HCV Assessment Report
PT Rimba Hutani Mas

Jambi, Indonesia

Asia Pacific Consulting Solutions

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FINAL

ACKNOWLEDGEMENTS

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Greenpeace

WWF Indonesia

WWF International

HCVRN Indonesia

HCVRN International

Forest People's Program

Eyes on the Forest

The Forest Trust

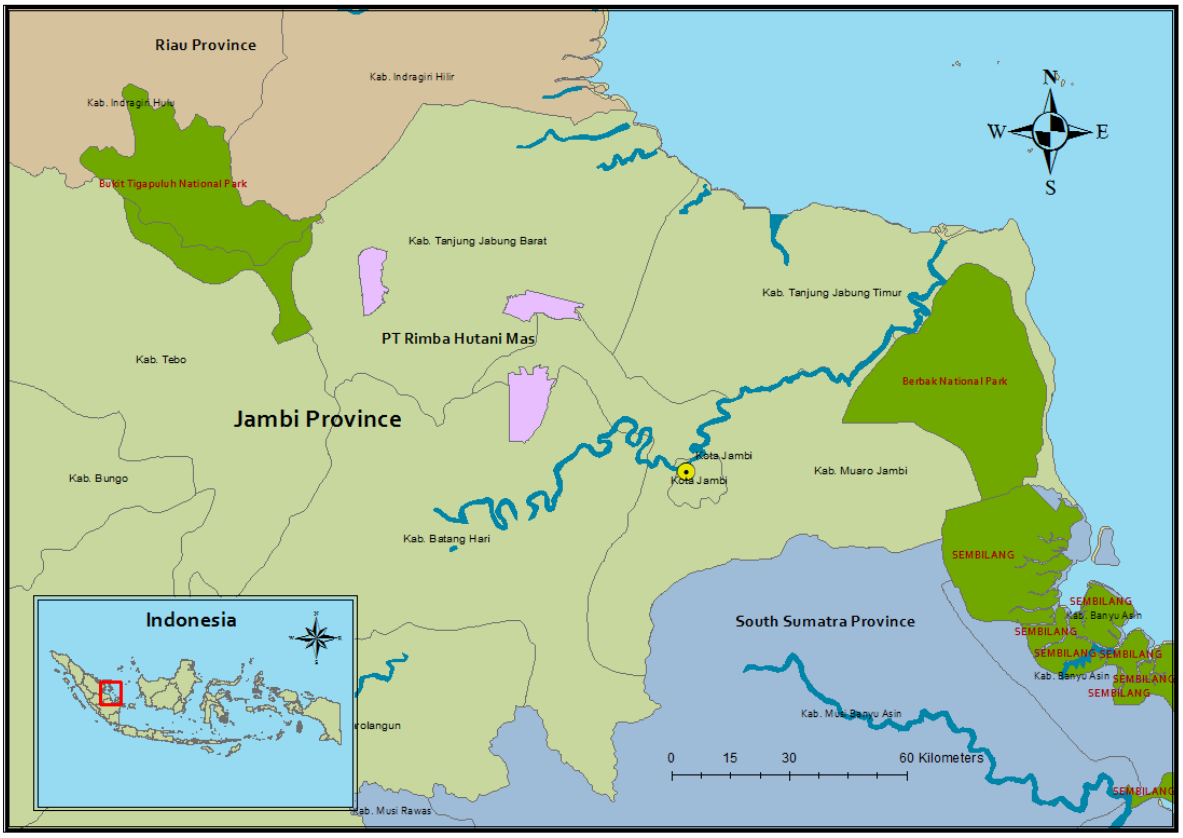
WALHI

and many others at the local level

Thank you all!!

EXECUTIVE SUMMARY

The HCV Assessment in Jambi province focused on three (3) concessions comprising of PT Wirakarya Sakti (WKS), PT Rimba Hutani Mas (RHM), and PT Tebo Multi Agro (TMA) all of which provides timber supply to PT Lontar Papyrus Pulp & Paper Industry which belongs to Asia Pulp & Paper (APP) Group. This particular report present findings for PT RHM and the scope of the HCV Assessment for PT RHM is limited only to the area within the PT RHM concession.



