



Assessment of High Conservation Values in Presco's Ologbo Extension II Concession, Nigeria

HCV Assessment

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- **Location of assessment:** Edo State, Nigeria
- **Dates of assessment (month/year):** December 2014 to February 2015
- **Size of assessment area (ha):** 2,806 ha
- **Planned land use for assessment area:** oil palm
- **Certification scheme:** RSPO
- **ALS Tier rating:** Tier 1

About Proforest

Proforest is an independent company working with natural resource management and specialising in practical approaches to sustainability.

Our work ranges from international policy development to the practical implementation of requirements on the ground, with a particular focus on turning policy into practice. Our extensive and up-to-date knowledge of the international context ensures that our work for individual companies and organisations is set within an appropriate framework. At the same time, we are able to bring a wealth of current practical experience to policy development processes and debates.

The Proforest team is international and multilingual and has a broad variety of backgrounds, ranging from industry to academia and NGOs. This allows us to work comfortably in many types of organisations, as well as in a range of cultures. We have in-house knowledge of more than 15 languages, including Mandarin, Malay, French, Spanish and Portuguese.

Proforest was set up in 2000. Our expertise covers all aspects of the natural resources sector, from forestry and agricultural commodities to conservation, supply chain management and responsible investment.

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Introduction and background

1.1 Purpose of the HCV assessment

This is a report of a full High Conservation Value Assessment (HCV) commissioned by Presco Plc of Nigeria. The report details the findings, conclusions and recommendations of a comprehensive and participatory independent HCV assessment of a proposed new oil palm development by Presco on a 2,806 ha of land in the former Ologbo Forest Reserve (OFR) in the Edo State of Nigeria. The assessment was carried out during December 2014 and February 2015 by Proforest.

The report outlines the methodology, process steps and the HCVs that were identified in the proposed concession area and contains proposed management and monitoring recommendations for Presco to adopt and implement in order to safeguard the HCVs that were identified. However, the report neither provides a detailed land use plan for the layout of the plantation in the plantable areas of the concession nor does it contain detailed standard operating procedures (SOPs) that must guide Presco operations. These are operational requirements and Presco is expected to consider these requirements prior to plantation development activities.

Although the HCV assessment process started before coming into force of the HCV Resource Network (HCVRN) Assessor Licensing scheme (ALS), this report has been developed following the new ALS requirements and all other guidelines.

SIAT is an agro-industrial group of companies specialised in upstream plantation development and downstream processing operations. SIAT's operations in the agriculture sector in Africa focus on oil palm and rubber plantation development with increasing interests in cattle ranching. The company currently has four oil palm operations in three countries including GOPDC in Ghana, SIAT in Gabon and Presco and SIAT Nigeria both located in Nigeria. SIAT is a member of the Roundtable on Sustainable Palm Oil (RSPO) and hence is committed to working towards RSPO certification for all of its oil palm plantations. SIAT is currently in the process of achieving RSPO certification for the GOPDC and as part of its commitments to comply with the RSPO Partial certification requirements

About Presco

Presco Plc., one of the subsidiaries of SIAT, is a public listed liability company established on 24th September 1991 under the Nigerian Laws. The company is headquartered at Obaretin Estate in the Edo State of Nigeria. Presco operates three estates: Obaretin estate in Edo State with a total area of 5,631 ha, Cowan estate in Delta State with a total plantation area of 2,558 ha and the Ologbo Estate in Edo State. The Cowan and Obaretin Estates were existing plantations that the company inherited while the Ologbo plantations were established by Presco in a former forest reserve land. Presco has been operating in the Ologbo FR since 2007 when it began its first oil palm plantation after the State Government de-reserved about 7,300 ha of the badly degraded parts of the forest which had previously undergone state sanctioned Taungya system of farming.

Presco acquired this 2,460 ha (hereafter called Ologbo Extension II concession) from the State Government in two parcels measuring 3,922 ha and 346 ha as further extension to Presco's Ologbo Estate. As a member of RSPO, Presco intends to ensure the development of the newly acquired concession meets RSPO New Planting requirements and thus requested Proforest to undertake a HCV assessment prior to land conversion, in line with the RSPO Principle 7 and the NPP.

