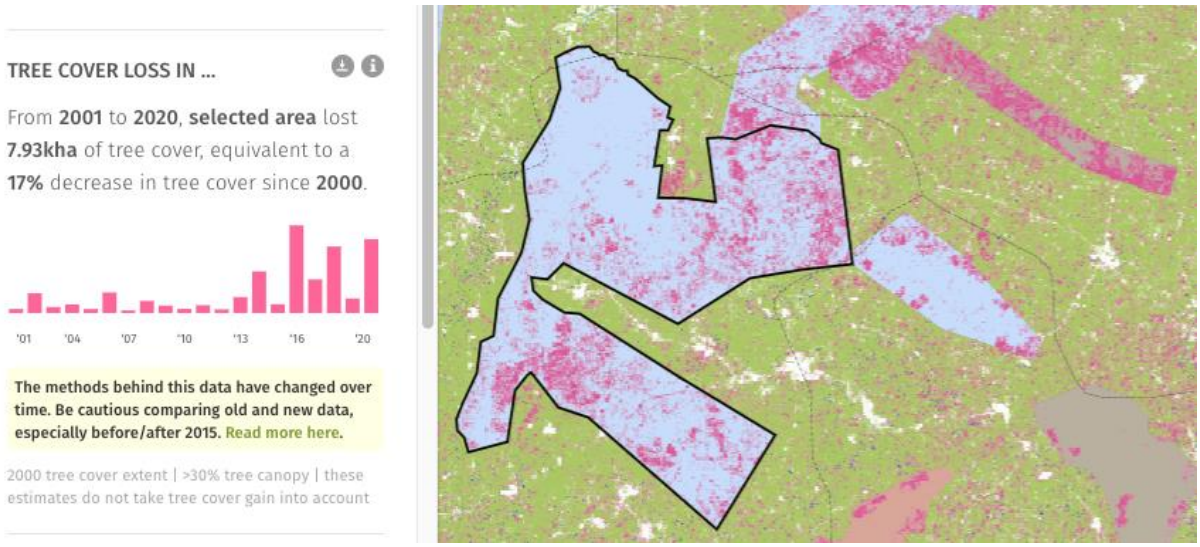
Figure 7: Tree Cover loss in ESP target districts 2013-2019



Source: Global Forest Watch. Tree Cover Loss dataset. https://gfw.global/346TUW0 downloaded and analysed by the Evaluation Team.

Caveat: WRI advise users to be cautious comparing old and new tree cover loss data, especially before/after 2015 due to changes in the way that global tree cover loss data was collected and analysed[88].

Figure 8: Tree cover Loss in Krokosua Hills Forest Reserve (2001 to 2020)



Source: Global Forest Watch Tree Cover Loss (pink pixels). https://gfw.global/3i2dmf1

[88] Weisse, M, and Potapov, P. (April 2021). Assessing Trends in Tree Cover Loss Over 20 Years of Data. https://www.globalforestwatch.org/blog/data-and-research/tree-cover-loss-satellite-data-trend-analysis/

Going forward, the evaluators understand that the Cocoa Forest Initiative partners will monitor land use and land use change trends in the target landscapes against a baseline that has now been established[89] in 2021.

With regard to **monitoring deforestation** and the underlying causes, Mondelēz representatives informed the evaluators that methods to monitor land cover and carbon trends impacts quantitatively using specialist service providers and datasets are on-going but that results are not yet verified and thus are not yet made public. Some extracts of their deforestation risk analyses were finally shared with the evaluators. The maps showing deforestation risk are indicative only but do suggest a continued high risk of deforestation in Forest Reserves in close proximity to areas with a high density of Cocoa Life farmers. These maps, as provided by Mondelez Cocoa Life Program monitoring team are, accompanied by lists of farms that need further on-the-ground examination by suppliers.

With regard to **monitoring the survival of planted trees and carbon stocks** on cocoa farms, land documentation / tree registration for all participating farms would be one way of doing this – serving the dual purpose of increasing farm and tree tenure security at the same time as monitoring trees and carbon stocks. Such surveys will anyway be necessary if ever any performance-based PES or carbon finance incentives are to be paid at farmer level.

6. Relevance, Effectiveness, Efficiency and Sustainability

This section summarises the assessment of the project against the standard OECD criteria. The UNDP Evaluation Guidelines (pages 37-38) provide a set of questions which the terminal evaluation team followed in our methodology to assess the relevance, effectiveness, efficiency and sustainability of the project based on the available documentation, indicate a rating score and justification, with suggestions for improvement.

6.1. Relevance

Alignment with national development priorities: Respondents interviewed during the mission study unanimously confirmed that the objectives, activities and results of the ESP Project have been consistent with national strategic direction and priorities of the Government of Ghana to address the problems and barriers confronting the farmers in the cocoa landscapes to promote cocoa productivity and household incomes in an environmentally friendly and sustainable manner.

Evidence includes:

- The support for the project by members of the Project Steering Committee (COCOBOD, the chair, Forestry Commission, Ministry of Lands and Natural Resources, Ministry of Finance, Farmer Unions, etc);
- Readiness of the UNDP Project team to seek collaboration and alignment of ESP initiatives with the emerging National Programmes such as the CFI and GCFRP;
- Attendance of relevant stakeholders at national and sub-national meetings;

[89] Ecometrica (January 2021). Ghana Launches National Map of Forests and Land Use. https://ecometrica.com/ghana-launches-national-map-of-forests/

- The significant increase in the cocoa farmer membership across the sampled communities; and
- The zeal of other non-project communities to benefit from the interventions of a potential ESP Phase III.

From a technical point of view, the program focus on increasing shade tree density on farms is relevant:

- Research results support the integration of shade into cocoa farms as a primary adaptation measure to higher dry season temperatures and longer dry seasons that pose a high risk to cocoa plantations, causing cocoa tree mortality.
- However, there is a need to research the right balance between cocoa yield increases (through introduction of new varieties into ageing cocoa farms), and their fertiliser demands to sustain soil fertility and productivity over the longer term, in particular because the Project document itself highlights that high input / output cocoa farming systems are inherently unsustainable.

Under section 4.1.1 reviewing the assumptions underpinning the ESP intervention logic, we noted that sustainable intensification of agricultural production only results in greater conservation, rather than accelerating forest loss at the wider scale, if the benefits of increased production are regulated by a number of essential **mediating factors** (tenure security, REDD+ contracts, land use planning, and law enforcement) and **incentives** (REDD+ payments or PES for conserving remaining forests). These mediating factors and incentives must be in place to constrain expansion of agriculture into forests when investment in sustainable intensification is stimulated by traditional and new incentives. In absence of these mediating factors increases in productivity are likely to encourage expansion of unsustainable cocoa. The Project must therefore demonstrate real progress on all of these factors if it is to be able to effectively achieve its intended impact.

Looking back, more could have and should have been done to continue the active Monitoring, Evaluation and Learning (MEL) through more direct engagement of the research community in designing ESP interventions, and monitoring its progress and impacts.

The results framework indicated that ESP intended to make a contribution to higher country level strategy of all UN Agencies, as defined in the UNDAF Country Framework. ESP Phase I provided inputs for the 2016 UNDAF, ESP Phase II only provide inputs for the 2020 UNDAF. but no indicators were defined within this framework in the project documentation. Annual reporting against the UNDP Country Program Document provides some evidence of ESP contribution towards CPD indicators though some of the claimed outcomes are unsubstantiated – for example reversal of deforestation trends (see Section 5.4 - Overall Outcome).

6.2. Effectiveness

The Evaluation Team received generally positive feedback from beneficiaries and Implementing partners and members of the Steering Committee on project effectiveness, in relation to some interventions e.g. climate smart cocoa practices. Many activities were implemented as planned (trainings delivered, exceeding the target number of beneficiary farmers, and shade trees grown and distributed).

Interviewees during the evaluation field mission observed that the institutional systems and governance structures of the farmer societies and farmer unions have been improved tremendously coupled with enhanced coordination of the IPs and partnership among ESP Project stakeholders, which will promote continuity of the benefits to direct beneficiaries.

However other initiatives (e.g. tree registration) were reported to have made limited progress due to both technical challenges and need to find a consensus between COCOBOD and Forestry Commission on national database management and data validation.

Limited information was available on other initiatives such as CREMAs. Phase 1 developed 1 CREMA in Asunafo North. Phase 2 aimed to establish 2 more. Pra-Subri CREMA has been developed since 2016, with substantial activities completed in Dec 2018. But the Wildlife Division of the Forestry Commission was slow to address the issues relating to administrative and procedural processes pertaining to the development of the CREMA (ESP Progress Report 2019), and the Forestry Commission took till Feb 2020 to issue a certificate of devolution to give full authority to the CREMA to operate. Further concerns about the sustainability of CREMAs have been raised by the ESP team (see Section 6.5 "Financial Sustainability"). It is thus still too early to assess their intended impact on ecosystems management and biodiversity conservation. A national review of CREMAs (Oct 2020), highlighted many areas requiring more work. Efforts to work with the Government to redesign a set of national CREMA regulations had not resulted in a final conclusion by end of 2020 (ECC Annual Report, 4th Quarter 2020). That notwithstanding, the ESP 2020 progress report is confident that the CREMA concept is on course to achieve its objectives of local communities sustainably managing the natural resources within their boundaries.

It is difficult to assess scope and scale of effectiveness at outcome level, due to a lack of any quantitative baseline, clear indicators, milestones and targets presented in the Project Document. ESP contribution to outcome indicators at the country program document (CPD) indicate only partial success[90]. Some claims made in CPD progress reports, such as hectares of planted shade trees, regeneration of the forest cover, are not substantiated by any objective evidence following a credible methodology. The Ipsos (2019) Impact Study indicates that Cocoa life farmers have on average 9.1 trees per hectare on their main farms [data on tree density on second or third farms is not provided]. This is half the density that ESP reports as being achieved by its farmers (18 trees per hectare)

The assessment of effectiveness of ESP Phase 1 has proven particularly challenging because of the general lack of information (progress not reported for half of the Outcomes) / institutional memory and because many Phase 1 outputs were dropped.

Farmer surveys (Ipsos 2019)[91] indicate that while fertilisers are now used by an average of 39% of farmers, the remaining 61% of farmers do not apply them. Reasons given include a lack of money to purchase fertilizer (52%), fertilizer being too expensive (47%), or fertilizer being unavailable on the local market (22%).

COCOBOD does not collect evidence on the effects of the use of agrochemicals in cocoa production through ESP project or COCOBOD's own initiatives. However, the Ipsos (2019) impact survey suggests that 39% of Cocoa Life farmers apply fertilizers, and 84% apply

[90] N.B. extracts from 2019 / 2020 CPD progress reports showing ESP contributions were shared only after formal evaluation period had ended.

[91] (Ipsos 2019). Cocoa Life Impact Study. Shared in confidence with the evaluation team.

chemicals. Data from the Cocoa Life farmer impact survey (Ipsos 2019) indicate that *higher yields are associated with higher number of times pesticides are sprayed (at 95% confidence interval).* The longer term impacts of fertilizer and chemical applications on the sustainability of higher cocoa yields are not yet analysed. But increasing yields by reducing pest and diseases without application of supplementary fertilizer is likely to deplete soil fertility and not be sustained in the long term. Impacts of fertilisers and agrochemicals on farm & forest ecology as well as ecosystem services (e.g. cocoa pollination) are not being monitored by either Cocobod or the Cocoa Life Program.

Effectiveness at tackling the impacts of climate change on cocoa and vice versa: The predicted effects of climate change on long-term cocoa productivity are significant, in particular in the drier, northern margins of the cocoa-growing zone. There is a risk that failure to invest in adaptation of cocoa farming systems in the north will continue to drive a shift of cocoa production into the forested zone to the south to maintain or indeed increase national production targets. The ESP and other cocoa initiatives are unlikely to be effective at reducing deforestation without addressing climate adaptation across the cocoa growing range.

