PROJEK PEMULIHAN TANAH GAMBUT PAHANG (PPRP)

FIRST MONITORING REPORT SUMMARY

FIRST MONITORING REPORT
(February 2024-January 2025)

PROJEK PEMULIHAN TANAH GAMBUT PAHANG
ENGGANG

SOUTHRIDGE

Project title	Pahang Peatland Restoration Project
Project ID	5474
Project lifetime	1 February 2024 – 14 May 2083; 59-year lifetime
Project location	Malaysia, Pahang State, Pekan and Rompin districts
Project proponent(s)	Enggang (Pekan) Sdn Bhd
Validation/verification body	Earthood Services Ltd
Public comment period (1 month period)	8 August 2025 – 7 September 2025
Audit Date	Starting from September 2025

1. SUMMARY OF PROJECT BENEFIT

1.1 Project Benefit (SECTION 1.1)

Outcome or Impact	Achievements during the Monitoring Period (also during the Project Lifetime since this is the first monitoring report)
1) Reduced peatland forest fire incidence through canal blocking, the development of near real time monitoring systems for early detection and the establishment of a fully equipped in-house firefighting team integrated into regional firefighting systems including government agencies and local NGOs. The benefits of this include a reduction in the frequency and scale of haze events, which positively impacts the respiratory health of local communities and helps mitigate economic losses in the wider area.	• 74 canal blocks constructed to rewet peatland, reducing the risk of fire ignition and spread. • Fire Emergency Response Team (FERT) established, consisting of 20 trained and fully equipped personnel. • Integrated into regional firefighting systems, collaborating with government agencies and NGOs. • Custom-built near real-time fire monitoring system using satellite imagery, drones, and ground sensors has been developed and deployed. • A total of 109 fire suppression operations were carried out, some of which were supported by conducted, with some guided by the government fire brigade. • Fire awareness campaigns and village-wide consultation events were conducted held across 16 villages to educate communities and improve early response. • A total of 6.1 km of fire breaks were constructed as part of the fire prevention infrastructure.
2) Preservation and revitalization of the indigenous *Jakun* culture and traditions through targeted investments in community-requested programs aimed at restoring a forest-oriented culture that is increasingly threatened by modernization. By empowering younger generations to reconnect with their cultural heritage, these efforts will foster stronger stewardship of land and natural resources.	• Employment of *Jakun* staff to facilitates culturally appropriate engagement while and ensuring trust and representation. • Community-requested programs were co-designed to support traditional knowledge, forest-oriented lifestyles, and cultural practices. • Participatory mapping and consultation sessions were conducted within 16 *Jakun* villages to document land use, cultural values, and forest-dependence. • Cultural heritage areas identified using the High Conservation Value (HCV) method and protected through project zoning and planning. • Engagements with *Jakun* youth and elders to incorporate traditional ecological knowledge into forest stewardship. • Community Learning Hub development has been initiated to promote intergenerational knowledge transfer, including storytelling, traditional skills, and vocational training relevant to *Jakun* identity.

	• Capacity-building initiatives were designed to be culturally sensitive and gender-responsive, ensuring inclusive participation.
3) Protection and restoration of an area that forms primary linkages in Malaysia's Central Forest Spine Master Plan (CFSMP) that aims to connect habitats of the critically endangered Malayan tiger (*Panthera tigris jacksoni*) along the length of Peninsular Malaysia.	• Conservation of 96,569 ha of tropical peat swamp forest—habitat for at least 13 Critically Endangered and Endangered species (e.g., Raffles' Banded Langur, Wrinkled Hornbill, Flat-headed Cat, Malay Tapir, Ramin Melawis, Meranti Paya). • Habitat restoration and hydrological rewetting through 74 canal blocks improved ecosystem conditions and enhanced habitat quality. • SMART patrolling system implemented with trained field teams to prevent poaching and monitor wildlife presence. • Camera trap biodiversity survey was launched in May 2024 to monitor presence and movements of rare, threatened and endangered species. • Bird biodiversity surveys were conducted (both monsoon and off-monsoon seasons) to track avian diversity as an indicator of ecosystem health. • 13Two community events were organized to raise awareness about biodiversity, poaching risks, and species protection. • No logging or land conversion permitted in the Initial Project Area, ensuring intact forest corridors and ecological connectivity.

