The ANJ Group Recovery Site 1st Progress Report

October 2020

PT Austindo Nusantara Jaya Tbk

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Date of this report: 16th October 2020.

Task: First Progress Report of the ANJ Group Recovery Site.

Referenced Document: ANJ Group HCS Area Loss Recovery Plan 2020.

Date of Reference Document: February 2020.

Effective Period of the Recovery Plan: April 2020 – August 2021.

Outcome of Recovery Plan: Site-Specific Management Plan for the Recovery Site.

Recovery Project Location: South Sorong Regency, West Papua Province, Indonesia.

Centroid of Recovery Site: 1.86°S, 132.5°E.

Recovery Site Area: 3,004 ha (GIS extent).

Number of Pages: 77 pages of main report, including maps, figures, charts, tables, and pages of appendices.

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List of Abbreviations

ANJ	Austindo Nusantara Jaya
APL	*Areal Penggunaan Lain*/Area for use other than forestry (Development)
BPN	*Badan Pertanahan Nasional*
CITES	the Convention on International Trade in Endangered Species of Wild Fauna and Flora
COVID-19	Corona Virus Disease
FPIC	Free, Prior and Informed Consent
GIS	Geographic Information System
GPS	Global Positioning System
ha	Hectares
HCS	High Carbon Stock
HCSA	High Carbon Stock Assessment
HCV	High Conservation Value
HGU	*Hak Guna Usaha* / Right of use for agriculture
IUCN	International Union for Conservation of Nature
IUP	*Izin Usaha Perkebunan*
KEE	Kawasan Ekosistem Esensial/ *Essential Ecosystem Area*
KLHK	Kementerian Lingkungan Hidup dan Kehutanan*/ Ministry of Environmental and Forestry*
km	kilometers
KPA	Kawasan Pelestarian Alam*/ natural conservation areas*
KSA	Kawasan Suaka Alam*/ natural sanctuary area*
m.a.s.l	Meters above sea level
MEC	Malaysian Environmental Consultants Sdn Bhd
NDPE	No Deforestation, No Peat, and No Exploitation
NTFP	Non-timber forest products
PT. PMP	PT. Putera Manunggal Perkasa
PT. PPM	PT. Permata Putera Mandiri
RePPProT	Regional Physical Planning Programme for Transmigration
RSPO	Roundtable on Sustainable Palm Oil
SKT	Surat Kepemilikan Lahan
SMM	Sahabat Mewah dan Makmur
SOP	Standard Operating Procedure

1 Introduction

PT Austindo Nusantara Jaya Tbk (ANJ) is an oil palm grower and has been a member of the Roundtable on Sustainable Palm Oil (RSPO) since February 26th, 2007. ANJ recognizes No Deforestation, No Peat, and No Exploitation (NDPE) and the HCSA commitments of our buyers and we have embedded these elements into our Sustainability Policy, published on October 31st, 2019. With our commitment to this Sustainability Policy, ANJ has decided to identify potential High Carbon Stock (HCS) area loss within all of ANJ's 8 oil palm concessions. This is a commitment to our purchasers, who also uphold the NDPE requirements. The identification of HCS area loss between January 1st, 2016 to December 31st, 2018 was undertaken to determine ANJ's HCS liability to be presented to the ANJ supply chain and stakeholders. The identified liability is compensated in the form of a consolidated block attached to our West Papuan concession, Indonesia.

Covid-19 Pandemic Implications

There has been a delay in the implementation of the ANJ recovery plan due to the Covid-19 Pandemic in Indonesia. A series of shutdowns and travel restrictions to West Papua has prevented site visits that would have studied the Recovery Site in terms of its social setting and ecology characteristics. Movement within the plantation area has also been restricted. Due to this, ANJ can only report on what has been possible, and this probably fall short of planned activities to date.

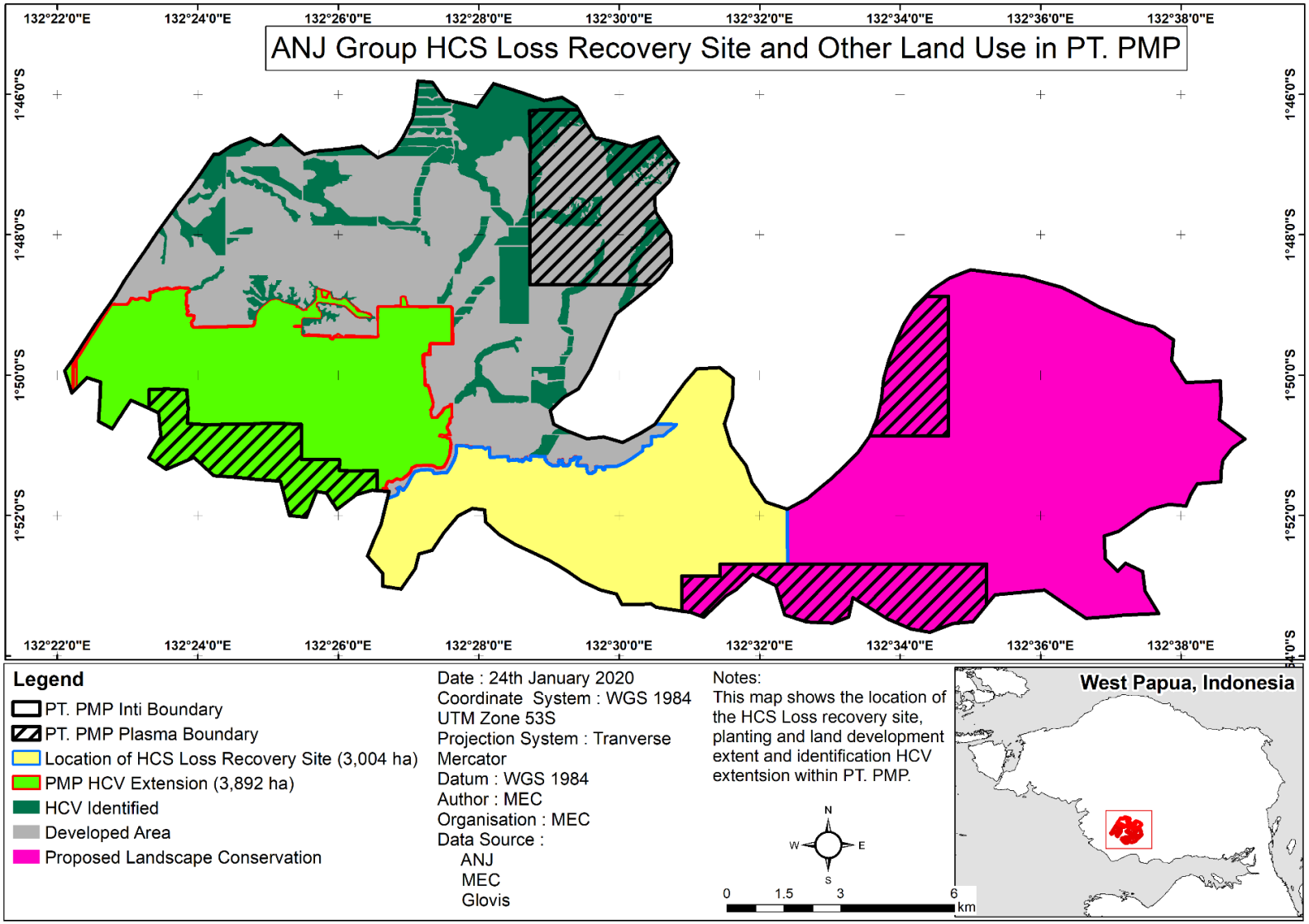
1.1 Key Objectives of the Recovery Plan

As part of ANJ's effort to uphold our Sustainability Policy and our buyer's commitment to HCSA, the recovery plan is designed to compensate HCS area loss that was identified within our group's oil palm concessions. The objectives of the Recovery Plan are as follows:

- To compensate for ANJ Group level clearance of HCS areas between the period of January 2016 to December 2018;
- To ensure legal and administration (regional and provincial) recognition of the Recovery Site set aside;
- To engage with stakeholders on this proposed recovery plan – ensuring full and comprehensive consultation; and
- To establish the current and future management requirements for the Recovery Site.

1.2 Declaration of HCS Area Loss in the ANJ Group

From ANJ's initial land cover classification, it was calculated that the accumulative HCS area loss in PT. SMM, PT. PMP, and PT. PPM is 2,530.55 ha (*interim extent*). ANJ Group declares that its HCS Liability between January 1st, 2016 and December 31st, 2018 is 2,530.55 ha. This will be the minimum hectarage that will be compensated for in this recovery plan. The Recovery Site identified by ANJ (as HCS offset) is adjacent to our West Papua Concession, PT. PMP, as shown in Map 1.1. There has been criticism from parties regarding the liability figures. However, this is being looked into and the liability will be presented in the next progress report.



Map 1.1: Land use in PT. PMP and the location of the Recovery Site

2 A Brief View of the Recovery Plan

As part of our commitment to offset the declared HCS area loss, ANJ proposes to embark on a recovery planning exercise. The construct of the recovery plan is such that it must be fully consultative and begins with exploration of options in its West Papuan Concession which is not only a challenge but an initiative that will conserve an area that was originally designated for oil palm development. The challenge being the social and legal constraints in this province which requires extraordinary effort.

The recovery plan has two phases. Phase 1 is the base-setting stage which requires the investigation of legal requirements, social challenges, acceptance of the additional conservation areas and compensation. These are pre-requisite actions that would lead to the establishment and subsequent management of the conservation site. Embedded within this recovery plan is the management plan exercise which depends on the successful completion of actions in Phase 1. The management planning exercise will be referred to as Phase 2, and there will be an overlap between the two phases. The key elements of Phase 1 and Phase 2 are presented below:

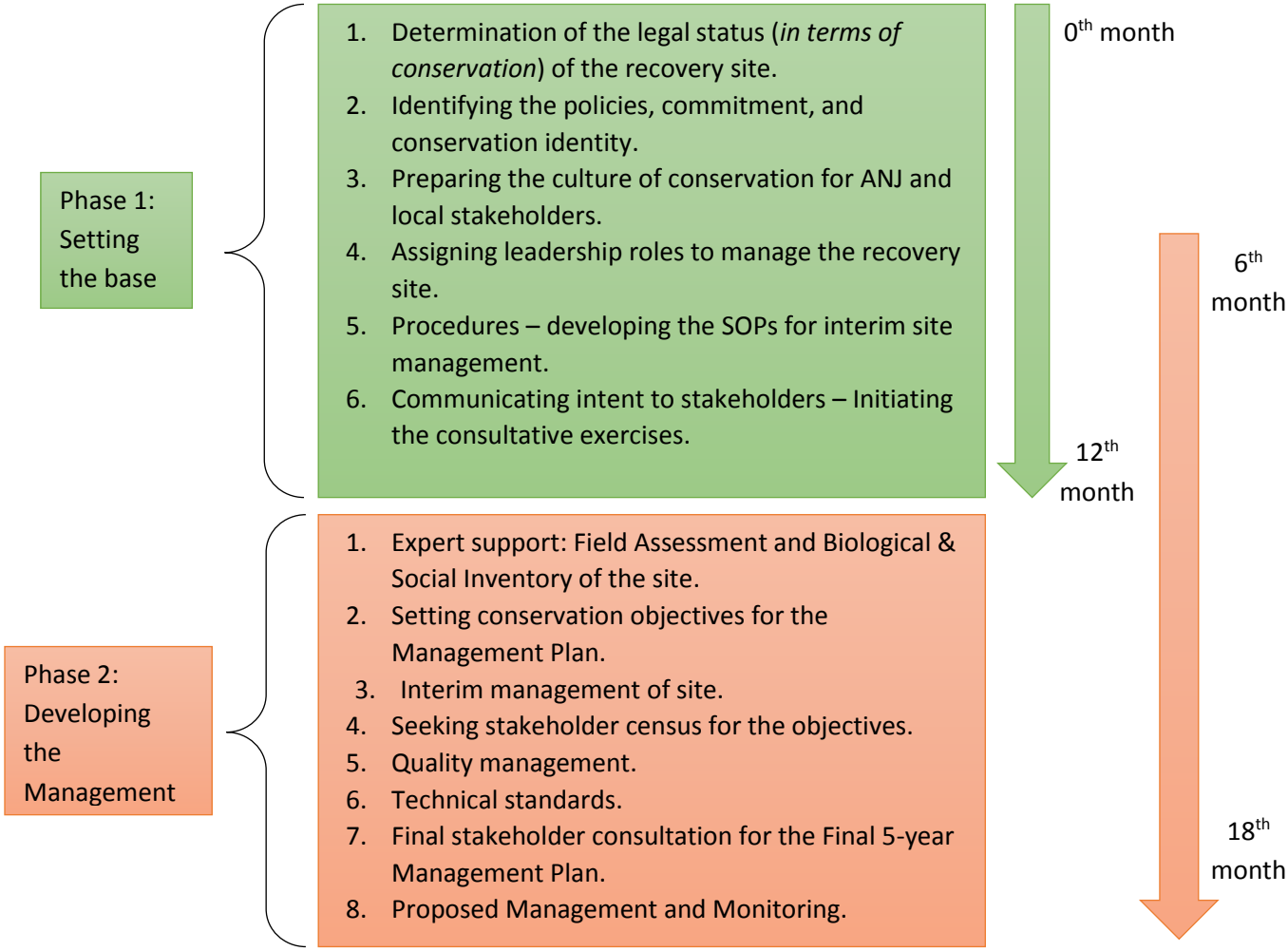


Chart 2.1: The key elements of Phase 1 and Phase 2

3 Reporting Progress: Phase 1 of the Recovery Plan

Irrespective of the Covid-19 pandemic restrictions, ANJ has managed to undertake actions that have been planned under Phase 1. As restricted as it may be, progress has been recorded and a summary of the initiatives and interim actions is provided in Table 3.1. This table charts out the proposed guidance in Phase 1 of the ANJ Recovery Plan and derived the key initiatives, as well as interim actions carried out.

Table 3.1: Key Initiatives and Interim Actions from Phase 1 of the ANJ Recovery Plan

Phase 1 Steps	Proposed Guidance	Key Initiatives	Interim Actions Carried out
1	Determination of the legal status (*in terms of conservation*) of the Recovery Site.	Explore Conservation Legal Status.	• Identified Threat to the Recovery Site Legal Status. • Exploring Legal Protection Alternatives (KEE & Local Provincial Protection). • Initiation of Boundary demarcation.
2	Identifying the policies, commitment, and conservation identity.	Commitment Policies	• Identification of Policies and Standard Operating Procedures (SOPs) relevant to the management of the Recovery Site.
3	Preparing the culture of conservation for ANJ and local stakeholders.	Internal Communication, Socialisation.	• Internal Socialisation: Introducing the Recovery Plan and Recovery Site to internal stakeholders and local communities.
4	Assigning leadership roles to manage the Recovery Site.	Organisation Chart	• Development of the ANJ Recovery Site Management Committee (Organisation Chart).
5	Procedures – developing the SOPs for interim site management.	Standard Operating Procedures	• Identification of Standard Operating Procedures (SOPs) relevant to the management of the Recovery Site.
6	Communicating intent to stakeholders – Initiating the consultative exercises.	External Communication and Consultation.	• Initiating External Stakeholder Consultative Process. - Identification of internal and external stakeholders. ANJ would have to undertake an exercise to identify relevant external stakeholders especially regional. In addition to this, the exercise will attract other international set of stakeholders such as Mighty Earth.
7	Expert support: Field Assessment and Biological & Social Inventory of the site.	Biodiversity Assessment	• Initial Ecological and Social Assessment. - Field visit for Ecology and Social survey by technical experts. • Drone Mapping.
8	Setting conservation objectives for the Management Plan.	Exploring objectives of the management plan	• Recovery Site Management Objective Public Consultation. • Management planning exercise. • Developing Management Budget (Interim Budget available). • Rehabilitation Strategy for Cleared Areas. • Establishment of Nursery.

3.1 Exploring Legal Conservation Status

The current legal status of the Recovery Site is *Areal Penggunaan Lain* (APL), where in the Indonesian legal context, areas in which the forest can be cleared and developed for agriculture with the approval of the provincial government. The background to this is that the identified Recovery Site is currently within the PT. PMP *Hak Guna Usaha* – HGU. The HGU total is 22,687 ha, of which only 5,822 ha have been planted in line with RSPO's sustainability requirement, refer to Table 3.2.

Table 3.2: Hectarage of Land Use in PT. PMP

Land Use in PMP (As Portrayed in Recovery Plan)	GIS Extent (ha)	Percentage (%)
Total Developed Area	5,821.74	26%
HCV Identified	2,154.37	9%
HCV Extension	3,892.08	17%
Recovery Site *	3,003.95	13%
Proposed Landscape Conservation*	7,815.10	34%
Grand Total	**22,687.23**	**100%**

**These areas can be taken back by the government for non-development and this is where the additionality factor comes in.*

Table 3.2 shows that only 26% of the HGU is developed. The remaining 74% is either earmarked as HCV, voluntary extension of HCV, and proposed conservation sites requiring legal intervention.

3.1.1 Threat – Revocation of user (cultivation) rights by the West Papuan government

The South Sorong Regency Land Department (*Badan Pertanahan Nasional* – BPN) has begun inquiring into the status and extent of the remaining undeveloped area within the PT. PMP concession (*Hak Guna Usaha* – HGU). See Figure 3.1. The issue arises when the undeveloped areas within PT. PMP are reclassified *as Tanah Terlantar* by the Indonesian Government. There is a realistic threat that the area identified by ANJ as the Recovery Site will be taken back by the Indonesian government. ANJ wants to pre-empt this by setting it aside as a Recovery Site, and work to obtain legal recognition as a conservation site.

KEMENTERIAN AGRARIA DAN TATA RUANG /
BADAN PERTANAHAN NASIONAL
KANTOR PERTANAHAN KABUPATEN SORONG SELATAN
PROVINSI PAPUA BARAT

Jl. Sanggat No.24, Teminabuan Email : kab.sorongselatan@bpn.go.id

Nomor : 158 /92.04/VII/2020
Sifat : Segera
Lampiran : -
Perihal : Permintaan Data Hak Guna Usaha PT. Permata Putera Mandiri dan PT. Putera Manunggal Perkasa.

Kepada Yth:
1. General Manager PT. Permata Putera Mandiri.
2. General Manager PT. Putera Manunggal Perkasa.

Di-
Tempat

Berdasarkan laporan dari PT. Permata Putera Mandiri dan PT. Putera Manunggal Perkasa perihal laporan pemanfaatan dan penggunaan Hak Guna Usaha (HGU) maka dengan ini kami sampaikan hal-hal sebagai berikut:

1. Bahwa kami akan mensinkronisasikan data spasial HGU dan pemanfaatan lahan HGU yang sudah beroperasi dan belum beroperasi sampai saat ini.
2. Bahwa peta-peta yang dilampirkan dalam laporan dimaksud tidak dapat terbaca.
3. Bahwa kami akan melaksanakan kegiatan Pengendalian Hak Atas Tanah terkait laporan dimaksud.

Maka sehubungan dengan hal tersebut diatas, diminta saudara untuk memberikan data spasial, *softcopy* lampiran peta-peta dan dapat berkordinasi dalam waktu dekat.

Demikian surat ini kami sampaikan, atas perhatian dan kerjasamanya kami ucapkan terima kasih.

Sorong Selatan, 7 Juli 2020

Kepala Kantor Pertanahan
Kabupaten Sorong Selatan

F. Magdalena Kipuw, S.H
NIP. 196507241986032001

Tembusan:
1. *Kepala Kantor Wilayah Badan Pertanahan Nasional Provinsi Papua Barat*
2. *Arsip*

Below are the Indonesian Government Regulations as a reference to the threat mentioned above: -

- Republic of Indonesia Government Regulation No. 11 of 2010 (Ordering and Utilizing Abandoned Land*/Penertiban dan Pendayagunaan Tanah Terlantar).*
- National Land Agency of the Republic of Indonesia Regulation No. 4 of 2010 (Procedures for Controlling Abandoned Land*/Tata Cara Penertiban Tanah Terlantar).*

Figure 3.1 : Letter of Inquiry from the South Sorong Land office

3.1.2 Exploring Legal Protection Alternatives (KEE & Local Provincial Protection)

ANJ will attempt to re-classify the recovery site within the HGU as a conservation area. This would require the support of multiple government agencies, both regional and national. Various legislation needs to be explored and pursued. On 20th March 2019, the West Papuan was declared a conservation province through legislation – *Gubernur Papua Barat Rancangan Peraturan Daerah Khusus Provinsi Papua Barat Nomor Tahun 2018 Tentang Pembangunan Berkelanjutan di Provinsi Papua Barat.* This legislation is being reviewed by ANJ, but there is also the possibility of using national legislation to declare the recovery site solely for conservation.

In exploring legislation, tenure is an important component as the PT. PMP HGU has a 25-year lease, which cannot guarantee the permanence of the recovery site.

Provincial localised conservation status

The *Peraturan Daerah Khusus Provinsi Papua Barat (Perdasus)* – March 2019, West Papua – states that it has been legislated to balance economic development and conservation, and prioritize the needs of indigenous communities. Being an umbrella regulation, it is to guide future economic development in the province while adhering to the Perdasus's four conservation principles extracted from the *Perdasus*:

a. *Bahwa untuk menjaga kelangsungan hidup Orang Asli Papua di atas tanahnya sendiri dan rakyat Indonesia umumnya, maka perlu menjaga, mempertahankan, memanfaatkan sumber daya alam dan kelestarian lingkungan hidup secara bijaksana demi meningkatkan taraf hidup dan kesejahteraan rakyat di Provinsi Papua Barat* **(Sustainable Living);**
b. *Bahwa untuk meningkatkan taraf hidup dan kesejahteraan rakyat di Provinsi Papua Barat dilakukan dengan usaha-usaha perekonomian yang memanfaatkan sumber daya alam* **(Sustainable Utilisation of Natural Resources);**
c. *Bahwa usaha-usaha perekonomian yang dilakukan adalah merupakan bagian dari proses pembangunan yang menyeluruh, terintegrasi dan berkesinambungan* **(Holistic and Continuous);**
d. *Bahwa pembangunan yang dilakukan di Provinsi Papua Barat adalah pembangunan yang didasarkan pada Tujuan Pembangunan Berkelanjutan (Sustanable Developmen Goals) pembangunan yang memenuhi kebutuhan generasi sekarang tanpa mengurangi kemampuan generasi yang akan datang dalam memenuhi kebutuhannya. cttn :dijelaskan lebih jelas yang disesuaikan dengan kondisi dan keunikan setempat (***Sustainable Development without Sacrificing or Reducing Future Generation Needs***); dan*
e. *Bahwa dengan penetapan Pembangunan Berkelanjutan di Provinsi Papua Barat maka ketersediaan sumberdaya alam dapat terjaga dan dapat dikelola sebagai sumber penghasilan dari berbagai sektor yang mendukung tercapainya derajat kehidupan rakyat Indonesia, khususnya Orang Asli Papua yang sejahtera* **(Conservation of Natural Resources).**

A. Essential Ecosystem Area (KEE)

ANJ is also exploring the possibility of declaring the Recovery Site as a *Kawasan Ekosistem Esensial* (KEE). Currently in Papua, there are no KEE sites. If successful, this Recovery Site will be the first KEE site in West Papua. Sites with natural and/or artificial ecosystem that functions as a wildlife buffer system and located outside of a natural sanctuary area (*Kawasan Suaka Alam* - KSA) and natural conservation areas (*Kawasan Pelestarian Alam* - KPA) can be declared as KEE. The criteria for KEE establishment is shown in Table 3.3.

