New Planting Procedure - Summary of Integrated Management Plan

NPP Reference Number	SCS-RSPONPP-000610	
Country of the NPP submission:	Nigeria	
RSPO Membership Number	2-0017-05-000-00	
Reference to the management unit management plan	Uyanga Oil Palm Estate Management Plan	
Name(s) of estate(s) covered under this management plan:	Uyanga Oil Palm Estate	

Guidance Notes:

This summary management plan shall indicate at a minimum but not be limited to the following:

- Key findings of the various assessments (e.g., potential minor environment and/or social risk requiring mitigation actions; total conservation areas).
- Key mitigation and monitoring regime, covering both the environmental and social aspects.
- Evidence of FPIC and key agreements with local communities (if any).
- An action plan describing operational actions consequent to the findings of the various assessments, referencing the grower's relevant operational procedures.
- Designation of the management team and responsible person for the implementation.

1	**SEIA**	**Social and Environmental Impact Assessment** **1. Social Impact Assessment:** The Social Impact Assessment (SIA), supported by stakeholder consultations, indicates that the proposed Uyanga Estate redevelopment is expected to deliver an overall positive socio-economic impact on the host communities and the wider region. The project is anticipated to create direct and indirect employment opportunities, improve household incomes, stimulate local businesses, and enhance infrastructure through Corporate Social

		Responsibility (CSR) programmes, including support for roads, education, healthcare, potable water, and community development. The project also presents opportunities for skills development and future market access for independent smallholders. Potential adverse social impacts identified include temporary disruption to livelihoods during plantation development, reduced access to some Non-Timber Forest Products (NTFPs), labour influx, and increased demand for social services. However, consultations confirmed that community farming activities are largely undertaken outside the plantation concession, and therefore the project is not expected to significantly affect local food production or customary land access. With continued stakeholder engagement, FPIC implementation, livelihood support measures, and an effective grievance mechanism, these impacts can be adequately managed. **2. Environmental Impact Assessments** The Environmental Impact Assessment (EIA), conducted in accordance with the Federal Ministry of Environment (FMEnv) guidelines and international best practices, identified both positive and potential adverse environmental impacts associated with the project. Key positive environmental outcomes include the productive redevelopment of an existing rubber plantation, protection of identified High Conservation Value (HCV) areas, improved biodiversity conservation, enhanced soil and water resource management, implementation of sustainable agricultural practices, and strengthened environmental monitoring programmes. Potential adverse impacts include temporary vegetation clearance, soil disturbance, localized erosion, dust and noise generation, increased waste generation, pressure on water resources, and disturbance to wildlife during plantation establishment. However, these impacts are expected to be temporary, localized, and manageable through the implementation of the Environmental Management Plan (EMP), biodiversity conservation measures, pollution control strategies, and continuous environmental monitoring. The overall findings of the Environmental and Social Impact Assessment demonstrate that the proposed redevelopment of the Uyanga Estate is environmentally and socially viable, provided that the recommended mitigation measures and management plans are fully implemented. From a social perspective, surrounding communities maintain secure customary land tenure systems and continue to practice diversified agriculture outside the plantation concession. Consequently, the project is not expected to significantly affect existing agricultural production or community access to farmland. Rather, the redevelopment is expected to stimulate local economic growth through employment creation, increased household incomes, improved infrastructure, enhanced community services, strengthened local businesses, and future market opportunities for independent smallholders. Overall, the anticipated socio-economic and environmental benefits of the project substantially outweigh the identified adverse impacts. With continued implementation of

the Environmental Management Plan (EMP), Social Management Plan (SMP), Corporate Social Responsibility (CSR) initiatives, FPIC commitments, stakeholder engagement programmes, and RSPO sustainability requirements, the project is expected to make a significant positive contribution to sustainable agricultural development, environmental stewardship, biodiversity conservation, and inclusive rural development within Cross River State.