Given that fertiliser has its own carbon footprint, emissions embodied in fertiliser should also be taken into account when optimising cocoa production systems. While Good Agricultural Practises is addressed under the CL Farming Pillar, there is need for coordinated monitoring of the overall impacts of GAP (fertiliser use, tree stocks on farms etc.) on carbon emissions. More shade, with lower yields that can be sustained with modest fertiliser applications will likely to be preferable over higher production her hectare with increased dependence on fertiliser applications. The evaluators were informed that Mondelēz has contracted South Pole to estimate farm level carbon impacts of the program[92]. However, results have not yet been reviewed and it is not a public model at this point, so was not shared with the evaluators

In the absence of land and tree tenure security and incentives to plant and maintain higher shade tree densities, economic analyses predict that farmers are more likely to opt for short term yield increases by limiting tree shade at the expense of longer-term sustainability. This risk has been noted in the Environmental Baseline Report, the Project Design documents for phases 1 and 2 and the Closeout and lessons learned reports and repeated in quarterly and annual progress reports. In absence of tree tenure issues being resolved and incentives being high enough, the project cannot effectively address the challenge of unsustainable cocoa production at scale.

Effectiveness at improving farmer incomes: The Sept 2020 ESP Internal Monitoring report also notes that further studies are required to substantiate evidence of positive impacts of improved yields on livelihoods (socio-economic benefits).

While farmer groups interviewed during the fieldwork noted improved incomes from more productive cocoa farms, IPSOS (2019) reports[93] indicate that 46% of surveyed farmers within the Cocoa Life Program still earn less than the international poverty line ($0.60 per person per day). Sharecropping farming households earned 22% less income than landowning cocoa farmers. While 22% of farmers reported that they have more than enough money to get by, the rest reported that they have only just enough money to get by (37%), sometimes struggle

[92] It is not based on field data collection but instead depends on modelling to assess some of the abovementioned factors.

[93] Ipsos (October 2019). Cocoa Life Impact Study Report. Ghana 2019 Baseline. Confidential.

to make ends meet (32%) or always struggle to make ends meet (9%). Overall the ESP target beneficiaries of the program are still some way from meeting SDG Goal No. 1 (end poverty).

However, at the wider national scale, reports suggest that efforts made by the Governments of Ghana and Côte d'Ivoire to increase the guaranteed cocoa farm price for the 2020/2021 season by 28% to $1,837 per tonne for cocoa to achieve a Living Income Differential (LID), have not yet had the anticipated impacts to lift incomes of smallholder cocoa farmers to a decent level due to disputes over how the LID paid by buyers is redistributed to farmers. The Private sector has generally welcomed such measures, but has pointed out that better prices must be linked to better environmental management and the respect of deforestation free standards[94]. Otherwise the private sector correctly predicts that an unconditional price increase could trigger expansion of unsustainable cocoa production. On the other hand, COCOBOD and national stakeholders argue that in absence of a living income, farmers will not be able to make the necessary investment to meet sustainability standards[95].

Effectiveness to ensure sustainability of cocoa production: As noted previously, the Project Document has not defined what is understood as "sustainable cocoa production" and has not established any metrics, or monitoring program to measure progress towards it. This is particularly important given the impacts of cocoa on carbon emissions and the impacts of climate change on cocoa productivity, as explained above. As yet, efforts to standardise sustainability standards into a unified certification scheme recognised by all companies have not resulted in a consensus, though efforts are on-going, spearheaded by COCOBOD. The complexity of multiple companies operating their own certification schemes when buying from thousands of farmers in the same landscape risks confusing farmers or rendering it impossible to trace cocoa from farm to market, or to audit compliance of farmers with commitments to protect forests in the wider landscapes. This points to the need for more concerted efforts to harmonise standards of sustainable landscape management, to which all farmers and companies within those landscapes adhere, and that are audited independently against a landscape wide certification.

Such an initiative to foster an all-company, landscape wide approach at the jurisdictional level is reported to be under discussion in some of the Hotspot Intervention Areas (HIAs), including Asunafo North, supported by the UK FCDO Partnership 4 Forests Program. However progress towards building a consensus between companies to invest in pre-competitive activities has been slow, demanding sustained facilitation by a trusted independent body.

[94] Mighty Earth (Sept 2019). Companies Support Higher Cocoa Prices for Farmers. https://www.mightyearth.org/2019/09/05/companies-support-higher-cocoa-prices-for-farmers/

[95] COCOBOD news (30 June 2021). Remunerative Income is the surest way to a sustainable cocoa industry – Participants at EU Sustainable Cocoa Dialogue. https://cocobod.gh/news/remunerative-income-is-the-surest-way-to-a-sustainable-cocoa-industry-participants-at-eu-sustainable-cocoa-dialogue

Many groups have dismissed company-defined certification schemes as either being inadequate without stronger standards and enforcement (Fern 2020)[96] or not being a solution to long term sustainable landscape management[97] [98], driving a race to the bottom:

> *"**Competition with sustainability programmes of chocolate companies:** Both standard organizations (Fairtrade and Rainforest Alliance) are in direct competition with the sustainability programmes of some cocoa and chocolate companies. Some of the companies have introduced their own seals, such as the **Mondelēz International Cocoa Life** seal or Nestlé's Cocoa Plan. Both Fairtrade and the Rainforest Alliance fear that large licensees will opt for their own certification programmes and abandon the original standards. The Race to the Bottom is therefore also being driven by the companies themselves. The companies' own programmes are much less transparent than Fairtrade and Rainforest Alliance. **Impact studies are only partially published and many companies have not even published their standard**."*
>
> ***Source**: Cocoa Barometer, 2020. The Voice Network[99].*

Instead they advocate for the development of collective and inclusive landscape approaches that are locally defined through bottom-up collaborative approaches. Landscape wide engagements such as ISEAL to define, and objectively monitor compliance with Sustainability Systems[100]. The efforts of the ESP Project to support the strengthening and replication of the CREMA model is heading in the right direction but will require buy-in and financing from all actors (public and private) in each landscape to ensure longer term success.

Overall, the Evaluation Team scored the Effectiveness for Phase 1 as Unsatisfactory (2) due to the dropping and/or non-implementation of over half the planned outputs. The Evaluation Team does not accept this as evidence of adaptive management, but instead as inadequate rigour in project design and implementation.

Under Phase 2 the effectiveness score was moderately satisfactory (4). Planned activities were implemented and outputs were to a large extent delivered for most of the service delivery (trainings, economic tree distribution) tasks. However, some key issues remain unresolved (CREMA operationalisation, functional tree registration system) or in their very early stages of preparation (incentive mechanism, land use plans / landscape management plans, implementation of the MTS).

6.3. Efficiency

Management Efficiency: ESP project was implemented based on UNDP's direct implementation guideline which restricted COCOBOD to only administrative roles under Nationally Implemented (NIM) procedures. A Project Management Unit (PMU) led the

[96] Brack D., and Ozinga S. (Dec 2020). Enforcing Due Diligence Legislation 'plus' https://www.fern.org/publications-insight/enforcing-due-diligence-legislation-plus-2230/

[97] IIED (2021). Producer agency and voice in certification schemes https://www.iied.org/producer-agency-voice-certification-schemes

[98] Fountain, A. and Huetz-Adams, F. (2020) Cocoa Barometer, 2020. The Voice Network. https://www.voicenetwork.eu/wp-content/uploads/2021/03/2020-Cocoa-Barometer-EN.pdf

[99] Cocoa Barometer, 2020. The Voice Network https://www.voicenetwork.eu/wp-content/uploads/2021/03/2020-Cocoa-Barometer-EN.pdf

[100] ISEAL Alliance. Sustainability systems. https://www.isealalliance.org/defining-credible-practice/sustainability-systems

implementation of all activities in consultation with the COCOBOD project focal person or lead with technical support and oversight from the UNDP project technical focal person. All necessary budgets and release of funds were duly approved by UNDP. Project finances were controlled by the UNDP and field level implementation by the PMU – limiting the involvement of COCOBOD as the national implementing partner (from 2017 Annual Report). The multi-level approval process was reported to have slowed down implementation to some extent.

25-30% of annual project implementation budgets for 2017 and 2018 went on personnel and administration costs of the COCOBOD PMU and field staff. In 2019 a substantial additional budget line for ***direct field implementation support*** was included (though it is not clear what this refers to - perhaps the newly recruited Field Coordinators?). The UNDP 10% Fee is added on top of this. Thus 35-40% of the total budget is spent on project management and administration by the Implementing partner and UNDP oversight.

Financial efficiency: The TE Team was sent expenditure reports (actuals versus budgets) that summarised actual expenditures in a single figure spent per Outcome per year with no breakdown of expenditure by Output or Activity. The TE Team also reviewed Proof of Performance (POP) quarterly expenditure reports submitted to Mondelēz Cocoa Life Program, that record budgets and actuals per quarter throughout the project lifespan and progress on indicators. Financial planning and reporting documents fully met the expectations of the Project Funder (Mondelēz International) and the Steering Committee. However, the POP reports do not group planned activities by output or outcome and there is no summary of progress (per year or for the whole project lifespan) of investment made and progress recorded per activity, output or outcome. This did not facilitate the Evaluators' efforts to make an informed assessment about the cost-efficiency / Value for Money of specific project interventions. The TE Team is not convinced that the tree registration process is either efficient or financially sustainable. Only more fundamental reforms and incentive schemes such as REDD+ or PES will create the long-term incentives needed for more sustainable shade cocoa production systems and wider landscape environmental protection.

The cocoa sector is a very crowded space, with many sustainable cocoa production & forest management initiatives making attribution of changes in any one agricultural landscape to one or another intervention difficult. There is some evidence of past duplications and overlaps between projects. Various stakeholders reported that private sector funded programmes such as The Mondelēz International Cocoa Life Program are focused only on their own supply chain, raising the question – "*how can single-buyer driven programs such as Cocoa Life improve sustainability of cocoa production in landscapes in which many farmers are selling to multiple cocoa buyers – each with their own sustainability initiatives*? Recently, promising improvements in coordination are beginning to materialise in relation to Hotspot Intervention Area (HIA) under the Ghana Cocoa-Forest REDD+ programme (GCFRP).

Overall, the Evaluation Team rated the Efficiency for both Phases 1 and 2 as Moderately Satisfactory (4). Adequate systems were in place for financial oversight but were heavy, due to the need for constant approval. It was not possible for the evaluators to measure value for money due to the absence of any summaries of investment by output by which to measure investments made per output or outcome against deliverables.

6.4. Overall Project Outcome

Assessment of achievement of Project Expected Results at Outcome and Output levels

As previously noted, indicators in the results framework for both phases of ESP only looked at the level of implementation of activities and thus did not provide adequate means to measure progress at the Expected Results or Outcome levels. Further, systems or sources of data presented in monitoring reports to measure progress at the output level were not seen by the TE Team to be able to verify data provided in Progress Reports. Despite this limitation, the TE Team has attempted to assess achievements against stated outputs and outcomes for the two phases of the project in the preceding section. In summary, progress reported on activities contributed to only partial achievement of stated outputs and outcomes.

Achievement of Project Expected Results

The overall outcome or impact of ESP was presented as a contribution to Outcome 3 of the 2012-UNDAF/Country [or Global/Regional] Programme Results and Resource Framework: Outcome 3: "*National systems and existing institutional arrangements for climate change mitigation and adaptation and for disaster risk reduction, as defined in the Hyogo Framework for Action at the district, regional and national level are functional*".

The Evaluation Team requested access to the most recent UNDAF Annual Report available. The latest available report was for 2016 and reports progress for nearly two dozen UN Agencies towards the UN Development Assistance Framework for the period 2012-17. This report identifies a number of intended results for Outcome 3 "Climate Change and Disaster Risk Reduction" to which ESP contributes – including "Increased community resilience to climate change" and "Biodiversity and land management issues integrated in national and local level policy and planning" but makes no mention of cocoa as a driver of deforestation or environmental degradation. Without mentioning ESP specifically, the report does however mention that "*UNDP worked with stakeholders to develop modalities for the registration of planted trees in off-reserve areas, and supported the operationalisation of a Community Resource Management Area (CREMA) in the Asunafo North District as an innovative natural resource governance and landscape-level planning tool that authorises communities to manage their natural resources for economic and livelihood benefits*".