The purpose of this full HCV assessment is to undertake a comprehensive and participatory assessment of HCVs in Presco Concession Extension II and to identify any area required to maintain or enhance one or more of the six HCVs and local people's land that may be located within the concession. Specific objectives of this HCV assessment are to:

- Identify all HCVs and potential HCVs in the concession whose presence or integrity could be impacted by the proposed oil palm plantation development. This is to be carried out in consultations with all relevant stakeholders
- Identify existing or potential threats to the identified HCVs
- Mapping of all localised HCV areas
- Provide recommendations for the management, monitoring and protection of the identified HCVs in the area.

The process steps and activities conducted during this assessment were all aimed at demonstrating compliance with the RSPO's NPP and the new HCV RN Assessor Licensing Scheme requirements.

RSPO requirements on HCVs

The RSPO principles and criteria contain a set of mandatory requirements for new oil palm plantations intending to be certified by the RSPO. These requirements are contained in Principle 7 of the RSPO principles and criteria (P&C), and requirements on HCV in Criterion 7.3, which states that "*New plantings since November 2005 have not replaced primary forest or any area required to maintain or enhance one or more High Conservation Values*". The RSPO's New Planting Procedure (NPP) also contains additional requirements for new plantings from 1st January 2010, but the NPP is not relevant to this HCV assessment as the Ologbo estate plantings started in 2007. Thus, only the requirements listed under Principle 7 apply to this report, and Presco complied with indicator 7.3.2 by conducting an HCV assessment prior to any conversion and new plantings. This report recommends in full the required HCV management and monitoring actions required by Presco to comply with Criterion 7.3.

1.2 Overview of the reference used

High Conservation Values (HCVs) refer to biological, ecological, social or cultural values considered outstandingly significant or critically important at the national, regional or global level and which require special measures for their maintenance and/or enhancement. The HCV concept aims to identify whether these values are present and to develop appropriate management and monitoring strategies to maintain and/or enhance the values. The concept was originally developed in 1999 by the Forest Stewardship Council (FSC) and has since been widely used in the context of FSC certification for sustainable forestry. The HCV approach was adopted by the RSPO and incorporated into the RSPO's first P&Cs in 2005. The six categories of HCVs and their definitions are listed in Box 1.

A key objective of this HCV assessment report is to undertake a comprehensive and participatory assessment in line with current best practice guidance on HCV identification, management and monitoring. Therefore, this report refers in particular to the following guidance documents:

1. Brown, E., N. Dudley, A. Lindhe, D.R. Muhtaman, C. Stewart, and T. Synnott (eds.). 2013 (October). Common Guidance for the identification of High Conservation Values.

HCV Resource Network. <https://www.hcvnetwork.org/resources/cg-identification-sep-2014-english>

2. Brown, E. and M.J.M. Senior. 2014 (September). Common Guidance for the Management and Monitoring of HCVs. HCV Resource Network. .

<https://www.hcvnetwork.org/resources/cg-management-and-monitoring-2014-english>

There is currently no HCV National Interpretation for Nigeria. However, as an alternative, this report makes reference to other reports from within the West and Central African regions, the HCV National Interpretations (NIs) available Ghana (2006) and Gabon (2008). However, these NIs are now over 7 years old and thus are not considered comprehensive. A more recent reference used here is ZSL's guide to conserving HCV species and habitats in West African oil palm landscapes.

This HCV assessment report makes reference to numerous other references throughout that are cited whenever used in the document and listed in full in the References.

Box 1: HCV definitions

HCV 1: Concentrations of biological diversity including endemic species, and rare, threatened or endangered (RTE) species that are significant at global, regional or national levels.

HCV 2: Large landscape-level ecosystems and ecosystem mosaics that are significant at global, regional or national levels, and that contain viable populations of the great majority of the naturally occurring species in natural patterns of distribution and abundance.

HCV 3: Rare, threatened, or endangered ecosystems, habitats or refugia.