PT RHM is a forest management enterprise managing an industrial plantation forest located in Muaro Jambi Regency, Tanjung Jabung Barat Regency, Batanghari Regency, and Tanjung Jabung Timur Regency in Jambi Province. Most of the area is plantation pulpwood forests (planted forests) and a mosaic of interspersed natural forest remaining in conservation areas with the major area being on the northwest district near Bukit Tiga Puluh National Forest (BTPNP).

Project Ownership

This project was commissioned by Asia Pulp and Paper Group. Asia Pulp and Paper Group (APP) is a trade name for a group of pulp and paper manufacturing companies in Indonesia and China. The APP group of companies is one of the world's largest vertically integrated pulp and paper companies, with an annual combined pulp, paper, and converting products capacity of over 18 million tons. APP-Indonesia and APP-China currently market their products in more than 120 countries across six continents. Asia Pulp & Paper's Indonesian administrative office is located at Sinarmas Land Plaza, Jalan Thamrin, Jakarta, Indonesia.

At the time of this report, the pulp mills of the Asia Pulp and Paper Group (APP) receive pulpwood from the HTI concessions of 38 suppliers located on the islands of Sumatra and Borneo. This project covers one (1) of those supplies on the island of Sumatra.

Concession Historical Aspects

At the beginning, PT Rimba Hutani Mas was a joint company between PT Heeching Timber Industry Indonesia (PT HTII) with PT Inhutani V and a Cooperative, that was legalized through approval from the Ministry of Forestry based on the Ministry of Forestry Decree No 382/Kpts-II/1997 with the extent of 72,500 ha. The company was established through Establishment Act by Notary Mariana Lina Iljas, SH No 45 dated 25 June 1970. The last revision of the Notary Act was by Notary Heleni Rityiany, SH No 03 dated 5 May 2011.

Previously, the company managed natural forest in Jambi Province. The extent of the company area was amended through Ministry of Forestry Decree No.68/Menhut-II/2004 dated March 9 2004 on the Stipulation of Industrial Plantation rights to PT Rimba Hutani Mas in the extent of 51,260 ha with a THPB (*Tebang Habis Permudaan Buatan*) silviculture system. The concession is spread across three locations called "work areas" comprised of Sei Dasal Work Area I with an area of 15,157 ha, Sei Danau Bangko Work Area consisting of 19,658 ha, and Taman Raja Work Area with 16,455 ha. The license was further amended through the Ministry of Forestry Decree No.689/Menhut-II/2010, providing for a total HTI area of the company of 35,814.20 ha.

Assessment Findings

In an effort to provide APP a result that could be more easily utilized, this report is prepared at the concession (Forest Management Unit) level. The concession report provides:

- identification of the team members and background,
- details on HCV descriptions according to the HCVF Toolkit for Indonesia (2010),
- a discussion of the methodology used to identify potential sites where HCV might exist,
- a landscape perspective in which the concession is operating within,
- results of the assessment,
- Management and monitoring recommendations based on the identified threats, and
- Barriers should the company choose to pursue FSC certification in the future.

The following descriptions summarise the results of the HCV identification process:

HCV 1 Areas with Important Levels of Biodiversity

HCV 1.1 Areas that Contain or Provide Biodiversity Support Function to Protection or Conservation Areas

The PT RHM concession area is comprised of three distinct and separated blocks of Sei Dasal, Sei Danau Bangko and Taman Raja Block. None of the three blocks is adjacent with protected areas such as protected forest or other conservation areas such as National Parks (NP), Nature Reserves (NR), and others.

Nevertheless, PT RHM has internally designated protected areas within its concession on the riparian buffer zone and in Block III (Taman Raja) which was especially designated as a protected area based on the proposal, input and agreement between stakeholders in the area surrounding block III Taman Raja. This relatively vast landscape is then designated as a protected area by the local government and approved by the Ministry of Forestry.

The extent of the protected area within PT RHM concession is 7,057.88 ha or around 19,743 % of the total area of the management unit (including block III Taman Raja). The positioning of these protected areas seems to be scattered throughout all areas, all of which do not have corridors connecting them. The advantage of connected protected areas is they increase the possibility of survival for important species found in the area. These protected areas are a PT RHM management unit initiative and follow provisions laid out in forestry regulations. All protected areas and riparian buffer zones in all PT RHM blocks that are still able to provie biodiversity support functions are HCVA 1.1.