The Evaluation Team was informed that a newer UNDAF Annual Report is in preparation for 2020, but remains a draft. The TE Team was given access to the Annual Report of the Environment and climate Cluster (Quarter 4, 202) which reports progress towards higher level outputs and outcomes against the CPD (Country Program Document) Indicators.

The Evaluation Team notes that the National Forest Monitoring System is not yet operational, and that forest cover and forest change baselines are not yet in place for all Hotspot Intervention Areas (HIAs), though these were not a planned output of the ESP.

Overall, the Evaluation Team rated the Overall Project Outcome for both Phases 1 and 2 as Moderately Unsatisfactory (3). While the project was considered relevant by most stakeholders, the partial achievement of planned outputs and outcomes, and relative inefficiency of the delivery mechanism have substantially limited its overall progress towards stated outcomes and longer term impacts.

6.5.Sustainability

Financial: At the national level the program remains dependent on a sole financier – the Mondelēz International Cocoa Life Programme. The project partners did not secure additional longer term finance (Under Outcome 3) from any new source beyond CL Programme, though there is evidence of alignment of the Cocoa Life funded ESP activities with other initiatives such as CFI, GCFRP, and the Partnership 4 Forests.

At the landscape and farm level, currently the financial sustainability of the project looks weak, due to high costs of interventions (CREMA operations, tree registration). Furthermore, there needs to be more open discussion and transparency over how government funds (such as those accessed by COCOBOD), those generated by REDD+ programmes, such as GCFRP, as well as private sector contributions should be mainstreamed and shared in the long run to support sustainable cocoa production and forest management.

Some stakeholders estimate that at least 10 years of external funding will be required before the CREMAs can sustain themselves financially. ESP efforts to fundraise from the Private Sector and donors to cover operational costs of the CREMA did not yield any new financing.

Incentive based mechanisms, in the form of REDD+ financing, voluntary carbon market and the production of Non Timber Forest Products (NTFPs) to diversify income and ensure sustainability, were proposed in Phase 1. These have yet to materialise and thus the incentives to maintain and/or restore natural forest in forest reserves, and to plant and maintain trees off-reserve remain limited.

The Evaluation Team rated Financial Sustainability for both Phases 1 and 2 as Moderately Unlikely (2).

Socio-political / economic sustainability is challenging to assess as there is limited robust evidence on current costs (e.g. regular and timely access to affordable / subsidised agricultural inputs) and whether these can be taken up by farmers if not subsidised. There is also evidence to suggest that farmers are not yet being adequately rewarded for the additional effort and investment required to produce environmentally sustainable cocoa (even with anticipated cocoa yield increases) – see the evaluation team's review of the assumptions and in particular Table 3 on page 54. This observation is supported by recent EU Sustainable Cocoa dialogue[101]. The ongoing discussion about how to administer the Living Income Differential highlights the challenge.

Institutional lethargy and vested political and economic interests seem also to be retarding efforts to reform land and tree tenure with as yet no adequate strategy in place or being implemented to overcome them.

The Evaluation Team rated Socio-political and Economic Sustainability for both Phases 1 and 2 as Moderately Unlikely (2).

Institutional framework and governance: ESP partners made a strategic choice to embed all capacity for delivery of training in environmentally sustainable cocoa production in the national institutions responsible for delivery of cocoa extension services – notably the Cocoa Health and Extension Division (CHED) of COCOBOD. The evaluators confirm that this was the correct

[101] COCOBOD news (30 June 2021). Remunerative Income is the surest way to a sustainable cocoa industry – Participants at EU Sustainable Cocoa Dialogue. https://cocobod.gh/news/remunerative-income-is-the-surest-way-to-a-sustainable-cocoa-industry-participants-at-eu-sustainable-cocoa-dialogue

strategic option for mainstreaming sustainability into the day-to-day operations and farmer training curricula of the nationally mandated agency for cocoa extension, thereby making it easier to scale up promising interventions to other landscapes and non "Cocoa Life Program" farming groups. That said, COCOBOD has clarified that the process of developing a harmonised guideline for Climate Smart Cocoa has taken account of experiences from many other programs, and did not depend solely on the influence of the ESP developed training manual or experiences. The planting of economic shade trees, safe handling of chemicals, optimal pruning practises etc have been part of the COCOBOD training curriculum since well before the existence of ESP. The Evaluators do however conclude that the environmental aspects of the training curriculum, and the capacity of CHED extensionists to deliver them, has been significantly improved by the ESP interventions.

Harmonised standards for 'climate smart cocoa' are still being developed by COCOBOD and will be rolled out, once approved. At the national level the evaluation team notes steady progress to mainstream key interventions into existing government structures. However, the 2018 ESP Progress report notes that there are insufficient CHED extension staff in the field. Mondelēz financed the recruitment of an additional 5 Field Coordinators and a further 7 were recommended (one for each of the 12 target Districts). This is not appropriate or sustainable in the long term. COCOBOD has its own funds, derived from levies on cocoa sales, and could probably afford to finance these extension staff itself to ensure institutional sustainability.

The Evaluation Team also notes that efforts to make meaningful progress towards enabling policy (e.g. land and tree tenure reforms) depend on collaboration and cooperation with other institutions – notably the Ministry of Lands & Natural Resources (MLNR), the Forestry Commission, the Lands Commission and Traditional Chieftaincies. ESP has established considerably less effective collaboration with these institutions than with COCOBOD. While the MLNR was represented on the ESP Steering Committee, it has not been represented in recent Steering Committee Meetings. ESP Progress reports regularly bemoan the lack of support from MLNR, and FC for supporting implementation of the program goals. In the 2020 Progress Report, the ESP concludes that it should have signed an enforceable MoU with the FC earlier in the program. Progress reports note the considerable influence of traditional authorities / landowners over the farming practises of tenant farmers and also the operations of CREMAs. ESP has correctly involved them more, though notes that this risks giving them too much influence, thus sustaining the status quo.

The Evaluators recognise that the Mondelēz International Cocoa Life Program, and the ESP Programme alone (a small sub-component of the CL Program) cannot resolve systemic problems alone. That said, all project documentation repeatedly highlights the fundamental need to address these systemic issues. In future, more coordinated and intensified collaboration will be required with other interested parties that are pushing for the same systemic reforms, if change is to be triggered. At the subnational level there is need for further alignment of the multiple public and private sector funded initiatives in target cocoa production landscapes, as is now starting in the Hotspot Intervention Areas under the GCFRP.

Building the capacity of local institutions for landscape governance, such as the CREMAs is a positive step in the right direction but so far only 2 out of the 12 Districts that the ESP covers have piloted this approach, and it is still early days. ESP Progress reports note that without donor funding, CREMA activities grind to a halt. In absence of having a source of income, the sustainability of the institutional structures /governance mechanisms of CREMAs with

sufficient financial resources to operate with self-generated funds remains a challenge. The CREMA concept will need to be aligned with the multi-stakeholder governance institutions and structure being put in place within the Hotspot Intervention Areas (HIAs) by the GCFRP.

While the landscape wide approach is emerging as the logical way forward to mainstream and scale up impacts of programs funded by single private companies or public agencies / donors, it has proven challenging to obtain long-term buy-in from other private sector actors to a common approach due to competitivity issues.

The Evaluation Team rated Institutional Sustainability for both Phases 1 and 2 as Moderately Unlikely (2) without substantial efforts to build a sustainable financing mechanism to sustain government services at adequate levels.

Going forward, there is a need to establish a more comprehensive program of advocacy to bring about the longer term land and tree tenure reforms required to overcome the fundamental root causes of unsustainable cocoa production – notably insecure land and tree tenure, and the lack of incentives for long-term sustainable production. The evaluators recommend a more concerted focus on scaling up land mapping and registration, and simultaneous tree registration, in closer collaboration with the Land and Forestry Commissions, thereby bridging the 'institutional gap' that seems to exist between Cocobod and the Land and Forestry Commissions. UNDP / ESP partners should also continue to work on building partnership agreements between Ghana and consumer countries that facilitate and support institutional sustainability - and bonuses for sustainable equitable production by cocoa farmers and their institutions that cover all the costs involved.

Environmental: A fundamental weakness of ESP is the lack of any consensus on a definition of what constitutes *environmentally sustainable* cocoa production, beyond increasing cocoa yields and tree densities per hectare of participating cocoa farmers. Further explanation is needed regarding how this can be sustained from a technical (maintaining soil fertility, yield quantity, quality) and financial perspective. While there is some anecdotal evidence that low cost climate smart practices will be sustained by farmers it is challenging to assess in other areas, due to limited data.

A key issue which threatens environmental sustainability is increasing land use pressure, through competition with other land uses (both legal and illegal). Forest and farm lands that were traditionally used for cocoa production are now being used for other activities, including illegal mining, oil palm and rubber production and sand winnowing.

There is also no clear definition of the environmental services that should be maintained in the wider landscape, or how they will be measured. Baseline biodiversity surveys have not been completed despite plans to do so, and baseline land use and carbon stocks have only just been established in one or two pilot landscapes (but not by ESP).

No work appears to have been done by ESP to develop Environmental Indicators to monitor sustainability (Phase 1, Output 1.5) thus making it impossible to assess progress over time. That said, the Mondelez Cocoa Life Program commissioned an independent Impact Study (Ipsos 2019) that has prepared a baseline for some key indicators, against which progress could now be monitored, but so far, this data has been kept confidential, not even shared with the ESP implementing partners, and does not serve as a general basis for monitoring sustainability across entire landscapes in a manner that allows comparison of sustainability across farms selling to all cocoa trading companies, and not just Mondelez.

Going forward, a stronger institutional relationship with the COSA measuring sustainability initiative is recommended, to learn what is and is not contributing to the different aspects of sustainability and apply lessons in an adaptive management framework.

The Evaluation Team rated the Environmental Sustainability for both Phases 1 and 2 as Moderately Unlikely (2).

Combining all aspects of sustainability, the Evaluation team rated the overall likelihood of sustainability of both phases as Moderately Unlikely (2).

6.6. Country ownership

No metric can really measure the level of ownership of a project, but there is general positive support for the work of ESP by all stakeholders. As noted in Section 4.4 on national priorities and country driven-ness, the Project was founded on a strong national commitment from Ghana's Cocoa Board, Mondelēz International and the Government to mainstream environmentally sustainable production practices into cocoa production landscapes across Ghana. The Government of Ghana (GoG) commitment to tackling deforestation and forest degradation across the country is evidenced by their adherence to a wide range of initiatives aimed at reducing forest loss in general and cocoa-driven forest loss in particular (see list in Section 4.4). The commitment from various national stakeholders (Ministry of Lands and Natural Resources, Forestry Commission, Stool Chiefs) to initiate and bring to fruition some of the difficult reforms on land and tree tenure necessary to enable the above programmes to succeed were less in evidence at the design stage of the ESP project, being noted as one of the key risks that could hamper project success, and such commitment remain elusive.

There were reports from key stakeholders of some institutional rivalry between COCOBOD and Forestry Commission over mandates and roles with regard to Cocoa-Forest interface, which has retarded progress. There is now need to clarify mandates, and streamline programs around a coherent national initiative to overcome long-standing challenges:

- Roles of different institutions (COCOBOD, FC, Lands Commission, Private Sector, Consortiums, CREMAs etc);
- Reform of land and tree tenure;
- Payment, management and sharing of carbon benefits;
- Pre-competitive collaboration between all cocoa trading companies to co-finance landscape wide initiatives rather than individual programs of various cocoa traders (Mondelēz, Hersheys, etc). Some further alignment is required with institutions being established for management of the Ghana Cocoa Forest REDD+ Programme in the six Hotspot Intervention Areas (HIAs); and
- Issues relating to payment of premiums (Living Income Differential) for cocoa that actually reach farmers.