HCV 4: Basic ecosystem services in critical situations including protection of water catchments and control of erosion of vulnerable soils and slopes.

HCV 5: Sites and resources fundamental for satisfying the basic necessities of local communities or indigenous peoples (for example for livelihoods, health, nutrition, water), identified through engagement with these communities or indigenous peoples.

HCV 6: Sites, resources, habitats and landscapes of global or national cultural, archaeological or historical significance, and/or of critical cultural, ecological, economic or religious/sacred importance for the traditional cultures of local communities or indigenous peoples, identified through engagement with these local communities or indigenous peoples.

1.8 HCV Tier rating

The HCV Resource Network Assessor Licensing Scheme requires HCV lead assessors to rate each new HCV assessment according to a predefined tier rating system. Under the system, HCV assessments are categorised into Tier 1 and Tier 2. The Tier rating is based on the level of perceived risk associated with the HCV assessment. The table below provides the details of the criteria for rating HCV assessments. It also concludes on the Tier system for this assessment based on the information provided by the stakeholders consulted including the management of Presco, state government officials and the local communities as well as the assessors own information. According to the HCV Resource Network Assessor Licensed Scheme requirements, a HCV assessment should be classified as Tier 1 if the response to one of the six main issues in Table 6 below is “YES”.

Indicators of potential risk and impacts	The assessment is Tier 1 if the response to one or more of the following is YES	Assessor’s response
Rating		
Scale of project: the overall area (ha) affected by production activities.	Will the operation cover or affect more than 50,000 ha	No. The total area of the concession under consideration is 2,806 ha
Intensity		
Conversion of natural ecosystem or habitat: a change from the natural ecosystem or habitat composition and structure to forestry plantation, agriculture or other land cover/ land use.	Is conversion of more than 500 ha of natural ecosystem or habitat planned	No. the recommended areas for planting has previously been cleared for farming under the government sanctioned Taungya system.
Risk		
Experience level of HCV assessor: while an assessor holds a provisional licence, a peer review is required as an additional means of quality assurance.	Does the lead HCV assessor hold a provisional licence?	Yes

Threats to biodiversity: production activities that may disturb or damage a national or international priority biodiversity area.	Does the project area contain, border or overlap with any priority biodiversity areas?	No.
Local and indigenous people: populations of people that overlap and/or use resources in the project area	Are there local or indigenous peoples living in or using the area that have claims to land, water and or natural resources in the project area?	No. Local people were allowed by government to use the land for taungya farming but they didn't have and did not claim right to the land or resources on the land.
Within certification schemes. If used outside of a widely recognised certification scheme, there is a higher risk that complementary safeguards may be lacking.	Is the HCV assessment taking place outside of a recognised certification scheme?	No. The client is a member of RSPO and the assessment is being conducted as a requirement for meeting the RSPO requirements.
Result		Tier 1

The HCV Resource Network Assessor Licence Scheme, requires that Tier 1 HCV assessment project includes a scoping study prior to the full HCV assessment. It also requires the report of the assessment to be peer reviewed by a HCV Resource Network approved peer reviewer. Given the outcome of the above HCV assessment rating requirements, this assessment is classified as Tier 1.

Assessment findings/HCV identification

This section presents an overview of the HCVs that were identified in Presco's Ologbo oil palm estate. For each of the HCVs, information is provided about their identification, current status and potential threats to their continued existence. The definitions and justifications used for the presence, potential presence or absence of HCVs follow the 2013 Common Guidance for the identification of High Conservation Values.

As previously stated, there is no HCV National Interpretation for Nigeria. Therefore, this report refers to globally applicable data sources and definitions used in the Common Guidance, and to some extent to the HCV National Interpretations for Ghana and Gabon and ZSL's guide to conserving HCV species and habitats in West African oil palm landscapes.

