

Assessment Report Industrial Forest Plantation High Conservation Value

Public Summary

PT. Bumi Mekar Hijau

250.370 Ha

**Ogan Komering Ilir Regency, South Sumatera
Province**

June – September 2013

*This Public Summary is prepared within the framework of APP's Forest Conservation Policy
and the information contained is the result of a full HCV assessment*

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1 INTRODUCTION

1.1 Time Frame of HCV Assessment

The assessment was conducted on June-September 2013

1.2 Reference

| No | Reference |
|----|---|
| 1 | National HCV Toolkit |
| 2 | <i>The High Conservation Value Forest Toolkit, Edition 1, December 2003</i> |

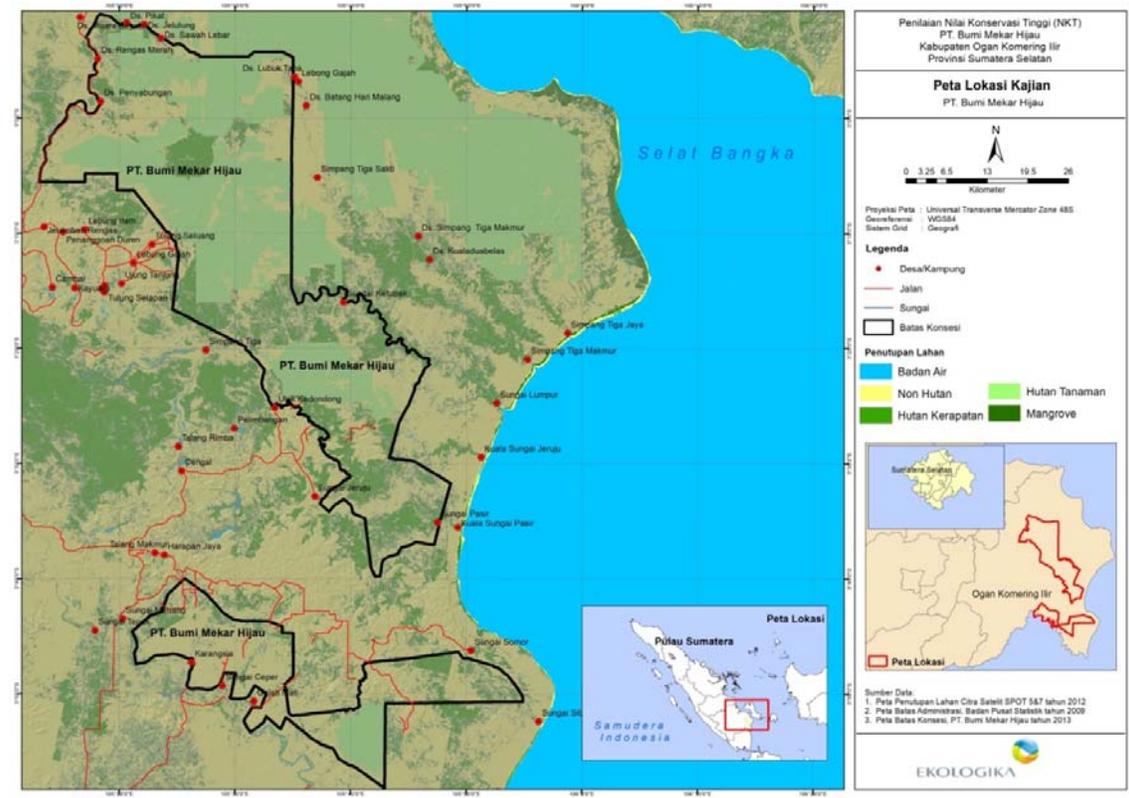
1.3 Project Development Status

PT. Bumi Mekar Hijau is one of APP supplier which has been operating since 2004, according to the FCP there will be no natural forest clearance by PT. Bumi Mekar Hijau after January 31, 2013

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|--|---|
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1.4 Area Description

The assessment was conducted on the Industrial Forest Plantation owned by PT. Bumi Mekar Hijau which is located in Tulung Selapan, Cengal, Pangkalan Lampam and Sungai Menang Sub-districts, Ogan Komering Ilir Regency, South Sumatra Province. Based on the Ministerial Decree of the Ministry of Forestry of the Republic of Indonesia No. SK.338/Menhut-II/2004 PT. BMH is licensed an area of ± 127.870 Ha. Afterwards, the Minister of Forestry Decree SK. 417/Menhut-II/2004 dated 19 October 2004 licensed the additional area, thus the concession of PT. BMH is 250.370 ha.



Map of PT. Bumi Mekar Hijau HCV assessment location

2 METHODS

2.1 Primary Data Collection

With the limited social data, socio-economic studies was also conducted on selected villlage to represent the concession. Personal information and HCV related or participatory research experiences with communities, of each team members are recorded in Appendix 2.

The primary data used are available in separate reports on:

- The vegetation within BMH concession
- Mammals within BMH concession
- Birds within BMH concession
- Reptiles and Amphibians within BMH concession
- Socio-economic and cultural condition within and around BMH concession

Management and monitoring recommendations suggested in this report served as the basis of management and monitoring recommendations used in this assessment.

Field Topography Verification. To assess the accuracy of topographic conditions described in secondary Digital Elevation Model (DEM), general field observations are conducted throughout whole BMH concessions. BMH concessions are generally sloping with dominantly swamp and peat forest ecosystems.

Vegetation Survey. Secondary Data of SPOT imagery analysis indicates that old secondary or primary forest is not exist in concession area of PT. BMH. Vegetation survey is focused on the density of young secondary forest, old and young shrubs by employing rapid assessment methods. Time consuming quantitative vegetation plotting will not be used because the team is trying to cover the areas as much as possible to assess species of high conservation priority and potentially affected by company's plantation forest development. The identification process are covers almost every vegetation from genus to species level, which is needed for HCV 1.2 and 1.3 identification.

