

# **RSPO NOTIFICATION OF PROPOSED NEW PLANTING**

This notification shall be on the RSPO website for 30 days as required by the RSPO procedures for new plantings (http://www.rspo.org/?q=page/535). It has also been posted on local on-site notice boards.

# Date of notification: 20<sup>th</sup> January 2014

Tick whichever is appropriate

| V | This is a completely new development and stakeholders may submit comments. |
|---|--|
|   | This is part of an ongoing planting and is meant for notification only.    |

| COMPANY                                   | : BUMITAMA AGRI LIMITED (BAL)  |
|---|--|
| SUBSIDIARY (If any)                       | : PT ANDALAN SUKSES MAKMUR (subsidiary of BAL)                               |
| RSPO Membership Numb                      | ber : 1-0043-07-000-00 (registered under BAL since October 8 <sup>th</sup> , |
|   | 2007)  |
| Location of proposed nev                  | w planting :   |
| Company Name                              | : PT ANDALAN SUKSES MAKMUR (PT ASMR)   |
| Location                                  | : Sekonyer Village, Teluk Pulai Village and Kumai Hilir Village, Kumai Sub-  |
| district, Kotawaringin Ba                 | arat Regency, Central Kalimantan Province.                                   |
| <ul> <li>Geographical location</li> </ul> | : 111°53'16" - 111°48'59" E and 2°38'41" - 3°0'41" S                         |
| <ul> <li>Surrounding Entities</li> </ul>  | : based on HCV Identification Final Report 2013                              |
| a. North                                  | : PT Bumilanggeng Perdanatrada   |
| b. East                                   | : Sekonyer River and Tanjung Puting National Park                            |
| c. West                                   | : Sekonyer River and Tanjung Puting National Park                            |
| d. South                                  | : Kumai River  |
| <ul> <li>New Planting Area</li> </ul>     | : ± 9,276.5 Ha (based on Location Permit), 930.84 Ha (appointed as HCV),     |
|   | 7,300 Ha (proposed for plantings area both estates and smallholders).        |

#### List of legal documents, regulatory permits and property deeds

The permits that have been obtained by the company are inclusive of Consent License (Izin Prinsip), Permitted Area (Ijin Lokasi), Environment Impact Assessment (AMDAL) and Environmental Permit (Izin Kelayakan Lingkungan and Izin Lingkungan) and the Plantation Business Permit (Izin Usaha Perkebunan). The followings are the list of the licenses and recommendations:

| No | Licenses and<br>recommendations                                   | Issued by   | Number  | Note                     |
|----|---|---|---|--------------------------|
| 1. | Deed of Establishment   | Tintin Surtini, SH. MH. MKn                                 | No : 46   | Registered<br>29-06-2007 |
| 2. | Company Registration Number                                       | Cooperation, UMKM and trade<br>Agency of Jakarta Province   | No. 12920-04/PM/P/1.824.271                           | Registered<br>03-09-2013 |
| 3. | Tax Registration Code Number                                      | Directorate General of Taxes,<br>Ministry of Finance        | 02.596.860.3-064.000                                  | Registered<br>20-07-2007 |
| 4. | Consent License<br>(Izin Prinsip)                                 | Regent of Kotawaringin Barat<br>(Bupati Kotawaringin Barat) | No.590/105/Pem-XI/2012 Year<br>2012 (size ± 9,000 Ha) | Registered<br>21-11-2012 |
| 5. | Permitted Area (Izin Lokasi)                                      | Regent of Kotawaringin Barat<br>(Bupati Kotawaringin Barat) | No.525/68/XII/2012 Year 2012<br>(size ± 9,276.5 Ha)   | Registered<br>18-12-2012 |
| 6. | Environmental Permit<br>(Persetujuan Dokumen ANDAL,<br>RKL & RPL) | Head of BLH<br>(BLH Kotawaringin Barat)                     | No. 660/698/BLH.II/X/2013                             | Registered<br>23-10-2013 |
| 7. | Environmental Permit (Izin<br>Lingkungan)                         | Regent of Kotawaringin Barat<br>(Bupati Kotawaringin Barat) | No.660/18/BLH/X/2013<br>size ± 9,276.5 Ha             | Registered<br>28-10-2013 |
| 8. | Plantation Business Permit (Izin<br>Usaha Perkebunan)             | Regent of Kotawaringin Barat<br>(Bupati Kotawaringin Barat) | No.525/308/EK<br>(size ± 7,000 Ha)                    | Registered<br>26-11-2013 |

**Table 1.** Types of permits and recommendations PT Andalan Sukses Makmur

# Figure 1. Location Map of PT ANDALAN SUKSES MAKMUR in Kalimantan Island, INDONESIA





Figure 2. Location Map of PT ANDALAN SUKSES MAKMUR in the District of KOTAWARINGIN BARAT

Figure 3. Project Plan Area of PT ANDALAN SUKSES MAKMUR overlay with Moratorium map Revision V (SK Menhut No. 6018/Menhut-VII/IPSDH/2013, dated 13 November 2013)



#### SUMMARY FROM SEI ASSESSMENT:

The Environment Impact Assessment (AMDAL) of PT Andalan Sukses Makmur was carried out by CV. INTERGRAHA CITRA PERSADA which is located at CV INTERGRAHA CITRA PERSADA Address : Komplek Tanjung Pura University Jl. M.H. Thamrin No. P-42 Pontianak - West Kalimantan, Telephone 0561 – 745286

The key consultants conducting these assessments have been accredited with Competency certificate and approved by The National Association of Professional Consultants of Indonesia.:

Table 2. Person and Expertise EIA Team Assessor in PT Andalan Sukses Makmur

| Team Name               | Team Composition                                  | Specification | Competence<br>certificate |
|-------------------------|---|---------------|---------------------------|
| Yudi Andrian, ST.       | Team Leader                                       | AMDAL A & B   | Team Leader<br>(KTPA)     |
| Endang Mulyadi A.K, MSi | Sub Team Social-<br>Culture & Community<br>Health |               | Member (ATPA)             |
| Naveri, S. Hut          | Sub Team Biology                                  |               | Member (ATPA)             |
| Ir. Wawan Hermawan      | Sub Team Biology                                  |               |                           |

| Kiki Prio Utomo, MSc    | Hydrologist                                       |             |               |
|-------------------------|---|-------------|---------------|
| Anwar Azazi, SE., DEA   | Sub Team Social-<br>Culture & Community<br>Health |             |               |
| Sutriswanto, SKM, M.Kes | Sub Team Social-<br>Culture & Community<br>Health |             |               |
| Sulistiani, ST          | Sub Team Physic-<br>Chemist                       | AMDAL B     | Member (ATPA) |
| Arry Kurniawan, ST      | Sub Team Physic-<br>Chemist                       | AMDAL A & B |               |

# Assessment Methods (data sources, collection, dates, program, and visited places)

The data collection process was strongly associated with the type of data that was collected. In generally, studies will be conducted based on primary data and secondary data. Primary data obtained through observation, measurement and field interviews, and secondary data obtained from the literature collected, either from the company, or directly related institutions in the study area. The methods that used to collect the data adjusted with components that can be studied. The used data must be accurate and reliable so that it can be used to analyze, measure and observe the environmental components which predicted will be affected and components of action plan which predicted gets significant impacts and the surrounding environment.

