

# PAHANG PEATLAND RESTORATION PROJECT (PPRP)



|                             |                                                                                                                                                               |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Project title               | Pahang Peatland Restoration Project                                                                                                                           |
| Project ID                  | 5474                                                                                                                                                          |
| Crediting period            | 1 February 2024 – 13 May 2083; 59-year crediting period                                                                                                       |
| Project lifetime            | 1 February 2024 – 13 May 2083; 59-year project lifetime                                                                                                       |
| (CCB) GHG accounting period | TBD                                                                                                                                                           |
| Original date of issue      | 6-March-2025                                                                                                                                                  |
| Most recent date of issue   | 24-March-2025                                                                                                                                                 |
| Version                     | 2.0                                                                                                                                                           |
| VCS Standard version        | 4.7                                                                                                                                                           |
| CCB Standards version       | 3.1                                                                                                                                                           |
| Project location            | Malaysia, Pahang State, Pekan and Rompin districts                                                                                                            |
| Project proponent(s)        | <b>Enggang (Pekan) Sdn Bhd</b><br>Contact name: Robin Lee<br>Email: <a href="mailto:robin.lee@enggang.com">robin.lee@enggang.com</a><br>Phone: +60 9-422 2689 |

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|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Validation/verification body</b> | <b>AENOR</b><br>Contact name: Jose Luis Fuentes Perez<br>Email: <a href="mailto:jfuentes@aenor.com">jfuentes@aenor.com</a><br>Phone: +34 914 326 000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>History of CCB status</b>        | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Gold Level criteria</b>          | <p>We aim to generate exceptional benefits related to climate and biodiversity through the Pahang Peatland Restoration Project (PPRP), under both the Verified Carbon Standard (VCS) and Climate, Community, and Biodiversity (CCB) standards.</p> <p><b>Climate:</b></p> <p>The PPRP will prevent the emission of an annual average of 2.4 million tons (t) CO<sub>2</sub>-equivalents (CO<sub>2</sub>e) through the restoration and protection of a threatened and degraded peatland area. This will be achieved through the restoration of the Project Area's hydrology through the construction of dams to block canals that are currently draining the Project Area leading to microbial decomposition of peat soils and to fire. Detailed information about the climate benefits generated through project activities can be found in Section 3.</p> <p><b>Community:</b></p> <p>There are numerous indigenous (<i>Orang Asli</i>) Jakun communities within the Project Zone that the Project will target with community development programs. Although Malaysia is a high human development country, more than half the <i>Orang Asli</i> households within the Project Zone live below the national poverty line. The Project will provide direct employment to these communities and invest in programs to provide both short- and long-term benefits within the Project Zone. Benefits will be shared equitably and transparently and ensure equal participation of women and vulnerable groups.</p> <p><b>Biodiversity:</b></p> <p>The PPRP will protect critical habitat for 10 endangered and critically endangered species, as well as 11 vulnerable species. The species protected within the Project Area include the Wrinkled Hornbill, Flat-Headed Cat, Hairy-Nosed Otter, Malay Tapir, White-Handed Gibbon, Dusky Langur, Common long-tailed Macaque and Southern Pig-tailed Macaque. The PPRP will strengthen the protection of the Project Area, thereby safeguarding the endangered habitat that these species depend on. Detailed information about the biodiversity benefits generated through the Project activity can be found in the final PD.</p> |

|                                |                                                                                                                                                                                        |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Expected verification schedule | This is a joint verification and validation. The Project anticipates undertaking annual verifications each year after the initial issuance.                                            |
| Prepared by                    | <p><b>Southridge Group</b></p> <p>Contact name: Josh Van Vianen</p> <p>Email: <a href="mailto:Josh@southridgegroup.com">Josh@southridgegroup.com</a></p> <p>Phone: +62 81282870982</p> |

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# 1 SUMMARY OF PROJECT BENEFITS

## 1.1 Unique Project Benefits

Table 1 Unique project benefits

| Outcome or impact estimated by the end of project lifetime                                                                                      | Section reference |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| 1) Protection and conservation of 96,569 hectares endangered and degraded peatland forest area                                                  |                   |
| 2) Improved conditions and livelihoods for communities by improving health services, education, job creation and entrepreneurship opportunities |                   |
| 3) Increased sustainable job opportunities for local communities and indigenous people                                                          |                   |
| 4) Restoration of rare degraded tropical peatland through the blocking of drainage canals                                                       |                   |
| 5) Habitat protection for 10 threatened/endangered species                                                                                      |                   |

## 1.2 Standardized Benefit Metrics

Table 2 Standardized benefit metrics

| Category                                           | Metric                                                                                                                                                                                                 | Estimated by the end of project lifetime                 | Section reference |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-------------------|
| GHG emission reductions or carbon dioxide removals | <i>Net estimated removals in the Project Area, measured against the without-project scenario</i>                                                                                                       |                                                          |                   |
|                                                    | <i>Net estimated reductions in the Project Area, measured against the without-project scenario</i>                                                                                                     |                                                          |                   |
| Forest <sup>1</sup> cover                          | <i>For REDD<sup>2</sup> projects: Estimated number of hectares of reduced forest loss in the Project Area measured against the without-project scenario</i>                                            |                                                          |                   |
|                                                    | <i>For ARR<sup>3</sup> projects: Estimated number of hectares of forest cover increased in the Project Area measured against the without-project scenario</i>                                          |                                                          |                   |
| Improved land management                           | <i>Number of hectares of existing production forest land in which IFM<sup>4</sup> practices are expected to occur as a result of project activities, measured against the without-project scenario</i> | <i># has of logging concession areas subject to LtPF</i> |                   |
|                                                    | <i>Number of hectares of non-forest land in which improved land management practices are expected to occur as a result of project</i>                                                                  | <i>N/A</i>                                               |                   |

<sup>1</sup> Land with woody vegetation that meets an internationally accepted definition (e.g., UNFCCC, FAO, or IPCC) of what constitutes a forest, which includes threshold parameters, such as minimum forest area, tree height and level of crown cover, and may include mature, secondary, degraded and wetland forests (VCS Program Definitions)

<sup>2</sup> Reduced emissions from deforestation and forest degradation (REDD) - Activities that reduce GHG emissions by slowing or stopping conversion of forests to non-forest land and/or reduce the degradation of forest land where forest biomass is lost (VCS Program Definitions)

<sup>3</sup> Afforestation, reforestation and revegetation (ARR) - Activities that increase carbon stocks in woody biomass (and in some cases soils) by establishing, increasing and/or restoring vegetative cover through the planting, sowing and/or human-assisted natural regeneration of woody vegetation (VCS Program Definitions)

<sup>4</sup> Improved forest management (IFM) - Activities that change forest management practices and increase carbon stock on forest lands managed for wood products such as saw timber, pulpwood, and fuelwood (VCS Program Definitions)

| Category    | Metric                                                                                                                                                     | Estimated by the end of project lifetime                                                                                                                                                        | Section reference |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|             | <i>activities, measured against the without-project scenario</i>                                                                                           |                                                                                                                                                                                                 |                   |
| Training    | Total number of community members who are expected to have improved skills and/or knowledge resulting from training provided as part of project activities | 1,200 people joined livelihood improvement training which is 80% of 1500 total people trained. (900 for livelihood capacity building program and 600 for sustainable capacity building program) |                   |
|             | Number of female community members who are expected to have improved skills and/or knowledge resulting from training as part of project activities         | 360 women which is 30% from 1200 joined livelihood improvement training                                                                                                                         |                   |
| Employment  | Total number of people expected to be employed in project activities <sup>5</sup> , expressed as number of full-time employees <sup>6</sup>                | Approximately 75 to 100 FTE employees                                                                                                                                                           |                   |
|             | Number of women expected to be employed as a result of project activities, expressed as number of full-time employees                                      | ~25% of employees expected to be women                                                                                                                                                          |                   |
| Livelihoods | Total number of people expected to have improved livelihoods <sup>7</sup> or income generated as a result of project activities                            | 600 people (50% of the 1,200 who joined livelihood improvement training)                                                                                                                        |                   |
|             | Number of women expected to have improved livelihoods or income generated as a result of project activities                                                | 180 women which is 30% from total number of people expected to improved livelihood and income                                                                                                   |                   |

<sup>5</sup> Employed in project activities means people directly working on project activities in return for compensation (financial or otherwise), including employees, contracted workers, sub-contracted workers and community members that are paid to carry out project-related work.

<sup>6</sup> Full time equivalency is calculated as the total number of hours worked (by full-time, part-time, temporary and/or seasonal staff) divided by the average number of hours worked in full-time jobs within the country, region or economic territory (adapted from the UN System of National Accounts (1993) paragraphs 17.14[15.102];[17.28]) FTE for Malaysia is defined as 343 days, or 49 man-weeks, or 1,960 man-hours.

<sup>7</sup> Livelihoods are the capabilities, assets (including material and social resources) and activities required for a means of living (Krantz, Lasse, 2001. The Sustainable Livelihood Approach to Poverty Reduction. SIDA). Livelihood benefits may include benefits reported in the Employment metrics of this table.

| Category   | Metric                                                                                                                                                                                                  | Estimated by the end of project lifetime                                                        | Section reference |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------|
| Health     | Total number of people for whom health services are expected to improve as a result of project activities, measured against the without-project scenario                                                | 1,200 people                                                                                    |                   |
|            | Number of women for whom health services are expected to improve as a result of project activities, measured against the without-project scenario                                                       | At least 50% of them should be women = 600 people                                               |                   |
| Education  | Total number of people for whom access to, or quality of, education is expected to improve as result of project activities, measured against the without-project scenario                               | At least 180 youth finished secondary school                                                    |                   |
|            | Number of women and girls for whom access to, or quality of, education is expected to improve as result of project activities, measured against the without-project scenario                            | 50% of the targeted youth should be women = 90 girls                                            |                   |
| Water      | Total number of people who are expected to experience increased water quality and/or improved access to drinking water as a result of project activities, measured against the without-project scenario | Approximately 350 households                                                                    |                   |
|            | Number of women who are expected to experience increased water quality and/or improved access to drinking water as a result of project activities, measured against the without-project scenario        | Approximately 50% of the household's members                                                    |                   |
| Well-being | Total number of community members whose well-being <sup>8</sup> is expected to improve as a result of project activities                                                                                | At least 2,400 people which is around 50% of total people we engaged in the well-being programs | 2.1.15<br>3.4.2   |

<sup>8</sup> Well-being is people's experience of the quality of their lives. Well-being benefits may include benefits reported in other metrics of this table (e.g. Training, Employment, Livelihoods, Health, Education and Water), and may also include other benefits such as strengthened legal rights to resources, increased food security, conservation of access to areas of cultural significance, etc.

| Category                  | Metric                                                                                                                                                                                                                | Estimated by the end of project lifetime                                                                                       | Section reference |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-------------------|
|                           |                                                                                                                                                                                                                       | Note: total people we engaged in the well-being programs is around 4800 people                                                 |                   |
|                           | Number of women whose well-being is expected to improve as a result of project activities                                                                                                                             | At least 700 female community members which is approximately 30% of 2400 people who expected to have their well-being improved |                   |
| Biodiversity conservation | Expected change in the number of hectares managed significantly better by the Project for biodiversity conservation <sup>9</sup> , measured against the without-project scenario                                      | At least 68,968 hectares good forest/peat ecosystem and 2,762 hectares riparian ecosystem will be conserved under this project |                   |
|                           | Expected number of globally Critically Endangered or Endangered species <sup>10</sup> benefiting from reduced threats as a result of project activities <sup>11</sup> , measured against the without-project scenario | One Critically Endangered and nine Endangered species                                                                          |                   |

<sup>9</sup> Managed for biodiversity conservation in this context means areas where specific management measures are being implemented as a part of project activities with an objective of enhancing biodiversity conservation, e.g. enhancing the status of endangered species

<sup>10</sup> Per IUCN's Red List of Threatened Species

<sup>11</sup> In the absence of direct population or occupancy measures, measurement of reduced threats may be used as evidence of benefit

## 2 PROJECT DETAILS

### 2.1 Project Goals, Design and Long-Term Viability

#### 2.1.1 Summary Description of the Project (VCS, 3.2, 3.6, 3.10, 3.11, 3.13, 3.14; CCB, G1.2)

The Pahang Peatland Restoration Project (PPRP, or “the Project”) is a grouped project that focuses on restoring and conserving ~96,569 hectares of peatland and alluvial marshland in Pahang State, Malaysia, ~77,478 hectares of which make up the initial project area. The area represents the largest remaining continuous peat and wetland forest area in Peninsular Malaysia and is a high conservation value ecosystem through its biodiversity, landscape value and importance to local communities. As such, the implementation of the Project will also preserve and enhance globally significant biodiversity as well as the livelihoods and wellbeing of the communities that surround the area. The Project is not within jurisdiction covered by a jurisdictional REDD+ program.

The total Project Area comprises of 11 Permanent Reserved Forests (PRF), six of which were gazetted (formally established) in 1987-88, with a further five added in 2006-7. These areas are designated as ‘production forests’ under Section 10(1)(a) “timber production forest under sustained yield” of the National Forestry Act 1984 and as such the primary management objective following their designation was timber production. Logging activities in the total Project Area have been ongoing since 1999 and it is estimated that over 32,000 hectares has been logged over.

While the Pahang Forest Management Plan (PFMP) (2016-2025) identifies the area for timber production under a Selective Management System (SMS), with additional Reduced Impact Logging (RIL) guidelines in place, the impacts of the common practice form of timber harvesting have been significant. In addition to the felling of trees, construction of canals, drainage channels and roads have also impacted both the forest environment and, critically, the hydrology of the peatland areas, resulting in a process of ongoing drying, oxidation and degradation of peat areas, leading to the release of substantial volumes of greenhouse gases (GHG) to the atmosphere. In addition, there is significant evidence that in a number of areas felling has not followed guidelines, with areas being clear-felled, particularly close to the edge of the PRF, with these areas subsequently at high risk of conversion to agriculture as well as presenting very high fire risks. The PFMP identified that logging activities were planned to continue within the area for the duration of the plan and that a follow-up plan would be developed focused on the same primary objective of timber utilization.

In addition to the threat from harvesting, ongoing pressures for land and agricultural development have led to areas within the PRFs being allocated for agricultural development. Specifically, five parcels of land totaling an estimated 4,564 hectares along Sungai Bebar were allocated to three companies between 2015-2017 for the purpose of oil palm plantation development. Further applications have also been made, including for an 8,296.15 hectares dairy farm, the application for which was cancelled as a result of early action towards the development of the current project. Information from the mapping and survey

department also indicates that two land lots (covering over 3,000 hectares in total) had been identified for surveying as part of a process towards sub-division and alienation.

The continuation of this business as usual (BAU) situation would result in the ongoing degradation of forest areas through logging and peat drainage as well as a progressive decline in the PRF area due to degazettement (official reclassification of land use) for forest conversion. Since 1999, over 32,000 hectares have been logged using clear felling (strip logging) and unsustainable “selective” logging practices, leaving areas too degraded to qualify as forest. Logging has continued under the PFMP with inadequate enforcement of RIL guidelines, resulting in significant biodiversity loss, ecosystem degradation and GHG emissions.

Through the assistance of carbon financing, the Project, over its initial lifespan of 60 years, will avoid ~132.5 million tons of CO<sub>2</sub>e over 59 years by halting degradation from logging, agriculture, and canal construction. Reforestation of degraded and drained areas will remove ~11.3 million tons of CO<sub>2</sub>, while fire prevention and peat rewetting will further reduce emissions from peat oxidation and fires. The Project is expected to achieve a total reduction and removal of ~143.8 million tons of CO<sub>2</sub>e over 59 years, averaging ~2.4 million tons annually.

The Project will ensure the peat landscape inside the Project Area will remain intact and degraded areas are rehabilitated, that the rich biodiversity of the area is preserved, and that livelihoods and wellbeing of local communities living around the Project Area are enhanced. Through these actions the Project will also help to reduce the vulnerability of the surrounding landscape and communities to climate change by reducing risks of fire and flooding and improving the resilience of community livelihoods to climate change.

This will be achieved through reinvesting carbon financing received through the Project into the landscape with actions focusing on:

- Fire monitoring and prevention: Satellite imagery, drones, and ground sensors will detect fire and fire risks, with water level management, firebreaks, a dedicated Project fire prevention and management team, and delivery of community fire response training implemented to reduce fire hazards.
- Community development and livelihood enhancement: The Project will design and deploy sustainable income-generating activities such as eco-tourism and agroforestry initiatives, which will reduce reliance on practices that degrade the peatland, while fostering local stewardship.
- Forest monitoring and law enforcement: Real-time monitoring and collaboration with authorities will enhance enforcement to prevent illegal logging, land conversion, and peat drainage.
- Land and hydrology rehabilitation: Peat rewetting, hydrological management (e.g., damming drainage canals), and forest restoration will reverse ecosystem degradation, improve biodiversity, and enhance carbon storage.

The Project is also surrounded by a number of indigenous communities belonging to the Jakun ethnicity. There are approximately 8,000 Indigenous people located in the Project Zone where the Project is looking to have net positive benefits in terms of social, cultural and livelihood outcomes. Specifically, the Project

will target health, education, traditional knowledge preservation, employment and ecosystem services as thematic areas for community development.

The Project Area and its surrounds make up last remaining peat swamp complex of significance in Peninsular Malaysia which is host to a wide array of endemic and endangered plants and animals. In the absence of the Project this critically threatened habitat would be further degraded and eventually lost completely. Not only will the Project protect the remaining habitat, but it will improve connectivity and restore degraded areas through rewetting and reforestation efforts which will improve biodiversity outcomes for the wider region as well as the Project Area itself.

### 2.1.2 Audit History (VCS, 4.1)

Table 3 Audit history

| Audit type | Period                         | Program | Validation/verification body name | Number of years |
|------------|--------------------------------|---------|-----------------------------------|-----------------|
| Validation | (DD-Month-YYYY--DD-Month-YYYY) | VCS+CCB | AENOR                             |                 |

### 2.1.3 Sectoral Scope and Project Type (VCS, 3.2)

Table 4 Sectoral scope and project type

|                                             |                                               |
|---------------------------------------------|-----------------------------------------------|
| <b>Sectoral scope</b>                       | 14: Agriculture, forestry, and other land use |
| <b>AFOLU project category <sup>12</sup></b> | WRC + ARR<br>WRC + REDD                       |
| <b>Project activity type</b>                | RWE, CIW and APD                              |

### 2.1.4 Project Eligibility (VCS, 3.1, 3.6, 3.8, 3.18, 4.1; CCB Program Rules, 4.2.4, 4.6.4)

The Project falls under VCS Scope 14 (AFOLU). The overarching goals of the Project are to protect existing aboveground carbon stocks by avoiding planned forest degradation and deforestation through commercial harvesting of timber, fire and conversion to agriculture. Emissions reductions from these activities qualify as APDef. Where forest has been lost or degraded, the Project will restore degraded areas through assisted natural regeneration, activities which qualify as ARR. Lastly, the Project Area covers four major peat domes experiencing various levels of degradation from the construction of drainage canals and which are under threat from further degradation and conversion to agriculture. Project activities targeting the blocking of existing canals and avoidance of further canal development qualify as APWDeg, and CIW and RWE activities for reducing emissions reductions.

<sup>12</sup> See Appendix 1 of the VCS Standard

The Project is not seeking validation approval, when it does it will initiate the public comment period before meeting the VVB.

The Project start date is 1st February 2024. Pipeline listing and joint validation/verification are expected to be completed within 18 months of the start date. To this end, the Project will meet all VCS requirements related to listing, validation and verification for a WRC project.

The Project will utilize the latest versions of both VM0007 and VM0047 to account for emission reductions and removals. Both of these methodologies are approved by the VCS Program and have been broadly implemented across other tropical peatland projects.

### 2.1.5 Transfer Project Eligibility (VCS, 3.23, Appendix 2)

The Project is new and does not seek transfer of eligibility, being registered with VCS/CCB in the first instance.

### 2.1.6 Project Design (VCS, 3.6)

Indicate if the Project has been designed as:

- ☐ Single location or installation
- ☐ Multiple locations or project activity instances (but not a grouped project)
- ☒ Grouped project

#### 2.1.6.1 Eligibility Criteria for Grouped Projects (VCS, 3.6; CCB, G1.14)

There are opportunities to expand the avoided deforestation, wetland restoration and reforestation activities into new areas as part of a grouped project. Expansion of initial project activities into new areas as new activity instances will not differ from the initial project activities in their application from initial project activities.

All new instances of project activities will conform with the applicability conditions of both VM0047 and/or VM0007. New areas where project activities will be expanded are part of the same contiguous forest reserve area and are under the same commercial pressures for conversion which would lead to losses of habitat and ecosystems services with significant negative impacts on biodiversity in the without-project scenario. Non-forest areas would continue to be degraded through existing drainage and periodic fire which would facilitate encroachment by communities into the PRF. In both the initial Project Area and any areas where new project activity instances are expanded (labeled as 'Protection Zone' in Figure 3), the without-project scenario for communities in the Project Zone is the same, with limited development or investment in alternative livelihoods and ongoing negative health impacts from peat fire and haze events.

Under the new VM0047 methodology there are no requirements for determining baseline scenarios, rather a dynamic baseline approach is adopted, and reforestation efforts are benchmarked against the performance of areas outside of the Project Area. There is only one future area where avoided planned

degradation activities may take place with the conversion of some of the PRF to an oil palm plantation. For this area, there is a known agent of degradation in the form of a commercial agriculture company. The baseline determination for this area will be outlined in section (3.1.4) of the final project description document.

The future project areas are within the same contiguous PRF, thus the additionality assessment for the initial project area is broadly applicable to all future areas. Furthermore, the drivers of deforestation and degradation are represented in the initial Project Area for which additionality has been determined through the application of the VCS tool VT0001.

Stakeholder consultation and engagement of all communities linked to future areas has already begun, as part of the wider project. There are no additional communities that will need to be engaged with the expansion of project activities. Instead, it will require scaled up FPIC and benefit sharing processes to be completed with the existing communities before project activities are begun. The initial Project Area has been designed with community input and does not overlap with areas of contested land rights. Future activity instances will be expanded into areas where there are sensitive overlapping land rights and therefore will require both FPIC and benefit sharing mechanisms to be agreed with impacted communities and community groups. The processes to achieve this will not differ from existing processes implemented by the Project, as outlined in sections 2.5.7 and 2.5.8 of the final Project document and future monitoring reports.

Monitoring plans implemented for the initial project activities are scalable to new areas and will be expanded using the same monitoring elements for climate, community and biodiversity. All compulsory monitoring elements included in methodologies and modules used will also be scaled into new areas.

### 2.1.7 Project Proponent (VCS, 3.7; CCB, G1.1)

Table 5 Project proponent

|                   |                                                                  |
|-------------------|------------------------------------------------------------------|
| Organization name | Enggang Pekan Sdn Bhd                                            |
| Contact person    | Robin Lee                                                        |
| Title             | Manager                                                          |
| Address           | 17th Floor, UBN Tower, 10 Jalan P Ramlee, 50250 Kuala Lumpur     |
| Telephone         | +60 9-422 2689                                                   |
| Email             | <a href="mailto:robin.lee@enggang.com">robin.lee@enggang.com</a> |

### 2.1.8 Other Entities Involved in the Project

Table 6 Other entities

|                   |                  |
|-------------------|------------------|
| Organization name | Southridge Group |
|-------------------|------------------|

|                     |                                         |
|---------------------|-----------------------------------------|
| Role in the Project | Co-developer                            |
| Contact person      | Josh Van Vianen                         |
| Title               | Technical Director                      |
| Address             | Baarerstrasse 82, 6300 Zug, Switzerland |
| Telephone           | +62 812 8287 0982                       |
| Email               | Josh@southridgegroup.com                |

### 2.1.9 Project Ownership (VCS, 3.2, 3.7, 3.10; CCB, G5.8)

Enggang (Pekan) Sdn. Bhd. (“Enggang”) holds a legal use right to the entire Project Area through a Carbon Project Agreement (CPA) with the Pahang State Government. A copy of this agreement can be made available to auditors on request. This agreement, together with prevailing legislation, grants Enggang the right to generate and sell carbon credits and to implement all planned project activities. To this end, Enggang has already paid for the use permit to operate a carbon project and generate emission reductions. Evidence of the payment for and transfer of use rights to Enggang can be provided upon request.

### 2.1.10 Project Start Date (VCS, 3.8)

Table 7 Project start date

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Project start date | 1-02-2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Justification      | The Project start date is 01 February 2024. This is the date on which activities that led to the generation of GHG emission reductions or removals were first implemented, under the clear legal authority of Enggang (Pekan) Sdn. Bhd. (“Enggang”), as the holder of a Carbon Activity Use Permit issued by the State Government of Pahang. Although the Carbon Project Agreement presaged the start date by almost a year, it was stipulated in the agreement that existing logging concessions that held paid up annual use rights would continue until Enggang negotiated their termination or their current use rights expired and would not be renewed. These concessions had active logging compartments whereby the logging permits were granted on an annual basis. Once these compartments were logged, the Carbon Project Agreement prevented any further logging licenses and permits from being issued and allowed Enggang to start operating the site for the purposes of conservation and restoration. |

### 2.1.11 Benefits Assessment and Project Crediting Period (VCS, 3.9; CCB, G1.9)

Table 8 Benefit assessment and project crediting period

|                                                      |                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Crediting period</b>                              | The Project crediting period is the same as the concession license lifetime of 59 years. The Project proponent is committed to long term investment in the Project Area and to generating long term GHG benefits from a critically threatened peat landscape. This meets the VCS requirements of being more than 20 and less than 100 years. |
| <b>Start date of first or fixed crediting period</b> | 01-February-2024 to 14-May-2083                                                                                                                                                                                                                                                                                                              |
| <b>CCB benefits assessment period</b>                | 01-February-2024 to 14-May-2083                                                                                                                                                                                                                                                                                                              |

### 2.1.12 Differences in Assessment/Project Crediting Periods (CCB, G1.9)

Not applicable

### 2.1.13 Project Scale and Estimated Reductions or Removals (VCS, 3.10)

☐ < 300,000 tCO<sub>2</sub>e/year (project)

☒ ≥ 300,000 tCO<sub>2</sub>e/year (large project)

| Calendar year of crediting period | Estimated reductions or removals (tCO <sub>2</sub> e) |
|-----------------------------------|-------------------------------------------------------|
| 01-02-2024 to 31-12-2024          | 1,422,018                                             |
| 01-01-2025 to 31-12-2025          | 1,592,801                                             |
| 01-01-2026 to 31-12-2026          | 1,636,507                                             |
| 01-01-2027 to 31-12-2027          | 1,680,213                                             |
| 01-01-2028 to 31-12-2028          | 1,723,919                                             |
| 01-01-2029 to 31-12-2029          | 1,767,626                                             |
| 01-01-2030 to 31-12-2030          | 1,811,332                                             |
| 01-01-2031 to 31-12-2031          | 1,855,038                                             |
| 01-01-2032 to 31-12-2032          | 1,898,744                                             |
| 01-01-2033 to 31-12-2033          | 1,942,451                                             |

| Calendar year of crediting period | Estimated reductions or removals (tCO <sub>2</sub> e) |
|-----------------------------------|-------------------------------------------------------|
| 01-01-2034 to 31-12-2034          | 1,986,157                                             |
| 01-01-2035 to 31-12-2035          | 2,029,863                                             |
| 01-01-2036 to 31-12-2036          | 2,073,569                                             |
| 01-01-2037 to 31-12-2037          | 2,117,276                                             |
| 01-01-2038 to 31-12-2038          | 2,160,982                                             |
| 01-01-2039 to 31-12-2039          | 2,204,688                                             |
| 01-01-2040 to 31-12-2040          | 2,248,394                                             |
| 01-01-2041 to 31-12-2041          | 2,292,101                                             |
| 01-01-2042 to 31-12-2042          | 2,335,807                                             |
| 01-01-2043 to 31-12-2043          | 2,379,513                                             |
| 01-01-2044 to 31-12-2044          | 2,402,932                                             |
| 01-01-2045 to 31-12-2045          | 2,426,350                                             |
| 01-01-2046 to 31-12-2046          | 2,449,768                                             |
| 01-01-2047 to 31-12-2047          | 2,473,187                                             |
| 01-01-2048 to 31-12-2048          | 2,496,605                                             |
| 01-01-2049 to 31-12-2049          | 2,520,024                                             |
| 01-01-2050 to 31-12-2050          | 2,543,442                                             |
| 01-01-2051 to 31-12-2051          | 2,566,860                                             |
| 01-01-2052 to 31-12-2052          | 2,590,279                                             |
| 01-01-2053 to 31-12-2053          | 2,613,697                                             |
| 01-01-2054 to 31-12-2054          | 2,637,115                                             |
| 01-01-2055 to 31-12-2055          | 2,660,532                                             |
| 01-01-2056 to 31-12-2056          | 2,567,168                                             |

| Calendar year of crediting period | Estimated reductions or removals (tCO <sub>2</sub> e) |
|-----------------------------------|-------------------------------------------------------|
| 01-01-2057 to 31-12-2057          | 2,361,756                                             |
| 01-01-2058 to 31-12-2058          | 2,385,173                                             |
| 01-01-2059 to 31-12-2059          | 2,408,590                                             |
| 01-01-2060 to 31-12-2060          | 2,432,008                                             |
| 01-01-2061 to 31-12-2061          | 2,455,425                                             |
| 01-01-2062 to 31-12-2062          | 2,478,843                                             |
| 01-01-2063 to 31-12-2063          | 2,502,260                                             |
| 01-01-2064 to 31-12-2064          | 2,525,677                                             |
| 01-01-2065 to 31-12-2065          | 2,549,095                                             |
| 01-01-2066 to 31-12-2066          | 2,572,512                                             |
| 01-01-2067 to 31-12-2067          | 2,595,930                                             |
| 01-01-2068 to 31-12-2068          | 2,619,347                                             |
| 01-01-2069 to 31-12-2069          | 2,642,764                                             |
| 01-01-2070 to 31-12-2070          | 2,666,182                                             |
| 01-01-2071 to 31-12-2071          | 2,689,599                                             |
| 01-01-2072 to 31-12-2072          | 2,713,017                                             |
| 01-01-2073 to 31-12-2073          | 2,736,434                                             |
| 01-01-2074 to 31-12-2074          | 2,759,851                                             |
| 01-01-2075 to 31-12-2075          | 2,783,269                                             |
| 01-01-2076 to 31-12-2076          | 2,806,686                                             |
| 01-01-2077 to 31-12-2077          | 2,830,104                                             |
| 01-01-2078 to 31-12-2078          | 2,850,438                                             |
| 01-01-2079 to 31-12-2079          | 2,850,437                                             |

| Calendar year of crediting period                                      | Estimated reductions or removals (tCO <sub>2</sub> e) |
|------------------------------------------------------------------------|-------------------------------------------------------|
| 01-01-2080 to 31-12-2080                                               | 2,850,436                                             |
| 01-01-2081 to 31-12-2081                                               | 2,850,435                                             |
| 01-01-2082 to 31-12-2082                                               | 2,850,434                                             |
| 01-01-2083 to 14-05-2083                                               | 1,187,681                                             |
| <b>Total estimated ERRs during the first or fixed crediting period</b> | <b>142,061,341</b>                                    |
| <b>Total number of years</b>                                           | <b>59</b>                                             |
| <b>Average annual ERRs</b>                                             | <b>2,407,819</b>                                      |

#### 2.1.14 Physical Parameters (CCB, G1.3)

The Project Area covers a unique wetlands ecosystem in South-Eastern Pahang State in Peninsular Malaysia that sits within a wider, 230,000 hectares landscape that includes the edges of the peat basins and mineral soils known as the South-East Pahang Peat Landscape (SEPPL).

##### Topography

Located along the Pekan-Nenasi coastal belt, the SEPPL is comprised of four main physiographic units, i.e., coastal beach ridges interspersed with swales (BRIS), inland peat swamp basins, alluvial flood plains and western uplands (see

Figure 1).

The BRIS unit, which is composed of well-drained sandy beach ridges separated by swampy swales, forms a continuous strip along the coast, from Pekan town in the north to Rompin town in the south. Formed by longshore drift, the unit is widest (up to 8 km wide) at Pekan and Nenasi towns and narrow (around 400 m wide) in between.

Further inland from the BRIS unit, are a number of inland swamp basins derived from a succession of old lagoons first formed during the late Pleistocene. There are four main basins altogether, separated from each other by flood plains that have formed along the rivers that flow through the unit. The total length of this unit extends from the Sungai Pahang floodplain in the north to the Sungai Rompin floodplain in the south. The unit is 20 km wide on average, between the hills in the west and BRIS unit in the east. The continuous lowering of the sea level through the Holocene has enabled extensive peat development in the water-logged environment of these basins. The basins are now comprised almost entirely of peat soil that is composed of partially-decomposed hemi material. Paramanathan (2006) categorized two soil types here, i.e., the Gali and Gondang series.

The core of the basins (where the peat depth is greatest) are located within forest reserves of the SEPPSF. Small, raised pockets of old beach sands with heath vegetation still occur in some places within this unit.

## Soil

Peat may be defined as an organic soil (Histosol<sup>13</sup>) that contains at least 18% soil organic carbon and has a thickness of at least 50 cm. Areas where peat has naturally accumulated are called peatlands. Peat consists of partially-decayed plant organic matter that decomposes very slowly in water-logged anoxic environment in the absence of oxygen, and peatland formation occurs when the rate of accumulation of this organic matter exceeds the rate of its decomposition.

Malaysian peat characteristically consists of semi-decomposed woody material such as tree trunks and stems. Peat swamps in Malaysia are considered to be an inland wetlands formation, with high porosity of between 70 to 95 % on a volume basis, over 80% water saturation, and low bulk density<sup>14</sup> of between 0.05 to 0.40 g/cm<sup>3</sup>.

The Project Area covers a lowland peat formation that developed in depressional areas (inland peat swamp basins) where the water table is high for prolonged periods. The formation is likely to have taken place in the Holocene (over the past 10,000 years before present) when the sea levels rose and then subsided to a relatively constant level. In southeast Pahang, the retreating sea levels resulted in water-logged inland lagoons or basins with clay base, that were cut off from the sea by old beach ridges and mangrove deltas. The conditions in these poorly-drained lagoons were conducive for peat formation, and subsequently the development of peat swamp forests over the peat soil.

Narrow bands of riverine floodplains with alluvial mineral soils occur behind the levees that form along the banks of the three major rivers that drain the Project Area, i.e., Sungai Pahang, Sungai Bebar and Sungai Mercung. As opposed to the well-drained, sandy levees, the riverine floodplains are poorly-drained and often water-logged.

The western edge of the inland swamp basins is adjacent to rolling hills that contain soils developed over granites, schist, and sedimentary rocks. As most of these sedentary soils are deep and well-drained, much of these areas have been converted to agriculture.

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<sup>13</sup> Organic soils are distinguished by Soil Taxonomy as the Order of Histosols (Gk. histos; tissue). Soils are classified as Histosols if more than half of the upper 80 cm of soil is organic.

<sup>14</sup> Typically expressed in g/cm<sup>3</sup>, bulk density is calculated as the dry weight of soil divided by volume (including the volume of soil particles and the volume of pores among soil particles). A measure of soil compaction, bulk density reflects the soil's ability to function for structural support, water and solute movement, and soil aeration.