Objective(s)	Action(s)	Timeline
In-migration/population increase	• Influx of migrant workers from neighbouring community and enhancement of social engagement, thereby increase community populations and social wellbeing • Social and Economic boost for the community through population increase • Prevent Adulteration of cultural values, through Awareness programs to promote cultural preservation due to influx of migrant.	Before commencement and during implementation of project
Social Infrastructure Development	• Development of Infrastructure (roads, power, markets, telecom, boreholes, staff housing, recreation within and outside the concession • Road grading/new road construction– Electricity extension– Market development– Telecom improvement– • Borehole provision– Staff quarters & recreation centre • Rehabilitations of the moribund clinic and schools.	Before commencement and during implementation of project
Employment opportunity and local business development	• Provision of over 4000 direct employment and over 2000 indirect employment through direct labour, contractors and sub-contractors • Opportunity for local development business boost through smallholders and outgrowers project development • Opportunity for local dwellers to engagement in FFB trading and supply	Before commencement and during implementation of project

		Ensuring food sufficiency	• Given that food crop production and processing form the backbone of subsistence, livelihood and income for the communities, Biase Plantations Limited, as part of its corporate social responsibility and community development policy, considers assisting local farmers to increase productivity through extension service support for smallholders and outgrowers within their project area. • To assist and partner with relevant agencies to train interested smallholders' farmers on Best Management practices. • Assist in rural road maintenance to reduce cost of transportation of food product from the farm to the market.	Before commencement and during implementation of project
		Enhance availability of NTFPs	• Train farmers on sustainable use of agrochemicals on their land for food crop farming so that they can continue to harvest NTFPs notably mushrooms.	Before commencement and during implementation of project
		Environmental Impact		
		Reduce air pollution	• Use dust suppression techniques on frequently used roads near community dwellings in the dry season or undertake surface improvement (such as gravelling) where possible. • Enforce speed limits on roads to reduce dust resulting from vehicular movement.	Throughout implementation of project
		Air Quality Deterioration	• Conduct regular maintenance of machinery and vehicles to minimize emissions. • Prohibit open burning of biomass; encourage chipping, composting, or mulching. • Implement speed limits on plantation roads to reduce dust generation.	Throughout implementation of project

		Prevent water pollution	• Establish and maintain buffers along water bodies (e.g. Calabar river) in line with recommendations in HCV-HCSA report. • Prohibit the use of agrochemicals within the buffer zones and ensure that only trained personnel are engaged in chemical application around these zones.	During land preparations and during project implementation
		Impact on Biodiversity and Land Use	• Develop a Biodiversity Management Plan (BMP) including habitat enrichment and replanting of native species. • Prohibit hunting, trapping, and disturbance of wildlife through strict enforcement of a wildlife protection policy. Within the conservation areas.	Before commencement and during implementation of project
		Soil Degradation and Erosion	• Apply erosion control structures such as contour ridges, silt traps, check dams, and grassed waterways. • Promote mulching and cover cropping to maintain soil moisture and reduce erosion. • Introduce soil fertility management using organic amendments and controlled fertilizer application based on soil tests. • Conduct routine soil quality monitoring to detect degradation early.	During Land Preparation and throughout the project implementations.
		Surface and Groundwater Contamination	• Use precision fertilizer application and avoid application before heavy rainfall. • Install monitoring boreholes to evaluate groundwater quality changes over time. • Establish chemical storage and handling protocols including bunded areas, spill kits, and proper labeling.	During Land Preparation and throughout the project implementations
		Increased Water Demand & Hydrological Alterations	• Use water-efficient irrigation technologies, e.g., drip or regulated deficit irrigation. • Develop a Water Abstraction Management Plan aligned with natural seasonal flow patterns. • Maintain and protect natural drainage channels to prevent flooding and downstream flow disruption.	Before commencement, During Land Preparation and throughout the project implementations

			• Rehabilitate degraded areas with vegetation to enhance infiltration and reduce runoff.	
		Waste Accumulation and Disposal Issues	• Implement a Waste Management Plan (WMP) covering segregation, recycling, and proper disposal of plastics and hazardous waste. • Compost organic waste for soil amendment or biomass energy. • Provide collection points and sealed containers for empty chemical containers, with disposal through licensed waste contractors.	During Land Preparation and throughout the project implementations

Responsibility for the implementation of these measures will include but not limited to:

- The Plantation Head: Ensure all resources as necessary are provided for effective implementation of the management recommendations.
- BPL Sustainability Manager: Overall oversight for implementation and monitoring of management measures for EMP
- EHS Manager: Enforcement of HSE protocols throughout the project lifetime
- Community Laison Officer: Community engagement and ensuring mutual benefited relationship between the host community and company.