The data collected as:

- Physic Chemical Components (Climate, Air Quality and Noise, Hydrology, and Soil).
- Biological Components (Vegetation, Animals, and Water Biota).
- Socio-Economic Culture Components (Demography/Population, Social, Economic, Social and Cultural).
- Environmental Health and Public Health Components (Environmental sanitation, public health level, level of public health services).

# **Methods of Significant Impact Estimation**

Determination of significant impacts intended as an estimation attempt of large and importance the environmental quality changes that caused by plantation development activities and palm oil mills of PT Andalan Sukses Makmur in Kumai District, Kotawaringin Barat Regency. Method of significant impact estimates that will happen approached by differentiating the magnitude impact and significant impacts.

# A. Estimation of Magnitude Impact

Magnitude of Impact measured from the environmental quality changes. On estimates of changes in environmental quality is a used formal and informal method.

# 1. Formal Methods

Formal methods are used to estimate the impact of parameters which the system characteristics can be identified or estimated by using the approach of environmental threshold at national and regional levels.

# 2. Non Formal Methods

Non-formal method is a method that is based on the professional judgment of experts, Logical Frame Analysis and Analogy. This method is used to estimate the environmental parameters which characteristics system is difficult to identify or estimate by modeling approach such as models, socio-cultural systems.

To simplify estimates of magnitude Impact from changes in quality of the matrix filling, then used the approach of environmental quality assessment scale. Level of environmental quality assessment scale using a scale of 1-5. Based on these figures assessment, environmental quality differentiated as: excellent (5), good (4), fairly good (3), bad (2), and very poor (1). Systematically, environmental quality and assessment scale.

#### **B.** Determination of Important Impact Characteristics

Assessment of the important impact characteristics were done according to BAPEDAL decision Number: KEP-056 of 1994 on Guidelines Regarding Significant Impacts size. Meanwhile, in relation to the impact evaluation conducted by Important Impact scaling into two categories: important and less important. Characteristics Impact divided into two groups, negative impacts and positive impacts. Be negative if the changes / impact estimated get adverse the environmental, and is positive if the changes / impact estimated get benefit the environment.

#### C. Methods of Important Impact Evaluation

Important impact evaluation explored in "holistic causative" against expected environmental components that affected. For this purpose, used supporting tools such as interactions matrix. Interactions matrix between activity components and environmental component contain magnitude of Impact and Importance of Impact. This important impact evaluation expected to study carefully and thorough to primary impact (positive / negative) and secondary impacts (positive / negative), and also other derivative impacts on the environment component and source of importance Impact from activities component.

From the study of important impacts source and important impacts hypothetical are expected can be identified the key issues that need to be managed. Results of the Important impact evaluation are also expected to assist the decision making process in the selection of an alternative plan that viable in terms of environmental aspects.

The development of oil palm plantation and palm oil mill of PT. Andalan Sukses Makmur in the Kumai District, Kotawaringin Barat has raised the awareness of the environmental impact on the physical-chemical, biological, and social, economic, cultural and local public health, in both the positive and negative impacts. In the implementation of plantations development and Palm Oil Mill of PT. Andalan Sukses Makmur, one aspect of which is the main consideration is the preservation of the environment, in order to support the implementation of sustainable development.

EIA study of plantations activity and Palm Oil Mill of PT. Andalan Sukses Mandiri is a single EIA activity / projects. Furthermore, the scoping study of area boundary for Environmental Impact Assessment (EIA) of Oil Palm Plantation activities considering four (4) factors, namely: limit project / activity, ecological boundaries, social boundaries and administrative boundaries.

Plantation activities and Palm Oil Mill of PT. Andalan Sukses Makmur, is predicted to raise the magnitude and importance of the impact to the environment, so it needs to be explored in depth including the four phases of activity: Pre-Construction phase, Construction phase, Operational phase and Post-Operational phase.

Magnitude and importance of the impact that need attention in the EIA study of the Plantation and Palm Oil Mill of PT. Andalan Sukses Makmur at pra-construction phase, is the change in attitudes and perceptions and social unrest. At this phase the activities that will be explored is the socialization and boundary demarcation and land acquisition.

Magnitude and importance of the impact that needs attention in the construction phase is a decrease in air quality and noise levels, decrease the quality of surface water, land and forest fire potential, decreased diversity of flora, fauna species diversity decreased, increased job and business opportunities, increase incomes, changes in attitudes and perceptions as well as the decrease in public health. At this stage of activities that can be studied is the mobilization of heavy equipment, manpower recruitment, land clearing, construction of facilities and infrastructure, seeding and planting, maintenance of immature plants, factory construction and waste water treatment plant.

Magnitude and importance of the impacts that need attention at this operation phase is the reduction of air quality and increased noise, increased job and business opportunities, increase incomes, changing attitudes and perceptions, decreased levels of public health in the study area. At this stage the activity which is analyzed is the FFB harvesting and transport, maintenance of generating plant, FFB processing, waste treatment and replanting.

Magnitude and importance impacts that need attention at the post operation phase is the reduction of air quality and increased noise, decrease of local income, changing attitudes and perceptions, and community unrest. At this phase the activity which analyzed is labor dismissals, demobilization of heavy equipment, reforestation and revegetation, and also land handover to government and community.

Changes in some aspects of the environment (abiotis, biotic, social, economic, cultural and public health) in the Kumai Sub-District, Kotawaringin Barat, due to these activities require further tightening in the utilization of available natural resources and to optimize the management and monitoring efforts integrated and all components of the integrated business and technical agency responsible.