Figure 1 West-East cross-section of the Project Area

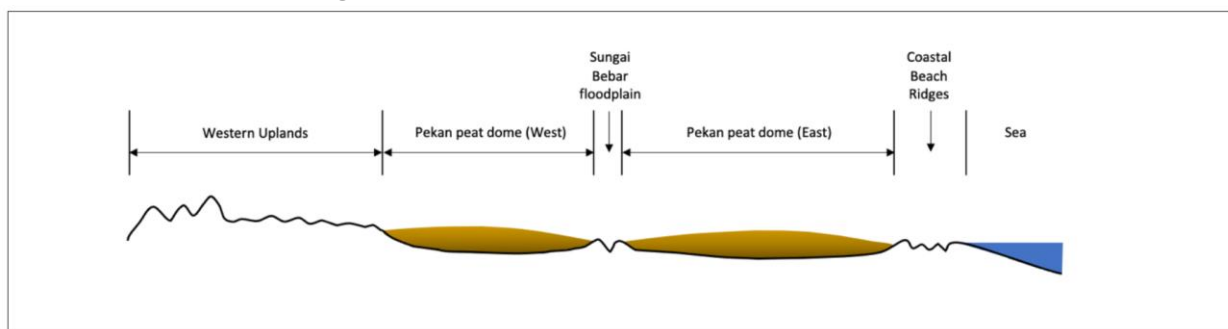
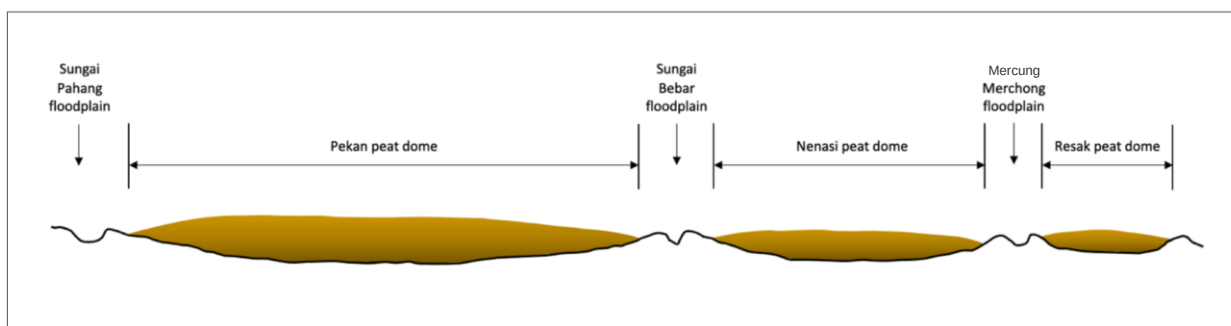


Figure 2 North-South cross-section of the Project Area



A soil reconnaissance map developed by the Department of Agriculture (DOA) and Universiti Putra Malaysia (UPM) in 2015 measured the total extent of the peat in the SEPPL to be 131,671 ha, with the core area located within the Project Area (See Figure 3). Through remote sensing based on recent satellite images as well as field verification, an additional 4,265 hectares of peatlands was identified in this study. This brings the total peat extent of the Project Area to 135,936 ha, of which 87,518 hectares are located within the forest reserves of the Project Area.

## Climate

Rainfall intensity and distribution are important as the peat swamp's water source is principally from rain (ombrogenous swamp). Rainfall data for the area indicates that the Project Area experiences a relatively drier period lasting eight months from February to September, followed by four months of heavy rain between October and January, the peaks being in December and January (northeast monsoon season). December records the highest mean monthly rainfall at the three selected weather stations with an average of 483 mm and July, the driest with 106 mm. Moderate mean monthly rainfall is experienced in the months of October (230 mm) and November (266 mm). By definition there are no dry months (<100 mm).

Mean annual rainfall over the period of 10 years between 1995 and 2004 from one station close to the Project site (Sek. Men. Ahmad, Pekan) was 2,715 mm. Annual averages however fluctuated between over 3,000mm per annum (highest 3,733 mm) to just over 2,000 mm per annum (lowest of 2,173mm). Overall, the Project Area is considered to receive an adequate amount and distribution of rainfall throughout the year for peat swamp maintenance and agricultural use.

The annual mean maximum and minimum temperatures for the period of 11 years from 1995 to 2005 in the Project Area are 33.3 °C and the minimum 23.4 °C with negligible variation over a ten-year period. The mean maximum temperature difference between night and day was 8.9 °C.

## Hydrology

Sungai Bebar flows southeast through Pekan, Kedondong and Nenasi forest reserves before discharging into South China Sea at Nenasi. The main tributaries of Sungai Bebar basin include Sungai Serai, Sungai Merba, Sungai Bangkong and Sungai Mayam. Kedondong forest reserve lies in between the confluence of Sungai Serai-Sungai Bebar and Sungai Merba which further shapes the basin and peatland ecological formation of Kedondong.

Due to its naturally blackish water caused by a high concentration of dissolved organic matter, Sungai Bebar has also earned the name 'Black Water Jewel'.

The main tributaries for Sungai Mercung basin comprise of Sungai Paha, Sungai Tanam and Sungai Kelayat. Sungai Mercung flows from the western part of PPRP project area before reaching the coastline.

Together, these two rivers, Sungai Bebar and Sungai Mercung form major basins within the PPRP landscape. The basins and their tributaries play a key role in shaping peat dome formations in Pekan, Kedondong, Nenasi and Resak. (In the downstream areas, these basins also support mangrove forest formation, further influencing the hydrological regime of the region). Total catchment areas for these two basins are 1,745.66 km<sup>2</sup> (Malaysia DID), with ~45% percent overlapping the initial Project Area.

Sungai Pahang basin extends into the northern part of the Project Area, while in the south of Resak Forest Reserve a few man-made canals flow into Sungai Rompin.

The Merchong Irrigation Scheme, the largest granary area in the Pekan District (DID/IRDA) and it plays a significant role in supporting paddy cultivation, relying on a network of canals for water distribution.

## Logging canals and skid trails

Extensive logging canals and skid trails, developed for timber extraction in these peat swamp forests, have altered the natural drainage patterns, affecting the hydrological connectivity between peatlands and river systems. These modifications contribute to changes in water retention, flow regulation, and overall peatland stability.

### 2.1.15 Social Parameters (VCS, 3.18; CCB, G1.3)

The PPRP project area is surrounded by local settlements that are home to predominantly Jakun indigenous people or *Orang Asli Jakun*, Malay locals, and assimilated migrants from Myanmar and Cambodia. The Malay locals and the assimilated migrants are culturally less connected to the peat swamp forest even though their villages are in the vicinity of the forest. The Project Zone therefore encompasses ten *Orang Asli* villages (*kampung Orang Asli*, KOA) with total population around 8004

people<sup>15</sup>. Most of the villages do not have officially demarcated village areas and are relatively isolated, with varying degrees of access to modern infrastructure. The villages are predominantly governed by traditional leadership structures, where the *Tok Batin* (village head) plays a significant role.

The population of these villages is almost entirely *Orang Asli Jakun* which is indigenous group from the area. In the past the communities were spread out (mainly along rivers) and were re-grouped/re-settled by the government in the 1970s to larger settlements to shield them from communist influence as well as to enable provision of basic infrastructure. Based on official classification, the villages may be divided into two categories—main villages and fragmented village (*kampung serpihan*)

Populations of the different villages vary significantly from under 100 to close to 2,000 inhabitants with *kampung serpihan* villages being the smallest. Main villages are provided with basic infrastructure including roads, housing, electricity and water with the largest settlement having a *Jabatan Kemajuan Orang Asli* (JAKOA) office and community hall (e.g. in RPS Runchang).

### Community Organization

Community organization combines formal legal structures and those traditional with *Orang Asli* communities. The Chieftain or village head, known locally as the *Batin* or *Tok Batin*, is an example of such tradition. The position is modernized and integrated into a modern government structure, with them being appointed by the federal government through village elections. Though anyone is eligible, in practice only the male descendants of previous *Batins* are able to garner the votes to become the successor. The position is key linked to development activities with development activities within the village only requiring signatory of the *Tok Batin*.

Villages are governed by village committees, the *Jawatan Kuasa Kemajuan dan Keselamatan Kampung* (JKKK). Such committees are under the purview of the Ministry of Rural Development and they play a significant role in village decision making and are keen to work closely or at least in consultation with the *Batins*.

Another aspect of the social structure is the role of women. The *Orang Asli* in Pekan is largely a patriarchal society. Men dominate the administrative structure of the village while the women are expected to adhere to culturally constructed gendered roles, e.g., to be good wives and marry early. It must be noted that women's participation in the JKKK is compulsory and whilst women cannot be elected as *Tok Batin* according to customary law, they can certainly become the *Pengerusi JKKK* (Chairwoman of the JKKK).

### Community livelihoods

The Jakun have historically lived as semi-nomadic horticulturists, deeply connected to the peat swamp forests. However, significant changes in land use, including deforestation and the introduction of large-scale oil palm plantations, have altered their traditional way of life. The Great Flood of 1970 was a turning point, leading to the relocation of some communities. Moreover, the encroachment of modern economic

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<sup>15</sup> Data source from JAKOA internal statistic report in 2022

activities has diminished their access to forest resources, further altering their socio-economic landscape.

Historically, the *Orang Asli Jakun* communities engaged in subsistence activities such as hunting, fishing, and shifting cultivation within the peat swamp forests. However, economic activities have shifted significantly towards oil palm cultivation, which has become a primary source of income. The conversion of forested land into plantations has reduced the community's reliance on forest resources, though traditional practices like collecting non-timber forest products (NTFPs) and small-scale fishing persist in some areas. The increasing conversion of land has also led to the degradation of the peat swamp ecosystem, impacting traditional livelihoods.

The main sources of paid income low-skilled labor jobs in the surrounding oil palm plantations, casual jobs in nearby towns such as Pekan and Muadzam Shah as well as passive income derived from dividends from community oil palm plantation schemes. Women are mostly confined to the domestic sphere, while men are the main breadwinners of their families.

In addition to this and in some cases instead of paid labor, many households have their own small plantation, i.e., orchards planted with rubber, oil palm or/and various fruit trees near their houses. For a few, income is supplemented by the collection and sale of non-timber forest products (NTFP) from the peat swamp forest, mainly *asam kelubi* (*Eleiodoxa conferta*), rattan (*Calamus spp.*), as well as medicinal plants, and handicraft products made from peat swamp plants (mainly *mengkuang* mats and baskets made from *Pandanus sp.*). Some rely on fishing for supplementary income or as a primary source of daily meals. Those who sell NTFP do so on a seasonal basis e.g., selling *asam kelubi* and other seasonal fruit collected from the forest. Sale of forest products is a supplementary source of income for most involved, save for a few individuals, especially those specializing in rattan collection and riverine fishing.

### **Socio-Cultural**

The Jakun communities are predominantly patriarchal, with leadership roles such as the *Tok Batin* traditionally held by men. However, women are increasingly participating in village committees (JKKK), although their roles are still limited by cultural norms. The population has a low literacy rate, and socio-economic challenges include poverty, limited access to education and healthcare, and issues of land tenure insecurity. The Jakun maintain a strong cultural identity, but their traditional beliefs and practices are gradually being eroded by external influences and modernization. There is also a noted level of distrust towards NGOs, stemming from negative past experiences, although some organizations have successfully engaged with the communities.

### **Community Rights and Access to Land**

*Orang Asli* are recognized as 'aborigine' in Article 160 (2) of the Constitution and that they are under the responsibilities of the Federal Government and not the State Government. The Aboriginal People Act 1954 (revised 1974) or better known as Act 134 is the principal law applicable in Peninsular Malaysia concerning the *Orang Asli*. Its objective is to protect and preserve the rights and various aspects of *Orang Asli* life including education and security. It also states that the land occupied by *Orang Asli* can be issued as an Aboriginal Reserve or Aboriginal Area by the State Authority thereby granting them the right to clear

the forest and collect forest produce, although there are gaps in the Act whereby the State Authority can grant them such rights, they can also revoke them. Thus, treating the *Orang Asli* as ‘tenants-at-will’, with the assumption of the State owning land is still very much the case in Malaysia. However, it should be noted the Act limits the power of the State to alienate land or grant licenses affecting land that is considered Aboriginal Areas (Wook, 2016).

Moreover, extensive power is given to the Director-General of JAKOA concerning the lives of the *Orang Asli* such as administration, welfare, and their advancement. Even with extensive power given to the Director-General, it does not, however, grant them absolute power.

Aside from the Aboriginal Peoples Act 1954, other legislation concerning the rights of the *Orang Asli* under federal laws includes the Wildlife Conservation Act 2010, National Forestry Act 1984, National Land Code 1965 and the National Parks Act 1980.

In relation to the interest of the *Orang Asli* concerning forest resources, two laws are important to take note of: the Wildlife Conservation Act 2010 and the National Forestry Act 1984. The Wildlife Conservation Act 2010 exempts the *Orang Asli* from hunting license and grants permission to hunt with the limitation for sustenance purposes. The Act also introduced the Sixth Schedule which specifically lists 10 animals that the *Orang Asli* are permitted to hunt. These include the wild boar, sambar deer, lesser mouse deer, pig-tailed macaque, silvered leaf monkey, dusky leaf monkey, Malayan porcupine, brush-tailed porcupine, white-breasted waterhen, and emerald dove (Aziz et al., 2013). Significantly, the Act puts forth that sale of these animals is prohibited. With regards to other collections of forest resources, the National Forestry Act 1984 gives *Orang Asli* access to.

### **Access to services**

Most villages have good access to schools that are located in or near the village. Nearly all villages have pre-schools (*Tabika KEMAS*) that are run by the Social Welfare Department (*Jabatan Kemajuan Masyarakat*, KEMAS) under the Ministry of Rural Development. While the larger villages such as RPS Runchang and Kampung Simpai have primary schools, most villages rely on primary schools located in nearby towns such as Paloh Hinai, Muadzam Shah or Kota Perdana where students stay in the hostels provided during the school semesters.

Barriers to schooling often involve finances (e.g., parents are unable to afford the cost of schoolbooks, uniform, or transport) as well as apathy of parents (and children) towards the formal education system and ethnic prejudices experienced by pupils at schools.

For a detailed description of the socio-economic conditions within the Project Zone please refer to Section 4.1.1

### **2.1.16 Project Zone Map and Project Location (VCS, 3.11, 3.18; CCB, G1.4-7, G1.13, CM1.2, B1.2)**

The PPRP Project Zone for the Project covers an additional ~47,824 hectares outside the PRF, shown in Figure 3. This includes all village communities identified as relevant stakeholders (see Sections 2.3.1

and 2.3.2). A map showing identified High Conservation Value (HCV) areas is included (see Figure 4). Refer to Sections 4.1.3 and 5.1.2 for further details on the identification of HCV areas.

Figure 3 Map of Project Area and Project Zone

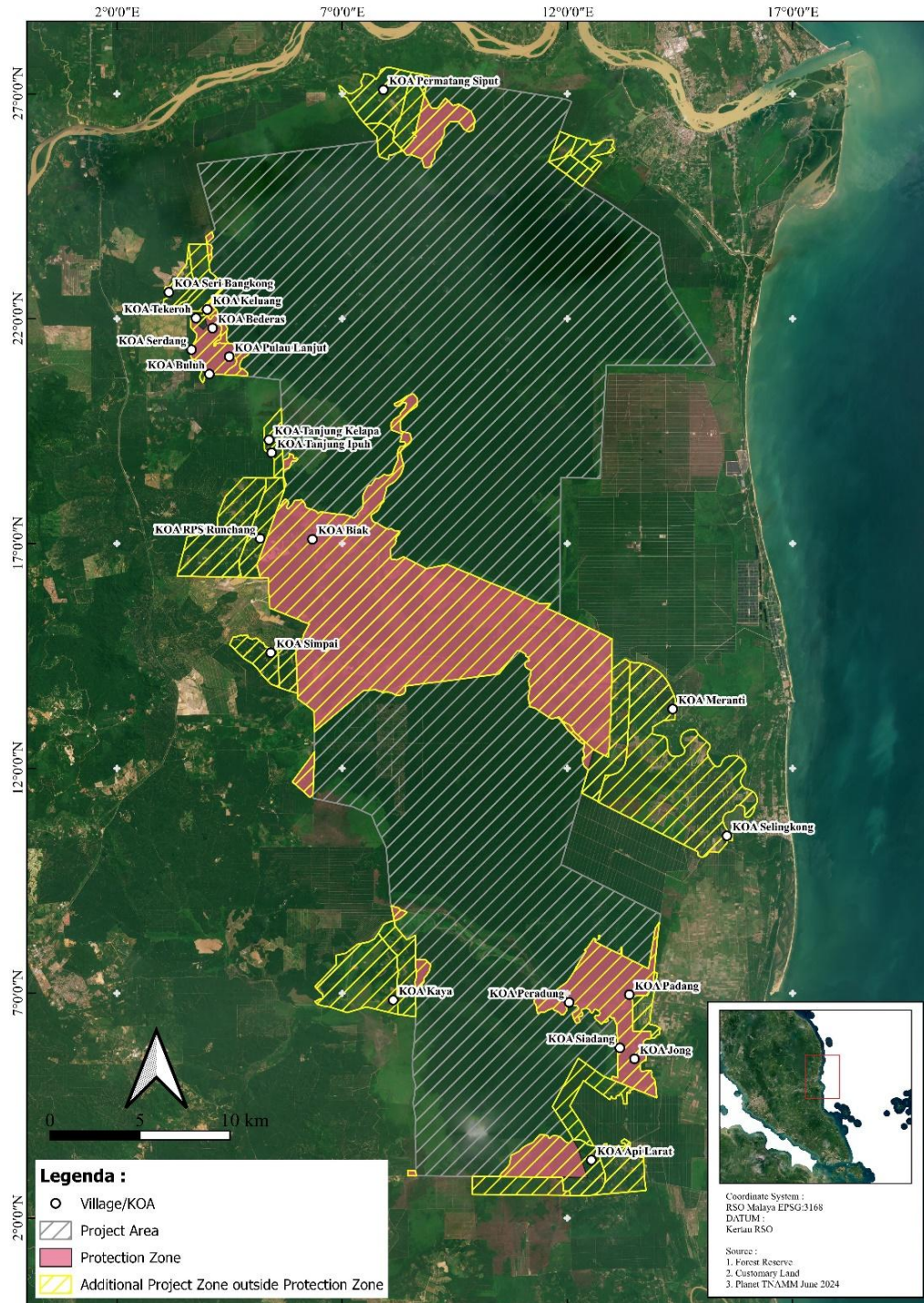
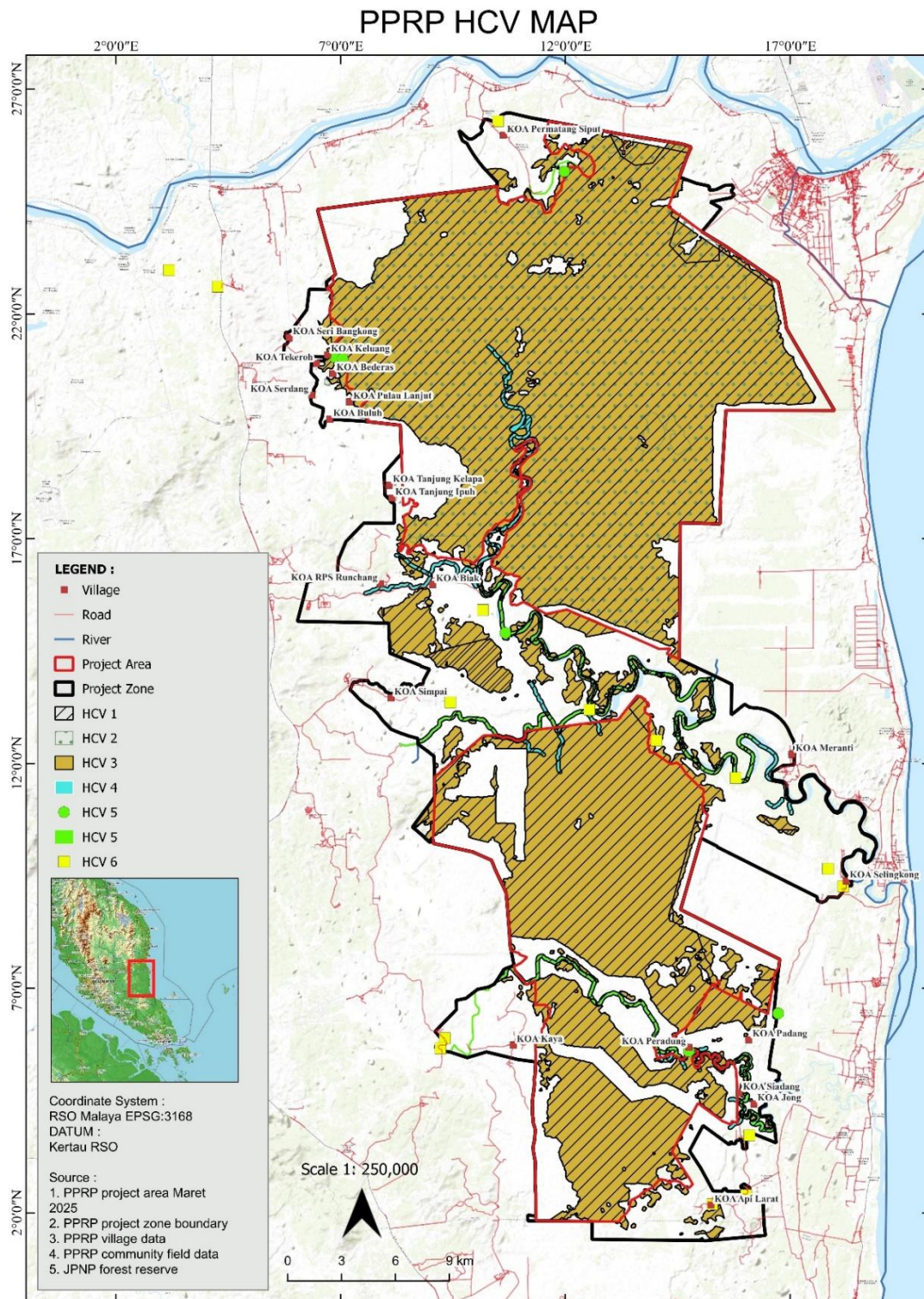


Figure 4 The PPRP HCV map



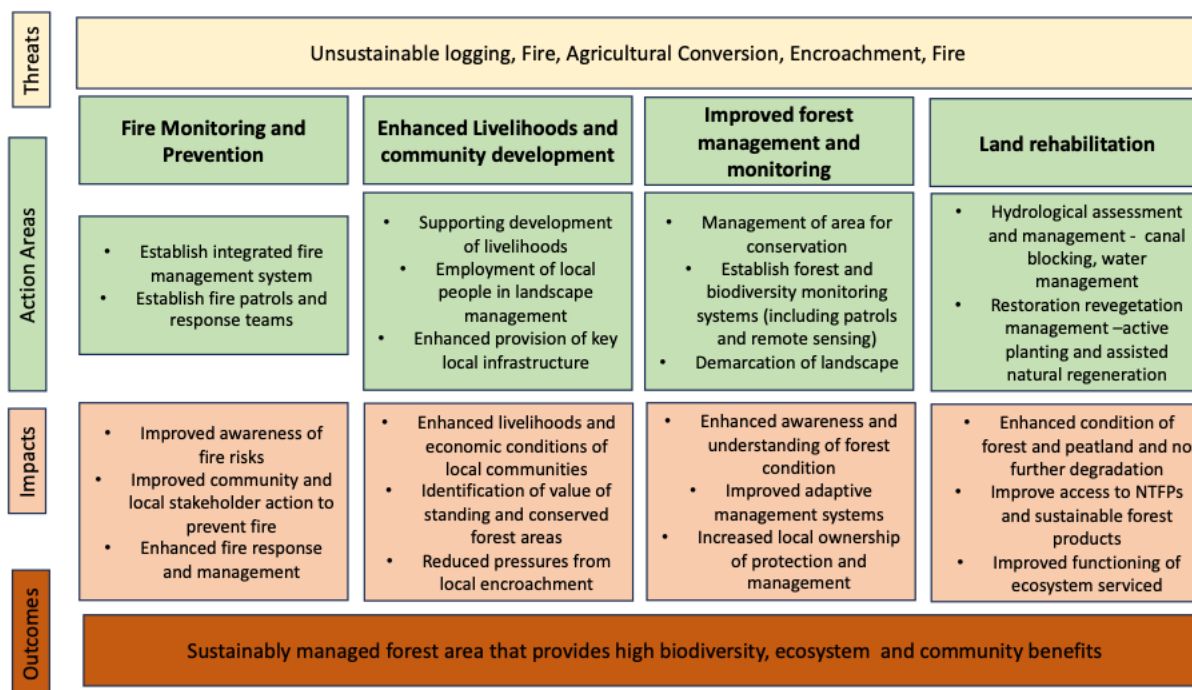
## 2.1.17 Project Activities and Theory of Change (VCS, 3.6; CCB, G1.8)

The Project aims to restore and protect the Project Area from further deforestation and degradation either from new logging or forest clearance activities, or from the impact of past logging activities including canal construction and peat draining. Project activities are designed to work with local communities to optimize the restoration of ecosystem functions, conserve biodiversity and support the development of sustainable livelihoods. The Project's theory of change model is shown below and identifies how project interventions will address the key threats to the Project Area and meet project objectives.

Figure 5 Project activities and Theory of Change

## Theory of Change

*The project will shift landscape from Baseline Scenario to one where peatland and forest are protected and restored, biodiversity is conserved and thrives, and local communities are able to gain lasting and sustainable benefits from the forest area while adopting improved and more resilient livelihoods.*



### Forest Patrolling

Forest patrolling is designed to reduce risks including illegal logging, poaching, and agricultural encroachment, which contribute to ecosystem degradation and fire hazards. Key activities include:

- Marking the Project boundaries and raising awareness among stakeholders.
- Establishing guard posts and social fencing systems.
- Conducting regular patrols (on foot, motorcycle, boat, and vehicle) and drone monitoring.
- Establishing a project monitoring system including fire hotspot and forest loss alerts.
- Engaging local authorities to address forest crimes.

### Fire Prevention and Monitoring

Fire is a major threat to the PPRP, especially during the annual dry seasons, which are *increasingly being prolonged and exacerbated* by the El Niño–Southern Oscillation weather phenomenon. Key activities include:

- Patrolling to prevent fire risks and establishing an early warning system (EWS) using satellite data, drone monitoring, and patrol communication.
- Training and equipping Fire Emergency Response Team (FERT) to respond swiftly to fires.
- Collaborating with neighboring plantations to monitor fire risks and provide fire suppression support.
- Training local communities on fire prevention practices.
- Collaborating with government agencies on an integrated fire management strategy in the district.

### **Canal Blocking and Hydrology Management**

Restoring peatland hydrology is critical to preventing ongoing degradation. Canal blocking activities include:

- Assessing and developing a canal-blocking strategy to rewet the peatlands.
- Constructing canal blocks with natural materials, arranged in a cascade to gradually raise water levels.
- Ongoing monitoring of water levels and canal block integrity.
- Working with neighboring plantations and government agencies to promote shared hydrological management.

### **Reforestation and Assisted Natural Regeneration (ANR)**

The Project aims to return the area to a fully forested state through natural regeneration, reforestation, and assisted natural regeneration (ANR). Key activities include:

- Studying soil and hydrology attributes for optimal replanting.
- Establishing tree nurseries and collecting native seeds.
- Conducting annual planting and ANR activities.

### **Community Development**

Although the surrounding communities have little dependence on the initial project area for livelihoods and the Project does not impact local land rights, PPRP is committed to supporting local development to build positive relationships and mitigate future risks. Key initiatives include:

- Educational programs, adult education, and school infrastructure improvements.
- Training and support for local crafts, health programs, and livelihood initiatives.
- Investments in women's groups and youth development.
- Focusing on direct equitable employment of indigenous communities from within the Project Zone.
- Sanitation and clean water programs to improve health outcomes.

## **Biodiversity Management and Monitoring**

The Project expects biodiversity to improve through reduced threats to existing habitat and habitat restoration. Biodiversity will benefit greatly from project activities that aim to ensure populations are stable or improving. A monitoring program will track species fluctuations, following CCB guidance, and guide future management decisions.

## **Stakeholder Engagement and Capacity Building**

Most of the above interventions must be carried out in collaboration with stakeholders such as neighboring plantations, government agencies and non-governmental organizations. PPRP holds regular meetings with these stakeholders to update them on project activities and to build capacity on the management of this ecosystem.

## **Cross-Cutting Project Governance**

These interventions will be implemented under a good cross-cutting project governance that create the necessary conditions for the Project's long-term success; these include:

- Adaptive management to refine and optimize activities.
- Effective administrative and human resources management.
- Robust financial management, including clear accounting systems and VCU marketing to ensure financial sustainability.
- Legal compliance to maintain the license and meet reporting obligations.

### **2.1.18 Sustainable Development Contributions (VCS, 3.17)**

The Project aligns with the 2030 Agenda for Sustainable Development and aims to foster resilient and inclusive growth. Key activities include promoting sustainable agriculture, enhancing healthcare, improving education, supporting gender equality, and ensuring clean water and sanitation. The Project also focuses on clean energy adoption, economic growth, innovation, reduced inequalities, sustainable cities, responsible consumption, climate action, and biodiversity protection.

Notable project activities supporting sustainable development include:

- Sustainable Agriculture: Implementing climate-smart practices to improve land quality and productivity.
- Healthcare: Providing medical support and healthcare consultation
- Education: Provide supporting activities and modules to reduce dropout rate and instill employability skills to youth
- Gender Equality: Supporting women-run businesses and leadership roles.
- Clean Water and Sanitation: Installing sanitation facilities and promoting hygiene.
- Renewable Energy: Installing energy-efficient and renewable energy solutions.
- Economic Activities: Supporting community-based enterprises and market access.
- Innovation and Infrastructure: Promoting resilient infrastructure and financial literacy.

- Waste Management: Training on waste disposal and promoting sustainable practices.

These activities will lead to direct benefits such as poverty reduction, improved health and education outcomes, enhanced gender equality, and environmental sustainability. For example, sustainable agriculture practices will increase food security and resilience to climate change, while healthcare initiatives will reduce mortality rates and improve overall well-being. Clean water projects will ensure safer sanitation, and renewable energy installations will reduce emissions and improve energy security.

The Project supports Malaysia's sustainable development priorities as outlined in the 11th National Development Plan (11MP) and the National SDG Roadmap. By localizing SDGs at sub-national levels, mobilizing resources through partnerships, and enhancing data readiness, the Project ensures alignment with national goals. Additionally, the online portal launched in 2022 enhances transparency and tracks SDG achievements at the state level.

#### Potential SDG contributions and indicators

1. No Poverty: Income, employment, and access to services.
2. Zero Hunger: Productivity, agricultural inputs, crop diversity.
3. Good Health & Wellbeing: Maternal mortality, skilled health staff at births, child mortality.
4. Quality Education: Access to education for additional children.
5. Gender Equality: Participation and leadership of women in initiatives.
6. Clean Water & Sanitation: Safe drinking water and sanitation facilities.
7. Affordable & Clean Energy: Non-fossil fuel-based energy installations.
8. Decent Work & Economic Growth: Employment and microfinance beneficiaries.
9. Industry, Innovation & Infrastructure: Access to credit, financial literacy training.
10. Reduced Inequalities: Income and productive assets for low-income communities.
11. Sustainable Cities & Communities: Household income, tree planting, sustainable agriculture.
12. Responsible Consumption & Production: Waste disposal training, renewable energy generation.
13. Climate Action: Hectares protected, reduction in fire incidence.
14. Life Below Water: Restored wetlands, improved sanitation facilities.
15. Life on Land: Sustainable Forest management, species diversity.
16. Peace, Justice & Strong Institutions: Participatory decision-making, public access to information.
17. Partnerships for the Goals: Stakeholder engagement and partnership agreements.

The Project will undergo annual reviews as part of the VCS and CCB monitoring, reporting, and verification processes. Data collection is continuous through internal reporting systems and periodic reconfirmation of memorandums of understanding (MOUs) with local villages. This ensures that progress towards SDG targets is systematically tracked and reported.

Through these measures, the Project aims to make significant contributions to Malaysia's sustainable development goals while ensuring systematic monitoring and reporting to track progress and outcomes.

#### 2.1.19 Implementation Schedule (CCB, G1.9)

Table 9 Implementation schedule and major milestones

| Date      | Milestone(s) in the Project's development and implementation                                                                                                                                                         |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2022      | Memorandum of Agreement (MOA) between HIS Holdings Sdn Bhd and the State Government of Pahang for the purpose of collaborating on an ESG Project covering the Project Area.                                          |
| 2022      | Initial feasibility assessment involving some limited site-based data collection undertaken.                                                                                                                         |
| 2023      | Date of Carbon Project Agreement between Enggang (Pekan) Sdn Bhd and the State Government of Pahang.                                                                                                                 |
| 2023      | Initial community engagement around forest and biodiversity conservation had been initiated by NGOs and research programs in the area; participatory mapping and planning initiated, social baseline data gathering. |
| 2023      | Initial Biomass (AGB and BGB) survey completed.                                                                                                                                                                      |
| 2023      | Fire prevention and management assessment and training undertaken; activities initiated.                                                                                                                             |
| 2024      | Project Start (see section 2.1.10): baseline activity based on approved logging halted and legal right of use and management secured by Enggang (Pekan) Sdn Bhd.                                                     |
| 2024      | Dissemination of reports; new management plan formally revised; community program fully operational.                                                                                                                 |
| 2024      | Project VCS & CCB validation & verification VCS-CCB Monitoring Event, Verification, dissemination of reports; continuation of all project activities.                                                                |
| 2024      | Nurseries established and revegetation program initiated.                                                                                                                                                            |
| 2025-2082 | VCS-CCB Monitoring Event, Verification, dissemination of reports (minimum every five years); continuation of all project activities.                                                                                 |
| 2082      | End of initial crediting period. License extension sought.                                                                                                                                                           |
| 2082+     | Project activities continued; project Monitoring and Verification continued (TBD).                                                                                                                                   |

### 2.1.20 Risks to the Project (CCB, G1.10)

*Use the table below to identify and describe the likely natural and human-induced risks to the expected climate, community, and biodiversity benefits during the project lifetime. Identify and describe the measures that have or will be taken to mitigate these risks.*

| Identified Risk | Potential impact of risk on climate, community and/or biodiversity benefits | Actions needed and designed to mitigate the risk |
|-----------------|-----------------------------------------------------------------------------|--------------------------------------------------|
|                 |                                                                             |                                                  |
|                 |                                                                             |                                                  |
|                 |                                                                             |                                                  |

### 2.1.21 Benefit Permanence (CCB, G1.11)

The PPRP is implemented under a long-term (60-year) concession license. Prior to the expiry of this license the Project will seek a further long-term extension in order to maintain the Project activities and benefits beyond the initial crediting/license period. In parallel, the Project will continue to advocate and promote to government stakeholders the importance of fully protecting remaining intact peat ecosystems to preserve their social, environmental and climate benefits. An alternative outcome to a further long-term extension would be the designation by the government of the area as being fully legally protected.

The community development program will seek to enhance the local economy in a sustainable way in order to demonstrate the long-term value obtained through the ongoing protection of the peat forest ecosystem, as opposed to its short-term destructive exploitation. As with the climate and environmental benefits, the Project will continue to advocate for the recognition of this societal and long-term economic benefit. Through these measures, the PPRP will seek to ensure the long-term permanence of the Project's benefits beyond its initial lifetime.

### 2.1.22 Financial Sustainability (CCB, G1.12)

The Project proponent and other project partners have applied their experience in project development and corporate finance to make conservative estimates for detailed annual operational budgets, annual credit generation and revenue from their sale, as part of a detailed financial model. Anticipated credit sales will generate sufficient cash flow to finance project activities through to the end of the crediting period. The Project co-developers (Enggang (Pekan) Sdn Bhd and Southridge AG) have access to secure financing for the implementation of project activities until the issuance of emission reduction credits. Details can be provided to the auditors on request.

## 2.2 Without-project Land Use Scenario and Additionality

### 2.2.1 Conditions Prior to Project Initiation and Land Use Scenarios without the Project (VCS, 3.13; CCB, G2.1)

The Project Area represented the largest contiguous tropical peatland ecosystem in Peninsular Malaysia. It is made up of four peat domes (Pekan, Kedondong, Nenasi and Resak) separated by two rivers and a tributary (the Bebar and Mercung). Forest cover in the Project Area ranges from Primary to severely degraded tropical secondary peat swamp forest. The degradation is caused by unsustainable logging and commercial drainage practices. It is a fire prone area with significant burnt over non-forest areas dominated by ferns and shrubs. In some frequently burnt areas, savannah grassland type systems have developed, and they are dominated by introduced acacia species that are fire resistant.

Peat soils are deep in many places with the Pekan peat dome being over 7 meters deep at its center. The climate is typical of tropical Southeast Asia with a dry and wet season. Northeast Monsoon season brings localized flooding to many parts of the Project Area. The extent and frequency of which has likely been worsened by degradation of the peat domes which, in their natural state, act to regulate flooding by slowing the outflow of water during heavy rains. Because the area is degraded and many areas drained, it is increasingly impacted by ENSO weather events, both El Nino (fire) and La Nina (floods).

Prior to the Project's start date, the area was legally designated for timber production and licensed selective logging with drainage. Certain blocks within the Project Area are subject to applications for commercial forest clearance for government-sanctioned land use change to plantations and other industrial agricultural uses.