2 **HCV areas and HCS forests**

Key findings from the Integrated HCV-HCSA assessment are summarized below:

The Integrated HCV–HCSA Assessment was conducted to meet RSPO NPP, Wilmar NDPE, and Nigerian regulatory requirements by ensuring all HCVs are identified, mapped, and protected before converting the existing rubber plantation to oil palm. The assessment confirmed the area is a long-established rubber plantation with no HCS forest or peat, no dependence by local livelihoods, strong FPIC engagement with eight communities, and manageable ecological values focused on riparian zones, a small swamp, and cultural sites.

- The AA is a long-established rubber plantation (since the 1950s).
- No High Carbon Stock (HCS) forest identified.
- No peat soils present (confirmed through ground-truthed soil surveys).
- Local livelihoods and food security do not depend on the AA.
- Eight (8) landlord communities engaged under FPIC.

The summary of identified HCVs, HCS forest patches and their management area are presented in the table below.

Table 2a Summary of identified HCVs, HCS forest patches and their management area

HCV Category	Status	Key Value Identified	Area in AA (ha)	Management Area (MA)
HCV 1	Present	Riparian corridors supporting RTE species (Yellow-casqued Hornbill – NT; Long-tailed Pangolin – EN)	397.04	100 m buffers (major rivers), 10 m buffers (streams)
HCV 2	Absent (AA)	No intact large-scale ecosystem	0.00	Not applicable
HCV 3	Present	Rare & threatened swamp ecosystem (NE AA)	1.85	**12.21 ha** (core + 100 m buffer)
HCV 4	Present	Water regulation, erosion control, fire prevention (riparian zones)	397.04	Same riparian buffers as HCV 1
HCV 5	Absent	No reliance on AA for food, water, NTFPs, hunting	649.91	Not applicable
HCV 6	Present	Iruphsanga shrine + 7 graveyards	0.87	Site-specific protection buffers

The areas identified for conservation from the HCV-HCSA assessment process includes only HCV areas as there were no HCS forests and community land use areas. The summary areas (in ha) for conservation are provided in the table 2a.

The distinction between the HCV 3 area and the HCV 3 management area is due to a buffer of 100 m provided around the swamp to protect it as recommended in the RSPO Manual on Best Management Practices (BMPs) for the Management and Rehabilitation of Riparian Reserves (Barclay et al. 2017). The HCV 3 area together with the 100 m buffer gives the HCV 3 management area. This also accounts for the distinction between the net total HCV area and the net total HCV management area.

Table 2b Summary of identified values

Values to be conserved	HCV-HCS areas (ha) within NPP	Management areas (ha)
HCS forest	0.00	0.00
Peat	0.00	0.00
HCV 1	397.04	397.04
HCV 2	0.00	0.00
HCV 3	1.85	12.21

HCV 4	397.04	397.04
HCV 5	649.91	649.98
HCV 6	0.87	0.87
Net total HCV area	652.63	663.06

Management and monitoring recommendations

Based on the identified HCVs, this section presents the threats to the identified HCV areas and provides management and monitoring recommendations to ensure the maintenance and/or enhancement of the HCV areas.

Threat assessment

The information for the threat assessment was obtained from the stakeholder consultations (including the affected communities, environmental NGOs and government agencies), field observation, and review of available previous information. The threat assessment approach was based on Salafsky & Margoluis (1999) and Brown & Senior (2014). The threat assessment methodology enabled the assessors to identify and analyse threats to the HCVs, considering the extent, likelihood and severity, as well as whether the threats were direct or indirect and internal or external threats.