2. ACHIEVEMENT OF SUSTAINABLE DEVELOMPENT GOALS (SDGS) (SECTION 2.1.12)

This project supports the United Nations 2030 Agenda, the Eleventh Malaysia Plan (RMK-11) and the SDG Roadmap by contributing to 12 Sustainable Development Goals (SDGs). It promotes poverty reduction, health, education, gender equality, and access to clean water. The project creates employment opportunities, reduces inequality, and fosters sustainable communities through peat swamp forest restoration and cultural heritage preservation. It also encourages responsible consumption, climate resilience, and biodiversity conservation.

Monitoring is carried out under the climate, community and biodiversity monitoring plan. Stakeholder engagement involves communities, companies and government agencies. Key initiatives include life skills training, inclusive employment, hydrological restoration and waste reduction, all aimed at enhancing resilience, equity and sustainability across the project area.

3. PROJECT SUMMARY (SECTION 2.1)

The Pahang Peatland Restoration Project (PPRP, or "the Project") is a grouped project aimed at restoring and conserving approximately 96,569 hectares of tropical peat swamp forest in Pahang State, Malaysia, of which 77,499 hectares make up the Initial Project Area. This area represents the largest remaining contiguous expanse of peat swamp forest and wetland in Peninsular Malaysia. It is a high conservation value ecosystem, rich in biodiversity with high level of endemism and threatened species. In addition, the area provides vital local ecosystem services, such as water and hydrological regulation, and holds significant cultural value for local communities.

During the first monitoring period (1 February 2024 – 31 January 2025), the Project successfully implemented a suite of activities aligned with its climate, community, and biodiversity objectives:

- Fire prevention and peatland rewetting:
    - Construction of 74 canal blocks to restore natural hydrology and reduce fire risk.
    - Formation of a 20-member Fire Emergency Response Team (FERT) trained and equipped for fire suppression and integrated into regional coordination networks.
    - Development and deployment of a near real-time remote sensing monitoring system (a customised Web-GIS platform) for fire and deforestation alerts, which came online in December 2024.

- Forest protection and monitoring:
    - Launch of the SMART patrol system and ground patrols to deter illegal activities and monitor biodiversity threats.
    - Establishment of two project outposts to create social fencing at key entrances of the Project Area.
    - Camera trap and bird surveys have been initiated to establish a biodiversity baseline and assess species presence, including Critically Endangered wildlife.

- Community engagement and development:
    - Socio-economic baseline studies were completed in 10 villages, forming the basis for culturally appropriate livelihood and education programs.
    - Conducted Phase 1 Free, Prior, and Informed Consent (FPIC) process via village-wide consultation programs involving 16 villages, and participatory mapping and verification exercises with smallholders within the Project Zone.
    - Initiated Phase 2 FPIC with 12 potentially impacted community members within the Project Area to assess the risks, costs and benefits of the Project through a collaborative engagement approach between the community and the Project team.

- Biodiversity conservation:
    - Conservation efforts support the habitat for more than 29 species that are rare, Critically Endangered, Endangered, or Vulnerable, including the Raffles' Banded Langur, Wrinkled Hornbill, and Malay Tapir.
    - Patrolling and habitat protection activities were complemented by community awareness campaigns.

The project's estimated greenhouse gas (GHG) impact during the monitoring period is the avoidance and removal of 1,187,893 tCO_2e, with full accounting and quantification provided in Section 3.2. This figure reflects emissions successfully avoided from deforestation and peat degradation. Future monitoring periods are expected to include additional emission reductions from rewetting and fire suppression, as well as removals from reforestation efforts.

In its first year of operation, the PPRP has made significant progress in implementing its nature-based climate mitigation strategies while simultaneously empowering communities, preserving cultural heritage, and protecting biodiversity.

4. LOCATION AND PROJECT DESCRIPTION LOCATION & PROJECT DESCRIPTION (SECTION 2.1.16)

4.1 Project Area and Project Zone

Enggang (Pekan) Sdn Bhd holds management rights over the Permanent Reserved Forest (PRF) within the Use Permit Area (UPA). Areas within the UPA that are not part of the Initial Project Area have been designated as the Protection Zone. This zone will continue to be managed for improved conservation outcomes without claiming emission reductions (or carbon credits) at this early stage. Covering 19,095 hectares, the Protection Zone represents a potential area for future expansion of project activities under the grouped project design. It forms part of the broader Project Zone, where the Project aims to generate positive impacts. In total, the Project Area and the broader Project Zone cover approximately 125,000 hectares, where the Project is expected to deliver positive outcomes for the climate, local communities and biodiversity.