Logging and conversion to agriculture has a long history in the area with much of the peatland surrounding what is now FR licensed for timber production purposes, which leads to forest degradation and subsequent clearance and/or drainage and conversion by commercial actors for extractive agricultural industries. Logging in the area is supposed to follow prescribed sustainable selective logging practices. However, in practice, many of the logging compartments have been drained and clear-felled or logged to a level where logged over areas no longer meet the definition of forest. Drainage canals are used for the construction of logging roads and for the transporting of logs to log ponds. These cause desiccation of peat, change the hydrology and alter the ecological conditions to a sufficient degree whereby natural regeneration is unlikely to occur or is severely restricted. Where small amounts of natural tree regeneration do occur, carbon stocks are not long lived as fire eventually clears the areas of all remaining tree cover. When these areas remain drained, periodic fires then continue to inhibit any significant return of tree cover or carbon stocks. Furthermore, before the Project secured rights to the project area there were several applications for conversion of forests to agriculture at various stages of

approval from new applications to areas with licenses approved and issued.

Figure 6 Logged Area (Pekan Permanent Reserved Forest, Compartment 68, 69)



Figure 7 Drained Area (Nenasi Permanent Reserved Forest, Compartment 31, 32)



Figure 8 Impacts of Recent (2022/2023) Logging and Drainage in the Project Area



Commercial Logging in the Project Area continued until January 2023, with some of the most destructive logging occurring in recent years. The agents of deforestation and degradation were a constellation of logging companies, contractors and agriculture companies with legal remit to degrade the forests. These agents of deforestation are not linked to the Project in any way and will not benefit from project outcomes. Therefore, no past degradation/deforestation occurred with the intention of benefiting from future restoration activities.

As such, the baseline scenario adopted is a continuation of the conditions existing prior to the Project's start date. Full details of the baseline selection, additionality assessments and legally authorized baseline activities are presented in Sections 3.1.4 and 3.1.5 of the final Project Document.

## 2.2.2 Most-Likely Scenario Justification (CCB, G2.1)

See Section 2.2.1 above and Sections 3.1.4 and 3.1.5 in the final Project Document.

### 2.2.3 Community and Biodiversity Additionality (CCB, G2.2)

As described in the previous sections, the baseline scenario is derived from a clear management plan that was legally approved and already underway at the Project outset. This allows for the setting of a baseline that determines with considerable certainty the likely impact on biodiversity and communities if the plan had not been halted by the Project.

Under the baseline scenario, the natural forests covered by the PPRP area would have been drained, logged and, in part, replaced with plantations and other industrial land uses such as a dairy farm. The natural forest would have been damaged or destroyed completely, and the peat ecosystem would have been degraded. The loss of natural tree diversity would have resulted in the local extinction of many animal and plant populations. Under the Project scenario, these natural ecosystems will be fully protected, and the degraded areas will be restored. For further information see sections 5.1.1 and 5.1.2.

The impact on communities of the baseline scenario would also have been profound. Loss of the natural forest would have led to the loss of access to non-timber forest products currently utilized by project zone communities. While regulations would compel a license-holding plantation company to identify such areas and ensure protection and access, this practice is widely ignored or only partially implemented, putting such areas at risk. Under the without-project community social baseline, the community livelihood and wellbeing would have been at risk. Particularly, the poverty trap of the community will persist, increasing threat of community health due to fires and floodings, as well as socioenvironmental risks. See section 0 for further details.

The arrival of large-scale logging operations—especially those involving clear-felling and drainage without any remediation—often triggers severe social disruption. As ecosystems are degraded and resources depleted, the benefits and burdens of these activities are rarely shared equitably. Communities frequently experience a breakdown in social cohesion, as those with power and influence disproportionately capture the gains while the costs fall heavily on marginalized groups. In many cases, decision-making processes lack transparency and meaningful community participation, creating fertile ground for elite capture. The influx of outside labor and heightened competition over diminishing natural resources further intensify tensions, increasing the risk of social conflict and deepening local inequalities.

Under the Project scenario, social capital will be enhanced by the Project working with, and supporting, legitimate social institutions within project zone communities. The decisions of such institutions will be respected, and support will be delivered in line with their needs, while great efforts will be made to ensure benefits are equitably distributed. The PPRP also aims to identify and reach poorer and marginalized communities and community members through a variety of sustainable livelihoods initiatives. These are designed to lift the poorest out of poverty by engaging them in community-based business development, sustainable livelihood activities and sustainable non-timber forest product use.

Under the baseline scenario, it is likely that commercial land-use designations would prevail over village-based claims. Commercial companies typically base their claims on centrally created tenure maps. Where conflicts exist, the typical response is short-term payment at undervalued rates. The PPRP works with all Project Zone communities to create spatially accurate maps that define the agreed extent of village land

and the agreed boundary of the Project Area, as well as recognition of other spatially explicit landscape features e.g. HCVs areas.

An often stated ‘benefit’ of commercial exploitation is said to be increased employment, however, there is little precedence among logging companies for active community engagement in operations or decision-making, and a great deal of precedent for importing a work force from other regions. Any local employment opportunities are typically for unskilled manual laborers who are offered little or no opportunity to receive further training. The PPRP is primarily implemented at the village level, in collaboration with village communities. Opportunities for involvement range from participation in planning and mapping initiatives, to direct employment (in both junior and senior positions, on a full-time, part-time or casual basis), to participation in a range of project initiatives/activities. The PPRP will also implement a comprehensive program of training and capacity building, linked to sustainable livelihoods, improving sustainable land management practices on peat, expanding opportunities for sustainable fishing and non-timber product gathering, improving financial management, fire management and wildlife monitoring among others.

#### 2.2.4 Benefits to be used as Offsets (CCB, G2.2)

The PPRP is not seeking to utilize any distinct community and biodiversity benefits as offsets in any other form.

## 2.3 Safeguards and Stakeholder Engagement

### 2.3.1 Stakeholder Identification (VCS, 3.18, 3.19; CCB G1.5)

The Project has adopted a wide definition of stakeholders: all agents thought to be affected by the Project (positively or negatively), including those by simple virtue of proximity. Within this classification, a number of different groups were identified that are important to the success of the Project by virtue of their role across the landscape.

Initial stakeholder identification was continuously conducted starting with social scoping conducted in 2022 - 2023 including:

- a) Rapid Rural Appraisal (RRA)
- b) Informal discussions and observations
- c) Semi-structured focus group discussions (FGDs) and key informant interviews (KIIs) with local authorities, village head (*Tok Batin*), and village community members
- d) Household surveys
- e) Participatory mapping

The Project team also continuously monitors and update the stakeholder list as we periodically engage with the community. We were also doing the snowballing method and verification in every engagement with community, including during the first community stakeholder consultation to find out more people who potentially impacted by the Project who are not identified previously or did not engage formally and proceed to have more exclusive informal dialogue to reach out to them. To ensure participation with our

community members and other stakeholders, we have established long-term positive relationships with these local groups, to maintain direct lines of communication between stakeholders and the Project.

In general, the Project identified several stakeholders' categories as follows:

- Community stakeholders are fishermen, farmers, NTFP collectors and hunters group who derive their livelihoods within the Project Area.
- Women, as well as youth and older people as vulnerable groups living nearby the Project Area.
- Other stakeholders – 10 villages surround the Project Area, with a population of ~8,000 who are predominantly *Orang Asli*, which share borders with the Project Area and/or were known to access resources within the Project Area.
- NGOs and private companies that are working within our landscape and surrounding area, as well as any related government authorities.

The stakeholder's categorization has been verified through semi-structured interviews and using local knowledge and longstanding relationships with community members (including via community members who are employed by the Project).

Table 10 in section 2.3.2 describes all stakeholders identified by the Project considered likely to be affected by the implementation of the Project. Local communities are further classified by livelihoods, as these are the most common unit of alliance in the local social context. Most community groups engage in multiple livelihood activities rather than depending on a single source of income, and thus typically belong to more than one group.

No community groups have legal landownership over the Project Area, but they may rely to a lesser or greater extent on the resources within the Project Area, hence their inclusion as stakeholders.

### 2.3.2 Stakeholder Descriptions (VCS, 3.18, 3.19; CCB, G1.6, G1.13)

Table 10 Stakeholder descriptions

| Category         | Stakeholder                                      | Rights, interest, and overall relevance to the Project                                                                                                                                                                                                           |
|------------------|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Community groups | Rubber farmers in Melogo Village                 | A group of rubber farmers whose frequently access the Project Area (Melogo Village)                                                                                                                                                                              |
|                  | Residents of <i>rumah rakit</i> in Mercung River | Four households that build semi-permanent houseboats ( <i>rumah rakit</i> ) inside the Project Area. They lived there temporarily to do seasonal livelihood activities such as fishing and collecting NTFP, only when it is accessible (when it's not flooding). |

| Category | Stakeholder                                 | Rights, interest, and overall relevance to the Project                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          | Subsistence farmers                         | Groups of people making a living from traditional farming (e.g. vegetables, rice) and/or agroforestry (e.g. harvesting fruit trees). Supporting farmers and ensuring farming practices become more sustainable and less dependent on burning practices will be essential to long-term project success and sustainability.                                                                                                                                                                               |
|          | Fishers                                     | <p>A number of groups rely on fishing within the river and canal systems to provide a significant element of their livelihoods. Supporting fishers and encouraging sustainable fishing practices within and outside of the Project Area will be essential to long-term freshwater biodiversity maintenance and long-term sustainability of fisher livelihoods.</p> <p>These includes fishermen that are frequently entering project area and having semi-permanent hut to stay during rainy season.</p> |
|          | Non-timber forest product (NTFP) collectors | Groups of people depend on the collection of rattan, damar resin, meranti resin, honey, etc. Supporting sustainable collection of NTFPs will ensure NTFP dependent livelihoods are secure over the long-term.                                                                                                                                                                                                                                                                                           |
|          | Traditional hunters                         | Individuals hunt for personal purpose and use traditional ways of hunting.                                                                                                                                                                                                                                                                                                                                                                                                                              |
|          | Women's livelihood groups                   | Groups of women organized to strengthen or start new livelihoods initiatives of benefit to their households and the wider community they live in. Supporting women's groups will be fundamental to building relationships with the wider community, supporting sustainable livelihoods strategies and strengthening gender equality at the household and village management level.                                                                                                                      |

| Category                        | Stakeholder                        | Rights, interest, and overall relevance to the Project                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Vulnerable groups               | Young people groups                | Groups of indigenous youth organized to do livelihoods and wellbeing activities, in order to improve their skills and knowledge.                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                 | Older people groups                | Group of senior citizen living nearby project area with special healthcare needs and limited access to healthcare facilities that will be engaged as beneficiaries of health-themed community benefits.                                                                                                                                                                                                                                                                                                                                                                                |
| Other stakeholders              | Project Zone village residents     | <p>The 10 villages surrounding the Project Area and some of them are strongly relied to the forest area and also having access to the forest. The villages can be classified into three types:</p> <p>Village Resettlement Scheme (<i>Rancangan Penempatan Semula</i>, RPS), Village Regrouping Scheme (<i>Pengumpulan Semula Kampung</i>, PSK) and isolated villages (<i>Kampung Serpihan</i>). Most of the villages are also home of the indigenous Jakun people.</p> <p>The total population across these communities was assessed at around 4,000 people in 2024<sup>16</sup>.</p> |
|                                 | Village co-operatives              | Replace RISDA to manage commercial replanting scheme ( <i>Tanam Semula Komersial</i> , TSK) oil palm plantation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Private sector oil-palm Company | Amanah Saham Pahang Berhad         | There are 19 plantations that surround the Project Area with these owned by 14 different companies. These are a mix of government-owned (5), public-listed (3) and                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                 | Yayasan Pahang Plantation Holdings |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

<sup>16</sup> Population data based on JAKOA database in 2022 except for Kampung Padang, which is unofficial village. We retrieve Kampung Padang estimated population number from primary survey in 2024.

| Category           | Stakeholder                                                                                              | Rights, interest, and overall relevance to the Project                                                                                                                                                                                                                                                                        |
|--------------------|----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    | Pahang Coconut Valley Corporation Sdn Bhd                                                                | subsidiaries/associates of publicly listed (3), and independent companies (2).                                                                                                                                                                                                                                                |
|                    | Rangkaian Delima Sdn Bhd (Ace Empire)                                                                    | Need to aware about PPRP activities that involve their area such as camera traps and canal block.                                                                                                                                                                                                                             |
|                    | PKPP Agro Sdn Bhd                                                                                        | Data sharing on their activities and us.                                                                                                                                                                                                                                                                                      |
|                    | LKPP Corporation Sdn Bhd                                                                                 | To have collaboration to prevent fire and manage fire incidents.                                                                                                                                                                                                                                                              |
|                    | FELCRA Berhad                                                                                            | To have collaboration to manage fire incidents.                                                                                                                                                                                                                                                                               |
|                    | IOI Corporation Berhad                                                                                   |                                                                                                                                                                                                                                                                                                                               |
|                    | Boustead Plantations Berhad                                                                              |                                                                                                                                                                                                                                                                                                                               |
|                    | Negri Sembilan Oil Palms Berhad                                                                          |                                                                                                                                                                                                                                                                                                                               |
|                    | Seong Thye Plantations Sdn Bhd                                                                           |                                                                                                                                                                                                                                                                                                                               |
|                    | Prosper Capital Holdings Sdn Bhd                                                                         |                                                                                                                                                                                                                                                                                                                               |
|                    | Dara Lam Soon Sdn Bhd                                                                                    |                                                                                                                                                                                                                                                                                                                               |
| Federal Government | Ministry of Natural Resources and Sustainability ( <i>Kementerian Sumber Asli dan Kelestarian Alam</i> ) | Ministry of Natural Resources and Sustainability (NRES) including agencies like the Forestry Department of Peninsular Malaysia (JPSM), and the Department of Environment (JAS), plays a key role by overseeing forest conservation, enforcing environmental regulations, and ensuring sustainable management practices. Their |

| Category | Stakeholder                                                                                    | Rights, interest, and overall relevance to the Project                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |                                                                                                | <p>involvement is crucial for granting approvals, monitoring environmental impacts, and supporting efforts to reduce carbon emissions while protecting natural resources.</p> <p>The Department of Wildlife and National Parks of Peninsular Malaysia (PERHILITAN) oversees and regulate activities affecting wildlife and biodiversity. Its interest lies in protecting endangered species, preserving natural habitats, and ensuring that the Project aligns with national biodiversity and wildlife protection policies. Its relevance to the Project includes law enforcement towards wildlife poachers and traders within the Project Area and Project Zone.</p>                                                                                                                                                                                                                                                                                                                                                       |
|          | Ministry of Rural and Regional Development<br>( <i>Kementerian Kemajuan Desa dan Wilayah</i> ) | <p>The Ministry of Rural and Regional Development (KKDW), through the Indigenous People Development Department (<i>Jabatan Kemajuan Orang Asli</i>, JAKOA), has mandate to protect and promote the welfare of the <i>Orang Asli</i> community. Its relevance to the Project includes ensuring that the Project respects the rights, culture, and livelihoods of the <i>Orang Asli</i>, supports community development, and provides fair benefits. JAKOA also plays a key role in granting approvals and ensuring compliance with national policies on indigenous rights and rural development.</p> <p>An agency under KKDW is the Rubber Industry Smallholders Development Authority (RISDA). RISDA previously managed the commercial replanting scheme (TSK) but now manages some oil palm fresh fruit bunch collection hubs for smallholders.</p> <p>Another agency of similar function is the Federal Land Consolidation and Rehabilitation Authority (FELCRA) which now operates some plantations in the landscape</p> |

| Category                                                                                                                          | Stakeholder                                                                                                            | Rights, interest, and overall relevance to the Project                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                   |                                                                                                                        | through its incorporated entity, FELCRA Berhad.                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                                                                                                   | Ministry of Housing and Local Government<br>( <i>Kementerian Perumahan dan Kerajaan Tempatan</i> )                     | The Fire and Rescue Department (Bomba) is under the purview of the Ministry of Housing and Local Government. It has the right to ensure fire prevention and safety measures are followed in the Project premises. Its interest also lies in reducing the risk of peat fires, which can cause environmental damage and threaten public safety. The Project works closely with Bomba, including setting up a Fire Emergency Response Team (FERT) under as a community fire-fighting team under the guidance of Bomba. |
|                                                                                                                                   | Ministry of Energy Transition and Water Transformation<br>( <i>Kementerian Peralihan Tenaga Dan Transformasi Air</i> ) | The Ministry of Energy Transition and Water Transformation (PETRA), through its agency, the Department of Irrigation and Drainage (JPS), governs rivers and canals in the Project Area and Project Zone and has interest in flood mitigation. JPS need to be consulted about canal blocking activities.                                                                                                                                                                                                             |
|                                                                                                                                   | State Executive Council ( <i>Majlis Mesyuarat Kerajaan</i> )                                                           | The Pahang State Executive Council (MMK) is the executive branch of the Pahang State Government. It makes decisions on land use under the jurisdiction of the state laws based on advice from the State Legal Advisor and the State Economic Planning Division.                                                                                                                                                                                                                                                     |
| State Government<br>Under the Federal Constitution of Malaysia, the state government has jurisdiction on land and forest matters. | State Forestry Department<br>( <i>Jabatan Perhutanan Negeri Pahang</i> )                                               | The State Forestry Department (JPNP) has the right and interest to regulate permanent reserved forests. It plays a crucial role in ensuring the Project complies with state forestry laws and policies. Its relevance includes managing permits and fees related to the Project, and law enforcement against encroachers in the PRF.                                                                                                                                                                                |

| Category                            | Stakeholder                                                                                 | Rights, interest, and overall relevance to the Project                                                                                                                                                                                                                                                                                            |
|-------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                     | Pahang Biodiversity Council ( <i>Majlis Biodiversity Pahang</i> )                           | The Pahang Biodiversity Council (MBP) oversees nature conservation efforts in Pahang. Its relevance includes managing permits under the Access to Biological Resources and Benefit Sharing Act.                                                                                                                                                   |
|                                     | State Education Department                                                                  | The Project collaborates with the State Education Department on community development programs that focuses on education.                                                                                                                                                                                                                         |
|                                     | State Health Department                                                                     | The Project collaborates with the State Health Department on community development programs that focuses on health.                                                                                                                                                                                                                               |
|                                     | Pahang <i>Orang Asli</i> Corporation (ORACO)                                                | The Pahang <i>Orang Asli</i> Corporation (ORACO) aims to drive holistic development to improve the socio-economic status of the <i>Orang Asli</i> community in Pahang. It plans, manages and monitors economic activities on land that has the potential to benefit the <i>Orang Asli</i> community, including land surrounding the Project Area. |
|                                     | District and Land Office ( <i>Pejabat Daerah and Tanah</i> ) for Pekan and Rompin districts | The District and Land Offices manage and regulate land use within the Project Zone. Their role includes the authority to influence land use decisions such as the alienation of land for residential, commercial, and agricultural purposes, which can directly impact the conservation and restoration efforts.                                  |
| Non-governmental Organisation (NGO) | Jaringan <i>Orang Asli</i> SeMalaysia (JOAS)                                                | The non-governmental organizations (NGOs) have the interest to protect the environment, and to protect local communities' rights towards land and resources. They are relevant to Project because they can be the collaboration partners to help achieve the Project objectives.                                                                  |
|                                     | Jaringan Kampung <i>Orang Asli</i> Semenanjung Malaysia (JKOASM)                            |                                                                                                                                                                                                                                                                                                                                                   |

| Category | Stakeholder                                  | Rights, interest, and overall relevance to the Project |
|----------|----------------------------------------------|--------------------------------------------------------|
|          | Persatuan Suku Jakun Pahang (PSJP)           |                                                        |
|          | Jaringan Kampung Orang Asli Pahang (JKOAP)   |                                                        |
|          | Apa Kata Wanita Orang Asli                   |                                                        |
|          | Center for <i>Orang Asli</i> Concerns (COAC) |                                                        |
|          | Global Peace Foundation Malaysia             |                                                        |
|          | Global Environment Centre (GEC)              |                                                        |

### 2.3.3 Stakeholder Access to Project Documents (VCS, 3.18, 3.19; CCB, G3.1)

Hard and soft copies of project documentation, including participatory mapping reports, participatory rural appraisal reports, summary PDD and summary MRs, VCS and CCB information, validation and verification audit report, copies of the signed MoU, meeting registers and any other key documents are made available to all relevant stakeholders. Summaries of the PDD and MRs in Malay language will be made available prior to the Validation period, through village facilitators in each of the target villages. To overcome literacy barriers, the Project will aim to conduct sessions which summarize the content of the PDD, MRs and other project documentation. Hard copies will be made available at the community hall/centers in each respective village. Soft copies will be distributed through the Project's website and WhatsApp group with each of the community groups and through regular community meetings facilitated by village leaders and community development assistant (CDA). Backups of all hard copies will be stored in the Project documentation repository and made available as/when needed.

### 2.3.4 Dissemination of Summary Project Documents (VCS, 3.18, 3.19; CCB, G3.1)

The Project team disseminates relevant project documents through direct and regular coordination engagements with relevant stakeholders, in particularly project zone communities (see section 2.3.3).

### 2.3.5 Informational Meetings with Stakeholders (VCS, 3.18, 3.19; CCB, G3.1)

The Project team conducted informational meetings with relevant stakeholders in mid-2023. The stakeholders were mainly the Pahang State Government and the Indigenous People's Authority (JAKOA). The Project team subsequently approached distinct groups of stakeholders. In addition, the Project team conducts informational meetings with government partners, NGOs and surrounding land managers to inform them about the Project and implementation progress to date. Several meetings were conducted in November 2023 and followed up in May 2024. An NGO roundtable discussion was held in July 2024.

Regarding community stakeholders, the Project's Community Engagement Team initiated socio-economic scoping in September 2023 in several villages while continuing to engage with JAKOA to consult and obtain permission to do more in-depth and comprehensive research on the indigenous people, which was carried out in October 2023. Following the engagement with JAKOA, the Community Engagement Team conducted social surveys in November and December 2023, in 11 villages. In March 2024, a community activity survey was conducted to identify communities' activities within the PRF. Engagement with village communities was expanded to cover 16 villages during village-wide consultation campaigns in August until September 2024 to provide village participants with opportunities to consult and clarify the Project activities, gather more information on the community stakeholder activities, monitor progress and next steps discussions. One week prior to every village-wide consultation event, posters publicizing the event will be hung in communal spaces and announcements will be made by village facilitators and the Community Engagement Team. The Community Engagement Team also reached out via WhatsApp or text and called the relevant stakeholders to ensure the meeting involved all relevant people. Village facilitators will take extra care to ensure more marginalized households are informed as a priority from the consultation campaign. At the conclusion of the village-wide consultation campaigns, data gathered was analyzed and 10 villages were identified as having the most significant relationships with project area that need to be engaged during Project lifetime. The engagement with community stakeholders continued with small groups or individuals continued from October 2024 until February 2025 to verify land ownership through participatory mapping process in order to design the Project Area.

#### 2.3.6 Risks from the Project and No Net Harm (VCS, 3.18, 3.19)

The Project has been through a comprehensive initial assessment of likely natural and human-induced risk including risk of fire, flooding, ecosystem change, and any impact on human well-being and livelihoods. Mitigation strategies for risks identified are set up, including following the global and national guidelines and law to ensure that the Project will cause no harm and will conserve the ecosystem. The mitigation strategies are included in the Project's integrated manual.

#### 2.3.7 Community Costs, Risks, and Benefits (CCB, G3.2)

The PPRP is committed to transparent, participatory, and timely community engagement, ensuring that all information regarding potential costs, risks, and benefits is communicated clearly and accessibly before communities make decisions regarding their involvement in the Project. This process is facilitated by local staff recruited from the communities, who have established long-standing relationships with the communities and uphold high standards of integrity and trust.

All community engagement processes are participatory in nature. At several stages of project design specific discussions on risks, costs and benefits have been undertaken, including but not limited to:

- Village consultations where maps were produced and potentially impacted stakeholders collaborated with the Project team to identify where project activities might overlap with areas where community activities occur e.g. farming, fishing and NTFP collection.
- Pre mapping presentations were given to educate the participants on how to identify risks to them and their communities.
- Participatory smallholder verification throughout the Project landscape was conducted to identify and map exactly where farming activities were occurring within the PRF and project area.

The Projects FPIC process (see Table 14) also has specific details for determining the scale of any risks, costs and benefits for community members who may have their rights impacted in a participatory way,

Below are summarized the generalized risk, costs and benefits as they have been determined through the consultation process to date.

- **Cost**

The primary costs to communities involve changes in land-use practices by burning and livelihood activities to align with the Project's sustainability goals. Community members are expected to halt activities such as the uncontrolled use of fire for agricultural land clearance and illegal encroachment. While these shifts are essential for achieving the Project's long-term environmental goals, they may require communities to adopt new practices that could involve short-term financial or labor-related costs and time allocated to attend the Project community programs. The PPRP has prioritized transparency in explaining these responsibilities to ensure community members fully understand the implications of their participation.

- **Risk**

The transition to sustainable practices carries inherent risks, particularly for households that depend heavily on activities that the Project aims to regulate or restrict. There is a short-term risk of restricting traditional land-clearing methods. Additionally, some alternative livelihood strategies introduced by the Project may not yield immediate financial benefits, potentially leading to temporary economic strain. The PPRP recognizes these challenges and is committed to closely monitoring the impacts by frequent communication with the community, hiring local facilitators, and utilizing GRM. PPRP also provides tailored support and adjusting strategies as needed to minimize community vulnerability during the transition period. We also did not restrict the community from using the area for fishing and collecting NTFP for their livelihood.

- **Benefits**

Despite the potential costs and risks, the PPRP is designed to deliver significant long-term benefits to participating communities. The Project aims to create sustainable livelihood alternatives that match or exceed previous income levels while improving skills and working

conditions. Special attention will be given to households most in need, ensuring equitable distribution of project benefits. The implementation of sustainable livelihood strategies will promote food security, diversify income sources, women empowerment, and strengthen community resilience.

Beyond direct economic benefits, the Project empowers communities by building local capacity for resource management, ensuring that community-led initiatives can continue independently after the Project concludes. The PPRP also aims to serve as a model for sustainable land use management in the region, fostering knowledge sharing through tours and outreach to government agencies, non-profits, and other stakeholders. By encouraging broader adoption of these practices, the Project contributes to regional efforts in carbon emissions reduction, biodiversity conservation, and the promotion of equitable development.

The Project also will share the benefits of the stakeholder's well-being improvement by providing health and education programs including to youth, women, and older people.

Moreover, half of the PPRP staff were recruited locally and have long-standing relationships with the communities in the Project Zone. They uphold the highest standards of transparency when interacting with communities because maintaining the level of personal trust developed is paramount, but also because this is considered the best strategy for genuine engagement and long-term success of the Project.

The PPRP will strive to ensure consultation and collaboration with communities is conducted to the highest standards of integrity and in a timely, transparent and accessible manner.

### 2.3.8 Information to Stakeholders on Validation and Verification Process (VCS, 3.18.6, 3.19; CCB, G3.3)

The Project team shares information on the processes involved in CCB validation and verification during meetings and engagements. This will be an ongoing process that will increase the stakeholders' awareness of the CCB processes and the ways in which the Project is working to achieve them.

Communication methods used are likely to prioritize direct meetings with the stakeholders supported by tools such as posters in community meeting points and special sessions, as needed, which will be used to disseminate information on the validation and verification processes, explaining the opportunity this presents for communities to discuss positive and negative aspects of the Project, raising questions and concerns. For some villages, they prefer to communicate through local village facilitators or village officials, as well as village WhatsApp group. All communications materials are available to the auditor on request.

### 2.3.9 Site Visit Information and Opportunities to Communicate with Auditor (VCS, 3.18.6; CCB, G3.3)

Once the date for the audit is fixed, site staff will inform community members of the visit. The schedule of the field visit will be made public by communicating this at least three weeks in advance, and there

will be meetings in each of the target villages to explain why the audit is happening and what sorts of questions may be asked.

Communities and other relevant stakeholders will be encouraged to speak directly and independently to the auditors. To facilitate this type of communication, community members will be encouraged to speak with auditors without the presence of Project staff using a local translator or other non-Project staff to overcome language barriers if necessary.

### 2.3.10 Stakeholder Consultations (VCS, 3.18; CCB, G3.4)

Table 11 List of Stakeholder Consultations

|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Date of stakeholder consultation</b> | November - December 2023 and March – April 2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Engagement activity</b>              | Social Baseline Study                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Stakeholder name</b>                 | KOA Api Larat: 24/11/2023, 15/12/2023 & 10-12/3/2024<br>KOA Permatang Siput: 25/11/2023 & 16-18/4/2024<br>KOA Landai: 26/11/2023, 13/12/2023 & 20-22/3/2024<br>KOA Meranti: 26/11/2023, 14/12/2023 & 17-19/3/2024<br>RPS Runchang: 29-30/11/2023 & 1-4/4/2024<br>KOA Simpai: 2/12/2023 & 27-30/3/2024<br>KOA Seri Bangkong: 3/12/2023 & 5-7/4/2024<br>KOA Sawah Batu: 6&9/12/2023 & 24-26/3/2024<br>KOA Selingkong: 7&16/12/2023 & 13-15/3/2024<br>KOA Arong: 13/12/2023 & 13-15/4/2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Stakeholder engagement process</b>   | <p>The initial step involved applying for a permit from the Department of <i>Orang Asli</i> Development (JAKOA), as conducting activities in <i>Orang Asli</i> villages and with <i>Orang Asli</i> requires official permission. Once the permit was secured, scoping meetings were held with village committees from all 10 villages. After obtaining the necessary approvals and input from the village committees, the Project team scheduled the formal surveys and focused group discussion sessions for each village. Village committees informing villagers about the survey and focused group discussion sessions. In some villages, the committees also accompanied enumerators during house-to-house visits to ensure smoother engagement with villagers.</p> <p>In November to December 2023, the first round of data collection in each villages started, facilitated by the village committees and local enumerators. Following the first stage of data collection, the</p> |

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             | <p>data analysis revealed the need for a second survey to gain deeper insights into community activities within the forest.</p> <p>Following that, the second survey was conducted in March to April 2024 targeting more specific potentially impacted stakeholders including farmers, fishers, and NTFP collectors. During this stage, the research team visited not only the villagers' homes but also the areas where these activities were conducted. To improve communication and build trust, indigenous enumerators were engaged to conduct the survey. Flyers were also distributed beforehand to inform villagers of the survey schedule.</p> <p>The comprehensive process ensured that the social baseline study was conducted ethically, respectfully, and effectively, with strong community involvement at every stage. The findings from both surveys and focused group discussions provide valuable insights to support future project planning and implementation in the villages involved.</p> |
| <b>Consultation outcome</b> | <p>Through open communication and active participation, the Project Team have built a strong relationship with the communities, fostering trust and mutual understanding. This process has also allowed villagers to learn informally about the Project, creating awareness and interest. The social baseline study provided deeper insights into the community's socioeconomic conditions, challenges, and aspirations.</p> <p>This process of engagement has guided the design of our future stakeholder interactions, helping us identify potentially impacted stakeholders, refine the Project Area, and shape project activities. Additionally, it has provided valuable insights into the best approaches for ongoing engagement, ensuring that the Free, Prior, and Informed Consent (FPIC) process is conducted appropriately and respectfully with the communities.</p>                                                                                                                                |
| <b>Stakeholder input</b>    | <p>Stakeholder input gathered from this study serves as a foundation for designing targeted community development programs. By analyzing the gaps and needs identified, the Project can create initiatives that effectively address economic opportunities, education, skills development, infrastructure, and environmental concerns.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

### 2.3.11 Continued Consultation and Adaptive Management (VCS, 3.18; CCB, G3.4)

The PPRP recognizes that engagement with the communities and other stakeholders is a continued process to ensure the Project activities go well as planned or when there is change in the Project plan in order to bring positive impacts to the stakeholders. Continued engagement and consultations include the

Free Prior Informed Consent (FPIC) process. As such the Project uses several approaches to ensure communication and consultation remains active throughout:

- Village facilitators report issues, needs and wishes of vulnerable groups and wider community. These reports will be filed in the Project filing system and used to inform formal and less formal focus group discussions and other types of community meetings. Once these points have been confirmed with the wider community, action points will be incorporated in the Project's workplan.
- Monthly or bi-monthly visits from Project staff to each target community to discuss a variety of project components including livelihoods strategy design, implementation and progress. Relevant and implementable feedback from visits will be incorporated in the Project's workplan. More frequent and in-depth engagement and consultation will be held with those stakeholders that are potentially encroaching in PRF near or within the Project Area.
- A functional Grievance Redress Mechanism (GRM) to maintain an open communication channel and to ensure community members feel their concerns and grievances are heard and addressed in reasonable timeframes.
- A series of coordination meetings with the other stakeholders will be conducted quarterly or necessary in person.

The Project's management and implementation strategy is fully adaptable and based on the principle of learning and empowerment. The Project's adaptive management plan is anchored on vision and mission of the Project and governed by the Project's policies. It enables the Project Team to systematically improve existing practices through continuous monitoring and evaluation to achieve its goals.

#### 2.3.12 Stakeholder Consultation Channels (CCB, G3.5)

Regular engagement for consultation includes key activities such as participatory mapping, key informant interviews, conflict resolution meetings, FPIC, awareness raising and general consultation meetings have and will continue to be carried out by Project staff in target communities, involving wide representation from different stakeholder groups and, when this is not possible, speaking to a smaller group of community representatives. Project staff are acutely aware of elite capture issues within communities and will always carry out inclusive consultations when these are possible and practical. Refer to sections 2.3.4, 2.3.5 and 2.3.11 which contain the details of information disseminations and communication process with the stakeholders.

#### 2.3.13 Stakeholder Participation in Decision-Making and Implementation (VCS, 3.18, 3.19; CCB, G3.6)

PPRP ensures inclusive and culturally appropriate participation of all stakeholders, particularly indigenous communities and marginalized groups, in decision-making and implementation.

All community engagement begins with prior notification and consent, obtained through official letters, WhatsApp messages, and phone calls to village leaders and community representatives. Public

consultations are conducted for any decision-making involving communities, with communication delivered in the local language and culturally sensitive formats to ensure full understanding.

The Project team, composed entirely of Malaysian nationals—including 50% from the Jakun Indigenous People—ensures a deep understanding of local socio-cultural contexts, reducing the risk of miscommunication or exclusion.

A gender-sensitive approach is central to the Project, including:

- Separate women-only consultation sessions to ensure their perspectives are heard and integrated.
- A minimum of 30% female participation in consultations (with a target of 50%), facilitated by scheduling meetings at appropriate times.
- Formation of women's livelihood groups and leadership opportunities in project activities.
- Ensuring women lead at least 30% of sustainable livelihood initiatives.
- Actively involving female group leaders in project design and implementation.
- Gender-balanced staffing in the appropriate roles.

All agreements with communities are formalized through discussions with village leaders or group representatives, ensuring transparency and collective ownership of project activities.

#### 2.3.14 Anti-Discrimination Assurance (VCS 3.19; CCB, G3.7)

Enggang (Pekan) Sdn Bhd as the proponent of PPRP, has anti-discrimination policies which set out that their staff are to be aware and proactive in identifying and preventing any type of discrimination or harassment happening in the Project both internally and externally, including discrimination based on gender, race, religion, or sexual orientation, among others. These policies are set out in the Project's Human Capital Management Policy, the Recruitment and Selection Standard Operating Procedure, Sexual Harassment Rules and Enggang (Pekan) Sdn Bhd's Employee Handbook which all staff receive a copy of and formally acknowledge their agreement, as this also been socialized through workers training (see also Section 2.3.17 below. The Employee Handbook can be made available to auditors on request). If ever deemed necessary, Enggang (Pekan) Sdn Bhd will provide additional training to ensure all staff have a complete understanding of the applicable company policies and their obligations under them.