Table 3.3: Criteria of an Essential Ecosystem Area (*KEE*)

Criteria	Description
High conservation value	• High concentrations of biological diversity. • Rare, threatened, or endangered ecosystems, habitats or refugia. • Wildlife corridors. • Provide ecosystem services.
High social and economic values	• Local communities are dependent to fulfill their basic necessities and their livelihood. • The area contributes towards local cultures both physical and metaphysical.

The current recovery site has the following characteristics: -

i. River Ecosystem,
ii. Swamp Ecosystem,
iii. High Biodiversity areas, and
iv. Fuctional Wildlife Corridors.

This being the case, it is seen as suitable for classification as KEE, and ANJ is also exploring this possibility. The determination of the KEE is decided by the *Surat Keputusan (SK)* of the West Papuan Governor. The KEE is also supported/ enforced by the Law of Indonesia Republic (refer to Table 3.4).

Table 3.4 Indonesian laws related to KEE

Indonesian Laws	Description
Undang-Undang Republik Indonesia Nomor 5 Tahun 1990 Tentang Konservasi sumber daya alam hayati dan ekosistem.	Article 5 states that conservation of natural resource can be done through: a. Protection of wildlife buffer area, b. Preserving the diversity of flora and fauna and its ecosystem, and c. Sustainable utilization of natural resources and its ecosystem.
Peraturan Pemerintah Republik Indonesia Nomor 28 Tahun 2011: Pengelolaan Kawasan Suaka (PSK) Alam dan Kawasan Pelestarian Alam (KPA).	Article 24 (1) stated that KEE is an area with ecosystem such as karst, wetland, mangrove and/or peat, and that are found outside both KSA and KPA area.

3.1.3 Initiation of Boundary Demarcation

Physical boundary demarcation is the first step in transforming the Recovery Site planning into reality. The ANJ field team has started installing boundary markers (*patok*) and signboards (*plang*) as interim measures to physically secure the Recovery Site. A total of 4 informative signboards and 30 boundary markers have been installed along the northern boundary of the Recovery Site. This is to indicate the boundary between oil palm development and conservation. Signboards were positioned at strategic locations, especially at the estate's development and natural ecosystem interphase, and pathways frequented by local communities (see Figure 3.2). The boundary markers were placed in the northern section. Boundary demarcation in this section was targeted to be completed in the first phase as the location was easily accessible through the estate road network (see Figure 3.3).

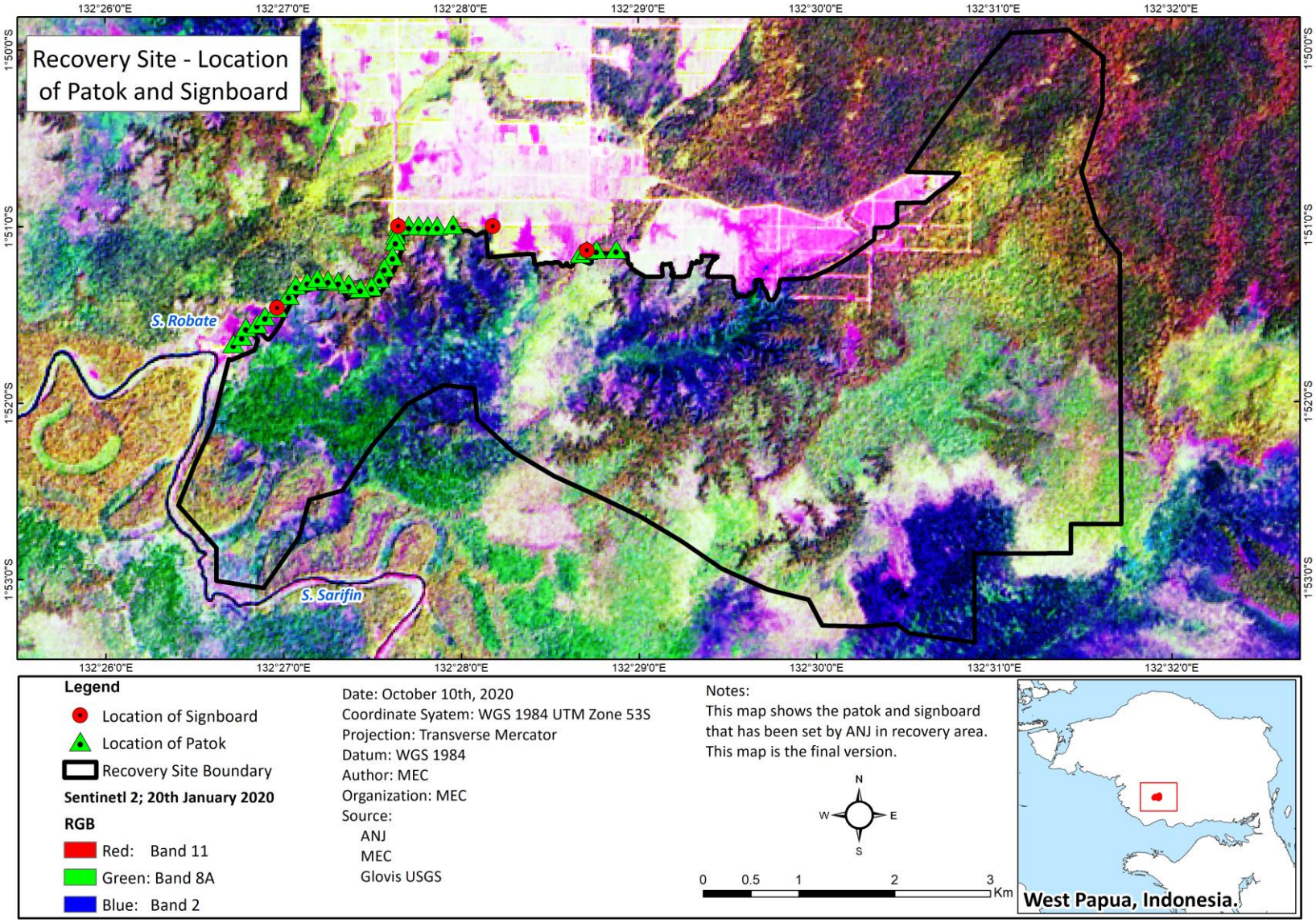
Figure 3.2: Informative signboards (plang) for local communities and internal stakeholders.

Figure 3.3: Boundary markers were placed in the northern boundary of the Recovery Site.

Table 3.5 shows the list of GPS coordinates where the markers and signboards have been installed, and Map 3.1 shows the locations of these boundary markers placed.

Table 3.5: Recovery Site Boundary Demarcation Coordinates

No	GPS Coordinates	
	X	Y
Informative Signboard		
1	132°26'58.3" E	1°51'27.8" S
2	132°27'39.3" E	1°51'00.0" S
3	132°28'43.0" E	1°51'08.3" S
4	132°28'11.2" E	1°51'00.1" S
Boundary Markers		
1	132°26'43.5" E	1°51'39.9" S
2	132°26'46.4" E	1°51'37.3" S
3	132°26'47.7" E	1°51'34.3" S
4	132°26'51.5" E	1°51'33.2" S
5	132°26'54.2" E	1°51'30.6" S
6	132°26'58.3" E	1°51'27.8" S
7	132°27'02.2" E	1°51'23.5" S
8	132°27'04.6" E	1°51'20.0" S
9	132°27'08.5" E	1°51'18.8" S
10	132°27'39.3" E	1°51'00.0" S
11	132°27'42.8" E	1°50'59.9" S
12	132°27'46.1" E	1°50'59.9" S
13	132°27'49.2" E	1°51'00.0" S
14	132°27'52.4" E	1°51'00.0" S
15	132°27'57.8" E	1°50'59.6" S
16	132°27'38.5" E	1°51'03.0" S
17	132°27'38.3" E	1°51'05.1" S
18	132°27'37.3" E	1°51'10.2" S
19	132°27'34.5" E	1°51'14.1" S
20	132°27'32.9" E	1°51'17.7" S
21	132°27'30.2" E	1°51'20.5" S
22	132°27'26.4" E	1°51'21.1" S
23	132°27'22.5" E	1°51'19.7" S
24	132°27'19.0" E	1°51'18.8" S
25	132°27'15.5" E	1°51'18.2" S
26	132°27'11.9" E	1°51'17.6" S
27	132°28'40.8" E	1°51'09.4" S
28	132°28'43.0" E	1°51'08.3" S
29	132°28'46.1" E	1°51'08.1" S
30	132°28'52.8" E	1°51'08.0" S



Map 3.1: Location of boundary markers (patok) and signboards installed in the Recovery Site (Phase 1)

3.2 Policies and Standard Operating Procedures related to the Recovery Site

Committing to policies and consolidation of relevant SOPs for the Recovery Site was undertaken in Phase 1. These policies and SOPs were standardised to match the quality system developed for management of the Recovery Site. Monitoring protocols are now being developed to evaluate and guide implementation of management actions. An iterative mechanism is also being investigated so that an adaptive management approach instituted. The relevant list of policies and SOPs are presented in Table 3.6.

Table 3.6: List of policies and SOPS relevant to the Recovery Site

No	Policies and SOPs (English)	*Kebijakan and SOPs (Bahasa Indonesia)*	Types	Description
1	ANJ Sustainability Policy	*(Kebijakan Keberkelanjutan)*	Policy	This policy is the sustainability foundation of ANJ. It has 3 key elements, that are (1) Long term economic viability (Prosperity), (2) Human well-being (People), and (3) stewardship of natural resources and management of the environment (Planet).
2	Conservation Policy	*(Manual Kebijakan Konservasi)*	Policy	This policy is the company's guidance manual towards protecting and conserving the environment. This includes the determination of HCV areas and other areas of conservation importance and formulating the management and monitoring plan for these areas.
3	Internal Memo on Participatory and Customary Land Rights Boundary Mapping Among Customary Landowners	*(Internal Memo Permintaan Partisipasi dan Tatabatas Antar Marga Pemilik Hak Ulayat)*	Internal Memo	In accordance with the ANJ's Sustainability Policy, this document details the procedures on how to conduct Participatory Mapping of Customary Land Rights within the PT. PMP concession. The proceduress include gathering sufficient information of tribe historical background, and the genealogy of the clans, mapping the customary land extent. This is important in identifying the landowners who are eligible for compensation and demarcating the customary extent of their land.
4	Internal Memo on Mechanism for Transparency of Information and Request of Information. (Linked to SOP *Komunikasi and Pemberian Informasi* (SOP – Leg – 02)	*(Internal Memo Menetapkan Mekanisme Transparasi Informasi dan Pemberian Tanggapan Atas Permintaan Informasi).*	Internal Memo	This document guides the on-site team on specific implementation of the Transparency mechanism. The guidance document assign roles and responsibilities to certain departments within the company. The memo also provides a list of documents which can be made publicly available and other confidential documents (not publicly available).

No	Policies and SOPs (English)	*Kebijakan and SOPs (Bahasa Indonesia)*	Types	Description
5	Internal Memo on Grievance Mechanism	*(Internal Memo Mekanisme Keluhan)*	Internal Memo	The purpose of this internal memo is to inform stakeholders that there is a mutually agreed grievance system in PT. PMP. The memo shows the assigned personnel and their responsibilities, and procedures on grievances resolution. This is done by conducting a grievance meeting weekly or when necessary.
6	Internal Memo regarding the Policy Compliance on the Protection of Protected Flora and Fauna Species, and the Conservation of HCV areas within the PT. PMP HGU concession	*(Internal Memo Terkait Kepatuhan Kebijakan Perlindungan Satwa dan Tumbuhan Yang Dilindungi dan Kelestarian areal HCV Yang Ada di Konsesi HGU PT. PMP).*	Internal Memo	All stakeholders, both internal and external, are responsible (i) to socialise and to report cases or any activities infringing the flora and fauna protection regulation, (ii) to maintain the information board, and (iii) maintain the integrity of identified conservation areas.
7	Disagreement and land ownership conflict resolution SOP	*(SOP Penanganan Perbedaan Pendapat dengan Masyarakat dan Sengketa Kepemilikan Lahan).*	SOP	The SOP covers the procedures for receiving and handling complaints, protests, dismay of the company's policies and or decisions made by the company, a well as, handling or resolving disputes that may arise.

This list of policies and SOPs will be updated accordingly based on the changing management requirements of the Recovery Site.

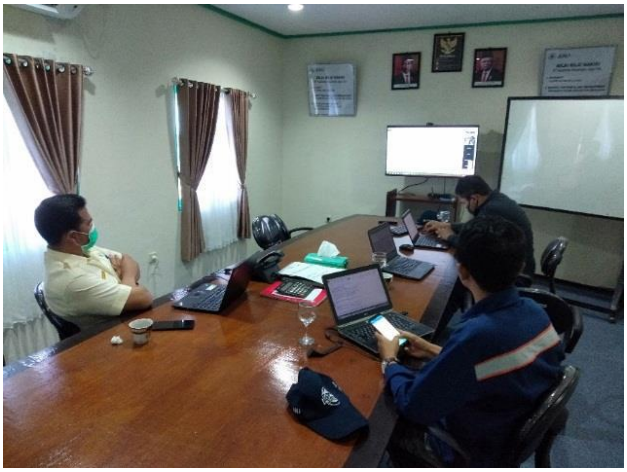
3.3 Internal Communication and Socialisation

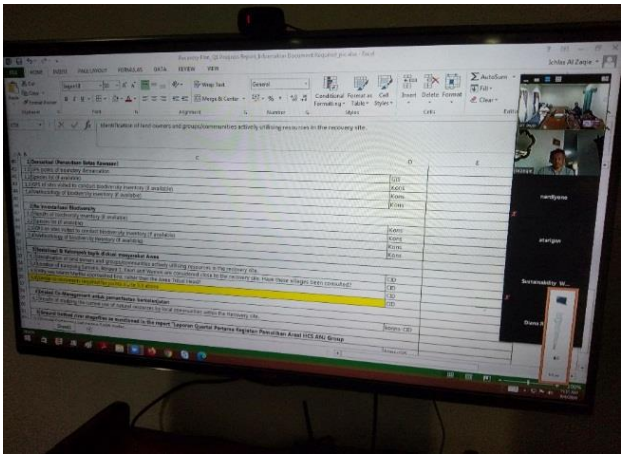
A series of internal communications and socialisation was conducted within the ANJ community to set the right mindset and culture for effective conservation management. As setting the base for the Recovery Site is a priority in Phase 1, these meetings were held among ANJ's internal staff to plan out and implement interim management actions. ANJ has also started educating estate workers and other relevant internal stakeholders of the Recovery Site and its objectives. The following presents a summary of the meetings held in the 1st Phase of Recovery Plan exercise: -

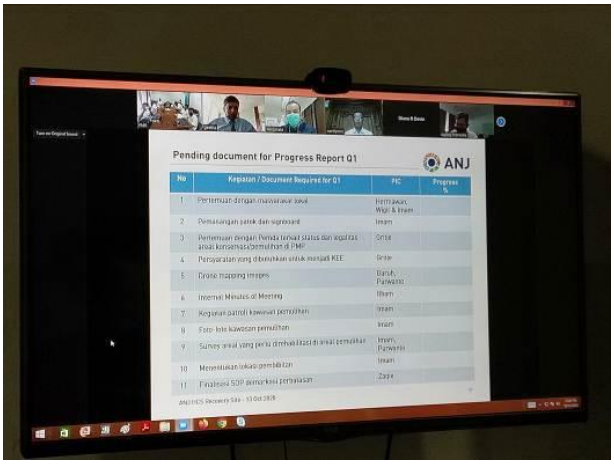
3.3.1 Internal Meetings Spanning between July to October 2020

1. **1st ANJ Internal Meeting**
   - This is a Recovery Site introduction meeting with ANJ's internal staff, which consist of representatives from the Board of Directors, Estate Management, GIS, Legal, Conservation, Sustainability and Compliance Departments.
   - A background on the purpose and objectives of the Recovery Site was presented.
   - A discussion to set the base to formulate a management committee for the Recovery Site, and to develop a plan of interim activities to be carried out in the 1st Phase.
2. **2nd ANJ Internal Meeting**
   - Meeting to track implementation progress of the interim activities planned for 1st Phase.
   - Assigned Person-in-Charge and the departments involved with deadline targets.
3. **3rd ANJ Internal Meeting**
   - Discussed on whom and how to collate data gathered from the interim actions carried out and finalisation of 1st Phase progress.
   - Discussed on delayed activities, challenges faced on site, and the postponement of the Recovery Site Biodiversity field assessment. This was due to the travel restrictions imposed by the local government, and the increase in Covid-19 cases in West Papua, amid the pandemic.
   - Reviewed alternative actions to be carried in the 1st Phase.
4. **4th ANJ Internal Meeting**
   - Followed up on the recommended alternative actions.
   - Finalised the ANJ Recovery Site Management Committee Organisation Chart.
5. **5th ANJ Internal Meeting**
   - A re-induction meeting of the Recovery Site, highlighting its importance for the security of ANJ's Supply Chain and GAR Re-entry Protocols. This is to re-enforce awareness and understanding of the Recovery Site importance to the company, and to create the right mindset when carrying out activities for the project.
   - Provided a summary of potential HCS loss due to land clearing for development by ANJ and recovery area to compensate.
   - Followed up on main activities carried out in Phase 1 and Phase 2.
   - Presented the finalised HCS Management Committee Organisation Chart.
   - Followed up on outstanding documents and data that are required for the 1st Phase Progress Report.

Figure 3.4 shows photos of both virtual and physical internal meetings held between the ANJ West Papua management and ANJ Headquarter in Jakarta.







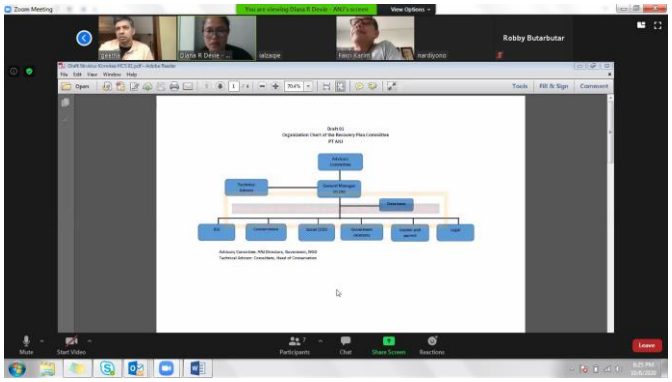


Figure 3.4: A series of internal meetings held to plan and implement Recovery Site interim activities.

3.3.2 Socialisation

The following is a summary of the socialisation held in the 1st Phase of the Recovery Planning exercise: -

1. **Socialisation on the Recovery Site, Protection of Flora & Fauna, ANJ's PENDAKI Programme, and the ANJ Conservation Policy** (see Figure 3.5).

   The sosialisation content is as below:

   - The prohibition of forest clearing for farming activities, animal trading especially protected species and, fishing methods by poisoning or electrocution the river.
   - All workers to notify their mandores / supervisors if there are any sightings of wildlife.
   - The integrity of the recovery site as identified by the company should be maintained.
   - The Conservation Department also presented their work program which includes co-management with the local communities. Some of these activities include, but are not limited to the following:
     - Installing signboards at identified Recovery Site and displaying posters of protected species listed by the Ministry of Environment and Forestry of Indonesia;
     - To inventorise species of flora and fauna;
     - Awareness creation amongst all workers and contractors regarding the protection of flora and fauna; and
     - To encourage local communities' utilisation of natural resources in a sustainable manner.

Figure 3.5: Socialisation regarding the Recovery Site to workers.

3.4 Organisation Chart

An organisation chart is pivotal to identify roles and responsibilities within ANJ to effectively implement the Recovery Site plan. The chart in Figure 3.6 clearly maps out the reporting structure for this project and is designed to be comprehensive yet streamlined. This project has the support of ANJ's various units such as the Board of Directors, Sustainability and Compliance, Conservation, GIS, Social, Government Relations, and Legal Divisions. The success of this project relies on the collaboration of both on-site management and the headquarters. This is reflected in the designed structure of the organisation chart. The reporting formation of the organisation chart was intended effective for quality control and monitoring.

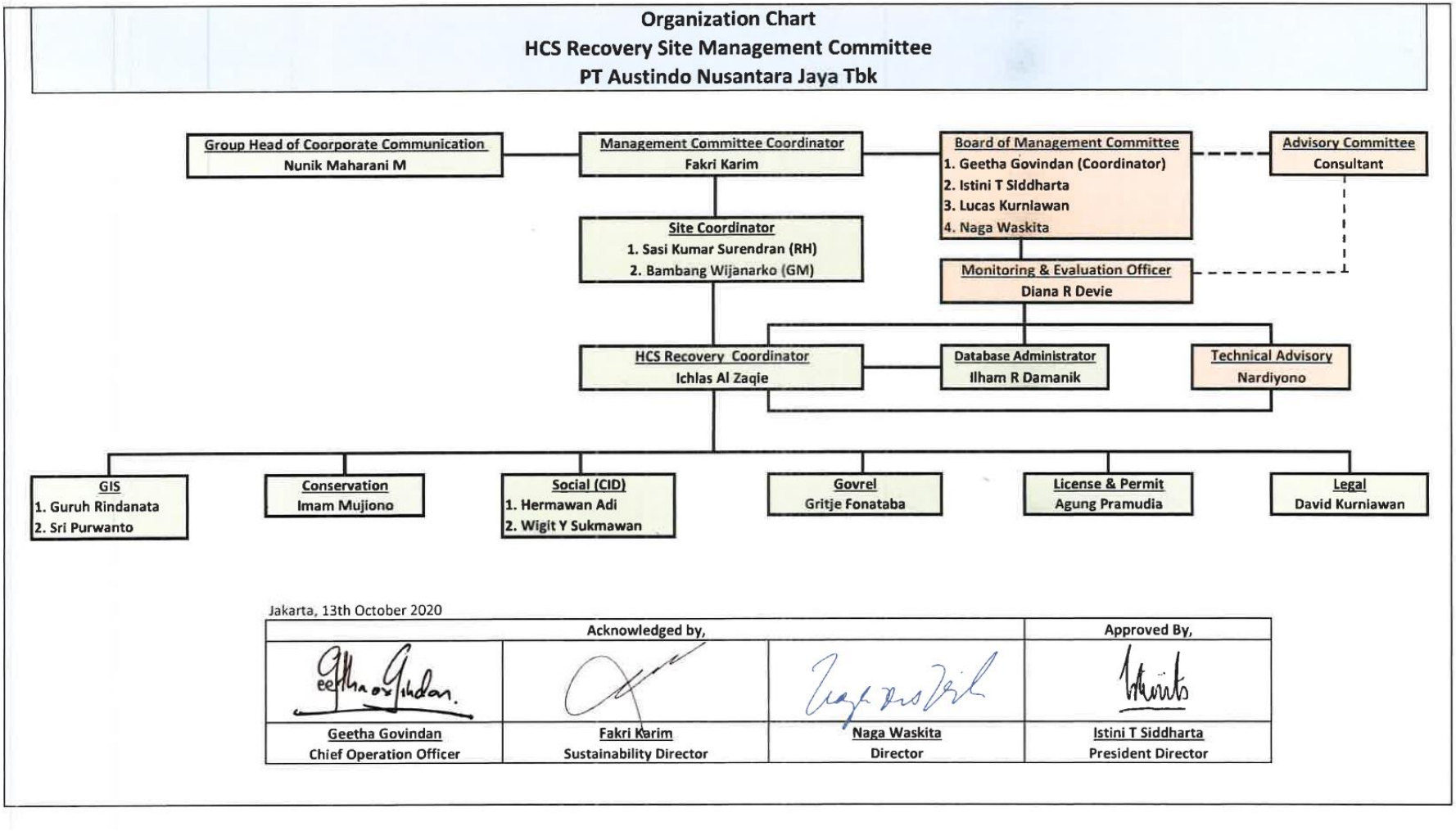


Figure 3.6: Final ANJ HCS Recovery Site Management Committee.