Magnitude and importance of the impacts that will be managed and monitored in the Environmental Management Plan and Environmental Monitoring Plan based on the results of the impact evaluation are: Physical-chemical environment components include air and noise quality, surface water quality, and forest fires potential. Social culture and public health components include: social unrest, job and business opportunities, perceptions, local revenue and public health level.

Environmental management of the environmental components that experiencing fundamental change, in both the positive and negative as a effect of the Oil Palm Development plan of PT. Andalan Sukses Makmur to be carried out in terms of the three approaches, are: technological, socio-economic-cultural and institutional.

Implementation of environmental monitoring carried out by PT. Andalan Sukses Makmur. Environmental monitoring reports will be submitted annually to the government agencies and technical adviser

# SIA (Social Impact Assessment)

The Social Impact Assessment of PT Andalan Sukses Makmur was carried out by Sonokeling Akreditas Nusantara which is located at PT Sonokeling Akreditas Nusantara Address : Komplek Sari Inten Number. 44 RT 02/RW 09, Ciomas Rahayu, Ciomas, Bogor - West Java, 16610 Telephone. 0251-7521685.

The key consultants conducting these assessments are:

| No. | Expert Name                 | Expertise/Position |
|-----|-----------------------------|--------------------|
| 1   | Ir. Kresno Dwi Santosa, MSi | Team Leader        |
| 2   | Burhanudin Gala, MA         | Anthropologists    |
| 3   | Janri Bungatali, MSi        | Sociologists       |
| 4   | Insan Kurnia, S.Hut., MSi   | Social-Culture     |

Table 4. Person and Expertise SIA Team Assessor in PT Andalan Sukses Makmur

#### Assessment Methods (data sources, collection, dates, program, and visited places)

Social Impact Assessment on the ground was carried out as bellows :

#### Method of Executing the Study

Approach framework in the study of Social Impact Assessment was by learning the present existing condition in PT. Andalan Sukses Makmur, particularly the condition which was related with socio-economic condition, socio-economic impacts of the company toward the surrounding of the community, and the community's perception. Based on the existing condition, compilation and preparation were conducted for making SIA document and social management plan which contain activities that should be conducted to create ideal condition (desirable condition).

Sampling technique that is being used was purposive sampling (samples were selected on the basis of researcher's judgement which decided that those samples were the most suitable to be selected for the purpose and objectives of the research) and simple random sampling (technique of sample collection which gave the same chance for all population elements to be taken). In determining the distribution of research samples, representativeness of the samples was considered on the basis of population characteristics.

Purposive sampling was used for determining the sample villages, whereas simple random sampling was used for determining respondents which were taken from villages which became the sample. Sample villages were taken on the basis of typology / characteristics of the community, accessibility, social vulnerability and inputs from PT. Andalan Sukses Makmur. On the basis of sampling techniques being used and inputs from the company, the villages which became the sample were village of Kampung Kumai Seberang Desa Kumai hilir, Sekonyer and Teluk Pulai villages.

Implementation in the field of Social Impact Assessment carried out by following the principles as follows:

- 1. Participatory: issues and information identification was conducted in a participatory mechanism. This approach used the people as subjects to use their experience for social issues mapping , shared their opinions and aspirations , as well as in designing and managing the changes that will take place
- 2. Multiparty: issues and information identification was conducted through multiparty approach that involving those party both directly and indirectly give and/or receive the impact.
- 3. Rapid and Ex ante ; Issues and information identification were done quickly and based on alleged (forecast ) to the change that occur rather than based on accurate factual data as a solution to the Social Impact Assessment limitations, as well as of the time limitation.
- 4. Appreciative; issues identification guided information in a positive manner, not only to determine the extent of the gap that happened, but also to explore their expectations, potential, and ideas to find solutions to the social issues that occur.
- 5. Social Learning Cycle; social impact assessment is not one linear process but more to a cycle process, which serves as a social learning processes to respond to any environmental changes

#### **COMMUNITY CHARACTERISTIC**

#### Socio-Culture

People in the study of the villages were Muslim majority. All people live in harmonious society. Resident can practice their faith without interference or threat from any party. Religious tolerance has led to a high quality socially rich life which is going well and in harmony Melayu and Banjar ethnic groups are dominant in the study of the villages, except in transmigration areas dominated by Javanese and Sundanese ethnics group and there are also ethnic flores. Ethnic immigrants and native around the plantation area of PT. ASMR have built up social relationships with each other since the existence of transmigration settlements. One form of activity that have had a positive impact on the relationship between community members is a sport together. The availability of a wide range of sports facilities, especially soccer and volleyball, in addition to meet people's needs in terms of recreation and self-actualization is also an excellent means to accelerate the process of integration in society, both in the groups with similar backgrounds and of different (ethnic, religious, level of education, etc.)

#### Sosio-Economic

The populations residing in the surrounding villages of PT. ASMR in general make their livelihood from agriculture (rice farmers or farming). Another alternative livelihood is gardening, farming or fishing and shellfish, or utilizing other natural products for their own consumption or for sale The business activities of the population around the area of PT. ASMR can be classified into two groups, namely groups of non-formal and formal. The formal sector consists of business areas such as Civil Servants (PNS), the military, and employment in a private company in nearby residential population. The informal sector is more open in the population which endeavors in agriculture, the utilization of non-timber forest products, fishing, small-scale trade and the provision of transport services Later the business operation of the PT. ASMR and its processing plant is expected to have an impact on changes in livelihoods and communities around the plantation. Livelihoods were previously only on the utilization of non-timber forest products is expected to grow in the presence of employment opportunities and business opportunity, such as wholesale business through contracting, freight services (unloading tbs), provision of daily needs of employees (business stores or kiosks) and other business activities

# Demography and Village Density around PT ASMR

Kumai sub-districts has the second largest population in West Kotawaringin. As recorded in 2012 the population of districts Kumai reached 47 674 people. Downstream, the Kumai village has a population of 7.968 inhabitants or 16.71% of the total population in the District of Kumai. This amount is the largest compared with other villages.

Overall Kumai District area classified in the category that is not solid people/km2 16:32 by grouping according to Law no. 56/PRP/1960. The law divides the category density becomes less dense (51-250 people/km2) is quite dense (251-400 people/km2) and very dense (> 400 people/km2).