#### 2.3.15 Feedback and Grievance Redress Procedure (VCS, 3.18.4; CCB, G3.8)

Table 12 Grievance Redress Mechanism (GRM)

|                            |                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Development process</b> | <p>The Project will adopt a formal grievance and redress procedure to prevent and address, fully and transparently, any conflicts with and among communities and other stakeholders which may arise during the implementation of project activities.</p> <p>Nevertheless, one of the most important elements of the grievance redress procedure is to prevent potential conflicts before they</p> |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                    | <p>arise. Such precautionary approaches include the implementation of FPIC-based community consultations, participatory planning, regular communication and trust and relationship building between Project staff and community members. This helps to identify underlying grievances well in advance and allow them to be addressed in a less formal way.</p> <p>Establishing a grievance resolution procedure and appointing a grievance team serve the primary purpose of ensuring that the Project proponent is cognizant of and appropriately addresses any stakeholder complaints. It must be planned to support all relevant stakeholders' including the communities, workers, partners, and contractors in effectively and successfully handling grievances at the Project level. Within a fair timeline, the system must include steps for receiving, hearing, responding to, and trying to settle concerns while taking culturally acceptable conflict resolution techniques into consideration. Public access to the procedure and the records of conflicts settled by it are also required.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Grievance redress procedure</b> | <p>The Grievance Focal Point acknowledges and records grievances within seven days, then assesses them. Valid grievances are addressed, while invalid ones are closed within 14 days, with the complainant receiving a satisfaction survey and closure report. All submissions are monitored for transparency.</p> <p>First stage: The grievance resolution process involves the Project Lead forming a Grievance Team to investigate the complaints. The complainant is notified within 14 days, and a report is prepared within 21 days. The report is reviewed and approved by the Project Lead. One approved, the complaint has 30 days to accept or reject the resolution. If accepted, the case is closed with a report and satisfaction survey; if rejected, the Grievance Focal Point informs the complainant about the escalation process.</p> <p>Second stage: The Grievance Team selects a mediator, and with their help, conducts an investigation and prepares a resolution report. The resolution is reviewed by the Oversight Committee and approved by the Project Lead. The proposed resolution is shared with the complainants. If the proposed resolution is accepted, the complainant will receive a closure report and satisfaction survey. If rejected, the complaint is informed about referral process, which extends the review period 90 days for further consideration.</p> <p>Third stage: If the grievance remains unresolved, a legal counsel is appointed for arbitration or litigation, and a ruling is issued. The complainant is then informed of the case closure with a satisfaction survey and closure report.</p> |

If necessary, the Project Lead ensures the resolution implemented, while the Grievance Focal Point monitors and evaluates the process.

Figure 9 PPRP Grievance Redress Mechanism (GRM) Flowchart



All reported cases from various open and transparent channels should be registered in the Grievance registration system and should be assessed to identify and verify the cause, actors and scale of grievances. The Project's Grievance team will first recommend resolution options based on the feedback from the stakeholders. The degree of intervention and process will depend on the nature of disputes, and the Project staff will continue to monitor the cases.

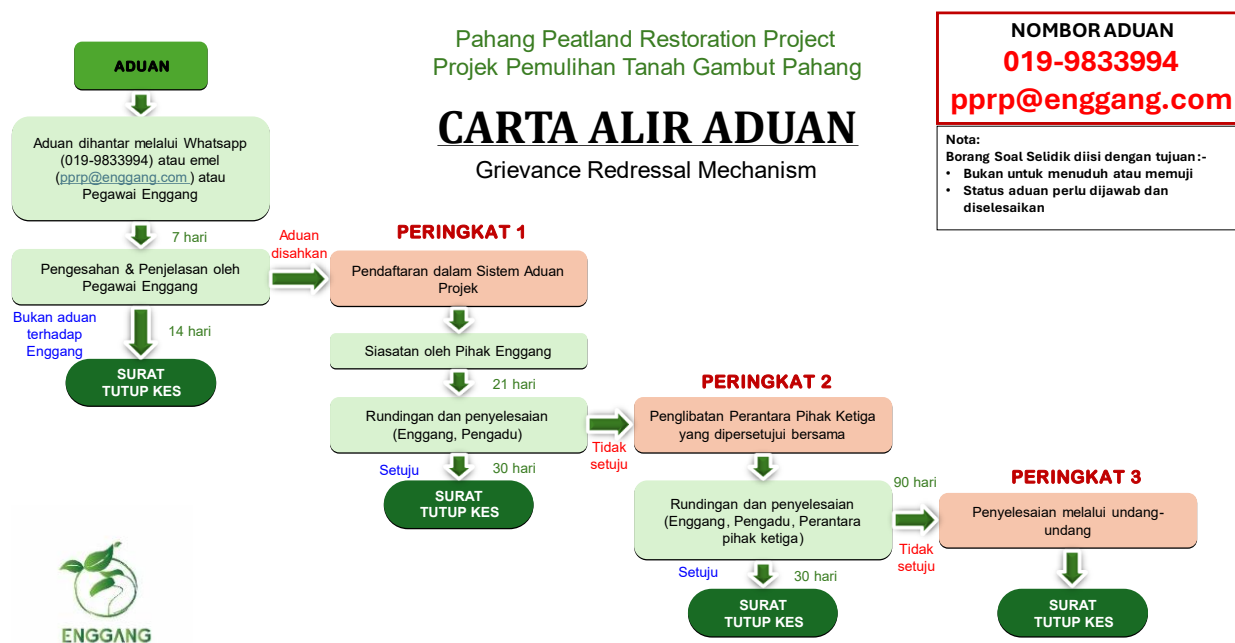
The Project believes that most if not all grievances will be resolved this way because, based on experience, bringing in a third party will put communities ill at ease and in some cases undermine the trust that has been built. However, if grievance is not amicably resolved after the first stage process with the Grievance Team, follow up support will be sought from an external and neutral mediator. If this process is still unsuccessful in resolving the complaint, the complainant can pursue arbitration or court actions. All cases will be referred and examined to the extent allowed by Malaysia and Pahang State laws.

### 2.3.16 Accessibility of the Feedback and Grievance Redress Procedure (VCS, 3.19; CCB, G3.8)

The Project team shares the simplified grievance mechanism in local language (see Figure 10) during the ongoing engagement with key stakeholders, in particular with local communities in the Project Zone. It will be shared regularly and repeatedly, so all relevant stakeholders will be familiar with the process and communication channels. The grievance mechanism provides a few channels suitable for stakeholders to submit their feedback including a phone number, WhatsApp, email and dedicated post boxes.

Community stakeholders in the Project Zone are given the phone numbers of the Community Development Officer and Community Development Assistant who are assigned to engage with that community. These will be shared at every opportunity by village facilitators.

Figure 10 PPRP GRM simplified flowchart for the communities in Malay



### 2.3.17 Worker Training (VCS, 3.19; CCB, G3.9)

The PPRP invests in people living within the Project Zone, the wider region (Pahang State), and Malaysia as a whole. It provides employment opportunities and capacity improvement irrespective of gender, age, social class or ethnicity and other factors. A particular emphasis is placed on Project Zone communities because offering local employment, either as permanent staff or short-term contractor, is fundamental to the long-term effectiveness of the Project.

To support the smooth operation and productivity of the company, the Project systematically conducts training for its employees. These training programs encompass both internal training, conducted by the company itself, and external training, which also involves external trainers from outside sources. The aim of these training programs is to enhance the knowledge, skills, and attitudes of the employees. The list of potential training courses for the Project workers is set out in Table 13.

Table 13 Worker's training during project lifetime

| No                               | Training Activities                                                                                             | Type                | Schedule          | Target                                                       |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------------|-------------------|--------------------------------------------------------------|
| <b>Soft Skills</b>               |                                                                                                                 |                     |                   |                                                              |
| 1                                | Anti-bribery and Corruption                                                                                     | Internal            | Annually          | All levels                                                   |
| 2                                | Anti-Discrimination, Violation & Sexual Harassment                                                              | Internal            | Annually          | All levels                                                   |
| 3                                | Safety and health training (e.g., basic first aid, fire extinguisher usage)                                     | Internal & External | Annually          | All levels                                                   |
| 4                                | Personal effectiveness (e.g., 7 Habit, time and leave management, public speaking, effective communication)     | External            | Annually          | All levels                                                   |
| 5                                | Culture and Performance Management                                                                              | External            | Annually          | All levels                                                   |
| 6                                | Finance & tax management                                                                                        | External            | Bi-Annually       | All levels                                                   |
| <b>Project – Specific Skills</b> |                                                                                                                 |                     |                   |                                                              |
| 1                                | Project Onboarding                                                                                              | Internal            | As needed         | New hires                                                    |
| 2                                | Carbon monitoring (Incl. Peatland, Carbon stock assessment and AGB survey training)                             | Internal            | Bi-Annually       | Supervisor & Forest Protection Team                          |
| 3                                | On-site risk identification and mitigation training (Incl. forest fire management and its suppression training) | Internal & External | Bi-Annually       | All Staff & Communities<br>(Separate Session)                |
| 4                                | Software training, (e.g. Microsoft Office, database management, GIS and mapping)                                | Internal & External | Annually          | Supervisor & Staff (as needed)                               |
| 5                                | SMART patrol & Safety Driving (4WD and boat)                                                                    | Internal            | Bi-Annually       | Supervisors, Forest Protection team, and Biodiversity team   |
| 6                                | Biodiversity and community assessment training (Incl. HCV- HCS Identification)                                  | Internal            | Bi-Annually       | Supervisor & Biodiversity team and Community Engagement Team |
| 7                                | VERRA validation and verification process                                                                       | Internal            | Every three years | Supervisor & Staff                                           |
| 8                                | Hydrological monitoring training (including relevant climatic parameters)                                       | Internal            | Bi-Annually       | Supervisor & Staff (as needed)                               |
| 9                                | Tools training (e.g. GPS, drones, auger, rangefinder, water logger, etc.)                                       | Internal & External | Annually          | Supervisor & Staff (as needed)                               |

### 2.3.18 Community Employment Opportunities (VCS, 3.19.13; CCB, G3.10)

In order to guarantee equitable employment opportunities, the Project encourages Project Zone community members to apply for all job positions, including management roles. provided they fulfil the necessary credentials and capabilities.

Open positions have been (and will continue to be) advertised in a variety of ways to reach a broad array of potential applicants. This includes online posting on job boards and through social media. Project staff will visit all villages to announce local job vacancy opportunities, so that community leaders have the opportunity to refer suitable candidates from their communities. Currently, about 50% of Project staff are hired from Project Zone communities. Currently, women from the surrounding villages comprise around 30% of the Project staff. Women's participation will continue to increase if possible.

### 2.3.19 Occupational Safety Assessment (VCS, 3.19; CCB, G3.12)

The Project is dedicated to providing a healthy, safe and secure working environment for all its workers and visitors while upholding the preservation and protection of the natural ecosystem. To this end, Enggang (Pekan) Sdn Bhd has adopted a Health, Safety and Security Policy stating that it:

1. Prioritize the health and well-being of our workers through regular health and safety training programs.
2. Provide access to necessary safety equipment and ensure its proper use during field operations.
3. Encourage a culture of open communication regarding physical & mental health concerns and promptly address any reported issues.
4. Continuously improve health management systems to ensure the highest standards of occupational health and safety.
5. Conduct regular risk assessments for all activities including fieldwork, identifying, and mitigating potential hazards.
6. Establish procedures for the management of occupational health and safety risks, including emergency response plans in accordance with best practices.
7. Empower the workforce with skill-based competency to handle any potential unsafe situation.
8. Foster a safety culture, encouraging our workers to actively participate in maintaining a safe working environment.

With support from a third-party contractor, Enggang (Pekan) Sdn Bhd is developing a Health and Safety Management System in accordance with ISO 45001. The Health and Safety Management System shall contain the following management controls:

- a) An occupational safety and health committee consisting of representatives from the management and the staff members.
- b) Risk assessment shall be performed half-yearly using the TECCOPS framework to assess technical, environmental, commercial, climate change, operational, political and social risks.
- c) Significant safety and health risks associated with project activities are assessed and controlled to levels as low as reasonably practicable.
- d) Changes to facilities, processes and organisations are managed to maintain risk controls.

- e) Emergency response plans, including those for medical emergencies and environmental disasters (such as fires or flooding), are established and exercised on an annual basis, as a minimum, to maintain preparedness.
- f) Incidents are investigated and analysed to identify improvements.
- g) Regular reporting to the Oversight Committee.

In implementing the above, Enggang (Pekan) Sdn Bhd management will stop any work, or prevent any work from starting, where adequate controls of health and safety risks are found not to be in place. Further details on specific mitigation actions implemented by Enggang (Pekan) Sdn Bhd to address health and safety risks are available on request.

## 2.4 Management Capacity

### 2.4.1 Project Governance Structures (CCB, G4.1)

The Project will be implemented and managed by the Malaysian company Enggang (Pekan) Sdn Bhd with project development, technical and operational support from Swiss project development company Southridge AG. A full detailed organigram is available to auditors on request. Enggang (Pekan) Sdn Bhd is responsible for all financial and compliance control.

### 2.4.2 Required Technical Skills (VCS, 3.19; CCB, G4.2)

PPRP and its partners form a highly experienced team with decades of combined professional experience in the design and implementation of the planned project activities. These include:

- **Project Management:** The Project is being jointly managed by Enggang (Pekan) Sdn Bhd and Southridge AG by executive professionals with doctoral-level educations on forestry and carbon management, and combined multiple decades of experience in developing and implementing emissions reduction and removals projects, including tropical peatland projects, for project development companies and multinationals.
- **Forest Protection and Restoration:** Forest protection is conducted by Project staff who have expertise in peat swamp forest protection and conservation, including staff recruited from local indigenous communities, and supported by expert consultants with more than 10 years' individual experience in peatland restoration and conservation.
- **Carbon Accounting and Monitoring:** Carbon accounting is led by Southridge AG, with experts experience in calculation of GHG avoidance, reduction and removal from tropical peatland carbon projects. Monitoring activities and implemented in the field by Enggang (Pekan) Sdn Bhd staff.
- **Community Development:** This role is led by Enggang (Pekan) Sdn Bhd whose staff have over 10 years' collective working experience with indigenous communities, with supplemental support from Southridge AG experts experienced in community stakeholder engagement, consultation, FPIC, community program design and implementation.

- **Biodiversity Conservation:** Biodiversity conservation effort is conducted by Project Staff with more than 20 years' combined experience in wildlife monitoring, HCV assessment and auditing, and human-wildlife conflict resolution.

#### 2.4.3 Management Team Experience (VCS, 3.19; CCB, G4.2)

Resumes for the core project management team are available to the auditors on request.

#### 2.4.4 Project Management Partnerships and Team Development (VCS, 3.19; CCB, G4.2)

The Project partners, at the Project's outset, are as described above and as shown in Section 2.4.2. In addition to these core partners, the Project will seek to establish new partnerships on themes or issues, as required, whenever such partnerships add value to the Project or address a resource need that cannot be resolved internally, such as through expert consultants.

Enggang (Pekan) Sdn Bhd employs staff on an industry competitive basis and to date has faced no recruitment challenges; it also offers attractive employment benefits as a tool to retain talent. Projects like the PPRP are only as good as the staff that implement them, and this is fully recognized by Enggang (Pekan) Sdn Bhd and the other core project partners.

#### 2.4.5 Financial Health of Implementing Organization(s) (CCB, G4.3)

Enggang (Pekan) Sdn Bhd has secured financing from its principals for the duration of the first monitoring period. Supporting documentation can be provided to the auditors on request. The Project will engage buyers of VCUs with a view to generating revenue that will cover the operational costs of the Project on an ongoing, sustainable basis.

#### 2.4.6 Avoidance of Corruption and Other Unethical Behavior (VCS, 3.19; CCB, G4.3)

Enggang (Pekan) Sdn Bhd has strict ethics and compliance and anti-bribery and corruption policies and practices in place, which can be made available to auditors on request. These include:

- A system of financial controls for the detection and prevention of contravening actions such as bribes;
- Procedures to ensure compliance with all applicable anti-corruption laws and regulations;
- Guidelines on what are acceptable gifts and hospitality to be offered or accepted and set value limits for registration and approval;
- Rules and procedures to ensure that any actual, potential or perceived conflicts of interests and any actions required to mitigate it properly are fully recorded and tracked;
- Procedures to ensure that facilitation payments are not made;
- Compliance rules and procedures for relevant ethics and compliance risks, which will include a periodic assessment of the main ethics and compliance related risks to identify any additional

risks requiring mitigation, and a system for retaining documents evidencing efforts to support the compliance commitment and program elements;

- Antitrust rules for communication with competitors where applicable which are in line with industry practices;
- A data collection and archiving system that assures the protection of personal data. Core management staff will be trained in the implications and application of these policies and procedures and will receive annual refresher training; and
- A helpline (or similar mechanism) to enable staff and third parties to report any suspected violations of the program, with a clear policy of non-retaliation and investigation procedures for allegations.

When contracting with third parties, Enggang (Pekan) Sdn Bhd uses risk-based due diligence procedures to ensure that the integrity of such parties is assessed and, where necessary, addressed to the satisfaction of Enggang Pekan Sdn Bhd. As such, all Enggang (Pekan) Sdn Bhd contractors are required to undergo due diligence screenings to confirm that:

- The third party complies with applicable anti-bribery Laws and regulations and Enggang (Pekan) Sdn Bhd's standards;
- Key individuals providing services are not on international sanctions lists;
- Politically exposed individuals that are engaged in the business are identified and their suitability assessed. Copies of all documentation are available to auditors on request.

Enggang (Pekan) Sdn Bhd's ethics, compliance, anti-bribery and corruption policies are communicated to all staff through the Employee Handbook, and staff will receive annual training on this. Such training will provide guidance on the identification and mitigation of risks around bribery and corruption, facilitation payments, conflicts of interest, gifts and hospitality, engagement of government officials and money laundering.

#### 2.4.7 Commercially Sensitive Information (VCS, 3.5.2 – 3.5.4; CCB Rules, 3.5.13 – 3.5.14)

## 2.5 Legal Status and Property Rights

### 2.5.1 National and Local Laws (VCS, 3.1, 3.6, 3.7, 3.14, 3.18, 3.19; CCB, G5.6)

The PPRP is designed and implemented in full compliance with both State (Pahang) and National (Malaysian) laws. Relevant laws and regulations on land use, forestry, carbon and climate include:

State Laws:

- Enactment No. 6 of 1986 to adopt the National Forestry Act, 1984;
- National Forestry Act 1984: Forest (Amendment) (No. 2) Rules, 2022 (Rules (No. 2)).

National Laws:

- National Forestry Act 1984
- Environmental Quality Act 1974;
- Wildlife Conservation Act 2010;
- Aboriginal Peoples Act 1954;
- Fisheries Act 1985;
- Occupational Safety and Health Act 1994;
- Workmen's Compensation Act 1952;
- Factories and Machineries Act 1967;
- Employees' Social Security Act 1969;

In addition, the following international conventions are relevant to the Project:

- Convention on Wetlands of International Importance, 1971;
- Convention on the International Trade in Endangered Species of Wild Flora and Fauna, 1973;
- International Tropical Timber Agreement, 1994;
- United Nations Convention on Biological Diversity, 1992;
- United Nations Framework Convention on Climate Change, 1992;
- United Nations Declaration of the Rights of indigenous Peoples, 2007.

### 2.5.2 Relevant Laws and Regulations Related to Worker's Rights (VCS, 3.18.2; CCB, G3.11)

The PPRP is designed and implemented in full compliance with Malaysia's Employment Act 1955, with the newest Amendment in 2022: the key national piece of labor legislation that outlines the rights and obligations of both employers and employees in Malaysia. It covers a wide range of employment-related matters, including employment contracts, working hours, rest days, wages, overtime, and employment termination procedures. The Act also addresses issues such as maternity leave, sick leave, and annual leave entitlements for employees. It plays a vital role in regulating employment relationships in Malaysia, ensuring fair treatment of workers and providing a legal framework for resolving labor disputes. Amendments to the Act over the years have aimed to modernize and enhance labor standards to meet the evolving needs of the workforce.

### 2.5.3 Human Rights (VCS, 3.19)

The Project is deeply committed to recognizing and protecting the rights of the *Orang Asli Jakun* in Malaysia, as outlined by international frameworks such as the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and International Labour Organization (ILO) Convention 169 on Indigenous and Tribal Peoples. In line with Malaysian human rights law, particularly the Protection of Human Rights Act 1999, the Project ensures that Indigenous rights, including land and cultural identity, are respected. To uphold these rights, the Project involves the Department of *Orang Asli* Development (JAKOA), ensuring informed and voluntary participation of the *Orang Asli Jakun* throughout the Project lifecycle.

Furthermore, we are engaging with several NGOs, including Jaringan *Orang Asli* SeMalaysia (JAOS), Global Peace Foundation Malaysia, Persatuan Suku Jakun Pahang (PSJK), Jaringan Kampung *Orang Asli* Pahang (JKOAP), Persatuan Suku Jakun Pahang (Wanita), Apa Kata Wanita *Orang Asli*, and the Center for *Orang Asli* Concerns (COAC). Our discussions with these organizations focus on maintaining a collaborative approach to safeguarding Indigenous rights and ensuring that the Project continues to bring positive impacts to the *Orang Asli Jakun* community. Through these partnerships, the Project is fostering an inclusive development process that respects the rights and aspirations of the Indigenous Peoples.

#### 2.5.4 Indigenous Peoples and Cultural Heritage (VCS, 3.18, 3.19)

PPRP prioritized protection and preservation of traditional cultural heritage of *Orang Asli* as part of community engagement programs. All other projects activities also ensuring no harm to the existing cultural heritage, even promoting the indigenous knowledge of environmental conservation efforts. For instance, the Project identified sacred place in Pulau Kancil, inside Nenasi PRF, which the Project will not be placing any external features nearby and protecting access so the local community could still access their sacred place. Detailed information on cultural and heritage identified places is provided in the section 4.1.3 on High Conservation Value (HCV), under HCV 5 and 6. The process of identifying those HCV areas includes key informant interviews with the *Batins* and the *Orang Asli* nearby, participatory mapping, and primary observations.

#### 2.5.5 Statutory and Customary Property Rights (VCS, 3.18, 3.19; CCB, G5.1)

The Project Area includes permanent reserved forests gazetted under the state laws of Pahang. As decreed under the Federal Constitution of Malaysia, land and forestry is under the jurisdiction of state governments, instead of the federal government. PRFs are forested areas designated to be maintained as forests either for timber production or ecosystem protection purposes. PRFs are owned by the state government and governed by the State Forestry Department of Pahang (Jabatan Perhutanan Negeri Pahang, JPNP). They can be licensed to business entities or individuals for specified activities with the issuance of Use Permit. Examples of Use Permit include permit for logging, permit for non-timber forest products and permit for carbon project.

The Project Zone includes areas with a mix of state and private ownership. Some areas are leased out by the State government to private companies for the purposes of business, e.g., palm oil plantations, other agricultural farms and industries, yet others are owned by individuals for private settlement under the National Land Code 1965 (*Kanun Tanah Negara*) that implement a Torrens system.

Land and forest can be used by the indigenous people outside the National Land Code within these conditions:

- The communities who live on land owned by the government but have been living there for generations can claim the land as customary land and obtain statutory land rights under the Aboriginal Peoples Act 1954. In the Project Area, none of the communities have obtained the statutory rights although some of them are in the process of proposing their mapped land to be

gazetted. PPRP closely monitors this process to ensure that customary property rights are respected.

- The communities have access to the Project Area as it is stated in the National Forestry Act 1984 and Wildlife Conservation Act 2010 that indigenous people can use forest for their traditional activities and livelihood.

### 2.5.6 Recognition of Property Rights (VCS, 3.7, 3.18, 3.19; CCB, G5.1)

Malaysia has a complex indigenous land rights situation where formal recognition of customary lands, particularly in PRFs is rare and often contentious. The Project has applied precautionary principles through consultation with local communities to ensure respect for indigenous rights as the communities themselves see them. However, the Project cannot give formal recognition of said rights due to complex legal and political constraints. Several communities in and around the Project Zone are currently attempting to gain some form of legal recognition for customary lands. To this end, the Project has taken measures to ensure that property rights – as defined by local communities – are protected and that any potential negative impacts of project activities on property rights are minimized. The initial Project Area has been designed to ensure that any areas where there may be overlapping land rights are excluded for the first instance of project activities. This was done by:

- Participatory mapping with all local communities in the Project Zone.
- Drone and satellite mapping of smallholders within the PRF followed by participatory ground verification.
- Exclusion of claimed customary lands currently being proposed by the communities for gazettelement. This was done through engagement with village heads and customary land organizations on existing customary land maps. Villages which have shared their claimed customary land maps with the Project team include:
  - KOA Meranti
  - KOA Selingkong
  - KOA Jong
  - KOA Padang (*kampung serpihan* of KOA Jong)
  - KOA Kaya (*kampung serpihan* of KOA Sawah Batu)
  - KOA Permatang Siput
  - KOA Seri Bangkong

The Project does not restrict access or discourage traditional use of forest resources as these privileges for the indigenous people are protected under the law. Where any rights are determined to be impacted in the future, the Project has developed a detailed FPIC process that will be implemented where needed as outlined in the next section.

### 2.5.7 Free, Prior and Informed Consent (VCS, 3.18; CCB, G5.2)

Table 14 Free, Prior and Informed Consent (FPIC)

|                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description of process for obtaining consent</b> | <p>The Project has developed a three-phase process for obtaining FPIC for project activities that impact land rights for any local community, community group or other stakeholders. This process must be executed before any project activities are started that may impact local communities and indigenous people.</p> <p>Phase 1: Stakeholder identification</p> <ul style="list-style-type: none"> <li>• Collect baseline community data (secondary government data, household surveys, village consultations, participatory mapping, smallholder mapping and ongoing community engagements).</li> <li>• Identify stakeholders whose rights are potentially impacted by project activities or whose rights may be impacted in the future.</li> </ul> <p>Phase 2: Impact assessment (risks, costs and benefits)</p> <ul style="list-style-type: none"> <li>• Consult with potentially impacted stakeholders to determine the risks, costs and benefits of project activities in a participatory manner.</li> <li>• Ensure full understanding of the scale, timing, reversibility and location of project activities is achieved.</li> <li>• Ensure local stakeholders have a full understanding of the FPIC process and what the purpose and expected outcome of the current phase of FPIC is.</li> <li>• Identify the scale of specific risks, costs and benefits with stakeholders for locally relevant project activities that may impact rights.</li> <li>• Document consultation outcome. Where significant impacts are identified that will require consent before implementation of project activities, discuss next steps.</li> <li>• Share the GRM</li> <li>• Where consent is required, set a time for returning for further consultation.</li> </ul> <p>Phase 3: Consent and Benefit Sharing</p> <ul style="list-style-type: none"> <li>• Revisit the impacted stakeholders and outcomes of previous consultations and ensure that risk, costs and benefits of project activities have not changed in scale.</li> </ul> |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                | <ul style="list-style-type: none"> <li>• Revisit the FPIC process and ensure full understanding of the process and what stage the process is at.</li> <li>• Discuss the process for developing a benefit sharing mechanism that is fair, transparent and equitable.</li> <li>• In collaboration with the stakeholders, draft a list of potential benefits that could be included in a benefit sharing agreement.</li> <li>• Leave the stakeholder to consider the options.</li> <li>• The Project team will draft a benefit sharing mechanism based on suggestions from stakeholders and get internal approval for the mechanism.</li> <li>• Return to stakeholders to present draft benefit sharing mechanism for negotiation.</li> <li>• If agreement is reached, request signing of document, if no agreement reached, redraft based on new inputs and repeat process until agreement is reached.</li> <li>• Prepare FPIC agreement that at a minimum contains: purpose and scope of agreement, the consent process, provisions for cultural sensitivity, detailed rights and responsibilities, the agreed benefit sharing mechanism, the GRM process, explanation of the monitoring and evaluation process as well as conditions under which the agreement can be amended or terminated.</li> <li>• Return for further consultation and present the outcomes of previous consultations to ensure full understanding.</li> <li>• Present the draft FPIC agreement and ensure full understanding of all elements.</li> <li>• If consent is given sign the document, if no consent is given revise the agreement and repeat process until agreement is reached.</li> </ul> |
| <b>Outcome of FPIC process</b> | <p>The Project has been designed in a participatory manner to ensure that impacts on rights are minimized. Of the ~2000 stakeholders within the Project Zone identified and consulted, none have been identified as requiring FPIC as rights have will not be impacted by initial project activities. FPIC is a process that will be ongoing throughout the Project lifetime. It is anticipated that future activities, particularly canal blocking, will impact some local communities. These stakeholders have already been identified and will be engaged for FPIC as the Project progresses and activities are expanded into new parts of the Project Area.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>The Project workplan is carefully managed to ensure planned activities are not occurring in any areas where potentially impacted stakeholders are located. No project activity shall proceed without first completing the FPIC process or obtaining consent agreements where necessary.</p> <p>The Project is committed to ensuring that activities will not encroach on land, relocate people without consent, and force physical or economic displacement. Where appropriate, fair and transparent benefit sharing mechanism will be developed to ensure net positive impacts of project activities on local communities and indigenous people. In the unlikely case that project activities displace local people, appropriate compensation will be determined through the FPIC process described above.</p> |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 2.5.8 Benefit Sharing Mechanisms (VCS, 3.18, 3.19;)

|                                                           |                                                                                                                                                                                                                                                                                                    |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Process used to design the benefit sharing plan</b>    | <i>Describe the process used to develop the benefit-sharing agreement with the affected stakeholder groups.</i>                                                                                                                                                                                    |
| <b>Summary of the benefit sharing plan</b>                | <i>Describe the benefit-sharing agreement. Where affected stakeholder groups wish to keep elements of the plan private, provide the full arrangement as a commercially sensitive document. The Project proponent shall demonstrate that the community wishes to keep this information private.</i> |
| <b>Approval and dissemination of benefit sharing plan</b> | <i>Demonstrate that the benefit- sharing agreement was agreed up on by the affected stakeholder groups, and that the agreement was shared in a culturally appropriate manner. Demonstrate that the agreement is readily accessible should stakeholders wish to review the agreement.</i>           |

## 2.5.9 Property Rights Protection (VCS, 3.18, 3.19; CCB, G5.3)

As outlined in Section 2.5.7, no voluntary or involuntary removal or relocation will be implemented by the Project. No activities important to culture or livelihood will be displaced. Local villagers who depend on illegal logging and hunting practices within the Project Area are a small minority and will be engaged as part of the community development workstream and are incentivized to shift to sustainable livelihoods which will generate at least as much revenue and will provide better working conditions.

## 2.5.10 Illegal Activity Identification (VCS, 3.19; CCB, G5.4)

The Project identified some small-scale illegal activities within the Project Zone:

- Open burning by anyone, including the indigenous communities, is illegal under the Environmental Quality Act 1974.

- Large scale agriculture land opening within the PRF is illegal under the National Forestry Act 1984.
- A small number of external people (non-indigenous people) try to use the forest for hunting, fishing, and collecting any forest resources without a proper permit.

In all those cases, community members involved in these activities are a very small minority. Measures to reduce these activities and to minimize risks to project success include:

- Inclusive awareness raising efforts through community meetings.
- Outpost for monitoring illegal activities.
- Regular patrolling (SMART patrol) with community to monitor any illegal activities.
- Deploy Fire Emergency Response Team (FERT) to control and suppress fire from damaging the peatland and forest.

#### 2.5.11 Ongoing Disputes (VCS, 3.18, 3.19; CCB, G5.5)

There are currently no ongoing disputes that occurred in the Project Area. The Project continuously engages with community stakeholders to ensure their rights are not impacted.

#### 2.5.12 Approvals (CCB, G5.7)

Pursuant to a Carbon Project Agreement (CPA) (Pekan Peat Swamp) dated 13th February 2023 made between (1) The State Government of Pahang (the “Government”) and 2) Enggang (Pekan) Sdn Bhd. Enggang (Pekan) Sdn Bhd was appointed by the Government to manage the Project Area and Protection Zone and to implement the Project. The term of the CPA is 60 years (based on three renewable 20-year periods). The CPA document can be made available upon request.

#### 2.5.13 Double Counting and Participation under Other GHG Programs (VCS, 3.23; CCB G5.9)

##### 2.5.13.1 No Double Issuance

Is the Project receiving or seeking credit for reductions and removals from a project activity under another GHG program, or any other form of community, social, or biodiversity unit or credit?

☐ Yes ☒ No

##### 2.5.13.2 Registration in Other GHG Programs

Has the Project registered under any other GHG programs?

☐ Yes ☒ No

Is the Project active under the other program?

☐ Yes ☒ No

### 2.5.13.3 Projects Rejected by Other GHG Programs

Has the Project been rejected by any other GHG programs?

☐ Yes ☒ No

## 2.5.14 Double Claiming, Other Forms of Credit, and Scope 3 Emissions (VCS, 3.24)

### 2.5.14.1 No Double Claiming with Emissions Trading Programs or Binding Emission Limits

Are project reductions and removals or project activities also included in an emissions trading program or binding emission limit? See the *VCS Program Definitions* for definitions of emissions trading program and binding emission limit.

☐ Yes ☒ No

### 2.5.14.2 No Double Claiming with Other Forms of Environmental Credit

Has the Project activity sought, received, or is planning to receive credit from another GHG-related environmental credit system? See the *VCS Program Definitions* for definition of GHG-related environmental credit system.

☐ Yes ☒ No

### 2.5.14.3 Supply Chain (Scope 3) Emissions

Do the Project activities affect the emissions footprint of any product(s) (goods or services) that are part of a supply chain?

☐ Yes ☒ No

## 2.6 Additional Information Relevant to the Project

### 2.6.1 Leakage Management (VCS, 3.11, 3.15)

The Project is located on the only peat swamp in Pahang state that is designated to be logged for commercial timber extraction. Because PRFs and their exploitation are controlled at the state level in Malaysia, it is no possible for leakage to occur in this case as there are no other peatland PRFs for activities to be shifted to.