6.7. Gender equality and women's empowerment

The overall Cocoa Life Program – of which ESP is a component part, was designed to improve the lives of women and men engaged in cocoa farming at the community level. Abantu for Development is the responsible for all gender issues on the Cocoa Life Program.

However, ESP Phase 1 project document makes no reference to gender, women or a rights based approach. Phase II Project document included a strategy for improve gender equality, in particular by deliberately designing strategies to encourage women to accept leadership positions in its farmer cooperatives and Community Resource Management Areas (CREMA) and as part of its capacity building efforts. This was intended to provide relevant skills and knowledge that would give women greater confidence. The project also committed to collaborate with other Cocoa Life partners including Abantu for Development to take up leadership positions, especially in the cocoa cooperatives. The Phase 2 project document also noted that if fundamental structural barriers to women's leadership and agency (e.g. challenges relating to land ownership, obtaining an equal share of the cocoa value chain by women) are to be addressed, work would be required on social norms at the community level and at policy advocacy at national and global level.

The Risk Screening at project design did not envisage any risks related to gender and thus no monitoring was done. Disaggregated records were kept of the number of men and women trained and benefiting from project activities. The women groups of the farmer societies have been trained by the World Vision International and UNDP-ESP Team on gender and governance mechanisms and issues, women empowerment, decision making, and additional livelihood interventions.

However, stakeholders gave mixed reactions on the effectiveness and performance of the women's groups when interviewed during the field visits. Whilst some of the women groups have been trained and are very active practising the learnt skills to improve their economic and standard of living in their respective communities, others are yet to be trained, have weak organizational and mobilization systems and as a result, are inactive in their communities.

The evaluation field mission heard qualitative evidence of increasing proportion of women in farmer Societies (20-50%) and Union / CREMA Management committees. Ipsos (2019) report that 19% of female farmers have leadership positions in farmer societies, compared to 30% for male farmers. The majority of women strongly agreed (26%) or agreed (40%) that Cocoa Life Institutions have improved women's leadership opportunities.

While gender was identified as a key factor affecting land and tree tenure in both the land and tree tenure reviews (2016), there is no mention of the impact of gender on land or tree tenure in any of the monitoring reports or the final project close-out report, nor further analysis of how gender was addressed by the program.

It is important to recognise that smallholder farmers are not all equal. Since reporting and indicators have not been sufficiently disaggregated by gender, migration status, or disability status it is not clear whether the project has looked sufficiently well into the issue of **leaving no one behind** and the risk that smaller tenant, migrant and women farmers may be less likely to benefit from the project because they have limited land tenure security and access to finance.

6.8. Cross-cutting Issues:

6.8.1. Climate change mitigation and adaptation;

Section 5.4 on Lessons Learned from other initiatives presents some key issues emerging from recent research relating to adaptation of the cocoa sector to climate change, and its potential contribution to mitigation efforts, by optimising production in terms of carbon emissions per

kg of cocoa produced. In any future phase, the project needs to make a more concerted effort to invest in, and follow the findings of research into cocoa production optimisation. The addition of a respected, independent researcher with mastery of current work on climate smart cocoa production to the project team and steering committee is recommended.

6.8.2. Human rights

While Phase 1 project document made no mention of a human rights approach, the Phase 2 project document made explicit the UN principles and approaches to mainstream a human rights approaches. While the progress reports present gender disaggregated results for progress against indicators, there is little indication that the project has used a Human Rights based approach during implementation to address the negative trends for women and youth; disparities and opportunity gaps between men, on the one hand and women and youth on the other hand. Some recommendations to address this in the design of any next phase is presented in Section 0.

6.8.3. Capacity development

The project has invested substantially in the development of capacities of both COCOBOD CHED Community Extension Agents who in turn have invested in building the capacity of individual farmers, farmer societies, cooperatives and District level partners. While the project only works with some farmers in each landscape - presumably focussing on those in societies that supply Mondelēz there is a growing demand for more training of non-participating farmer societies.

6.8.4. South-south cooperation

Phase II of the project design included an element of global support from UNDP's Green Commodities Program (GCP) to share lessons between countries. by promoting the exchange of best practices, lessons learned and innovative approaches between Ghana and other cocoa growing countries such as Dominican Republic and Indonesia and others in the African Region.

The ESP ProDoc also, envisaged that GCP would facilitate capacity building trainings and knowledge exchanges via onsite trainings, online resources such as webinars etc. for the PMU, Cocoa life Ghana and COCOBOD teams' participation in the GCP's Community-of-Practice, a network of agro-commodity practitioners working on related issues. Online webinars were a common feature of the GCP, however these activities were not necessarily reported on.

UNDP has facilitated some South-South learning experiences, such as in a collaboration with South Korea – a leader in community-based forest fire management, and as an active member of UNDP's Green Commodities Community. GCP supported ESP to produce a strategic fundraising note which was anticipated would serve to identify funding sources to supplement the current funding from Cocoa Life. Observations on this are captured under Section 5.3 on progress towards Outcome 3: Identifying Funding Mechanisms, under Phase 2 and under the analysis of co-financing under Section 4.7.3.

6.8.5. Knowledge management

As a foundation for the Project, an Environmental Baseline Report prepared by UNDP (2013) made a comprehensive assessment of the current status of the cocoa sector, the challenges relating to climate change and sustainability and potential strategies for addressing these. It reviewed the existing literature and highlighted a number of lessons learned from previous

efforts to tackle Ghana's emerging cocoa-driven deforestation trends and findings from research conducted in Ghana and elsewhere. While this review was comprehensive, it presented a range of views as to the long term solutions to ensure more sustainable cocoa production and notes that there are trade-offs between lower tree cover with temporarily increased yields, versus cocoa grown under more shade with continued investment in inputs of fertiliser and pesticides. The review notes that whilst promoting shaded cocoa for long-term productivity, the short-term costs to farmers should be recognized to facilitate the development of appropriate strategies to achieve the sustainability goal. Shaded trees start to produce later and maximum yields are lower than unshaded trees. Because of this, farmers typically opt for low-shade, especially if they plant hybrid cocoa. The Baseline report concludes that more information is needed on the trade-offs and recommends longer-term research into the complex interactions between shade, yield and soil fertility management - in particular phosphorus.

The UNDP management team has routinely prepared lessons learned sections in periodic progress reports and the end-of-phase 1 Closeout Report and accompanying "lessons learned" document (2016). These often come back to the same lessons and recommendations that were initially highlighted in the Baseline Report. The Evaluation Team has reiterated many of the same analyses and where possible added more depth to the scientific rationale for a more effective multi-pronged strategy for any future ESP intervention to deal with the complex challenges.

The issue seems to be less about whether the lessons have been drawn, or documented, and more about how to ensure that they are actually applied in practise to resolve long-standing and deep-rooted challenges such as tree tenure reform.

Knowledge isn't power until it is applied: Good Environmental Practises (GEP) have been integrated into training modules and training of trainers programs. According to IPSOS (2019) 57% of surveyed farmers report having participated in GEP training, and 89% of farmers trained reported making many changes to their behaviour. IPSOS (2019) Impact Survey indicates that "many" (no statistic provided) farmers have demonstrated evidence of shade management practises, with an average of 9.1 trees per hectare on their main farms (lower than the optimum of 12 shade trees recommended by Utz). Only 23% have officially registered any of their shade trees. But knowledge of good environmental practices is not always sufficient condition for farmers to adopt alternative practises - they also need the incentives to ensure that sustainable practises are adopted in place of less sustainable but more profitable short term production methods. Ipsos (2019) Impact study results summarised elsewhere throughout this evaluation report shows that while a good proportion of farmers do adopt good agricultural practices (GAP) and good environmental practises (GEP), many others do not because they do not have the spare money to buy either fertilizes or agrochemicals, and cannot afford to cut down and replace old cocoa trees and wait some years before higher yielding hybrids begin to yield. Only 45% of farmers show evidence that they implement adequate soil health management measures. The risk that farmers would not implement best practises without financial incentives was clearly summarised in the Project Lessons Learned Report at the end of ESP Phase 1 (UNDP, October 2016).

- *Lesson # 3: Exploration of innovative economic incentives to encourage biodiversity-compatible cocoa: As already mentioned, farmers' have low perceptions and appreciation for environmental issues. It is therefore necessary to put into place*

compensation packages for ecosystem services, carbon offsets, and integration of buffer zone cocoa into landscape management plans and financial supports as mechanisms to encourage environmentally sustainable cocoa production. These mechanisms would bring on board additional funding to support such incentive packages. It is not just enough to undertake capacity building activities to improve production methods – the adoption process would be faster when farmers receive some immediate benefits.

Despite this repeated recognition, no incentives or financing mechanisms have been put in place during Phases 1 and 2, though clearly it was the intention of both phases to do so.

6.8.6. Volunteering

Many of the community initiatives being promoted in the context of the Ayum-Asuokow CREMA are done on a voluntary basis. The Phase II project document envisaged establishing three Community Fire Prevention Volunteer Brigades. However, the monitoring reports do not report on how many were actually established or how they function in qualitative terms. That said, the Field Mission reported seeing low incidence of bush fires in the project intervention area. The section reporting progress on Output 2.2 summarises the impacts of such efforts.

6.8.7. Impact from Covid-19 pandemic

The following findings are based on the field mission report of the National Consultant.

Ghana recorded her first covid-19 pandemic case on 22nd March, 2020 and since then the Government of Ghana has put in various measures to minimize the spread and effects of the virus on the economy, including the business, farming community, the citizenry and cocoa farmers. The impact of Covid-19 pandemic on the direct beneficiaries of the ESP Project and other stakeholders are outlined below:

- The farmer societies, farmer unions and community animators are not able to hold their monthly meetings except emergency ones to attend immediate issues related to ESP Project due to the health restrictions imposed by the Ghana Health Service (GHS) and World Health Organization (WHO) on Ghanaians;
- Difficult getting farm hands and labourers to undertake cocoa farming activities such as nursery operations, planting, weeding, spraying of the crop against diseases and pests in the farms;
- The fear of members and executive members of farmers societies and farmer unions as well as staff of the IPs contracting the virus in an attempt to assist others who may be sick or suspect of the disease, leading to very little activities performed by the stakeholders;
- Cocoa farmers now spend relatively more of their meagre income on buying medicines, face masks, soaps, hand sanitizers in order to prevent the contact with the virus in the communities;
- Disruption of supply chain and logistics management in the cocoa landscapes via reduced of imports of farming inputs (agro-chemicals, seeds, PPEs, fertilizers, etc) from abroad as a result of lockdown in specified European, Asian and American countries;

- Lack of farm inputs (agro-chemicals, seeds, PPEs, fertilizers, etc) in retailing and wholesaling units in the communities apparently due to reduced imports from abroad as a result of lockdown and restrictions imposed to manage Covid-19 pandemic;
- Non-payment of cocoa farmers following the sale of cocoa beans to licensed buying companies, leading to economic hardship and poverty among cocoa farmers;
- Project management unit of the ESP Project and other IPs could not visit the farmer societies, farmer unions and the communities often as required for the purpose of monitoring and evaluation of the Project; and
- Prices of farming inputs have increased between 20% and 50%. For instance, the retail price of a 50kg of cement has gone up from GhC 30.00 in July, 2019 to GhC 47.00 by end of February, 2021. Similarly, other basic household items, fuel, etc have witnessed a big jump in the retail prices of them.

6.8.8. Catalytic/Replication Effect

Stakeholders provided generally positive reports that ESP investments have catalysed improvements in environmentally sustainable cocoa production, and innovations relating to land and tree governance mechanisms (strengthened farmer institutions and CREMAs) that can be scaled up.

Tree registration has been seen as technically successful, and with some adjustments, the software co-developed / tested by ESP and FIP will likely be adopted as a national standard. However, challenges remain, relating to the cost of tree registration and the guarantees that the benefits from harvesting registered trees in 15+ years will accrue to farmers, unless fundamental tree tenure reforms are enacted.