Table 5: Summary of HCV assessment findings

HCV	Definition	Brief description and justification		
		Present	Potential	Absent
1	Species diversity. Concentrations of biological diversity including endemic species, and rare, threatened or endangered (RTE) species that are significant at global, regional or national levels.			
2	Landscape-level ecosystems and mosaics. Large landscape-level ecosystems and ecosystem mosaics that are significant at global, regional or national levels, and that contain viable populations of			

HCV Management and Monitoring

This section includes assessment of the real and potential threats to HCVs identified in the assessment area, management recommendations to ensure the maintenance or enhancement of HCVs present in the concession, and monitoring recommendations to determine if the HCVs are being maintained over time.

1.16 Threat assessment

Threats to identified HCVs in the concession were assessed through direct field observations of activities in and around the HCV areas, consultations with local communities and community groups, previous experience of the assessment team in the area, the assessment team’s knowledge of palm oil plantation development, and reports of previous studies undertaken in the area.

Table 8: Threats to Identified HCVs in the concession

HCV	Brief description of value present in assessment area	Main threats
3	Rare, threatened or endangered ecosystems: The swamp ecosystem south of Plot 1 of the concession	<p>Swamp ecosystems have unique bio-ecological dynamics and species which must be maintained and/or enhanced. The swamp ecosystems in the concession is however fragile and vulnerable due to its location in a vastly degraded and agrarian landscape. The threats to the integrity of the swamp ecosystem includes:</p> <p>Logging</p> <p>During the field assessment, logging and chainsaw lumbering was observed to be taking place in parts of the swamp conservation area. The construction of field roads by Presco for plantation management purposes could further facilitate chainsaw lumbering in this area due to improved accessibility, and could result in the degradation of the area which is part of the only relatively less disturbed forest vegetation in the Ologbo reserve.</p> <p>Cattle herding</p> <p>The activities of nomadic herdsmen were observed in the concession quite close to the swamp conservation area. It was observed that herdsmen had fell a huge number of trees in the planted areas of the concession to provide fodder (leaves of trees) to their cattle in the dry season. The herdsmen were also noted to have set fire to extensive portions of the concession to induce sprouting of fresh grass</p>

to feed their cattle. The activities of these herdsmen, if not checked, could be extended into the swamp area in the concession and destroy the unique swamp ecosystem.

Farming

There is increasing demand for farmland by farmers from the local communities who have been evicted from previous concession areas. Additionally, a lot of farmers from around the Ologbo community complained about the distance to the newly allocated land in the north of the reserve for farming. The farmers also complained about low soil fertility, hence low crop yields, in the newly allocated farming area. Given the proximity of the swamp in the concession to the Ologbo community, coupled with the known fact that swamps have fertile soils suitable for agriculture, there is the possibility of local farmers clearing areas in and around the swamp for farming. Farming within the swamp would invariably result in increased erosion and runoff, sedimentation of the river, chemical pollution from use of agrochemicals, and eutrophication from fertilizer use. It could also alter the unique dynamics of the swamp biota.

Hunting

The fauna survey identified the swamp areas as providing refuge for a variety of wildlife species. Local communities confirmed this finding during consultations and stated that the swamp areas within the reserve are the only remaining worthwhile hunting grounds for bush-meat. This poses potential threat to the wildlife in the swamp which may be hunted for meat.

Plantation agrochemical use

Oil palm plantation development involves the use of agrochemicals (herbicides, pesticides, etc.). These chemicals, if used close to the swamp in large quantities, or if not applied and disposed of properly, could pollute the water in the swamp and subsequently the Ossiomo river through leaching into ground water and runoff. The chemical pollution could destroy aquatic life in the swamp and in the river.

Plantation land preparation and road construction

If the swamp area is not adequately delineated and protected, it could suffer considerable damage during land preparation and road construction which would adversely reduce its extent and function.

4.1 Areas critical to water catchment: The swamp vegetation in Plot 1 of the concession provides a buffer between the plantable area and the Ossiomo river which flows along the eastern and southern boundaries of the concession

Logging

Logging within the swamp (as explained under threats to HCV 3 above), if not checked, would reduce the vegetation cover. This would reduce the capacity of the swamp to moderate stream flow, stabilize the terrain, reduce river bank erosion, regulate runoff, trap sediments and promote infiltration of sediment-borne nutrients and pesticides. This would affect the water quality of the Ossiomo river on which some communities depend occasionally for water for household use.