# 3 CLIMATE

## 3.1 Application of Methodology

### 3.1.1 Title and Reference of Methodology (VCS, 3.1)

Table 15 Title and Reference of Methodology

| Type<br>(methodology,<br>tool, module) | Reference ID<br>(if applicable) | Title                                                                                                                                                          | Version |
|----------------------------------------|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Methodology                            | VM0007                          | REDD+ Methodology Framework (REDD+MF)                                                                                                                          | 1.8     |
| Methodology                            | VM0047                          | Afforestation, Reforestation, and Revegetation                                                                                                                 | 1       |
| Module                                 | VMD0016                         | Methods for stratification of the Project Area (X-STR)                                                                                                         | 1.3     |
| Module                                 | VMD0001                         | Estimation of carbon stocks in the above- and belowground biomass in live tree and non-tree pools (CP-AB)                                                      | 1.2     |
| Module                                 | VMD0002                         | Estimation of carbon stocks in the dead wood pool (CP-D)                                                                                                       | 1.1     |
| Module                                 | VMD0005                         | Estimation of carbon stocks in the long-term wood products pool (CP-W)                                                                                         | 1.2     |
| Module                                 | VMD0006                         | Estimation of baseline carbon stock changes and greenhouse gas emissions from planned deforestation/forest degradation and planned wetland degradation (BL-PL) | 1.4     |
| Module                                 | VMD0009                         | Estimation of emissions from activity shifting for avoiding planned deforestation/forest degradation and avoiding planned wetland degradation (LK-ASP)         | 1.3     |
| Module                                 | VMD0013                         | Estimation of greenhouse gas emissions from biomass and peat burning (E-BPB)                                                                                   | 1.3     |
| Module                                 | VMD0015                         | Methods for monitoring of greenhouse gas emissions and removals (M-REDD)                                                                                       | 2.3     |
| Module                                 | VMD0016                         | Methods for stratification of the Project Area (X-STR)                                                                                                         | 1.3     |

| Type<br>(methodology,<br>tool, module) | Reference ID<br>(if applicable) | Title                                                                                                                                                            | Version |
|----------------------------------------|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Module                                 | VMD0017                         | Estimation of uncertainty for REDD project activities (X-UNC)                                                                                                    | 2.2     |
| Module                                 | VMD0042                         | Estimation of baseline soil carbon stock changes and greenhouse gas emissions in peatland rewetting and conservation project activities (BL-PEAT)                | 1.1     |
| Module                                 | VMD0044                         | Estimation of emissions from ecological leakage (LK-ECO)                                                                                                         | 1.1     |
| Module                                 | VMD0046                         | Methods for monitoring of soil carbon stock changes and greenhouse gas emissions and removals in peatland rewetting and conservation project activities (M-PEAT) | 1.1     |
| Tool                                   | NPRT                            | AFOLU Non-Permanence Risk Tool                                                                                                                                   | 4.2     |
| Tool                                   | T-SIG                           | CDM Tool for testing significance of GHG emissions in A/R CDM project activities                                                                                 | 1       |
| Tool                                   | VT0001                          | Tool for the demonstration and assessment of additionality in VCS agriculture, forestry and other land use (AFOLU) project activities                            | 3       |

### 3.1.2 Applicability of Methodology (VCS, 3.1)

Table 16 Applicability of Methodology

| Reference ID/Title               | Applicability condition                                                                                        | Justification of conformance                                                                                                                                                                                                                                                                      |
|----------------------------------|----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Example: VM0007                  | First applicability condition for given methodology, tool, or module                                           | Justification that the Project conforms with this applicability condition                                                                                                                                                                                                                         |
| VM0007 (All REDD Activity Types) | 1) Land in the Project Area has qualified as forest for at least the 10 years prior to the Project start date. | The areas where the Project is conducting REDD activities are designated as PRF and classified as a mix of primary and degraded secondary peat swamp forest. These areas are part of a wider production forest landscape and have been classified as forests continuously for the preceding 10 yr |

| Reference ID/Title                      | Applicability condition                                                                                                                                                                                                                 | Justification of conformance                                                                                                                                                                                                                                                                                              |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                         |                                                                                                                                                                                                                                         | period as shown in satellite imagery from 2013.                                                                                                                                                                                                                                                                           |
| VM0007 (All REDD Activity Types)        | 2) Where land within the Project Area is peatland or tidal wetlands and emissions from the SOC pool are deemed significant, the relevant WRC modules are applied alongside other relevant modules.                                      | The majority of the Project Area is peat and all relevant WRC modules have been applied to estimate emissions from peat decomposition.                                                                                                                                                                                    |
| VM0007 (All REDD Activity Types)        | 3) Baseline deforestation in the Project Area falls within either of the following categories:<br><br>Unplanned deforestation (VCS category AUDef)<br><br>Planned deforestation (VCS category APDef)                                    | Before the Project start date, the Project Area was an active production forest with clear government sanctioned plans for commercial exploitation and peatland degradation. REDD activities fall under the category of planned deforestation.                                                                            |
| VM0007 (All REDD Activity Types)        | 4) Leakage prevention activities <b>do not</b> include:<br><br>Flooding agricultural lands to increase production (e.g., rice paddies); and/or<br><br>Intensifying livestock production through use of feed-lots and/or manure lagoons. | The Project Area only extends within PRF boundaries where agricultural activities are prohibited, and the Project does not intend to implement or promote any livestock intensification or                                                                                                                                |
| VM0007 (Avoiding planned Deforestation) | 7) Conversion of forest lands to a deforested condition is legally permitted.                                                                                                                                                           | The proposed Project Area is a comprised of several Permanent Reserved Forest (PRF) areas that have been gazetted under the National Forestry Act 1984 where these PRFs are classified as 'production forests' under Section 10(1)(a) "timber production forest under sustained yield" of the National Forestry Act 1984. |

| Reference ID/Title              | Applicability condition                                                                                                                                                                                                                                                                                                                                                                                                                          | Justification of conformance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| VM0007 (All WRC Activity Types) | 8) Project activities <b>do not</b> lower the water table, unless the Project converts open water to tidal wetlands, or improves the hydrological connection to impounded waters.                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| VM0007 (All WRC Activity Types) | 9) Changes in hydrology result in the accumulation or maintenance of SOC stock, noting that a) this pertains to projects that intend to sequester carbon through sedimentation and/or vegetation development and b) this does not pertain to projects that increase salinity to reduce CH <sub>4</sub> emissions. Projects that aim to decrease CH <sub>4</sub> emissions through increased salinity must account for any changes in SOC stocks. | The Project will alter hydrology by rewetting drained peat areas which ensures the maintenance of SOC by avoiding further microbial decomposition and reducing fire risk.                                                                                                                                                                                                                                                                                                                                                                   |
| VM0007 (All WRC Activity Types) | 10) Hydrological connectivity of the Project Area with adjacent areas <b>does not</b> lead to a significant increase in GHG emissions outside the Project Area.                                                                                                                                                                                                                                                                                  | The Project aims to restore the hydrological integrity of peat areas to near natural conditions. The Project Area covers almost an entire peat landscape with multiple peat domes that are not connected hydrologically. Adjacent peat areas not covered by the Project Area are heavily degraded and usually already converted to industrial agriculture with heavy drainage networks. Rewetting the Project Area would not significantly impact on these areas as they would remain heavily drained with a significant emissions profile. |

| Reference ID/Title              | Applicability condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Justification of conformance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| VM0007 (All WRC Activity Types) | 11) Project activities <b>do not</b> include the burning of organic soil.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Project activities do not include the burning of organic soil. Conversely, the Project will prevent fires through rewetting of degraded peat and the establishment of a fire protection team.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| VM0007 (All WRC Activity Types) | 12) Nitrogen fertilizer(s), such as chemical fertilizer or manure, <b>are not applied</b> in the Project Area during the Project crediting period.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No nitrogen fertilizer(s) will be applied in the initial Project Area and there are no intensive agricultural activities proposed in the Project scenario. Should surrounding communities choose to join the Project and new activity instances be added at later verifications, Project activities would only look to support climate smart paludiculture and agroforestry activities that do not rely on chemical inputs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| VM0007 (RWE Project Activities) | <p>13) Prior to the Project start date, the Project Area meets one of the following criteria:</p> <p>a) The Project Area is free of any land use that may be displaced outside the Project Area, as demonstrated by at least one of the following, where relevant:</p> <p>i) The Project Area has been abandoned for two or more years prior to the Project start date; or</p> <p>ii) Use of the Project Area for commercial purposes (i.e., trade) is not profitable as a result of salinity intrusion, market forces or other factors. In addition, timber harvesting in the baseline scenario within the Project Area does not occur; or</p> <p>iii) Degradation of additional wetlands for new agricultural/aquacultural</p> | <p>The areas within the Project Area where RWE activities take place are areas that have been drained for timber extraction and logged and consequently, in some areas, burned. This has resulted in areas that are either deforested completely or degraded to such an extent that they hold no commercial value as an extractive resource and would not be logged further in the baseline scenario.</p> <p>With this baseline land use in the RWE areas of continued drainage and periodic burning of degraded forest areas and because logged over areas are not rewet after initial entry and construction of drainage canals, there is little chance of any significant return of carbon stocks through natural regeneration processes. Therefore, second rotation logging is also unlikely to be profitable.</p> <p>The Project Area and the wider landscape is replete with examples where 1<sup>st</sup> rotation logging and drainage ultimately leads to fires and forest loss.</p> |

| Reference ID/Title                                 | Applicability condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Justification of conformance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                    | <p>sites within the country will not occur or is prohibited by enforced law.</p> <p>OR</p> <p>b) The area is under a land use that may be displaced outside the Project Area, although in such case, baseline emissions from this land use must not be accounted for, and where degradation of additional wetlands for new agricultural/aquacultural sites within the country will not occur or is prohibited by enforced law.</p> <p>OR</p> <p>c) The area is under land use that will continue at a similar or greater level of service or production during the Project crediting period (e.g., reed or hay harvesting, collection of fuelwood, subsistence harvesting, commercial fishing).</p> | <p>Furthermore, even in the absence of fire, without hydrological interventions the forest has very little potential to return to a semi-natural state due to the levels of degradation from logging. Once logged, these areas sit fallow therefore and no activity shifting would occur. In future years the Project will aim to bring in new areas as part of a grouped project design for an expanded rewetting program. Some of these areas have quasi-legal or illegal smallholders that have encroached after land has been cleared by fire. These communities will be included in any rewetting program which will counter any leakage risk.</p> <p>To this end, restoring the peat systems in these areas would not displace any commercial land use elsewhere in the state or peninsular Malaysia. Additionally, there are no other peatlands in the state of Pahang where logging for commercial peat swamp species could be shifted.</p> |
| VM0007 (RWE Project Activities—Peatland Rewetting) | 14) Rewetting drained peatland (RDP) activities occur on project areas that meet the VCS definition for peatland (see VCS Program Definitions).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| VM0007 (CIW Project Activities)                    | 16) Activities occur on project areas that meet the VCS definition of peatland (see VCS Program Definitions).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| VM0007 (CIW Project Activities—APWD)               | 19) Conversion of intact or partially altered wetlands to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| Reference ID/Title | Applicability condition                                                                                                                                                                                                                                                                                                                                                                     | Justification of conformance                                                                                                                                                                                                                                                                                                                  |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    | a degraded condition is legally permitted in the Project Area in which avoiding planned wetland degradation activities will take place.                                                                                                                                                                                                                                                     | Because combined with REDD project activities the applicability conditions for REDD apply as stated in footnote 15 of VM0007. These conditions have been met (see above).                                                                                                                                                                     |
| VM0047             | 1) Project activities increase vegetative cover; and                                                                                                                                                                                                                                                                                                                                        | By restoring the hydrological integrity of drained peat areas, the Project will reduce fire frequency and improve the ecological conditions required to increase tree cover through its assisted natural regeneration program.                                                                                                                |
| VM0047             | 2) Area based, census based, or a combination of the two quantification approaches may be used provided approach-specific applicability conditions are met. Approaches must be selected at the Project start date and used for the entire project crediting period. Where the two approaches are used together, they must be applied in non-overlapping areas defined at the Project start. | Area based quantification will be used for the entire Project Area where reforestation activities will occur. The later addition of new project activity instances may use the census method where communities planting programs are developed. These areas will not overlap with existing ARR accounting areas and so this condition is met. |
| VM0047             | 3) Project activities <b>do not</b> involve mechanical removal offsite or burning of significant <sup>2</sup> stocks of pre-existing dead wood (e.g., for site preparation). Where project site preparation includes chipping, mastication or machine piling all material must remain onsite within the Project boundary.                                                                   | Dead wood will not be transported offsite in any form or burned as part of project activities.                                                                                                                                                                                                                                                |

| Reference ID/Title           | Applicability condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Justification of conformance                                                                                                                                                                                                                                                                                                                    |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| VM0047                       | 4) Project activities <b>do not</b> take place in tidal wetlands (e.g., mangroves, salt marshes).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No part of the Project Area is considered mangrove or tidal wetlands.                                                                                                                                                                                                                                                                           |
| VM0047                       | 5) Project activities that occur on organic soils or in wetlands and <b>do not</b> result in a manipulation of the water table. Planting species that do not naturally occur in organic soils or wetlands is considered a manipulation of the water table. Where projects take place on organic soils or wetlands and manipulate the water table, they must be developed using a multiple project activity design applying this methodology and a Wetland Restoration and Conservation methodology (e.g., VM0036 Methodology for Rewetting Drained Temperate Peatlands). In such cases, the Project activities must comply with all applicable conditions of the selected Wetland Restoration and Conservation methodology and this methodology. | The Project will only plant or encourage the natural regeneration of native peat swamp species which do not impact the water table. The Project has also been designed using VM0007 to cover WRC components for activities on organic soils. All relevant applicability conditions for the WRC component under VM0007 are also met (see above). |
| VM0047 (Area-based approach) | 6) Project activities produce continuous tree and/or shrub cover on any contiguous area exceeding one hectare.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | The Project aims to create continuous forest cover across the entire Project Area this will involve the improvement of degraded forests and reforestation of non-forest areas up to ~18k ha in the first project instance.                                                                                                                      |
| VM0047 (Area-based approach) | 7) Projects may include direct (e.g., manual planting, broadcast seeding) and indirect activities (e.g.,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | The Project will take an assisted natural regeneration approach whereby the restoration of the hydrological integrity of non-forest peat areas will facilitate                                                                                                                                                                                  |

| Reference ID/Title | Applicability condition                                                                                                                                                                           | Justification of conformance                                                                                                                                                                                              |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    | activities that permit or facilitate natural regeneration, like herbivory exclosures).                                                                                                            | natural regeneration and reduce the impact of fires.                                                                                                                                                                      |
| VDM0016            | Module must be used to delineate non-peat versus peat and to stratify the peat according to peat depth and soil emission characteristics                                                          | This module has been used to delineate peat depth strata and soil emission characteristics.                                                                                                                               |
| VDM0016            | The Project boundary must be designed such that the negative effect of drainage activities that occur outside the Project Area on the Project GHG benefits are minimized                          | External drainage activities that impact the Project Area are minimized to the extent that is possible. Most external drainage impacts come from commercial agriculture areas where the Project has no management rights. |
| VDM0001            | Module is applicable to all forest types and age classes.                                                                                                                                         | This module has been used to estimate above ground carbon stocks for all forest classes in the Project Area                                                                                                               |
| VDM0002            | Module is applicable to all forest types and age classes.                                                                                                                                         | This module has been used to estimate above ground carbon stocks for all forest classes in the Project Area                                                                                                               |
| VDM0005            | Module is applicable to all cases where wood is harvested for conversion to wood products for commercial markets, for all forest types and age classes.                                           | For areas where the Project activity is avoided planned degradation this module has been applied to baseline case of timber harvesting.                                                                                   |
| VDM0006            | Module is applicable for estimating the baseline emissions on forest lands (usually privately or government owned) that are legally authorized and documented to be converted to non-forest land. | The Project Area covers a large production forest that is authorized for wetland degradation through selective logging and conversion to industrial agriculture.                                                          |

| Reference ID/Title | Applicability condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Justification of conformance                                                                                                                                                                                                                                                                         |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    | <p>Translated to WRC terminology as per the module this can be read as:</p> <p>Module is applicable for estimating the baseline emissions on <b>wetlands</b> (usually privately or government owned) that are legally authorized and documented to be converted to degraded wetlands or non-wetland.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                      |
| VMD0009            | <p>The module is applicable for estimating the leakage emissions due to activity shifting from forest lands that are legally authorized and documented to be converted to non-forest land, including activity shifting to forested wetland that is drained or degraded as a consequence of project implementation.</p> <p>The module is also applicable for estimating the leakage emissions due to activity shifting from non-forested wetlands that are legally authorized and documented to be converted and degraded. Under these situations, displacement of baseline activities can be controlled and measured directly by monitoring the baseline deforestation or wetland degradation agents or class of agents.</p> <p>This tool must be used for projects in areas where planned deforestation happens on forested</p> | <p>Lands within the Project Area are forested and degraded wetlands legally authorized for further degradation as per the government approved management plan. As Module BL-PL is used for baseline scenario development, all relevant applicability conditions for that module are met therein.</p> |

| Reference ID/Title | Applicability condition                                                                                                                                                                                                                                                                              | Justification of conformance                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    | <p>wetlands, regardless of the absence of wetland within the Project boundaries.</p> <p>The module is mandatory if Module BL-PL has been used to define the baseline, and the applicability conditions in Module BL-PL must be complied with in full.</p>                                            |                                                                                                                                                                                                                                                                                                                                                                                                            |
| VMD0013            | <p>This module is applicable to REDD project activities with emissions from biomass burning and REDD-WRC project activities with emissions from biomass and/or peat burning. This module is also applicable to RWE and ARR-RWE project activities with emissions from peat burning.</p>              | <p>Burning of peat and forest occurs in the baseline and therefore this module is applicable.</p>                                                                                                                                                                                                                                                                                                          |
| VMD0015            | <p>Strata as defined in the relevant baseline modules are fixed and may not be changed without baseline revision.</p>                                                                                                                                                                                | <p>There has been no change to the definition of strata within the Project Area</p>                                                                                                                                                                                                                                                                                                                        |
| VMD0015            | <p>The module is mandatory for REDD, CIW-REDD, RWE-REDD and stand-alone CIW project activities.</p>                                                                                                                                                                                                  | <p>This project is a CIW/RWE-REDD project and therefore implements this module which is mandatory.</p>                                                                                                                                                                                                                                                                                                     |
| VMD0016            | <p>For peatland rewetting and conservation project activities this module must be used to delineate non-peat versus peat and to stratify the peat according to peat depth and soil emission characteristics.</p> <p>In the case of WRC project activities, the Project boundary must be designed</p> | <p>The peat areas in the Project are stratified as per this module according to peat depth class and drainage characteristics in both the baseline and project scenarios.</p> <p>The Project Area is surrounded by production landscapes that heavily drain the peat soils where planting occurs. Without management rights for surrounding areas the Project has worked with commercial actors, where</p> |

| Reference ID/Title | Applicability condition                                                                                                                                                                                                                                                                                                       | Justification of conformance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    | such that the negative effect of drainage activities that occur outside the Project Area on the Project GHG benefits are minimized.                                                                                                                                                                                           | possible, to block canals along shared boundaries to minimize the impacts of drainage from adjacent concessions.                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| VMD0017            | Mandatory For REDD MF projects                                                                                                                                                                                                                                                                                                | Implemented to calculate uncertainty.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| VMD0042            | It must be demonstrated by using the latest version of T-SIG that N <sub>2</sub> O emissions in the Project scenario are not significant, or that N <sub>2</sub> O emissions will not increase in the Project scenario compared to the baseline scenario, and therefore N <sub>2</sub> O emissions need not be accounted for. | <p>N<sub>2</sub>O emissions will not increase in the Project scenario compared to the baseline for two reasons:</p> <p>The Project will avoid further degradation and drainage of peat systems as part of both natural forest logging practices and conversion to agriculture which is a major driver for N<sub>2</sub>O emissions.</p> <p>No nitrogen fertilizers will be used in the Project scenario whereas in the baseline scenario where agricultural conversion occurs nitrogen fertilizers would likely be added to maintain crop production.</p>   |
| VMD0042            | In the baseline scenario the peatland must be drained or partially drained. At the start of the Project the peatland may still be undrained.                                                                                                                                                                                  | The Project Area is subject to the construction of canals for both logging and agricultural conversion in the baseline. Avoiding this degradation is a primary project activity.                                                                                                                                                                                                                                                                                                                                                                            |
| VMD0044            | Leakage caused by hydrological connectivity is avoided by project design and site selection, as set out in Section 5 below.                                                                                                                                                                                                   | <p>The peat areas surrounding the Project Area are a mix of state land—often encumbered by smallholder agriculture—and commercial agriculture. Both require drainage to maintain crop production (particularly for Oil Palm). All four peat domes in the Project Area (Pekan, Kedondong, Nenasi and Resak) have some level of agricultural activity in adjacent areas and where they exist on peat they are inevitably drained.</p> <p>Through increased fire frequency and microbial decomposition these areas will inevitably be subject to increased</p> |

| Reference ID/Title | Applicability condition | Justification of conformance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    |                         | <p>GHG emissions, subsidence and further drainage.</p> <p>It is not possible to adjust the Project Area to include these areas without any legal rights to the land. However, the Project Area is already heavily degraded and drained in many places. By blocking logging and drainage canals in the Project Area and restoring the hydrological integrity of the Project Area to a near natural condition (i.e. fully saturated), the ecological function of the peat swamp within the Project Area will improve which in turn will help to moderate the severity of seasonal flooding and drought events in the surrounding areas without altering the frequency or duration these events. Moderating the flow of water into drained areas adjacent to the Project Area will reduce the extremes of drought and flood and therefore reduce subsidence rates and fire risks by maintaining or improving mean water table depths.</p> <p>Furthermore, the Project proponent has been working to support the blocking of canals in the areas surrounding the Project Area where possible to ensure improvement of hydrological integrity and reduce fire risk in the wider peat landscape. This will be an ongoing activity in the Project Zone. The Project has installed water table monitoring sites in many of these areas to ensure that no ecological leakage occurs boundary monitoring points are also used to monitor changes of water table on the Project boundary. Hydrological modelling will also cover off site areas to ensure that water tables are maintained relative to the Project Area. However, it should be noted that GHG emissions in the adjacent peat areas</p> |

| Reference ID/Title | Applicability condition                                                                                                                                                                                                                                                                                                           | Justification of conformance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    |                                                                                                                                                                                                                                                                                                                                   | will always increase due to agricultural land use practices that require consistent drainage until the drainage elevation limit is met and no more drainage is possible. The restoring of the peat domes in the Project Area will slow this process down and likely reduce emissions.                                                                                                                                                                                                                                                                     |
| VMD0046            | The Project Area must meet the VCS definition for peatland. This module is limited to domed peatlands in the tropical climate zone.                                                                                                                                                                                               | The Project Area meets the VCS definition of a peatland and includes four hydrologically discrete tropical peat domes.                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| VMD0046            | It must be demonstrated using tool T-SIG that N <sub>2</sub> O emissions in the Project scenario are not significant, or it must be demonstrated that N <sub>2</sub> O emissions will not increase in the Project scenario compared to the baseline scenario, and therefore N <sub>2</sub> O emissions need not be accounted for. | <p>N<sub>2</sub>O emissions will not increase in the Project scenario compared to the baseline for two reasons:</p> <p>The Project will avoid further degradation and drainage of peat systems as part of both natural forest logging practices and conversion to agriculture which is a major driver for N<sub>2</sub>O emissions.</p> <p>No nitrogen fertilizers will be used in the Project scenario whereas in the baseline scenario where agricultural conversion occurs nitrogen fertilizers would likely be added to maintain crop production.</p> |
| VMD0046            | In the baseline scenario the peatland must be drained or partially drained.                                                                                                                                                                                                                                                       | The Project Area is subject to the construction of canals for both logging and agricultural conversion in the baseline. Avoiding this degradation is a primary project activity.                                                                                                                                                                                                                                                                                                                                                                          |
| VMD0046            | It must be demonstrated using Module LK-ECO that ecological leakage must not occur.                                                                                                                                                                                                                                               | As per module LK-ECO the Project has been designed to limit potential impacts on water tables in hydrologically connected areas outside the Project Area.                                                                                                                                                                                                                                                                                                                                                                                                 |

| Reference ID/Title | Applicability condition                               | Justification of conformance                                                                                |
|--------------------|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| VMD0046            | At project start the peatland may still be undrained. | At the Project start date the Project Area is a mix of drained and undrained forest and non-degraded areas. |

### 3.4 Optional Criterion: Climate Change Adaptation Benefits

#### 3.4.1 Regional Climate Change Scenarios (CCB, GL1.1)

Pahang State, situated along the eastern coast of Peninsular Malaysia, stands as one of the largest and most ecologically diverse regions within the nation. Renowned for its rich biodiversity, expansive rainforests, and a multitude of ecosystems, Pahang State finds itself uniquely susceptible to the far-reaching impacts of climate change. Recent years have borne witness to notable shifts in the region's climate patterns, engendering profound consequences for its environment, economy, and communities.

Malaysia's equatorial location bequeaths upon it a hot and humid climate that persists year-round. The nation's climatic conditions exhibit variations across its landscapes, distinguishing the climates of Peninsular Malaysia from those in the East, where maritime influences hold sway. Local climate conditions are further modulated by mountain ranges, giving rise to highlands characterized by cooler, wetter conditions and high cloud cover, lowlands with temperatures spanning 23°C to 32°C and elevated humidity, and coastal areas that share temperatures akin to the lowlands but experience sunnier skies and reduced rainfall. Malaysia experiences two distinct monsoon seasons: the Southwest Monsoon, spanning from April to September, and the Northeast Monsoon, which prevails from October to March. On average, the nation receives about six hours of direct sunlight each day, with cloud cover being most prevalent during the afternoon and evening hours.

From 1970 to 2013, the regions of Peninsular Malaysia, Sabah, and Sarawak witnessed surface mean temperature increases of 0.14°C to 0.25°C per decade<sup>17</sup>. The World Bank's projections under the highest emissions pathway, RCP8.5, anticipate average temperatures to escalate by 3.11°C by the 2090s—0.6°C less than the global average. Under the lowest emissions pathway, RCP2.6, a 0.8°C increase by the 2090s is foreseen, approximately 0.2°C less than the global average. Concurrently, a notable upswing in rainfall is projected across the nation, amplifying vulnerability to flooding. Models suggest that early-season droughts and floods may culminate in yield reductions of up to 60% in rice cultivation.

Specifically in Pahang, per the National Water Research Institute of Malaysia (NAHRIM), annual rainfall is projected to surge by up to 10% by 2050, with nearly 40% of this precipitation materializing during the

<sup>17</sup> Climate Risk Country Profile: Malaysia (2021): The World Bank Group and the Asian Development Bank.

annual northeast monsoon season<sup>18</sup>. This pattern signals heightened rainfall, elevating river flows, water levels, storms, storm surges, and exacerbating coastal flooding along the region's coastline.

Drought conditions hold the potential to disrupt the cultivation of rubber, palm oil, and cocoa, which are among the main biodiversity in Malaysia. In terms of livelihoods, climate change in Malaysia threatens to exacerbate poverty and inequality, particularly for low-income earners heavily reliant on climate-sensitive activities such as agriculture, fishing, and informal sectors within the urban economy. These communities often inhabit more exposed areas. In Pahang State, where agriculture is predominant and farmers constitute a significant portion of the population, climate change inflicts damage to crops, curtails productivity, and elevates production costs, thereby eroding farmers' incomes and fostering poverty and inequality. This, in turn, diminishes farmers' active engagement in agriculture. The intense monsoon periods frequently bring about devastating floods, precipitating large-scale evacuations, public infrastructure damage, diminished crop yields, and loss of lives, especially in the low-lying areas along the east coast of Peninsular Malaysia.

In response, the Malaysian Federal Government has already proactively formulated several national adaptation policies and strategies to confront the challenges posed by climate change. According to The World Bank's 2021 report<sup>19</sup>, Malaysia has instituted a minimum of six national policies, strategies, and plans focused on climate change adaptation. Additionally, the adaptation strategies and policies in Pahang State need to be focused on achieving sustainable livelihood, in order to tackle the long-term effects of climate change, which is aligned with this project's aims.

### 3.4.2 Climate Change Impacts (CCB, GL1.2)

#### **Environmental Impact**

In the context of Malaysia's climate change projections, which are derived from The World Bank data mentioned above, these projections have immediate and tangible consequences for the environment within the Project Area. The PPRP area, recognized for its ecological significance and classified as an Environmentally Sensitive Area (ESA) Rank 1 in the National Physical Plan, is particularly vulnerable to these climate shifts. The potential impacts include increased flood intensities, erosion of shorelines, coral reef bleaching, decreased water availability, and a heightened frequency of droughts, among other ecological disruptions. These changes place the invaluable biodiversity and environmental conservation status of the region at risk, affecting not only the ecosystem but also the overall well-being of its inhabitants.

#### **Economic Impact**

Economically, the impacts of climate change in the Project Area and zone have the potential to be substantial and multifaceted. The baseline scenario of continued logging activities within the PRFs,

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<sup>18</sup> Mahfuzul, I.Md., Aldrie, A.A. and Ara, B.R. (2022) 'Potential impact of coastal hazards: Case of Pahang, Malaysia', *Disaster Advances*, 15(2), pp. 66–72. doi:10.25303/1502da6672.

<sup>19</sup> Climate Risk Country Profile: Malaysia (2021): The World Bank Group and the Asian Development Bank.

compounded by the effects of climate change, would have serious long-term impacts on the environmental integrity of the area. Construction of canals, drainage channels, and roads associated with logging operations adversely affects both the forest environment and the critical hydrology of peat areas. This process leads to continuous drying, oxidation, and degradation of peatlands, releasing exacerbating environmental challenges in addition to releasing substantial amounts of GHGs.

The baseline scenario conversion of PRF land to agricultural purposes, such as oil palm plantations and dairy farms, would contribute to further environmental degradation and fragmentation of the Project Area, leading to further drainage and drying of the peatland, forest fires and increased flood risks, in turn damaging crops and other livelihood sources such as fishing, damaging infrastructure, reducing biodiversity including genetic diversity and seed-pools, and harming human health through exposure to fire and smoke. The economic consequences extend beyond financial loss, encompassing a wider spectrum of socio-economic impacts on the communities reliant on these resources. The baseline scenario would therefore result in extensive local economic losses and contribute to broader and irreversible environmental degradation.

### **Social Community Wellbeing Impact**

The indigenous *Orang Asli Jakun* community, deeply rooted in the Project Zone, faces significant challenges to its well-being due to climate change impacts. These shifts directly affect their traditional practices, economic livelihoods, cultural heritage and their wellbeing. As climate change disrupts the peat swamp forest and its ecosystems, the Jakun people encounter altered weather patterns, changing landscapes, and potential loss of biodiversity within the forest<sup>20</sup>. These changes disrupt their traditional way of life, emphasizing the vulnerability of indigenous populations to environmental shifts.

This community's strong spiritual connection to the forest, considering it sacred and to be inhabited by spirits, underscores the deep-rooted social and cultural implications of the impacts of climate change. Balancing the need for development and sustainability with preserving traditional beliefs becomes increasingly complex as the climate transforms the landscape, weather patterns, hydrology and in turn environmental quality.

To address these multifaceted challenges, sustainable and climate-resilient strategies are essential to ensure the long-term health of both the environment and local communities while considering the broader climate change landscape in Malaysia.

### **3.4.3 Measures Needed and Designed for Adaptation (CCB, GL1.3)**

The Project Zone communities are vulnerable to anticipated climate change impacts because their livelihoods and well-being are dependent on the ecosystem integrity over the surrounding peat swamp forest. Although some negative impacts from climate change are inevitable and beyond the control of the

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<sup>20</sup> Gill, S.K., Fadzil, K.S., Hamzah, K.A. (2009). The Wetlands People—Insight into the Jakun through the PRA. In: Respectful Listening: The Jakun as Partners in Conservation. Kepong, Selangor Darul Ehsan.: Peat Swamp Forest Project. 31-53.

Project, we aim to strengthen community and biodiversity resilience by implementing adaptation options through multiple project activities. They include:

- Restoration of peat swamp ecosystems and reforestation;
- Restoration of hydrology and water table to prevent excessive water loss and improve resilience against extended dry periods;
- Planning and designing of climate resilient infrastructural development;
- Agroforestry capacity building;
- Adjustment of agricultural calendars, crop patterns and planting practices;
- Diversification of economic activities by introducing sustainable livelihood options;
- Capacity building for forest management and NTFP development;
- Integrated natural disaster management and prevention systems (e.g., early warning systems, monitoring protocols, and improved techniques and technologies);
- Disease prevention and control through early warning education and information dissemination;
- Improved access to clean water and sanitation facilities;
- Improved access to rain/river water collection systems.

## 4 COMMUNITY

### 4.1 Without-Project Community Scenario

#### 4.1.1 Descriptions of Communities at Project Start (CCB, CM1.1)

The PPRP project area is surrounded by 10 villages which are home to ~8,000 *Orang Asli Jakun* / Jakun Indigenous People. At the start of the Project, the well-being of these *Orang Asli Jakun* community was marked by challenges across several dimensions: environmental, social, economic, psychological, and spiritual. The community faced environmental degradation due to deforestation and conversion of peat swamp forests to oil palm plantations, which disrupted their traditional livelihoods. The loss of forest resources negatively affected their economic stability, contributing to poverty, with many community members relying on low-wage labor. Baseline survey data indicate that more than 50% of Jakun households within the Project Zone are categorized as “Malaysian B40”, having monthly income less than RM2,589, which is the national poverty line in 2022<sup>21</sup>. Socially, the community maintained close-knit relationships, with strong familial and communal ties, though gender dynamics were heavily patriarchal, often limiting the agency of women. Psychologically and spiritually, their connection to the forest, traditionally a source of cultural and spiritual identity, has weakened. This erosion of traditional beliefs, combined with modern influences, left some members feeling disconnected from their cultural roots.

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<sup>21</sup>[https://storage.dosm.gov.my/technotes/hies\\_poverty.pdf](https://storage.dosm.gov.my/technotes/hies_poverty.pdf)

The *Orang Asli Jakun* community shared a deep historical, cultural, and spiritual connection to the peat swamp forests. Traditionally semi-nomadic horticulturists, they once depended on forest resources such as rattan, medicinal plants, and animal protein through the hunting small fauna. The *Tok Batin* (village head). plays a pivotal role, acting as both a cultural and spiritual leader. Though modern governance structures integrated the *Tok Batin* into the federal system, traditional practices such as healing and managing community relations are still prevalent. Customary institutions and rules governing the use of natural resources, though increasingly undermined by external economic pressures, are viewed as crucial for the community's persistence.

Communities value their traditional sites, such as burial grounds and spiritual/mythical places within the forest. However, economic pressures often take precedence over cultural preservation, leading many to reluctantly support the conversion of forest areas into plantations. The community's relationship with natural resources, while historically balanced and respectful, has become more economically driven, as traditional livelihood systems give way to market-based activities, particularly through oil palm and rubber cultivation introduced by government agencies such as RISDA (Rubber Industry Smallholders Development Authority) to improve economic outcomes for indigenous people. Despite legal restrictions on agriculture development within PRFs, and the mandatory palm oil certification scheme (Malaysian Sustainable Palm Oil) that prohibits conversion of natural forests into new plantations, many local community members still cultivate oil palm within the forest reserve. They may suffer lower yield due to the lack of capacity to manage planting on peat or suffer discounted price of the fresh fruit bunch produced due to the lack of certification. The Project opens more sustainable opportunities for the communities, which makes them more beneficial and improves livelihoods and wellbeing. The Project raised local awareness about peatland conservation, and how they can improve their livelihoods and wellbeing by utilizing peatland resources.

*Orang Asli Jakun* community display a diversity of experiences shaped by social, economic, and cultural factors. Although generally the communities are low income, wealth disparities do exist with a few slightly higher income families benefiting from productive smallholdings or wage labor. Gender dynamics are skewed, with men dominating leadership roles such as the *Tok Batin* or village committee positions, while women are often confined to domestic unpaid work, although some women are starting to engage in local governance structures like the *Jawatankuasa Kemajuan dan Keselamatan Kampung* (JKKK) or village committees. Ethnic diversity is limited with most community members identifying as Jakun, though intermarriages with outsiders, including Chinese, Malays and other indigenous groups, are common.

Demographics influence village traditions, with older generations holding on to traditional practices and knowledge, while younger generations are more influenced by modern schooling and external cultures. The younger members of the community increasingly show a diminished interest in traditional livelihoods and belief systems, often seeking employment opportunities outside the village, thus further eroding the community's indigenous knowledge base and cultural practices.

#### 4.1.2 Interactions between Communities and Community Groups (VCS, 3.19; CCB, CM1.1)

At the start of the Project, the *Orang Asli Jakun* communities surrounding the Project Area maintained close, cooperative relationships within their villages and surrounding communities. The structure of social interactions was rooted in traditional values of mutual support, with activities centered around community life, resource sharing, and cultural preservation. While each village operated semi-autonomously, the villages shared common beliefs, customs, and livelihood strategies.

Interactions between the Jakun community and external groups, such as governmental bodies, corporations, and NGOs, are varied, ranging from collaboration to distrust. Local governance, represented by the village committees (JKKK) and led by the *Tok Batin*, often mediated these interactions. The *Tok Batin*, as the cultural and administrative leader, is integral in guiding interactions with external stakeholders. However, the extent of collaboration is often dependent on the community's previous experiences with these groups.

The internal cohesion of the Jakun community is maintained through deeply ingrained practices of mutual assistance. Community members frequently engage in traditional cooperative work for various communal needs, including ceremonies like weddings, funerals, and births, as well as public infrastructure projects, such as maintaining access roads and communal facilities. This shared effort extended into practices such as organizing collective fishing or gathering parties, which served both social and economic purposes. These cooperative activities were critical for maintaining community bonds, ensuring that traditional customs and values were passed on to younger generations.

Relations with external groups, especially government agencies and NGOs, are complex. The Department of *Orang Asli* Development (JAKOA) plays a prominent role in mediating between the community and the state, particularly concerning land use and assistance programs. However, interactions are often met with a mix of gratitude and frustration. While governmental aid was appreciated, the community frequently expressed disappointment in the lack of long-term, meaningful support, particularly regarding infrastructure development, livelihood opportunities and customary land rights.

NGOs have had a more contentious relationship with the Jakun community. Some NGOs are perceived to exploit the community's vulnerabilities for their own agenda. However, there are exceptions where NGOs, working transparently and with genuine intent, have earned the community's trust. These groups often supported small-scale livelihood initiatives, such as handicraft production or sustainable agriculture, though the success of these initiatives depended heavily on local acceptance.