Population density in the countryside around the village oil palm plantation area of PT. ASMR is low in theory and this will not cause problems in the provision of land for housing and farming. Low population density also does not potentially cause health and safety problems, but has the potential lag on various aspects of life Related to this, then PT. ASMR will need to pay attention to a variety of socio-economic needs of the villages around the company. Aggravating factors is due to high expectations on the implementation of the community towards Corporate Social Responsibility (CSR) to be able to meet the various needs of the community, while mitigating factors is the relatively low number of people and most of purpose is only to fulfill the basic needs such as employment opportunities, development of smallholdings, business opportunities, improving the quality of infrastructure, health care, education, infrastructure and other worship

#### Potential Conflict of PT. ANDALAN SUKSES MAKMUR

Identification of social issues through participatory processes with stakeholders indicate that at least there are 6 social issues or conflict potential in communities around PT ASMR which may be influential in the PT ASMR plantation development.

#### SUMMARY FROM HCV ASSESSMENT:

The key consultants conducting these assessments have been accredited and approved by RSPO. The team members are:

| No. | Expert Name                   | Expertise/Position             | Status           |
|-----|-------------------------------|--------------------------------|------------------|
| 1   | lr. Kresno Dwi Santosa, M.Si  | Team Leader Socio              | Approved by RSPO |
|     |                               | Economic and Culture           |                  |
|     |                               | Expert                         |                  |
| 2   | Dr. Ir. Harnios Arief, M.Sc.F | Biodiversity (Fauna) Expert    | Approved by RSPO |
| 3   | Dr. Ir. Rachmad Hermawan,     | Environmental Services         | Approved by RSPO |
|     | M.Sc.F                        | Expert                         |                  |
| 4   | Kasuma Wijaya, S.Hut, M.Si    | GIS Expert                     |                  |
| 5   | Mulyadi Kamad, S.Hut          | Socio Economic and Culture     |                  |
|     |                               | Expert                         |                  |
| 6   | Domi Suryadi                  | Biodiversity (Flora) Assistant |                  |
|     |                               | Expert                         |                  |
| 7   | Ainurrahman, Amd              | Biodiversity (Flora) Assistant |                  |
|     |                               | Expert                         |                  |
| 8   | A Rahman Hakim, S.Hut         | Environmental Services         |                  |
|     |                               | Assistant Expert               |                  |
| 9   | Hendi Kusnadi                 | GIS Assistant Expert           |                  |

**Table 4.** The name of team members Assessor and status approval RSPO

#### Assessment Methods (Data sources, data collection, dates, program, and visited places)

#### Implementation Method

#### **Date and Location**

Identification and analysis of the HCV was carried out in the area of PT. Andalan Sukses Makmur at Kumai District (Kumai Hilir, Sekonyer and Teluk pulai Village), Kotawaringin Barat Regency - Central Kalimantan Province. The identification and analysis was held on April 2013.

#### **Materials and Equipments**

Materials used in the identification and analysis include are : *digital elevation model map, landsat image map, land system map/RePProt, indonesia topographical map (Rupa Bumi Indonesia map),* forest land use map (TGHK), hydrology map, unit management administration map, IUCN red list of threatened species, The CITES Appendices, Government Regulation of Indoneisa Number 7 1999 (PP 7 1999) and materials that used in field survey are Guidance Book on Bird Life in Java, Bali, Sumatera and Kalimantan, a Field Guide to Mammals of Borneo, Payne et al., 1985, published by WWF Malaysia, Kuala Lumpur, Questioners and tally sheet.

Tools used are GPS, compass (Brunton), plastic rope 50 m (marked at 2, 5, 10 and 20 m), circular/diameter gauge, camera, length gauge, binoculars, and stationeries.

# Approach

There are 2 (two) factors that determine the success in maintaining and increasing HCV in the area of PT. Andalan Sukses Makmur, namely (1) the availability of identification and analysis documents on the existence of HCV in the area of PT Andalan Sukses Makmur since this will be used as a reference in preparing the management and monitoring plans, and (2) management documents and monitoring plans for the identified high conservation value area (HCVA) in the area of PT. Andalan Sukses Makmur, and this will be used as a reference in the management and monitoring of HCVA.

The success in the implementation of the identification and analysis activities of HCV existing in the area of PT. Andalan Sukses Makmur is determined by 2 (two) factors, namely: (1) the availability of adequate data and updated secondary and primary data, and (2) proper and systematic documentation of activities in stages. The availability of updated and reasonably sufficient data and information are greatly dependent on the activities of field surveys which are carried out systematically, adequately and well planned. In order to conduct a well planed field survey, the review of the available documents/reports and maps and initial identification of HCV are reqiured. Precise and systematic stages of activities to enhance the success of the identification and analysis of the existing HCV included field surveys, data processing, data analysis and synthesis, identification of HCV, analysis of HCV existence, and mapping.

# Physical

Climatic conditions in Kumai is similar to other tropical areas where classified into rainy and dry seasons. Generally, the rainy season occurs in March to April and November to December, while dry season occurs on September. The duration of both of these seasons fluctuate, at times with longer dry season or a longer rainy season.

Based on DEM SRTM Data analysis and field survey observation showed of the land is flat (0-8%) area. Based on Land Systems Map (RePPProT 1987) showed that in the area of PT. ASMR oil palm plantation consists of six classes of land, namely Bawin (*Plains*), Gambut (*Swamp*), Kahayan (*Alluvial Valleys*), Kajapah (*Tidal Swamp*), Segintung (*Terraces*) and Serimbang (*Alluvial Valleys*).

The working area of PT. Andalan Sukses Makmur includes Kumai River, watershed. The rivers that crossed the area are as many as 5 rivers and creeks. The rivers are present in and around the area of PT. ASMR is influenced by tide and rising rising pushed by the tide's of Kumai river and the Java sea. In general, the water of the rivers meet the standards for local consumption needs, the workers in the plantations and oil palm crop irrigation even into the future.