Amphibian and Reptile. Based on available secondary data, PT. BMH concession and the surrounding areas likely contain protected species of amphibian dan reptile. Effective conservation will need accurate information regarding conservation, population, distribution and habitat information, despite the limited amphibian dan reptile studies in South Sumatra, notably only in three location Bayung Lincir, Napallicin, and Gumai Pasemah. Surveys of two last decades covered lowland and peat swamp forest habitat. In Ogan Komering Ilir regency, amphibian dan reptile surveys, as part of HCV assessment, is the first, thus underlining the importance of this data for main refence of concession management plan. The survey is conducted in young secondary forest, old and young shrubs and acacia forest plantation. The survey could be a parameter and indicator of environmental change or degradation, from the identification of disappeared, survived and apperared in the concession area. The survey employs Visual Encounter Survey (VES), random search, and company' documented pictures study before field surveys. Allocated time for each location is at least 3 nights. More than 1 observer is assigned as the minimun requirements of VES. All encountered individuals are recorded and captured when possible, for measuring (amphibian

measurement is snout to vent and reptile is snout to cloaca and cloaca to tip of the tail), identifying the sex and coordinate.

Burung. Abundance survey of bird types was conducted by using cruising methods with Sorensen-Dice index to analyse the data, to identify the similarity of birds' flocks in each habitat type. Elaboration of the method, the survey area and the results are given in the separated avifauna report.

Mammals. Mammals and other vertebrate survey is the focus of HCV 1.2, 1.3 and 2.3. The survey is conducted in two phases i.e. questionnaire interview and field survey. Social economic assessor team, using prepared questionnaire, carries out the interviews. The focus is on the respondents; indication of big mammals presence, especially elephant; and the effect or disturbance of their presence on the community. Field survey is conducted with Recca Methods, which is a modified line transect methods, for ease movement and efficient travelling time. Two mammals teams are walking on the survey area from morning until afternoon (09.00 -17.00). The purpose is to gather objective data to support high probability detection of Sumatran Elephant and other important species, as well as reviewing various threats e.g. poaching and illegal logging.

Social and Cultural. The social and cultural scope of High Conservation Value (HCV) assessments falls to the criteria HCV 5 (basic needs of local communities) and 6 (cultural identity and local community's bond with the area). Landscape methods were employed in the assessment, thus it carried out in villages within and around the concession area.

Sample determination is based on the following criteria:

1. The village is within the concession area.
2. The village is located around the area in a very close proximity to the concession and potentially, directly or indirectly, affected by the company's operations.
3. The village is located around the concession area based on watershed (DAS).

Selected villages around the area was to examine the questions of whether natural resources from the concession and the forest areas are crucial to the fulfillment of basic needs of local communities, irreplaceable, do the community make use of natural resources in the concession area sustainably? And does loss/damage of some parts or all of the natural resources due to company's operations affect the community livelihood?

Data Collection Method using data that collected from Focus Group Discussions (FGD) and semi-structured interviews. To ensure the participation in the process of data collection, representatives and community groups (village authority, religious figures, youth, and marginal group) were involved in the FGD. The purpose is to collect the information on resources of each areas (settlement, hamlet, village) garnered from local community's knowledge, which is resourceful for HCV 4 assement and sosio-economic HCV 5, and HCV 6.

Location and delineation of High Conservation Value (HCV) 5 and HCV 6 are identified by observation, while GPS coordinates are input to set High Conservation Value Area (HCVA). The locations then accurately presented in spatial maps.

2.2 Schedule

| No | Activity | Date |
|-----------|--------------------------------|----------------------------|
| 1 | Pre-assessment | 22-26 May 2013 |
| 2 | Reporting | May-June 2013 |
| 3 | Multistakeholders consultation | 2 July 2013 |
| 4 | Assessment | June - September 2013 |
| 5 | Reporting | August 2013 – January 2014 |
| 6 | Public Consultation | 29-30 January 2014 |
| 7 | Peer Review | March 2014 |
| 8 | Final Report | May 2014 |

3 ASSESSMENT TEAM

ECOLOGY TEAM

Hendi Sumantri (Team Leader, GIS, and Landscape Ecology)

- Profession : Forest & Governance Technical Lead, PT. Ekologika Consultants
- Expertise : GIS, Remote Sensing, Landscape Ecology, Strategic Environmental Studies (KLHS), Biodiversity Survey
- Field Experience : Hendi starts his professional career on conservation and natural resource management since 2001 and involved in various activities related to land cover mapping, forest changes (deforestation) mapping, GIS modelling, Stock and Carbon Emission Framing (related to REDD), Strategic Environmental Studies (KLHS), and spatial planning. Worked in several conservation-related NGO (Conservation International Indonesia and Burung Indonesia) and experienced in several field activities at Mamberamo (Papua), Gorontalo, and Mandailing Natal (North Sumatera). Since 2009 involved in HCV Assesement of PT. Manokwari Mandiri Lestari in West Papua.

Donny Gunaryadi (Mammals, Sumatran Elephant Expert)

- Profession : Biodiversity Specialist
- Expertise : Biodiversity Survey, Elephant Ecology and Conservation.
- Field Experience : Donny graduated from Department of Biology, Universitas Indonesia and had worked in Wildlife Conservation Society (WCS) for 12 years. While served in WCS as Program Coordinator for Elephant Conservation, Donny had done multiple surveys on monitoring Sumatran Elephant population at Gunung Leuser National Park, Bukit Barisan Selatan National Park, and Way Kambas National Park. Donny also experienced in organizing patrol team and giving trainings for staffs at national park, and also heavily involved in Sumatran Elephant Forum on National Park.

Yoga Travolindra (Mammals)

- Profession : Field Surveyor
- Expertise : Biodiversity Survey, Stakeholder and Community Engagement, Forest Fire Management.
- Field Experience : Since 2004, Yoga had involved with South Sumatra Forest Fire Management Project (SSFFMP) positioned as member of

Forest Fire Division Team and Village Facilitator and training communities on dealing with forest fire. Yoga also often involves in participatory village mapping activities and giving Environmental Education related to Forest Fire aspects. Yoga joined with Merang REDD Pilot Project (MRPP) as a team member of Measurement and Monitoring Forest Carbon. Yoga also trained in monitoring Sumatran Tiger using camera trap and involved as member of Field Team in Sumatran Elephant Population Survey Team with WCS.

Iwan Saputra (Mammals)

Profession : Field Surveyor
Expertise : Biodiversity Surveys, Environmental Education, Community Development.
Field Experience : Started field work as volunteer at Wetlands International Indonesia Program (WI-IP) for wildlife survey activity at Berbak and Sembilang, including avifauna in both of those locations. Active in environmental education activity for community, working together with Wahana Bumi Hijau and shoreline community empowerment in NGO Bakau.