6.8.9. Progress to Impact

This heading was provided in the template for the Final Evaluation Report. Since an "overall Impact" is not defined for the ESP, we understand this to be synonymous with "Overall Outcome" - which is reported on in Section 5.4.

7. Main findings, conclusions, recommendations & lessons

7.1. Main Findings

The ESP project design made a strategic choice to embed the capacity for delivery of training in environmentally sustainable cocoa production in the national institution responsible for delivery of cocoa extension services – notably the Cocoa Health and Extension Division (CHED) of COCOBOD. This has enabled ESP to integrate environmental sustainability into the heart of the mandated institution, making it easier to scale up promising interventions to other landscapes and non "Cocoa Life Program" farming groups. While some of the environmentally sustainable practises promoted and rolled out by the CL funded ESP, including shade tree planting were already part of the COCOBOD policy and farmer training curriculum, they have been strengthened by the ESP Program interventions, better integrated into the CHED farmer

training curriculum and the extension staff have been better trained to deliver the environmental component of the curriculum and not just the agronomic aspects.

Some good progress has been made with training roll out and tree planting, generally meeting planned targets. But the impact of ESP activities is still only being felt by those farmers who are members of the Cocoa Life Farmer Unions in the pilot districts that the project has managed to engage, and not every community member. Scaling up will require engagement of all private sector and donor financed initiatives into coherent and coordinated programs in existing and new Districts and landscapes if efforts to reduce deforestation and degradation and achieve demonstrably sustainable cocoa production is to be achieved at country-level. Scaling up will require substantial additional resources that have not yet been secured and stronger coordination between different funders.

Improved Land and Tree Tenure and incentives were from the outset identified as fundamental preconditions for sustainability, but at the close of both Phases 1 and 2, they still remain elusive. While the evaluators acknowledge that the ability to bring about Land and Tree Tenure reform lies beyond the mandate of ESP Project alone, the Project Documents of both Phases 1 and 2 explicitly set out to influence policy and establish financing mechanisms that would incentivise sustainable production systems. Until such time as necessary reforms are effectively secured, progress towards environmentally sustainable cocoa production risks being continually undermined. There is little incentive for smallholder farmers to plant and nurture shade and timber trees to maturity, if they have no ownership rights over them.

Progress with more fundamental, systemic land tenure reforms continues to be slow and frustrating. Proposed interim solutions include tree registration of planted trees in cocoa farms to secure the farmers' stake in the long-term value of timber trees planted as a form of incentive. At the request of the Ghanaian Authorities, the ESP developed and field-tested tree registration procedures and software in partnership with the Forest Investment Program (FIP). Forestry Commission requirements for the system were complex, but ESP partners set out to keep any tree registration system as simple as possible, making it more manageable and cost-effective for potential scaling up. After heavy investment of time and effort, the Forestry Commission and ESP contracted software developers experienced a range of difficulties in operationalising the software and GIS database, which remained problematic up to the end of Phase 2.

Mechanisms for monitoring impacts of the programme on key metrics (deforestation, on-farm tree cove and carbon stocks, cocoa yields, farmer incomes, etc), which should have been put in place under Phase 1, are still non-existent or too weak to support any quantitative analysis.

While the broader Mondelēz International Cocoa Life Program may have monitoring data on these metrics / Key Performance Indicators, these are not all made public and the Evaluation Team did not have access to them for analysis. Further, these are done on the basis of farmer recall during interviews and some farm visits, rather than direct measurement due to methodological challenges (see Section 5.4).

The presentation of financial information in quarterly reports against activities without any summary of cumulative expenditure per output and outcome did not facilitate analysis of expenditure per outcome our output by the Evaluation Team, or assessment of value for money.. Observed weaknesses in monitoring and reporting must be addressed in any future phase.

Funding for forest conservation activities under both Phase 1 and Phase 2 was very limited. The project's strategy was to influence landscape management through the establishment, capacity building and operationalisation of multi-stakeholder governance structures of Community Resource Management Areas (CREMAs). One CREMA was established during Phase 1 and an additional two were established during phase 2. A certificate of devolution to give full authority to the CREMA to operate was finally issued on February 6, 2020 after some delays. Stakeholders gave a positive assessment of the CREMA concept as a strategy towards restoration and conservation of cocoa landscapes. All the CREMA bodies now have byelaws and constitutions that govern their activities, have bank accounts that facilitate their governance system and also aid financial transactions. In addition, CREMAs have established fire volunteer groups to prevent bushfires and also promote responsible charcoal production using the landscape approach. Some buffer zones have been created by planting economic trees along water courses. Whilst there was some awareness raising on why it is important to conserve animals, there is no objective evidence regarding wildlife trends. The National CREMA Review Report (Oct 2020) looked at other CREMAs and found there was only anecdotal evidence to support analysis of trends.

However, challenges remain to render CREMAs financially sustainable with no other stakeholders yet willing to contribute to operational costs despite ESP efforts to fundraise for the CREMA from the private sector, and donors.

Progress on developing incentive-based mechanisms for farmers to plant and retain trees in cocoa farms, and the development of additional income sources for the CREMAs (such as through the gathering and/or cultivation of non-timber forest products) has been limited (while noting that community development and promotion of additional livelihood interventions, gender, women and youth empowerment were supported under a different pillar of Cocoa Life, championed by the WVI - and were not part of the current evaluation).

Preliminary feasibility analyses for developing a pilot voluntary carbon project concluded there was limited potential for direct payments to farmers due to the estimated high administrative costs and low carbon revenues for individual farms. Efforts have instead focused on collaborating with the Forestry Commission's Climate Change Unit to align ESP with the Ghana Cocoa Forest REDD+ Programme (GCFRP) in the hope that in the medium term it can generate carbon revenues from which benefits and services will trickle down to farmer groups. But roll out of the GCFRP has also been slow.

The National Cocoa Platform that was to be put in place by ESP Under Outcome 6 of Phase 1 was shifted to a separate program, managed by COCOBOD upon request from its senior management, with its own Project Document. A platform was established and was reportedly well-managed and popular with stakeholders, but after a promising start with much interest, foundered due to a decline of political will in circa 2017 under new Cocobod leadership. This is not a criticism of ESP – but the weakness of the national dialogue resulting from failure of the Cocoa Platform has made it more difficult to progress on important reform processes. UNDP is currently exploring the viability of reviving a national cocoa platform, with full political support, in collaboration with the Swiss State Secretariat of Economic Affairs (SECO). Given the wide range of actors in the cocoa sector, each pursuing their own programmes with separate funding, a revived national cocoa platform will be essential to ensure dialogue and coordination across the sector, in particular to advocate for key systemic reforms, and improve

the efficiency and effectiveness of ESP and similar initiatives. Recommendations are made below on alignment of national and subnational coordination mechanisms.

7.2. Conclusions

Strengths:

Good progress has been made with building the capacity of CHED staff of COCOBOD, CEAs, staff of the Implementing Partners and project field staff to deliver a range of environmental sustainability training programs to farmers. In turn farmers reached by the ESP programme have improved environmental practices on cocoa farms including in particular the planting of economic shade trees and adoption of environmentally sustainable practises.

The Cocoa Life (CL) Programme is the largest private sector-funded cocoa sustainability program in the world - and in Ghana. Despite this, demand for training and materials by farmers enrolled in the Cocoa Life Program who benefit from ESP support, and those observing, who are not yet enrolled in the CL program outstrip supply. Farmers are motivated by access to free technical and material support with potential to increase yields and income.

Women have benefited from the project, with an increasing proportion of trainees and membership of Farmer Societies, and management positions in Cooperative Unions. But they still lag behind (often being at less than equal 50% representation in management positions) and require added attention in future.

Institutional capacity to support landscape-wide environmental management has grown, to a limited extent, through the establishment of CREMAs in two of the 12 target districts supported by the ESP though the Forestry Commission seems not yet fully supportive of their operations in the absence of approved Regulations on CREMAs, and the CREMAs' activities remain heavily dependent on donor funding.

Weaknesses:

All project documents and analyses have clearly recognised that insecure land and tree tenure and unfair distribution of benefits from their use are the fundamental underlying cause of unsustainable cocoa farming practices, This is a long-standing issue. COCOBOD and the project implementing partners accepted the challenge to address this through the ESP but progress on overcoming these systemic challenges has been limited. Field tests of tree registration technologies and procedures have demonstrated the technical complexity, administrative capacity constraints and high costs to implement it at scale, with insufficient assurances of revenue sharing with farmers at harvest. The 2nd National Stakeholder Dialogue on Tree Registration (Koforidua, June 2019) highlighted many outstanding challenges, shared by multiple stakeholders, and drafted a roadmap to address them.

The Evaluators do not see Tree Registration as a viable long-term solution and even as a shorter term measure, georeferencing and recording every planted tree in a national database is not cost effective to roll out at scale – at least not as a standalone strategy. Instead the evaluators recommend that tree registration should be bundled with land tenure documentation which delivers immediately tangible and positive long-term impacts for farmers, and in itself, goes a long way to secure tree tenure security.

Discussions with staff of both project implementing partners, and UNDP teams indicate that there were divergent opinions about the original intention of pilot testing such a tree

registration exercise, as requested by Forestry Commission. On the one hand, some perceive that tree registration was a realistic alternative to more fundamental tree tenure reform, and accepted to test procedures and technologies to satisfy the Forestry Commission requirements for a technical solution. On the other hand, some were sure that the pilot trial would demonstrate that individual tree registration is not viable, and would furnish the evidence necessary to move the debate forwards to seek more systemic and fundamental policy and legal reforms.

The final (2020) progress report concludes that after numerous clarifications and alterations of registration modalities, the software system developed by the ESP hired consultant (ImageAD) failed, and the Forestry Commission has not validated the data. In summary at the end of ESP Phase II, the tree registration experience is described as "inconclusive" but "*has been worthwhile as it has* ***contributed some vital lessons learnt to the national discourse on tree registration****"*. The lessons learned and recommendations provided by the project staff themselves in progress reports are not clear what these lessons were, or what can be done to address them going forward.

Some stakeholders have gone so far as to suggest that the Forestry Commission's insistence on complex individual tree registration was a deliberate attempt to ensure that efforts to secure tree tenure security would be too expensive (with considerable proportion of the cost being the hiring of Forestry Commission staff as consultants to monitor the registration process, validate data and host the national tree registration database), and thus could NOT succeed, beyond a small pilot scale. This outcome maintains the status quo – i.e. tree ownership remains in the hands of the traditional landowners (stools), with management and control of off-reserve trees remaining vested in the state, not the individual tree planter. This retains power in the Forestry Commission to earn both formal and informal revenues from the majority of off-reserve trees (both naturally occurring and planted) despite any efforts taken by farmers to nurture naturally occurring tree seedlings, or, at much greater expense, plant nursery grown stock. The Evaluators' analysis is that there is a political economy problem to solve – i.e. that the only real solution remains land and tree tenure reform, and that vested interests are standing in the way of moving forward towards these. This has not been clearly expressed in project progress reports or recommendations for the future.

Without the requisite land use plans to guide and regulate land use, and incentives for forest protection and tree planting being in place, institutional capacity alone will not ensure more sustainable outcomes. Work on many of these additional factors (land use planning, creation of incentive mechanisms) were planned in the original project document but then either not done, pushed into the future, or hived off to other actors through restructuring, resulting in a patchwork of interventions, managed by different programmes that have not yet added up to the intended 'whole'. A proposal in the 2019 Annual Work Plan to hire a consultant to conduct an assessment of the Hotspot Intervention Areas (HIAs) and develop a management plan for the HIAs in consultation with other consortium partners (Output 3.3) was not followed by any report on progress against this output in the 2020 progress report.

As a result, deforestation is still ongoing in the Project's target districts, though there is still no means of monitoring how much, or whether it is driven by cocoa or other land uses. Some work is on-going, funded by Cocoa Life, to develop methodologies for more detailed analyses of deforestation in the cocoa production landscapes but results remain preliminary and are not yet public (*pers. comm.* Mondelēz International)

Project supervision by the UNDP team seems to be adequate but establishing and following a consistent results framework at both the design and implementation of phase 1 and 2 of the project have been weak, particularly in phase 1.