# Biological

#### Flora

There were 90 species found in the area of PT. ASMR, based on the results of the analysis of the plant status, there was three types including rare/protected are ; 1 kantong semar (*Nephentes melampora*)

Only one found protected species under PP. 7 / 1999 and Apendix II CITES in consension ASMR and In addition, also in this area are found 2 plant species are included in the List of the IUCN Red

List, with details: 1 species, including CR / Critically Endangered and 1 species including VU / Vulnerable ; as presented in Table 4.

| No |                   | Sciontific Namo           | Family         | Habitus | Status |   |              |
|----|-------------------|---------------------------|----------------|---------|--------|---|--------------|
| NU | Local Maine       | Scientilic Ivallie        | Fairiny        | Habius  | IUCN   | Status         CITES         -         -         App II         -         App II         -         App II         - | PP 7         |
| 1  | Bengaris          |                           |                |         | -      | -   | -            |
| 2  | Putri malu        | Mimosa pudica L.          | Fabaceae       | herba   |        |   |              |
| 3  | Talas Hutan       | Alocasia longiloba        | Aracaceae      | Herba   | -      | -   | -            |
| 4  | Pakisan           | Equisetum sp.             | Equisetaceae   | Herba   | -      | -   | -            |
| 5  | Kantong semar     | Nepenthes ampularia       | Nepetheaceae   | Herba   | -      | App II  | $\checkmark$ |
| 6  | Paku rawa         | Nephropelis radicans      | Oleandraceae   | Herba   | -      | -   | -            |
| 7  | Rasau             | Pandanus sp.              | Pandanaceae    | Herba   | -      | -   | -            |
| 8  | Sempiring         | Themedea gigantia         | Poaceae        | Herba   | -      | -   | -            |
| 9  | Rotan Sega        | Calamus caeius            | Arecaceae      | Liana   | -      | -   | -            |
| 10 | Rotan tampenik    | Calamus sp.               | Arecaceae      | Liana   | -      | -   | -            |
| 11 | Mikania           | Mikania michrantha        | Asteraceae     | Liana   | -      | -   | -            |
| 12 | Sirih Hutan       | Piper miniatum            | Piperaceae     | Liana   | -      | -   | -            |
| 13 | Jangau            | Salacca conferta          | Arecaceae      | Liana   | -      | -   | -            |
| 14 | Akar kekait       | Uncaria sclerophylla      | Rubiaceae      | Liana   | -      | -   | -            |
| 15 | Karamunting kodok | Rhodomyrtus sp.           | Myrtaceae      | Perdu   | -      | -   | -            |
| 16 | Karamunting       | Rhodomyrtus tomentosa     | Myrtaceae      | Perdu   | -      | -   | -            |
| 17 | Nyirih Batu       | Xylocarpus sp.            | Meliaceae      | Pohon   | -      | -   | -            |
| 18 | Bintangur         | Calophyllum grandiflorum  | Guttiferae     | Pohon   |        |   |              |
| 19 | Waru              | Hibiscus macrophyllus     | Malvaceae      | Pohon   |        |   |              |
| 20 | Rengas manuk      | Melanorrhoea walichii     | Anacardiaceae  | Pohon   |        |   |              |
| 21 | Bakau             | Rhizophora mangle L.      | Rhizophoraceae | Pohon   |        |   |              |
| 22 | Sindur            | Sindora leiocarpa         | Fabaceae       | Pohon   |        |   |              |
| 23 | Pedada            | Sonneratia alba           | Sonneratiaceae | Pohon   |        |   |              |
| 24 | Akasia            | Acacia mangium            | Fabaceae       | Pohon   | -      | -   | -            |
| 25 | Joring hantu      | Adenanthera ellipticum    | Fabaceae       | Pohon   | -      | -   | -            |
| 26 | Parak             | Aglaia rubiginosa         | Meliaceae      | Pohon   | -      | -   | -            |
| 27 | Medang            | Alceodaphne coriacea      | Lauraceae      | Pohon   | -      | -   | -            |
| 28 | Medang kuning     | Alceodaphne sp.           | Lauraceae      | Pohon   | -      | -   | -            |
| 29 | Pulai             | Alstonema pneumatophora   | Apocynaceae    | Pohon   | -      | -   | -            |
| 30 | Pulai rawa        | Alstonia schoolaris       | Apocynaceae    | Pohon   | -      | -   | -            |
| 31 | Penaga            | Calophyllum sclerophyllum | Clusiaceae     | Pohon   | -      | -   | -            |
| 32 | Terentang         | Campnosperma macrophyllum | Anacardiaceae  | Pohon   | -      | -   | -            |
| 33 | Bedaru            | Cantleya corniculata      | Icacinaceae    | Pohon   | -      | -   | -            |
| 34 | Betapai           | Cinnamomun partenoxylon   | Lauraceae      | Pohon   | -      | -   | -            |
| 35 | Kelapa            | Cocos nicifera            | Arecaceae      | Pohon   |        | -   | -            |