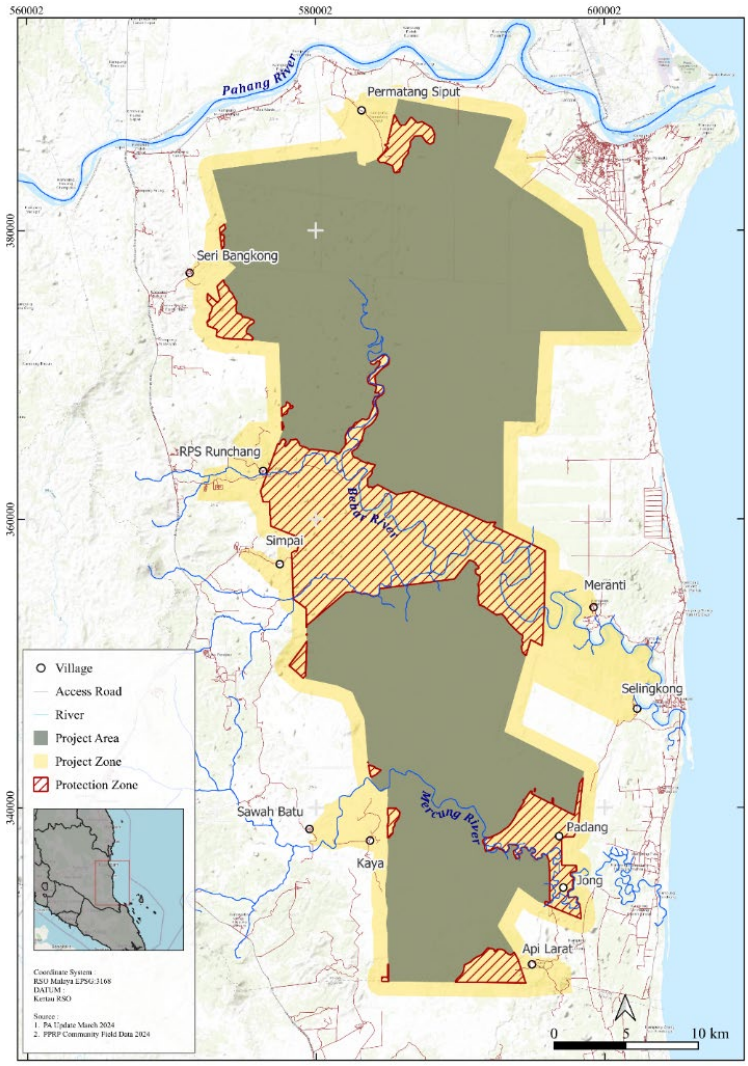

Figure 1: Map of Project Area and Project Zone

4.2 Scope and Project Type

The Pahang Peatland Restoration Project (PPRP) is a long-term initiative aimed at restoring degraded peatland areas, protecting forests, and supporting local communities. It is expected to reduce GHG emissions, prevent fires and flooding, and conserve biodiversity. The project will run for 59 years (2024–2083) and is being developed under the Verified Carbon Standard (VCS) and Climate, Community & Biodiversity (CCB) Standards, using methodologies VM0007 and VM0047, along with 11 Verra Modules and 4 Tools.

4.3 Implementation of the Free, Prior, and Informed Consent (FPIC) Process (SECTION 2.5.7)

During the implementation of FPIC Phase 1, the Project facilitated participatory mapping with communities to define the Project Zone (see Section 2.3.2 of the PDD). Community involvement in this mapping process not only documented land claims and livelihood areas such as smallholdings, fishing zones and non-timber forest product (NTFP) collection areas but also enabled communities to better understand their spatial relationship with Project activities and to plan future land use. A total of at least 2,856 stakeholders were consulted during FPIC Phase 1 and identified as potentially affected.

The Project is designed based on an approach that respects the rights of communities within the Project Zone to their land, territories and natural resources. Throughout the consultation process, the primary focus was on building a shared understanding of the Project's goals and activities. Each stage of implementation also emphasised transparency of information to the communities. The outcomes of FPIC Phase 1 were used to plan the Initial Project Area, ensuring that smallholdings and lands claimed as customary areas were excluded from the Project Area.