Farming

Farming in the swamp (if it occurs for reasons explained under threats to HCV 3 above), would have the same effects as logging (i.e. reduced vegetation cover leading to reduced capacity of the swamp to moderate stream flow, stabilize the terrain, reduce river bank erosion, regulate runoff, trap sediments and promote infiltration of sediment-borne nutrients and pesticides). The water

	<p>could also be polluted as a result of the use of agrochemicals on the farms and could have adverse health implication for communities who occasional depend on the river.</p> <p><u>Plantation land preparation and road construction</u></p> <p>Heavy earth-moving machinery are used in land preparation and road construction. If the areas to be prepared for planting and for road construction are not adequately delineated, operations are not properly planned, and operators of these machinery are not adequately guided, considerable damage could be done to portions of the swamp vegetation. This would negatively impact the function of the swamp to provide critical water catchment functions.</p> <p><u>Plantation agrochemical use</u></p> <p>Use of agrochemicals as explained for HCV 3 above could pollute the water in the swamp and the Ossiomo river. This could have health implications for communities downstream who occasionally depend on the river for fish and for water for household use.</p>
<p>6 Areas critical to local communities' traditional cultural identity: The Ologbo community mentioned that the Agbaraa and Aken shrines are located in the swamp area (even though the assessment team could not verify their existence)</p>	<p>The Agbaraa and Aken shrines, if confirmed to exist, could face threats from conversion of the swampy area for farming, and from logging and lumbering activities.</p>

1.17 HCV Management Recommendations

Given the level of degradation of the original forest cover of this concession and the fact that there are no biological features considered significant at the national or regional level beside the swamp ecosystem, and the fact that the area has already been converted to farms, it is recommended that this concession can be converted **with some appropriate management strategies for maintaining areas with exceptional conservation values. This area can therefore be converted into oil palm plantation with the exception of the HCVs and HCVs management areas described in this report.**

Subsequently, this section presents recommendations for managing the identified high conservation values in the concession, should Presco go ahead to convert the new Ologbo Extension II concession into oil palm plantations. The aim is to ensure the continued existence of identified HCVs and minimise all likely adverse impacts. Key areas that need management interventions are described generally, and reference is made to the specific High Conservation Values that specific management interventions apply.

All the identified HCVs are located within the swamp area in Plot 1 of the concession. Coincidentally, Presco, in agreement with the Edo State Forestry Department, has already set this area aside to be managed as a conservation area. No plantation activity will therefore take place within the swamp area. The assessment team also observed during the field assessment that Presco has already assigned 'Eco guards' to the swamp conservation area to patrol and protect it from illegal activities. This is commendable and it is strongly recommended the Presco continues with this exercise, in addition to the recommendations in Table 9 below