**Table 5.** List of Plant Species Found in the Area of PT. ASMR Based on Their Status

| NI. | La cal Nacca           | O dia affa Nama                | E                | Liste'i se |   | Status   |      |
|-----|------------------------|--------------------------------|------------------|------------|---|----------|------|
| NO  | Local Name             | Scientific Name                | Family           | Habitus    | IUCN         CIT           -         - <th>CITES</th> <th>PP 7</th> | CITES    | PP 7 |
| 36  | Gerunggang             | Cratoxylon arborescens         | Clusiaceae       | Pohon      | -   | -        | -    |
| 37  | ldat                   | Cratoxylon glaucum             | Clusiaceae       | Pohon      | -   | -        | -    |
| 38  | Mantibu                | Dactylocladus stenostachys     | Crypteroniaceae  | Pohon      | -   | -        | -    |
| 39  | Asam-Asam              | Dictyoneura acuminata          | Sapindaceae      | Pohon      |   |          |      |
| 40  | Bakunyit               | Diospyros polyalthioides       | Ebenaceae        | Pohon      | -   | -        | -    |
| 41  | Jelutung               | Dyera costulata                | Apocynaceae      | Pohon      |   |          |      |
| 42  | Pantung                | Dyera lowii                    | Apocynaceae      | Pohon      | -   | -        | -    |
| 43  | Jambu-jambu            | Eugenia cuprea                 | Myrtaceae        | Pohon      | -   | -        | -    |
| 44  | Ubar Putih             | Eugenia eucoxylum              | Myrtaceae        | Pohon      | -   | -        | -    |
| 45  | Pasak bumi             | Eurycoma longifolia            | Simarubaceae     | Pohon      | -   | -        | -    |
| 46  | Jamai                  | Ficus septica                  | Moraceae         | pohon      | -   | -        | -    |
| 47  | Ketiau                 | Ganua motleyana                | Sapotaceae       | Pohon      | -   | -        | -    |
| 48  | Asam Kandis            | Garcinia rostrata              | Clusiaceae       | Pohon      | -   | -        | -    |
| 49  | Rengas                 | Gluta renghas                  | Anacardiaceae    | Pohon      | -   | -        | -    |
| 50  | Ramin                  | Gonystylus bancanus            | Thymelaeaceae    | Pohon      | VU  | App II   | -    |
| 51  | Karet                  | Hevea brasilliensis            | Euphorbiaceae    | Pohon      | -   | -        | -    |
| 52  | Mendarahan             | Knema cinerea                  | Myristicaceae    | Pohon      | -   | -        | -    |
| 53  | Kumpang                | Knema cinerea Warb.            | Myristicaceae    | Pohon      |   |          |      |
| 54  | Kempas                 | Koompassia malaccensis         | Fabaceae         | Pohon      | -   | -        | -    |
| 55  | Empaning               | Lithocarpus cantleyanus        | Fagaceae         | Pohon      |   |          |      |
| 56  | Klingkala burung       | Litsea roxburghii              | Lauraceae        | pohon      | -   | -        | -    |
| 57  | Besamut                | Lycopodium cernuum             | Lycopodiaceae    | Pohon      | -   | -        | -    |
| 58  | Mahang Putih           | Macaranga pruinosa             | Euphorbiaceae    | Pohon      | -   | -        | -    |
| 59  | Mahang                 | Macaranga semiglobosa          | Euphorbiaceae    | Pohon      | -   | -        | -    |
| 60  | Pauh                   | Maclurodendron porteri         | Rutaceae         | Pohon      | -   | -        | -    |
| 61  | Petti                  | Mangifera longipetiolata       | Anacardiaceae    | Pohon      | -   | -        | -    |
| 62  | Tembaras               | Memecylon edule                | Melastomataceae  | Pohon      | -   | -        | -    |
| 63  | Nyatuh                 | Palaquium rostratum            | Sapotaceae       | Pohon      | -   | -        | -    |
| 64  | Bentan                 | Parastemon urophyllus          | Rosaceae         | Pohon      | -   | -        | -    |
| 65  | Banitan                | Polyalthia lateriflora         | Annonaceae       | Pohon      | -   | -        | -    |
| 66  | Kasai                  | Pometia alnifolia              | Sapindaceae      | Pohon      | -   | -        | -    |
| 67  | Mentanguran            | Rapanea umbellata              | Myrsinaceae      | Pohon      | -   | -        | -    |
| 68  | Lewari                 | Schima wallichii               | Theaceae         | Pohon      | -   | -        | -    |
| 69  | Meranti Merah          | Shorea smithiana               | Dipterocarpaceae | Pohon      | EN  | -        | -    |
| 70  | Ubar Merah             | Syzygium leucoxylum            | Myrtaceae        | Pohon      | -   | -        | -    |
| 71  | Galam Tikus            | Syzygium valdevenosum          | Myrtaceae        | Pohon      | -   | -        | -    |
| 72  | Merang                 | Tetramerista glabra            | Thymelaeaceae    | Pohon      | -   | -        | -    |
| 73  | Pelawan                | Tristania obovata King.        | Myrtaceae        | Pohon      | -   | -        | -    |
| 74  | Bekapas                | Vatica oblongifolia            | Dipterocarpaceae | Pohon      | -   | -        | -    |
| 75  | Halaban                | Vitex pubescens                | Verbenaceae      | Pohon      | -   | -        | -    |
| 76  | Bejangkang             | Xylopia fusca                  | Annonaceae       | Pohon      | -   | -        | -    |
| 77  | Bruta/ Resam           | Gleichenia linearis            | leicheniaceae    | Semak      | -   | -        | -    |
| 78  | Lambiding              | Stenochlaena palustris         | Blechnaceae      | Semak      | -   | -        | -    |
| 79  | Rumput Piai            | Acrostichum aureum             | Polypodiaceae    | l erna     | -   | -        | -    |
| 80  | Kadaka                 | Asplenium nidus                | Aspleniaceae     | l erna     | -   | -        | -    |
| 81  | Kacangan               | Canavalia sp.                  | Fabaceae         | lerna      | -   | -        | -    |
| 82  | Sungkup                | Garcinia forbesii King.        | Gutteraceae      |            |   | <b> </b> |      |
| 83  | Pekat Laki             | Leptaspis urceolata            | Poaceae          |            |   |          |      |
| 84  | Besamut                | Lycopodium cernuum L.          | Lycopodiaceae    |            | -   | -        | -    |
| 85  | Nipan<br>Desites Kasis | INYPA TRUTICANS                | Arecaceae        |            |   |          |      |
| 86  | Banitan Kuning         | Polyalthia glauca              | Annonaceae       |            |   |          |      |
| 87  | Papung                 | Sandoricum einarginatum Hiern. | Meliaceae        |            |   | <b> </b> |      |
| 88  | Dacang                 | iviangitera toetida            | Anacardiaceae    |            |   | <b> </b> |      |
| 89  | Parak api              | Difference                     | Dillara          |            |   |          |      |
| 90  | Simpur                 | Dillenia excelsa               | Dilleniaceae     |            |   |          |      |

# Wildlife

There were 118 species of wildlife found in the area of PT ASMR and grouped in 47 families that consist of Mammals 16 species (11 families), Aves 94 species (31 families) and Reptile 8 species (5 families).

There are 27 species that are protected by Government Rule No 7/1999 i.e. 9 species of mammals, 15 species of birds and 3 species of reptile. Based on CITES, there are 26 species i.e. 6 species of Appendix I, 20 species of Appendix II.

Whereas, 11 species are included in IUCN RED LIST that consist of VU/Vulnerable 7 species and EN/Endangered 4 species (see **Table 6**).