Attribution of impacts of ESP versus other interventions is difficult due to multiple actors operating in the same landscape and the lack of an M&E system that objectively monitors both target and control farms and communities to collect objective statistically credible evidence with which to assess real changes induced by the Project, as recommended by COSA (2019)[102].

Observation: While the objectives of the ESP remain relevant, the format of delivery of support to cocoa farmers and community institutions in the field - by a set of disparate programs each funded by a public or private sector sponsor risks leading to confusion and fatigue among beneficiaries. Mechanisms for better coordination of the design and implementation of programs supported by multiple donors / private sector operators remain challenging and need clear consensus during design of any 3rd phase. Recommendations are made below to this effect.

7.3. Recommendations

As requested by the terminal evaluation TORs, this section presents a set of concrete, corrective, feasible, and practical actions and decision-making for the design, implementation, monitoring and evaluation of any future phase of the ESP project. They aim to be specific, and clearly justified in relation to the achievement of the project objectives, and include actions to follow up or reinforce initial benefits from the project. They are proposals for future directions underlining main objectives, and propose changes to project strategy, including the log frame indicators and targets.

Monitoring, Evaluation and Learning (MEL): ESP Project M&E framework is based on inputs and outputs, in accordance with UNDP norms - higher level outcomes being reported at country level. Given that the ESP output-level reporting is underpinning claims of sustainability of the Cocoa Life Program, a more robust Monitoring, Evaluation and Learning (MEL) framework needs to be in place all interventions in priority districts and landscapes. Such a framework will need to go beyond ESP, and indeed the broader Cocoa Life Program and monitor key performance indicators objectively for all actors in the landscape. This will improve both efficiency and effectiveness of all actors and ensure improved transparency, accountability and inclusivity within the cocoa sector that can measure progress towards relevant targets on poverty, child labour policies and cocoa buying prices, as well as the slowing/reversal of deforestation trends.

The monitoring system can support advocacy work aimed at linking fair price for cocoa to sustainable land use practices and due diligence by private sector re compliance to forest and labour laws. Reporting and indicators must be sufficiently disaggregated in order to ensure that the project has a clear grasp on how different socio-economic groups (women, migrant farmers, people with disabilities) benefit from project activities and outcomes, given that they have limited land tenure security and access to finance. The M&E system should not only be aligned with the existing Global Cocoa Life Key Performance Indicators (KPIs), but also

[102] COSA (2013). THE COSA MEASURING SUSTAINABILITY REPORT COFFEE AND COCOA IN 12 COUNTRIES. The Evidence of Sustainability Impacts (p.12) https://thecosa.org/wp-content/uploads/2014/01/The-COSA-Measuring-Sustainability-Report.pdf

harmonised with KPIs of other stakeholders, include the ability to demonstrate the impacts of programme interventions in target groups as compared with non-targeted 'control' groups.

Lessons learned should be recorded in a project specific or sector-wide knowledge management system and published in periodic knowledge products. This should ensure that lessons learned from previous phases of the project are not simply noted but are reflected upon and used to develop clear strategies to address key challenges and barriers that have repeatedly hindered progress, such as addressing land and tree tenure issues and illegal mining. Furthermore, going forward, the project should take more account of relevant on-going and past experiences in the sector, and research. This will improve both efficiency and effectiveness of the project.

Credible independent monitoring and transparent reporting on key social and environmental commitments: The Cocoa Life Program is not independently certified. As a result, claims made by Cocoa Life about the sustainability of the source of cocoa depend primarily on the aggregation of data that UNDP managed, COCOBOD implemented project sends to Mondelēz International Cocoa Life. **This data is replicated directly in Cocoa Life Program progress reports and publicity material but remains largely a report of inputs (trees distributed, training given) rather than outcomes and impacts (reduction in rates of deforestation, increases in on-farm carbon stocks, improvements in cocoa yields).** There is some independent impact assessment by IPSOS, based on a range of data collection methods (see Section 5.4). Reporting and indicators must be sufficiently disaggregated in order to ensure that the project has a clear grasp on how different socio-economic groups (women, migrant farmers, people with disabilities) are all benefiting from project activities and outcomes and to ensure that these groups are benefiting from the project despite the fact they have limited land tenure security and access to finance. Deforestation data should also be disaggregated into on- and off-reserve trends.

In future, we recommend that COCOBOD ensures that all projects by companies, donors, NGOs etc report into a centralized system so improvements in standardised KPIs can be monitored at a systemic level. Where possible, a harmonised national M&E system should include the ability to demonstrate the impacts of programme interventions in target groups as compared with non-targeted 'control' groups. Responsibility for collecting, analysing and publishing objective monitoring data on all KPIs should be made absolutely clear.

Financial sustainability: There needs for more open discussion and transparency over how government funds (such as those accessed by COCOBOD), those generated by REDD+ programmes, such as GCFRP, as well as private sector contributions should be mainstreamed and shared in the long run to support sustainable cocoa production and forest management. This does not mean that UNDP must lead the discussion / process, but should make a concerted effort to initiate it.

Some stakeholders estimate that some more years of external funding will be required before the CREMAs can sustain themselves, and even then, only if sufficient powers are devolved to them to generate revenues from a range of activities. The ESP partners are encouraged to conduct feasibility studies to explore realistic ways of securing long term financing for the CREMAs. This conclusion is also shared by the National CREMA Review Report (Oct, 2020). This does not mean that UNDP must end up leading the discussion / process, but should make a concerted effort to initiate it. Some stakeholders estimate that some more years of external

funding will be required before the CREMAs can sustain themselves, and even then, only if sufficient powers are devolved to them to generate revenues from a range of activities.

Land and tree tenure reform: The TE Team recommends continued concerted collaboration between interested parties and programs (FLEGT VPA; REDD+; Government of Ghana's Forest Investment Program (FIP), climate smart cocoa; among others) in supporting communities and civil society to collectively engage with the different agencies of the Government of Ghana, and traditional landowners and other vested interests, and advocate for a paradigm shift towards the necessary land and tree tenure reforms, thereby creating a critical mass for change. Stakeholders interviewed noted that at least another 3-4 years of focused effort is required to bring about change. Any new phase must envisage addressing this issue at a national scale in a single, coherent and sustained process, led by a government mandated task force that engages all stakeholders, supported by facilitation of a neutral party (potentially UNDP), with blended funding and support from multiple sources and avoiding a fragmented approach by different stakeholders and initiatives. Being just one of many stakeholder groups, with a narrower interest in cocoa and enhancing on-farm tree shade and carbon stocks, the implementing partners of ESP should not lead, but instead contribute to such an initiative. The evaluators recommend a concerted revival of the work done by Client Earth[103] and Taylor Crabbe Ghana[104] to amend the Trees and Timber Act. This would need to build coherent civil society, public and private sector support and advocacy for appropriate reforms. There is still scope for stakeholder consultations on the need for a modern Forest Act, which takes into consideration community ownership and tenurial rights. While such reforms are absent in Ghana's legal framework, any attempt for individual projects to change the tenure arrangement will struggle. Any such initiative will need to be a collective effort of multiple agencies and programmes including partners of the Cocoa & Forests Initiative and the Voluntary Partnership Agreement (VPA-FLEGT) process.

Tree Registration: While some trees have been mapped and registered, until the challenges with the rollout and long-term financing and governance of the scheme and tree and land tenure policy issues are resolved, these are likely to undermine long-term confidence of farmers that they stand to gain from their individual conservation efforts. The increased benefits from tree planting in terms of improved cocoa yields alone were not proven at the time of project design (see Section 4.1.1 Assumptions and Table 9) and no new rigorous research work has been done to demonstrate objectively the net cost-benefit of tree planting if all costs and returns are included and discounted to today's values (Net Present Value). While farmers may plant trees while they are provided free of charge to their door, there is no guarantee that they will continue to plant and maintain them in the longer term, nor that farmers that are not given free tree seedlings will follow suit.

The Evaluators concur with the conclusion of other studies (O'Sullivan et al. 2018[105]; Hirons *et al*, 2018[106]) that suggest that tree registration may not be a long term financially or technically

[103] ClientEarth Ghana Program: https://www.clientearth.org/how-we-work/our-global-reach/africa/ghana/

[104] Taylor Crabbe Ghana https://taylorcrabbegh.com/

[105] O'Sullivan et al. (2018), ibid. https://www.land-links.org/wp-content/uploads/2018/04/Session-08-06-OSullivan-585_paper.pdf

[106] Hirons, M., McDermott, C., Asare, R., Morel, A., Robinson, E., Mason, J., Boyd, E., Malhi, Y. and Norris, K. (2018) Illegality and inequity in Ghana's cocoa forest landscape: how formalization can undermine farmers

sustainable answer to side-step the impasse for more fundamental land and tree tenure reform. While it may serve as a temporary measure it may distract attention from the bigger goal of tree tenure reform. Timber trees that are planted, and registered today will not be mature for harvesting for at least 30-50 years. By that time, it is essential that more fundamental reforms will have been secured.

The Evaluation Team therefore recommends undertaking a thorough review of the costs, benefits and long-term practical and logistical feasibility of scaling up land and tree registration across the country, using existing technologies (including others trialled by ESP with RMSD, Agro-Eco and Meridia and any others), and explore options for long term financing of such an initiative. The Evaluation Team recommends that whatever the outcome of such a review, more concerted effort should be made to advocate for more fundamental land and tree tenure reforms that would render individual tree registration unnecessary. However, the complex interaction between the statutory and customary land and tree tenure systems, and the impact it has on incentivising tree planting and retention highlighted by recent studies[107], requires careful analysis before any further work on land and tree tenure reforms is conducted.

Re-establishment of the Ghana Cocoa Platform, and Coordination of Technical and Financial partner interventions: Coordination of finance at the national and landscape / HIA levels is essential but difficult given the multiple sources of funding and insistence on control of own funds by donors (Govt, International, Private). Prior to any future ESP Phase 3, all actors will need to agree on mechanism to better align and coordinate diverse initiatives at both national and landscape level, with linkages in between.

The Evaluators recommend that the project partners explore and assess the viability of all the different existing national / landscape / stakeholder level platforms before then deciding how any new or revamped platform would align with, or integrate with other existing platforms to create a functional, well supported platform (or network of stakeholder representation groups) that can again engage on the key policy and legal reform process.

It is also important that prior to an ESP Phase 3, key institutions, such as the Forestry Commission, Lands Commission and COCOBOD, agree to collaborate and coordinate their work, much more closely and recognise the common issues, including land tenure security and documentation, deforestation and forest degradation. These challenges need to be addressed and financially supported in a more coherent fashion to ensure sustainable cocoa production and sustainable forest management in the long run.

Landscape approach: The TE Team supports further engagement by the Project Implementing agencies with the landscape approach, building on the CREMA concept and the HIA approach adopted by FC REDD+ Cocoa Forest Program. The TE Team support the on-going work with National REDD+ Secretariat of the Forestry Commission, COCOBOD and WCF with Proforest acting as Facilitator to develop a Landscape Management and Investment Plan for the Asunafo

control and benefits from trees on their farms. Land Use Policy, 76. pp. 405-413. ISSN 0264-8377 doi: https://doi.org/10.1016/j.landusepol.2018.02.014 Available at http://centaur.reading.ac.uk/75818/

[107] Asaaga, F., Hirons M., Malhi, Y., (2020). Questioning the link between tenure security and sustainable land management in cocoa landscapes in Ghana. World Development 130 (2020) 104913. https://doi.org/10.1016/j.worlddev.2020.104913

Hotspot Intervention (HIA) area as reported by ProForest[108]. Some further alignment is required with institutions (Consortium, etc) being established for management of REDD+ Cocoa Forest Programme Hotspot Intervention Areas (HIAs). Reaching an early consensus on how to secure long-term sustainable financing of landscape wide initiatives and their governance institutions is key to ensuring that this approach can succeed at scale, beyond one or two pilot landscapes.