HCV 1.2 Critically Endangered Species

Three flora species were found in the PT RHM concession area that are critically endangered (**CR**) on the IUCN Red List. The only wildlife species in the area with CR status on the IUCN Red List is the Sumatran Tiger (*Panthera tigris sumatrae*), based on the information from the community and findings from three PT RHM blocks.

HCV 1.3 Areas that Contain Habitat for Viable Populations of Endangered, Restricted Range or Protected Species

This area is explained in the Toolkit (2010) as areas that constitute habitat for viable populations of endangered, restricted range, or protected species and the team concluded that thirteen (13) out of 101 flora species are protected by government regulations and global convention, eight (8) species are protected by global convention and 6 species were protected by Indonesian regulation. Five (5) of these species belongs to CR category of IUCN, in which, all are from the meranti family (Dipterocarpaceae Family). Overall, there were 31 species of mammals found within the concession area of PT RHM. Around 21 species of mammals found within the concession have very important conservation values. One (1) species is categorized as Critically Endangered (CR) : Sumatran Tiger (***Panthera tigris sumatrae***), and 3 species are Endangered (EN): Agile gibbon (***Hylobates agilis***), Malayan tapir (***Tapirus Indicus***), and Banded langur (***Presbytis melalophos***). Five (5) species are categorized as Vulnerable (VU) in the IUCN list: Sambar deer (***Cervus unicolor***), Slow loris (***Nycticebus coucang***), Oriental small clawed otter (***Aonyx cinerea***), Sun bear (***Helarctos malayanus***), and Babi jenggot *(Susbarbatus).* Five (5) species are included in Appendix I CITES, such as Agile gibbon (***Hylobates agilis***), Slow loris (***Nycticebus coucang***), Malayan tapir (***Tapirus Indicus***), Sun bear (***Helarctos malayanus***), and Sumateran Tiger (***Panthera tigris sumatrae***), while another 5 species are included in Appendix 2 CITES such as : Oriental small clawed otter (***Aonyx cinerea****),* Giant squirrel *(**Ratufa affinis**),* Leopard cat *(**Felis bengalensis**),* Lesser treeshrew (***Tupaia minor****),* and Banded langur (***Presbytis melalophos***). Twelve (12) of the species are protected under Indonesian law. During observations, of the 155 species of birds found, 68 species are of importance from a conservation value.

These 68 species are either categorized as *Near Threatened* (NT), *Vulnerable* (VU) in the IUCN list, Appendix I and Appendix II of the CITES list, protected by the Indonesian law (through PP 7 in the year 1999), or are migratory species. Overall, 32 species of amphibian and reptilian has been identified within the concession area of PT RHM. These consist of 14 reptilian and 18 amphibians with 3 species of important conservation value. They are Kuhl's Creek Frog ***(Limnonectes crybetus***) of the amphibians and Reticulated python (***Phyton reticulatus***) and Water monitor (***Varanus salvator***) of the reptilian group.

A lot of effort, and more time is required to assess population viability than was available during HCV assessments. As there were no population viability analyses, HCV assessments used landscape carrying capacity analyses for HCV 1.3 species, which considers the level and quality of support to the ecosystem from the landscape closest to the concession. A simple approach for looking at 'potential carrying capacity' that can be used for population viability is by observing the presence of numbers of certain species in the PT RHM concession area of block III Taman Raja and linking them to places that allow populations of the same species in a larger and protected forest landscape near the concession; in this case, the protected area and BTNP adjoining or close to the PT RHM block III Taman Raja concession area. Consequently, block III Taman Raja within the PT RHM concession that still have natural forest and are contiguous with other natural forest or larger forest blocks around the PT RHM concession can be considered as HCVA 1.3 for most of the wildlife species species meeting HCV 1.3 criteria. While the Taman Raja block and the remaining protected area of Block Sei Dasal and Block Sei Danau Bangko may still retain its function as HCV 1.3 for flora species meeting HCV 1.3 criteria.