Following the revision of the Initial Project Area boundary, additional consultations (FPIC Phase 2) were conducted with eight smallholders and four fishermen identified as potentially affected. Discussions on the risks, costs and benefits of the Project revealed that seven of the smallholders and all four fishermen agreed that their rights and livelihoods would not be impacted. One smallholder raised concerns regarding the initial plan for canal blocking, which might affect their land. In response, the Project team revised the canal blocking design, reassessed the associated risks and benefits together with the community, and ultimately reached a consensus that the revised plan would not result in adverse impacts.

During this monitoring period, none of the stakeholders (communities) identified in FPIC Phase 1 and assessed in FPIC Phase 2 required the implementation of FPIC Phase 3, which involves formal consent and benefit sharing agreements. However, the Project recognises that FPIC is not a one-time process but must be conducted on an ongoing basis. Should the Project expand into new areas, particularly those involving additional activities such as canal blocking or replanting, stakeholders identified in Phase 1 will be re engaged under FPIC Phase 2 to assess the impacts of such activities, including their risks, costs, and benefits.

4.4 Summary of Achievements: Climate (SECTION 3.1.3)

During the first monitoring period (February 2024 – January 2025), the PPRP implemented an integrated monitoring framework to track GHG mitigation, peatland restoration, and ecological integrity. Activities focused on water table monitoring, climate measurements, forest degradation and deforestation detection, fire and burnt area assessment, and hydrological restoration interventions.

Table 1: Summary of Data Collection and Restoration Activities during Monitoring Report 1

Peat Dome / Forest Reserve	Manual Water Table Measurements (of readings)	Automatic Water Table Measurements (daily log count)	Permanent Vegetation Plot (no.)	Hotspots detected (no.)	Burnt Scar Area (ha)	Burnt Scar Verifications (no.)	Canal Blocks Installed (no.)
Project Area							
Pekan East	235	1,244	9	20	76.3	3	70
Pekan West	94	2,498	2	3	2.2	1	-
Nenasi	242	1,817	16	8	201.2	4	-
Resak	251	2,182	3	4	115.6	2	4
Protection Zone							
Kedondong *(Protection Zone)*	130	231	-	38	-	-	-
Total	**952**	**7,972**	**30**	**73**	**395.3**	**10**	**74**

Hydrology

Hydrological monitoring was implemented across the PPRP to quantify the effectiveness of peatland rewetting, track water table dynamics, and inform emissions reporting. A total of 291 piezometers were installed throughout the Project Area and Protection Zones, with 96 automatic data loggers installed to collect high-resolution time series data on water levels. Data collection followed the VMD0046 M-PEAT methodology requirements, with measurements captured every 10 minutes during the dry season and every 30 minutes during the monsoon season.

Over the monitoring period, a total of 8,924 water table measurements were collected (Manual: 952; Automatic: 7,972). These data were used to stratify peatland conditions, detect trends in groundwater level behavior or fluctuations, and support hydrological modelling process.

Canal Block

A total of 74 canal blocks were constructed based on the results of hydrological modelling and ecological risk assessments. The majority of these canal blocks are located in the Tanjung Medang sector of the Pekan Forest Reserve. The purpose of the canal blocking is to reduce peatland degradation and enhance carbon (CO_2) storage.

Forest and Fire Monitoring

Findings from the monitoring conducted during this period indicate that no illegal logging or timber extraction activities were detected through SMART patrols and satellite image analysis. No forest-to-non forest land cover changes were recorded, except in areas affected by fire.

Fire monitoring was conducted using a combination of remote sensing, hotspot alert systems, and ground verification. A total of 73 hotspots were recorded, with 10 confirmed burned areas identified in the field. The depth of the burned peat was measured through peat excavation, and this data was used to estimate carbon dioxide emissions based on stratified emission factors and IPCC guidelines.

The burned areas were also mapped and classified according to peat type and vegetation class to ensure more accurate GHG emission calculations.

This integrated monitoring and restoration approach strengthens the project's climate mitigation outcomes by enhancing carbon storage, reducing emissions from peat oxidation and fires, and ensuring compliance with international carbon assessment standard.