Mas Untung (Avifauna)

Profession : Avifauna Researcher
Expertise : Biodiversity Survey especially on avifauna taxon, Bird Watcher.
Field Experience : Since college, Untung joined with Yayasan Kutilang Indonesia at Yogyakarta. Conducted bird varieties survey in several locations at forests in Java, some of them are Bromo Tengger National Park, Meru Betiri National Park, and heavily involved in several bird competition which held in Java and Bali.

Agus Satriya Wibowo (Avifauna)

Profession : Avifauna Researcher
Expertise : Biodiversity Survey especially on bird taxa.
Field Experience : Agus Satriya Wibowo (Asat) joined with Yayasan Kutilang Indonesia in Yogyakarta. Conducted survey on bird varieties on several forests in Java, some of these locations are Bromo Tengger National Park, Meru Betiri National park and at vicinities of Merapi. Asat also possessed comprehension on the topic of Geographic Information System (GIS)

Mistar (Herpetofauna/Reptillian dan Amphibian)

Profession : Biodiversity Management Unit Coordinator at Yayasan

Ekosistem Lestari
Expertise : Herpetofauna (Amphibian dan Reptilian).
Field Experience : Worked in biodiversity conservation and surveys since 1999 as Field Assistant in Leuser Management Unit. Heavily involved in biodiversity surveys at Sumatera and Kalimantan, which held by Conservation International, WWF Indonesia, TNC, and several consultant companies. Other than that, Mistar also heavily involved in discussion/workshop related to herpetofauna in Indonesia or in international scale. With his experience, Mistar is known as one of the respectable figures at Sumatera area.

Fernando Togar Manurung, MP. (Forestry and Plant Ecology)

Profession : Forest Ecology Lecturer, Faculty of Forestry, Universitas Tanjung Pura.
Expertise : Biodiversity survey, Forest Ecology / Tropic Silviculture
Field Experience : Worked in conservation field in West Kalimantan for 23 years, especially in Forest Ecology. Known as Tropical Forest and Peat Plants Expert. Had done several researches and studies in forest and silvicultural plants at several forest management rights (HPH) and industrial forest plantation (HTI) areas. Also known as AMDAL designer on Ecology Assessor field for Ecolabelling certification and Forestry Technical Expert Instructor.

Agusti Randi S.Hut (Plant Ecology Team)

Profession : Plants Consultant
Expertise : Biodiversity Survey, especially Plants
Field Experience : Since 2010 had done various biodiversity research with several institutes such as FFI and WWF at several conservation and private companies in West Kalimantan for HCV purpose and others.

SOCIAL TEAM

Ninil Riyati Miftahul Jannah (Social Technical Advisor)

Profession : Freelance Consultant (UNDP, UNESCO, UNICEF, National Disaster Management Agency of Indonesia (BNPB), Ministry of Environment), expert in capacity development, environmental education, community development, and community based climate change risk management and adaptation.
Expertise : More than 10 years of experiences in community development for conservation, environmental education, dan sustainable development education. Her specialization lies on developing model and methodology based on conceptual and practical

comprehension from several participatory research tools, such as RRA, PRA, and PAR and Appreciative Inquiry approach. Currently known concentrating on reducing disaster risk and organizing community (village) toward resilient community model, using community based and participatory approach.

Field Experience : (2013) Tim Leader Security Baseline Assessment: Stakeholder Mapping, 19 Field PT. Pertamina EP; (2011) Tim leader HCV aspek social-ekonomi komunitas dalam penilaian NKT untuk PT. Gema Hutan Lestari – TBI.
 (2013) Team Leader for Security Baseline Assessment: Stakeholder Mapping, 19 Field in PT. Pertamina EP; (2011) Team Leader of community socio-economic aspects of HCV in HCV assessment for PT. Gema Hutan Lestari – TBI.

Adi Suyadi (Social)

Profession : Consultant
 Expertise : Social Surveys, Social Mapping and Community Development
 Field Experience : Joined Perkumpulan Lingkar on Community-based Disaster Risk minimizing program and community development in 2006-2008. Served as Document and License Staff at PT. SMART Tbk. with duties in maintaining licensing and conducting Community Development program in 2009-2011. Served as Survey & Mapping Staff at PT. Mitra Bangsa Utama with duties involved in field mapping with GIS in 2012.

Cindy Wulandari (Social)

Profession : Staff of Perkumpulan Lingkar
 Expertise : Community Assistance
 Field Experience : Experienced in Community Assistance, village as well as school communities, experienced in designing and conducting socio-economy data gathering, facilitating Capacity building of village communities, experienced in outdoor and environmental conservation.

Pudji Santoso (Social)

Profession : Senior Staff Project in Perkumpulan Lingkar, Yogyakarta.
 Expertise : Experienced for over than 7 years in various fields including community development, conservaton, environmental education and informal education for adults.
 Field Experience : Developing environmental education program in Klub Indonesia Hijau. Served as field assistant for three years in Forest Management program with local communities in Ngawi, East Java for Lembaga Studi Ekosistem Hutan (LeSEHan). Volunteered when Jogja-Java earthquake occurred in 2006, then joined wih Local NGO and heavily involved with communities in Community Development and

Disaster Risk Minimalization in village communities, ranged from village to school communities in Yogyakarta and Central Java.

Rahmat Subiyakto (Social)

Profession : Community Development Specialist
Expertise : More than 10 years of experience as social worker in community development, environmental education and non formal education. Currently served in community development field, specifically on community based disaster risk reduction.
Field Experience : Assistance in several communities, including school and local communities using participatory methods. Also experienced in programs such as developing outdoor activities, environmental education, and disaster risk reduction.

Ruhui Eka Setiawan (Social)

Profession : Senior Staff Project of Perkumpulan Lingkar, Yogyakarta
Expertise : More than 7 years working experiences in several fields, including community development, conservation, environmental education and informal education for adults.
Field Experience : Developing environmental education program in an environmental organization (Klub Indonesia Hijau). Volunteered when earthquake disaster hit Jogja-Central Java (2006), then joined a local NGO in Jogjakarta and heavily involved with communities in community development and reducing disaster risk in village as well as school communities of Yogyakarta Central Java regions.

Sunaring Kurniandaru (Social)

Profession : Field Researcher
Expertise : More than 9 years working experiences in wildlife conservation, wildlife habitat and population research particularly birds, and experienced in research on the topic of community socio-economic and cultural, and possessing writing skills
Field Experience : Research coordinator of endemic birds conservation and population in Yogyakarta and socio economic and cultural research of water bird hunter community in Java and experienced in socio-economic and cultural research of community in conservation area in Jogjakarta.