HCV 1.4 Areas that Contain Habitat of Temporary Use by Species or Congregations of Species

During assessments in the concession area of PT RHM, six migratory birds species were found in and around the concession area of PT RHM. Key habitats like those required in high conservation value 1.4; caves as breeding or nesting sites and habitats for swiftlets and bats and saltlicks are not found during verification on the ground in all of PT RHM concession blocks. In the forest area of block III Taman Raja which possesses a much better forest cover as compared to other blocks, It was difficult to meet local hunters with information about such 'special areas' where animals and birds congregate to seek food or minerals; not one was documented in the concession area. There is a possibility that this is due to the conversion of natural forest into plantation forest that destroyed saltlicks in block I and II. While it may also been due to the limited time of assessment which restricts the ability to obtain in-depth information with the community surrounding block III Taman Raja. However, upon looking at the map of tiger habitat , it is clear that tiger may roam into the western part of Taman Raja block which granted the Taman Raja Block as area that acts as corridor for the movement of tigers in the surrounding landscape. Furthermore, the document provided to the team prior to the assessment titled "Rancangan pengelolaan kawasan lindung taman raja dan koridor hidupan liar TNBT" mentioned the result of the feasibility study conducted on the area Ex-PT Hatma Santi adjacent with Taman Raja Block as corridors for wildlife.

Given the fact that the neighboring area is corridors from BTNP to Taman Raja Block, it is highly likely that the area of Taman Raja Block may still contain the key habitats required by the wildlife. Therefore, given the precautionary approach, the team concluded that PT RHM concession area in Taman Raja Block, should also be designated as HCV 1.4.

HCV 2 Natural Landscapes and Dynamics

HCV 2.1 Large Natural Landscapes with Capacity to Maintain Natural Ecological Processes and Dynamics

Block I and Block II of PT RHM concession area does not qualify as part of a bigger forest block of more than 20.000 Ha as required by HCV 2.1 while block III, Taman Raja within PT RHM concession area, is part of a bigger forest block (core area) of more than 20,000 ha. This area connected with the concession is the ex natural forest concession of PT Hatma Santi and Bukit Tigapuluh National Park. Thus, the area included as HCVA 2.1 is the part that is within the core area of buffer zone.

HCV 2.2 Areas that Contain Two or More Contiguous Ecosystems

Three approaches were used to identify HCV 2.2; i.e., contiguous forest ecosystems were based on (1) *differences in elevation*, (2) *contiguous swamp and non-swamp ecosystems and (3) presence of kerangas forest*.

Based on the field assessment it was found that there is no contiguous swamp and non-swamp ecosystem that is still present within the concession area of PT RHM nor is there any presence of kerangas forest. Thus, point (2) and (3) above was not found in the concession. Differences in elevation was observed in the Block III Taman Raja. However, the difference in elevation does not constitute a difference in types of ecosystem distributed along elevation gradients especially since the forest cover and natural ecosystem have been lost in the MBI part of Taman Raja Block. Therefore, the first approach was also not fulfilled.

HCV 2.3 Areas that Contain Representative Populations of Most Naturally Occurring Species

The extent of habitat area necessary to maintain minimum viable population (MVP) varies greatly between species. Nevertheless, **large areas that are not fragmented and cover various ecosystem types have greater potential for sustaining multiple species than those that are smaller and fragmented with a limited variety of ecosystem types**. These requirements and conditions may only be met by the forest area of block III Taman Raja from the PT RHM concession area. Therefore, with the precautionary approach, it is determined that block III Taman Raja of PT RHM concession area has fulfilled the condition to be designated as HCV 2.3.

HCV 3 Rare or Endangered Ecosystems

Some parts of the concession area of PT RHM belongs to South-Eastern Coastal Swamps (Block I) and South-Eastern Plains and Hills (Block II, Block III). South-Eastern Coastal Swamps are areas comprised of one of the largest tropical peat swamp in the island of Sumatera (Berbak National Park).

Almost the entire region was once covered by peat swamp forest, swamp forest or riparian forest linked to rivers and flood plains, and lowland dipterocarp forest in areas with dry mineral soil. South-Eastern Plains and Hills, Lowland Dipterocarp forest once covered most of this area, and the remaining block is one of the world's most diverse ecosystems (Kerinci Seblat National Park).