#### 4.1.3 High Conservation Values (CCB, CM1.2)

Table 17 HCV 4

|                         |                                                                                                                                                                 |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| High Conservation Value | HCV 4 – Critical Ecosystem Services                                                                                                                             |
| Qualifying Attribute    | Water Regulation and Flood Control: Peatlands act as natural water reservoirs, regulating water flow and reducing the risk of floods during heavy rainfall. The |

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | <p>hydrology of peatlands is crucial for maintaining water quality and preventing salinization of nearby agricultural lands.</p> <p>Fire Prevention: Intact peat swamp forests are water-saturated, which minimizes fire risks compared to degraded peatlands. Forest cover reduces the likelihood of wildfires, crucial for protecting surrounding areas and biodiversity.</p> <p>Carbon Storage: Peatlands are one of the most effective natural carbon sinks, storing vast amounts of carbon in their soil and vegetation. Preventing peat decomposition reduces greenhouse gas emissions, contributing to global climate regulation.</p> |
| <b>Focal Area</b> | The entire project area can be considered a critical ecosystem in terms of the peatland landscape and so comprises the entire focal area.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

Table 18 HCV 5

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>High Conservation Value</b> | HCV 5 – Forest and river areas fundamental to meeting basic needs of local communities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Qualifying Attribute</b>    | <p>Food Source: Rivers provide fish essential for protein and income. Forest produces fruits, herbs, and hunted animals (boar, squirrel, monkey, birds) for food.</p> <p>Self-Sustained Agriculture: Communities grow plants sufficient for their living needs, supporting food security and reducing dependency on external resources.</p> <p>Livelihood and Income: Sale of forest products like pitcher plants (<i>periuk kera</i>), wild fruits (<i>asam kelubi</i>), rattan (<i>rotan</i>), palas leaves (<i>daun palas</i>), and resin (<i>damar</i>). Traditional weaving materials like screwpine leaves (<i>mengkuang</i>) support handicrafts.</p> <p>Building Materials: Timber is used to build houses, boats, and small bridges.</p> <p>Medicinal Resources: Herbs are gathered for traditional medicine.</p> <p>Cultural and Traditional Practices: Weaving and hunting are culturally significant and preserve traditions.</p> <p>Water Supply: The forest regulates water flow, supporting drinking, irrigation, and sanitation.</p> |
| <b>Focal Area</b>              | Peat swamp forest, Sungai Bebar and Sungai Mercung.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

Table 19 HCV 6

|                                |                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>High Conservation Value</b> | HCV 6 – Areas Critical to the Traditional Cultural Identity of Local Communities                                                                                                                                                                                                                                                                                    |
| <b>Qualifying Attribute</b>    | <p>Cultural and Spiritual Significance: Sacred sites used for rituals, spiritual practices, and maintaining community well-being. These areas are vital for preserving traditional beliefs and cultural identity.</p> <p>Ancestral Heritage: Sites of historical importance where ancestral connections are honored through ceremonies and cultural activities.</p> |
| <b>Focal Area</b>              | <p>Lubuk Mudik in Sungai Bebar</p> <p>Pulau Kancil in Nenasi PRF</p> <p>Kuala Merba at the entrance from Sungai Merba to Sungai Bebar</p> <p>Kuala Serai at the entrance from Sungai Serai to Sungai Bebar</p> <p>Pulau Rawa in Pekan PRF</p>                                                                                                                       |

#### 4.1.4 Without-Project Scenario: Community (CCB, CM1.3)

In the absence of the Project, the community would face severe environmental, economic, and social challenges. Continued deforestation, land clearing, and recurring fires would accelerate the degradation of the peatland ecosystem. The loss of natural water catchment functions would exacerbate flooding, leading to more frequent and severe inundations that damage homes, infrastructure, and agricultural lands. Water pollution and habitat destruction would drastically reduce fish stocks, a critical resource for local livelihoods (Nath et al., 2017). Furthermore, the recurring haze from fires would deteriorate air quality, causing widespread health issues such as respiratory illnesses and disruption of daily life impacting education and economic outcomes (Kiely et al., 2020). As ecosystems degrade, access to clean water and other essential resources would become increasingly limited, further impacting community well-being.

Economically, the community would suffer from reduced livelihood opportunities. Fishing-dependent households would struggle as water pollution and habitat loss diminish fish populations, while smallholder farmers reliant on oil palm cultivation would face declining yields due to degraded peatlands turning into unproductive, waterlogged areas caused by the eventual reaching of the drainage limit as soils subside and burn. With limited alternative income sources, many families, especially those already below the poverty line, would experience heightened financial instability. The absence of reforestation and restoration efforts would also mean the loss of potential employment and income-generating opportunities, leaving many community members trapped in unsustainable practices such as illegal logging for survival. Long-term, there are likely to be no net positive outcomes communities in areas where peatland is drained and developed for other purposes such as agriculture irrespective of claims that peatlands can be sustainably managed for such uses (Evers et al., 2017).

The social fabric of the community would also deteriorate under this scenario. Limited educational support and economic hardship would contribute to high school dropout rates, particularly among youth who feel compelled to support their families financially. With fewer opportunities, young people would be more vulnerable to risky behaviors such as drug use, early-age marriage, and long-term unemployment. Health risks would also rise due to persistent exposure to poor air quality and the impacts of prolonged flooding, increasing medical costs and reducing overall productivity. The overall quality of life in the community would decline as these interconnected challenges persist and worsen over time.

Women and children would be particularly affected. Women, often responsible for household income generation and caregiving, would have limited access to education, training, and economic opportunities, reducing their ability to contribute to household financial stability. Many would continue relying on subsistence-level activities that are increasingly unsustainable due to environmental degradation. Without targeted empowerment initiatives, women would struggle with low self-esteem and limited decision-making power, further marginalizing them within their households and communities. Similarly, children growing up in this environment would lack proper parental guidance, encouragement, and educational support, making them more susceptible to academic struggles, low self-esteem, and disengagement from schooling. Without intervention, these conditions would perpetuate cycles of poverty, limiting the community's ability to achieve long-term resilience and prosperity.

## 4.2 Net Positive Community Impacts

### 4.2.1 Expected Community Impacts (CCB, CM2.1)

|                                  |                                                                                                                              |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| <b>Community group</b>           | <i>Identify group</i>                                                                                                        |
| <b>Impact(s)</b>                 | <i>Identify impact(s)</i>                                                                                                    |
| <b>Type of benefit/cost/risk</b> | <i>Describe whether each impact is predicted or actual, direct or indirect, and whether it is a benefits, a cost or risk</i> |
| <b>Change in well-being</b>      | <i>Describe type and magnitude of each impact</i>                                                                            |

### 4.2.2 Negative Community Impact Mitigation (VCS, 3.19; CCB, CM2.2)

Participation in community programs is voluntary, with an aim to benefit participants. It is designed to avoid causing environmental harm or generating pollutants, waste, or hazardous materials. Recognizing the male dominance in traditional Jakun communities and Malaysia more broadly, the Project seeks to create employment opportunities for women (particularly indigenous women) through conservation and restoration efforts by promoting their inclusion and empowerment via the Project community development programming. To ensure a safe working environment for women, strict guidelines outlined

in the section 2.5.2 and detailed in the Employee Handbook<sup>22</sup> will be followed. Additionally, the Project will work closely with community development associations (CDA) to prevent or mitigate any adverse community impacts (see section 4.5.8).

#### 4.2.3 Net Positive Community Well-Being (VCS, 3.19; CCB, CM2.3, GL1.4)

The Project is expected to generate net positive well-being outcomes for all identified community groups, addressing environmental, economic, and social vulnerabilities present in the without-project scenario. By implementing a holistic approach to ecosystem restoration, climate resilience, and community empowerment, the Project ensures long-term sustainability and improved living conditions for local populations.

A key benefit of the Project is the significant reduction in fire incidents, which previously posed severe health hazards, economic losses, and environmental destruction. Through active peatland restoration, community fire prevention efforts, and firefighting infrastructure, the Project effectively eliminates uncontrolled fires, thereby preventing respiratory illnesses, property damage, and disruptions to livelihoods. As a result, air quality improves, leading to better health outcomes for vulnerable groups, particularly children, women, and those with pre-existed health conditions.

The Project also ensures access to clean water and improved water stocks by restoring the natural hydrology of peatlands. The implementation of canal blocking and wetland conservation measures maintains groundwater levels, preventing saltwater intrusion and securing freshwater resources for drinking, sanitation, and agricultural use. This directly benefits local communities by reducing waterborne diseases and enhancing food security through sustained fisheries and agriculture.

By stabilizing the ecosystem, the Project significantly enhances disaster management and mitigation. The restoration of natural water catchment areas reduces the frequency and severity of floods, safeguarding homes, infrastructure, and agricultural lands. Additionally, the reforestation efforts using native species contribute to climate change adaptation by lowering surface temperatures, making the environment more resilient to extreme weather conditions. Localized early warning systems and community training further enhance disaster preparedness, ensuring that communities can respond effectively to environmental risks.

The Project directly contributes to improved community well-being through enhanced education, health, and income opportunities. With better environmental conditions, health risks associated with air pollution and contaminated water sources are mitigated, leading to lower healthcare costs and improved productivity. Educational programs integrated into the Project promote awareness of environmental conservation and equip younger generations with skills to pursue sustainable livelihoods.

Economically, the Project fosters job creation and alternative income sources by engaging local communities in conservation activities, sustainable fisheries, and agroforestry. These initiatives empower marginalized groups, including women and indigenous communities, by providing equitable access to

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<sup>22</sup> The Project's Employee Handbook will be available upon request

resources and decision-making processes. By securing long-term environmental and socio-economic stability, the Project ensures that community well-being continues to improve well beyond its duration.

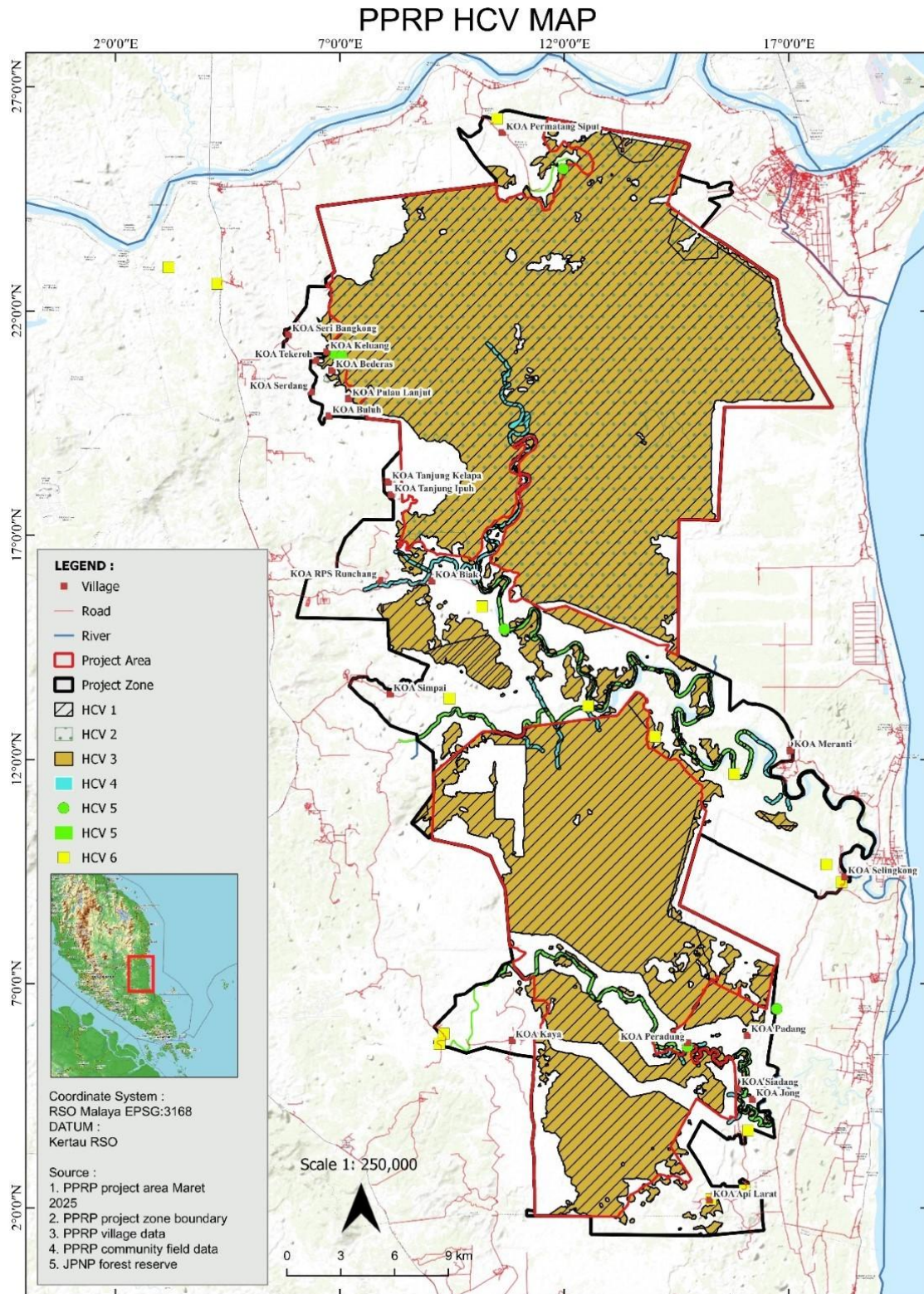
Exceptionally, the PPRP also aimed to meet the Gold Level criteria for climate change adaptation and community benefits. To meet those Gold Level criteria, the Project incorporates robust strategies to enhance community resilience. By restoring peatlands and implementing sustainable land-use practices, the Project strengthens local adaptive capacity to climate change impacts such as extreme rainfall, drought, and temperature fluctuations. The reduction of fire incidents and improved hydrological management ensure that communities can maintain stable livelihoods despite shifting climatic conditions. Furthermore, the integration of education, capacity-building, and participatory governance ensures that local populations are well-equipped to sustain these adaptation measures for future generations.

Through these combined efforts, the Project delivers lasting improvements to community well-being, ensuring a resilient, healthier, and more prosperous future for all stakeholders.

#### 4.2.4 High Conservation Values Protected (CCB, CM2.4)

The Project will ensure that no HCVs related to community well-being will be negatively affected. The Project activities will include protecting and preserving ecosystem areas that are essential for water sources and flood control, and areas that provide natural barriers against forest and land fires (HCV 4). The Project activities will also protect water sources, such as rivers that are used for fishing by many local communities (HCV 5), including maintaining water quality, preventing contamination, and promoting sustainable water usage. The Project will also protect forest cover associated with cultural identity and customary practices, and preserve cultural sites found in the Project Zone (HCV 6). The Community Engagement Team will be at the forefront of these efforts to protect these HCV areas. The location of each of those HCVs are mapped out on the Figure 11 below.

Figure 11 PPRP HCV Map



## 4.3 Other Stakeholder Impacts

### 4.3.1 Impacts on Other Stakeholders (VCS, 3.18, 3.19; CCB, CM3.1)

The Project is aimed at giving positive impact to the immediate community groups as outlined in section 4.2 and specified impact to vulnerable groups in section 4.5.4 and women in section 4.5.5. The Project committed to amplify the impact to the wider *Orang Asli Jakun* communities surrounding the Project Area through opening local employment opportunities, improvement of clean water access and ecosystem restoration as well as cleaner air due to reduced fires. The Project's contribution to improve the community's livelihood will also be contributed to the wider local economic improvement.

### 4.3.2 Mitigation of Negative Impacts on Other Stakeholders (VCS, 3.18, 3.19; CCB, CM3.2)

There is no significant negative impact identified to the other stakeholders caused by the Project. However, it is possible that as biodiversity returns to the Project Area, local stakeholders may be impacted by large wildlife, but we have assessed this risk as very low. To deal with this potential negative impact, the Project will develop a human-wildlife conflict reduction strategy and will train stakeholders on how to reduce this potential negative risk. The Project will also continue to maintain direct lines of communication with local stakeholders and, should any other negative impacts emerge, such risks will be identified and addressed as part of an adaptive management approach that will allow for adjustments to operations such that potential negative impacts can be mitigated efficiently and effectively.

### 4.3.3 Net Impacts on Other Stakeholders (VCS, 3.18, 3.19; CCB, CM3.3)

The Project is not expected to have any negative impact on the other stakeholders as describe above. All the impacts to all stakeholders are considered as positive impact as described in the section 4.2 and 4.3.1.

## 4.4 Community Impact Monitoring

### 4.4.1 Community Monitoring Plan (CCB, CM4.1, CM4.2, GL1.4, GL2.2, GL2.3, GL2.5)

Table 20 PPRP Community Monitoring Plan

| Outcome 1: Improved Livelihood and Economic Well-being                                                 |                                                                                                               |                                                           |                                                                          |                                                                                                                   |                                                                                                                    |                                                |                      |
|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|------------------------------------------------|----------------------|
| Outcome 1.1: Increased livelihood                                                                      |                                                                                                               |                                                           |                                                                          |                                                                                                                   |                                                                                                                    |                                                |                      |
| Program                                                                                                | Targeted community                                                                                            | Indicator / Variable                                      | First year target                                                        | Five years target                                                                                                 | Ten years target                                                                                                   | Data collection method / Means of verification | Monitoring Frequency |
| Capacity building program to enhance knowledge, skills and attitude on sustainable economic activities | Impacted Community<br>Women Group<br>Youth Group<br>Forest Produce Gatherer<br>Fishers<br>Subsistence Farmers | Number of participants attended capacity building program | Identified community that have potential to be involved with the program | Minimum 50 participants cumulative attended the programs comprise of minimum 50% youth and at least 30% are women | Minimum 150 participants cumulative attended the programs comprise of minimum 50% youth and at least 30% are women | Program report / attendance record             | Annually             |
|                                                                                                        |                                                                                                               | Number of capacity building program on entrepreneurship   | Design suitable program according to their needs and interest            | At least 3 capacity building programs cumulatively with 30%                                                       | 6 capacity building programs cumulatively with 30%                                                                 | Program documentation / survey / interview     | Annually             |

|                                                  |                    |                                                        |                                                                          | participants are women                                                              | participants are women                                                              |                                                |                      |
|--------------------------------------------------|--------------------|--------------------------------------------------------|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------|----------------------|
|                                                  |                    | Number of products/ business developed by participants | Identify existing products/ business that have potential for development | 3 products/ business have been developed                                            | 6 products/ business have been developed                                            | Program documentation / survey / interview     | Annually             |
|                                                  |                    | Number of participants who have increased their income | Identify local community's current income                                | 15% of the participants (30% of them are women) have increased their income for 25% | 30% of the participants (30% of them are women) have increased their income for 50% | Program documentation / survey / interview     | Annually             |
| <b>Outcome 1.2: Increased project employment</b> |                    |                                                        |                                                                          |                                                                                     |                                                                                     |                                                |                      |
| Program                                          | Targeted community | Indicator / Variable                                   | First year target                                                        | Five years target                                                                   | 10 years target                                                                     | Data collection method / Means of verification | Monitoring Frequency |
| Project employment                               | Local community    | Number of community members in project zone            | 15 FTE from local community (20% women) hired by project                 | **25 FTE per year (25% women) hired by project                                      | **100 local community (30% women) hired by project                                  | Company record                                 | Annually             |

|  |  |                  |  |  |  |  |  |
|--|--|------------------|--|--|--|--|--|
|  |  | hired by project |  |  |  |  |  |
|--|--|------------------|--|--|--|--|--|

## Outcome 2: Improved Awareness and Level of Education

### Outcome 2.1: Increased awareness on biodiversity, ecosystem and climate education

| Program                                                                          | Targeted community | Indicator / Variable                                                       | First year target               | Five years target                                                                                                 | Ten years target                                                                                                   | Data collection method / Means of verification | Monitoring Frequency |
|----------------------------------------------------------------------------------|--------------------|----------------------------------------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|------------------------------------------------|----------------------|
| Educational Program for Climate Change, Sustainable Practices, and Reforestation | Local community    | Number of participants attended awareness on sustainable lifestyle program | Engagement with local community | Minimum 30 participants cumulative attended the programs comprise of minimum 50% youth and at least 30% are women | Minimum 100 participants cumulative attended the programs comprise of minimum 50% youth and at least 30% are women | Program report / attendance record             | Annually             |
|                                                                                  |                    | Number of awareness on sustainable lifestyle program                       | Engagement with local community | At least 2 capacity building programs cumulatively with 30% participants are women                                | 4 capacity building programs cumulatively with 30% participants are women                                          | Program documentation / survey / interview     | Annually             |

|                                           |                      | Number of local community participants in replanting effort | Engagement with local community            | 100 local community cumulatively participate (30% of them are women) in replanting effort                            | 300 local community cumulatively participate (30% of them are women) in replanting effort                            | Program report / attendance record             | Annually             |
|-------------------------------------------|----------------------|-------------------------------------------------------------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|------------------------------------------------|----------------------|
| Outcome 2.1: Increased school attendance  |                      |                                                             |                                            |                                                                                                                      |                                                                                                                      |                                                |                      |
| Program                                   | Targeted stakeholder | Indicator / Variable                                        | First year target                          | Five years target                                                                                                    | 10 years target                                                                                                      | Data collection method / Means of verification | Monitoring Frequency |
| Community Learning Hub                    | Children and Youth   | Number of learning center established                       | Engagement with local community            | Minimum one learning hub established                                                                                 | 3 learning hubs established                                                                                          | Project documentation                          | Annually             |
|                                           |                      | Number of children and youth attended the learning center   | Engagement with school and local community | Minimum 15 children/youth cumulatively attended the learning hub and passed secondary school certificate examination | Minimum 45 children/youth cumulatively attended the learning hub and passed secondary school certificate examination | Attendance record                              | Annually             |
| Outcome 3: Improved Health and Well-being |                      |                                                             |                                            |                                                                                                                      |                                                                                                                      |                                                |                      |

| Program                                                | Targeted community                                                                                | Indicator / Variable                                                   | First year target                                                        | Five years target                                                                                                | 10 years target                                                                                    | Data collection method / Means of verification | Monitoring Frequency |
|--------------------------------------------------------|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|------------------------------------------------|----------------------|
| Initiative to supply cleaned water for local community | Local community in RPS Runchang, KOA Meranti and KOA Simpai                                       | Number of problems households of have accessed to cleaned water supply | Identify area and villages have problems with cleaned water              | 50 problems households have accessed to cleaned water supply                                                     | 75 problems households have accessed to cleaned water supply                                       | Community Survey                               | Annually             |
| Health Screening and Consultation Program              | Local community (Most in-need household: people who are poor and cannot afford to get healthcare) | Number of people attended health screening and consultation program    | Engagement with health agency and local community                        | Minimum 100 people (30% are women) cumulatively attended health screening and consultation program in five years | Minimum 200 people (30% are women) per 10 years attended health screening and consultation program | Project documentation                          | Annually             |
| Youth Development, Sport and Recreational Program      | Youth                                                                                             | Number of youth participate in the program                             | Identified community that have potential to be involved with the program | Minimum 50 youth participants cumulative attended the programs                                                   | Minimum 150 youth participants cumulative attended the programs                                    | Program report / attendance record             | Annually             |

#### 4.4.2 Monitoring Plan Dissemination (CCB, CM4.3)

The above-mentioned monitoring plan and any relevant project summary documents are disseminated to all relevant stakeholders through their representatives and also made available online for the public to access. Those will be distributed physically and virtually through WhatsApp, email, and on the Project website. The documents are available in English and local language as necessary.

### 4.5 Optional Criterion: Exceptional Community Benefits

#### 4.5.1 Exceptional Community Criteria (CCB, GL2.1)

The Pahang Peatland Restoration Project (PPRP) qualifies under the exceptional community criteria based on the second eligibility pathway, whereby more than 50% of households in the Project Zone live below the national poverty line. Baseline data indicate that a majority of the *Orang Asli Jakun* (Jakun Indigenous People) who inhabit the 10 villages surrounding the Project Area, fall within Malaysia's B40 income category—defined as households earning less than RM2,589 per month (2022 national poverty line). This reflects the widespread economic hardship experienced by these communities, which is compounded by environmental degradation, loss of traditional forest-based livelihoods, and limited access to alternative economic opportunities. The community's historical dependence on peat swamp forest resources has been severely disrupted by deforestation and land conversion, leaving many reliant on unstable, low-wage labor or unsustainable agricultural practices.

The PPRP aims to directly address these socio-economic vulnerabilities by restoring ecological functions of the peatlands while creating inclusive, sustainable livelihood opportunities. In the short term, the Project introduces alternative income-generating activities such as community nurseries, sustainable harvesting of non-timber forest products (NTFPs), eco-craft development, and community-based monitoring. These interventions not only provide direct employment but also build local skills and awareness around peatland conservation. In the long term, the Project envisions a resilient socio-ecological system where communities can benefit from diversified livelihood streams, improved ecosystem services, and greater market access through value-added sustainable products. By integrating traditional knowledge with participatory development approaches, the Project enhances community agency, supports intergenerational learning, and ultimately improves overall well-being and economic resilience in a culturally respectful manner.

#### 4.5.2 Short-term and Long-term Community Benefits (CCB, GL2.2)

The Project is designed to generate both short-term and long-term net positive well-being benefits for smallholders and community members by improving livelihoods, fostering environmental sustainability, and enhancing resilience to socio-economic and climate-related challenges. In the immediate term, the Project creates employment opportunities for local communities through conservation and restoration

activities such as reforestation, fire prevention, and sustainable land management. These initiatives provide direct income for smallholders and marginalized groups, reducing economic instability.

Additionally, the Project offers training and capacity-building programs, equipping community members with skills in sustainable agriculture, fisheries management, and alternative livelihoods. Improved air and water quality resulting from fire reduction and peatland restoration also lead to immediate health benefits, lowering incidences of respiratory diseases and waterborne illnesses. Community engagement and participatory decision-making processes further ensure that all stakeholders are actively involved in shaping project outcomes, fostering local ownership and social cohesion.

Over the long term, the Project strengthens economic stability by diversifying income sources through sustainable livelihood programs, including agroforestry, eco-tourism, and fisheries development. These initiatives help smallholders transition away from environmentally degrading practices and ensure long-lasting economic security.

The restoration of the peatland ecosystem enhances climate resilience, reducing the impact of floods, droughts, and fires on community livelihoods. Sustainable water management practices secure access to clean water resources, benefiting both agriculture and household needs. Improved education and health services, supported by project initiatives, further contribute to long-term well-being by empowering future generations with better opportunities and reducing healthcare burdens.

By integrating environmental, economic, and social sustainability, the Project ensures that communities experience lasting improvements in their quality of life, securing a resilient and prosperous future for smallholders and community members.

#### 4.5.3 Community Participation Risks (CCB, GL2.3)

Through a participatory process consultations and mapping, the Project has identified several key risks that may hinder smallholders and community members from fully engaging in project activities. These risks include economic trade-offs, unequal participation, accessibility constraints, and socio-cultural barriers. The Project has been designed to mitigate these risks through proactive engagement strategies, inclusive decision-making, and targeted support mechanisms.

##### **Economic trade-offs and loss of livelihoods**

Participation in conservation activities may initially reduce land availability for agricultural use or restrict access to previous income sources such as logging or fishing. To mitigate this, the Project provides alternative livelihood opportunities, such as agroforestry, sustainable fisheries, and eco-tourism. Additionally, benefit-sharing mechanisms ensure that affected community members receive fair compensation and financial support during the transition.

##### **Unequal participation and marginalisation**

There is a risk that dominant voices (e.g., landowners, men, or community leaders) may disproportionately influence decision-making, sidelining marginalized groups such as women, youth, and landless farmers. To address this, the Project mandates at least 30% participation from women in all discussions and community meetings. Childcare services and convenient consultation venues are provided to encourage broader participation. Additionally, continuous engagement with vulnerable groups ensures their concerns and perspectives are incorporated.

#### **Limited accessibility and awareness**

Some community members, particularly those in remote areas, may face challenges in accessing project-related consultations and training. The Project counters this by implementing localized engagement strategies, including mobile outreach programs and community-based training hubs. Furthermore, information sessions are conducted in culturally appropriate formats and languages to ensure comprehensive understanding.

#### **Safety and security concerns**

Fieldwork and participation in conservation activities may expose community members, particularly women and youth, to safety risks such as hazardous working conditions or potential conflicts over land use. The Project incorporates robust health and safety measures, including field training on risk management, provision of protective equipment, and clear grievance redress mechanisms. Additionally, gender-sensitive policies are embedded in project operations to ensure the safety and security of all participants.

#### **Sociocultural and institutional barriers**

Resistance to change and lack of trust in external interventions may deter some community members from engaging with the Project. To build trust and foster collaboration, the Project employs Free, Prior, and Informed Consent (FPIC) processes, ensuring that community members have a say in decision-making from the outset. Transparent communication and long-term engagement strategies further strengthen local ownership and commitment.

#### **4.5.4 Marginalized and/or Vulnerable Community Groups (CCB, GL2.4)**

Table 21 Vulnerable Groups

|                             |                                                                                                                                                                                                                                                                                                                  |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Community Group</b>      | Children and Youth                                                                                                                                                                                                                                                                                               |
| <b>Net positive impacts</b> | The Project will provide educational programs to encourage children and youth to continue their studies until at least secondary school, ensuring they obtain certificates for better job opportunities. Additional initiatives include sports activities to promote healthy and productive lifestyles and skill |

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             | development programs to improve their employability, allowing them to secure higher-income jobs and break the cycle of poverty and social issues.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Benefit access</b>       | The Project will identify at-risk children and youth through community engagement, school partnerships, and social welfare assessments. Scholarships, mentoring, and school support programs will be introduced to help students overcome financial and motivational barriers. Outreach activities, such as sports programs and skill workshops, will actively engage youth and provide alternatives to risky behaviors.                                                                                                                                                                                                 |
| <b>Negative impacts</b>     | Some families may resist sending their children to school due to financial constraints or traditional mindsets. To mitigate this, awareness campaigns will educate parents on the long-term benefits of education, and financial aid programs (such as scholarships, school supplies, or transport assistance) will be introduced. Youth who are already engaged in harmful activities may struggle to participate in the programs; therefore, counseling, peer support, and intervention programs will be established to help them transition into education and skill development opportunities.                       |
| <b>Community Group</b>      | Older People                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Net positive impacts</b> | Many older people in the community are not actively working but have their own income through TSK, which serves as their financial support. This income is often used to sustain their daily lives and to help their family members, including children and grandchildren. The Project will assist them in accessing healthcare services, raising awareness about the importance of health screenings, and ensuring they receive necessary medical support. Recognizing their role as the bearers of tradition and cultural heritage, the Project will also create programs to document and pass down their knowledge to |

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         | younger generations, ensuring the continuity of traditional skills and values.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Benefit access</b>   | The Project will identify older individuals in need through community engagement and direct outreach. Support will be provided to help them access medical check-ups and awareness campaigns on disease prevention. Since some may not be familiar with modern healthcare systems, education programs will help bridge this gap. To preserve traditional knowledge, intergenerational programs will be introduced, encouraging older people to mentor and teach younger generations about traditional practices, cultural values, and sustainable livelihoods.                                                                                                                                                                                                                                                               |
| <b>Negative impacts</b> | Some elderly individuals may struggle with adapting to modernization and may feel isolated or distressed due to the erosion of traditional lifestyles. To mitigate this, the Project will promote community-based activities that integrate both traditional and modern elements, ensuring that older individuals feel valued and respected. Emotional support programs, such as peer support groups or storytelling sessions, will help them cope with lifestyle changes. To ensure they are not excluded from project benefits, targeted outreach efforts will be conducted to assess their needs individually and provide tailored assistance. The Project will also ensure that traditional knowledge is preserved and passed down, maintaining a strong sense of identity and cultural continuity within the community. |

#### 4.5.5 Net Impacts on Women (CCB, GL2.5)

The Project is designed to generate lasting, positive impacts on women by addressing the socio-economic barriers that have historically limited their opportunities. Women play a crucial role in maintaining household stability and community resilience, yet they often face systemic challenges such as limited access to education, restricted economic opportunities, and exclusion from decision-making processes. By implementing targeted interventions, the Project seeks to empower women, enhance their well-being, and ensure their voices are integral to shaping the community's future.

One of the primary ways the Project supports women is through economic empowerment. Many women in the community rely on subsistence activities or informal work, which are often unstable and provide minimal financial security. To address this, the Project introduces alternative livelihood programs such as sustainable agroforestry, traditional craft-making (e.g., *menganyam* or weaving), and small-scale enterprises. These initiatives provide women with skills training, financial literacy, and market access, allowing them to develop independent income sources. By reducing reliance on environmentally destructive practices, these sustainable economic activities also contribute to broader conservation goals, ensuring long-term resilience for both women and their communities.

Ensuring women's participation in decision-making is another key priority of the Project. Traditionally, leadership roles and community governance structures have been dominated by men, leaving women with limited influence over resource allocation and policy decisions. To counter this, the Project mandates a minimum of 30% female representation in community consultations, governance bodies, and stakeholder meetings. Women are encouraged to take leadership roles in local project committees, where they can directly influence decisions affecting their livelihoods and environments. To facilitate their involvement, the Project provides childcare support and arranges consultations at accessible times and locations, ensuring that household responsibilities do not become a barrier to participation.

Beyond economic and leadership opportunities, the Project also prioritizes improvements in women's health and overall well-being. Environmental degradation, poor air quality, and limited access to clean water disproportionately affect women, who often bear the responsibility of securing water and maintaining household hygiene. Through reforestation and fire prevention efforts, the Project significantly reduces air pollution, mitigating respiratory illnesses that have long plagued women and their families. Additionally, the restoration of natural water sources ensures a more reliable supply of clean water, promoting better hygiene, reducing the prevalence of waterborne diseases, and easing the burden on women responsible for household water collection.

Recognizing the safety risks that women may face when participating in fieldwork or community activities, the Project incorporates gender-sensitive safety measures. Standard Operating Procedures (SOPs) and Employee Handbook include clear policies on workplace safety, anti-harassment protocols, and grievance redress mechanisms. Moreover, fieldwork guidelines have been adapted to protect female staff and participants from security risks, ensuring that women can engage in project activities without fear of discrimination or harm.

Through these comprehensive interventions, the Project ensures that women are not only beneficiaries but active agents of change. By fostering economic independence, enhancing leadership opportunities, and improving overall well-being, the Project creates an environment where women can thrive. These efforts contribute to long-term community resilience, demonstrating that gender inclusivity is not just a social imperative but a key driver of sustainable development.

#### 4.5.6 Benefit Sharing Mechanisms (CCB, GL2.6)

|                                                           |                                                                                                                                                                                                                                                                                                    |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Process used to design the benefit sharing plan</b>    | <i>Describe the process used to develop the benefit-sharing agreement with the affected stakeholder groups.</i>                                                                                                                                                                                    |
| <b>Summary of the benefit sharing plan</b>                | <i>Describe the benefit-sharing agreement. Where affected stakeholder groups wish to keep elements of the plan private, provide the full arrangement as a commercially sensitive document. The Project proponent shall demonstrate that the community wishes to keep this information private.</i> |
| <b>Approval and dissemination of benefit sharing plan</b> | <i>Demonstrate that the benefit-sharing agreement was agreed up on by the affected stakeholder groups, and that the agreement was shared in a culturally appropriate manner. Demonstrate that the agreement is readily accessible should stakeholders wish to review the agreement.</i>            |

#### 4.5.7 Benefits, Costs, and Risks Communication (VCS, 3.18; CCB, GL2.7)

Ensuring that all community members have access to relevant and adequate information about the Project's benefits, costs, and risks is a priority. The Project has actively shared this information through established community channels, primarily engaging village representatives such as the *Tok Batin* (village leaders), who serve as key conduits for communication. These representatives have been briefed on the Project's objectives, expected outcomes, and potential risks to ensure that stakeholders are well-informed about both the short-term and long-term implications of the Project.

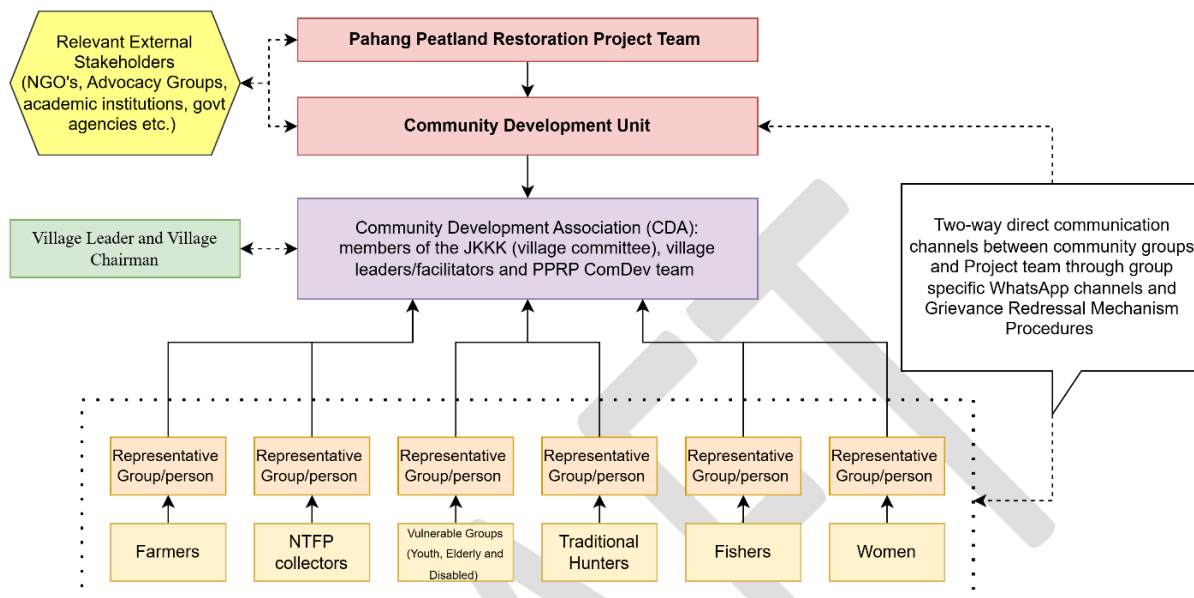
Recognizing the potential risk of information bias or miscommunication due to reliance on intermediaries, the Project has taken additional measures to maximize outreach and inclusivity. Beyond engaging village leaders, the Project team has conducted direct consultations with a broad range of community members, particularly those most directly impacted. These efforts include community meetings, participatory workshops, and household-level engagements to ensure that individuals understand the Project's impact on their livelihoods, rights, and well-being. Feedback mechanisms, such as grievance redress channels and periodic follow-up consultations, have been established to verify comprehension and address concerns.