Untung Tri Winarso (Social)

Profession : Director of Perkumpulan Lingkar
Expertise : Social Research, Community Development, and Community

Field Experience : Organizing.
: Research coordinator of Developing tools for DIY community resilient, community assistance for village development plan, team coordinator for PRBBK program in Cilacap-Central Java, Governor Regulation formulation team, PRB DIY Action Plan.

Yanet Paulina (Social)

Profession : Gender Specialist
Expertise : Experienced more than 7 years in several fields, including community development, conservation, environmental education and informal education for adult.
Field Experience : Volunteered in Jogja-Central Java earthquake in 2006 then joined Perkumpulan Lingkar, Yogyakarta and working with communities in community development and reducing disaster risk in village as well as school communities of Yogyakarta Central Java regions.

4 RESULT

4.1 HCV Result

| HCV | Definition | Present | Potential | Absent |
|-----|--|-----------------|-----------|-------------|
| 1 | Focus on biological diversity including endemic species, and rare, threatened or endangered species, that are significant at global, regional or national levels. | 1.2,1.2,1.3,1.4 | | |
| 2 | Large landscape-level ecosystems and ecosystem mosaics that is significant at global, regional or national levels and containing the viable populations of the great majority of the naturally occurring species in natural patterns of distribution and abundance. | | | 2.1,2.2,2.3 |
| 3 | Rare, threatened, or endangered ecosystems, habitats or refugia. | 3 | | |
| 4 | Basic ecosystem services in critical situations, including protection of water catchments and control of erosion of vulnerable soils and slopes. | 4.1,4.3 | | 4.2 |
| 5 | Sites and resources fundamental for satisfying the basic necessities of local communities or indigenous peoples (for livelihoods, health, nutrition, water, etc.), identified through engagement with these communities or indigenous peoples. | 5 | | |
| 6 | Sites, resources, habitats and landscapes of global or national cultural, archaeological or historical significance, and/or of critical cultural, ecological, economic or religious/sacred importance for the traditional cultures of local communities or indigenous peoples, identified through engagement with these local communities or indigenous peoples. | 6 | | |

| HCV | Sub HCV | Definition | Parameter |
|-----|---------|---|---|
| 1. | 1.1 | Areas/sites that have or give Biodiversity Supporting Function for Protected and/or Conservation Areas. | Germplasm preservation area (KPPN), wildlife preservation area (KPSL), Riverbanks, buffer zone of padang sugihan wildlife reserve |
| | 1.2 | Endangered species. | Sumatran elephant |
| | 1.3 | Areas/sites that have or give Biodiversity Supporting Function for Protected and/or Conservation Areas. | 8 species of mammals, 25 birds species, 7 amphibian and reptile species, 1 vegetation species |
| | 1.4 | Areas that contain habitat for viable population of endangered restricted range or protected species | Sumatran Elephant, <i>Egretta intermedia</i> , <i>Numenius</i> sp., <i>Ardea alba</i> , <i>Himantopus leucocephalus</i> dan <i>Chlidonias leucopterus</i> |
| 3 | | Areas with endangered or nearly extinct ecosystem. | Peat swamp and riparian forest ecosystem |

| | | | |
|---|-----|---|---|
| 4 | 4.1 | Important areas or ecosystem which have functions as water supply and flood control for community that resides in downstream areas. | Riverbank and swamp |
| | 4.3 | Areas that function as natural barriers to prevent forest or field fire. | All natural vegetation that has never been burned |
| 5 | | Areas with important functions to fulfill local community's basic needs. | Protein source (freshwater fish), vitamin source (fruit and vegetable), cattle feed, construction materials (nipah), fuel woods (gelam) & charcoal (leban & gelam), medicine (singkir leaf, sesalung root, majaan seed, jadem sap, rimbatan bejute leaf, sanak di laut, singgah di kayu leaf, renayan kupira, ulang-ulang bidadari, simpur leaf, simo pedang leaf, gelam wood), clean water source for drink and cook (river), clean water for sanitation (river), direct source of income (fish from river, swamp and estuary and Gelam wood), ricefield land/subsistence, economic farming land (rubber plantation), handicraft material (nipah and purun leaves, rattan), grazing field (swamp, pasture, riverbank). |
| 6 | | Areas with Important Functions as Traditional Cultural Identity of Local Communities. | Kebape grave, Old graves, Siti Sima grave, Tanjung Serai, Tulung Gemeris, Buyut Dukun grave, water spring pool, ancient boat |

4.2 Public Consultation Result

Implementation:

| | |
|--------------|-----------------------------|
| Date | 29-30 January 2014 |
| Venue | Hotel Grand Duta, Palembang |

Attendance List

Government Institution

- Provincial Forestry Agency
- Provincial Agricultural Agency
- Provincial Farming Agency
- Provincial Fisheries and Marine Affairs Agency
- Provincial Agency of Regional Development Planning (BAPPEDA)
- Provincial Environment Agency
- Provincial Forest Area Development Bureau (BPKH)
- Provincial level of Regional Technical Implementation Unit (UPTD) of Land and Forest Fire Management
- Research and Development (Litbang) of Provincial Forestry Agency
- Watershed Management Agency (BPDAS)
- Natural Resource Conservation Agency (BKSDA)

- Regency Forestry Agency
- Regency Agriculture Agency
- Regency Farming Agency
- Regency Fisheries and Marine Affairs Agency
- Regency Agency of Regional Development Planning (BAPPEDA)
- Fire Fighter (Manggala Agni)
- Environmental Bureau (BLH)
- Academician/Researcher/University
- Environmental researcher
- Forestry researcher
- Natural Resource Conservation researcher
- Socio-cultural researcher
- Socio-economy researcher
- University research center
- University community service center
- Other relevant organization

Non Government Organization

- Environment
- Forestry
- Natural Resource Conservation
- Socio-Cultural
- Socio-Economy
- Community Empowerment
- Advocacy
- Customary community forum/alliance
- Conservation cadre communication forum