Planting material production and distribution: There is a need to review mechanisms for production and distribution of planting materials to farmers - inefficiencies resulting in late delivery and low survival of distributed materials - (noting that some improvements have been made during Phase 2 by establishing and training community nurseries that are geographically close to farmers, and owned by community members). The ESP partners are encouraged to continue exploring both private sector and community nursery options to achieve the quantity, quality, and speed of delivery of planting material required for a national level program. Going forward, it is important that the production and distribution of planting materials is aligned as much as possible with changing seasonal rain patterns in order to increase tree survival rates.

Consistent monitoring of tree seedling survival rates for several years after planting is essential. The new tree registration procedures should be able to record the number of surviving trees on farms. This can then be compared with the number of tree seedlings that a farmer has been allocated for planting. Information on successes and failures should be fed back into the tree production and distribution process to ensure that appropriate steps are taken to adapt the tree production distribution process (e.g. in relation to tree species grown, timing of distribution and planting, spatial arrangements in relation to cocoa plants) to ensure optimum conditions for shade tree and cocoa growth in relation to a changing climate. Accurate measurement will also support claims regarding increased carbon storage on cocoa farms and to underpin any future payments for environmental services.

Creating incentives to conserve forests and plant trees: Rollout of PES schemes was intended to be the mechanism by which farmers would be incentivized to plant trees both on their own farms and in degraded forest reserves. Under ESP Phase 1 Component 5, which aimed to explore potential Voluntary Carbon Market financing options, the ESP team and UNDP's Green Commodities Programme (GCP) conducted a feasibility study of carbon-based payments, and concluded that individual payments to farmers are not realistic, for several reasons: individual carbon storage (or avoided deforestation) per farm is very small and would result in small carbon payments. The transaction costs of registering and monitoring thousands of small cocoa farms would exceed the modest payments at realistic carbon prices at the time. Instead the TE Team concluded that carbon payments would be more realistic at an aggregated level and payments could be spent on e.g. farmer support systems or other services that would help a large number of farmers. This solution will largely depend on the effectiveness of the REDD+ program, and payments would only be generated in the longer term once the program is able to document reduction in deforestation and/or reforestation. UNDP continues to be a partner in this effort.

[108] ProForest (Dec. 2020). Production Landscape Programme Briefing Note 4: Developing a deforestation-free climate-resilient sustainable cocoa landscape: process and approach https://www.proforest.net/fileadmin/uploads/proforest/Documents/Publications/Asunafo_Asutifi_case_study_Dec_2020.pdf

If carbon payments finance farmer support systems across the landscape, it does not solve the problem of how to provide incentives to individual farmers, even if there are 'collective benefits'. 'Free-riders' will be happy with the public services but may not plant trees.

However, REDD+ progress remains slow, and while the ESP partners have a formal collaboration with the GCFRP, and a benefit-sharing mechanism has been developed[109], which includes farmers, as yet, no results-based payments have been made. Much, therefore, depends on farmers' confidence in the tree registration mechanism to guarantee that in the long term they may benefit from trees planted on farms.

Climate change & related adaptation and mitigation strategies: ESP has provided significant contributions to a more climate resilient cocoa production model, including introduction of climate-smart agronomical practices and the re-introduction of shade trees on cocoa farms. ESP - and UNDP in general - collaborate extensively with the Forestry Commission's Climate Change unit. The TE Team recommends continued focus on climate change & related adaptation and mitigation strategies for cocoa production and forest management. Future support should focus on the testing and promotion of more innovative and nuanced climate smart practices that are adapted to projected specific climate change impacts and in sub-regions of Ghana and other challenges, such as poor pollination. For example, based on research carried out by Bunn et al., (2019)[110] site-specific cocoa production adaptation strategies can help to match the degree of climate change impacts to each agro-ecological zone. Better preparation for change can help cocoa farming communities reduce risks of losing their livelihoods and vulnerability to the impacts of drought, heat and erratic rainfall. Frimpong-Anin et al. (2015)[111] have provided some suggestions on practices that help conserve cocoa pollinators which could also be encouraged. Further, the older over-grown agroforests should NOT be rehabilitated, but instead the landowners / tenants encouraged to maintain the high accumulated carbon stocks and biodiversity found in such old farms. Results should be fed into the harmonised guidelines on Climate Smart Cocoa currently being finalised by COCOBOD

It is understood from the UNDP Team that Cocoa Life has already given the climate change aspects of their programme to another **vendor, Fairtrade**. So this will be included in the overall Cocoa Life program going forward. However, the TE notes that the responsibility for climate change adaptation and mitigation lies with national agencies and not with a private sector investor. National ownership, and coordination with other climate change initiatives will be essential to achieve meaningful progress and impact on this.

Research questions needing answers: The ESP partners need to research the following:

- Some old unproductive cocoa farms are classified as "forest" under the national Forest Definition, and their rehabilitation (clearance and replanting) would be recorded as

[109] Forestry Commission (Sept 2018) Advanced Draft Benefit Sharing Plan Ghana Cocoa Forest REDD+ Programme https://www.forestcarbonpartnership.org/system/files/documents/Ghana%20FCPF%20ER%20Program%20Advanced%20Draft%20BSP.pdf

[110] Bunn, C. Laderach, P. Quaye, A., Sander M., Noponen, R and Lundy M. (2019). Recommendation domains to scale out climate change adaptation in cocoa production in Ghana https://www.sciencedirect.com/science/article/pii/S2405880719300640)

[111] Frimpong-Anin et al. (2015). Some Facts About Cocoa Pollination https://www.researchgate.net/publication/318827628_SOME_FACTS_ABOUT_COCOA_POLLINATION#fullTextFileContent

deforestation by the MRV system, and would result in the loss of both carbon stock and biodiversity and negatively impact Ghana's national performance based carbon finance revenues. CL and/or ESP should record the initial status of farms that Cocoa Life Program funds are helping to rehabilitate to understand the net carbon impacts of interventions.

- The net cost-benefit of rehabilitation of cocoa farms from different starting points: full-sun cocoa farms that have become less fertile due to soil nutrient depletion; old unproductive 'over-grown' traditional cocoa agroforests that must be cleared and replanted to become productive again. The analysis of cost-benefit should build on the work done by Obiri et al., (2007) [112] and determine what, if any, incentives are required to encourage the establishment and maintenance of higher carbon-stock shaded cocoa plantations over the immediate benefits of full sun cocoa. In some cases, as noted by Mohammed et al., (2016)[113], farmers with very old cocoa plantations with large carbon stocks should instead be encouraged to maintain them rather than clear and replant.
- The socio-economic impact of documenting tenure status of farmland, noting that legal documentation can potentially unlock access to significant finance for cocoa farmers, and thus become a much greater incentive than performance based REDD+ or voluntary carbon finance that have not proven to be cost-effective. Embedding tree registration in the land registration process has the added benefit of having very low incremental cost, and much higher short- to medium-term positive impact on farmer livelihoods. Support for up-front land registration (at a cost of circa $100 per farm) for all Cocoa Life participating farmers may turn out to be a much bigger incentive to engage in environmentally sustainable production than the potential and somewhat uncertain long-term benefits of tree registration per se.

Steering Committee Composition: While ensuring that the structure respects UNDP's Programme and Operations Policies and Procedures, the evaluators recommend adding the voice of an independent scientific advisor, mandated to provide inputs from research on sustainability of increased yields, long-term soil fertility, etc. It is strongly recommended that researchers from institutions such as the University of Ghana's Institute of Statistical, Social and Economic Research (ISSER) are placed on the Board of ESP in any future initiative to ensure that objective scientific rigour is applied both to the design and quantitative and qualitative monitoring of the interventions and their impacts.

Modified Taungya System (MTS): The MTS as a mechanism for restoring degraded forest reserves faces a number of significant challenges according to independent reports and published research papers[114]. The evaluators have provided a review of these challenges that UNDP / Cocobod / Mondelēz International Cocoa Life Program will need to address in any future phase, if they intend to promote MTS as a solution for forest restoration at scale. While the technical feasibility of the MTS, and the immediate benefits are evident, the medium to

[112] Obiri et al. Financial analysis of shaded cocoa in Ghana. Agroforest Syst (2007) 71: 139–149 https://www.worldcocoafoundation.org/wp-content/uploads/files_mf/obiri2007.pdf

[113] Mohammed, A., Robinson, J., Midmore, D., and Verhoef, A. (2016). Carbon storage in Ghanaian cocoa ecosystems. Carbon Balance Manage (2016) 11:6 DOI 10.1186/s13021-016-0045-x

[114] Tropenbos International and Tropenbos Ghana. 2019. Drastic changes are needed in the cocoa sector to halt deforestation in Ghana. Policy Brief, November 2019. Wageningen, the Netherlands https://www.tropenbos.org/resources/publications/drastic+changes+are+needed+in+the+cocoa+sector+to+halt+deforestation+in+ghana

long-term benefits are more elusive, and the success of the "modified" system depends heavily on the transparent and respectful sharing of power and benefits by powerful state institutions with poor rural farming communities, with long-term legally enforceable agreements. The ESP partners have reported frequent concerns about the ambition to enact meaningful and timely reforms by these same state institutions during Phases 1 and 2. Full political commitment to address key challenges around implementing Taungya at scale must be secured from the relevant authorities as a prerequisite for any future investment.

Prospects for further development of MTS under a new phase of funding: The Evaluation Team learned from discussions with ESP partners that there are on-going discussions about how, under a third phase, the UNDP and ESP teams could support the roll-out of MTS at a larger scale to restore degraded forest reserves within the priority Cocoa production landscapes, notably Asunafo North District.

A first draft proposal for funding was submitted at the end of last year. While the focus will still be on continued support for CL Environment Pillar, Mondelēz International Cocoa Life has proposed that UNDP will focus more on forest restoration efforts, to help them meet their commitments and targets under the CFI. This will include scaling up the use of the Modified Taungya System as a mechanism for reforestation in degraded forest reserves. The future program will also consider enrichment planting to accelerate restoration of intact forests, etc.

These activities would still be implemented in the same landscapes, and still in collaboration with cocoa farming communities but addressing some of the problems outside the farms. Such initiatives will need strong collaboration with the Forestry Commission, who have an essential role to play but historically has not collaborated very well, as reported in ESP Progress Reports.

Given that the ESP pilot MTS initiative is in its very early days, with limited lessons to draw from experiences so far, the evaluation team has reviewed the literature to identify both the opportunities for, and potential challenges for MTS rollout in future, to inform the preparation for another potential phase of funding.

In view of the conflicting scientific and socio-economic evidence on MTS systems reported under Section 5.3, the TE Team recommends that, before the go ahead is given for UNDP and COCOBOD to continue the roll out MTS, a thorough review of the pros and cons of the MTS system is carried out, in order to identify the key criteria required that are essential to have in place for it to succeed and to assess whether these criteria are in place.

Use of Agrochemicals: There is need for continued caution about potential harmful effects of excess herbicides, particularly glyphosates and pesticides that are used in cocoa production. For instance, more active and direct measures to minimise the use of agrochemicals and to encourage best practices as used in organic cocoa production from around the world should be encouraged to minimize the use of herbicides among farmers[115]. Such approaches should be encouraged wherever possible, given the links with the decline in cocoa pollinators and research that indicates that herbicides may reduce the natural regrowth of tree saplings that could instead be nurtured to provide an effective and efficient way for cocoa farms to reach optimum shade cover, without having to plant tree seedlings. Further research is required to determine: (i); the impact of herbicides on the natural regeneration of useful shade trees and other plants on cocoa farms; (ii) how the widespread use of insecticides is affecting cocoa

[115] See for example: https://www.barry-callebaut.com/sites/default/files/2019-01/gzd_e_bc_ar08_cabosse_ii.pdf).

pollination; (iii) the impact of agrochemicals on other income generating activities, such as gathering edible giant snails.