| No   | Lokal                   | Ilmiah                   | Famili        | IUCN | CITES  | PP no. 7     |
|------|-------------------------|--------------------------|---------------|------|--------|--------------|
| Aves | •                       |                          |               |      |        | •            |
| 1    | Elang hitam             | Ictinaetus malayensis    | Accipitridae  |      | App II | √            |
| 2    | Alap-alaperasia         | Falco tinnuculus         | Falconidae    |      | App II | $\checkmark$ |
| 3    | Alap-alap capung        | Microhieraxfringillarius | Falconidae    |      | App II | $\checkmark$ |
| 4    | Punai lengguak          | Treron curvirostra       | Columbidae    |      |        |              |
| 5    | Punai besar             | Treron capellei          | Columbidae    |      |        |              |
| 6    | Tekukur biasa           | Streptopelia chinensis   | Columbidae    |      |        |              |
| 7    | Punai bakau             | Treron fulvicollis       | Columbidae    |      |        |              |
| 8    | Punai Gading            | Treron vernans           | Columbidae    |      |        |              |
| 9    | Delimukan zamrud        | Chalophaps indica        | Columbidae    |      |        |              |
| 10   | Burung-madu belukar     | Anthreptes singalensis   | Nectariniidae |      |        |              |
| 11   | Bubut besar             | Centropus sinensis       | Cuculidae     |      |        |              |
| 12   | Burung madu             | Anthreptes malacensis    | Nectarinidae  |      |        |              |
| 13   | Bubut alang-alang       | Centropus bengalensis    | Cuculidae     |      |        |              |
| 14   | Elang brontok           | Spizetus cirrhatus       | Accipitridae  |      | App II |              |
| 15   | Wiwik lurik/ukit        | Cacomantis sonnerati     | Cuculidae     |      |        |              |
| 16   | Walet sarang putih      | Collocalia fuciphaga     | Apodidae      |      |        |              |
| 17   | Walet sarang hitam      | Collocalia maxima        | Apodidae      |      |        |              |
| 18   | Walet sapi              | Collocalia esculenta     | Apodidae      |      |        |              |
| 19   | Kepinis jarum kecil     | Rhapidura leucopygialis  | Apodidae      |      |        |              |
| 20   | Raja udang meninting    | Alcedo meninting         | Alcedinidae   |      |        |              |
| 21   | Raja udang kalung biru  | Alcedo euryzona          | Alcedinidae   |      |        |              |
| 22   | Pekaka emas/bekaka      | Pelargopsis capensis     | Alcedinidae   |      |        |              |
| 23   | Cekakak batu            | Lacedo pulchella         | Alcedinidae   |      |        |              |
| 24   | Cekakak sungai          | Todirhamphus chloris     | Alcedinidae   |      |        |              |
| 25   | Enggang kihingan/balian | Annorhinus galeritus     | Bucerotidae   |      | App II |              |
| 26   | Kangkareng hitam        | Anthracoceros malayanus  | Bucerotidae   |      | App II |              |
| 27   | Cabak maling            | Caprimulgusmacrurus      | Caprimulgidae |      |        |              |
| 28   | Elang tikus             | Elanus caeruleus         | Accipitridae  |      |        |              |
| 29   | Kacer                   | Copsychus saularis       | Muscicapidae  |      |        |              |
| 30   | Kareo padi*             | Amaurornisphoenicurus    | Rallidae      |      |        |              |
| 31   | Kecici                  | Sitta frontalis          | Sittidae      |      |        |              |
| 32   | Perenjak                | Prinia familiaris        | Sylviidae     |      |        |              |
| 33   | Pipit                   | Lonchura malacca         | Estrilidae    |      |        |              |
| 34   | Puyuh batu              | Coturnix chinensis       | Phasianidae   |      |        |              |
| 35   | Cipoh kacat             | Aeghitinia tipia         | Chloropseidae |      |        |              |

Table 6. Wildlife Species in the Area of PT. Andalan Sukses Makmur Based on Their Status

| No   | Lokal                     | Ilmiah                       | Famili        | IUCN | CITES  | PP no. 7     |
|------|---------------------------|------------------------------|---------------|------|--------|--------------|
| Aves |                           |                              | •             |      |        |              |
| 36   | Cipoh jantung             | Aeghitinia viridissima       | Chloropseidae |      |        |              |
| 37   | Cipoh kacat               | Aeghitinia tipia             | Chloropseidae |      |        |              |
| 38   | Cica daun kecil           | Chloropsis cyanopogon        | Chloropseidae |      |        |              |
| 39   | Cica daun besar/otan daun | Chloropsis sonnerati         | Chloropseidae |      |        |              |
| 40   | Cica daun sayap biru      | Chloropsis cochincinensis    | Chloropseidae |      |        |              |
| 41   | Cucak rawa                | Pycnonotus zeylanicus        | Pycnonotidae  | VU   | App II |              |
| 42   | Cucak kuricang/broceng    | Pycnonotus atriceps          | Pycnonotidae  |      |        |              |
| 43   | Cucak rumbai tungging     | Pycnonotus eutilotus         | Pycnonotidae  |      |        |              |
| 44   | Merbah gunung/jongjan     | Pycnonotus flavescens        | Pycnonotidae  |      |        |              |
| 45   | Gagak kampung             | Corvus macrorhynchos         | Corvidae      |      |        |              |
| 46   | Cica kopi melayu          | Pomatorhinus montanus        | Timaliidae    |      |        |              |
| 47   | Tepus kepala kelabu       | Stachyris poliocephala       | Timaliidae    |      |        |              |
| 48   | Kucica kampung/penyambung | Copsychus saularis           | Turdidae      |      |        |              |
| 49   | Kucica hutan/Tinjau       | Copsychus                    | Turdidae      |      |        |              |
| 50   | Kucica ekorkuning/kusior  | Trihixos pyrrhopygus         | Turdidae      |      |        |              |
| 51   | Perenjak rawa             | Prinia flaviventris          | Silviidae     |      |        |              |
| 52   | Sikatan hijau laut        | Eumyas thalassina            | Muscicapidae  |      |        |              |
| 53   | Kipasan belang            | Rhipidura javanica           | Muscicapidae  |      |        |              |
| 54   | Kehicap ranting           | Hypothymis azurea            | Muscicapidae  |      |        |              |
| 55   | Seriwang Asia             | Tersiphone paradisi          | Muscicapidae  |      |        |              |
| 56   | Sikatan bakau             | Cyornis rufigastra           | Muscicapidae  |      |        |              |
| 57   | Sikatan kerdil            | Muscicapellahodgsoni         | Muscicapidae  |      |        |              |
| 58   | Murai-batutarung          | Monticola solitarius         | Muscicapidae  |      |        |              |
| 59   | Sikatan kepala-abu        |                              | Muscicapidae  |      |        |              |
| 60   | Kerak kerbau              | Acridotheres javanicus       | Sturnidae     |      |        |              |
| 61   |                           | Eurystomus orientalis        | Coraciidae    |      |        |              |
| 62   | liong emas/tung           | Gracula religios             | Coraciidae    |      | App II | 1            |
| 63   | Burung madu polos         | Anthreptes simplex           | Nectariniidae |      |        | N            |
| 64   | Burung madu rimba         | Hypogramma hypogrammicum     | Nectariniidae |      |        | N            |
| 65   |                           | Arachnothera longirostra     | Nectarinidae  |      |        | N            |
| 66   | Burung-madukelapa         | Anthreptesmalacensis         | Nectarinidae  |      |        |              |
| 07   | Burung-madu               | Aetropyga siparaja           | Neciariniidae |      |        |              |
| 60   | Pijanungkampung           | Arachilourieracitasitostitis | Neciariniidae |      |        | N            |
| 70   | Pijanung besar            | Archinolnera robusia         | Reciariniuae  |      |        | v            |
| 70   | Pondol bijoubinglis       | Anianuava anianuava          | Ploiceidae    |      |        |              |
| 71   | Bondol hijau dada merah   | Erythrura byoorythra         | Ploiceidae    |      |        |              |
| 73   | Bondol nerutoutib         | Lonchura leucogastra         | Ploiceidae    |      |        |              |
| 74   | Bondolkalimantan          | Lonchura fuscans             | Ploiceidae    |      |        |              |
| 75   | Bondol rawa               |                              | Ploiceidae    |      |        |              |
| 76   | Burung gereja             | Passer montanus              | Ploiceidae    |      |        |              |
| 77   | Bangautongtong            | Leptoptilos javanicus        | Ciconiidae    | VU   |        |              |
| 78   | Elang-lautperut-putih     | Haliaeetusleucogaster        | Accipitridae  |      | App II | √            |
| 79   | Elang rawa abuabu         | Cyrcus cyaneus               | Accipitridae  |      | App II |              |
| 80   | Elang bondol              | Haliastur indus              | Accipitridae  |      | App II |              |
| 81   | Gajahan besar             | Numenius arquata             | Scolopacidae  | VU   |        |              |
| 82   | Gajahan timur             | Numenius madagascariensis    | Scolopacidae  |      |        |              |
| 83   | Trinil ekor-kelabu        | Tringa brevipes              | Scolopacidae  |      |        |              |
| 84   | Kuntul besar              | Egretta alba                 | Ardeidae      |      |        | $\checkmark$ |
| 85   | Kuntul kecil              | Egretta garzetta             | Ardeidae      |      |        | $\checkmark$ |
| 86   | Kokokan laut              | Butorides striatus           | Ardeidae      |      |        |              |
| 87   | Pecuk ular-Asia           | Anhingamelanogaster          | Anhingidae    |      |        |              |
| 88   | Kuntul kerbau             | Bubulcus ibis                | Ardeidae      |      |        |              |
| 89   | Blekok sawah              | Ardeola speciosa             | Ardeidae      |      |        |              |
| 90   | Pergam kelabu             | Ducula pickeringi            | Columbidae    | VU   |        |              |
| 91   | Kukuk beluk               | Strix leptogrammica          | Strigidae     |      |        |              |
| 92   | Pentis Kalimantan         | Prionoehilusxanthopygius     | Meliphagidae  |      |        |              |
| 93   | Sikep-maduAsia            | Pernis ptilorhynchus         | Accipitridae  |      |        |              |
| 94   | Pijantung tasmak          | Arachnotheraflavigaster      | Nectariniidae |      |        |              |