Table 9: HCV management recommendations

Thematic area	HCV reference	Management recommendations
<p>Maintenance of the swamp ecosystem, riparian vegetation, water catchment functions, water resources and water quality</p>	<p>3, 4.1</p>	<p>It is recommended that the entire swamp area within the concession, and the associated riparian vegetation on the bank of the Ossiomo river be managed as a contiguous conservation zone. It is recommended that a buffer zone should be created along the edges of the swamp area close to the plantable portions of Plot 1 of the concession in order to protect the swamp ecosystem from spill-off effects of plantation operations. Buffer zones are generally recommended for all development projects. In terms of agro-industrial plantations (such as oil palm development), it is essential to give consideration to the additional threats posed by erosion and potential water pollution from agro-chemicals application. The role of buffer zones in managing run-offs that could affect important conservation values in the riparian ecosystems is thus very important (Thang and Chappell, 2004; Chappell <i>et al.</i>, 2007).</p> <p>It is recommended that the width of the buffer zone separating the swamp area from the plantable area should be at least 100 metres. This buffer zone would consist largely of planted areas of Gmelina and farm follows situated along the inner boundaries of the swamp, and which are very distinct from the swamp vegetation.</p> <p>Land preparation</p> <p>It is recommended that Presco ensures a non-movement of machinery in the buffer zone and also to adopt a strict Zero Cutting policy in the buffer zone. In particular, land preparation teams must be trained to carry out their operations such that they avoid unintended damages to the swamp area. Areas where land preparation activities are to be undertaken near the swamp should not only be marked on maps, but also be clearly delineated and visibly marked on the ground.</p> <p>Given that the swamp area is located at the extreme south-eastern edge of the Ologbo reserve, and given that the swamp area does not connect directly to Presco’s other concessions within the reserve (there all alternative access routes), construction of roads in the swamp area must be avoided.</p> <p>Logging and lumbering</p> <p>Presco should intensify patrols in the swamp conservation area by the Eco-guards to deter logging and lumbering activities. The company should liaise with the Edo State Forestry Department and the State security agencies to arrest and sanction persons who may be found undertaken such operation in the conservation.</p> <p>Farming</p> <p>Presco’s Eco-guards should patrol the area regularly to ensure that no conversions to farmlands takes place.</p> <p>Presco should also liaise with the local communities, the Edo State Forestry Department and other relevant institutions to explore the possibility of allocating land outside the concession and closer to the Ologbo and Obayantor communities south of the reserve (in addition to the earlier allocated land north of the reserve) for farming under agreeable terms. This would address the concerns of farmers about the insufficiency of the presently allocated land</p>

	<p>to meet the demand for farmland, and also address the issue of the distance of the presently allocated land to the communities south of the reserve. Regarding farmers' complaints about low soil fertility and low yield in the presently allocated farming area, Presco could collaborate with the Edo State Ministry of Agriculture and other institutions to supply higher yielding crop (mostly cassava) varieties and farm inputs (mostly fertilizer) to the farmers under agreed terms. This could be implemented as part of Presco's Corporate Social Responsibility policy.</p> <p>Presco should give farmers in the concession sufficient notice and time to harvest their annual crops before commencing operations. For farmers who have perennial crops (e.g. plantain and pineapple), Presco should contract the relevant institution to undertake crop valuation based on which compensation will be paid to the farmers.</p> <p><u>Agrochemical use</u></p> <p>Use of agrochemicals including pesticides, herbicides and fertilisers in areas closed to the buffer zone should be controlled, including controlled dosage to avoid excessive environmental loads, avoidance of spraying into buffer zones, avoidance of accidental spillages, safe handling and cleaning of spraying equipment and controlled disposal of rinsing water, and safe storage and disposal of containers. These measures need to be developed into Standard Operating Procedures (SOPs). Staff and workers should be trained on these SOPs and they must be able to demonstrate adequate understanding and be able to comply with them.</p>
<p>Protection of wildlife in the swamp area 3</p>	<p><u>Hunting</u></p> <p>The Eco-guards should look out for activities of hunters in the swamp area. Any unusual activity should be reported to the appropriate institutions for action to be taken.</p> <p><u>Cattle herding</u></p> <p>Cattle herding should be strictly prohibited in the swamp conservation area.</p> <p><u>Land preparation</u></p> <p>No land preparation activity should take place in the swamp and its associated buffer zone.</p> <p>It is also recommended that land preparation activities in the plantable portion of Plot 1 of the concession are planned to start from areas further away from the swamp conservation area so that wildlife would have the chance to move into the conservation area through the buffer zone.</p>
<p>Protection of shrines 6</p>	<p>Presco should engage the communities to determine the existence of the supposed Agbaraa and Aken shrines in the Swamp area. If found to exist, their location should be mapped. Consultation should then be undertaken with the Ologbo community to determine the best means of protection. Given that the shrines, if present, would be in an area already set aside for conservation in which no plantation operation will take place. Presco should therefore not be obliged to pay any appeasement fees. In most cases, the management of HCV 6 areas is usually left in the control of the communities concerned without the company having to intervene. It is therefore suggested that Presco allows unhindered access of the shrines to the communities to undertake their cultural activities.</p>