3.5 External Communication and Consultation – Initiating Consultative Process

As a part of transparency, stakeholders will need to be both kept informed and have opportunities to be heard, and recorded. To initiate the consultative process, ANJ should take leadership roles for the following: -

- Developing a stakeholder community;
- Giving a platform to as broad a range of stakeholder opinion as possible;
- Ensuring that stakeholders are kept aware of the opinions of each other;
- To ensure confidence that stakeholders own opinions are being shown due respect; and
- Fostering a culture for constructive communications.

In the 1st Phase, ANJ has begun the Recovery Site consultative process with customary landowners, local communities, and the West Papuan South Sorong government. These are key stakeholders who are directly involved in the management of the Recovery Site. ANJ acknowledges that to gain stakeholders' acceptance and consent for the Recovery Site project, the consultation has to be an iterative process, establishing a two-way communication. This requires tact and patience as repetition of various stage is required to ensure the success of the Recovery Plan. There will be a series of small-scale consultations (or focus group discussion), as well as large-scale public consultations. However, due to the pandemic and travel restrictions, it was not possible to organise consultation with large groups and local community's in remote areas.

Despite the challenges faced, ANJ managed to conduct several consultations with representatives of customary landowners and the local government. Below is a list of meetings held from June to October 2020, and the summary of the discussions:

1. **Discussion with Mama Martha in two different visitations**. Refer to Figure 3.7.

- Introduced the Recovery Site and explained that the company intends to conserve the area rather than develop it with oil palm.
- The land belongs to a customary tribe (*suku*) called Awee, specifically the Taerare clan (*marga*).
- Informed Mama Martha (matriarch) that the company will continue to meet with other tribe leaders, landowners, and local communities to socialise and gain acceptance of the Recovery Site conservation project.


-

Figure 3.7: Discussion with Mama Martha on two occasions.

2. **Consultation meeting between PT. PMP (ANJ) representative and the customary landowners of the Recovery Site. Refer to Figure 3.8**.
    - The objective of the meeting was to inform the customary landowners that their land within the Recovery Site will be conserved and rehabilitated. The company is committed to managing the area in accordance with the legal, RSPO and HCS requirements. The company hopes that local communities will participate in this conservation effort and co-manage the area.
    - A local community member raised a concern on where their right to access the Recovery Site will be taken due to the conservation status.
    - Another local community expressed his disappointment because the owners were hoping that their land will be developed so that they can receive the timber compensation fee and profit from plasma. They also inquired whether the conservation status will be permanent or can the area be developed in the future.
    - The company clarified that the locals will not lose their rights to access the conservation area for collection of NTFP and hunting, however, the company cannot develop the land for oil palm. The conservation status of the Recovery Site will remain intact so as to maintain the integrity of the area for future generations to benefit from.
    - At the end of the meeting, the landowners accepted the reasons why their land will not be developed.

Figure 3.8 Recovery Site consultation meeting with the customary landowners.

3. **Socialisation on the Recovery Site to Customary Landowner representatives in Sumano Village**. Refer to Figure 3.9.
    - To inform the customary landowners in Kampung Sumano that their land will become a conservation area and it will not be developed by the company. ANJ is committed to protecting the integrity of the Recovery Site and the flora and fauna within the area.
    - To introduce the meaning of Recovery Site and purpose.
    - To explain the long-term benefits of conserving the area.
    - To encourage the local community to be involved in co-managing the area by utilizing natural resources in a sustainable manner.
    - To assure the locals that the conservation status in the Recovery Site does not eliminate their rights to access the land.

Figure 3.9: Socialisation on the Recovery Site in the Kampung Sumano

2. **Presentation of ANJ's HCS Recovery Site to the South Sorong District Officer**. Refer to Figure 3.10.
    - The meeting was attended by Yohan Hendrik Kokorule, Assistant II of the Sorong Selatan District Office, and ANJ's representative from various units such as Government and Stakeholder Relations, Corporate Communication, Conservation, and Sustainability Compliance.
    - ANJ presented a background of the Recovery Site and the company's plan to conserve and manage the area with the support of local government.
    - The company has begun socialising with landowners within the Recovery Site. The Recovery Site will benefit the local community as the integrity of the forest will be maintained.
    - On behalf of the South Sorong District Office, the officer appreciated the company's effort in conserving 3,004 ha of the Recovery Site. The District Office will investigate the laws that can support and enforce the conservation status of the site.
    - As agreed, the company will continue to communicate with the District Office and other relevant organisation, such as the Ministry of Environment and Forestry soon.

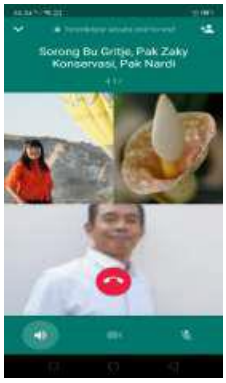


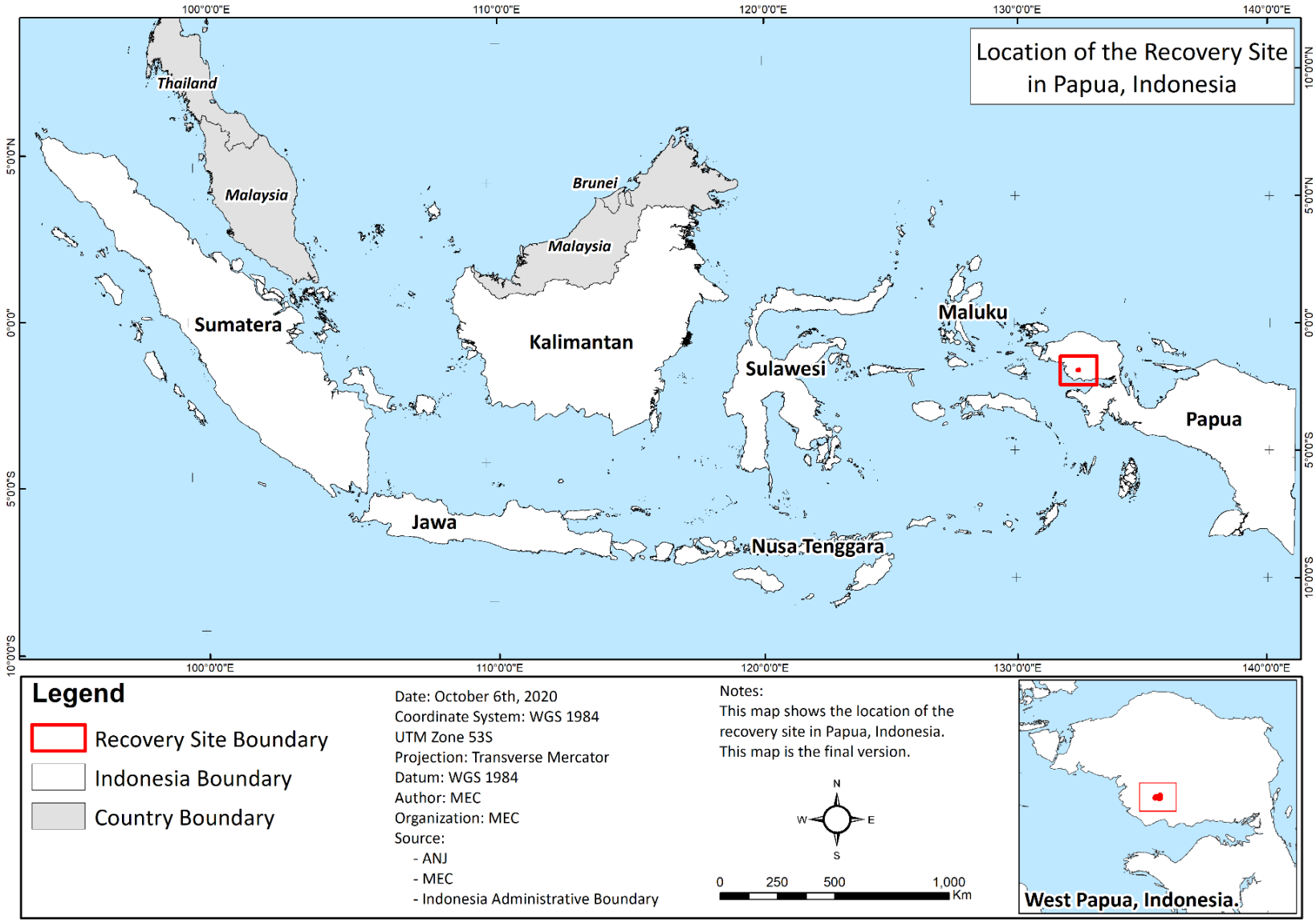
Figure 3.10: Photos of consultation with the local government

3.6 Initial Biodiversity and Social Assessment of the Site

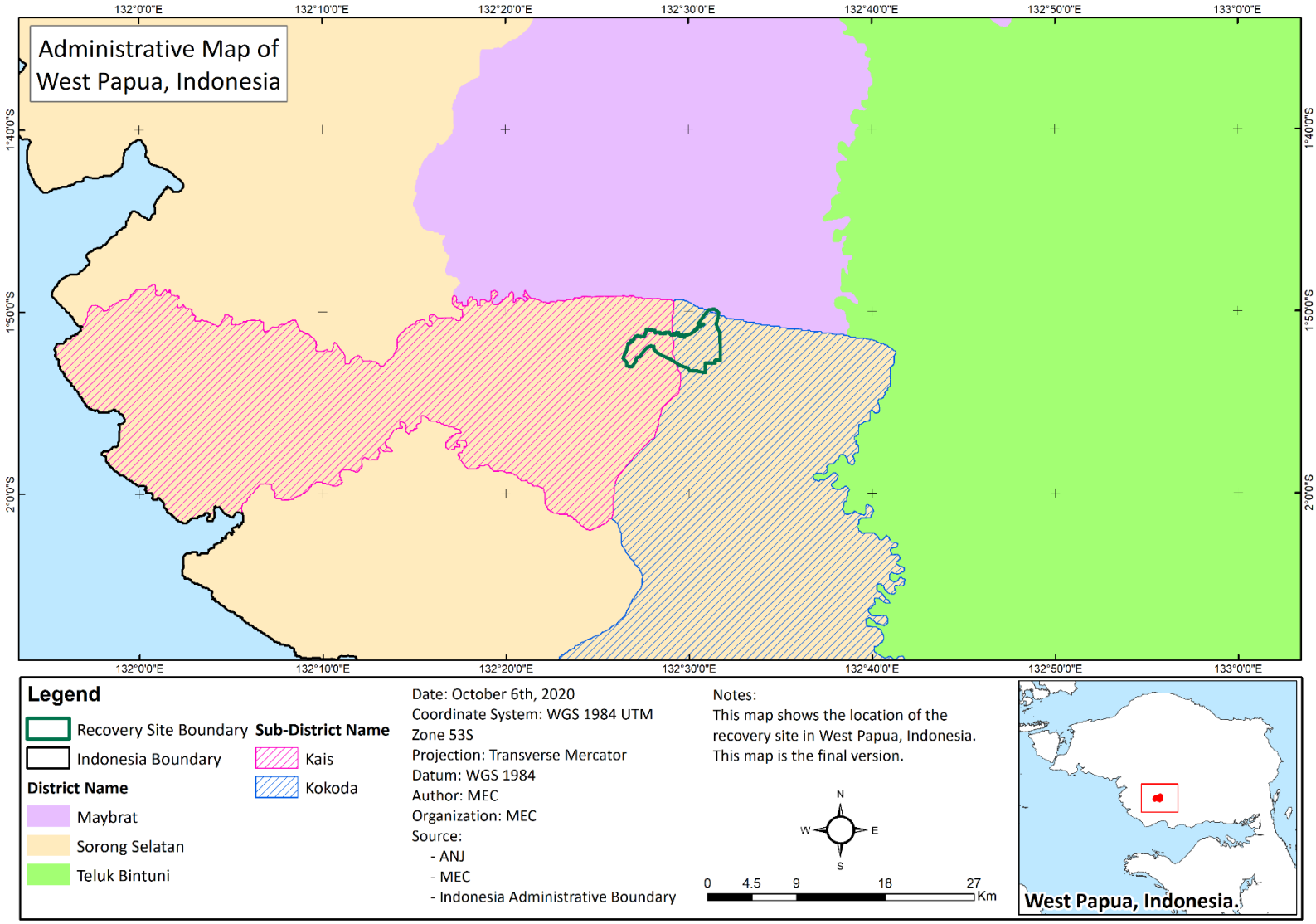
3.6.1 Introduction

PT Austindo Nusantara Jaya Tbk (ANJ) has been a member of Roundtable on Sustainable Palm Oil (RSPO) since 26th February 2007. In order to fulfill our commitment to our buyers who subscribe to NDPE, our HCS liability was calculated and a Recovery Site was selected. The site is located in Kais and Kokoda Sub-District, Sorong Selatan District, West Papua Province, Indonesia (refer Map 3.2 and Map 3.3). The centroid of the Recovery Site is 01^0 51' 52.00" South (Latitude) dan 132° 29' 38.700" East (Longitude). The site has a total area of 3,003.95 ha. Therefore, the purpose of this report is to present the initial biodiversity and social assessment of the Recovery Site.

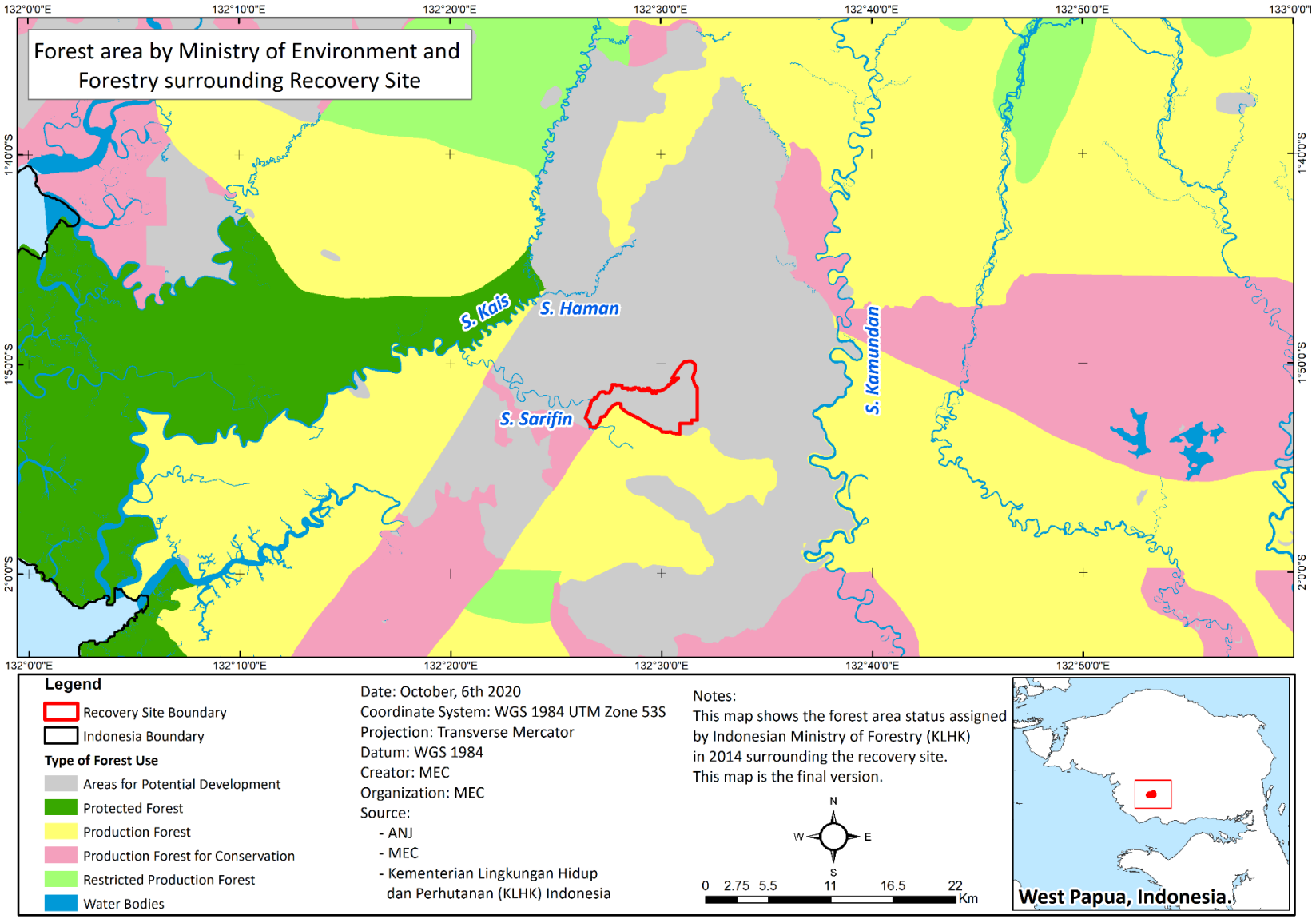
The *'Peta Penutupan Lahan Indonesia Tahun 2014'* SK MENLHK Nomor 78/ Menhut-II/2014 - 22/9/2014 by *Kementerian Lingkungan Hidup dan Kehutanan* (KLHK) and shows that the Recovery Site has been classed as *Areal Penggunaan Lain* (APL), - areas in which the forest can be legally cleared and developed (refer Map 3.4). The site has been partially cleared and abandoned and the remaining areas consist of both dry forest and swampy vegetation. In order to establish the conservation status of the area, support from the local government is essential. The areas can, as previously stated, be classified legally as a KEE. This option is still being explored.



Map 3.2: Location of the Recovery Site in West Papua, Indonesia.



Map 3.3: Administrative location of the Recovery Site in West Papua, Indonesia.



Map 3.4 Land use planning surrounding the Recovery Site.

3.6.2 Social Context

The clans in the area strongly believe that the natural resources such as land, forest and water belong to them and were handed down by their ancestors. There are two villages who has customary land rights in the Recovery Site (Refer Map 3.5). These villages are Kampung Benawa 1 and Kampung Sumano. Local community presence has been recorded in the area since the 1980s. Reference to the Table 3.7 below shows the demographic information of these villages such population size, ethnicity, religion, and socio-economic activities of villages having customary rights over the Recovery Site.

Table 3.7: Current demographic information of the villages having customary rights over the Recovery Site

No.	Village	District / Regency / Province	No. of households / KK (population)	Religion	Ethnicity	Main Socioeconomic Activities
1.	**Kampung Benawa I**	Kais District, South Sorong, West Papua	• 77 KK • 366 individuals • 191 Men • 175 Women	Protestant	Awe'e Tribe (consists of 16 Clans)	Majority of the villagers' farm, harvest sago and other NTFPs such as fruits and vegetables. They also hunt and fish on a daily basis.
2.	**Kampung Sumano**	Kais District, South Sorong, West Papua	• 47 KK • 260 individuals • 135 Men • 125 Women	Protestant	Awe'e Tribe (consists of 18 Clans)	

Photo 3.1 Meeting hall in Kampung Benawa 1

Photo 3.2 Kampung Sumano

3.6.2.1 Local community dependency

The local community is highly dependent on natural resources as they have always been hunter gatherers. The local community hunt, harvest sago, collect firewood, herbs, paraphernalia for conducting rituals, and timber as building materials. The forest products collected and meat from hunted animals are sold for cash in the nearest town. Table 3.8 shows the dependency of the locals on the forest and river resources.

Table 3.8 Dependency of local communities towards natural resources.

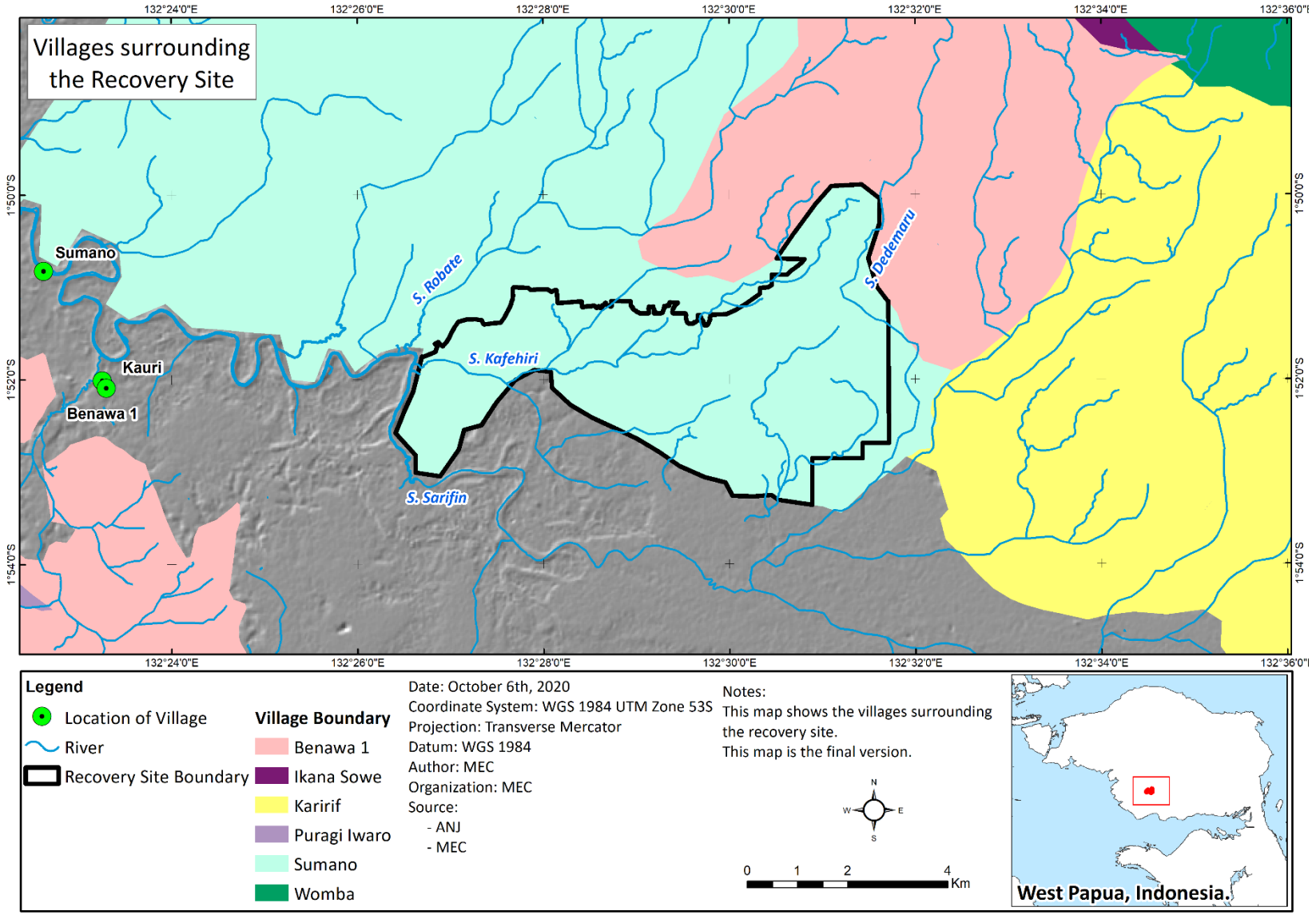
Category	Dependency	Description
Forest	1. Source of carbohydrate.	Kampung Benawa 1 and Kampung Sumano are heavily dependent on sago as the main source of carbohydrate.
	2. Source of protein.	The protein needs are acquired mainly through hunting. The locals hunt wild pigs, deer, cassowary, crocodile, and tree kangaroos using traps, spears, blow darts and also dogs. The local communities also consume sago worms as a source of protein.
	3. Source of fruits and vegetables.	The locals can easily obtain fruits such as durian, jackfruit, langsat, mango, rambutan and coconut and vegetables such as melinjo, fern, *umbut sagu,* star gooseberry, cassava leave, sago shoots, mushrooms, bamboo shoots and others. The resources are consumed and sold to generate family income.
	4. Plants with medicinal values	Certain plants have medicinal values and are used for treatments. These plants include *Daun Gatal, Kulit Kayu (*Tree Bark*), Kulit Pohon Lawang (*Bark of Lawang Tree*), Kulit Pohon Lawang (*Bark of Lawang Tree*), Sarang Semut (*Ants Nest*), Halea Putih (*White Ginger*) and Kayu Susu.* Since the local community has very limited access to medical facilities.
	5. Building and tool materials	Timber from the forest such as merbau, matoa, mersawa, iron wood, resin wood and others are used to build houses. Apart from timber, pelepah and sago leaves are used for roof and house building. To build boats and canoes, villagers commonly use the Palaka or Benuang wood (Octomeles sumatrana), Kumudo or terentang (Camnosperma sp), salowaku, and kayu susu (Alstonia sp). Sago trunk and nibung tree trunk are used to make bow and arrows and to build fish catching and hunting tools.
	6. Energy fulfillment	The people are very dependent on firewood for energy fulfillment and cooking.
River	1. Water source	The people are dependent on Sarifin River and Gaina River water for drinking, cooking, and sanitation.
	2. Source of Protein	Protein needs include fish and prawns are obtained by fishing in the rivers, lakes, and swamps. A variety of freshwater species like eel-tail catfish, snakehead, and others are caught.
	3. Transportation	Kampung Benawa 1 and Kampung Sumano can only be access via river. It takes about 4 to 5 hours by longboat from Teminabuan, the capital of South Sorong.