As the AA is an existing rubber plantation, it should be noted that overall, the scale/magnitude of threats arising from the oil palm development project is expected to be lower compared to conversion from non-plantation areas to a new oil palm plantation. The threat assessment considered current as well as potential threats, and details are presented in the table below:

Table 2c: Threat to HCV areas

Value identified	Brief description of value present in AA	Main threats (Current, *C* / Potential, *P*)
HCV 1, 3 & 4	***HCV 1*** • 100 m buffer of Calabar and Iyang Ita Rivers; 10 m buffer of Idem Itoro and Dukwe Rivers and 10 m buffer of all streams in the AA • Habitat for wildlife including identified RTE species – Yellow-	***Encroachment and conversion of RTE habitats for farming (P)*** **Description:** Encroachment into HCV 1 buffer areas during land preparation by BPL or encroachment by workers in the camps into the HCV1 buffer areas for farming, especially the few old workers using abandoned areas of the rubber plantation for peasant farming. This could lead to the destruction of habitats and breaks in the buffers which also serve as wildlife corridor. **Likelihood:** Low for encroachment by BPL and medium to high for encroachment by workers

				casqued Hornbill (VU) and Long-tailed Pangolin (VU). • Connecting corridor from Cross River National Park and Oban Block Forest Reserve to other adjoining ecosystems. ***HCV 3*** • Swamp (vulnerable and RTE ecosystem) with 100 metre MA. Located in northern part of the AA ***HCV 4*** • Riparian buffers along Calabar and Iyang Ita Rivers (100 metre buffer on both sides as MA), Idem Itoro and Dukwe Rivers (10 metre buffer on both sides as MA) and all other streams in the AA (10 metre buffer on both sides as MA). These riparian buffers are important for protecting water catchments and prevention of	**Extent:** Low for BPL and low for workers (only few are farming in the AA who will be displaced) **Severity:** High as any encroachment will lead to long-term destruction of the encroached area. **Direct/indirect:** Direct **Internal/external:** Internal and external ***Hunting (C)*** **Description:** Hunting of wildlife including RTEs is practiced in the landscape, although not the main source of protein or a widely practiced activity. This could be carried out by workers of BPL or community members. A pangolin was reportedly killed a week before the full assessment fieldwork. **Likelihood:** High **Extent:** Low to medium **Severity:** High as it could result in the death/loss of RTEs. **Direct/indirect:** Direct **Internal/external:** Internal and external ***Bush fires (P)*** **Description:** Burning for land preparation by farmers, hunting, etc. especially outside the AA could lead to bush fires in the riparian buffers and cause destruction of habitat, breakages in the buffer area and wildlife corridor and death/loss of RTEs. **Likelihood:** High **Extent:** Low to high **Severity:** High as any area burnt will lead to long-term destruction of the encroached area. **Direct/indirect:** Direct **Internal/external:** Internal and external ***Logging and collection of fuelwood and NTFPs (C)*** **Description:** Logging for timber and collection of fuelwood and NTFPs (eg. medicinal plants)

				spread of fires within the AA and landscape.	are common in the landscape. Logging and unsustainable harvesting of fuelwood and NTFPs within the buffer areas could lead to destruction of habitats for RTEs and affect the structure of the buffer, thereby reducing its functionality in protecting the waterbodies and swamp. **Likelihood:** High **Extent:** Low to high **Severity:** Low to medium **Direct/indirect:** Direct **Internal/external:** Internal and external ***Erosion and sedimentation of waterbodies and swamp (P)*** **Description:** Clearing of buffer areas through encroachment during land preparation by BPL or from farming activities and burning in the buffer areas will lead to exposed soils, resulting in erosion and sedimentation of the waterbodies and swamp. **Likelihood:** High **Extent:** Low to high **Severity:** Low to high **Direct/indirect:** Direct **Internal/external:** Internal and external ***Pollution of waterbodies and swamps from agrochemical use (P)*** **Description:** Agrochemicals are commonly used in oil palm plantations and for peasant farming in the landscape. This could potentially lead to pollution of the rivers, streams and swamp especially when used for farming within the buffer areas through sediment transport into the water bodies and swamp. Breaks in buffer areas from farming and burning would also reduce its functionality in protecting the waterbodies and swamp. **Likelihood:** High