Use of a Human Rights Based Approach: in future phases the Project should focus more on using a human rights-based approach, i.e. that all forms of discrimination in the realisation of rights must be prohibited, prevented and eliminated. It also requires the prioritisation of those in the most marginalised situations who face the biggest barriers to realising their rights. In the context of the ESP project, we recommend that in the next phase of the project, there is a much stronger drive to raise cocoa farming communities' awareness of their basic human rights, in relation, for example, to access to clean water, children's education and fair cocoa prices for their cocoa; and the importance of their role to advocate for these issues. In short, to provide support that contributes to the development of the capacities of 'duty-bearers' to meet their obligations and/or of 'rights-holders' (i.e. cocoa farmers and their communities) to claim their rights. Such an approach would include:

(i) Addressing negative trends for women and youth; disparities and opportunity gaps between men and women and youth, identified during formulation phases, by direct consultation with the organisations working with these people;

(ii) Building capacities of implementing partners to mainstream gender along with mainstreaming climate change to address gender and youth disparities; and

(iii) Ensuring rights of vulnerable groups - women and youth, but also people living with HIV/AIDS and the elderly are taken into account, by ensuring their voices are heard and by enabling them to participate in decision-making bodies;

(iv) Ensuring through implementation and monitoring processes that these vulnerable groups are effectively targeted and receiving equal or disproportionally greater benefit;

(v) Targeting these vulnerable groups for capacity development activities, especially women and youth, enabling them to claim/fulfil their rights. Clearly disaggregating these groups, using appropriate human rights indicators to increase accountability

7.4. Lessons Learned

This section aims to highlight the best and worst practices in addressing issues relating to relevance, performance and success that can provide knowledge gained from the particular circumstances (methods used, partnerships, financial leverage, etc) that are applicable to other UNDP interventions. The lessons learned also focus on examples of good practices in project design and implementation.

More scientific rigour in project design and monitoring and evaluation: While the Environmental Baseline Report (UNDP, 2013) drew on a wide range of literature and highlighted some important lessons about sustainable cocoa production, some of these have not been fully translated into project design, or if they were, have been subsequently forgotten about, and presented as if they new findings - particularly with regard to the importance of land and tree tenure reform and the likely difficulties to achieve it due to the complex political economy of the cocoa and forest sectors. More could have been done during both project design and implementation to learn from the lessons provided by other projects and scientific research and publications, though some of these have been published during the project

lifespan. The Evaluators make recommendations for specific research questions that should be addressed in future.

Section 5.4 on Lessons Learned from other initiatives presents some key issues emerging from recent research relating to adaptation of the cocoa sector to climate change, and its potential contribution to mitigation efforts, by optimising production in terms of carbon emissions per kg of cocoa produced. Before any new project is financed, a new, thorough analysis of the body of formal scientific literature, and grey literature from other projects should be reviewed to draw out key lessons for integration into future project design. In any future phase, the project needs to make a more concerted effort to invest in, and follow the findings of research into cocoa production optimisation. The addition of a respected, independent researcher with mastery of current work on climate smart cocoa production to the project team and steering committee is recommended. Researchers from institutions such as the University of Ghana's Institute of Statistical, Social and Economic Research (ISSER) and Institute of African Studies are good candidates for such work, given the former's strong track record of engagement with the COSA initiative and the latter's strong track record on understanding the challenges smallholder farmers face in relation to land tenure and agricultural production.

Actions to strengthen land and tree tenure security must recognise and more firmly address the current lack of commitment to tenure reform by both the government and Ghana and the customary authorities, as reported by the ESP final progress Report (UNDP 2020).

Further consideration of potential risks of Public Private Partnerships: The ESP is perhaps unusual in the portfolio of UNDP inasmuch as it is financed 100% by the private sector with co-financing and in-kind contributions from COCOBOD in terms of the use of its structures to support project implementation. This puts UNDP in the role of contractor to the private sector and largely responsible for successful delivery of the stated results of the project. Mondelēz International, that finances the Cocoa Life program and the ESP under CL, will no doubt be acutely aware of this. UNDP's instantly recognisable brand as global ambassador for sustainable development bolsters the credibility of Mondelēz's Cocoa Life program, in the eyes of the less-critical members of the global public and chocolate consumers, regardless of the strengths or weaknesses of program design and implementation. This has incalculable Public Relations (PR) value for Mondelēz (on which it capitalizes in its progress reports[116]), that markets the Cocoa Life Brand[117] as evidence of sustainability on every chocolate product it places on increasingly forest-risk sensitive international markets.

The association of UNDP with a program that does not measure or demonstrate its contribution to sustainable development due to a sub-standard M&E framework during phases 1 and 2 puts UNDP's reputation under the spotlight - in particular as national[118] and

[116] Mondelēz (2020). Cocoa Life: CFI progress report Côte d'Ivoire, Ghana (and Indonesia). https://www.cocoalife.org/~/media/CocoaLife/en/download/article/MDLZ_Cocoa_Life_CFI_Report-March_2020.pdf

[117] https://www.cocoalife.org/

[118] Tropenbos (2019). Drastic changes are needed in the cocoa sector to halt deforestation in Ghana. https://www.tropenbos.org/resources/publications/drastic+changes+are+needed+in+the+cocoa+sector+to+halt+deforestation+in+ghana ,

international observers[119] [120] [121] have begun to repeatedly question the effectiveness and efficacy of public and private efforts to regulate cocoa-driven deforestation in Ghana.

In line with UNDP's own Programme and Operations Policies and Procedures (POPP) on Public Private Partnerships[122], the UNDP management needs to consider how it can bring its considerable convening power to guide the cocoa sector more purposefully towards long term sustainability on all fronts - social, economic and environmental - while also assessing, managing and monitoring all potential reputational risks for UNDP.

Any future phase of the ESP Programme should be subject to a thorough review against the UNDP Guidelines on Cooperation between the United Nations and the Business Sector[123] and be subject to screening against the UNDP Risk Assessment Tool. This has been a mandatory requirement for any type of partnership between UNDP and a private sector entity since 2013, though it is not clear whether the previous phases of the UNDP partnership with the Mondelēz International Cocoa Life Program were subject to such a screening prior to signature of agreements. The screening exercise is likely to elicit a more in-depth evaluation of the range of risks associated with the planned investments and partnership, which, in the view of the Evaluation Team, were not sufficiently identified or monitored during ESP Phases 1 and 2 (see Section 4.6.2).

Reaching agreement on better institutional arrangements for coordination during any third phase of ESP: The cocoa and forest sectors in Ghana are a crowded space, with the Cocoa and Forest Initiative (CFI), Ghana Cocoa Forest REDD+ Program and other ongoing initiatives with many government agencies, private foundations and international donors involved, each with their own programme and governance structures. This is both positive but also problematic if not well coordinated.

UNDP is currently designing the third phase jointly with the Mondelēz Cocoa Life Programme to ensure alignment with relevant objectives as aligned with UNDP's CPD and Mondelēz's obligations under the CFI.

Before finalising the institutional arrangements for any next phase of ESP, this evaluation recommends a thorough joint review of the current mechanisms for cross-sectoral coordination and scope for further adjustment and alignment of coordination mechanisms

[119] Fountain, A. and Huetz-Adams, F. (2020) Cocoa Barometer, 2020. The Voice Network. https://www.voicenetwork.eu/wp-content/uploads/2021/03/2020-Cocoa-Barometer-EN.pdf;

[120] Mighty Earth (2019) Cocoa and African Deforestation:Assessing the Cocoa and Forests Initiative in Ghana and Côte d'Ivoire - https://www.mightyearth.org/wp-content/uploads/Problems-and-solutions-concerning-the-CFI-in-Ghana-and-Co%CC%82te.-final.pdf

[121] Fern : Tackling the Hidden Cost of Europe's Chocolate Habit. https://www.euractiv.com/section/energy-environment/news/tackling-the-hidden-cost-of-europes-chocolate-habit/

[122] UNDP (2016): Private Sector Partnerships https://popp.undp.org/SitePages/POPPBSUnit.aspx?TermID=a843cfef-088c-4a81-b797-ea33f77a089e&Menu=BusinessUnit and https://popp.undp.org/UNDP_POPP_DOCUMENT_LIBRARY/Public/Partnerships_Private%20Sector%20Partnerships.docx

[123] Guidelines on Cooperation between the United Nations and the Business Sector (Issued on 20 November, 2009). https://www.un.org/en/ethics/assets/pdfs/Guidelines-on-Cooperation-with-the-Business-Sector.pdf?web=1

with all such initiatives in accordance with the Paris Declaration on Aid Effectiveness (2005) and the subsequent Accra Agenda for Action (AAA, 2008)[124].

There are numerous candidates to facilitate the different components of a national programme on sustainable cocoa and subnational landscape or jurisdictional programmes. Possible candidates to lead facilitation of include Government agencies (Ministry of Lands & Natural Resources; Forestry Commission, COCOBOD); international Private Sector organizations such as the World Cocoa Foundation which has a strong national presence on the ground in Ghana; and NGOs such as IDH, ProForest, national NGOs, etc).

[124] https://www.oecd.org/dac/effectiveness/parisdeclarationandaccraagendaforaction.htm

8. Annexes

Annex 1: Terminal Evaluation ToR;

See attached document in .pdf format

Annex 2: TE mission itinerary, including summary of field visits;

No.	Date (2021)	District/ Community	Nature of Respondents	Total number of interviewees	Total number of Women
	Juabeso District				
1	22nd February	Adwumam	Cocoa farmers	26	14
2	22nd February	Juabeso	Implementing Partners	6	0
3	23rd February	Tiabante	Cocoa farmers	32	13
	Asunafo North Municipal				
4	24th February	Gyankotabuo	Cocoa farmers & CREMA	14	0
5	24th February	Sekyerekrom	Cocoa farmers & CREMA	27	7
6	24th February	Kasapin	CREMA Executives	5	0
7	24th February	Mim	Traditional Authorities	3	1
8	25th February	Akwaduro	Cocoa farmers & MTS	37	16
9	25th February	Anwianwian	Cocoa farmers & MTS	22	13
10	25th February	Goaso	Implementing Partners	10	0
	Amansie West District				
11	26th February	Manso Abore	Cocoa farmers	55	32
12	26th February	Antoakrom	Cocoa farmers	6	1
13	26th February	Kwakokrom	Cocoa farmers	19	4
	Sekyere East				
14	1st March	Ntumkumase	Cocoa farmers	18	8
15	1st March	Effiduase	Implementing Partners	8	4
16	2nd March	New Apaaso	Cocoa farmers	10	2
			Total	**298**	**115**

Annex 3. List of persons interviewed;

https://docs.google.com/spreadsheets/d/1wRAcIcYyH4pKOebg1DAhfG1SEEtNpMjOKn3Vh19gnjo/edit?usp=sharing

Annex 4 . List of documents reviewed;

See Footnotes

Annex 5. Evaluation question matrix (evaluation criteria with key questions, indicators, sources of data, and methodology)

See Matrix in separate document here:
https://drive.google.com/file/d/1IPHgjDqjASDzTw1e41jk8VJNDY4zX8zx/view?usp=sharing

Annex 6. Questionnaire used and summary of results;

See Evaluation Framework and questions here
https://drive.google.com/file/d/1IPHgjDqjASDzTw1e41jk8VJNDY4zX8zx/view?usp=sharing

Annex 7. Co-financing tables;

Not relevant; no co-financing was secured for the ESP.

Annex 8. TE rating scales);

See Table 1 on page 20

Annex 9. Signed evaluation consultant agreement form;

Attached in separate document

Annex 10. Signed UNEG Code of Conduct form;

Attached in separate document

Annex 11. Signed TE Report Clearance form;

Annex 12. TE Audit trail,

1st Review: 27 May 2021 Accessible here -
https://docs.google.com/document/d/1dtQ35eyDR_xEpCfeaCc-yIYGT9FOWNRgDmxQ9YFDPTY/edit?usp=sharing

2nd Review: 28 June 2021 *Accessible here -* *https://drive.google.com/open?id=1WwJ9vy-tC6Qr58xhOinhTaJy7ulQtTG-*