The forest areas within the Recovery Site are used as hunting grounds, areas that supply food and medicinal plants and are a source of income for the two villages mentioned. Besides this, the locals are also very dependent on the river for their source of protein, water and for their transportation. Since the tributaries within the Recovery Site flows into the river that passes through the villages, it is important to conserve both the forest and rivers (see Figure 3.10 to Figure 3.13)

Figure 3.11: Gaina River in Kampung Benawa 1

Figure 3.12: Locals commute by longboat

Figure 3.13: Sarifin River



Map 3.5: Village surrounding the Recovery Site

3.6.3 Physical Setting of the Recovery Site

The Recovery Site is located in between two major rivers namely, Kais and Kamudan River. These are some of the major rivers that drain the mountains to the north. Its tributaries are Kafehiri, Dedemaru, and Sarifin Rivers that flow through the Recovery Site towards south. To the south, the streams enter the wetlands along the Sarifin River. The Sarifin River is also tributary of the Kais river and its head waters would have open lakes similar to the lakes east of Winuni. However, by the 1940's, the open waters had become choked with floating vegetation as it is today. With rainfall averaging between 150 to 280 mm per month, the rivers are seldom dry.

The Recovery Site is generally flat, with most of the area having slope less than 5 degrees. Map 3.6 shows a slope model of the Recovery Site. No steep areas (>20° slope) are found. The slope range within the Recovery Site with its extent is presented in the Table 3.9. The elevation contours are based on the Digital Elevation Model Nasional – Republik Indonesia (DENMAS) data and this is shown in Map 3.7. This elevation model indicates that the Recovery Site has an elevation range between 0 to 44m a.s.l (see Table 3.10).

Table 3.9: Slope model and its extent of Recovery Site

No	Slope (Degree)	Area (ha)
1	0 - 5	2,380.08
2	5.01 - 10	562.01
3	10.01 - 15	58.53
4	15.01 - 20	3.33
Total Area (ha)		**3,003.95**

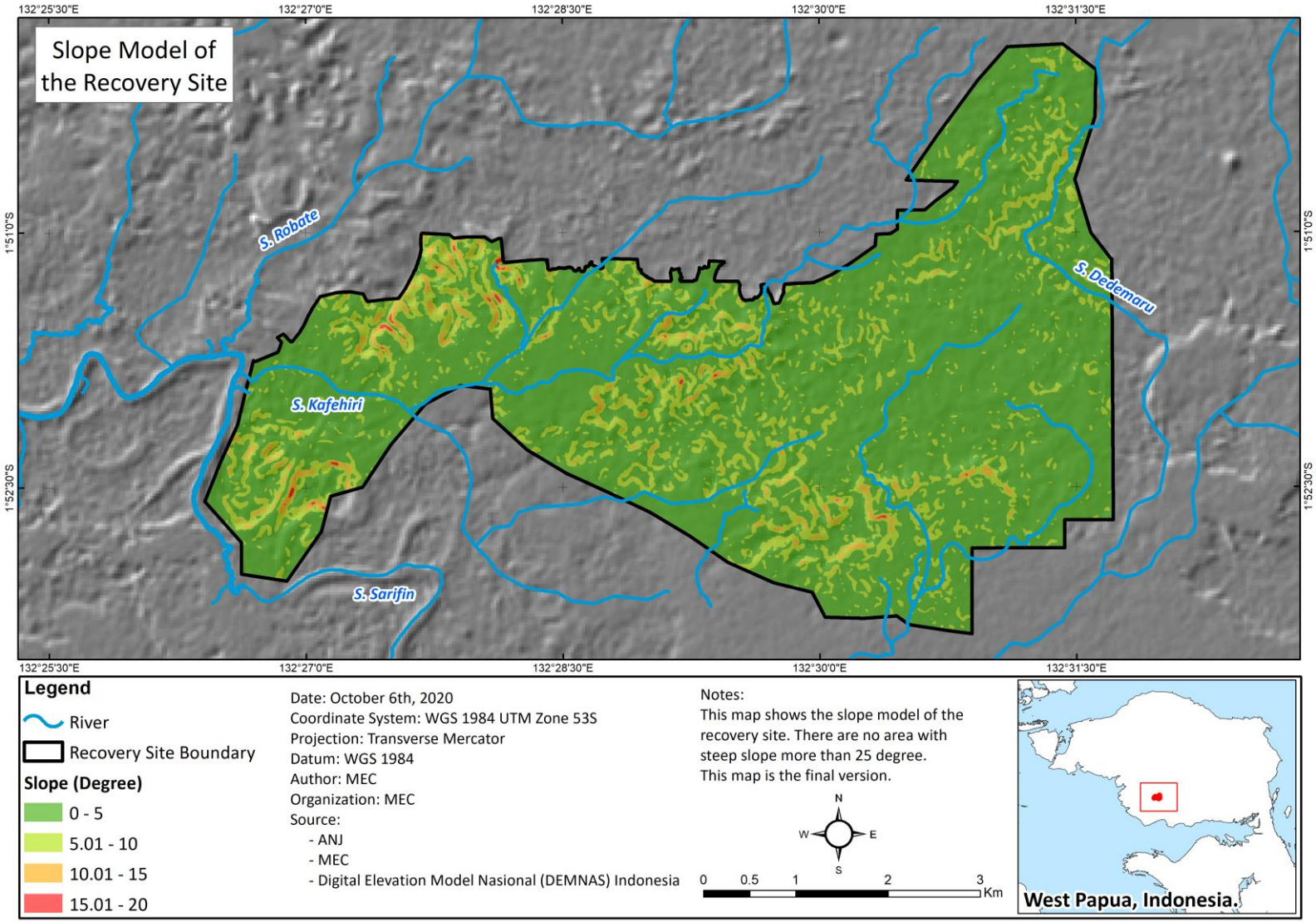
Table 3.10: Elevation and its extent of Recovery Site

No	Elevation (m a.s.l)	Area (ha)
1	0 - 10	798.40
2	10.01 - 20	870.62
3	20.01 - 30	1,122.12
4	30.01 - 40	203.90
5	40.01 - 50	8.91
Total Area (ha)		3,003.95

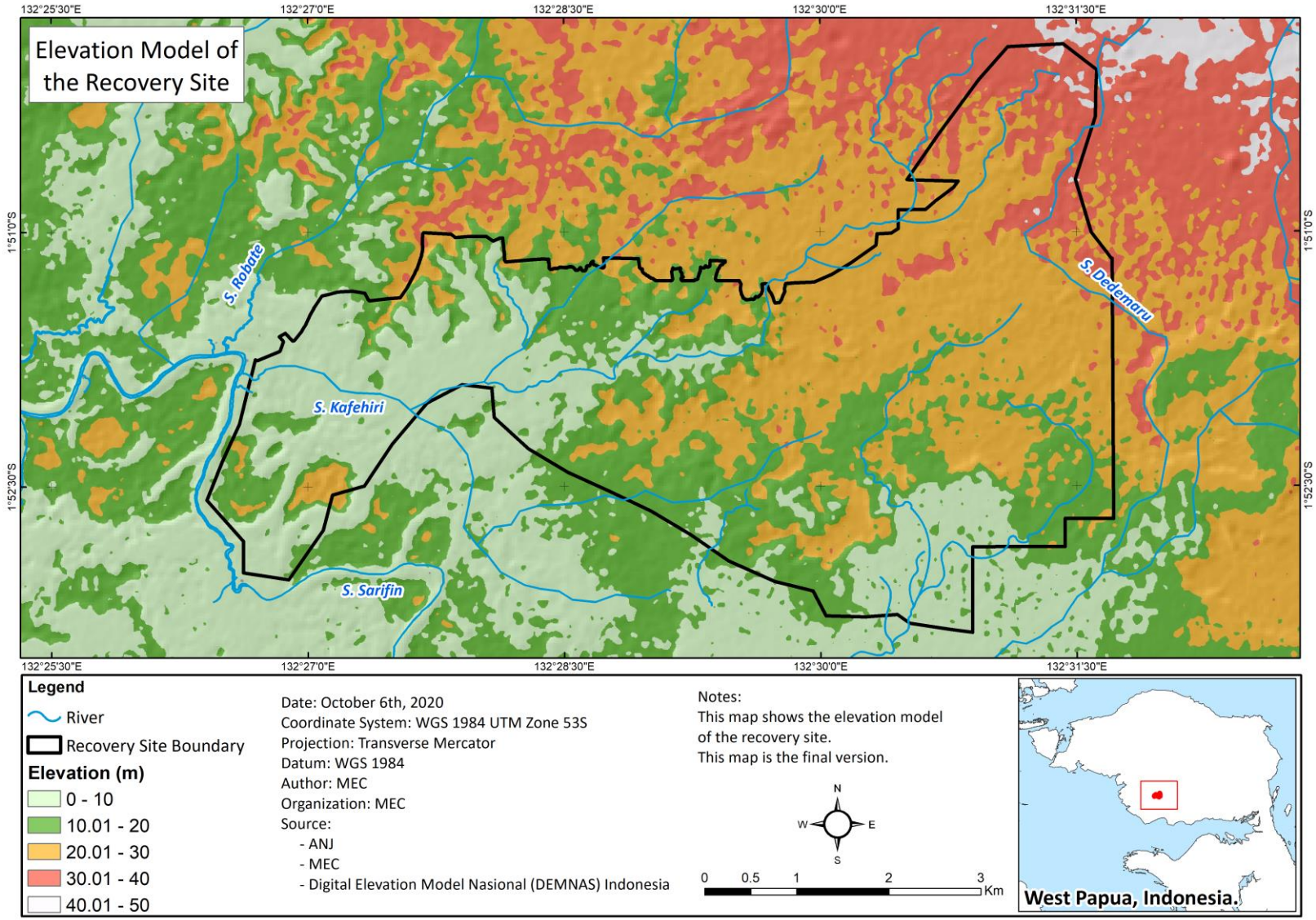
The Recovery Site is divided into three land systems based on the land system map (RePPProT, 1987), namely Puragi (PRG), Taritatu (TRT), Sapauwar (SPW) (see Table 3.11 and Map 3.8). The area is dominated by PRG (81%) land system, which is low undulating terrace with dissected margin. Backswamp areas forming lakes (TRT land system) are found at the western and south eastern section of the Recovery Site. The south western section of the Recovery Site is SPW with meander belts and this is part of Sarifin River. The Recovery Site has soils that are a red-yellow podsol in the north with some organic rich soils in the wetter areas in the south.

Table 3.11: Land system based on RePPProT, 1987 within Recovery Site

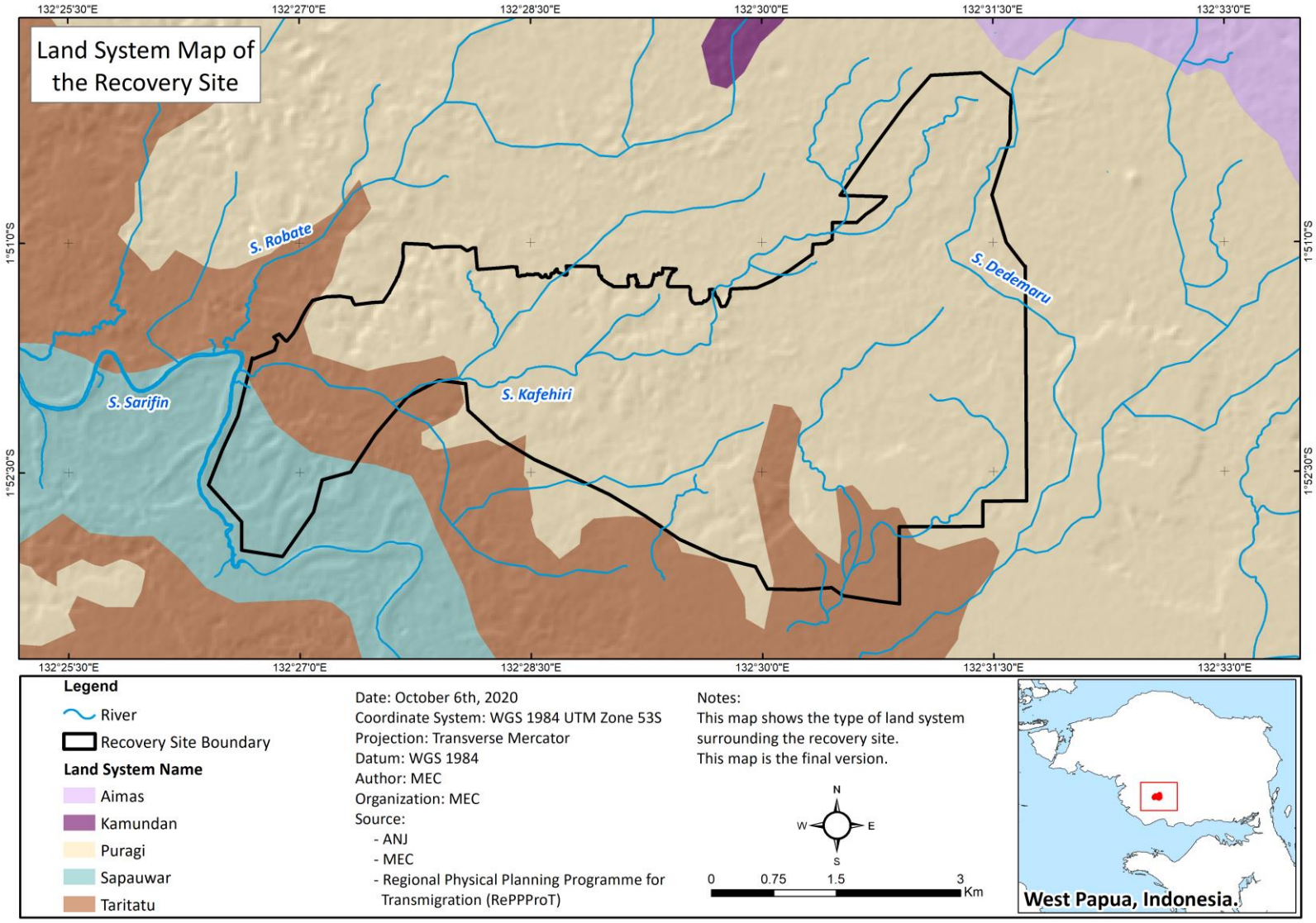
Symbol	Land System	Land Type	Notes	Soil group association	Area (ha)	Percentage (%)
PRG	Puragi	*Low undulating terraces with dissected margins*	Flat River and lake terrace	Tropaquepts; Dystropepts; Tropopsamments	2,433.75	81
TRT	Taritatu	*Backswamps with many lakes, periodically inundated*	Closed alluvial, subswamp or marsh (without marine influence)	Tropohemists; Tropaquents; Hydraquents	399.45	13
SPW	Sapauwar	*Meander belt of large rivers crossing coastal plains*	Alluvial, meander belt including meander scar	Eutropepts; Tropaquepts; Tropofluvents	170.75	6
				Total	**3,003.95**	**100%**



Map 3.6:Slope model of the Recovery Site



Map 3.7: Elevation Model of Recovery Site



Map 3.8: Land system surrounding the Recovery Site

3.6.4 Potential Biodiversity Based on the Recovery Site Landscape

3.6.4.1 Potential Flora Presence

Based on the results of the assessment conducted in the landscape of the Recovery Site by MEC (2014) and also the database gathered the ANJ Conservation division, 318 flora species from 76 families are recorded in the landscape of Recovery Site. The dominant families were Orchidaceae, Myristicaceae, Euphorbiaceae, Lauraceae, Meliaceae, Elaeocarpaceae, Leguminosae, Myrtaceae, Rubiaceae and Phyllanthaceae. A detailed species list of the identified plants is presented the Appendix of this document.

From the 340 flora species identified in the landscape, there is one Critically Endangered (CR) species, and 4 Vulnerable (VU) species, 4 Near Threatened (NT) species, 47 Least Concern (LC) species and 2 Data Deficient (DD) species are listed under IUCN Red list. These protected species are shown in Table 3.12 below.

Table 3.12: RTE plant species listed in Global IUCN Red list found in Recovery Site landscape.

IUCN Red list categories	Species	Count of Species
Critically Endangered	*Aquilaria malaccensis*	1
Vulnerable	*Intsia bijuga*	4
	Anisoptera thurifera	
	Pericopsis mooniana	
	Aquilaria filaria	
Near Threatened	*Cycas rumphii*	4
	Agathis labillardieri	
	Cryptocarya massoy	
	Pholidota chinensis	
Least Concern	-	47
Data Deficient	*Mangifera indica*	2
	Myristica brassii	
Grand Total		**58**

There are 48 CITES Appendix II species and 1 species that is protected under Indonesia Legislation - *Peraturan Pemerintah Indonesia* (*NOMOR P.106/MENLHK/SETJEN/KUM.1/12/2018*) found in Recovery Site landscape. In addition, 9 plant species that are endemic to the island of Papua were also found in that landscape. The endemic and Indonesia protected plant species are presented in Table 3.13 below.

Table 3.13: Indonesia protected and Papua endemic species identified in the Recovery Site landscape.

Conservation status	Number of species	Total count
Protected under Indonesia Legislation	*Agathis labillardierei*	1
Endemic species	*Bulbophyllum digoelense, Bulbophyllum tortum, Cryptocarya massoy, Dendrobium agrostophylloides, Dendrobium arachnoideum, Dendrobium finisterrae, Dendrobium gjellerupii, Diplocaulobium aratriferum, Robiquetia mooreana*	9

A summary of conservation status of plants found in Recovery Site landscape is presented in Table 3.14.

Table 3.14: Numbers of plant species based on conservation status found in the area.

No	Conservation Status	Category	Species count
1	IUCN Red list	Critically Endangered - CR	1
		Vulnerable - VU	4
		Near Threatened - NT	4
		Least Concern - LC	47
		Data Deficient - DD	2
3	CITES	Appendix II	48
4	Indonesian Legislation	*Peraturan Pemerintah Indonesia* (*NOMOR P.106/MENLHK/SETJEN/KUM.1/12/2018*)	1
5	Endemic species	Papua Island	9

3.6.4.2 Potential Fauna Presence

A total of 207 fauna species from 78 families were identified in the landscape of Recovery Site based on the assessment conducted in the proximal landscape of the Recovery Site by MEC (2014) and also the database from the ANJ Conservation Unit. There are 153 species of birds, 26 species of reptiles, 13 species of mammals, 11 species of fishes and 4 species of amphibians. The full animal species list is provided in Appendix of this document, and a summary species count identified within the Recovery Site landscape is presented here in Table 3.15.

Table 3.15: Summary of the animals recorded in Recovery Site landscape

Group	Species count	Family Count
Birds	153	47
Reptiles	26	12
Mammals	13	7
Fishes	11	9
Amphibians	4	3
Grand Total	**207**	**78**

From the 207 fauna species identified in the landscape, there are 1 Critically Endangered (CR), 1 Endangered (EN), 8 Vulnerable (VU), 4 Near Threatened (NT), 181 Least Concern (LC) and 1 Data Deficient (DD) species listed in the IUCN Red list (refer to Table 3.16).

Table 3.16: RTE fauna species listed in Global IUCN Red list found in the Recovery Site landscape,

IUCN Red list categories	Species	Count of Species
Critically Endangered	*Spilocuscus rufoniger*	1
Endangered	*Cuora amboinensis*	1
Vulnerable	*Amyda cartilaginea*	8
	Dendrolagus inustus	
	Goura cristata	
	Hydrosaurus pustulatus	
	Pelochelys bibroni	
	Rusa timorensis	
	Spilocuscus papuensis	
	Thylogale brunii	
Near Threatened	*Aquila gurneyi*	4
	Goura victoria	
	Hemibelideus lemuroides	
	Megatriorchis doriae	
Least Concern	-	181
Data Deficient	*Papurana volkerjane*	1
Grand Total		**196**

A total of 48 species found are protected under Appendix I and II (CITES). There is also a national legislation protecting fauna species under *Peraturan Menteri Lingkungan Hidup Dan Kehutanan Republik Indonesia (Nomor P.106/Menlhk/Setjen/Kum.1/12/2018).* There are 55 animals' species that are protected under Indonesian law. A bird species migratory analysis was also undertaken. A total of 24 bird species are classified as migratory.

The count and proportion of endemic species help us understand the evolutionary significance of the local wildlife population. But considering the size and expanse of the Republic of Indonesia, it is more useful to consider the species that are endemic to the bio-geographical unit - the island of Papua. Seventy four (74) endemic species were found in the landscape (Table 3.17).

Table 3.17: Endemic fauna species found in the Recovery Site landscape.

No	Group	Number of species
1	Amphibian	2
2	Birds	56
3	Fishes	2
4	Mammals	5
5	Reptile	9
Total		**74**

A summary of conservation status of fauna species found in landscape of the Recovery Site is presented in Table 3.18 below.

Table 3.18: Numbers of animal species based on conservation status found in the landscape.

No	Conservation Status	Category	Birds	Mammals	Reptiles	Amphibians	Fishes	Total
1	IUCN Red list	Critically Endangered - CR	-	1	-	-	-	1
		Endangered - EN	-	-	1	-	-	1
		Vulnerable - VU	1	4	3	-	-	8
		Near Threatened - NT	3	1	-	-	-	4
		Least Concern - LC	148	7	19	3	4	181
		Data Deficient - DD	1	-	-	-	-	1
2	CITES	Appendix I	2	-	-	-	-	2
		Appendix II	28	5	13	-	-	46
4	Indonesian Legislation	*Peraturan Pemerintah Indonesia* (*NOMOR P.106/MENLHK/SETJEN/KUM.1/12/2018*)	45	6	4	-	-	55
5	Endemic species	Papua Island	56	5	9	2	2	74

The count of different flora and fauna species recorded gives us a first impression of the 'value' a site may have for the conservation of biodiversity. The larger the number of species, the more valuable – biologically, it would appear to be. Based on this, the recovery site has a very high conservation potential.