		Extent: Low to high **Severity:** Low to high **Direct/indirect:** Direct **Internal/external:** Internal and external
HCV 6	• Iruphsanga shrine in the southern part of the AA close to the Calabar – Akamkpa Highway • Seven graveyards within the AA, mostly close to the old workers' camps	***Clearing/destruction during land preparation or farming (P)*** **Description:** Accidental clearance or destruction of parts of the shrine and graveyards during land preparation for the oil palm project by BPL or by workers who farm in the AA. **Likelihood:** Low **Extent:** Low to high **Severity:** High as may result in permanent destruction of the cultural site. **Direct/indirect:** Direct **Internal/external:** Internal ***Desecration of cultural sites (P)*** **Description:** Workers, especially non-indigenes and newly employed workers who may not know and understand the traditions of the area may encroach into the cultural sites and carry out unauthorised activities within the cultural sites. **Likelihood:** Low **Extent:** Low to high **Severity:** Low to high **Direct/indirect:** Direct **Internal/external:** Internal

Table 2d Management and monitoring recommendations for identified HCVs

Value identified	Threats	Management areas and prescriptions	Monitoring recommendations
HCV 1, 3 & 4	▪ Encroachment and conversion of RTE habitats	▪ Physically demarcate, protect and preclude HCV 1, 3 & 4 areas (100 m buffer of Calabar and Iyang Ita Rivers; 100 m	▪ Regular monitoring of HCV 1, 3 & 4 boundaries during land clearing to check

			for farming ▪ Hunting ▪ Bush fires ▪ Logging and collection of fuelwood and NTFPs ▪ Erosion and sedimentation of waterbodies and swamp ▪ Pollution of waterbodies and swamp from agrochemical use	buffer around swamp; 10 m buffer of Idem Itoro and Dukwe Rivers and all streams) from development. ▪ Enhance the buffer areas through enrichment planting. ▪ Develop SOPs for HCV 1, 3 & 4 management areas. ▪ Training and sensitization of workers and local communities on conservation areas/ measures. ▪ Strictly enforce no burning policy for land preparation. ▪ Prevent burning, logging and farming within the buffer areas and swamp. ▪ Prevent hunting of RTEs irrespective of their location within the AA ***Follow up measures/ next steps*** ▪ BPL should map all streams encountered within the AA during land preparation and apply the above recommendations to them. ▪ This information from the mapped streams should be used to update the HCV 4 map and revise and finalize the summary map.	for accidental clearing/ encroachment. ▪ Periodic patrols to monitor HCV1, 3 & 4 demarcations (beacons, signages, etc.) ▪ Regular monitoring of unauthorised activities such as farming, logging, burning, etc. within the buffer areas and swamp. ▪ Regular monitoring and reporting on enrichment planting activities (e.g. species planted, quantity, area planted, survival rate, etc.). ▪ Periodic surveys on occurrence and distribution of RTE species. ▪ Review of implementation of SOPs to assess effectiveness.
			HCV 6 ▪ Clearing/ destruction during land preparation or farming ▪ Desecration of cultural sites (shrine and graveyards)	▪ Demarcate, protect and preclude the HCV 6 areas from development areas. ▪ Ensure unrestricted access to the cultural sites by traditional authorities/local communities. ▪ Sensitize workers and visitors on HCV 6 areas and respect for cultural norms and traditions.	▪ Collaborative monitoring to check encroachment and desecration ▪ Monitoring of effectiveness of sensitization programmes. ▪ Review of grievance records regarding HCV 6.

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<td>Summarized objectives and actions for the conservation and maintenance of the identified values are provided below:

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<tr><th>Objective(s)</th><th>Action(s)</th><th>Timeline</th></tr>
<tr><td>Mapping of streams and updating of maps</td><td>Collaborate with the affected communities, to protect the identified shrines and graveyard and cemetery.
All identify streams and any other stream or tributary which is encountered during land preparation which has not been mapped should be mapped.
This information should be used to update and finalize the HCV 4 and summary maps.</td><td>Before and during implementation of project</td></tr>
<tr><td>Conservation of identified values</td><td>Develop/Revise and implement SOPs on management and monitoring of HCV and HCS areas in line with relevant recommendations in HCV-HCSA report (e.g. riparian buffer areas etc.)</td><td>Throughout implementation of project</td></tr>
<tr><td>Monitoring of the Identified Areas</td><td>Continuous monitoring of the designated HCV areas for enhancements</td><td>Throughout implementation of project</td></tr>
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Responsibility for the implementation of these measures will include but not limited to:
• The Plantation Head: Ensure all resources as necessary are provided for effective implementation of the management recommendations.
• Assistant General Manager Uyanga: Development and management of plantation; implementation of best management practices; and oversight of implementation of all social and environmental mitigations measures.
• BPL Sustainability Manager: Overall oversight for implementation and monitoring of management measures for conservation of HCV/HCS areas
• EHS Manager: Enforcement of HSE protocols throughout the project lifetime
• Community Laison Officer: Community engagement and ensuring mutual benefited relationship between the host community and company.</td>
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<td>Stakeholder and local people engagem</td>
<td>Based on FPIC processes followed, below are summarized objectives and actions for implementation to ensure all relevant stakeholders benefit fairly from the project
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<tr><th>Objective(s)</th><th>Action(s)</th><th>Timeline</th></tr>
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	ent (FPIC process)	**Full implementation of the MOU signed with Landlord community**	• BPL to fully implements all agreement with the landlord communities as stipulated in the signed MOU. • Priority to be given to the community on project that they have capability to executive.	Throughout implementation of project
		Access to medical facility	• BPL to support the community and give assess at a subsidize rate to access the existing clinic in the concession. • Continuous support for the annual medical outreach.	Throughout implementation of project
		Access to clean water facility	• Access to clean drinking water remains a major concern across most of the communities. As such, it is a priority for BPL to provide adequate and sustainable access to clean drinking water for the landlord communities.	Throughout implementation of project
		Minimize impact of migrant workers on local socio-cultural structures	• It is recommended that the company gives priority to employing workers from the local communities, provided they have the requisite knowledge and expertise. • Furthermore, the company should endeavour to regularly sensitise migrant workers to respect the existing local socio-cultural structures and systems.	Before and during implementation of project

Responsibility for the implementation of these measures will include but not limited to:

- The Plantation Head: ensure all full implementations of the MOU signed with the landlord community and overall development and management of the plantation.
- BPL Sustainability Manager: Overall oversight for implementation and monitoring of management measures for conservation of HCV/HCS areas
- EHS Manager: Enforcement of HSE protocols throughout the project lifetime
- Community Laison Officer: Community engagement and ensuring mutual benefited relationship between the host community and company.

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<td>Soil and Topography</td>
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A detailed soil assessment was conducted at Uyanga Estate, including field surveys, soil profile pits, and laboratory analysis. The study evaluated soil characteristics, classification, and suitability for sustainable oil palm development.

Geology & Parent Material
• Dominant geology: Precambrian Basement Complex (crystalline igneous and metamorphic rocks)
• Secondary formations: Sedimentary rocks (sandstone and shale) including the Asu River Group
• Soils are largely derived from:
  ○ Granite (acid igneous)
  ○ Metamorphic rocks (schist)
  ○ Sedimentary materials

Soil Classification (USDA – Great Group Level)

The soils fall under three major orders:
• Oxisols
• Ultisols
• Entisols

Dominant Soil Groups:
• Kandiudox (Oxic soils) – ~41%
• Kandiudult & Hapludult (Ultisols) – ~39%
• Udorthents (Entisols) – ~19%
• Acrudox – ~1% (steep terrain)