Community Representative

- Village Chief, Customary Chief, Head of Sub-district, community representative

Public Consultation Result

| Result Matrix of Group 1 Discussion (HCV 1.1) | | |
|--|--|---|
| Question | Assessment Result | Stakeholders Input |
| Is there any High Value Conservation Area in the forest management unit (UMH) or in the surrounding landscape? | There are biodiversity in protected mangrove forest area. | There are elephants, root tigers, deer, porcupine, estuary crocodile, sinyolong crocodile, phyton, cobra in significant number in all areas, especially near natural forests. |
| Where is HCV found in the area? | 500 buffer zone near border of concession areas; all protected areas that was designated by private companies. | In all areas, especially near natural forests, as example: sungai pasir and ulak kedondong |

| | | |
|--|--|---|
| What kind of threats that could reduceb/threatened the specified HCV? (Internal of External factors) | - Conversion of Protected Forest - Illegal Logging - Production activity using canal lines | Area conversion of forest into forest industries, loss of natural habitats and source of food that decline in quality and quantity. |
| Which area that has to be maintained to reduce threats for HCV? | Preserved area (Germplasm), Wildlife Preservation area, and riverbank, support buffer zone and water absorption areas. | Conservation in several spots such as riverbank, protected forest, and restoring wildlife habitat area so that those animals have living place. |
| What kind of management that has to be done to reduce such threats? | Reconstruction of boundary marking with stakeholders No-harvesting in HCVA/HCVMA conservation of germplasm preservation area (KPPN) and riverbank Rehabilitation of mangrove forest Increasing staffs and community comprehension on the topic of forest's function and HCV animals. | Protecting the remaining forest and creating conservation land/area in several locations for the purpose of supporting wildlife feeding and breeding ground. Planting prumpung for elephant's food. |
| What kind of monitoring that has to be done to measure effective maintenance? | Conservation/prohibition in protected area (monitoring/patrolling to protect respective area), annual area monitoring to measure the bordered forest integrity as buffer zone of the adjacent protected mangrove forest Annual biodiversity survey to evaluate wildlife population tendency in protected area and forest. | Informing communities to report the sight of elephant to monitoring team and district. Collaborative elephant pouch mapping between company and community. |

Result Matrix of Group 1 Discussion (HCV 1.3)

| | Question | Assessment Result | Stakeholders Input |
|--|-----------------|--------------------------|---------------------------|
|--|-----------------|--------------------------|---------------------------|

| | | | |
|---------------------------|--|---|---|
| HCV | Is there any High Value Conservation Area in the forest management unit (UMH) or in the surrounding landscape? | There are 8 mammals species, 33 bird species, 7 herpetofauna species, 2 endangered plant species, limited and protected spreading. | Group of elephants, root tiger, labi labi, turtles, deers, crocodile, phyton and cobra. |
| HCVA | Where is HCV found in the area? | HCVA: All areas. HCVMA: natural ecosystem and wildlife corridors. | Almost all areas in location, especially near natural forest in Ulak Kedondong village and Bukit Batu village. |
| Threats toward HCV | What kind of threats that could reduced/threatened the specified HCV? (Internal of External factors) | 1. Habitat degradation and fragmentation that affecting HCV biodiversity 2. Habitat conversion done by communities. 3. Wildlife hunting done by communities and external parties. | Forest conversion and land opening for field. Usage of chemicals, such as fertilizer and pesticide. |
| HCVMA | Which area that has to be maintained to reduce threats for HCV? | All concession area of PT. SBA WI, including forest industry. Areas that need special treatments are riverbank area, grass in concession area and elephant corridor (suspected areas between population) | Areas with forest, monitored for the purpose of knowing animal activity to avoid conflict with communities. |
| Management Recommendation | What kind of management that has to be done to reduce such threats? | Building relationships between sub-populations (specifically for Sumatran Elephants). Increasing ecosystem's health that supports preservation of elephant population and TTD wildlife inside landscape on long-term basis. Increasing knowledge and law enforcement to protect TTD wildlife. | Protecting existing forest and creating conservation space/area in several locations for the purpose of animal's wellbeing. Informing communities that witness elephant's existence and follow up the information to district, local researcher, and monitoring corridor. |

| | | | |
|---------------------------|---|--|--|
| Monitoring Recommendation | What kind of monitoring that has to be done to measure effective maintenance? | <ul style="list-style-type: none"> - Monitoring by PT. SBA WI staffs. - Annual assessment. | Local authorities and private companies are in subject to involve communities to protect and monitoring every specific period. |
|---------------------------|---|--|--|

5.2. Group 2 (HCV 1.2 and 1.4) :

Facilitator: Lubis Hendri

Resource Person: Yoga (Ekologika Team)

Note taker: Fahrizal Pulungan

| Result Matrix of Group 1 Discussion (HCV 1.2 and 1.4) | | | |
|---|--|---|---|
| | Question | Assessment Result | Stakeholders Input |
| HCV | Is there any High Value Conservation Area in the forest management unit (UMH) or in the surrounding landscape? | Nearly extincted species: Sumatran Elephant, Sumatran Tiger, Turtles and Biyuku, Nearly extinct plant species: Swamp Meranti (based on IUCN's criteria). 45 elephants existed in the area | Elephant's corridor, border of shore area, and riverbank area. Vegetation of ramin, spread of nibung located between Sumatra-Bangka, Jelutung. |
| HCVA | Where is HCV found in the area? | Species are found in Ketupak river, Lumpur river, Lebung Hitam, and Tanjung Jati. | Swamp district |
| Threats toward HCV | What kind of threats that could reduced/threatened the specified HCV? (Internal of External factors) | Possible risk that affecting species wholeness that are endangered in concession: 1. Private companies activities; 2. Wildlife exploitation. | To reduce threats towards HCV ; 1. White Patrol; 2. Community Empowerment; 3. Preserving Nibung plant and endangered vegetation; 4. Review for Industrial Forest Management Plan ; 5. Further identification of elephant habitat and creating elephant corridor. |
| HCVMA | Which area that has to be maintained to reduce threats for HCV? | <i>Presented results are not listed in this matrix.</i> | Areas of Ketupak river, Lumpur river, Lebung hitam, and Tanjung Jati |
| Management Recommendation | What kind of management that has to be done to reduce such threats? | <i>Presented results are not listed in this matrix..</i> | Building corridors, need additional data related to managing Sumatran Elephant species. Nibung preservation is recommended to support nibung plant vegetation. |

| | | | |
|---------------------------|--|---|---|
| | | | Managed areas: Peat protected areas, Plasma Nutfah Conservation Area, and Wildlife preservation which included in HCV management plan. |
| Monitoring Recommendation | What kind of management that has to be done to reduce such threats? | <i>Presented results are not listed in this matrix.</i> | Organizing a monitoring team which involved related parties (stakeholder); companies, government authorities, communities, researcher and CSO/NGO. |
| | What kind of monitoring that has to be done to measure the effectiveness of maintenance? | | After retrieving data, analyzing and further inspection towards the data are conducted to identify existing potential risk. Time series (to view existing changes) are used to view retrieved data. For Fauna sector: Completing methodology in retrieving data, for example adding Secondary Data (past to present data, retrieved from interviews, current condition of corridor, existing potential feeding ; Pressure of Habitat Area (functional shift of area & vegetation changes); feeding ground position & salting found. For flora sector; Secondary Data (resulted from Land Cruising and Interviews); vegetation changes and land site condition (micro climate); Pressure resulted from area functional shift; species ecology data (including adaptability & reproductional and also site specific; spatial planning of forest management. |