3.6.5 Land Cover

The initial land cover analysis of the Recovery Site is summarised in Table 3.19 and Map 3.9.

Table 3.19: Land cover within the Recovery Area.

Land Cover in Recovery Area	GIS Extent (ha)	Percentage (%)
Late Succession Dry Land Forest	111.75	4%
Mid Succession Dry Land Forest	77.36	3%
Late Succession Dry Land Forest with Interspersed Swamps	839.39	28%
Mid Succession Dry Land Forest with Interspersed Swamps	32.03	1%
Late Succession Mixed Swamp Forest	1,123.02	37%
Swamp Forest (Regrowth Oxbow)	51.95	2%
Swampy Underbrush (Hanguana Swamp)	601.05	20%
Meander Belt	122.18	4%
Cleared Area	45.24	2%
Total GIS Extent (ha)	**3,003.96**	**100%**

Summarised below is a description of the preliminary land cover identified in the Recovery Site:

The Late Succession Dry Land Forest are found in relatively flat to undulating areas and as the name suggests, is dry and normally not flooded. These areas are found in the north and east of the Recovery Site. The area has a good range of tree sizes, with trees reaching heights over 35 m and diameters over 50 cm. The common tree species include *Vatica rassak* (a dominant species), *Palaquium* sp, *Agathis labillardierei*, and *Hopea* sp. Species found at the lower strata incldue *Agrostistachys borneensis*, *Syzygium* sp, *Aceratium* sp, *Elaeocarpus* sp, *Pandanus sp.* and various species of palms. The forest floor has a relatively thin layer of (forest) litter, and the canopy opening tends to be relatively small, maintaining a moist and humid microclimate. Large mammals and birds are also found in this forest and are hunted by the local communities.

Mid Succession Dry Land Forest areas are also found in the area of interest. These forests are also found towards the northern section. The canopy of the forest is relatively more open and the litter layer thinner; these secondary forests are situated nearer to the logging tracks and also along rivers indicating that they were more easily accessed. The area has been logged for the merbau wood (*Intsia bijuga*) as evidenced by the presence of stumps and logging tracks and the common pioneer species like *Octomeles sumatrana, Breonia chinensis*, *Macaranga, Alphitonia excelsa* and *Ficus* as well as secondary herbs, shrubs and climbers.

Some of the dry land forest with gentle terrain and alluvial soils in very low-lying areas are sometimes intermittently waterlogged for varying periods of time. These forests are found fairly extensively in the area and have been described as late and mid succession dry land forest with interspersed swamps. Such forests are very commonly found throughout the Recovery Site. In these flood prone areas, *Hanguana malayana* and *Metroxylon sagu (*sago) are common. The mid succession forms of these forest areas are generally similar to late succession and is more open (lower stature and open canopy) and harbours ferns, grasses and sedges as well as some *Hanguana* and sago.

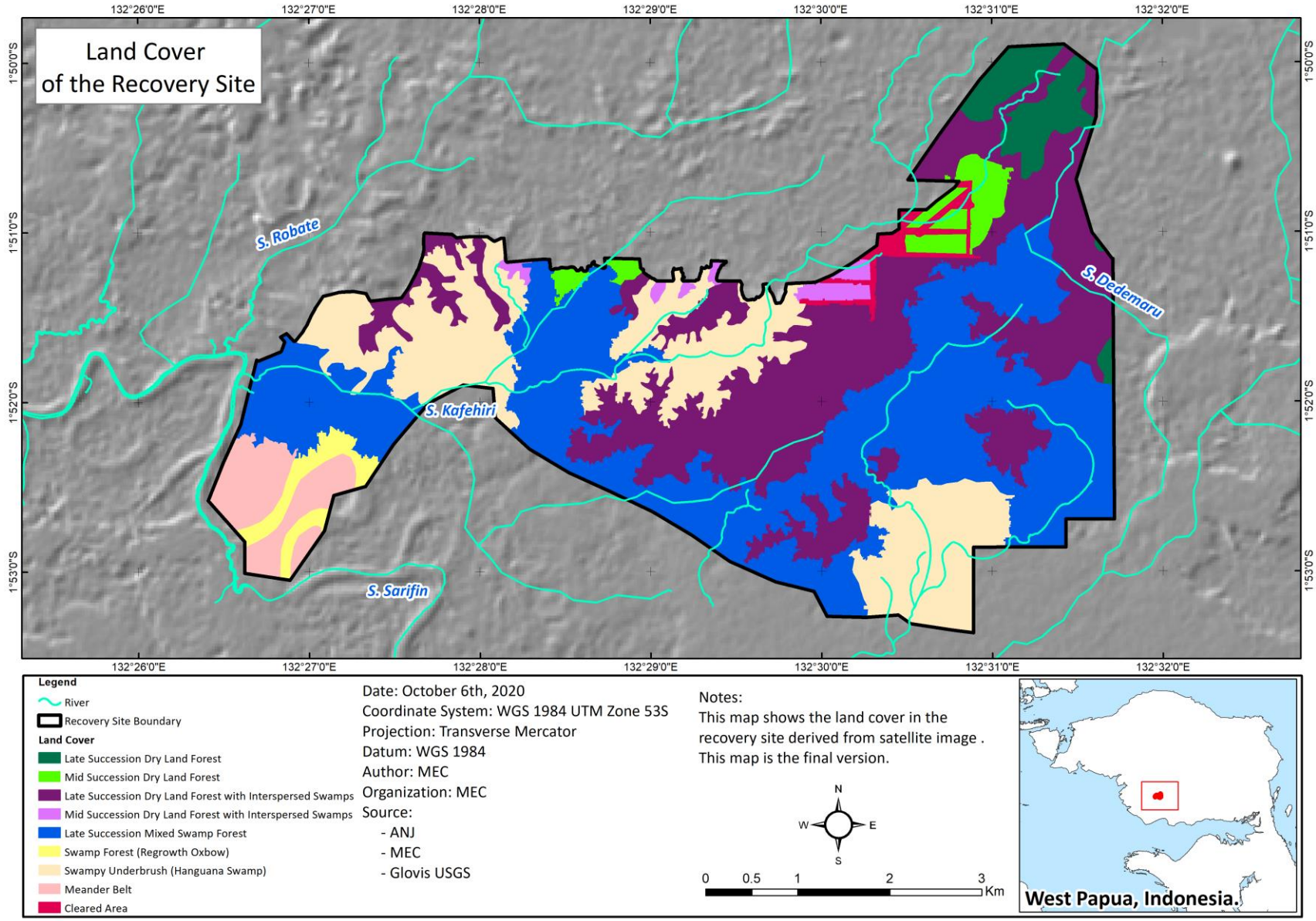
The Late Succession Mixed Swamp Forest is found in areas that are flooded or waterlogged throughout the year and dominated by the thorny sagu (*Metroxylon sagu*) as well as other trees such as *Vatica rassak*, *Campnosperma brevipetiolatum*, *Calophyllum* sp and *Alstonia spatulata,* most of which can reach to over 20 m in height and 40 cm in diameter. Some areas can be dominated by sagu while others have non palms in greater numbers. The sagu are harvested by the local community for consumption.

Swampy Underbrush (Hanguana Swamp) is low in height, usually less than 2 m, and is found in continuously flooded areas. These swamps have sometimes been referred to as 'savannah' in some older text, as from a distance, they appear like savanna grassland. They are found in the southern and western sections of the estate and may have isolated stems of *Alstonia spatulata* and *Melastoma* and patches of various ferns and sedges interspersed in between.

Swamp Forest (Regrowth Oxbow) is one that has been almost filled up with soil and organic material. Flood tolerant shrubs and herbs such as *Pandanus*, grasses and sedges are dominant. Ox-bow lakes are also found in the in the south western section of Recovery Site. There are also relatively open lakes, although most ore overgrown with floating islands of *Hanguana* and shrubs such as *Melastoma*.

A meander belt is the zone of varying widths on both banks of meandering rivers that are experiencing erosion and deposition. The belt is visible as a zone that is subject to flooding and may have exposed sand banks and also ox-bow lakes some of which may have been covered with vegetation but are often visible from satellite images. The sand banks are zones where sand and gravel from erosion further upstream is deposited in the meander belt where the flow of water is slower. On outer banks, erosion may be occurring and over time, alignment of the river is slowly altered.

Areas that have been cleared but abandoned are classified as cleared land undergoing early succession. These areas will be rehabilitated.



Map 3.9: Types of Landcover in the Recovery Site

3.7 Exploring objectives of the management plan

Throughout the first phase, a series of formal and informal discussions were held internally to finalise the conservation objectives of the Recovery Site. In the discussion process, it was identified that at this point in time, ANJ would only record general conservation objectives rather than the details simply because a detail site assessment is to be undertaken within the next two months. This being the case, the four general conservation objectives that are being explored for the management plan can be summarised as the following: -

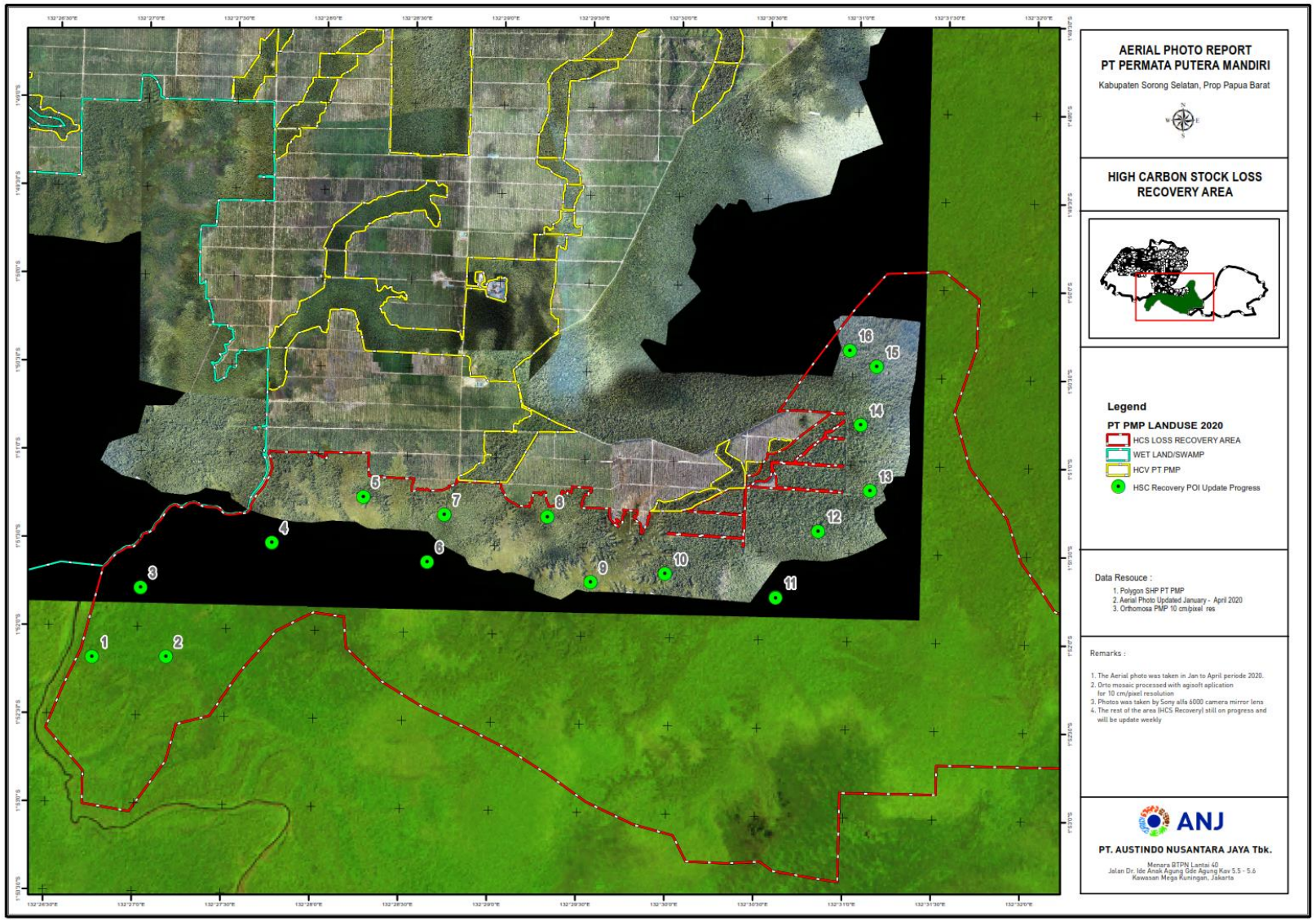
- **Conservation of biodiversity.**
  This is not the same as preservation of natural areas. Preservation sets areas aside for natural self-regulation. Conservation could include preservation as a one of its actions, but in a dynamic situation, generally sees a need for more active management prescriptions if remediation or intervention is considered necessary. This will include conflict with local community on unsustainable NTFP take. There will be also be a rehabilitation component.
- **Sustaining the quality of physical resources.**
  This objective focuses on soil and its nutrients, and water within and surrounding the Recovery Site. These are issues which need to be conserved for the benefit of future generations. Increasingly, the atmosphere is of concern for climate change controls.
- **Access and benefits to economic resources.**
  This concern is correlated to the sustainable use of timber and NTFPs within the Recovery Site. These are also social considerations. Until now, the surrounding communities are recognized as having the rights to resources, which seems to be consumed at a level below the rate of replacement; and as a result, absolute shortages have yet to be detected in the ANJ area. But with a changing environment from clearing and development, sustainable NTFP and timber take will need to be managed with the selected areas such as rights assigned to communities. Management staff should be trained in to handle social resource management and conflict resolution with the local community. It is essential that local communities give prior agreement to these protocols.
- **Culture and landscape.**
  The local communities have developed their culture in situ and in response to the benefits their surroundings have provided. The familiar landscapes and resource opportunities will be changed by development, and with their passing so too will pass the assurance that a once familiar landscape provided. Culture and religion are sometimes embodied as sacred artifacts, but more usefully it can be viewed as the culture with which a community feels comfort and confidence with its surroundings. When the landscape changes, old practices may no longer be relevant and may no longer provide this assurance; instead, it will be replaced with anxiety. Managers will need to seek to minimize this loss to culture through design, access and operations of the Recovery Site in consultation with the local communities.

These conservation objectives should be seen as goals which conservation managers will work towards. This is where an active stakeholder community, willing to give support, will be a benefit to ANJ. The discussion has the moral authority to set, review, and refine the conservation objectives for the Recovery Site. This will give the field managers at ANJ an already established direction and a pathway endorsed and agreed to by a consensus of stakeholders.

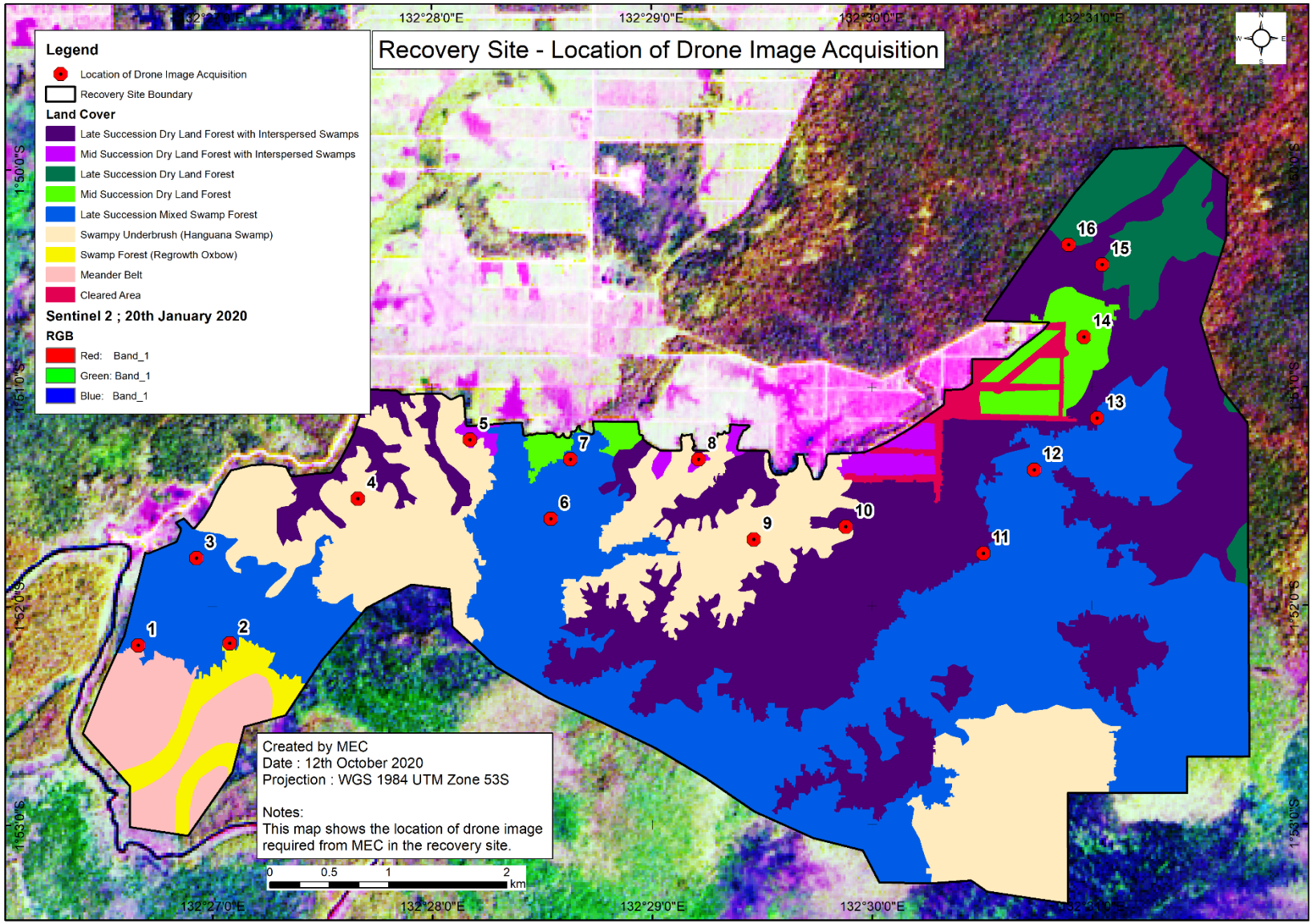
3.7.1 The Recovery Plan: Next Steps

In order to establish objectives for the final management plan of the Recovery Site, sufficient data on the Recovery Site must be gathered. ANJ has commenced on several activities to enable further studies to be conducted for the Recovery Site. The activities currently in progress are the following:

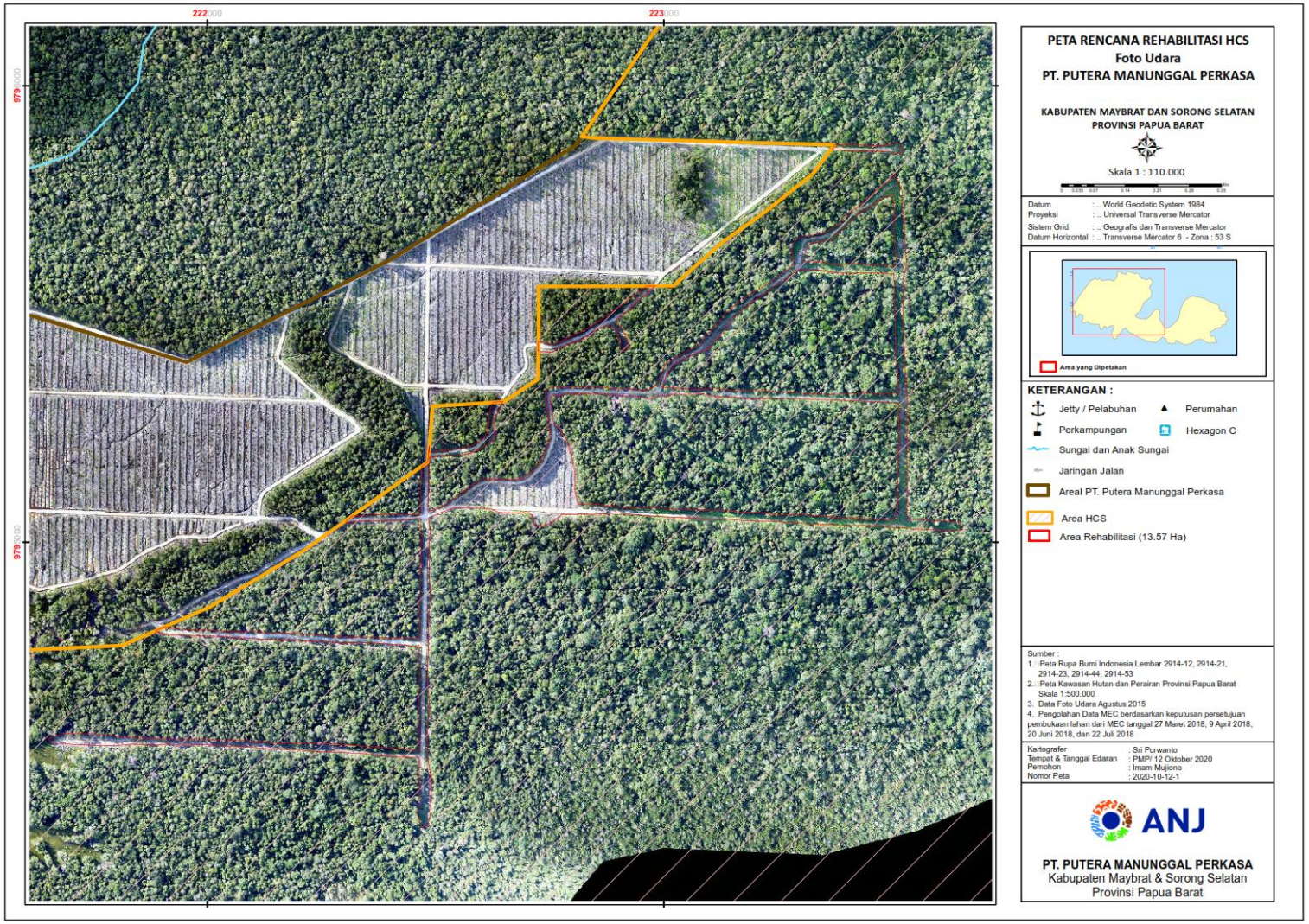
i. **Drone Mapping of the Recovery Site.**
   Due to bad weather on-site, the ANJ drone team has only managed to map 14% of the Recovery Site (refer to Map 3.10). This is further delayed by lack of accessibility to remote in the southern and eastern sections of the Recovery Site.
ii. **Recording low- altitude drone images and videos of the Recovery Site** – to improve the ecological analysis of the site.
   Similar as above, heavy wind and rain have impeded the progress of the drone exercise. Locations to capture the drone images and videos are present in Map 3.11. These points were selected based on its land cover criteria from the desktop ecological model in Section 3.6.5.
iii. **Rehabilitation Program for the cleared areas within the Recovery Site.**
   The Recovery Site includes that were roads previously cleared by the company. Embedded in the management plan, the company intents to rehabilitate the roads. This area has been surveyed by the ANJ on-site team. Location of the cleared roads are shown in Map 3.11 and current condition of the cleared roads are shown in Figure 3.15.
iv. **Establishment of Nursery.**
   A plant nursery location has been selected. The GPS coordinate of the nursery is 1°50'00.1" S, 132°28'54.8" E. The site team has started growing endemic and localised plant species. See Figure 3.16.
v. **Recovery Site Field Assessment by Independent Survey Team.**
   Preparation has been made for a survey team of technical experts to conduct a biodiversity and social assessment of the Recovery Site. However, assessment have been delayed several times due to travel restrictions imposed by the local government and unpredictable increase of number of Covid-19 cases in West Papua.
vi. **Public Consultation** (pending due to the severity of Covid-19 cases in West Papua).
   Though ANJ had planned for a large stakeholder consultation for the Recovery Site. This has been postponed as it is unsafe to host large consultation events. In the meantime, ANJ is exploring alternative to conduct Public Consultation without sacrificing the inclusiveness of external stakeholders in the development of the Recovery Site project.
vii. **Interim Budget.**
   The interim budget for 2020 is USD 50, 000. The detailed budget for the management planning can only be presented once the management plan actions are identified and costed.