The soils at Uyanga Estate are predominantly acidic, nutrient-deficient, and of moderate fertility, with sandy loam texture and low cation exchange capacity. While generally suitable for oil palm cultivation, they require intensive soil management and conservation practices to ensure sustainable productivity. However, the underlisted actions have been recommended to address the limiting factors and issues pertaining to the fertility status of the soils.
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<tr><th>Objective(s)</th><th>Action(s)</th><th>Timeline</th></tr>
<tr><td>Reduce risk of soil erosion on identified moderately steep slopes</td><td>Implement erosion control measures such as terracing, platforms and growing of cover crops to prevent erosion and possible loss of soil and nutrients.</td><td>During implementation of project</td></tr>
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Reduce high soil acidity	Use rock phosphate (250 kg/ha) or lime (0.51.0 ton/ha) to reduce acidity and boost crop growth.	During implementation of project
Enhance SOM to sustainable levels	Apply mulching, cover cropping, and organic manures to sustain organic matter contents	During implementation of project
Improve available soil Nitrogen levels	Apply Nitrogen fertilizers at 90-120kg per ha as urea or NPK compounds or blends. Alternatively, use poultry manure and cow dung applied at 5 t/ha to supply the required nitrogen.	During implementation of project
Improve available soil phosphorus levels	Apply 60 kg P_2O_5 per ha as triple super phosphate (TSP), di-ammonium phosphate (DAP) or NPK compound fertilizers	During implementation of project
Improve exchangeable bases (calcium, magnesium and potassium) to enhance levels of ECEC	• Apply rock phosphate or triple super phosphate or soluble calcium sources like dolomite and calciprill to improve soil calcium content. • Apply dolomite to improve soil magnesium content. • Apply potassium fertilizer to improve yield and quality of crops. • Apply soil conservation practices (terracing, soil erosion control, cover cropping, etc.)	During implementation of project

Responsibility for the implementation of these measures will include but not limited to:

- The Plantation Head: Ensure all resources as necessary are provided for effective implementation of the management recommendations.
- The Estate (Plantation) Manager/Eco Management Unit : Ensure all soil recommandations including crop production, Nutriment management are follows.
- Sustainability Manager: guide and ensure planting is not done on any steep slopes.

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<td>GHG</td>
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Greenhouse Gas (GHG) Emission Report

The GHG assessment for BPL Uyanga Oil Palm Estate was conducted by Proforest team, dated 19th June, 2026. The assessment team is confirmed to meet the NPP 2021 requirements, with the following qualities:

i. Knowledge of carbon emission accounting methodologies for above and below ground carbon stocks, including peat.

ii. Experience in verifying land cover maps and/or conducting carbon stock assessment in agriculture and/or forestry sectors.

iii. Experience and expertise in using remote sensing technology to estimate carbon stocks.

The estimation of GHG was done using a combined methodology comprising a comprehensive desktop review of relevant documents and the application of the latest version of the RSPO New Development GHG Calculator, the prescribed tool under the RSPO New Planting Procedure (NPP) for estimating greenhouse gas emissions and sequestration associated with new oil palm developments.

The main sources of emissions that were identified are:
• Land-use change,
• FFB transport fuel consumption, and
• Fertilizer usage.

The concession area does not contain peatlands and is largely composed of mineral soils. Hence, no emissions are anticipated from the potential decomposition of peat. The soil analysis also confirmed the absence of peat and this strengthens BPL’s compliance with RSPO’s no-peat development requirement. The desk-based study indicates that the NPP area consists of approximately 94% rubber plantation, 2% open land, and 4% of agriculture area. The current vegetation has moderate carbon sequestration potential. Hence, conversion of the NPP area to oil palm is expected to yield a net gain in carbon stock over time.
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<tr><th>Objective(s)</th><th>Action(s)</th><th>Timeline</th></tr>
<tr><td>To maximize sequestration of GHGs</td><td>• Protect conservation areas in line with recommendations in HCV-HCSA report such as maintaining buffer areas.
• Cultivation of cover crops especially on the land allocated for food crop production by communities.</td><td>During implementation of project</td></tr>
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		Emission reduction from fertilizer usage	• Inorganic fertilizers applied to address deficiencies based on soil and tissue sampling reports. • Stacking of palm fronds in the plantation and re-use of EFBs to serve as mulch. • Adoption of Good Agronomic Practices such as cultivation of nitrogen-fixing crops to minimize use of inorganic fertilizers.	During implementation of project
		Reduction in emission from fuel usage	• Use of fuel-efficient trucks to reduce number of trips associated with transport of FFBs	During implementation of project
		Responsibility for the implementation of these measures will include but not limited to: • Sustainability Manager: Overall oversight for conservation of HCV/HCS areas and monitoring of GHGs • Estate (Plantation) Manager/EMU : Crop production, Nutriment management		
6	**Acceptance of Management Plans**	**Name of Person Responsible**	**Voo Gin Fah**	
		Designation	**Plantation Head**	
		Signature		
		Date	**10/07/2026**	