To further enhance transparency, the Project has employed various communication strategies tailored to community needs. Information has been conveyed in accessible formats, including verbal explanations in local languages, visual aids, and simplified written materials. Additionally, outreach efforts are ongoing to ensure that any gaps in understanding are identified and addressed through continuous engagement.

By maintaining open channels of dialogue and prioritizing inclusivity in information dissemination, the Project strives to minimize risks related to miscommunication and ensure that all stakeholders, particularly those directly affected, are equipped with the knowledge necessary to make informed decisions regarding their participation in the Project.

#### 4.5.8 Governance and Implementation Structures (CCB, GL2.8)

Figure 12 PPRP Governance and Community Program Implementation Structures



PPRP adopts a multi-layered and inclusive governance structure that ensures full and effective participation of smallholders and community members in project decision-making and implementation. The governance model integrates both project-led and community-based structures to facilitate inclusive dialogue, transparency, and responsive engagement across all levels.

At the core of the implementation structure is the PPRP Team, supported by a dedicated Community Development Unit (ComDev Unit) responsible for leading community engagement and participatory processes. This unit works closely with village-level actors through the Community Development Association (CDA)—a body composed of the JKKK (village committee), village leaders and facilitators, and representatives from the PPRP ComDev team. The CDA serves as a critical mechanism for aggregation and coordination of local perspectives, ensuring that community voices are integrated into project planning and implementation.

Village Leaders and Village Chairpersons also play a key leadership role by connecting formal village governance with project activities and facilitating alignment between customary governance and project goals. The CDA is closely coordinated with villages leaders for information and knowledge sharing to support the Project's success and ensure the communities' needs are being met.

The CDA structure enables representation of each community group, including:

- Farmers
- Non-Timber Forest Product (NTFP) collectors
- Traditional Hunters

- Fishers
- Women
- Vulnerable Groups (youth, elderly, and persons with disabilities)

Each group is represented by a designated Group Representative, who actively engages in CDA discussions and liaises with the Community Development Unit to communicate group-specific needs, challenges, and feedback.

To further strengthen participatory governance and grievance redressal, the Project has established two-way direct communication channels between the Project team and community members. These include group-specific WhatsApp channels and clearly defined Grievance Redressal Mechanism Procedures, allowing for timely feedback, issue resolution, and transparent decision-making.

Additionally, relevant external stakeholders—such as NGOs, advocacy groups, academic institutions, and government agencies—are engaged in advisory and collaborative roles to enhance knowledge-sharing and alignment with broader development goals.

This governance structure fosters inclusive participation, acknowledges existing self-governance systems, and empowers local communities—particularly marginalized and vulnerable groups—to play an active role in shaping project outcomes.

#### 4.5.9 Smallholders/Community Members Capacity Development (CCB, GL2.9)

PPRP is facilitating capacity development for the community near the Project Area especially on environmental awareness, building more sustainable lifestyles, as well as sustainable livelihoods. The capacity development programs aimed to reach to the *Orang Asli* as many as possible, including women, youth, and older people. The details of capacity building activities will be monitored every year and written in Section 4.4.1

## 5 BIODIVERSITY

### 5.1 Without-Project Biodiversity Scenario

#### 5.1.1 Existing Conditions (VCS, 3.19; CCB, B1.1)

Tropical biodiversity is in rapid decline globally, driven largely by habitat destruction and over exploitation as well as a range of interacting drivers including climate change, invasive species, and habitat degradation. The terrestrial biomes of Southeast Asia have been identified as some of the most at risk biomes on the planet, and Malaysia has suffered significant forest and biodiversity loss over the last 40 years.

Peninsular Malaysia, part of the Sundaland biodiversity hotspot, is renowned for its rich and diverse ecosystems, ranging from dense rainforests and mangroves to freshwater wetlands and coral reefs. Pahang, the largest state in Peninsular Malaysia, is a biodiversity-rich region that encompasses some of the country's most vital ecosystems. From the peaks of Taman Negara, one of the world's oldest rainforests, to the Cameron Highlands and the unique mangrove forests along its coast, Pahang boasts an exceptional variety of habitats. This ecological wealth supports a remarkable array of species, including iconic wildlife such as the Malayan tiger (*Panthera tigris jacksoni*), the Malayan tapir (*Tapirus indicus*), and the Asian elephant (*Elephas maximus*), as well as countless endemic plants and insects.

However, despite this natural wealth, Pahang faces significant challenges in maintaining its biodiversity. Deforestation for agriculture, including oil palm and durian plantations, poses a substantial threat to wildlife habitats. Urbanization and infrastructure projects, such as highways, further fragment ecosystems, making it harder for species to survive and thrive. Illegal wildlife trade and poaching further exacerbate the decline of flagship species like the Malayan tiger. Additionally, climate change and pollution, particularly from palm oil plantations and mining, have intensified the degradation of ecosystems, jeopardizing biodiversity. The threats facing the Project Area are real and imminent. In the absence of carbon finance the area would continue to be degraded, drained, deforested and burnt resulting in the rapid loss of a critically threatened peatland ecosystem replete with high levels of biodiversity.

Table 22 RTE Species identified in the area

**RTE Mammals Species:**

- Raffles' Banded langur (*Presbytis femoralis*) CR
- Wrinkled Hornbill (*Rhabdotorrhinus corrugatus*) EN
- White-handed gibbon (*Hylobates lar*) EN
- Dusky langur (*Trachypithecus obscurus*) EN
- Common long-tailed macaque (*Macaca fascicularis*) EN
- Southern pig-tailed macaque (*Macaca nemestrina*) EN
- Malay tapir (*Tapirus indicus*) EN
- Flat-headed cat (*Prionailurus planiceps*) EN
- Hairy-nosed Otter (*Lutra sumatrana*) EN
- Asian Small-clawed Otter (*Aonyx cinereus*) VU
- Smooth-coated otter (*Lutrogale perspicillata*) VU
- Leopard (*Panthera pardus*) VU
- Sun Bear (*Helarctos malayanus*) VU
- Bearded pig (*Sus barbatus*) VU

There is a total of 52 RTE species (7 CR, 22 EN, 23 VU,) currently known to be living in the Project Area and Project Zone. The Project design ensures that all remaining forest cover is maintained, and no further habitat fragmentation occurs. The species listed are a mix of peat swamp endemics and more generalist species. However, all will benefit from improved connectivity through rewetting and reforestation efforts. There are no plans for project activities that would pose additional threats to connectivity or habitat maintenance for any of these species. Furthermore, project activities can only enhance connectivity by restoring burnt areas through replanting/rewetting/ reforestation and eventually linking all the forest blocks together.

### Critically threatened habitat: Tropical Peat Swamp ecosystems

Peat swamp forests in Malaysia, particularly in Peninsular Malaysia, are considered highly threatened. According to the IUCN Red List of Ecosystems, many of these peat swamps are classified as Critically Endangered (CR) or Endangered (EN) due to extensive logging, land conversion for agriculture (especially oil palm plantations), and drainage.

As per the baseline scenarios of planned wetland degradation, drainage and conversion to agriculture. In the absence of the Project, the ecologically sensitive habitats within the Project Area would be damaged, lost, burnt and replaced over time with large negative impacts on local biodiversity. By restoring the deforested areas, stopping fires and rewetting degraded peat by blocking canals, the ecological/ hydrological integrity of the ecosystem will improve as will connectivity between habitat patches and individual peat domes in Pekan, Nenasi, Kedondong and Resak.

None of the planned project activities will have any negative impacts on these critically and imminently threatened ecosystems.

### Areas needed for habitat connectivity

As above, project activities will only improve connectivity between fragmented habitats and spatially distinct peat dome ecosystems that were once more contiguous in their forest cover.

The main peat domes are all separated by rivers where encroachment, fire and agricultural development has often been focused, leading to increasing distances between distinct peat domes that were historically forested right up to the river's edge. Project activities will aim to restore this lost connectivity with no activities planned that will risk further fragmentation of habitats over time. Furthermore, the Project Area makes up part of Malaysia's Central Forest Spine which aims to

connect critical tiger habitat throughout  
Peninsular Malaysia

The Project Area represents an area of critical environmental and biodiversity value. It has been listed by BirdLife International as an Important Bird and Biodiversity Area (IBA-MY18)<sup>23</sup> and zoned as an Environmentally Sensitive Area (ESA) Rank 1 in the National Physical Plan<sup>24</sup>. With diverse vegetation types that consist primarily of peat swamp forest containing pockets of freshwater swamp forest as well as heath and lowland forest on mineral soils, the Project Area is ecologically complex and biologically important. 69,563 ha, or 72 % of the total Project Area and Protection Zone is covered by forest in good condition and 87.491 % or 91 % 89 of the total Project Area and Protection Zone covers tropical organic peat soil substrate.

Earlier studies of the area identified 63 species of mammals, 233 species of birds, 17 species of amphibians, 29 species of reptiles and 54 species of fish. An additional baseline survey undertaken as part of the Project development process indicates that critical landscapes remain intact and that there remain globally significant populations of critically endangered species and that levels of diversity may well be higher than previously identified, with the assessment including seven new mammal records for the area.

In total, 31 species of mammals, 141 bird species, and 38 fish species were recorded over the baseline survey period in 2022, that did not include night surveys or animal trapping. This includes 21 globally threatened species under the IUCN Red List: one Critically Endangered (CR) species<sup>25</sup>, nine Endangered (EN) species, and 11 Vulnerable (VU) species (Table 23 IUCN Red List fauna species recorded within the Project Area & Project Zone in baseline surveyTable 23). Key species of interest within this area include the hairy-nosed otter *Lutra sumatrana* and the Flat-Headed Cat (*Prionailurus planiceps*), two rare wetlands specialists that are classified as Endangered in the IUCN Red List. Another Endangered wetland specialist, that is rare elsewhere but the most common hornbill species in the landscape, the Wrinkled Hornbill (*Aceros corrugatus*) has also been recorded, while the fish survey yielded three new records for the area: the catfish *Silurichthys indragiriensis* and the Lais Fish (*Ompok spp*), as well as the Betta Fish (*Betta affi omega*), a critically endangered fighting fish.

<sup>23</sup> <http://datazone.birdlife.org/country/malaysia/ibas>

<sup>24</sup> <https://myplan.planmalaysia.gov.my>

<sup>25</sup> Recorded based on description by local communities.

Table 23 IUCN Red List fauna species recorded within the Project Area & Project Zone in baseline survey

| Taxa    | Not evaluated (NE)/ Data Deficient (DD) | Least Concern (LC) | Near Threatened (NT) | Vulnerable (VU)* | Endangered (EN)* | Critically Endangered (CR)* | Total species |
|---------|-----------------------------------------|--------------------|----------------------|------------------|------------------|-----------------------------|---------------|
| Mammals | 0                                       | 14                 | 3                    | 5                | 8                | 1                           | 31            |
| Birds   | 0                                       | 120                | 15                   | 5                | 1                | 0                           | 141           |
| Fish    | 6                                       | 28                 | 3                    | 1                | 0                | 1 <sup>26</sup>             | 38            |
| Total   | 6                                       | 162                | 21                   | 11               | 9                | 1                           | 210           |



Figure 13 Photos Captured of RTE Species in the Project Area (From Top to Bottom): Hairy-nosed Otter, Wrinkled Hornbill and Raffles' Banded Langur

### 5.1.2 High Conservation Values (CCB, B1.2)

Based on the preliminary data collection and knowledge of current conditions, the Project has designed appropriate management and monitoring approaches for the long-term management of social and environmental risks and benefits, including those related to HCV values.

The majority of Project Area has been identified as HCV 1 (area with notable biodiversity concentration), HCV 2 (large landscape-level areas) and HCV 3 (rare and threatened habitats). In addition, several areas outside of the Project Area, but within the Project Zone were also identified as HCV 1-3 (Figure 14). Social HCVs have also been identified through community consultation and participatory mapping exercise with important river systems, graveyards and sacred places all present in the landscape (Figure 14).

<sup>26</sup> Laboratory analysis required to confirm.

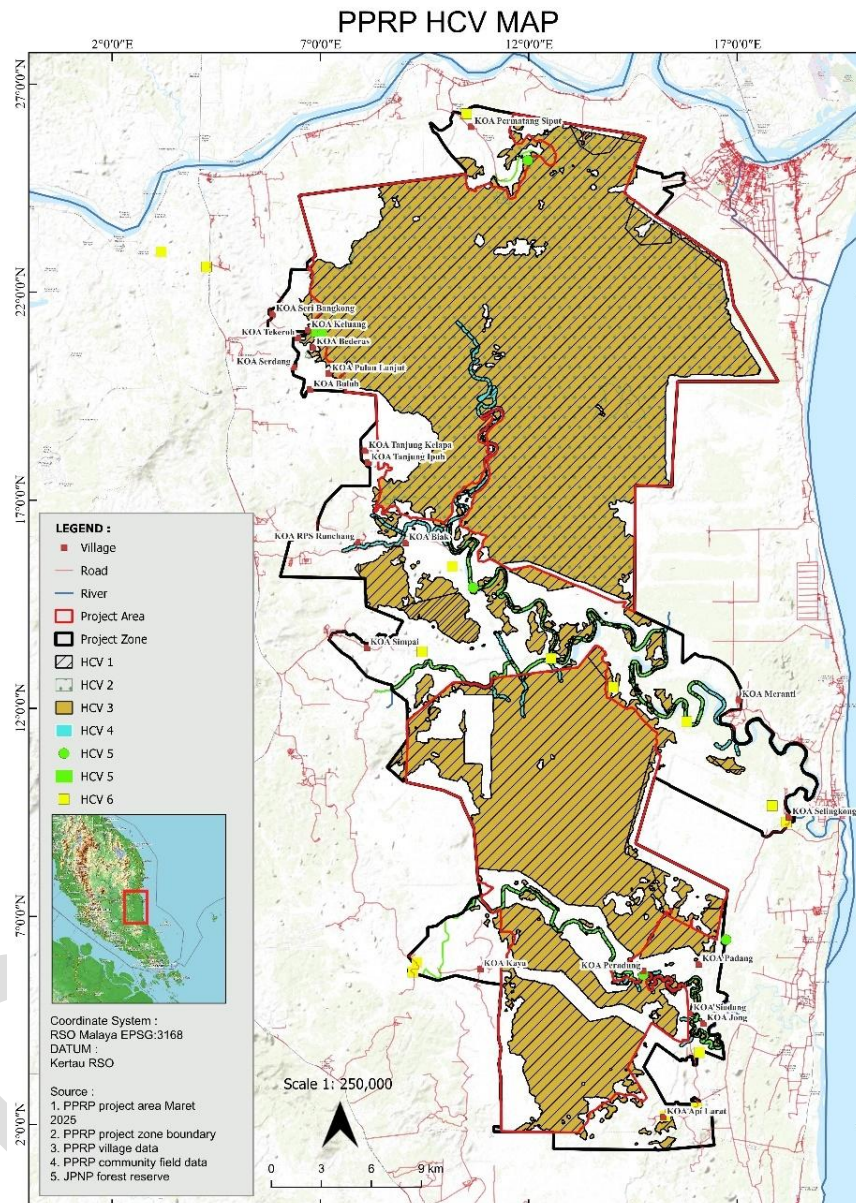


Figure 14: Project HCV (1-6) Map

The tables below present each HCV value, along with its current condition, the baseline (without project) scenario, the Project activity to maintain/enhance the values, and the monitoring method.

#### 5.1.2.1 HCV 1: Species Diversity

HCV 1 is defined as a concentration of biodiversity, including endemic species, and rare, threatened or endangered (RTE) species, which is significant at the global, regional or national level.

Table 24 PPRP HCV 1

| High conservation value | HCV 1: Species Diversity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Qualifying attribute    | <p>Areas that have biodiversity support functions for Protected Areas or Conservation, particularly:</p> <ul style="list-style-type: none"> <li>• Conservation areas near or inside the management unit (with significant biodiversity)</li> <li>• Areas expected to provide biodiversity support for protected or conservation areas near management unit</li> <li>• Areas where the management unit's activities might potentially have negative impacts on the biodiversity conservation functionality of a protected or conservation area</li> <li>• All Critically Endangered (CR), Endangered (EN) and Vulnerable (VU) listed in the IUCN Red List</li> <li>• Species protected by Malaysian Laws such as: Wildlife Conservation Act 2010 (Act 716), National Forestry Act 1984, Fisheries Act 1985 (Act 317), International Trade in Endangered Species Act 2008 (Act 686), Access to Biological Resources and Benefit Sharing Act 2017, Environmental Quality Act 1974 and Pahang Biodiversity Enactment 2021.</li> <li>• Species listed in CITES Appendix I and II</li> <li>• Species that require a location with certain characteristics during their life cycle to congregate, breed, migrate or otherwise, are referred to as keystone habitat</li> </ul> <p>In the Project Area and Project Zone, there are:</p> <ul style="list-style-type: none"> <li>• 287 species of tree</li> <li>• 69 species of mammals</li> <li>• 141 bird species</li> <li>• 73 fish species</li> <li>• 13 reptile species</li> </ul> |

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | <ul style="list-style-type: none"> <li>17 anurans species</li> </ul> <p>All IUCN Red List species, categorized as Critically Endangered, Endangered, and Vulnerable are listed in Section 5.1.1.</p> <p>The PPRP Project Area is included in an Important Bird Area (IBA) with a total of 233 species recorded. The Project landscape is an important habitat for endangered species such as the Malayan tiger (CR), Flat-headed cat (EN), Hairy nosed otter (EN), Dusky langur (EN), Raffles' Banded langur (CR), Long-Tailed Macaque (EN), Southern Pig-Tailed Macaque (EN), Wrinkled hornbill (EN) and is a habitat for a diversity of species.</p> |
| <b>Focal area</b> | <p>Most of the Project Area consist of natural forest that meets HCV 1 criteria, based on the presence of rare and threatened species and is identified as an Important Birds and Biodiversity Area (IBA), and Key Biodiversity Area (KBA)</p>                                                                                                                                                                                                                                                                                                                                                                                                         |

#### 5.1.2.2 HCV 2: Ecosystems and Mosaics at the Landscape Level

HCV 2 identifies landscape-level ecosystems and mosaics that are significant for wildlife populations or contain large intact ecosystems which are significant at the global, regional or national level, and which contain natural populations of species that can survive within natural patterns of distribution and abundance.

Table 25 PPRP HCV 2

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>High Conservation Value</b> | HCV 2: Landscape Level Ecosystem, Ecosystem Mosaics and Intact Forest Landscapes                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Qualifying Attribute</b>    | <p>Criteria:</p> <ul style="list-style-type: none"> <li>Large areas (e.g. greater than 50,000 hectares, though this is not a rule) that are relatively far from human settlements, roads or other access points.</li> <li>Smaller areas that provide key landscape functions such as connectivity and buffering (e.g., protected area buffer zone or a corridor linking protected areas or high-quality habitat together). These smaller areas are only</li> </ul> |

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | <p>considered HCV 2 if they have a role in maintaining larger areas in the wider landscape.</p> <ul style="list-style-type: none"> <li>Large areas that are more natural and intact than most other such areas and which provide habitats of top predators or species with large range requirements.</li> </ul> <p>The Project Area and Protection Zone is dominated by forest cover in good condition covering an area of 69,563 ha. Nevertheless, the forested area is split into patches, resulting in breaks in the overall habitat connectivity. The largest forest patch is in the northern Pekan FR, covering an area of 43,240 ha.</p> <p>Eight endemic bird species are found in the Pekan FR. Its suitability as a habitat for endemic animal populations needs to be explored more deeply in order to ensure that endemic species can continue to survive.</p> |
| <b>Focal Area</b> | <p>The Project Area is divided into two stretches of forest in good condition separated by degraded areas. The area of natural forest in the Pekan FR can be considered large per the HCV definition, making this area a representative habitat for viable species populations. Other FR blocks are of a material size (~20,000 ha), thus also qualifying them as habitat for the sustainability of key species and as representative of HCV 2.</p>                                                                                                                                                                                                                                                                                                                                                                                                                       |

### 5.1.2.3 HCV 3: Ecosystem and Habitats

HCV 3 identifies ecosystems, habitats, or refuges that are rare, threatened, or endangered. To be able to define ecosystem criteria, it is necessary to consider the biogeographic regions of the same and/or adjacent countries, including an approach to analyzing forest cover loss within the Project Area.

Table 26 PPRP HCV 3

|                                |                                                                                                                                                                                                                                          |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>High Conservation Value</b> | HCV 3: Ecosystem and Habitats                                                                                                                                                                                                            |
| <b>Qualifying Attribute</b>    | <p>Criteria:</p> <ul style="list-style-type: none"> <li>Naturally rare because they depend on highly localised soil types, locations, hydrology or other climatic or physical features, such as some types of limestone karst</li> </ul> |

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | <p>forests, inselbergs, montane forest, or riverine forests in arid zones.</p> <ul style="list-style-type: none"> <li>• Anthropogenically rare, because the extent of the ecosystem has been greatly reduced by human activities compared to their historic extent, such as natural seasonally flooded grasslands on rich soils, or fragments of primary forests in regions where almost all primary forests have been eliminated.</li> <li>• Threatened or endangered (e.g. rapidly declining) due to current or proposed operations.</li> <li>• Classified as threatened in national or international systems (such as the IUCN Red List of Ecosystems).</li> </ul> |
| <b>Focal Area</b> | <p>Approximately 91% of the Project Area and Protection Zone lies on rare and highly localized peat soil, some of it already degraded and which is in rapid decline due to anthropogenic commercial activity involving its drainage and removal of forest cover, thus qualifying the entire area as HCV 3.</p>                                                                                                                                                                                                                                                                                                                                                        |

#### 5.1.2.4 HCV 4: Ecosystem Services

HCV 4 identifies ecosystem services that are crucial to communities or nature, such as watershed protection or flood control.

Table 27 PPRP HCV 4

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>High Conservation Value</b> | HCV 4: Ecosystem Services                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Qualifying Attribute</b>    | <p>Areas important for watersheds, erosion control, and areas that provide restrictions on destructive fires, pollination services. Ecosystem or forest that serves to and/or for:</p> <ul style="list-style-type: none"> <li>• Manage extreme water flow events, including buffer zones (riparian) or intact floodplains</li> <li>• Maintain the downstream river flow regimes</li> <li>• Maintain the water quality characteristics</li> </ul> |

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | <ul style="list-style-type: none"> <li>• Fire prevention and protection</li> <li>• Protection of vulnerable soils, aquifer and fisheries</li> <li>• Clean water supply</li> <li>• Wind protection, and moisture, rainfall, and other climatic elements</li> <li>• Pollination services</li> </ul> <p>The PPRP creates these ecosystem services through its peat swamp forest, river, and buffer areas.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Focal Area</b> | <p>HCV 4 area within the PPRP landscape has been identified, specifically with respect to:</p> <ul style="list-style-type: none"> <li>• The identified flood prevention areas are peat swamp forests ;</li> <li>• Areas that can serve as fire prevention are the peat swamp forest on undrained peatland;</li> <li>• Areas identified as land protection, aquifer and fisheries are riparian buffer areas, although the shrub land cover can still function to prevent morpho erosion of the river.</li> <li>• Areas identified for wind protection and microclimate regulator are the peat swamp forest area located on the eastern side.</li> <li>• Areas that serve as water catchments identified during field visits are the peat swamp forest area located on the eastern side.</li> <li>• Pollination services found in this area are indicated by the presence of honey trees, found in in the forest.</li> </ul> |

The intact peat swamp forest will require little management to maintain its HCVs. However, in order to enhance the existing HCVs across the entire project area and the surrounding degraded land, the Project will ensure active management of fires and rehabilitation of the surrounding peatland hydrology. Restoration activities are also planned to extend connectivity across all of the forest blocks within the Project Area.

### 5.1.2.5 Threatened or Rare Ecosystems

PPRP aims to protect and restore over 96,000 hectares of a threatened peatland ecosystem. The Project covers the largest intact peatland landscape in Peninsular Malaysia, the forest cover of which previously spanned over 300,000 hectares, but has been subject to human use for intensive commercial logging and plantation development, resulting in a loss of forest cover, fire and drainage of the peat, shrinking the area of viable intact ecosystem and habitat to its present, fractured condition within the Project Area. The intact forest areas within the Project Area is important for sheltering high levels of biodiversity including a multitude of critically endangered and vulnerable species, as outlined in the sections above detailing the high conservation values. The expansion and enhancement of non-forest and degraded forest areas within the Project will further expand the extent of critical habitat and, in time, result in full connectivity between the forest blocks that make up the Project Area.

### 5.1.3 Without-project Scenario: Biodiversity (CCB, B1.3)

The PPRP area is largely surrounded by production and industrial plantation forest and was previously licensed by the Pahang State Government for commercial logging—per its designation as PFR. In the absence of an active restoration project, the area would be subject to ongoing intensive logging, clearance, drainage and, in parts, conversion – and accompanied by extensive incidences of fire. Biodiversity and ecosystems in the PPRP area would experience only negative impacts in the without-project scenario for several key reasons.

Commercial logging, even when undertaken per management plans that aim to reduce overall impact, lead to the loss of forest, improved road access, removal of large trees that are key structural components of the ecosystem and provide habitat for thousands of species (plants—e.g., epiphytes, insects, reptiles, mammals), and—when undertaken in peat swamps—the digging of canals and/or skid trails, which degrade and dry the soil and remove vegetative cover. The precedents set by historical commercial logging over the PRFs that are covered by the Project Area (and elsewhere in Pahang) suggest that management plans are not adhered to and result in significant overharvesting, extensive forest cover loss (often resembling clear felling), and limited post-harvest rehabilitation efforts (e.g., replanting and canal blocking), which would exacerbate the near- and long-term impacts on biodiversity.

Conversion of peat forest to agriculture (as is the case in the baseline for the Resak blocks) involves the removal of natural aboveground vegetative cover, digging of commercial drainage networks in the peat soil and planting of crops—in this case the planting of feed crops to support a newly established dairy plant. This process devastates biodiversity directly and leads to the pollution of soils and waterways, which further impacts biodiversity belowground and downstream.

The Project Area and its surroundings are highly vulnerable to fire due to the flammability of the drained peat and use of fire to clear land in smallholdings around the Project Area and in the Project Zone. The historical pattern of fire encroachment into the Project Area would continue unchecked in the without-project scenario and exacerbate in the context of further drainage of the peat and the impacts of climate

change. Furthermore, the lack of enforcement of land use regulations have often created a pattern of smallholder planting on burnt areas within the Forest estate—which would prevent natural regeneration from occurring and leading to the permanent loss of biodiversity values over these areas.

## 5.2 Net Positive Biodiversity Impacts

Under the Project scenario, the maintenance and improvement in both the quality and extent of threatened habitats will have significant positive impacts on the range of biodiversity in the area. Reduced degradation, fragmentation and reduction in the fire disturbance frequency will ensure the ongoing survival of the documented species at the site and the expansion of important species into newly restored areas. Restoration efforts are also expected to lead to an eventual long-term increase in the carrying capacity for a range of species across the Project Area.

### 5.2.1 Expected Biodiversity Changes (VCS, 3.19; CCB, B2.1)

Peatland rehabilitation will lead to improved ecosystem services for biodiversity, affecting an increase in important pollinating and seed dispersing species which will accelerate natural regeneration within the Project Area. Through implementation of the Project scenario, the survival and eventual recovery of populations of many species of conservation concern is expected. These species would otherwise become severely depleted or would be eliminated entirely from the landscape under the baseline scenario.

These benefits will be achieved by reducing the threats. No negative effect on biodiversity in the Project Area is anticipated from any project activities.

The expected net benefits for biodiversity will be:

- The persistence of the full range of intact, ecologically functional habitats which are minimally degraded or undisturbed by humans.
- The restoration and regeneration of drained, burned over and degraded peatland into functional forest.
- The protection of drained, burned over and degraded peatland from fire risks.
- The persistence and recovery of populations of species of conservation concern. These populations should fulfil their full range of ecological functions and eventually grow to carrying capacity.
- The augmentation of the current extant biodiversity through provisioning of habitat through restoration activities.
- Improvement of both terrestrial and aquatic habitat quality and quantity that currently acts as a biological corridor.

The key threats that will be addressed are habitat loss, increased fire resilience and resistance, hunting in all forms, and over-harvest of non-timber forest products (NTFPs). Although hunting, fishing and over-harvesting of NTFPs are not currently issues in the Project Area, as the forest recovers, and the biodiversity improves the area may become targeted for such activities.

Table 28 Expected Biodiversity Changes

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Biodiversity element</b>    | RTE Species                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Estimated change</b>        | Increased abundance and occupancy within the Project Area and Project Zone. The Project Area contains natural peat swamp ecosystems that serve as critical habitats for RTE species, such as the Flat-Headed Cat, Hairy-Nosed Otter, Dusky Langur, Raffles' Banded Langur, Long-Tailed Macaque, Southern Pig-Tailed Macaque, and Wrinkled Hornbill. The loss of this ecosystem and natural habitats would lead to the disappearance of habitat and food sources, significantly impacting their populations and causing a decline in numbers. Under the Project scenario, the Project Area will be protected, and degraded areas will be restored. This will ensure the long-term survival of the habitats and the species that depend on them |
| <b>Justification of change</b> | The core project activities of stopping commercial exploitation of forest resources and the associated drainage as well as the avoidance of conversion to agriculture will stop further degradation of habitats for RTE species. Rewetting and reforestation efforts will improve the quality and quantity of wetland habitat as well as increase the connectivity between fragmented patches which will improve the carrying capacity of the ecosystem for RTE species (Budiharta et al., 2014).                                                                                                                                                                                                                                             |
| <b>Biodiversity element</b>    | Floral and faunal density                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Estimated change</b>        | <p>Based on the results of biodiversity identification in the Project Area and Project Zone, 233 species of fauna were recorded. The fauna consists of:</p> <ul style="list-style-type: none"> <li>31 mammal species</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         | <ul style="list-style-type: none"> <li>• 141 bird species</li> <li>• 38 fish species</li> </ul> <p>Floral diversity (trees) is estimated to be 275 species.</p> <p>(Keller et al., 2023)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Justification of change | <p>In the absence of the Project, diversity of plant and animal life would continue to reduce. With long term restoration and rewetting efforts, the number of different species found in the Project Area and Project Zone is expected to increase.</p> <p>With the Project in place, the ability for these areas to support biodiversity will be strengthened and these areas will be protected. Increased forest cover and the planting of tree species that are important to mammal and bird species for some aspect of their ecology such as for food sources or nesting will likely encourage population growth of key mammal species such as gibbons, sun bears, pigs and hornbills.</p> |
| Biodiversity element    | Protection of rare ecosystems and wildlife habitat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Estimated change        | <p>The Project Area contains peatland and alluvial marshland ecosystems. Without intervention, the Project Area will lose these ecosystems, which are critical habitats for flora and fauna. Under the Project scenario, the entire 96,569 hectares area will be protected, and degraded ecosystems will be restored by planting with local species. This activity will ensure long-term conservation of the habitat.</p>                                                                                                                                                                                                                                                                       |
| Justification of change | <p>In the absence of the Project, it is likely that species diversity would be negatively affected by increasing extractive activities and land-use change within the Project Area and Protection Zone. However, with the Project in place, the ability for these areas to support biodiversity will be strengthened and these areas will be protected. Increasing heterogeneity of landscape habitats will likely be associated with a marked increase in habitat, including insects. This, in turn, will likely accelerate the restoration of the Project Area through improved ecosystem</p>                                                                                                 |

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>service provisioning in the form of pollination services. Moreover, the blocking of canals will naturally increase the extent and quality of different spawning grounds (fish and amphibians) and nesting sites (gharials and turtles). The natural diversification of the canal substrate will be further augmented by selecting species for replanting around the canal blocks that encourage the formation of root systems to bind the compacted peat material used for canal block construction. These root and vegetation mats will also provide spawning and nesting grounds for the aquatic community.</p> |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### 5.2.2 Mitigation Measures (VCS, 3.19; CCB, B2.3)

Project activities are designed to protect and enhance HCV areas as such, no negative impacts are anticipated, and as such no specific mitigation measures are currently planned. The impact of project activities on all HCV areas and key target species will, however, be constantly monitored and if at any point negative impacts are detected remedial actions will immediately be taken.

Project activities will focus on the protection of intact forest through preventing further logging or future illegal forest clearing, as well as actions to reduce the impacts of and rehabilitate areas from past logging activities (through both canal blocking /rewetting of peat areas and assisted natural regeneration and where appropriate reforestation). Measures will also be taken to prevent unsustainable and/or illegal hunting in the wider Project Zone through close engagement with communities and ongoing monitoring.

Key biodiversity management activities include devoting significant resources to detecting, identifying and understanding the characteristics, distribution, sensitivity and vulnerability of HCVs.

As mentioned in the Section 5.2.1 above, any predicted negative impacts are most likely to occur as the prescribed project activities successfully lead to increases in biodiversity. It is possible that new animals and plants returning to the area may provide incentives for short-term opportunities for exploitation in the Project Area. These activities could be illegal logging of or poaching. However, a variety of mitigation measures will be implemented to avoid any potentially negative impacts to the increased biodiversity derived from project activities and to protect the Project from illegal activities. This will include efforts from the Community Development team to conduct regular engagement to maintain appropriate monitoring of the area.

In order to ensure the absence of the offsite stakeholder impacts, the Project will undertake regular consultations with the members of surrounding local communities, and other relevant stakeholders, to ensure that their concerns are integrated into the Project's further planning.

### 5.2.3 Net Positive Biodiversity Impacts (CCB, B2.2, GL1.4)

In the without-project scenario, the Project Area faces major threats including commercial logging and, conversion of forest ecosystems into agricultural plantations, all of which would lead to a loss of biodiversity values. Project activities are designed to mitigate these negative impacts and encourage positive changes in biodiversity. There are no negative impacts to biodiversity in the Project scenario and therefore all changes from project activities are considered a net positive particularly considering the scale of the planned commercial degradation in the baseline.

Peatland ecosystems are under threat globally and with the ecosystems and the unique biodiversity therein under increasing threat from climate change. There are no other large peatland ecosystems in eastern Peninsular Malaysia which means that many wetland specialist species are range limited without any gene transfer between populations. Adaptability to climate change and genetic diversity are closely interlinked (Brauer et al., 2023; Kelly, 2019). In absence of the Project, shrinking habitat, increased fragmentation and reduced connectivity between peat domes in the Project Area would lead to increased risk of bottles necks and genetic drift which in turn would likely result in reduced ability of species to adapt to future climate scenarios.

By implementing measures to protect and restore habitats, the Project will contribute to maintaining important habitats for RTE and endemic species. The restoration program will underpin the survival and recovery of populations of species of conservation concern.

Additionally, the Project's focus on sustainable land use practices and enhanced ecosystem services will contribute to the overall resilience and adaptability of biodiversity. By adopting climate-smart strategies and incorporating climate change considerations into planning and management, this project will help biodiversity adapt to the possible impacts of climate change.

#### 5.2.4 High Conservation Values Protected (CCB, B2.4)

Three forms of biodiversity-related HCVs were identified above (Section 5.1.3) for PPRP. They are:

- Concentrations of biological diversity including endemic species and rare, endangered or threatened species that are significant at the global, regional and national levels.
- Rare, Threatened, or Endangered ecosystems, habitats or refugia.
- Basic ecosystem services in critical situations, including protection of water catchment and control of fires.