Map 3.10: Current progress of drone mapping in the Recovery Site.



Map 3.11: Location of Drone Images and Videos will be taken.



Map 3.12: Cleared areas within the Recovery Site to be rehabilitated*

**The area that seems to be not vegetated has oil palm planting and is outside the Recovery Site and its clearance has been compensated for within the Recovery Site.*

Figure 3.14: Condition of the cleared road to be rehabilitated

Figure 3.15: Photos of the cleared road to be rehabilitated

Figure 3.16: Plant nursery in progress

4 Summary of Progress

The summary of the progress made in the 1st Phase is presented in the Gantt Chart below. It should be noted that Phase 1 is delayed and thus, the 1st Phase achievement is subsequently also falling short of target. ANJ has taken cognizant of this and is currently, attempting to accelerate the progress. The Covid-19 Pandemic has further impeded our progress and create uncertainty in our planning.

Chart 4.1: Progress of interim actions undertaken in the Phase 1 of the Recovery Site Project.

Phase 1 steps	Proposed Guidance	No.	Interim Actions Carried Out	Month	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21
1	Determination of the legal status (in terms of conservation) of the Recovery Site.	1.1.1	Identified Threat to the Recovery Site Legal Status.	In Progress																	
		1.1.2	Exploring Legal Protection Alternatives (KEE & Local Provincial Protection).	In Progress																	
		1.1.3	Initiation of Boundary demarcation.	In Progress																	
2	Identifying the policies, commitment, and conservation identity.	1.2.1	Identification of Policies and Standard Operating Procedures (SOPs) relevant to the management of the Recovery Site.	Done																	
3	Preparing the culture of conservation for ANJ and local stakeholders.	1.3.1	Socialisation: Introducing the Recovery Plan and Recovery Site to internal stakeholders and local communities.	In Progress																	
4	Assigning leadership roles to manage the Recovery Site.	1.4.1	Development of the ANJ Recovery Site Management Committee (Organisation Chart).	Done																	
5	Procedures – developing the SOPs for interim site management	1.5.1	Identification of Standard Operating Procedures (SOPs) relevant to the management of the Recovery Site.	In Progress																	
6	Communicating intent to stakeholders – Initiating the consultative exercises	1.6.1	Initiating External Stakeholder Consultative Process.	In Progress																	
		1.6.2	Identification of internal and external stakeholders.	In Progress																	
7	Expert support: Field Assessment and Biological & Social Inventory of the site.	2.1.1	Initial Biodiversity and Social Assessment of the Site	Done																	
		2.1.2	Recovery site field assessment by independent survey team	Delayed																	
8	Setting conservation objectives for the Management Plan.	2.2.1	Drone Mapping	In Progress																	
		2.2.2	Recording low- altitude drone images and videos of the Recovery Site	In Progress																	
		2.2.3	Public consultation	Postponed																	
		2.2.4	Management planning exercise.	In Progress																	
		2.2.5	Interim budget	In Progress																	
		2.2.6	Rehabilitation Strategy for Cleared Areas.	In Progress																	
		2.2.7	Establishment of Nursery	In Progress																	

5 End Note

This Recovery Plan Progress for the 1st Phase is presented in a form that summarises the attempts by ANJ to establish the recovery site as a conservation area. Pandemic set aside, we have progressed, slowly but surely, to bring about awareness of our intention to manage the site for conservation. Although it can be said that the site is within the current PT. PMP HGU, reality is such that this site will soon be lost, to either succumbing to legislation or ANJ itself releasing itself of managing the area. The HGU extents over 22,687 ha of which only 5,822 ha have been developed. As part of its commitment to producing sustainable palm oil, ANJ has committed to managing a total of 6,046 ha as HCV. It has to be noted that 3,892 ha has been voluntary classified as an HCV extension area. This makes no economic sense because the total HCV set aside is more than the developed area. If logic were to prevail the HCV extension site could be return to the government and the HGU reduced to merely 7,976 ha. This is the total of the developed area and the HCV extent identified within it.

It makes no economic sense to support an area of its conservation larger than what has been developed. The areas not identified as HCV were initially proposed for landscape conservation as West Papua is now a conservation province. A realistic look at the current situation indicates that the land not planted by PT. PMP and classified as APL could easily be reclassified as *tanah terlantar* and taken back by the government. In addition to this, there is also local community pressure to develop the area for oil palm after it has been logged. ANJ categorically states that the current recovery set aside is an addition to its unbalanced conservation commitment and should be respected so. This is a commitment taken by the company to ensure that the ecosystems in the Recovery Site will soon be threatened and a pre-cautionary approach is taken to conserve it.

The progress in management planning is slow but that is unavoidable. However, ANJ will continue to develop a management plan and set aside the appropriate funding to ensure that the site is adequately managed and protected from the pressures that will potentially arise in the coming years. This recovery progress report has its gaps but as the momentum builds, the next record of progress will, without any hindrance, provide a successful pathway towards conservation of the site.

6 Appendix

6.1 Data Table of Flora Species

Table 6.1: 2 List of plant species recorded in the landscape of recovery site

No	Family	Species	IUCN	Version	CITES	Indonesian Law (P106/TSL/2018)	Endemic	Remark
1	Thymelaeaceae	*Aquilaria malaccensis*	CR	A2cd ver 3.1	Appendix II	-	-	Trees
2	Thymelaeaceae	*Aquilaria filaria*	VU	A2cd ver 3.1	Appendix II	-	-	Trees
3	Dipterocarpaceae	*Anisoptera thurifera*	VU	A3cd ver 3.1	-	-	-	Trees
4	Leguminosae	*Intsia bijuga*	VU	A1cd ver 2.3	-	-	-	Trees
5	Leguminosae	*Pericopsis mooniana*	VU	A1cd ver 2.3	-	-	-	Trees
6	Cycadaceae	*Cycas rumphii*	NT	ver 3.1	Appendix II	-	-	Ferns
7	Araucariaceae	*Agathis labillardieri*	NT	ver 3.1	-	√	-	Trees
8	Lauraceae	*Cryptocarya massoy*	NT	A4ab ver 3.1	-	-	Endemic	Trees
9	Orchidaceae	*Pholidota chinensis*	NT	ver 3.1	-	-	-	Orchid
12	Orchidaceae	*Dendrobium finisterrae*	LC	ver 3.1	Appendix II	-	Endemic	Orchid
10	Orchidaceae	*Bulbophyllum macranthum*	LC	ver 3.1	Appendix II	-	-	Orchid
11	Orchidaceae	*Claderia viridiflora*	LC	ver 3.1	Appendix II	-	-	Orchid
13	Orchidaceae	*Dendrobium litorale*	LC	ver 3.1	Appendix II	-	-	Orchid
14	Orchidaceae	*Dendrobium macrophyllum*	LC	ver 3.1	Appendix II	-	-	Orchid
15	Orchidaceae	*Dendrobium mirbelianum*	LC	ver 3.1	Appendix II	-	-	Orchid
16	Orchidaceae	*Dendrobium nindii*	LC	ver 3.1	Appendix II	-	-	Orchid
17	Orchidaceae	*Dendrobium sylvanum*	LC	ver 3.1	Appendix II	-	-	Orchid
18	Thymelaeaceae	*Gonystylus macrophyllus*	LC	ver 3.1	Appendix II	-	-	Trees
19	Nepenthaceae	*Nepenthes alata*	LC	ver 3.1	Appendix II	-	-	Pithcher plants
20	Nepenthaceae	*Nepenthes mirabilis*	LC	ver 3.1	Appendix II	-	-	Pithcher plants

No	Family	Species	IUCN	Version	CITES	Indonesian Law (P106/TSL/2018)	Endemic	Remark
21	Tetramelaceae	*Octomeles sumatrana*	LC	ver 3.1	Appendix II	-	-	Trees
22	Rhamnaceae	*Alphitonia excelsa*	LC	ver 3.1	-	-	-	Trees
23	Apocynaceae	*Alstonia angustifolia*	LC	ver 2.3	-	-	-	Trees
24	Apocynaceae	*Alstonia scholaris*	LC	ver 2.3	-	-	-	Trees
25	Apocynaceae	*Alstonia spatulata*	LC	ver 3.1	-	-	-	Trees
26	Leguminosae	*Archidendron clypearia*	LC	ver 3.1	-	-	-	Trees
27	Chrysobalanaceae	*Atuna racemosa*	LC	ver 3.1	-	-	-	Trees
28	Rubiaceae	*Breonia chinensis*	LC	ver 3.1	-	-	-	Trees
29	Orchidaceae	*Bromheadia finlaysoniana*	LC	ver 3.1	-	-	-	Orchid
30	Anacardiaceae	*Campnosperma brevipetiolatum*	LC	ver 3.1	-	-	-	Trees
31	Annonaceae	*Cananga odorata*	LC	ver 3.1	-	-	-	Trees
32	Arecaceae	*Caryota mitis*	LC	ver 3.1	-	-	-	Palm
33	Apocynaceae	*Cerbera floribunda*	LC	ver 3.1	-	-	-	Trees
34	Lauraceae	*Cryptocarya densiflora*	LC	ver 3.1	-	-	-	Trees
35	Leguminosae	*Cynometra ramiflora*	LC	ver 3.1	-	-	-	Trees
36	Dilleniaceae	*Dillenia alata*	LC	ver 3.1	-	-	-	Trees
37	Euphorbiaceae	*Endospermum peltatum*	LC	ver 3.1	-	-	-	Trees
38	Leguminosae	*Falcataria moluccana*	LC	ver 3.1	-	-	-	Trees
39	Moraceae	*Ficus benjamina*	LC	ver 3.1	-	-	-	Climbers
40	Clusiaceae	*Garcinia dulcis*	LC	ver 3.1	-	-	-	Trees
41	Gnetaceae	*Gnetum gnemon*	LC	ver 3.1	-	-	-	Trees
42	Hanguanaceae	*Hanguana malayana*	LC	ver 3.1	-	-	-	Trees
43	Myristicaceae	*Horsfieldia irya*	LC	ver 3.1	-	-	-	Trees
44	Euphorbiaceae	*Macaranga lowii*	LC	ver 3.1	-	-	-	Trees
45	Rutaceae	*Melicope elleryana*	LC	ver 3.1	-	-	-	Trees

No	Family	Species	IUCN	Version	CITES	Indonesian Law (P106/TSL/2018)	Endemic	Remark
46	Podocarpaceae	*Nageia wallichiana*	LC	ver 3.1	-	-	-	Trees
47	Nepenthaceae	*Nepenthes ampularia*	LC	ver 3.1	-	-	-	Pithcher plants
48	Sapindaceae	*Nephelium lappaceum*	LC	ver 3.1	-	-	-	Trees
49	Datiscaceae	*Octomeles sumatrana*	LC	ver 3.1	-	-	-	Trees
50	Pandanaceae	*Pandanus tectorius*	LC	ver 3.1	-	-	-	Terna
51	Sapindaceae	*Pometia Pinnata*	LC	ver 3.1	-	-	-	Trees
52	Araliaceae	*Schefflera actinophylla*	LC	ver 3.1	-	-	-	Shurb
53	Myrtaceae	*Syzygium malaccense*	LC	ver 3.1	-	-	-	Trees
54	Lamiaceae	*Teijsmanniodendron bogoriense*	LC	ver 3.1	-	-	-	Trees
55	Meliaceae	*Toona sureni*	LC	ver 3.1	-	-	-	Trees
56	Dipterocarpaceae	*Vatica rassak*	LC	ver 3.1	-	-	-	Trees
57	Anacardiaceae	*Mangifera indica*	DD	ver 2.3	-	-	-	Trees
58	Myristicaceae	*Myristica brassii*	DD	ver 3.1	-	-	-	Trees
59	Orchidaceae	*Robiquetia mooreana*	-	-	Appendix II	-	Endemic	Orchid
64	Orchidaceae	*Bulbophyllum digoelense*	-	-	Appendix II	-	Endemic	Orchid
66	Orchidaceae	*Bulbophyllum tortum*	-	-	Appendix II	-	Endemic	Orchid
70	Orchidaceae	*Dendrobium agrostophylloides*	-	-	Appendix II	-	Endemic	Orchid
71	Orchidaceae	*Dendrobium arachnoideum*	-	-	Appendix II	-	Endemic	Orchid
75	Orchidaceae	*Dendrobium gjellerupii*	-	-	Appendix II	-	Endemic	Orchid
60	Leguminosae	*Spatholobus littoralis*	-	-	Appendix II	-	-	Climbers
61	Orchidaceae	*Acriopsis emarginata*	-	-	Appendix II	-	-	Orchid
62	Orchidaceae	*Acriopsis liliifolia*	-	-	Appendix II	-	-	Orchid
63	Orchidaceae	*Acriopsis sp*	-	-	Appendix II	-	-	Orchid
65	Orchidaceae	*Bulbophyllum sp*	-	-	Appendix II	-	-	Orchid

No	Family	Species	IUCN	Version	CITES	Indonesian Law (P106/TSL/2018)	Endemic	Remark
67	Orchidaceae	*Cadetia collina*	-	-	Appendix II	-	-	Orchid
68	Orchidaceae	*Coelogyne asperata*	-	-	Appendix II	-	-	Orchid
69	Orchidaceae	*Dendrobium (Section Grastidium)*	-	-	Appendix II	-	-	Orchid
72	Orchidaceae	*Dendrobium bracteosum*	-	-	Appendix II	-	-	Orchid
73	Orchidaceae	*Dendrobium capituliflorum*	-	-	Appendix II	-	-	Orchid
74	Orchidaceae	*Dendrobium crumenatum*	-	-	Appendix II	-	-	Orchid
76	Orchidaceae	*Dendrobium sp*	-	-	Appendix II	-	-	Orchid
77	Orchidaceae	*Diplocaulobium sp*	-	-	Appendix II	-	-	Orchid
78	Orchidaceae	*Eria javanica*	-	-	Appendix II	-	-	Orchid
79	Orchidaceae	*Eria sp*	-	-	Appendix II	-	-	Orchid
80	Orchidaceae	*Flickingeria angulata*	-	-	Appendix II	-	-	Orchid
81	Orchidaceae	*Flickingeria sp*	-	-	Appendix II	-	-	Orchid
82	Orchidaceae	*Grammatophyllum papuanum*	-	-	Appendix II	-	-	Orchid
83	Orchidaceae	*Oberonia ensiformis*	-	-	Appendix II	-	-	Orchid
84	Orchidaceae	*Oberonia sp*	-	-	Appendix II	-	-	Orchid
85	Phallaceae	*Phallus indusiatus*	-	-	Appendix II	-	-	Fungi
86	Orchidaceae	*Pholidota imbricata*	-	-	Appendix II	-	-	Orchid
87	Orchidaceae	*Plocoglottis sp*	-	-	Appendix II	-	-	Orchid
88	Orchidaceae	*Pomatocalpa marsupiale*	-	-	Appendix II	-	-	Orchid
89	Orchidaceae	*Pseudovanilla sp*	-	-	Appendix II	-	-	Orchid
90	Orchidaceae	*Spathoglottis plicata*	-	-	Appendix II	-	-	Orchid
91	Orchidaceae	*Thrixspermum amplexicaule*	-	-	Appendix II	-	-	Orchid
159	Orchidaceae	*Diplocaulobium aratriferum*	-	-	-	-	Endemic	Orchid
92	Elaeocarpaceae	*Aceratium oppositifolium*	-	-	-	-	-	Trees
93	Rutaceae	*Acronychia murina*	-	-	-	-	-	Trees

No	Family	Species	IUCN	Version	CITES	Indonesian Law (P106/TSL/2018)	Endemic	Remark
94	Lauraceae	*Actinodaphne sp*	-	-	-	-	-	Trees
95	Meliaceae	*Aglaia sp1*	-	-	-	-	-	Trees
96	Meliaceae	*Aglaia sp2*	-	-	-	-	-	Trees
97	Meliaceae	*Aglaia sp3*	-	-	-	-	-	Trees
98	Meliaceae	*Aglaia sp4*	-	-	-	-	-	Trees
99	Meliaceae	*Aglaia sp5*	-	-	-	-	-	Trees
100	Meliaceae	*Aglaia sp6*	-	-	-	-	-	Trees
101	Meliaceae	*Aglaia sp7*	-	-	-	-	-	Trees
102	Euphorbiaceae	*Agrostistachys borneensis*	-	-	-	-	-	Trees
103	Araceae	*Alocasia sp*	-	-	-	-	-	Palm
104	Zingiberaceae	*Alpinia sp*	-	-	-	-	-	Gingers
105	Apocynaceae	*Alstonia sp*	-	-	-	-	-	Trees
106	Anacardiaceae	*Anacardiaceae*	-	-	-	-	-	Trees
107	Annonaceae	*Anonnaceae*	-	-	-	-	-	Trees
108	Phyllanthaceae	*Antidesma sp1*	-	-	-	-	-	Trees
109	Phyllanthaceae	*Antidesma sp2*	-	-	-	-	-	Trees
110	Phyllanthaceae	*Aporosa sp1*	-	-	-	-	-	Trees
111	Phyllanthaceae	*Aporosa sp2*	-	-	-	-	-	Trees
112	Phyllanthaceae	*Aporosa sp3*	-	-	-	-	-	Trees
113	Leguminosae	*Archidendron sp*	-	-	-	-	-	Trees
114	Primulaceae	*Ardisia sp1*	-	-	-	-	-	Trees
115	Primuliaceae	*Ardisia sp2*	-	-	-	-	-	Trees
116	Moraceae	*Artocarpus altilis*	-	-	-	-	-	Trees
117	Moraceae	*Artocarpus camansi*	-	-	-	-	-	Trees
118	Moraceae	*Artocarpus sp*	-	-	-	-	-	Trees
119	Aspleniaceae	*Asplenium sp*	-	-	-	-	-	Trees

No	Family	Species	IUCN	Version	CITES	Indonesian Law (P106/TSL/2018)	Endemic	Remark
120	Phyllanthaceae	*Baccaurea sp*	-	-	-	-	-	Trees
121	Lecythidaceae	*Barringtonia josephstaalensis*	-	-	-	-	-	Trees
122	Lecythidaceae	*Barringtonia sp*	-	-	-	-	-	Trees
123	Arecaceae	*Borassus sp*	-	-	-	-	-	Palm
124	Arecaceae	*Calamus sp*	-	-	-	-	-	Climbers
125	Calophyllaceae	*Calophyllum sclerophyllum Vesque*	-	-	-	-	-	Trees
126	Calophyllaceae	*Calophyllum sp1*	-	-	-	-	-	Trees
127	Calophyllaceae	*Calophyllum sp2*	-	-	-	-	-	Trees
128	Calophyllaceae	*Calophyllum sp3*	-	-	-	-	-	Trees
129	Burseraceae	*Canarium acutifolium*	-	-	-	-	-	Trees
130	Burseraceae	*Canarium sp*	-	-	-	-	-	Trees
131	Fagaceae	*Castanopsis sp*	-	-	-	-	-	Trees
132	Casuarinaceae	*Casuarina sp*	-	-	-	-	-	Trees
133	Meliaceae	*Chisocheton ceramicus*	-	-	-	-	-	Trees
134	Meliaceae	*Chisocheton sp*	-	-	-	-	-	Trees
135	Lauraceae	*Cinnamomum sp*	-	-	-	-	-	Trees
136	Phyllanthaceae	*Cleistanthus sp1*	-	-	-	-	-	Trees
137	Phyllanthaceae	*Cleistanthus sp2*	-	-	-	-	-	Trees
138	Orchidaceae	*Coelogyne sp*	-	-	-	-	-	Orchid
139	Euphorbiaceae	*Croton sp*	-	-	-	-	-	Trees
140	Leguminosae	*Crudia sp*	-	-	-	-	-	Trees
141	Lauraceae	*Cryptocarya sp1*	-	-	-	-	-	Trees
142	Lauraceae	*Cryptocarya sp2*	-	-	-	-	-	Trees
143	Lauraceae	*Cryptocarya sp3*	-	-	-	-	-	Trees
144	Ctenoplophonaceae	*Ctenolophon sp*	-	-	-	-	-	Trees

No	Family	Species	IUCN	Version	CITES	Indonesian Law (P106/TSL/2018)	Endemic	Remark
145	Cyatheaceae	*Cyathea sp*	-	-	-	-	-	Ferns
146	Cycadaceae	*Cycas sp*	-	-	-	-	-	Ferns
147	Leguminosae	*Cynometra sp*	-	-	-	-	-	Trees
148	Gesneriaceae	*Cyrtandra sp*	-	-	-	-	-	Terna
149	Burseraceae	*Dacryodes sp*	-	-	-	-	-	Trees
150	Penaeaceae	*Dactylocladus stenostachys*	-	-	-	-	-	Trees
151	Dilleniaceae	*Dillenia sp*	-	-	-	-	-	Trees
152	Ebenaceae	*Diospyros malabarica*	-	-	-	-	-	Trees
153	Ebenaceae	*Diospyros papuana*	-	-	-	-	-	Trees
154	Ebenaceae	*Diospyros sp1*	-	-	-	-	-	Trees
155	Ebenaceae	*Diospyros sp2*	-	-	-	-	-	Trees
156	Ebenaceae	*Diospyros sp3*	-	-	-	-	-	Trees
157	Ebenaceae	*Diospyros sp4*	-	-	-	-	-	Trees
158	Ebenaceae	*Diospyros sp5*	-	-	-	-	-	Trees
160	Marantaceae	*Donax sp*	-	-	-	-	-	Shurb
161	Malvaceae	*Durio sp*	-	-	-	-	-	Trees
162	Malvaceae	*Durio zibethinus*	-	-	-	-	-	Trees
163	Meliaceae	*Dysoxylum sp*	-	-	-	-	-	Trees
164	Elaeocarpaceae	*Elaeocarpus sp 1*	-	-	-	-	-	Trees
165	Elaeocarpaceae	*Elaeocarpus sp 2*	-	-	-	-	-	Trees
166	Elaeocarpaceae	*Elaeocarpus sp 3*	-	-	-	-	-	Trees
167	Elaeocarpaceae	*Elaeocarpus sp 4*	-	-	-	-	-	Trees
168	Elaeocarpaceae	*Elaeocarpus sp 4*	-	-	-	-	-	Trees
169	Elaeocarpaceae	*Elaeocarpus sp 5*	-	-	-	-	-	Trees
170	Elaeocarpaceae	*Elaeocarpus sp 6*	-	-	-	-	-	Trees
171	Lauraceae	*Endiandra sp*	-	-	-	-	-	Trees