4.5 Summary of Achievements: Community (SECTION 4.3.1)

Outcome 1: Improved Livelihood and Economic Well-being					
Outcome 1.1: Enhanced livelihoods					
Objectives: Provide alternative, economically sustainable livelihood options rooted in ecosystem conservation, such as agroforestry and ecotourism					
Program	**Targeted community**	**Indicator / Variable**	**First year target**	**Monitoring frequency**	**Results from the First Monitoring Period (February 2024 - January 2025)**
Capacity building training to enhance knowledge, skills and attitude on sustainable economic activities	Women Youth (>18 years of age) Non-Timber Forest Product (NTFP) Gatherers Fishers Smallholders Traditional Hunters	Number of participants at capacity building trainings	Identification of community members that have potential to be involved with the training	Annually	Number of participants: • Smallholders: 355 individuals, with 246 males (69%) and 109 females (31%) • Fishers: 131 individuals, with 41 males (31%) and 90 females (69%) • NTFP gatherers: 135 individuals, with 69 males (51%) and 66 females (49%) • Traditional Hunters: 17 individuals, with 15 males (88%) and 2 females (12%) The communities were also consulted on their interest in participating in initiatives aimed at improving their socioeconomic status. Out of 443 respondents, 414 agreed that these programs could be implemented in their community.
		Number of capacity building trainings	Design suitable training curricula to improve incomes	Annually	In the first year, the Project focused on designing a multi-module capacity building program, guided by community feedback. The five planned modules include: 1. Reforestation Module 2. Solid Waste Management Module 3. Vocational skills 4. Entrepreneurship Module 5. Ecotourism Module

		Number of participants who have increased their income	Identify current income levels	Annually	Through the baseline community survey, the Project identified that more than 50% of the community members engaged had an income below the poverty line of RM 2,589 (2022 National Poverty Line).
Outcome 1.2: Increased employment opportunities					
Objectives: Create expanded employment opportunities through direct jobs, contractual services, and related economic activities					
Program	**Targeted community**	**Indicator / Variable**	**First year target**	**Monitoring frequency**	**Results from the First Monitoring Period (February 2024 - January 2025)**
Job creation for local communities	Local communities	FTE of local communities for jobs created by Project	15 FTE (minimum 20% women)	Annually	27 FTE local indigenous people employed in full time, multiple-month contract and daily waged job. • Male – 20.5 FTE (76%) • Female – 6.5 FTE (24%)

Outcome 2: Improved Level of Education and Environmental Sustainability Awareness					
Outcome 2.1: Increased awareness of biodiversity, ecosystems, climate change and sustainability					
Objectives:Foster a deeper understanding of environmental issues to support and enhance local communities' ongoing stewardship of the landscape					
Program	**Targeted community**	**Indicator / Variable**	**First year target**	**Monitoring frequency**	**Results from the First Monitoring Period (February 2024 - January 2025)**
Awareness programs on biodiversity, ecosystems, climate change and sustainability	Local communities	Number of participants attended awareness	Engagement with local communities	Annually	1,196 (66% female) community members attended awareness program during village-wide consultation events. Engagements during participatory smallholder verifications led to the establishment of a WhatsApp group for each village as a communication channel for next awareness program. The communities were also consulted on their views regarding the environment and sustainable lifestyle awareness program initiative. Out of 443 respondents, 386 (87%) agreed that these programs could be implemented in their community.
		Number of awareness programs conducted	Engagement with local communities	Annually	13 consultation programs that involved local communities from 16 villages between July to September 2024, covering awareness on the importance of peatland biodiversity and its ecosystem, and sustainable land use to the communities via multimedia including videos, flyers and exhibitions.
		Number of local community	Engagement with local communities for	Annually	During this first monitoring period, communities were consulted on their views

		participants in replanting efforts	participation in forest replanting efforts		regarding economic initiative programs such as entrepreneurship, ecotourism, and reforestation. Out of 443 respondents, 381 (86%) agreed that these programs could be implemented for the community.