5.3. Group 3 (HCV 3) :

Facilitator: Masrun Zawawi

Resource Person: Togar dan Adi (Ekologika Team)

Note taker: Syahrial

| Result Matrix of Group 3 Discussion (HCV 3) | | |
|---|-------------------|--------------------|
| Question | Assessment Result | Stakeholders Input |
| | | |

| | | |
|--|---|---|
| Is there any High Value Conservation Area in the forest management unit (UMH) or in the surrounding landscape? | Based on secondary data and land closure map and also field map resulted from main ecosystem assessment result : 1. Peat Swamp forest 2. Mangrove forest. | Data of locations which taken from the result of ecosystem assessment, method of sampling from two ecosystem? Vegetation analysis? Area coverage of peat and depth? Track jog? Water table since it is related to environmental service with scalable matrix. |
| Where is HCV found in the area? | 1. Mangrove alongside of east shore, 2. Peat forest in private companies' area | 1. Using data with detailed scale (repairing map) 2. Map that depicts endangered ecosystem and steps need to be done |
| What kind of threats that could reduced/threatened the specified HCV? (Internal of External factors) | <i>Presented results are not listed in this matrix.</i> | 1. Opening fisheries traditionally (external) 2. Canal outlets (internal) that designated towards shore 3. Invasive species in buffer zone area. |
| Which area that has to be maintained to reduce threats for HCV? | HCVA which peat swamp forest and mangrove forest existed. | Planting or conducting enrichment in types of mangrove plants of enrichment at border of shore area which is listed in critical condition. |
| What kind of management that has to be done to reduce such threats? | Further survey. | Enrichment and halting expansion. |
| What kind of monitoring that has to be done to measure effective maintenance? | scheduled annual check, fly over | Ground check of peat forest and mangrove and also mapping to scale total area wide. |

Additional Note:

5.4. Group 4 (HCV 4.1 & 4.3) :

Facilitator :Subardin

Resource Person : Hendi (Ekologika Team)

Note taker: Sigid

| Result Matrix of Group 4 Discussions (HCV 4.1) | | | |
|---|--|---|---|
| | Questions | Assessment Results | Stakeholders Input |
| HCV | Is there any High Value Conservation Area in the forest management unit (UMH) or in the surrounding landscape? | Riverbank area for living purpose, survey was conducted by sampling at nipah area (mixed area), several areas which are listed as water absorption area. HCV is not only water source, but also | Mr. Icuk Harma from Simpang Tig Sakti – there was a small scale river which functioned as source of water, lebung, and <i>parit kecil</i> , peat dome, does existed in this part of concession. |

| | | | |
|--------------------|--|--|---|
| | | flood control. Is there any effect from private companies' activity? Wetland condition also having changes, however the results are not good as planned. | |
| HCVA | Where is HCV found in the area? | Riverbank and canal outlet. | 1) small trench, 2) lebung, 3) peat dome (<i>Participant marked these locations on map</i>) |
| Threats toward HCV | What kind of threats that could reduceb/threatened the specified HCV? (Internal of External factors) | Local protected areas, stipulated by company. Threat: the status is weak, not known by stakeholders, 2) hidrology function due to company activities | Icuk Harma from Simpang Tiga Sakti ; management of private companies' trench, when the trench opened during flood, it adds the water level of the flood, in dry condition the trench was closed, thus the environment suffered from drought, and these conditions are affecting communities that needs water, and adds risk of flood. (from simpang tiga sakti), increasing water debit, never happened before canalization made by private companies, sambong to the extent of steep surface, teluk pulau district's river are still used for our communities' living purpose, still flowing water significantly, after canalization was built they (private companies) cut the water line, at lebung tapa area, they have to walk because of the mud level at the area. this condition can be seen when drought occured at the area. (2) Lack of clean water with decreasing quality of river water. Back then, <i>Seribu Akar</i> water (peat water) was used, but now there are no sources of water. (3) Relationship between communities and private companies are never in a good condition. When three companies opened canal altogether, it will increase the water debit at Simpang Tiga Sakti. Sedimentation occured by canalization. (4) Mulyadi from Ceper river. Mesuji river is polluted by pesticide, meanwhile currently the water was used for daily use by the community. The pollution also killed many fishes. These fished are |

| | | | |
|---------------------------|---|--|---|
| | | | also source of income for communities. |
| HCVMA | Which area that has to be maintained to reduce threats for HCV? | Riverbank and canal outlet. | |
| Management Recommendation | What kind of management that has to be done to reduce such threats? | (1) HCV boundaries management (riverbank area) has to be made clear between one and another. (2) Spread and preserving canal using heavy utilities have to be reduced, to minimize sedimentation occurred to the area. | No clear parameter. WTP existed, communities using the water treatment as many as 50 percent. (2) Training for communities, for example the importance of preserving peat area as source of water. (3) Conduct routine meetings and communities to bridge understanding between involved parties, for example flood problems that overflows to settlements and plants. (bobby TFT) (4) Village regulations that supported regulation source of water. (Puspa) |
| Monitoring Recommendation | What kind of monitoring that has to be done to measure effective maintenance? | (1) Monitoring water quality have to be conducted and scheduled, from before it was built, so we could have a clear indicator. (2) monitoring the effect of logging process towards water river. | There are scheduled monitoring (adjusted with season condition, for there are effects that specifically occurred in both season) by independent team. |

Additional note:

- In HCV assessment process, management and monitoring recommendations did not employ gender perspective, despite the main consumption of water is by women (Puspa)

| Result Matrix of Group 4 Discussion (HCV 4.3) | | | |
|---|--|---|--|
| | Questions | Assessment Result | Stakeholders Input |
| HCV | Is there any High Value Conservation Area in the forest management unit (UMH) or in the surrounding landscape? | Ecosystem that never exposed to fire disaster. Swamp are never exposed to such risk (fire disaster), while peat swamps are prone to fire. | Icuk from Simpang Tiga Sakti, swamps are still prone to fire disaster, even if there is water below. |
| HCVA | Where is HCV found in the area? | Wetland area, swamps, and natural barriers. | There is forest that never exposed to fire disaster at KPPN Biyuku, Simpang Tiga Sakti. |

| | | | |
|---------------------------|--|---|--|
| Threats toward HCV | What kind of threats that could reduceb/threatened the specified HCV? (Internal of External factors) | Peat canalization, community activities such as diposing cigarrete waste. | Illegal logging, traditional farming system conducted by communities such as cut, shred, and burn. |
| HCVMA | Which area that has to be maintained to reduce threats for HCV? | Wetland area, swamps, and natural barriers. | KPPN Biyuku, Simpang Tiga Sakti. Participant marked locations on map. |
| Management Recommendation | What kind of management that has to be done to reduce such threats? | 100 m no logging buffer zone area. | Changing community customs by providing alternative source of income from using slash and burn system into another way, as sonor to HCV. |
| Monitoring Recommendation | What kind of monitoring that has to be done to measure effective maintenance? | Regular monitoring that involves several components. | There are monitoring and scheduled monitoring conducted by indepent team (an organization which created by private companies and communities) from bobby TFT |

Second Day

Matrix HCV 5 and 6 discussion result of group 2 (PT.SBA concession)

Matrix HCV 5 discussion result of group 2

Note taker : Sigid Widagdo

| Result Matrix of HCV-5 : Important Natural Resources in Providing Communities' Basic Needs | | | |
|---|--|--|--|
| | Questions | Assessment Results | Stakeholders Input |
| HCV | Is there any High Value Conservation Area in the forest management unit (UMH) or in the surrounding landscape? | SP Tiga Makmur; source of protein intake ; river fish, etc – construction material (roof – Nipah), - <i>source of clean water</i> (river), - crafts / Utensils (ship fom meranti / medang wood). Sp Tiga Sakti; Source of protein intake; fish condtions are not managed in a preserving way. | SP Tiga Makmur ; source of carbohydrate ; glutinous rice, construction material ; langkang wood for constructing house. SP Tiga Sakti ; source of protein ; fish are managed using keramba. Utensils ; ship made of sungkit wood, and communities can not afford fiber ship because it is expensive, not because they don't want to use an alternative. |
| HCVA | Where is HCV found in the area? | Source of protein intake is fulfilled from Riding river, Lebung Hitam river, Belidang river and Lumpur river. | Canals, swamp, Semuning river trench at Simpang Tiga Sakti. |
| Threats toward HCV | What kind of threats that could reduced/threat ened the specified HCV? (Internal of External factors) | Polluted river water caused by private companies' activity. Land clearing. | Internal threats: (1) Deer hunting for additional source of protein intake. (2) fish-catching device: using electricity, poison/putas, or thight fishnet that also caught small fishes. Tight fishnets are used to make fermented fish paste. (3) Existence of lebak lebung auction that conducted extensive exploitation towards fish as source of protein. External threats: (4) Private companies posed threat toward clean water and existence fish in river. |
| HCVMA | Which area that has to be maintained to reduce threats for HCV? | | Participant marked locations on map |

| | | | |
|---------------------------|---|--|--|
| Management Recommendation | What kind of management that has to be done to reduce such threats? | Participative mapping for HCV 5: on areas that is prohibited to build canal. | (1) On water / canal management, private companies can assure and maintain water quality and quantity consumed by communities is in good condition, as well as fish preservation. Conducted further studies that related to source of water and river flow. (2) cleaning canals by monitoring quality of waste. (3) For wood supply, for ship construction, it is proposed to plant multipurpose and superior tree as company requirement . |
| Monitoring Recommendation | What kind of monitoring that has to be done to measure effective maintenance? | <i>Presented results are not listed in this matrix.</i> | (1) Collaborative organization that conducts monitoring. (2) Village regulation that controls management proposal, (3) Optimizing community monitoring group, and empowering community through socialization and training. |

Additional Note : simpang tiga induk is not included in SBA. Simpang tiga induk (ricefield) is part of other use forest area (APL). SBA only included kampung sungai mat yasin village, BMH sungai belidang and sungai bagan villages