No	Family	Species	IUCN	Version	CITES	Indonesian Law (P106/TSL/2018)	Endemic	Remark
172	Myristicaceae	*Endocomia sp*	-	-	-	-	-	Trees
173	Euphorbiaceae	*Endospermum sp*	-	-	-	-	-	Trees
174	Araceae	*Epipremnum sp*	-	-	-	-	-	Terna
175	Zingiberaceae	*Etlingera sp*	-	-	-	-	-	Gingers
176	Gentianaceae	*Fagraea racemosa*	-	-	-	-	-	Trees
177	Gentianaceae	*Fagraea sp*	-	-	-	-	-	Trees
178	Gentianaceae	*Fagraea volubilis*	-	-	-	-	-	Trees
179	Moraceae	*Ficus sp*	-	-	-	-	-	Trees
180	Salicaceae	*Flacourtia sp*	-	-	-	-	-	Trees
181	Flagellariaceae	*Flagellaria indica*	-	-	-	-	-	Shurb
182	Pandanaceae	*Freycinetia sp*	-	-	-	-	-	Shurb
183	Clusiaceae	*Garcinia sp 1*	-	-	-	-	-	Trees
184	Clusiaceae	*Garcinia sp 2*	-	-	-	-	-	Trees
185	Clusiaceae	*Garcinia sp 3*	-	-	-	-	-	Trees
186	Clusiaceae	*Garcinia sp 4*	-	-	-	-	-	Trees
187	Clusiaceae	*Garcinia sp 5*	-	-	-	-	-	Trees
188	Clusiaceae	*Garcinia sp 6*	-	-	-	-	-	Trees
189	Cannabaceae	*Gironniera nervosa*	-	-	-	-	-	Trees
190	Cannabaceae	*Gironniera sp*	-	-	-	-	-	Trees
191	Phyllanthaceae	*Glochidion sp*	-	-	-	-	-	Trees
192	Anacardiaceae	*Gluta aptera*	-	-	-	-	-	Trees
193	Anacardiaceae	*Gluta sp1*	-	-	-	-	-	Trees
194	Anacardiaceae	*Gluta sp2*	-	-	-	-	-	Trees
195	Gnetaceae	*Gnetum sp*	-	-	-	-	-	Shurb
196	Annonaceae	*Goniothalamus sp*	-	-	-	-	-	Trees
197	Malvaceae	*Grewia sp*	-	-	-	-	-	Trees

No	Family	Species	IUCN	Version	CITES	Indonesian Law (P106/TSL/2018)	Endemic	Remark
198	Sapindaceae	*Guioa sp*	-	-	-	-	-	Trees
199	Myristicaceae	*Gymnacranthera sp*	-	-	-	-	-	Trees
200	Rhizophoraceae	*Gynotroches axillaris*	-	-	-	-	-	Trees
201	Euphorbiaceae	*Hancea penangensis*	-	-	-	-	-	Trees
202	Proteaceae	*Helicia sp*	-	-	-	-	-	Trees
203	Salicaceae	*Homalium sp*	-	-	-	-	-	Trees
204	Dipterocarpaceae	*Hopea papuana*	-	-	-	-	-	Trees
205	Dipterocarpaceae	*Hopea sp1*	-	-	-	-	-	Trees
206	Dipterocarpaceae	*Hopea sp2*	-	-	-	-	-	Trees
207	Myristicaceae	*Horsfieldia globularia*	-	-	-	-	-	Trees
208	Myristicaceae	*Horsfieldia sp*	-	-	-	-	-	Trees
209	Aschariaceae	*Hydnocarpus sp*	-	-	-	-	-	Trees
210	Aquifoliaceae	*Ilex sp*	-	-	-	-	-	Trees
211	Leguminosae	*Inocarpus fagiferus*	-	-	-	-	-	Trees
212	Myristicaceae	*Knema sp1*	-	-	-	-	-	Trees
213	Myristicaceae	*Knema sp2*	-	-	-	-	-	Trees
214	Myristicaceae	*Knema sp3*	-	-	-	-	-	Trees
215	Myristicaceae	*Knema sp4*	-	-	-	-	-	Trees
216	Arecaceae	*Korthalsia sp*	-	-	-	-	-	Climbers
217	Leeaceae	*Leea sp*	-	-	-	-	-	Shurb
218	Arecaceae	*Licuala sp*	-	-	-	-	-	Palm
219	Fagaceae	*Lithocarpus sp1*	-	-	-	-	-	Trees
220	Fagaceae	*Lithocarpus sp2*	-	-	-	-	-	Trees
221	Lauraceae	*Litsea sp 2*	-	-	-	-	-	Trees
222	Lauraceae	*Litsea sp 3*	-	-	-	-	-	Trees
223	Lauraceae	*Litsea sp 4*	-	-	-	-	-	Trees

No	Family	Species	IUCN	Version	CITES	Indonesian Law (P106/TSL/2018)	Endemic	Remark
224	Lauraceae	*Litsea sp 5*	-	-	-	-	-	Trees
225	Lauraceae	*Litsea sp1*	-	-	-	-	-	Trees
226	Arecaceae	*Livistona sp*	-	-	-	-	-	palm
227	Lycopodiaceae	*Lycopodium sp*	-	-	-	-	-	Shurb
228	Euphorbiaceae	*Macaranga sp1*	-	-	-	-	-	Trees
229	Euphorbiaceae	*Macaranga sp2*	-	-	-	-	-	Trees
230	Euphorbiaceae	*Macaranga sp3*	-	-	-	-	-	Trees
231	Euphorbiaceae	*Macaranga sp4*	-	-	-	-	-	Trees
232	Euphorbiaceae	*Macaranga sp5*	-	-	-	-	-	Trees
233	Euphorbiaceae	*Mallotus sp*	-	-	-	-	-	Trees
234	Calophyllaceae	*Mammea sp*	-	-	-	-	-	Trees
235	Anacardiaceae	*Mangifera sp*	-	-	-	-	-	Trees
236	Melastomataceae	*Medinilla sp*	-	-	-	-	-	Terna
237	Annonaceae	*Meiogyene sp*	-	-	-	-	-	Trees
238	Melastomataceae	*Melastoma sp1*	-	-	-	-	-	Shurb
239	Rutaceae	*Melicope glabra*	-	-	-	-	-	Trees
240	Rutaceae	*Melicope sp*	-	-	-	-	-	Trees
241	Melastomataceae	*Memecylon sp1*	-	-	-	-	-	Trees
242	Melastomataceae	*Memecylon sp2*	-	-	-	-	-	Trees
243	Calophyllaceae	*Mesua sp*	-	-	-	-	-	Trees
244	Arecaceae	*Metroxylon sagu*	-	-	-	-	-	Palm
245	Malvaceae	*Microcos sp*	-	-	-	-	-	Trees
246	Compositae	*Mikania sp*	-	-	-	-	-	Shurb
247	Myristicaceae	*Myristica sp1*	-	-	-	-	-	Trees
248	Myristicaceae	*Myristica sp2*	-	-	-	-	-	Trees
249	Myristicaceae	*Myristica sp3*	-	-	-	-	-	Trees

No	Family	Species	IUCN	Version	CITES	Indonesian Law (P106/TSL/2018)	Endemic	Remark
250	Myristicaceae	*Myristica sp4*	-	-	-	-	-	Trees
251	Rubiaceae	*Nauclea sp*	-	-	-	-	-	Trees
252	Rubiaceae	*Neolamarckia cadamba*	-	-	-	-	-	Trees
253	Euphorbiaceae	*Neoscortechinia sp*	-	-	-	-	-	Trees
254	Sapindaceae	*Nephelium sp1*	-	-	-	-	-	Trees
255	Sapindaceae	*Nephelium sp2*	-	-	-	-	-	Trees
256	Sapotaceae	*Palaquium obtusifolium*	-	-	-	-	-	Trees
257	Sapotaceae	*Palaquium sp1*	-	-	-	-	-	Trees
258	Sapotaceae	*Palaquium sp2*	-	-	-	-	-	Trees
259	Pandanaceae	*Pandanus sp1*	-	-	-	-	-	Terna
260	Pandanaceae	*Pandanus sp2*	-	-	-	-	-	Terna
261	Moraceae	*Paratocarpus sp*	-	-	-	-	-	Trees
262	Anacardiaceae	*Parishia sp*	-	-	-	-	-	Trees
263	Sapotaceae	*Payena sp*	-	-	-	-	-	Trees
264	Malvaceae	*Pentace sp*	-	-	-	-	-	Trees
265	Euphorbiaceae	*Pimelodendron amboinicum*	-	-	-	-	-	Trees
266	Pipericaceae	*Piper sp1*	-	-	-	-	-	Shurb
267	Pipericaceae	*Piper sp2*	-	-	-	-	-	Shurb
268	Annonaceae	*Polyalthia sp*	-	-	-	-	-	Trees
269	Rubiaceae	*Porterandia sp*	-	-	-	-	-	Trees
270	Sapotaceae	*Pouteria obovata*	-	-	-	-	-	Trees
271	Sapotaceae	*Pouteria sp*	-	-	-	-	-	Trees
272	Moraceae	*Prainea sp*	-	-	-	-	-	Trees
273	Rubiaceae	*Prismatomeris sp*	-	-	-	-	-	Trees
274	Rubiaceae	*Psydrax sp*	-	-	-	-	-	Trees
275	Melastomataceae	*Pternandra sp*	-	-	-	-	-	Trees

No	Family	Species	IUCN	Version	CITES	Indonesian Law (P106/TSL/2018)	Endemic	Remark
276	Aschariaceae	*Ryparosa sp*	-	-	-	-	-	Trees
277	Burseraceae	*Santiria sp 1*	-	-	-	-	-	Trees
278	Burseraceae	*Santiria sp 2*	-	-	-	-	-	Trees
279	Burseraceae	*Santiria sp 3*	-	-	-	-	-	Trees
280	Burseraceae	*Santiria sp 4*	-	-	-	-	-	Trees
281	Oxalidaceae	*Sarcotheca sp*	-	-	-	-	-	Trees
282	Actinidiaceae	*Saurauia sp*	-	-	-	-	-	Trees
283	Araliaceae	*Schefflera digitata*	-	-	-	-	-	Trees
284	Ochnaceae	*Schuurmansia henningsii*	-	-	-	-	-	Trees
285	Araceae	*Scindapsus sp*	-	-	-	-	-	Terna
286	Cyperaceae	*Scleria sp*	-	-	-	-	-	Shurb
287	Selaginellaceae	*Selaginella sp*	-	-	-	-	-	Shurb
288	Elaeocarpaceae	*Sloanea sp1*	-	-	-	-	-	Trees
289	Elaeocarpaceae	*Sloanea sp2*	-	-	-	-	-	Trees
290	Smilacaceae	*Smilax sp*	-	-	-	-	-	Climbers
291	Stemonuraceae	*Stemonurus scorpioides*	-	-	-	-	-	Trees
292	Stemonuraceae	*Stemonurus sp*	-	-	-	-	-	Trees
293	Blechnaceae	*Stenochlaena palustris*	-	-	-	-	-	Ferns
294	Malvaceae	*Sterculia sp*	-	-	-	-	-	Trees
295	Myrtaceae	*Syzygium sp1*	-	-	-	-	-	Trees
296	Myrtaceae	*Syzygium sp2*	-	-	-	-	-	Trees
297	Myrtaceae	*Syzygium sp3*	-	-	-	-	-	Trees
298	Myrtaceae	*Syzygium sp4*	-	-	-	-	-	Trees
299	Myrtaceae	*Syzygium sp5*	-	-	-	-	-	Trees
300	Myrtaceae	*Syzygium sp6*	-	-	-	-	-	Trees
301	Myrtaceae	*Syzygium sp7*	-	-	-	-	-	Trees

No	Family	Species	IUCN	Version	CITES	Indonesian Law (P106/TSL/2018)	Endemic	Remark
302	Myrtaceae	*Syzygium sp8*	-	-	-	-	-	Trees
303	Lamiaceae	*Teijsmanniodendron sp*	-	-	-	-	-	Trees
304	Combretaceae	*Terminalia sp*	-	-	-	-	-	Trees
305	Rutaceae	*Tetractomia tetrandra*	-	-	-	-	-	Trees
306	Rubiaceae	*Timonius sp1*	-	-	-	-	-	Trees
307	Rubiaceae	*Timonius sp2*	-	-	-	-	-	Trees
308	Myrtaceae	*Tristaniopsis sp*	-	-	-	-	-	Trees
309	Rubiaceae	*Uncaria sp*	-	-	-	-	-	Climbers
310	Apocynaceae	*Voacanga africana*	-	-	-	-	-	Trees
311	Apocynaceae	*Voacanga sp*	-	-	-	-	-	Trees
312	Meliaceae	*Walsura sp*	-	-	-	-	-	Trees
313	Polygalaceae	*Xanthophyllum sp1*	-	-	-	-	-	Trees
314	Polygalaceae	*Xanthophyllum sp2*	-	-	-	-	-	Trees
315	Polygalaceae	*Xanthophyllum sp3*	-	-	-	-	-	Trees
316	Polygalaceae	*Xanthophyllum sp4*	-	-	-	-	-	Trees
317	Annonaceae	*Xylopia sp*	-	-	-	-	-	Trees
318	Zingiberaceae	*Zingiber sp*	-	-	-	-	-	Gingers

6.2 Data Table of Fauna Species

Table 6.3 List of fauna species recorded in the landscape of recovery site

No	Group	Family	Scientific name	English name	Indonesia Name	Feeding guild	Conservation Status				Res / Mig	Habitat
							CITES	IUCN	P.106 /2017	Endemic		
1	Mammals	Phalangeridae	*Spilocuscus rufoniger*	black-spotted cuscus	Kuskus Tutul Hitam	Folivore - frugivore		CR	P	Endemic	BR	F
2	Reptile	Geoemydidae	*Cuora amboinensis*	Southeast Asian Box	Kura-kura ambon	Omnivore	II	EN			BR	W
3	Mammals	Macropodidae	*Dendrolagus inustus*	Grizzled Tree-kangaroo	Kanguru pohon	Folivore - frugivore	II	VU	P	Endemic	BR	F
4	Birds	Columbidae	*Goura cristata*	Western Crowned Pigeon	Mambruk Ubiaat	Frugivore	II	VU	P	Endemic	BRw	F
5	Mammals	Phalangeridae	*Spilocuscus papuensis*	Waigeo Cuscus	Kuskus Waigeo	Folivore - frugivore	II	VU	P		BR	F
6	Reptile	Trionychidae	*Amyda cartilaginea*	Asiatic Softshell Turtle	Bulus	Carnivore	II	VU			BR	W
7	Reptile	Trionychidae	*Pelochelys bibroni*	Southern New Guinea	Bulus besar kulit lunak	Omnivore	II	VU			BR	W
8	Mammals	Cervidae	*Rusa timorensis*	Javan Rusa	Rusa Timor	Herbivore		VU	P		BR	F/O
9	Mammals	Macropodidae	*Thylogale brunii*	Dusky Pademelon	Kangguru tanah	Folivore - frugivore		VU	P		BR	F
10	Reptile	Agamidae	*Hydrosaurus pustulatus*			Carnivore		VU			BR	F/W
11	Amphibian	Ranidae	*Papurana volkerjane*			Insectivore		DD			BR	W
12	Birds	Cacatuidae	*Probosciger aterrimus*	Palm Cockatoo	Kakatua Raja	Frugivore	I	LC	P		BR	F
13	Birds	Psittacidae	*Cyclopsitta diophthalma*	Double-eyed Fig-parrot	Nuri-ara mata-ganda	Frugivore	I	LC	P		BR	F/O
14	Birds	Accipitridae	*Accipiter poliocephalus*	Grey-headed Goshawk	Elang alap pucat	Carnivore	II	LC	P	Endemic	BR	F
15	Birds	Accipitridae	*Henicopernis longicauda*	Long-tailed Honey Buzzard	Elang Ekor-panjang	Carnivore	II	LC	P	Endemic	BR	F/O
16	Birds	Paradisaeidae	*Manucodia ater*	Glossy-mantled Manucode	Manucodia Kilap	Frugivore	II	LC	P	Endemic	BR	F
17	Birds	Paradisaeidae	*Seleucidis melanoleucus*	Twelve-wired Bird of Paradise	Cendrawasih mati-kawat	Frugivore	II	LC	P	Endemic	BR	F
18	Birds	Psittacidae	*Chalcopsitta atra*	Black Lory	Nuri hitam	Frugivore	II	LC	P	Endemic	BR	F/O
19	Birds	Psittacidae	*Cyclopsitta gulielmitertii*	Blue-fronted Fig-parrot	Nuri ara dada jingga	Frugivore	II	LC	P	Endemic	BR	F/O
20	Birds	Psittacidae	*Lorius lory*	Black-capped Lory	Nuri Kepala Hitam	Frugivore	II	LC	P	Endemic	BR	F
21	Birds	Psittacidae	*Psittaculirostris desmarestii*	Large Fig-parrot	Nuri ara besar	Frugivore	II	LC	P	Endemic	BR	F
22	Reptile	Crocodylidae	*Crocodylus novaeguineae*	New Guinea Crocodile	Buaya papua	Carnivore	II	LC	P	Endemic	BR	W
23	Reptile	Varanidae	*Varanus prasinus*	Emerald Monitor		Carnivore	II	LC	P	Endemic	BR	F/W
24	Birds	Accipitridae	*Milvus migrans*	Black Kite	Elang paria	Carnivore	II	LC	P		M	
25	Birds	Accipitridae	*Accipiter rhodogaster*	Vinous-breasted Sparrowhawk	Elang alap dada merah	Carnivore	II	LC	P		BR	F
26	Birds	Accipitridae	*Aviceda subcristata*	Pacific Baza	Burung Baza pasifik	Omnivore	II	LC	P		BR	F
27	Birds	Accipitridae	*Elanus caeruleus*	Black-shouldered Kite	Elang tikus	Carnivore	II	LC	P		BR	F
28	Birds	Accipitridae	*Haliaeetus leucogaster*	White-bellied Sea Eagle	Elanglaut Perut-putih	Carnivore	II	LC	P		BR	W
29	Birds	Accipitridae	*Haliastur Indus*	Brahminy kite	Elang Bondol	Carnivore	II	LC	P		BR	F/W
30	Birds	Accipitridae	*Haliastur sphenurus*	Whistling Kite	Elang siul	Carnivore	II	LC	P		BR	F/W
31	Birds	Bucerotidae	*Rhyticeros plicatus*	Papuan hornbill	Julang Papua	Frugivore	II	LC	P		BR	F
32	Birds	Cacatuidae	*Cacatua galerita*	Sulphur-crested Cockatoo	Kakatua koki	Frugivore	II	LC	P		BR	F/O
33	Birds	Paradisaeidae	*Lophorina magnifica*	Magnificent Riflebird	Toowa Cemerlang	Insectivore	II	LC	P		BR	F
34	Birds	Psittacidae	*Geoffroyus geoffroyi*	Red-cheeked Parrot	Nuri Pipi-merah	Frugivore	II	LC	P		BR	F

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35	Birds	Psittacidae	*Trichoglossus haematodus*	Rainbow Lorikeet	Perkici Pelangi	Frugivore	II	LC	P		BR	F/O
36	Mammals	Phalangeridae	*Spilocuscus maculatus*	short-tailed spotted cuscus	Kuskus tutul	Folivore - frugivore	II	LC	P		BR	F
37	Reptile	Crocodylidae	*Crocodylus sp*		Buaya	Carnivore	II	LC	P		BR	W
38	Reptile	Pythonidae	*Morelia viridis*	Green tree python	Ular Sanca hijau	Carnivore	II	LC	P		BR	F
39	Reptile	Pythonidae	*Apodora papuana*	Papuan Olive Python	Sanca olive	Carnivore	II	LC		Endemic	BR	F
40	Reptile	Pythonidae	*Leiopython albertisii*	Northern White-lipped Python	Ular sanca bibir putih	Carnivore	II	LC		Endemic	BR	F
41	Reptile	Varanidae	*Varanus doreanus*	Bluetail monitor	Biawak ekor biru	Carnivore	II	LC		Endemic	BR	F/W
42	Reptile	Varanidae	*Varanus jobiensis*	Peach-throated Monitor		Carnivore	II	LC		Endemic	BR	F/W
43	Mammals	Pteropodidae	*Pteropus neohibernicus*	Great Flying Fox	Kalong	Folivore - frugivore	II	LC		Endemic	BR+M	A/F
44	Birds	Accipitridae	*Accipiter meyerianus*	Meyer's Goshawk	Elang alap meyer	Carnivore	II	LC			BR	F
45	Birds	Accipitridae	*Accipiter novaehollandiae*	Grey Goshawk	Elang Alap Kelabu	Carnivore	II	LC			BR	F
46	Birds	Strigidae	*Ninox connivens*	Barking Owl	Punggok gonggong	Carnivore	II	LC			BR	F
47	Birds	Strigidae	*Ninox rufa*	Rufous Owl	Punggok merah	Carnivore	II	LC			BR	F
48	Mammals	Phalangeridae	*Phalanger orientalis*	gray cuscus	Kuskus sutera	Folivore - frugivore	II	LC			BR	F
49	Reptile	Pythonidae	*Liasis fuscus*	Water Python	Sanca pelangi	Carnivore	II	LC			BR	W
50	Reptile	Pythonidae	*Morelia amethistina*	Amethystine Python		Carnivore	II	LC			BR	F
51	Birds	Alcedinidae	*Syma torotoro*	Yellow-Billed Kingfisher	Cekakak Torotoro	Piscivore-insectivore		LC	P	Endemic	BR	F
52	Birds	Casuariidae	*Casuarius casuarius*	Southern Cassowary	Kasuari Gelambir-ganda	Omnivore		LC	P	Endemic	BR	F
53	Birds	Casuariidae	*Casuarius sp*	Cassowary	Kasuari	Omnivore		LC	P	Endemic	BR	F
54	Birds	Casuariidae	*Casuarius unappendiculatus*	Northern Cassowary	Kasuari Gelambir-tunggal	Frugivore-insectivore		LC	P	Endemic	BR	F
55	Birds	Megapodiidae	*Talegalla cuvieri*	Red-billed Brushturkey	Maleo Kamur	Frugivore-insectivore		LC	P	Endemic	BR	F
56	Birds	Megapodiidae	*Talegalla jobiensis*	Collared Brush-turkey	Maleo kerah coklat	Omnivore		LC	P	Endemic	BR	F
57	Birds	Meliphagidae	*Pycnopygius stictocephalus*	Streak-Headed Honeyeater	Isap madu Kepala-coreng	Nectarivore-insectivore		LC	P	Endemic	BR	F/O
58	Birds	Ardeidae	*Ardea alba*	Great White Egret	Kuntul besar	Piscivore		LC	P		M	
59	Birds	Laridae	*Sterna dougallii*	Roseate Tern	Dara laut jambon	Piscivore		LC	P		M	
60	Birds	Threskiornithidae	*Platalea regia*	Royal Spoonbill	Ibis sendok raja	Piscivore		LC	P		M	
61	Birds	Threskiornithidae	*Threskiornis moluccus*	Australian Ibis	Ibis Australia	Piscivore		LC	P		M	
62	Birds	Alcedinidae	*Ceyx azureus*	Azure Kingfisher	Rajaudang Biru-langit	Piscivore-insectivore		LC	P		BR	W
63	Birds	Ardeidae	*Ardea sumatrana*	Great-billed Heron	Cangak laut	Piscivore		LC	P		BR	Wc
64	Birds	Ardeidae	*Ixobrychus flavicollis*	Black Bittern	Bambangan Hitam	Piscivore		LC	P		BR	W
65	Birds	Ardeidae	*Nycticorax caledonicus*	Rufous Night-heron	Kowak malam merah	Piscivore		LC	P		BR	W
66	Birds	Pittidae	*Pitta sordida*	Hooded pitta	Paok Hijau	Insectivore		LC	P		BR	F
67	Birds	Psittacidae	*Charmosyna placentis*	Red-flanked Lorikeet	Perkici dagu merah	Frugivore		LC	P		BR	F
68	Birds	Psittacidae	*Eclectus roratus*	Eclectus parrot	Nuri Bayan	Frugivore		LC	P		BR	F/O
69	Birds	Megapodiidae	*Megapodius reinwardt*	Orange-Footed Scrubfowl	Gosong Kaki-merah	Frugivore-insectivore		LC	P		BRs,w	F
70	Amphibian	Hylidae	*Hylarana cf. florensis*	Floresian Frog	Kodok flores	Insectivore		LC		Endemic	BR	F/W
71	Amphibian	Pelodryadidae	*Litoria cf. nigropunctata*	Black-dotted tree frog		Insectivore		LC		Endemic	BR	F/W
72	Birds	Alcedinidae	*Clytoceyx rex*	Shovel-billed Kookaburra	Raja udang Paruh-sekop	Piscivore-insectivore		LC		Endemic	BR	F