Outcome 2.2: Increased school attendance

Objectives: School dropout is a key driver of social issues and a major contributor to intergenerational poverty within the Project Zone communities. While government provisions for education and incentives are in place, this program specifically targets the cultural and social barriers that lead to marginalization. It aims to reintegrate youth into the formal education system and equip them with both academic qualifications and essential soft skills to support their educational and career development

Program	Targeted community	Indicator / Variable	First year target	Monitoring frequency	Results from the First Monitoring Period (February 2024 - January 2025)
Community Learning Hub established to supplement mainstream schooling and mentor children and youth individually to reduce school dropout rate	Children and youth	Number of Community Learning Hub established	Engagement with local communities, NGOs, and schools	Annually	The consultation process with the District Education Office and teachers from schools near to Project Zone, conducted between October 2024 and January 2025, provided critical insights into the systemic barriers faced by Jakun students and directly informed the refinement of educational interventions under the Project. Engagements with NGOs further enhanced the inclusivity and quality of the project design. Two key consultations were held—with the Global Peace Foundation (GPF) on 25 October 2024 and Persatuan Suku Jakun Pahang (PSJP) on 21 November 2024. Further details of these engagements are provided in Section 2.3.9.
		Number of children and youth attended the Community Learning Hub	Engagement with school and local communities	Annually	
		Number of children and youth attended the Community Learning Hub who avoided dropout before finishing secondary school	Engagement with school and local communities	Annually	

					The communities were also consulted on their views regarding the initiative to reduce school dropout rates and support students in completing secondary education. Out of 443 respondents, 390 (88%) agreed that these programs could be implemented in their community.

Outcome 3: Improved Health and Well-being					
Outcome 3.1: Provision of facilities for communities to access clean water					
Objectives: Improving community health and well-being by complementing existing government infrastructure and providing basic water supply services to communities in need.					
Program	**Targeted community**	**Indicator / Variable**	**First year target**	**Monitoring frequency**	**Results from the First Monitoring Period (February 2024 - January 2025)**
Clean water program	Local communities in need (households with insufficient clean water supply)	Number of households with improved access to clean water supply	Identify areas and villages with limited access to clean water	Annually	Water supply was identified as a gap in three villages, namely Selingkong, Permatang Siput, and RPS Runchang. The Project subsequently engaged with the government water supply management body (PAIP) to determine the government's plan for the area to avoid overlapping of upcoming development initiatives. RPS Runchang is thus selected for project interventions as the government plans to upgrade water supply infrastructure in Selingkong and Permatang Siput. The communities were also consulted on their views regarding the clean water supply initiative. Out of 443 respondents, 396 (89%) agreed that these programs could be implemented in their community.

Outcome 3.2: Accessibility to health services					
Objectives: Improved accessibility to healthcare services, such as facilitating health screening services and/or assisting registration with government provided services or programs					
Program	**Targeted community**	**Indicator / Variable**	**First year target**	**Monitoring frequency**	**Results from the First Monitoring Period (February 2024 - January 2025)**
Improve accessibility to healthcare services	Vulnerable individuals and households in communities, e.g., people with disabilities and elderly people	Number of people participate in the health screening and consultation program	Engagement with health agencies and local communities	Annually	Initial engagement with the state government health agency in November 2024 to introduce the project and establish relationship for further collaboration for community program. Engagement with local communities through multiple activities including household surveys and participatory smallholder verification, Project identified a number of vulnerable individuals: • Disabled persons: 12 individuals; 7 males (58%) and 5 females (42%) • Elderly people: 118 individuals; 79 males (67%) and 39 females (33%)

4.6 Summary of Achievements: Biodiversity (SECTION 5.3.1)

Outcome 1: Monitoring of Endangered Species						
Outcome 1.1: Endangered species monitoring system in place						
Program	**Indicator**	**First year target**	**Data collection method**	**Means of verification**	**Monitoring frequency**	**Results from First Monitoring Period (February 2024-January 2025)**
Long-term monitoring of presence of endangered fauna RTE species e.g., Raffles' Banded Langur (RBL)	Number of locations with species encountered Number of species/ Abundance/ distribution/ occupancy	Baseline data collected on abundance and distribution of endangered species	Camera traps / field surveys / Visual Encounter Survey (VES) / bio-acoustic devices / eDNA approach / SMART Patrol	Checklist of the RTE species for mammals and birds Distribution maps of the observed biodiversity SMART Patrol report	Monitoring Report: Annually Camera trapping: non-monsoon season, annually Bird diversity survey: hot and wet season, annually Fish diversity: ad hoc, annually SMART Patrol: weekly	Total species recorded combined methods: 230: Mammals: 32 species (2 CR, 7 EN, 7 VU, 3 NT, 13 LC), Birds: 186 species (2 EN, 8 VU, 27 NT, 147 LC, 2 N/A), Amphibian: 1 species (1 LC), Reptiles: 11 species (2 EN, 1 VU, 8 LC) Camera trapping effort: 62 stations set up, 49 camera traps captured usable images with a total of 6,277 camera trap-nights. Total images/videos recorded: 186,605; with 15,213 files containing identifiable wildlife including mammals, birds, and reptiles. Bird diversity survey using the point count method at 11 fixed transects with 10 points each, conducted during both the drier and wetter/migratory seasons. 186 bird species were recorded, with: 4,213 individual birds counted during the wetter / migratory season