Synthesis

HCV	Definition	Brief description and justification		
		Present	Potential	Absent
1	Species diversity. Concentrations of biological diversity including endemic species, and rare, threatened or endangered (RTE) species that are significant at global, regional or national levels.			
2	Landscape-level ecosystems and mosaics. Large landscape-level ecosystems and ecosystem mosaics that are significant at global, regional or national levels, and that contain viable populations of the great majority of the naturally occurring species in natural patterns of distribution and abundance.			
3	Ecosystems and habitats. Rare, threatened, or endangered ecosystems, habitats or refugia.	In Plot 1		
4	Ecosystem services. Basic ecosystem services in critical situations, including protection of water catchments and control of erosion of vulnerable soils and slopes.	In Plot 1		
5	Community needs. Sites and resources fundamental for satisfying the basic necessities of local communities or indigenous peoples (for livelihoods, health, nutrition, water, etc...), identified through engagement with these communities or indigenous peoples.			
6	Cultural values. Sites, resources, habitats and landscapes of global or national cultural, archaeological or historical significance, and/or of critical cultural, ecological, economic or religious/sacred importance for the traditional cultures of local communities or indigenous peoples, identified through engagement with these local communities or indigenous peoples.	In plot 1		

Presco has acquired a new concession within the Ologbo Forest Reserve in Edo State of Nigeria for oil palm plantation development. The new concession is comprised of two plots, Plot 1 and Plot 2. The concession is largely degraded and bare in many places, with farms, old fallows, and saplings of gmelina and teak plantations dominating the vegetation.

As can be seen from the HCV identification table above, HCVs 3, 4 and 6 were identified to be present in Plot 1 of the two plots.

In the south of Plot 1 is a swamp vegetation which is part of the remnant relatively less disturbed vegetation in the reserve. The Ossiomo River flows along the outer boundaries of the swamp.

In compliance with the RSPO requirements, an assessment was carried out to identify HCVs that may be present in the concession and make recommendations for their

management and monitoring in order to maintain or enhance those values. The results of the assessment culminated in the following conclusions regarding the presence of HCVs:

- Given that swamp ecosystems are becoming rare due to increasing drainage for agriculture owing to their fertile soils, and given that the swamp areas contain unique biota, and given that the swamp area in the concession is part of a contiguous refuge for wildlife in the landscape, the swamp area has been identified as **rare ecosystem** which requires protection and is classified as **HCV 3**.
- The swamp in the concession and associated riparian vegetation on the bank of the Ossiomo River perform critical water catchment functions. This includes moderation of stream flow, stabilization of the terrain, reduction of river bank erosion, regulation of runoff, and trapping of sediments and promote infiltration of sediment-borne nutrients and pesticides. These safeguard the quality of the water flowing in the river on which some communities downstream occasional depend on for fish and as source of water for household use. The swamp vegetation is thus classified as **HCV 4.1**.
- The Ologbo community mentioned during consultations that they had two shrines, the Agbaraa and Aken shrines, located within the swamp area of the concession. The assessment team was however unable to verify the existence and location of these shrines because the community explained that non-natives were not allowed in the shrine area. It has therefore been recommended that Presco follows up to verify the existence and locations of these shrines. On this basis, the shrines are considered as areas critical to local communities' traditional cultural identity and classified as **HCV 6**.

It must be noted that all the identified HCVs are located within the swamp area which has already been set aside for management as a conservation area. Given that the identified values are interrelated due to their interdependence, some cross-cutting management and monitoring recommendations have been made for their maintenance and/or enhancement. These include:

- Mapping and delineation of all HCV areas
- Protection of identified HCV through prohibition of activities such as logging, farming, cattle herding, road construction, land preparation and related activities in the swamp area
- Creation of a buffer zone to protect the swamp area from spill-over effects of plantation activities
- Training of field staff to be able to implement HCV management activities on the ground
- Engagement of local communities in designing and implementing HCV management measures
- Provision of alternative livelihood options for local communities to reduce dependence on the HCVs
- Presco's contribution to local development as a means of minimising the impact of conversion of the land to oil palm plantation and the attendant loss of livelihood options
- Monitoring of effectiveness of management measures
- Implementation of corrective actions for lapses in effectiveness of management measures.

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