By protecting the peat dome landscape, the Project will directly protect vital wildlife habitats and safeguarding critical water resources that are essential for the maintenance and functioning of the landscape. Reducing fire risk and maintaining connectivity by keeping the area intact will increase the site's value as an important biological corridor and improve forest cover. To this end, all the high conservation values (at the species, ecosystem or functional levels) will be much improved under the Project scenario compared to the baseline for the reasons noted above.

### 5.2.5 Species Used (VCS, 3.19; CCB, B2.5, B2.6)

The Project's restoration activities that include planting or regeneration within the PPRP area will utilize native or naturalized tree/plant species. No non-native species will be used in the Project Area.

### 5.2.6 Invasive Species (VCS, 3.19; CCB, B2.5)

The Project will not introduce any invasive species to the Project Area. All of the species used in this project are already found naturally occurring in this area.

### 5.2.7 GMO Exclusion (CCB, B2.7)

Our project will not introduce any genetically modified organisms (GMOs) to the Project Area.

### 5.2.8 Inputs Justification (VCS, 3.19; CCB, B2.8)

No inputs such as any nitrogen fertilizers, chemical pesticides, or biological control agents will be used for the Project.

### 5.2.9 Waste Products (VCS, 3.19; CCB, B2.9)

The Project fully follows the principles of Reduce, Reuse and Recycle. Inorganic waste generated from field and operational activities will be collected and separated based on recyclable components such as plastic packaging, paper and glass bottles, etc. The remaining inorganic waste will be removed, transported from the Project site, and disposed of through waste disposal facilities managed by the government or private parties who follow existing government regulations.

This pattern of waste management at the household scale will also be implemented at the village level through outreach and awareness programs. Organic waste will be separated and composted through a composting initiative. Organic waste that has been composted can be used as environmentally friendly fertilizer or disposed of by burial.

## 5.3 Offsite Biodiversity Impacts

### 5.3.1 Negative Offsite Biodiversity Impacts (CCB, B3.1) and Mitigation Measures (CCB, B3.2)

At this stage in the Project development, no negative offsite biodiversity impacts are predicted. However, as the Project continues, and degraded areas proximate to community settlements are restored, it is possible that exploitation may occur, for example with hunting or illegal logging activities. The Project will continue to pay close attention to the activities occurring at the Project site and in the wider project zone, and will address potential threats to biodiversity through the adaptive management system to prevent negative impacts from occurring.

### 5.3.2 Net Offsite Biodiversity Benefits (VCS, 3.19; CCB, B3.3)

The Project anticipates that there will be significant spillover of species outside of the Project Area, with biodiversity benefits extending beyond the boundaries and into the surrounding landscape. Project patrol teams will systematically monitor hunting and fishing grounds in and around the Project Area and mitigation plans will be developed if at any time there is an indication that the biodiversity outside of the Project Area is being over harvested or net positive impacts are not being achieved. See risk table in Section 2.1.18 for more justification that the risks are very low.

As noted above, no negative off-site impacts on the biodiversity area are anticipated. Therefore, it is expected that the net benefits from off-site biodiversity will be significant given the improvements in biodiversity and HCV ecosystems achieved through the Project as well as the broader level of behavioral change among communities surrounding the Project.

## 5.4 Biodiversity Impact Monitoring

### 5.4.1 Biodiversity Monitoring Plan (CCB, B4.1, B4.2, GL1.4, GL3.4)

PPRP has created a comprehensive monitoring plan to address biodiversity within the Project. The monitoring plan is built around standardized and well recognized surveying and monitoring techniques and methodologies. It contains all the required components necessary to conduct successful monitoring of biodiversity and the impacts of PPRP project activities throughout the duration of the Project. The biodiversity monitoring plan considers the overall requirements of the Project, combined with the financial, logistical, and staff capacity constraints, as well as the target species and habitats.

There will be two key stages required before effective monitoring can be put in place within the Project Area and Project Zone. First, all permanent monitoring sites (e.g., camera-trap locations) and transects (bird surveys and patrolling areas) will be investigated and established including, where necessary, tracks that need to be cut and/or flagged for regular use. To minimize any negative impacts on the landscape, multiple monitoring methods will be used at each site and transects established in between monitoring points. For example, travelling between camera-trap sites on either side of the site will utilize the existing trails. Similarly, these same trails/tracks will have bird monitoring stations established incrementally along their course. Although trails need to be clearly marked and will often follow animals' pathways, some maintenance and initial cutting may be required. However, this will be kept to a minimum not only to limit damage to the vegetation, but also to discourage easy access for users from outside the Project Area.

The second key component is the training and capacity development of the Project staff. All monitoring—barring the annual bird surveys—will be conducted by Project staff. The focus for biodiversity monitoring includes:

- Use of Spatial Monitoring and Reporting Tool (SMART) conservation software as part of patrolling protocols;
- Set up of camera-traps for terrestrial and semiaquatic animals (otters);
- Set up of bio-acoustic monitoring for birds (hornbills) and primates (Raffles' Banded Langur);
- Annual site bird and primate monitoring using Visual Encounter Survey (VES);
- Vegetation surveys at designated piezometer points; and
- Management of all data collected across all methods.

The SMART system will be used to monitor project activities at multiple levels. Firstly, it will be used to monitor inputs and track the performance of forest patrol teams in the field which is vital from a management perspective. Secondly, SMART data will provide a means of monitoring threat levels (i.e. levels of hunting/fishing and logging) through the generation of catch per unit effort (CPUE) indices. Using standardized threat indicators allows for comparisons over space and time and this will help to evaluate the effectiveness of enforcement and the impact of other conservation interventions. Thirdly, and of particular importance for PPRP in the earlier years of project activities—when threats of illegal activities are expected to remain low—the SMART system will be used to collect wildlife observations, and thus contribute to the wider program of biodiversity monitoring. The use of a system like SMART and the resulting standardized reporting of such global indicators will improve management effectiveness. The steps in the use of SMART as a tool for adaptive management are as follows:

- Forest patrols: patrol teams collect and record data on where they go and what they see while on patrol, such as threats (e.g. poaching signs), patrol results, and wildlife observations.
- Debriefing: patrols report their patrol activities and patrol data and routes are checked.
- Data entry: patrol data are stored in a SMART patrol database.
- Data analysis and reports: data are processed into visually appealing (easy to understand) tables, charts, and maps showing patrol effort, coverage, and results, thus forming the basis for patrol analysis and evaluation.
- Feedback and patrol planning: regular meetings with rangers are held to discuss patrol effort results and set new patrol targets.

The Project's biodiversity monitoring and survey utilizes well-recognized and scientifically sound methodologies. The methodology does not target specific species (barring hornbills), instead, it aims to capture the full range of biodiversity changes in the Project Area and Project Zone across a range of important species. To this end, it is a monitoring and survey plan that is both feasible and repeatable.

Camera-trapping is able to provide a balanced view of the mammal community, as camera-traps take photographs of all animals larger than 500 grams that move in front of the sensor. A standardized

camera-trap set-up provides information about the distribution or abundance of certain taxa and information about wildlife communities, such as species richness. Furthermore, repeated surveys will allow the Project to evaluate population trends over time, providing an important indicator on the effectiveness of conservation interventions and managements decisions (as outlined in Section 5.1.1.1).

For bird monitoring, the Project will measure relative abundance, using the point count method. In the Project Area, ten transects will be established for monitoring birds, with each transect consisting of ten permanent bird counting stations spaced at 200 m intervals. These transects will be designed to capture data across the various types of land cover classifications within the Project. Each bird species will be tracked by recording visual and audio data, along with the environmental variables at each station.

Details of the monitoring plan can be seen in the table below:

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Table 29 Biodiversity Monitoring Plan

| Program                                                                                                                | Indicator                                                                | First Year Target                                                        | Medium Term Target (5 Year)                                                                   | Long Term Target (>10 Year)                                                        | Method                                                              | Means of Verification               | Monitoring Frequency |
|------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------|----------------------|
| 1. Monitoring of Endangered Species                                                                                    |                                                                          |                                                                          |                                                                                               |                                                                                    |                                                                     |                                     |                      |
| Outcome 1.1: Endangered species monitoring system established with stakeholders                                        |                                                                          |                                                                          |                                                                                               |                                                                                    |                                                                     |                                     |                      |
| Long-term monitoring of presence of endangered species i.e., Raffles' Banded Langur (RBL)                              | 1. Number of sites<br>2. Number of species<br>3. Abundance and occupancy | Baseline data on abundance and occupancy of endangered species i.e., RBL | Existing abundance and occupancy monitored and new numbers recorded (10 -20%)                 | Achievement of minimum viable population of endangered species in the Project Area | Camera traps / field surveys / VES / SMART patrol                   | SMART patrol form and CT picture    | Weekly (dry season)  |
|                                                                                                                        |                                                                          | Map of endangered species distribution within the Project Area.          | Existing distribution of Endangered Species with 2-3% trend increased recorded                | Overview population of endangered species achieved in the Project Area             | Camera traps / field surveys / VES / SMART patrol                   | SMART patrol form, maps and reports |                      |
| Establish and strengthen stakeholder collaboration for the protection of endangered species (authorities and agencies) | 1. Number of stakeholders<br>2. Number of meeting/activities             | Conduct annual biodiversity survey/awareness program/meeting             | Enhance cooperation with relevant authorities and institutions for effective law enforcement  | Strong collaboration and coordination established with all stakeholders            | Meetings and discussions, field surveys, socialization and training | Report on activity and engagement   | Annually             |
|                                                                                                                        |                                                                          |                                                                          | Improve coordination between various related stakeholders to support any conservation program | Maintain and train person-in-charge related to conservation activities             |                                                                     |                                     |                      |
|                                                                                                                        |                                                                          | Deliver stakeholder outreach event on biodiversity conservation          | Enhance stakeholder knowledge through cooperation with relevant authorities and institutions  |                                                                                    |                                                                     |                                     |                      |
| 2. Ensure ecosystem and habitat integrity                                                                              |                                                                          |                                                                          |                                                                                               |                                                                                    |                                                                     |                                     |                      |
| Outcome 2.1. Protected forest area and habitats                                                                        |                                                                          |                                                                          |                                                                                               |                                                                                    |                                                                     |                                     |                      |

| Program                                                                             | Indicator                                                                            | First Year Target                                                                                                                                                                  | Medium Term Target (5 Year)                                                                                       | Long Term Target (>10 Year)                                                                                                        | Method                                              | Means of Verification                                                  | Monitoring Frequency |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|------------------------------------------------------------------------|----------------------|
| Remote monitoring of forest cover and detection of alerts from fire and forest loss | Total forest gained                                                                  | Record forest cover and identify potential threats from any source                                                                                                                 | Potential threats and existing forest cover has been monitored                                                    | All forest cover has been monitored with established system                                                                        | Satellite monitoring, drone surveys, ground surveys | Quarterly report of number of hotspots and forest cover changes        | Ongoing              |
|                                                                                     |                                                                                      | Record other land use change in the Project Area including agricultural activity                                                                                                   | Conversion of land cover has been monitored over 5 years                                                          | Conversion of land cover has been monitored over 10 years and a strategy developed to reduce potential future conversion           |                                                     |                                                                        |                      |
|                                                                                     |                                                                                      | Satellite-based fire hotspot monitoring                                                                                                                                            | 10% decrease in fire hotspots                                                                                     | 30% decrease in fire hotspots                                                                                                      | Weekly satellite monitoring                         |                                                                        |                      |
| Monitoring threat and danger                                                        | Illegal activity such as poaching, collecting NTFP and logging reduce and eliminated | Conduct baseline survey of poaching / illegal NTFP collection                                                                                                                      | Illegal activities reduce by 50%                                                                                  | No incidences of illegal activities                                                                                                | Field survey, SMART patrol                          | SMART patrol form and survey report                                    | Ongoing              |
|                                                                                     |                                                                                      | Implementing SMART patrols as an initial measure to combat detrimental poaching activities and strengthening monitoring, reporting to authorities to protect wildlife populations. | Poaching reduces by 50%                                                                                           | No poaching incidents                                                                                                              | Patrol and field verification                       | SMART patrol form, number of poaching incidences, number of complaints | Ongoing              |
|                                                                                     |                                                                                      |                                                                                                                                                                                    | Expand and strengthen the network of anti-poaching patrols to cover larger areas and protect key habitats         | Integrated and sustainable anti-poaching patrol system implemented in all areas vulnerable to poaching                             |                                                     |                                                                        |                      |
|                                                                                     |                                                                                      | Maintain and strengthen the patrol team in monitoring and enforcement actions                                                                                                      |                                                                                                                   | Ensure patrol teams have the ability, capacity and independence to protect areas and species                                       | Training                                            | Activity reports                                                       | Annually             |
|                                                                                     |                                                                                      | Install sign boards at strategic points, e.g., community access points and near roads                                                                                              | Local communities and other stakeholders aware of protected species, the Project Area, and applicable regulations | Local communities and other stakeholders have full understanding of protected species, the Project Area and applicable regulations | Socialization and formal/informal meetings          | Number of sign boards and records of illegal activities                | Annually             |

| Program                                                                                            | Indicator                                                  | First Year Target                                                                          | Medium Term Target (5 Year)                                                                                                                | Long Term Target (>10 Year)                                                                                                        | Method             | Means of Verification                                                                              | Monitoring Frequency |
|----------------------------------------------------------------------------------------------------|------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------------------------------------------------------------------------------------------------|----------------------|
| Outcome 2.2. Improvement of species diversity                                                      |                                                            |                                                                                            |                                                                                                                                            |                                                                                                                                    |                    |                                                                                                    |                      |
| Conduct habitat restoration activities to restore and enhance diverse habitats in the Project Area | Degraded areas restored to functional forest               | Conduct habitat restoration on at least 5% of the degraded habitat within the Project Area | Conduct habitat restoration on at least 10% of the degraded habitat within the Project Area                                                | Conduct habitat restoration on at least 30% of the degraded habitat within the Project Area                                        | Field verification | 1. Vegetation cover<br>2. Survival rate<br>3. Number restored areas<br>4. Number of canals blocked | Annually             |
|                                                                                                    |                                                            | Install canal blocks                                                                       | All targeted canal blocks installed                                                                                                        | Entire project area re-wet                                                                                                         | Field activity     | Number of canal blocks                                                                             |                      |
|                                                                                                    | Species richness and diversity                             | Conduct biodiversity surveys                                                               | Baseline information monitoring                                                                                                            | Scientific research and monitoring on the restoration progress and project area                                                    | Field surveys      | Biodiversity check list and trends, monitoring report                                              |                      |
| Conduct ecology research                                                                           | Invasive species list and distribution are well documented | Distribution of invasive species in the Project Area is mapped                             | Ensure that there are no new distributions or population developments of species considered invasive within the target area for five years | Achieve control or non-invasive species status within the Project Area                                                             | Field verification | Biodiversity monitoring report                                                                     | Annually             |
|                                                                                                    |                                                            | Conduct regular monitoring on invasive species                                             | Implement effective control methods and monitor their impact on the abundance and distribution of invasive species over a five-year period | Prevent spread or increase in the population of species considered invasive, and take appropriate control measures where necessary | Field verification | Biodiversity monitoring report                                                                     | Annually             |
|                                                                                                    |                                                            |                                                                                            | Engage with research institutions to work on invasive species control                                                                      | Control management plan established and implemented                                                                                | Field monitoring   | Management plan and report                                                                         | Ongoing              |
| 3. Outreach and awareness                                                                          |                                                            |                                                                                            |                                                                                                                                            |                                                                                                                                    |                    |                                                                                                    |                      |
| Outcome 3.1 Improved level of knowledge and awareness among stakeholders                           |                                                            |                                                                                            |                                                                                                                                            |                                                                                                                                    |                    |                                                                                                    |                      |

| Program                                                                                       | Indicator                                                                                               | First Year Target                                                                                                     | Medium Term Target (5 Year)                                                                                                                   | Long Term Target (>10 Year)                                                                                                     | Method                                             | Means of Verification                                  | Monitoring Frequency |
|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------|----------------------|
| Produce environmental education module                                                        | Environmental education module developed and implemented                                                | Develop thematic education module                                                                                     | Education delivered to 50% of communities in the Project Zone                                                                                 | Education delivered to 100% of communities in the Project Zone                                                                  | Training / education activities                    | Community environmental education facilitator in place | Annually             |
|                                                                                               |                                                                                                         |                                                                                                                       |                                                                                                                                               | Review and improve environmental education module                                                                               |                                                    |                                                        |                      |
|                                                                                               |                                                                                                         |                                                                                                                       | Community members trained to become environmental education facilitators                                                                      | Community members sustain employment as environmental education facilitators                                                    |                                                    |                                                        |                      |
| Produce publication materials                                                                 | Conservation information conveyed to the public                                                         | Produce publications in multiple languages and formats (posters, newspaper articles, leaflets, etc.)                  | Produce two scientific papers                                                                                                                 | Produce five scientific papers                                                                                                  | Research and collaboration with other institutions | Posters, newspaper articles, leaflets                  | Annually             |
| Environment education and collaboration with communities to protect species and their habitat | The level of community awareness and involvement in conservation activities and environmental education | Increase the number of participants or participants in environmental education and awareness programs by 10% annually | Increase the number of participants or participants in environmental education and awareness programs by 50%                                  | Increase the number of participants or participants in environmental education and awareness programs by 80 - 100%              | Training / awareness activities                    | Awareness and outreach reports                         | Annually             |
|                                                                                               |                                                                                                         | Involve at least one local community group in conservation activities or environmental projects annually              | Maintain active collaboration with at least three local community groups on conservation activities or environmental projects over five years | Maintain active involvement of at least most of the local community groups in conservation activities or environmental projects | Co-management actions                              | Awareness and outreach reports                         |                      |
| Awareness and outreach for youth                                                              | Number and level of beneficiary awareness                                                               | Raise awareness among youth in local communities                                                                      | Enhance cooperation with relevant authorities and institutions for effective conservation and                                                 | Maintain and strengthen the awareness that has been cultivated over the past 10 years by continuing the                         | Training and awareness activities                  | Awareness and outreach reports                         | Annually             |

| Program                                  | Indicator                                                                  | First Year Target                                | Medium Term Target (5 Year)                                          | Long Term Target (>10 Year)                                                | Method                | Means of Verification            | Monitoring Frequency |
|------------------------------------------|----------------------------------------------------------------------------|--------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------|----------------------------------|----------------------|
|                                          |                                                                            |                                                  | education programs                                                   | implementation of environmental education programs in schools and villages |                       |                                  |                      |
| Establish outreach and awareness program | Target audience aware of importance of the peat ecosystem and biodiversity | Conduct annual training and awareness activities | 50% of communities in Project Zone reached with awareness program(s) | 100% of communities in Project Zone reached with awareness program(s)      | Training / activities | Number of communities approached | Annually             |

## 5.4.2 Biodiversity Monitoring Plan Dissemination (CCB, B4.3)

The biodiversity monitoring plan will be disseminated to Project Zone communities and other relevant stakeholders and the public. Summaries of this work will be available in the same manner as other project documents, and this dissemination is discussed in Section 2.3.4.

## 5.5 Optional Criterion: Exceptional Biodiversity Benefits

PPRP aims to achieve exceptional biodiversity benefits and be validated to the Gold Level based on the presence of ecologically important IUCN Red Listed species in the Project Area.

### 5.5.1 High Biodiversity Conservation Priority Status (CCB, GL3.1)

Throughout the PPRP area, a variety of species have been identified including mammals, birds, reptiles, fish, and plants that are of high biodiversity conservation priority status. These are catalogued in Table 30 below. The Project Area fulfils vulnerability criterion with the presence of at least nine Endangered and one Critically Endangered species known to occur within the Project Area and several of these being present at a population level with breeding groups (langurs, hornbills).

Table 30 Species present in the Project Area and Project Zone that meet IUCN Red List criteria as critically endangered, endangered, and vulnerable species

|                | IUCN<br>Status | Common<br>name         | Scientific Name               | Family          | Range                                                                                                                         |
|----------------|----------------|------------------------|-------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------|
| <b>Mammals</b> |                |                        |                               |                 |                                                                                                                               |
| 1              | CR             | Raffles' Banded langur | <i>Presbytis femoralis</i>    | Cercopithecidae | Endemic to South and Southeast Pahang, Johor, Singapore                                                                       |
| 2              | CR             | Malayan pangolin       | <i>Manis javanica</i>         | Manidae         | Southeast Asia (Myanmar, Thailand, Cambodia, Laos, Malaysia, Singapore, Vietnam, Borneo, Java, Sumatra, Lesser Sunda Islands) |
| 3              | CR             | Tiger                  | <i>Panthera tigris</i>        | Felidae         | Peninsular Malaysia. This includes the states of Pahang, Kelantan, Perak, Terengganu, Johor.                                  |
| 4              | EN             | Flat-headed cat        | <i>Prionailurus planiceps</i> | Felidae         | Southern Thailand, Peninsular Malaysia, Sumatra, Borneo                                                                       |
| 5              | EN             | Hairy-nosed otter      | <i>Lutra sumatrana</i>        | Mustelidae      | Southern Thailand, Cambodia, Southern Vietnam, Peninsular Malaysia, Sumatra, Borneo                                           |
| 6              | EN             | Asian elephant         | <i>Elephas maximus</i>        | Elephantidae    | South and Southeast Asia (India, Nepal, Bhutan, Bangladesh, Myanmar, Thailand, Laos, Cambodia, Vietnam, Malaysia, Indonesia)  |
| 7              | EN             | Malay tapir            | <i>Tapirus indicus</i>        | Tapiridae       | Southern Myanmar, Southwestern Thailand, Malaysia, Sumatra                                                                    |

|    |              |                             |                                   |                 |                                                                                                                                                  |
|----|--------------|-----------------------------|-----------------------------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| 8  | EN           | White-handed gibbon         | <i>Hylobates lar</i>              | Hylobatidae     | Indonesia, Laos, Malaysia, Myanmar, Thailand                                                                                                     |
| 9  | EN           | Dusky langur                | <i>Trachypithecus obscurus</i>    | Cercopithecidae | Malaysia, Myanmar, Thailand, Singapore                                                                                                           |
| 10 | EN           | Common long-tailed macaque  | <i>Macaca fascicularis</i>        | Cercopithecidae | Southeast Asia (Bangladesh, Brunei, Cambodia, India, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste, Vietnam) |
| 11 | EN           | Southern pig-tailed macaque | <i>Macaca nemestrina</i>          | Cercopithecidae | Thailand, Malaysia, Indonesia (Sumatra, Borneo)                                                                                                  |
| 12 | EN           | Malayan flying fox          | <i>Pteropus vampyrus</i>          | Pteropodidae    | Southeast Asia (Thailand, Malaysia, Indonesia, Philippines)                                                                                      |
| 13 | EN           | Slow loris                  | <i>Nycticebus coucang</i>         | Lorisidae       | Southeast Asia (Bangladesh, Cambodia, China, India, Indonesia, Laos, Malaysia, Myanmar, Thailand, Vietnam)                                       |
| 14 | EN           | Otter civet                 | <i>Cynogale bennettii</i>         | Viverridae      | Southern Thailand, Peninsular Malaysia, Sumatra, Borneo                                                                                          |
| 15 | VU           | Leopard                     | <i>Panthera pardus</i>            | Felidae         | Sub-Saharan Africa, Northeast Africa, Central Asia, India, China                                                                                 |
| 16 | VU           | Asian Small-clawed Otter    | <i>Aonyx cinereus</i>             | Mustelidae      | South and Southeast Asia (India, Nepal, Bhutan, Bangladesh, Myanmar, Thailand, Laos, Cambodia, Vietnam, Malaysia, Indonesia, Philippines)        |
| 17 | VU           | Smooth-coated otter         | <i>Lutrogale perspicillata</i>    | Mustelidae      | South and Southeast Asia (India, Nepal, Bhutan, Bangladesh, Myanmar, Thailand, Laos, Cambodia, Vietnam, Malaysia, Indonesia)                     |
| 18 | VU           | Sun Bear                    | <i>Helarctos malayanus</i>        | Ursidae         | Southeast Asia (Bangladesh, Cambodia, China, India, Indonesia, Laos, Malaysia, Myanmar, Thailand, Vietnam)                                       |
| 19 | VU           | Bearded pig                 | <i>Sus barbatus</i>               | Suidae          | Borneo, Sumatra, Malay Peninsula, Philippines                                                                                                    |
| 20 | VU           | Binturong                   | <i>Arctitis binturong</i>         | Viverridae      | South and Southeast Asia (India, Nepal, Bhutan, Bangladesh, Myanmar, Thailand, Laos, Cambodia, Vietnam, Malaysia, Indonesia, Philippines)        |
| 21 | VU           | Sambar                      | <i>Cervus unicolor</i>            | Cervidae        | South and Southeast Asia (India, Nepal, Bhutan, Bangladesh, Myanmar, Thailand, Laos, Cambodia, Vietnam, Malaysia, Indonesia, Sri Lanka)          |
|    | <b>Birds</b> |                             |                                   |                 |                                                                                                                                                  |
| 22 | EN           | Wrinkled Hornbill           | <i>Rhabdotorrhinus corrugatus</i> | Bucerotidae     | Brunei, Indonesia, Malaysia, Thailand                                                                                                            |

|    |             |                              |                                   |               |                                                                                                                                                              |
|----|-------------|------------------------------|-----------------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 23 | EN          | White-crowned hornbill       | <i>Berenicornis comatus</i>       | Bucerotidae   | Malay Peninsula, Sumatra, Borneo                                                                                                                             |
| 24 | EN          | Greater green leafbird       | <i>Chloropsis sonnerati</i>       | Chloropseidae | Brunei, Indonesia, Malaysia, Myanmar, Singapore, Thailand                                                                                                    |
| 25 | EN          | Javan (Blue-winged) Leafbird | <i>Chloropsis cochinchinensis</i> | Chloropseidae | Southeast Asia, Borneo, Sumatra                                                                                                                              |
| 26 | VU          | Rhinoceros Hornbill          | <i>Buceros rhinoceros</i>         | Bucerotidae   | Malay Peninsula, Borneo, Sumatra, Java                                                                                                                       |
| 27 | VU          | Great Hornbill               | <i>Buceros bicornis</i>           | Bucerotidae   | Indian subcontinent, Southeast Asia                                                                                                                          |
| 28 | VU          | Black Hornbill               | <i>Anthraceroceros malayanus</i>  | Bucerotidae   | Brunei, Indonesia, Malaysia, Singapore, Thailand                                                                                                             |
| 29 | VU          | Wreathed hornbill            | <i>Rhyticeros undulatus</i>       | Bucerotidae   | Northeast India, Bhutan, Bangladesh, Southeast Asia, Greater Sunda Islands                                                                                   |
| 30 | VU          | Javan Myna                   | <i>Acridotheres javanicus</i>     | Sturnidae     | Java, Bali, introduced in Southeast Asia, Taiwan, Puerto Rico                                                                                                |
| 31 | VU          | Wallace's hawk-eagle         | <i>Nisaetus nanus</i>             | Accipitridae  | Malay Peninsula, Sumatra, Borneo                                                                                                                             |
| 32 | VU          | Large green pigeon           | <i>Treron capellei</i>            | Columbidae    | Southeast Asia                                                                                                                                               |
| 33 | VU          | Cinnamon-headed pigeon       | <i>Treron fulvicollis</i>         | Columbidae    | Southeast Asia                                                                                                                                               |
| 34 | VU          | Long-tailed parakeet         | <i>Psittacula longicauda</i>      | Psittaculidae | Southeast Asia                                                                                                                                               |
| 35 | VU          | Short-toed coucal            | <i>Centropus rectunguis</i>       | Cuculidae     | Southeast Asia                                                                                                                                               |
| 36 | VU          | Cinnamon-rumped trogon       | <i>Harpactes orrhophaeus</i>      | Trogonidae    | Southeast Asia                                                                                                                                               |
| 37 | VU          | Great slaty woodpecker       | <i>Mulleripicus pulverulentus</i> | Picidae       | Southeast Asia                                                                                                                                               |
|    | <b>Fish</b> |                              |                                   |               |                                                                                                                                                              |
| 38 | CR          | Betta fish                   | <i>Betta cf. omega</i>            | Opshronemidae | Only known from Pekan Nanas, Peninsular Malaysia                                                                                                             |
| 39 | EN          | Betta fish                   | <i>Betta tussyae</i>              | Opshronemidae | Only known from Pahang peat swamp forests, and Kemaman in Terengganu                                                                                         |
| 40 | EN          | Betta fish                   | <i>Betta waseri</i>               | Opshronemidae | Endemic to East coast of Peninsular Malaysia: Pahang and Terengganu. The population in Rantau Abang is thought to be extinct due to drought and forest fire. |
| 41 | EN          | Rasbora fish                 | <i>Brevibora dorsiocellata</i>    | Cyprinidae    | Muar River, Pahang River Basin, Central Sumatra.                                                                                                             |
| 42 | VU          | Paros fish                   | <i>Parosphromenus nagi</i>        | Opshronemidae | Endemic to Malaysia (Pekan, up north to Kemaman. Potential range extension down to Desaru.)                                                                  |

|                 |    |                             |                                     |              |                                               |
|-----------------|----|-----------------------------|-------------------------------------|--------------|-----------------------------------------------|
| 43              | VU | n.a.                        | <i>Kottelatlimia pristes</i>        | Cobitidae    | Peninsular Malaysia (Selangor) and Kalimantan |
| <b>Reptiles</b> |    |                             |                                     |              |                                               |
| 44              | CR | Painted terrapin            | <i>Batagur borneoensis</i>          | Geoemydidae  | Southeast Asia                                |
| 45              | CR | Orange-headed temple turtle | <i>Heosemys grandis</i>             | Geoemydidae  | Southeast Asia                                |
| 46              | CR | Malayan giant turtle        | <i>Orlitia borneensis</i>           | Bataguridae  | Peninsular Malaysia, Sumatra and Borneo       |
| 47              | EN | Malayan box turtle          | <i>Cuora amboinensis</i>            | Geoemydidae  | Throughout Southeast Asia                     |
| 48              | EN | Spiny turtle                | <i>Heosemys spinosa</i>             | Geoemydidae  | Southeast Asia                                |
| 49              | EN | Black Marsh turtle          | <i>Siebenrockiella crassicollis</i> | Geoemydidae  | Southeast Asia                                |
| 50              | EN | False Gharial               | <i>Tomistoma schlegelii</i>         | Gavialidae   | Southeast Asia                                |
| 51              | VU | King cobra                  | <i>Ophiophagus hannah</i>           | Elapidae     | Throughout Asia                               |
| 52              | VU | Asiatic Softshell Turtle    | <i>Amyda cartilaginea</i>           | Trionychidae | Broadly distributed in Southeast Asia         |

### 5.5.2 Trigger Species Population Trends (CCB, GL3.2, GL3.3)

Trigger species are defined, in accordance with the CCB standards, as species that cause the site to meet KBA qualifying conditions, which are determined based on IUCN vulnerability criteria. We have identified 29 trigger species present in the Project Area and Project Zone including one apex predator, seven other mammal species, four bird species, five reptile species, one aquatic species, and eleven plant species. Overall, the trigger species in the Project Area and Project Zone will be positively affected by the with-project scenario in all cases. At this time, we do not have estimations of population numbers of these species within PPRP.

|                                             |                                                                                                                        |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| <b>Trigger species</b>                      | <i>Identify species</i>                                                                                                |
| <b>Population trend at start of project</b> | <i>Describe recent population trend in the project zone at the start of the project. Estimate numbers, if possible</i> |
| <b>Without-project scenario</b>             | <i>Describe the most likely changes under the without-project land use scenario</i>                                    |

### With-project scenario

*Describe measures needed and designed to maintain or enhance the population status of each trigger species in the project zone, and to reduce the threats to them. If possible, estimate the number of this species that will be in the project zone at the end of the project*

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# APPENDIX 1: STAKEHOLDER DESCRIPTION TABLE

Use this appendix, if necessary, to identify stakeholders and fulfill Section 2.3.2 above. Modify the table, if necessary, to suit the Project activities, or delete if not used.

| Stakeholder                                                                                                                 | Rights, interest, and overall relevance to the Project |
|-----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| Identify communities and any community groups within them, any cross-cutting community groups, and list other stakeholders. |                                                        |
|                                                                                                                             |                                                        |
|                                                                                                                             |                                                        |
|                                                                                                                             |                                                        |
|                                                                                                                             |                                                        |

## APPENDIX 2: PROJECT ACTIVITIES AND THEORY OF CHANGE TABLE

Use this appendix, if applicable, to identify project activities and fulfill the requirements of Section 2.1.17 above. This is an example of just one method of representing the theory of change. Results chains/flow diagrams are another effective way to represent the theory of change. Modify the table, if necessary, to suit the Project activities, or delete if not used.

| Activity description | Expected climate, community, and/or biodiversity |                        |                     | Relevance to project's objectives |
|----------------------|--------------------------------------------------|------------------------|---------------------|-----------------------------------|
|                      | Outputs (short term)                             | Outcomes (medium term) | Impacts (long term) |                                   |
|                      |                                                  |                        |                     |                                   |
|                      |                                                  |                        |                     |                                   |

## APPENDIX 3: PROJECT RISKS TABLE

Use this appendix to identify and summarize the project risks and fulfill the requirements of Sections 2.3.6, 2.3.17, 2.5, and 0.1– 0, above. Where no risk is identified, write ‘No risk identified’ and provide justification in the third column. Add rows as needed.

|                                                                                                                                               | Identified risk(s) | Potential impact of risk on stakeholders, ecosystem health, and biodiversity | Mitigation or preventative measure(s) taken |
|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------------------------------------------------------|---------------------------------------------|
| Natural and human induced risks to stakeholders' wellbeing                                                                                    |                    |                                                                              |                                             |
| Risks to stakeholder participation                                                                                                            |                    |                                                                              |                                             |
| Working conditions                                                                                                                            |                    |                                                                              |                                             |
| Safety of women and girls                                                                                                                     |                    |                                                                              |                                             |
| Safety of minority and marginalized groups, including children                                                                                |                    |                                                                              |                                             |
| Pollutants (air, noise, discharges to water, generation of waste, and release of hazardous materials and chemical pesticides and fertilizers) |                    |                                                                              |                                             |

|                                                                                                                                                                       |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| Discrimination                                                                                                                                                        |  |  |  |
| Sexual harassment                                                                                                                                                     |  |  |  |
| Equal pay for equal work                                                                                                                                              |  |  |  |
| Gender equity in labor and work                                                                                                                                       |  |  |  |
| Forced labor <sup>27</sup>                                                                                                                                            |  |  |  |
| Child labor                                                                                                                                                           |  |  |  |
| Human trafficking                                                                                                                                                     |  |  |  |
| Recognition of, respect of, and promotion of the rights to IPs, LCs and customary rights holders                                                                      |  |  |  |
| Preserving and protecting cultural heritage                                                                                                                           |  |  |  |
| Protecting and preserving property rights, customary rights, or protecting legal or customary tenure/access rights to territories, property, and resources, including |  |  |  |

<sup>27</sup> The identified risks and commensurate mitigation or preventative measure(s) for forced labor, child labor, and human trafficking, must be inclusive of staff and contracted workers employed by third parties.

|                                                                                                               |  |  |  |
|---------------------------------------------------------------------------------------------------------------|--|--|--|
| collective and/or<br>conflicting rights                                                                       |  |  |  |
| Impacts on biodiversity<br>and ecosystems                                                                     |  |  |  |
| Soil degradation and soil<br>erosion                                                                          |  |  |  |
| Water consumption and<br>stress                                                                               |  |  |  |
| Habitats (and areas<br>needed for habitat<br>connectivity) for rare,<br>threatened, and<br>endangered species |  |  |  |
| Areas needed for habitat<br>connectivity                                                                      |  |  |  |
| Invasive species                                                                                              |  |  |  |
| Ecosystem conversion                                                                                          |  |  |  |
| [Additional risk identified]                                                                                  |  |  |  |

# APPENDIX 4: COMMERCIALLY SENSITIVE INFORMATION

Use the table below to describe the commercially sensitive information included in the Project description to be excluded in the public version.

| Section | Information | Justification |
|---------|-------------|---------------|
|         |             |               |
|         |             |               |

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## APPENDIX X: <TITLE OF APPENDIX>

*Use appendices for supporting information. Delete this appendix (title and instructions) where no appendix is required.*