						3,254 individuals during the drier / non-monsoon period. SMART Patrols conducted weekly accumulated 268 patrols. Distance covered: 4,547 km by boat, on foot, and vehicle; observations were compiled as well as monthly and annual reports. Bioacoustics and eDNA approaches have not yet been implemented; however, consultations with expert groups from conservation NGOs and universities have been conducted to develop the survey design, SOPs, device selection, and staff training. Proper monitoring using these methods is planned to commence in 2nd monitoring period.
Long-term monitoring of presence of flora RTE species	Number of locations with species encountered Number of species Abundance and occupancy	Baseline data collected on abundance and occupancy of endangered flora species	Field surveys / SMART Patrol/ permanent vegetation monitoring plots	Biodiversity monitoring report (distribution map, pictures, species list, SMART Patrol analysis)	Tree Survey: every 5 years	No results for this monitoring period. Field surveys through permanent vegetation monitoring plots will be established in 2nd monitoring period.
Establish and strengthen stakeholder collaboration for the protection of endangered species	Number of stakeholders consulted	Establishing and strengthening collaboration with stakeholders to protect endangered species (e.g., authorities/government agencies, NGOs, and plantation companies) \	Meetings and discussions, field surveys, socialization events and training	Reports on activity and engagement / attendance records	Annually	Community engagement: 13 consultation programs with indigenous communities (1,196 people attended) by introducing the key RTE species, wildlife laws, and indigenous rights to use natural resources. Stakeholder meetings: Two meetings held with neighboring oil palm plantations.

						Public awareness: Participation in the 2024 World Wetlands Day celebration at Pekan organized by the Pahang Biodiversity Council (MBP) with estimated at 300 participants. Fire Prevention: Participation in a peatland fire prevention awareness program co-organized with JPNP, SMPEM, JAS, BOMBA, and others, held at Kg Jong (64 individuals in attendance), Selingkong (130), Landai (118), Sg. Kalong (39), Arong (117), Runchang (38), and Simpai (132), with a total of 638 participants.

Outcome 2: Ensure Ecosystem and Habitat Integrity						
Outcome 2.1: Protected forest area and habitats						
Program	**Indicator**	**First year target**	**Data collection method**	**Means of verification**	**Monitoring frequency**	**Results in First Monitoring Period (February 2024-January 2025)**
Remote forest cover monitoring and detection of fire and deforestation	Net forest change (gain vs. loss) Land cover classification Fire burnt scar area Number of fire hotspots	Assess forest cover at start date Establish monitoring system	Remote sensing (i.e. satellite / drone monitoring) and ground surveys	Report on number of hotspots and forest cover changes Fire and deforestation report Loss events and reversal report	Post-event and/or annually	Assessments of forest cover (see also Section 3.2.1.1.1 PDD) and potential threats —including encroachment, fire, illegal logging, and land use conversion— have been identified to inform future monitoring and management actions.

						A satellite-based fire hotspot and deforestation monitoring website has been fully established and is currently operational. Key personnel receive daily alerts via email and Telegram to support rapid response and decision-making. Information on fire hotspots and actions were shared with stakeholders such as JAS, JPNP, JPS, BOMBA, NGOs, and the adjacent plantation managers via a WhatsApp Group with a total of 70 group members. The digital platform, known as the PPRP Monitoring System, can be accessed at: https://pprp.com.my.
		Identify hotspots and frequency of illegal activity based on historical records and community inputs Conduct preliminary survey on poaching, illegal NTFP collection, and illegal logging				Total human activity observations: 118 recorded by Forest Protection and Biodiversity units. Most frequent observations: human signs, followed by weapons/equipment, and fire incidents Hunting evidence: 9 snare structures and 1 box trap detected in and around the project area Fire incidents: recorded and reported to the FERT for action Illegal activities: informed and reported to PERHILTIAN and JPNP
Habitat restoration and improvement of species diversity	Area of degraded peat swamp restored to functional habitat	Areas for restoration identified	Field verification: 1. Vegetation cover 2. Survival rate 3. Number / mapping restored areas	Field verification reports / biodiversity monitoring reports / reforestation report	Annually	Restoration plan initiated, methodology designed, and species to replant identified, nursery site and care takers identified.