In the Indonesia HCV toolkit (2008), ecosystems that meet one or more of the following criteria are considered endangered in the HCV 3 definition:

> (1) if within a single physiographic region an ecosystem has declined in extent by 50% or more; (2) if it is expected to decline by >75% under future scenarios of forest conversion assuming all conversion areas in prevailing spatial plans can be converted. Ecosystems meeting the following criteria can be considered rare ecosystems: If, as a result of natural factors or human intervention, an ecosystem constitutes less than 5% of a bio-physiographic region.

Based on the physiographic analysis approach, PT RHM concession area meets the criteria of being part of a landscape with rare or endangered ecosystems. The area with rare or endangered ecosystem is concentrated on the protected area.

HCV 4 Environmental Services

HCV 4.1 Areas or Ecosystems Important for the Provision of Water and Prevention of Floods for Downstream communities

The physical environmental conditions of upstream area shows that the PT RHM area has limitations in terms of absorbing water and controlling surface run off due to the naturally low permeability of its soil types. The only factor supporting its capacity to catch water and control surface run off is its land cover vegetation. Its low soil permeability and shallow topsoil also means the area is highly susceptible to erosion. Accordingly, if land is cleared in the area, risks such as falling land productivity and sedimentation in rivers will increase. Thus, the vegetation cover at the upstream area has the important function as water catchment area to control flood and as water resources. Therefore, the area can be defined as HCV4.1. Furthermore, based on the water body function of the river and riparian buffer, 15 other river areas are designated as HCV 4.1 as well.

HCV 4.2 Areas Important for the Prevention of Erosion and Sedimentation

Findings on the ground show that not all rivers in the PT RHM concession possess the seven functions of riparian buffer zones. In the context of HCV 4, their functions in controlling morpho-erosion and riparian buffers can be designated as HCV 4.2. By verifying in the field, HCV 4.2 can be designated for RHM concession area. An example of areas meeting the criteria as HCV 4.2 is the area in the Sei Dasal (Northern part) where its upstream areas comprises of plantation forest, secondary forest, scrub and some fragments of community oil palm plantations. The acacia plantation forest in the hilly parts have been harvested reducing the capacity of the land to absorb water. This causes increased surface run off, land erosion and sedimentation which enters tributaries of the Tapak River in the western part and the Betara Kiri tributary in the eastern part of the area.

Thus, only the upstream areas in the Sei Dasal area that are still forested and have water catchment and surface run off control functions can be designated as HCV 4.2.

HCV 4.3 Areas that Function as Natural Barriers to the Spread of Forest or Ground Fire

The water catchment function of rivers occurs through a mechanism of underground lateral flow from the rivers to their riparian buffers and/or vertical gravitational flow below river beds. This function will continue if riparian buffers remain in a natural condition and have vegetation with root structures that provide pore space for river water to infiltrate. Such a condition will ensure soil in riparian buffers remains moist. For rivers with cleared riparian buffers, pore space is easily closed by finer soil and consequently their water catchment function diminishes. Some rivers and riparian buffers inside the PT RHM concession still retain this water catchment function. Some, however, are already degraded. If soil moisture is maintained as a result of lateral flow, riparian buffers will stay wet and can function as natural barriers to prevent the spread of land fires. Based on these explanations of the water catchment function, HCV 4.3 is present for those rivers that are two times wider than the largest tree canopy and have permanently moist riparian buffers.

HCV 5 Natural Areas Critical for Meeting the Basic Needs of Local People

Based on interviews with villagers, FGD outcomes and observations on the ground in the 12 villages assessed, around 1 KK family from Teluk Ketapang village secures more than 50% of its cash income from selling honey. They sell honey extracted from around 60 honey trees *(Koompassia excelsa)* and *Aro* (*Ficus glabella*) trees in production and protection forest near the Suban, Semak and Danau Bangko rivers inside the PT RHM concession area to meet their basic need for cash income. According to the family they have no alternative sources of cash income other than extracting honey from inside the company concession area. Honey extraction has become an irreplaceable main livelihood source for them and they feel highly dependent on the forest inside the protected area. From interviews with family members it seems they have been extracting honey there for more than 10 years. They feel they can continue current extraction rates now and into the future as honey is still readily available inside the company area. The family is committed to preserving honey trees through environmentally friendly and non-damaging extraction of honey. Thus, for one family in Teluk Ketapang village HCV is present in connection with fulfilment of the basic **need for cash income** in the form of around 60 honey trees located inside the company concession area.