Matrix HCV 6 discussion result of group 2

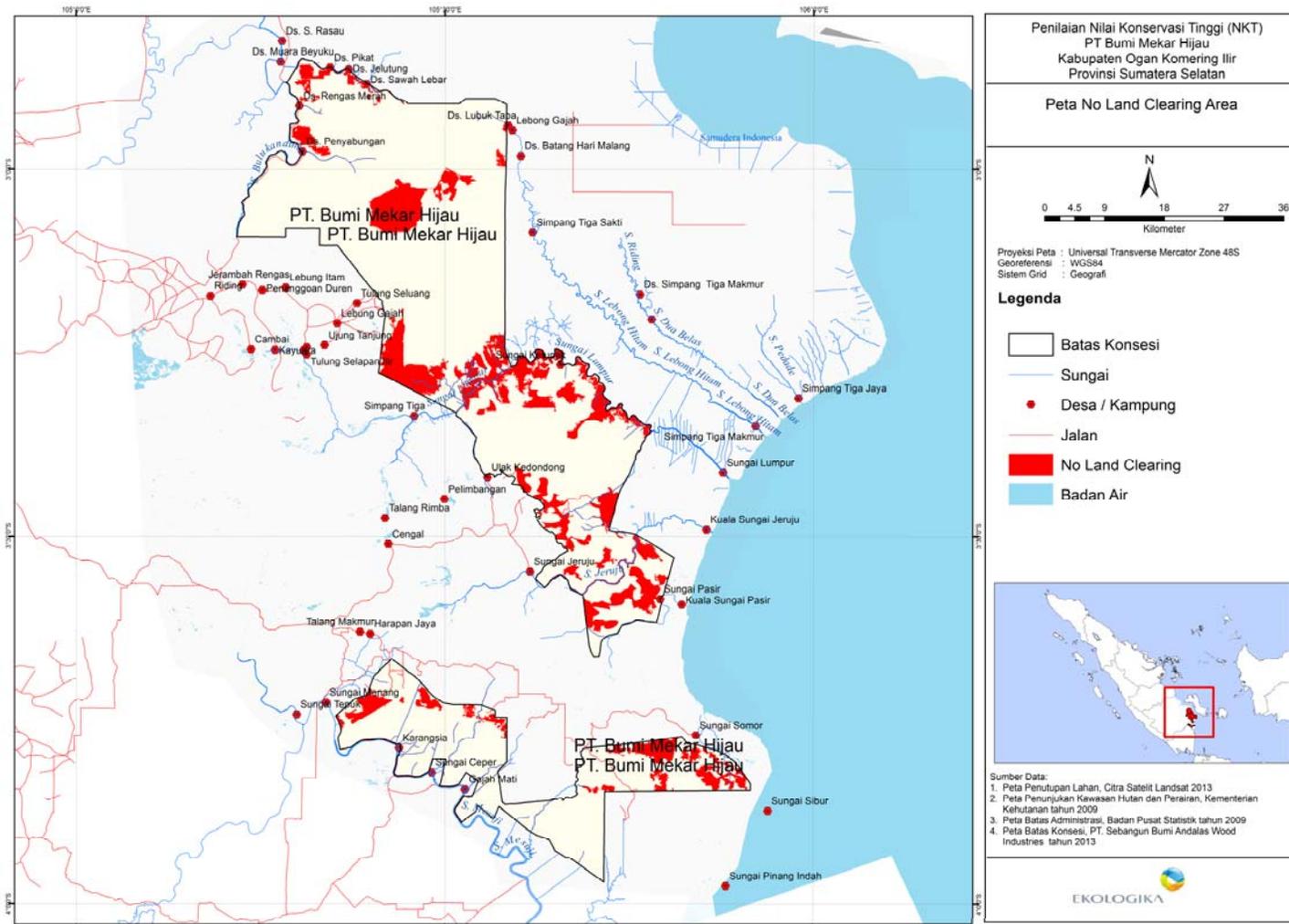
| Result Matrix of HCV-6: Related to cultural identity of community. | | | |
|---|--|--|--|
| | Questions | Assessment Result | Stakeholders Input |
| HCV | Is there any High Value Conservation Area in the forest management unit (UMH) or in the surrounding landscape? | Other than sacred places and graveyards, kunduw fruits were found used as construction material for building (local customs). Yellow bamboo is used to protect children from misfortune. (local customs) | Lebak lebung auction system |
| HCVA | Where is HCV found in the area? | | <i>Participants marked locations on map</i> |
| Threats toward HCV | What kind of threats that could reduced/threatened the specified HCV? (Internal of External factors) | Land opening that disregards local cultural values, including ones by private companies. | Massive exploitation by auction winner, a threat for lebak lebung; - diminishing myth/cultural values. |

| | | | |
|---------------------------|---|--|--|
| HCVMA | Which area that has to be maintained to reduce threats for HCV? | | <i>Participanst marked locations on map</i> |
| Management Recommendation | What kind of management that has to be done to reduce such threats? | Supporting local traditions, protecting and preserving locations such as graveyards. Explaining village's history. | (1) Publishing local folklore/myths and included in school's curriculum. (2) Formulate village regulation (PERDES) from customary law (such as simbur cahaya, or other unwritten customary law) |
| Monitoring Recommendation | What kind of monitoring that has to be done to measure effective maintenance? | Conducting field visit to village, interacting and communitating with stakeholders. | Developing written agreement between private companies and communities. |

5 RECOMMENDATION

| HCV | Sub HCV | Definition | Mangement | Monitoring |
|---|---------|--|--|---|
| 1. | 1.1 | Areas/sites that have or give Biodiversity Supporting Function for Protected and/or Conservation Areas. | Completing the boundary marking with conservation area | Re-measurement of boundaries and agreement upon the refence map |
| No-harvesting in the buffer zone | | | Direct field monitoring to visitable area. Standard post-harvesting in annual working plan (RKT) | |
| Conserving germplasm preservation area (KPPN) and riverbank | | | Collaborative patrols with forest ranger and community | |
| Increasing awareness of staff and community about wildlife | | | Patrol and enforcement of reporting system if there is a monitoring | |
| | 1.2 | Endangered species. | Human elephant conflict mitigation and protection measures of Sumatran elephants | Establishing Elephant Protection Unit (UPG) training and awareness to staff, contractors and the community |
| | 1.3 | Areas that contain habitat for viable population of endangered restricted range or protected species | Build connectivity between sub-populations (specifically for Sumatran elephants) | Surveys in the area of elephant movement range |
| | | | Improving ecosystems health | Active random pre and post-harvest endangered, endemic, and protected (TTD) species population surveys in annual working plan (RKT) |
| | | | Increase awareness and law enforcement | Regular patrols and questionnaires with staff and the community |
| | 1.4 | Areas that contain habitat of temporary use by species or congregation of species | Migratory birds inventory survey | Surveys in the area adjacent to mangroves and other wetland ecosystems |
| | | | Increasing awareness on migratory birds | Questionnaires with staff and the community |
| 3 | | Areas with endangered or nearly extinct ecosystem. | HCV3 Conservation | Collaborative patrols with forest ranger and community |
| | | | HCV3 Restoration | Stands Inventory and fauna survey |
| 4 | 4.1 | Important areas or ecosystem that function as water supply and flood control for community that resides in downstream areas. | Identification and further restrictions on HCVA 4.1 | “spot-check” survey of the result of production and cutting team |
| Harvesting and maintenance of the canal using heavy equipment minimally in the region of small riparian as the buffer to maintain hydrological function | | | “Spot-check” survey | |

| HCV | Sub HCV | Definition | Mangement | Monitoring |
|------------|----------------|---|---|---|
| | 4.3 | Areas that function as natural barriers to prevent forest or field fire. | Fire Patrols | Patrol with the community |
| 5 | | Areas with Important Functions to fulfill Local community's basic needs. | Participatory mapping to finalize HCVA 5. | Field inspection and periodic reporting |
| | | | Developing multi stakeholders collaboration and community empowerment | Participatory evaluation by focus group discussion with the program participants |
| | | | Monitoring land clearing for plantation area | Field survey and participatory monitoring, involving community and stakeholders |
| | | | Formulating regulation of natural resources utilization | Field survey and questionnaire |
| | | | Designation of protected area and buffer zone of protected forest | Field survey and participatory evaluation, involving beneficiaris in focus group discussion |
| 6 | | Areas with Important Functions as Traditional Cultural Identity of Local Communities. | Designation of cultural reserve | Periodical inventory; report to law enforcement official of vandalism and robbery |



Map Summarizes no Land Clearing and HCV management area of BMH

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