Rewetting activities	Number of functional canal blocks installed and maintained	Rewetting activities planned (e.g., canal blocking)		Rewetting activities	Number of functioning canal blocks constructed and maintained	Rewetting activities planned (e.g., canal blocking) .
Species richness and diversity monitoring in rewetted areas	Measured change in species richness and diversity (e.g., Shannon-Wiener index) in rewetted vs. non-rewetted areas	Establish baseline species richness and initiate monitoring of biodiversity response to rewetting	Biodiversity surveys using VES, camera traps, and vegetation plots in rewetted and control sites	Biodiversity check list, analysis of diversity indices, species trends comparisons, biodiversity monitoring report	Annually (post-rewetting), with follow-up after each major rewetting intervention	Monitoring framework designed, survey sites in rewetted areas identified, and collaborators engaged.
Monitoring of invasive species	Invasive species list and distribution	Regular monitoring and mapping of invasive species across the Project Area	Field monitoring	Biodiversity monitoring report	Annually	Invasive *Acacia* species were observed at multiple locations across the Project Area, with certain sites exhibiting notably high density. These areas have been identified and mapped accordingly to support future management and mitigation efforts
Capacity building for staff on conservation, ecosystems, and habitat integrity in peatland forest	Number of training sessions conducted					Staff capacity building on conservation, ecosystems, and habitat integrity in peatland forest.
						The satellite-based hotspot monitoring website for fire and deforestation has been fully established and is now operational. The main coordinator receives daily alerts via email and Telegram to support rapid response and decision-making.
						Total human activity observations: 118 recorded by the Forest and Biodiversity Protection Unit.

Outcome 3: Outreach and Awareness						
Outcome 3.1: Improved level of knowledge and awareness among stakeholders						
Program	**Indicator**	**First year target**	**Data collection method**	**Means of verification**	**Monitoring frequency**	**Results from First Monitoring Period (February 2024 - January 2025)**
Environmental education module	Environmental education module developed and implemented Community trainers trained Facilitators/trainers in place Module reviewed and improved	Development module on wildlife and peatland conservation	Training / education activities Training session Attendance data	Module booklet, attendance records, program report / training report	Annually	The module is not yet fully developed, but educational activities have started. Awareness talks were conducted in the local languages, supported by peatland models, and wildlife poster, reaching 16 Indigenous communities (1,196 participants). Children's activities were also delivered. While the module remains under development, foundational content and knowledge-building have commenced to support future improvements.
Produce publication materials	Conservation information conveyed to the public Number of materials published	Produce publications in multiple/local languages and formats	Materials produced	Publications, posters, newspaper articles, leaflets	Annually	Four awareness posters produced and displayed during 13 consultation events with local communities.
Establish outreach and environmental education programs in collaboration with local communities	Environmental education / awareness programs Training sessions	Identify and design outreach and environmental education program	Outreach and environmental education activities session	Awareness and outreach reports / record of attendance	Annually	Awareness talks for 16 Indigenous communities were delivered. Co-organized CEPA programs with SMPEM, JPNP, JAS, BOMBA, JPS, JAKOA, GEC, for 7 communities:

	Youth participation Number of women participants	Inclusion of youth and women in the programs (e.g., citizen scientist)	Attendance data disaggregated by gender and age Number of training sessions delivered			• Kg Jong (64 participants) • Kg Selingkong (130 participants) • Kg Landai (118 participants) • Kg Sg Kalong (39 participants) • Kg Arong (117 participants) • RPS Runchang (38 participants) • Kg Simpai (132 participants) Participated in World Wetlands Day 2024, with an estimated 300 attendants.
		Deliver training to raise awareness on fire risk, biodiversity conservation, and sustainable peatland management	Number of training events Number of activities implemented Number of communities engaged / that participate	Training report / record of attendance	Annually	13 consultation programs involving local communities from 16 villages were delivered between July to September 2024, covering awareness on the importance of peatland ecology and sustainable land use via multimedia including presentations, flyers, videos and exhibitions. Project staff were trained by Perlindung Alam Malaysia and received internal training on wildlife species identification.