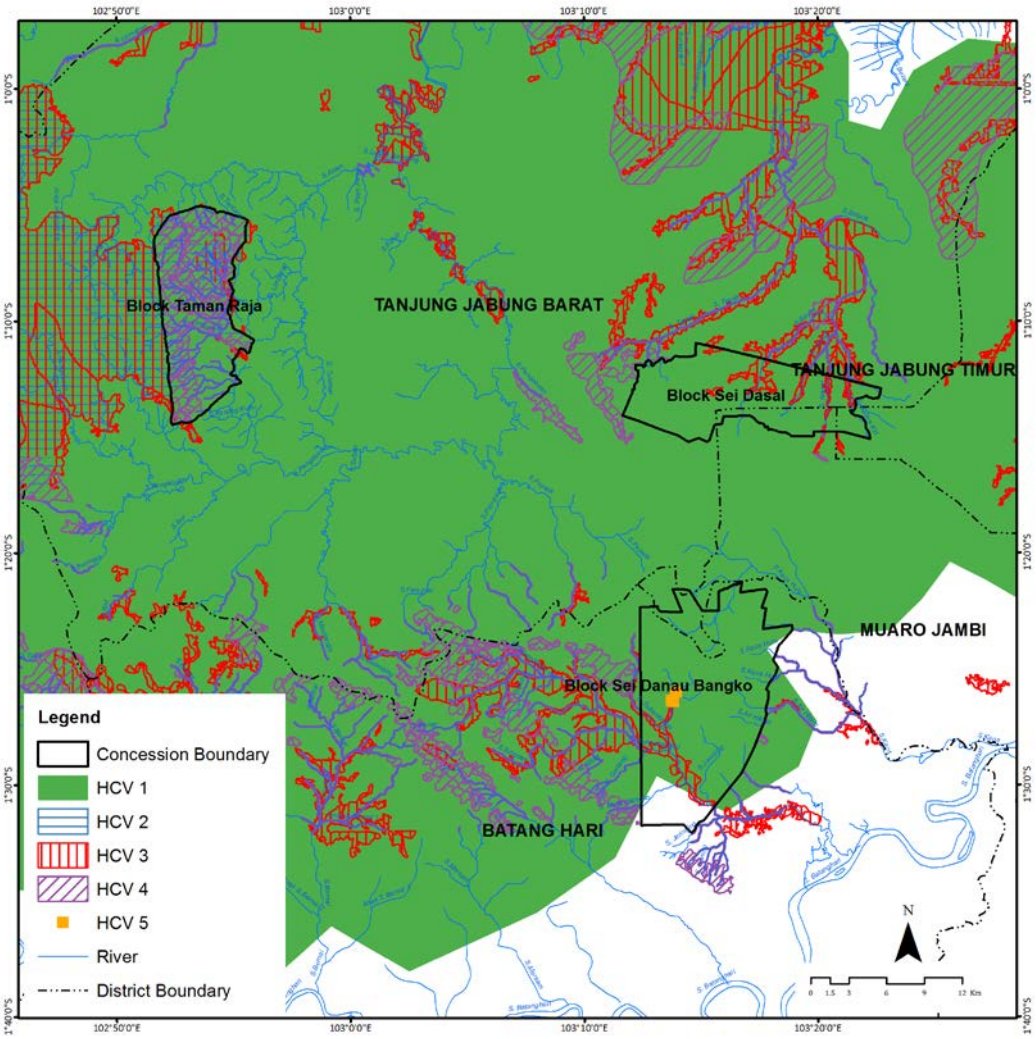
HCV 6 Areas Critical for Maintaining the Cultural Identity of Local Communities

From interviews with villagers, FGD outcomes and observations on the ground in the 12 villages assessed around PT RHM, no forest areas were found that communities consider their customary land. The team also found no isolated communities living in areas with limited road and telecommunications access that rarely have contact with outsiders. All of the 12 villages visited can be accessed either by road or by river, and communications facilities are also available making it easy to communicate with outsiders. Thus, no HCV 6 was found within the concession of PT RHM.