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73	Birds	Alcedinidae	*Dacelo gaudichaud*	Rufous-bellied Kookaburra	Kukabura perut merah	Piscivore-insectivore		LC		Endemic	BR	F
74	Birds	Alcedinidae	*Melidora macrorrhina*	Hook-Billed Kingfisher	Raja udang Paruh-kait	Piscivore-insectivore		LC		Endemic	BR	F
75	Birds	Artamidae	*Cracticus cassicus*	Hooded Butcherbird	Jagal papua	Frugivore-insectivore		LC		Endemic	BR	F
76	Birds	Artamidae	*Peltops blainvillii*	Lowland Peltops	Peltops hutan	Insectivore		LC		Endemic	BR	F
77	Birds	Campephagidae	*Campochaera sloetii*	Golden Cuckooshrike	Kepudang sungu emas	Insectivore		LC		Endemic	BR	F
78	Birds	Campephagidae	*Coracina melas*	Black Cicadabird	Kepudangsungu Hitam	Insectivore		LC		Endemic	BR	F
79	Birds	Campephagidae	*Edolisoma schisticeps*	Grey-headed Cicadabird	Kepudang sunngu desin	Insectivore		LC		Endemic	BR	F
80	Birds	Campephagidae	*Lalage atrovirens*	Black-browed Triller	Kapasan alis hitam	Insectivore		LC		Endemic	BR	F
81	Birds	Centropodidae	*Centropus menbeki*	Greater Black Coucal	Bubut Pini	Insectivore		LC		Endemic	BR	F
82	Birds	Columbidae	*Ducula mullerii*	Collared imperial pigeon	Pergam Kalung	Frugivore		LC		Endemic	BR	F/W
83	Birds	Columbidae	*Ducula pinon*	Pinon's Imperial-pigeon	Pergam Pinon	Frugivore		LC		Endemic	BR	F/O
84	Birds	Columbidae	*Ducula zoeae*	Zoe's Imperial-pigeon	Pergam Zoe	Frugivore		LC		Endemic	BR	F
85	Birds	Columbidae	*Macropygia nigrirostris*	Black-billed Cuckoo-dove	Uncal Paruh-hitam	Frugivore		LC		Endemic	BR	F
86	Birds	Columbidae	*Ptilinopus aurantiifrons*	Orange-fronted Fruit Dove	Walik Dahi-jingga	Frugivore		LC		Endemic	BR	F
87	Birds	Columbidae	*Ptilinopus coronulatus*	Coroneted Fruit-Dove	Walik Lunggung	Frugivore		LC		Endemic	BR	F
88	Birds	Columbidae	*Ptilinopus iozonus*	Orange-Bellied Fruit Dove	Walik Perut-jingga	Frugivore		LC		Endemic	BR	F
89	Birds	Columbidae	*Ptilinopus nainus*	Dwarf Fruit Dove	Walik Kerdil	Frugivore		LC		Endemic	BR	F
90	Birds	Columbidae	*Ptilinopus ornatus*	Ornate Fruit Dove	Walik buma	Frugivore		LC		Endemic	BR	F
91	Birds	Columbidae	*Ptilinopus perlatus*	Pink-spotted Fruit Dove	Walik Mutiara	Frugivore		LC		Endemic	BR	F
92	Birds	Columbidae	*Trugon terrestris*	Thick-billed Ground Pigeon	Delimukan Puyuh	Frugivore		LC		Endemic	BR	F
93	Birds	Cuculidae	*Centropus bernsteini*	Black-billed Coucal	Bubut hitam	Insectivore		LC		Endemic	BR	F
94	Birds	Dicaeidae	*Dicaeum pectorale*	Olive-crowned Flowerpacker	Cabai Papua	Nectarivore-insectivore		LC		Endemic	BR	F
95	Birds	Estrildidae	*Lonchura tristissima*	Streak Headed Manikin	Bondol coreng	Gramnivore		LC		Endemic	BR	F
96	Birds	Maluridae	*Malurus alboscapulatus*	White-shouldered Fairywren	Cikrak peri Bahu-putih	Insectivore		LC		Endemic	BR	G/O
97	Birds	Meliphagidae	*Meliphaga aruensis*	Puff-backed Honeyeater	Meliphaga aru	Frugivore		LC		Endemic	BR	F
98	Birds	Meliphagidae	*Microptilotis flavirictus*	Yellow-gaped Honeyeater	Meliphaga Paruh-kuning	Frugivore-insectivore		LC		Endemic	BR	F/O
99	Birds	Monarchidae	*Carterornis chrysomela*	Golden monarch	Kehicap Emas	Insectivore		LC		Endemic	BR	F
100	Birds	Nectariniidae	*Dicaeum geelvinkianum*	Red-Capped Flowerpecker	Cabai Mantel-merah	Nectarivore-insectivore		LC		Endemic	BR	F
101	Birds	Oriolidae	*Oriolus szalayi*	Brown Oriole	Kepudag coklat	Frugivore		LC		Endemic	BR	F
102	Birds	Pachycephalidae	*Pseudorectes ferrugineus*	Rusty Pitohui	Pitohui Karat	Insectivore		LC		Endemic	BR	F
103	Birds	Petroicidae	*Devioeca papuana*	Canary Flyrobin	Sikatan kenari	Insectivore		LC		Endemic	BR	F
104	Birds	Pomatostomidae	*Garritornis isidorei*	Papuan Babbler	Cicapapua Merah	Insectivore		LC		Endemic	BR	F/O
105	Birds	Rhipiduridae	*Rhipidura atra*	Black Fantail	Kipasan hitam	Insectivore		LC		Endemic	BR	F/O
106	Birds	Rhipiduridae	*Rhipidura leucothorax*	White-bellied Thicket-Fantail	Kipasan-semak Perut-putih	Insectivore		LC		Endemic	BR	F/O
107	Birds	Sturnidae	*Mino anais*	Golden Myna	Mino Emas	Frugivore-insectivore		LC		Endemic	BR	F
108	Birds	Sturnidae	*Mino dumontii*	Yellow-faced Myna	Mino Muka-kuning	Frugivore-insectivore		LC		Endemic	BR	F
109	Mammals	Macropodidae	*Dorcopsis muelleri*	Brown Dorcopsis	Lau-lau tanah	Folivore - frugivore		LC		Endemic	BR	F

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110	Reptile	Elapidae	*Aspidomorphus muelleri*	Müller's Crowned Snake		Carnivore		LC		Endemic	BR	F
111	Reptile	Scincidae	*Emoia physicae*	Slender Emo Skink	kadal ramping	Insectivore		LC		Endemic	BR	F
112	Mammals	Pteropodidae	*Nyctimene aello*	Greater Tube-nosed Bat	Kelelawar hidung tabung	Frugivore		LC		Endemic	BR+M	A/F
113	Birds	Rhipiduridae	*Rhipidura maculipectus*	Black Thicket-fantail	Kipasan-semak Hitam	Insectivore		LC		Endemic	BRs	F
114	Birds	Alcedinidae	*Alcedo atthis*	Commonn kingfisher	Raja-udang erasia	Piscivore-insectivore		LC			M	
115	Birds	Alcedinidae	*Todiramphus sanctus*	Sacred Kingfisher	Cekakak suci	Piscivore-insectivore		LC			M	
116	Birds	Ardeidae	*Bubulcus ibis*	Cattle Egret	Kuntul Kerbau	Insectivore		LC			M	
117	Birds	Ardeidae	*Nycticorax nycticorax*	black-crowned night heron	Kowak malam abu	Piscivore		LC			M	
118	Birds	Charadriidae	*Charadrius dubius*	Little Ringed Plover	Cerek kalung kecil	Insectivore		LC			M	
119	Birds	Charadriidae	*Charadrius mongolus*	Lesser Sandplover	cerek pasir mongolia	Insectivore		LC			M	
120	Birds	Charadriidae	*Pluvialis Dominica*	American Golden Plover	Cerek kenyut	Insectivore		LC			M	
121	Birds	Cuculidae	*Cacomantis flabelliformis*	Fan-tailed Cuckoo	Wiwik kipas	Insectivore		LC			M	
122	Birds	Cuculidae	*Cacomantis merulinus*	Plaintive Cuckoo	Wiwik kelabu	Insectivore		LC			M	
123	Birds	Cuculidae	*Cuculus saturatus*	Oriental Cuckoo	kangkok ranting	Insectivore		LC			M	
124	Birds	Cuculidae	*Eudynamys scolopaceus*	Western Koel	Tuwur asia	Frugivore		LC			M	
125	Birds	Hirundinidae	*Hirundo rustica*	Barn swallow	Layang layang Asia	Insectivore		LC			M	F
126	Birds	Laridae	*Gelochelidon nilotica*	Common Gull-billed Tern	Dara laut hitam	Insectivore		LC			M	
127	Birds	Meropidae	*Merops ornatus*	Rainbow Bee-eater	Kirik-kirik australia	Insectivore		LC			M	
128	Birds	Recurvirostridae	*Himantopus himantopus*	Black-winged Stilt	Gagang bayam timur	Piscivore		LC			M	
129	Birds	Scolopacidae	*Actitis hypoleucos*	Common sandpiper	Trinil Pantai	Insectivore		LC			M	W
130	Birds	Scolopacidae	*Calidris acuminata*	Sharp-tailed Sandpiper	Kedidi ekor tajam	Insectivore		LC			M	
131	Birds	Scolopacidae	*Tringa glareola*	Wood sandpiper	Trinil Semak	Insectivore		LC			M	W
132	Birds	Scolopacidae	*Tringa stagnatilis*	Marsh Sandpiper	Trinil Rawa	Piscivore		LC			M	
133	Amphibian	Hylidae	*Nyctimystes infrafrenatus*	White-lipped Tree Frog	Katak-pohon hijau, rizo'	Insectivore		LC			BR	F/W
134	Birds	Acanthizidae	*Sericornis beccarii*	Tropical Scrubwren	Tropical Scrubwren	Insectivore		LC			BR	F
135	Birds	Alcedinidae	*Ceyx azurea*	Azure kingfisher	Raja-udang biru-langit	Piscivore-insectivore		LC			BR	F/W
136	Birds	Alcedinidae	*Tanysiptera galatea*	Common Paradise Kingfisher	Cekakak pita Biasa	Piscivore-insectivore		LC			BR	F
137	Birds	Alcedinidae	*Todiramphus chloris*	Collared Kingfisher	Cekakak sungai	Piscivore-insectivore		LC			BR	F/W
138	Birds	Anatidae	*Dendrocygna guttata*	Spotted Whistling-duck	Belibis tutul	Piscivore		LC			BR	F/W
139	Birds	Anatidae	*Radjah radjah*	Raja Shelduck	Umukia Raja	Insectivore		LC			BR	W
140	Birds	Anhingidae	*Anhinga novaehollandiae*	Australasian Darter	Pecuk ular australia	Piscivore		LC			BR	F/W
141	Birds	Apodidae	*Collocalia esculenta*	Glossy Swiftlet	Walet Sapi	Insectivore		LC			BR	A
142	Birds	Ardeidae	*Ardea intermedia*	Intermediate Egret	Kuntul Perak	Piscivore		LC			BR	W
143	Birds	Artamidae	*Melloria quoyi*	Black Butcherbird	Jagal Hitam	Frugivore-insectivore		LC			BR	F
144	Birds	Campephagidae	*Coracina caeruleogrisea*		Kepudang sungu paruh tebal	Insectivore		LC			BR	F
145	Birds	Campephagidae	*Coracina lineata*	Yellow-eyed Cuckooshrike	Kepudang sungu Mata-kuning	Insectivore		LC			BR	F
146	Birds	Campephagidae	*Coracina papuensis*	White-Bellied Cuckooshrike	Kepudang sungu Kartula	Insectivore		LC			BR	F
147	Birds	Columbidae	*Chalcophaps stephani*	Stephan's Emerald Dove	Delimukan Timur	Frugivore		LC			BR	F

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148	Birds	Columbidae	*Macropygia amboinensis*	Slender-billed Cuckoo-dove	Uncal ambon	Frugivore		LC			BR	F
149	Birds	Columbidae	*Ptilinopus magnificus*	Wompoo Fruit-Dove	Walik Wompu	Frugivore		LC			BR	F
150	Birds	Columbidae	*Ptilinopus rivoli*	White-bibbed Fruit-Dove	Walik dada putih	Frugivore		LC			BR	F
151	Birds	Columbidae	*Ptilinopus superbus*	Superb Fruit Dove	Walik Raja	Frugivore		LC			BR	F/O
152	Birds	Columbidae	*Reinwardtoena reinwardtii*	Great Cuckoo-dove	Uncal besar	Frugivore		LC			BR	F
153	Birds	Cracticidae	*Cracticus quoyi*	Black Butcherbird	Jagal Hitam	Insectivore		LC			BR	F
154	Birds	Hemiprocnidae	*Hemiprocne mystacea*	Moustached treeswift	Tepekong kumis	Insectivore		LC			BR	F
155	Birds	Hirundinidae	*Hirundo tahitica*	Pacific Swallow	Layang layang Batu	Insectivore		LC			BR	W/O
156	Birds	Meliphagidae	*Lichmera argentauris*	Olive Honeyeater	Isap madu zaitun	Nectarivore-insectivore		LC			BR	F
157	Birds	Meliphagidae	*Philemon buceroides*	Helmeted Friarbird	Cikukua tanduk	Frugivore		LC			BR	F/O
158	Birds	Meliphagidae	*Xanthotis flaviventer*	Tawny-breasted Honeyeater	Burung madu	Nectarivore-insectivore		LC			BR	F/O
159	Birds	Monarchidae	*Myiagra alecto*	Shining Flycatcher	Sikatan kilap	Insectivore		LC			BR	Fm/O
160	Birds	Nectariniidae	*Nectarinia aspasia*	The Black Sunbird	Burung madu hitam	Nectarivore-insectivore		LC			BR	F
161	Birds	Nectariniidae	*Nectarinia jugularis*	Olive-backed Sunbird	Burung madu sriganti	Nectarivore-insectivore		LC			BR	F
162	Birds	Passeridae	*Passer montanus*	Eurasian Tree Sparrow	Burung-gereja erasia	Gramnivore		LC			BR	F/O
163	Birds	Pittidae	*Erythropitta erythrogaster*	Red-bellied Pitta	Paok Mopo	Insectivore		LC			BR	F
164	Birds	Podargidae	*Podargus ocellatus*	Marbled frogmouth	Paruhkodok Pualam	Insectivore		LC			BR	F
165	Birds	Podargidae	*Podargus papuensis*	Papuan Frogmouth	Paruh kodok papua	Insectivore		LC			BR	F
166	Birds	Rallidae	*Amaurornis moluccana*	Pale-vented Bush-hen		Frugivore-insectivore		LC			BR	F/W
167	Birds	Rallidae	*Rallina tricolor*	Red-necked Crake	Tikusan Tukar	Omnivore		LC			BR	W
168	Birds	Rhipiduridae	*Rhipidura leucophrys*	Willie Wagtail	Kipasan Kebun	Insectivore		LC			BR	O
169	Birds	Rhipiduridae	*Rhipidura rufiventris*	Northern fantail	Kipasan Dada-lurik	Insectivore		LC			BR	F/O
170	Birds	Sturnidae	*Aplonis cantoroides*	Singing Starling	Perling kicau	Frugivore		LC			BR	F
171	Fishes	Channidae	*Channa striata*	Snakehead murrel	Gabus	Aquatic Carnivore		LC			BR	W
172	Fishes	Cichlidae	*Oreochromis niloticus*	Nile tilapia	Ikan nila	Aquatic Carnivore		LC			BR	W
173	Fishes	Cyprinidae	*Barbonymus cf gonionotus*	Ray-finned fish	Ikan Tawes	Aquatic Carnivore		LC			BR	W
174	Fishes	Plotosidae	*Neosilurus cf brevidorsalis*	shortfin tandan	Ikan Ekor satu	Aquatic Carnivore		LC			BR	W
175	Mammals	Petauridae	*Petaurus breviceps*	sugar glider	Wupih sirsik	Omnivore		LC			BR	F
176	Mammals	Suidae	*Sus scrofa*	Wild Boar	Babi Hutan	Omnivore		LC			BR	F/O
177	Reptile	Chelidae	*Emydura subglobosa*	Red-bellied Short-necked Turtle	Kura-kura dada merah	Omnivore		LC			BR	W
178	Reptile	Colubridae	*Boiga irregularis*	Brown Tree Snake		Carnivore		LC			BR	F
179	Reptile	Gekkonidae	*Cyrtodactylus louisiadensis*	Ring-tailed Gecko		Insectivore		LC			BR	F
180	Reptile	Pygopodidae	*Lialis burtonis*	Burton's Snake-lizard	Kadal pensil burton	Carnivore		LC			BR	F
181	Reptile	Scincidae	*Emoia aenea*	Bronze Emo Skink		Insectivore		LC			BR	F
182	Reptile	Scincidae	*Emoia caeruleocauda*	Pacific Bluetail Skink	Kadal ekor biru	Insectivore		LC			BR	F/O

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183	Reptile	Scincidae	*Lamprolepis smaragdina*	Emerald Skink	Kadal Zamrud	Insectivore		LC			BR	F/O
184	Birds	Coraciidae	*Eurystomus orientalis*	Oriental Dollarbird	Tiong lampu Biasa	Frugivore-insectivore		LC			BR(is)+M	F/O
185	Birds	Cuculidae	*Cacomantis variolosus*	Brush Cuckoo	Wiwik rimba	Insectivore		LC			BR+M	F/O
186	Birds	Dicruridae	*Dicrurus bracteatus*	Spangled Drongo	Srigunting Lencana	Insectivore		LC			BR+M	F/O
187	Birds	Sturnidae	*Aplonis metallica*	Metallic Starling	Perling Ungu	Frugivore-insectivore		LC			BR+M	F
188	Birds	Alcedinidae	*Dacelo leachii*	Blue-winged Kookaburra	Kukabura Sayap-biru	Piscivore-insectivore		LC			BRs	Sv
189	Birds	Pachycephalidae	*Pachycephala melanura*	Mangrove Whistler	Kancilan Ekor-hitam	Insectivore		LC			BRse	Fm
190	Birds	Phalacrocoracidae	*Microcarbo melanoleucos*	Little Pied Cormorant	Pecuk padi belang	Piscivore		LC			Ms	W
191	Birds	Ardeidae	*Egretta garzetta*	Little Egret	Kuntul kecil	Piscivore		LC			nB	W
192	Birds	Phalacrocoracidae	*Phalacrocorax sulcirostris*	Little Black Cormorant	Pecuk padi hitam	Piscivore		LC			V	W
193	Birds	Accipitridae	*Megatriorchis doriae*	Doria's Goshawk	Elang Alap Doria	Carnivore	II	NT	P	Endemic	BR	F
194	Birds	Columbidae	*Goura victoria*	Victoria Crowned-pigeon	Mambruk victoria	Frugivore	II	NT	P	Endemic	BR	F
195	Birds	Accipitridae	*Aquila gurneyi*	Gurney's eagle	Rajawali Kuskus	Carnivore	II	NT	P		BR	F/O
196	Mammals	Pseudocheiridae	*Hemibelideus lemuroides*	Lemur-like Ringtail Possum	Kuskus lemur	Folivore - frugivore		NT			BR	F
197	Fishes	Butidae	*Oxyeleotris heterodon*	Sentani gudgeon		Aquatic Carnivore				Endemic	BR	W
198	Fishes	Plotosidae	*Plotosus cf papuensis*	Papuan eel-catfish	lele papua	Aquatic Carnivore				Endemic	BR	W
199	Reptile	Elapidae	*Micropechis ikaheca*	New Guinea Small-eyed Snake	Senawan tanah Irian	Carnivore				Endemic	BR	F
200	Birds	Meliphagidae	*Meliphaga sp1*	Honeyeater	Meliphaga	Frugivore-insectivore					BR	F
201	Fishes	Ariidae	*Cochlefelis sp*	sea catfishes	ikan sembilang ekor 2	Aquatic Carnivore					BR	W
202	Fishes	Ariidae	*Neoarius sp*	Salmon catfish		Aquatic Carnivore					BR	W
203	Fishes	Helostomatidae	*Helastoma cf temminkii*	Kissing gouramis	Ikan Samandar	Aquatic Carnivore					BR	W
204	Fishes	Palaemonidae	*Macrobrachium sp*	giant freshwater prawn	Udang sungai	Aquatic Carnivore					BR	W
205	Fishes	Parastacidae	*Paranephrops sp*	freshwater crayfish	Lobster Air-tawar	Aquatic Carnivore					BR	W
206	Reptile	Agamidae	*Hydrosaurus amboinensis*		Soa soa	Carnivore					BR	F/W
207	Reptile	Gekkonidae	*Gekko vittatus*	Lined gecko	Tokek bergaris	Insectivore					BR	F

Note for table above:

- Resident/ Migrant: BR-Breeding resident, BRe-Restricted (or nearly so) to eastern Papua, BRn-Restricted (or nearly so) to northern Papua,BRc-Restricted (or nearly so) to central Papua, BRs-Restricted (or nearly so) to southern Papua, BRn-Restricted (or nearly so) to north and east Papua, BRse- Restricted (or nearly so) to south-eastern Papua, Bris-Restricted to islands, BR?-Residential status uncertain, M-Non-breeding temperate winter migrants, Ms-Non-breeding migrants restricted mostly to southern Papua, BR+M-Breeding residents with populations seasonally augmented by non-breeding visitors, V-Vagrant/rare non-breeding visitor & escapees, nB-Non breeding visitor, seasonal pattern uncertain
- Habitat: S-Coastal or pelagic (oceanic) seabirds, W-Wetland species; rivers, estuaries, lakes, marshes, etc., Wc-Coastal wetland species; mangroves, estuaries, etc., G-Grasslands, W/G- Wetlands and grasslands, F-Forest-species (Closed forest or open, lightly wooded areas), Fc-Restricted to coastal or island forests, Fm-Mostly mangrove forest, Sv-Savannah, O-Open and disturbed areas (grassland, urban, agricultural, scrub etc.), Oc-Open areas near the coast, C-Coastal, A-Aerial
- CITES: I & II Indicates species listed under CITES Appendix I or II
- IUCN: CR-Critically Endangered, EN-Endangered, VU-Vulnerable, nt- Near Threatened
- Protected by Indonesian Rules : P.106 KLHK 2018