The following table and map summarizes the HCV management areas identified by the assessment team. The size of the concession area based on the license is a bit different if compared with the GIS calculated size as shown in the table below. Regarding this discrepancy, the company has stated the following "The determination of concession area size is based on the Republic of Indonesia Ministry of Forestry Decree (Surat Keputusan or SK) for the plantation forest concession license which includes the appended concession map. Boundary in the field was laid down in accordance to the appended SK concession map. There is inconsistency between the calculated area size based on the field boundary and the area size that was stated in the SK. This variation is caused by the digitization process on the SK concession map, which was only available in hardcopy format when the SK was issued, into the company's Geographic Information System (GIS). The company is still in the process of settling the definitive boundary with relevant government institutions. Under the current situation, the company decided that HCV assessment will use the GIS map which is consistent with field condition."

Type of HCV	**HCV area (hectare)**			
	Block Danau Bangko	Block Sei Dasal	Block Taman Raja	Total HCVA PT RHM
HCV 1.1	374.34	465.19	3,620.33	4,459.86
HCV 1.2	14,854.43	9,904.06	9,248.13	34,006.62
HCV 1.3	822.67	728.48	5,506.73	7,057.88
HCV 1.4	Not present	Not present	5,506.73	5,506.73
HCV 2.1	Not present	Not present	5,506.73	5,506.73
HCV 2.2	Not present	Not present	Not present	-
HCV 2.3	Not present	Not present	5,506.73	5,506.73
HCV 3	376.03	467.44	3,632.17	4,475.64
HCV 4.1	1,164.57	2,598.42	7,623.37	11,386.36
HCV 4.2	693.84	664.30	4,123.21	5,481.35
HCV 4.3	488.49	250.94	361.79	1,101.22
HCV 5*	239.89	Not present	Not present	239.89
HCV 6	Not present	Not present	Not present	-

*Only zonation of HCV 5 is presented. HCVs indicated by dots are not calculated in the above table.



Management and Monitoring Recommendations

APP has stated an intention to conduct an extensive "landscape management planning" process upon completion of HCV, HCS and social impact assessments that will provide a clear, holistic approach to dealing with all of the pertinent issues identified. The stated goal is to conduct extensive stakeholder consultations with government, universities, neighboring landusers, civil societies and communities during that process. **As a result management and monitoring recommendations provided in this report, as well as indicative High Conservation Management Areas (HCVMA) are provided in a generic framework to be used as a "guide" to help develop management prescriptions during this more extensive planning process.** HCV category and sub-category recommendations are provided in the full report and the following major generic recommendations have been provided without specific reference to HCV category or sub-category:

- Additional data for all HCV needs to be collected to supplement that from the assessment team, particularly relating to species presence, locality and potential population since due to time and budget constraints only a small fraction of the total area was able to be sampled;
- All final HCV management areas must be delineated on the ground and adequately protected from encroachment to protect and enhance HCV values present with the use of an appropriate buffer;

- Natural areas, particularly riparian zones and those areas that could be part of a larger concession wide wildlife corridor system connecting protected areas inside and outside the concession areas, need to be rehabilitated and restored with natural, indigenours species;
- Consultation with experts on specific species need to occur to determine when management activities have the most and least adverse effect on disturbance as well as what specific habitat needs are required;
- Hunting and encroachment of HCVMA must be controlled and prohibited, either using company staff, community patrols, government enforcement, civil society or a combination;
- Public education at the community level must occur to stress the importance of the HCV values, what they mean to the people living near the concession and why it is critical to protect and enhance these values;
- Designated staff responsible for HCV management should be assigned within each concession (at minimum concession level) and all field staff and contractors need training sessions explaining HCV values present and the importance of protecting and enhancing them;
- Areas with high populations of HCV 1.2 and 1.3 species should be considered for potential restoration as conservation areas;
- Collaboration with neighboring land users, particularly that can negatively influence HCV values within the concession and at the landscape level, must be undertaken in an effort to protect and enhance these values;
- Alternative species that require less intensive water management for survival and productivity need to be examined for peat soils to reduce the negative impact this has on the soil, hydrology and carbon emissions;
- HCV management prescriptions should be based on best practices instead of business as usual, summarized and made publically available;
- Identification of specific environmental values to monitor in order to determine the health of each HCV value and effectiveness of management programs must be developed and monitored on a regular basis;
- Periodic (minimum annually) summaries of monitoring results must be prepared and should be made publically available