| No       | Lokal                | Ilmiah                 | Famili          | IUCN | CITES  | PP no. 7     |
|----------|----------------------|------------------------|-----------------|------|--------|--------------|
| Mammlia  |                      |                        |                 |      |        |              |
| 1        | Kijang               | Muntiacus athrerodes   | Cervidae        |      |        | $\checkmark$ |
| 2        | Beruang madu         | Helarctos malayanus    | Ursidae         | VU   | App I  | $\checkmark$ |
| 3        | Pelanduk kecil       | Tragulus javanicus     | Tragulidae      |      |        | $\checkmark$ |
| 4        | Monyet ekor panjang  | Macaca fascularis      | Cercopithecidae |      | App II |              |
| 5        | Lutung banggat       | Presbytis hosei        | Cercopithecidae |      | App II |              |
| 6        | Lutung simpai        | Presbytis melalophos   | Cercopithecidae |      | App II |              |
| 7        | Orangutan, mawas     | Pongo pygmaeus         | Pongidae        | EN   | App I  | $\checkmark$ |
| 8        | Landak raya          | Hystrix brachyura      | Hystricidae     |      |        | $\checkmark$ |
| 9        | Kucing kuwuk         | Felis bengalensis      | Felidae         |      |        | $\checkmark$ |
| 10       | Trenggiling, peusing | Manis javanica         | Manidae         | EN   | App II | $\checkmark$ |
| 11       | Berang-berang        | Lutra perspicillata    | Mustelidae      |      | App II |              |
| 12       | Rusa Timor           | Cervus timorensis      | Cervidae        | VU   |        | $\checkmark$ |
| 13       | Babi hutan           | Sus scrofa             | Suidae          |      |        |              |
| 14       | Bekantan             | Nasalis larvatus       | Cercopithecidae | EN   | App I  | $\checkmark$ |
| 15       | Tupai                | Sundasciurus tenuis    | Tupaidae        |      |        |              |
| 16       | Beruk                | Macaca nemestrina      | Cercopithecidae |      |        |              |
| Mammalia |                      |                        |                 |      |        |              |
| 1        | Kobra                | Naja sumatrana         | Elapidae        | EN   | App I  | $\checkmark$ |
| 2        | Senyulong            | Tomistoma schlegelii   | Crocodylidae    |      | App I  | $\checkmark$ |
| 3        | Biawak               | Varanus salvator       | Varanidae       |      | App II |              |
| 4        | Kobra                | Naja sp.               | Elapidae        |      | App II |              |
| 5        | Ular sanca           | Python reticulatus     | Pythonidae      |      | App II |              |
| 6        | King kuning          | Ophiophagus hannah     | Elapidae        | VU   | App II |              |
| 7        | Cicak terbang        | Draco volans Linnaeus, | Agamidae        |      |        |              |
| 8        | Buaya muara          | Crocodylus porosus     | Crocodylida     |      | App I  | $\checkmark$ |

# **Environmental Services Aspect**

Region or ecosystem that is important as a provider of Water and Flood Control for Downstream Communities.

Region or ecosystem that is found in the area of PT Andalan Sukses Makmur is lowland forest ecosystems and peat swamp forests; while the Cloud forest ecosystems, forest ridge and karst ecosystems are not found in the area.

# Important Ecosystem and Its Relationship with the various Classes of Land Based on RePPProT

Ecosystems found in the area of PT. Andalan Sukses Makmur consists of 2 (two) types, namely lowland forest ecosystems and peat ecosystem. Land classes found in the region consists of 6 (five) types, namely Bawin (BWN), Gambut (GBT), Kahayan (KHY), Kajapah (KJP), Segintung (SGT) and Serimbang (SRM) including the threatened land systems and / or rare. However, because the condition of ecosystems has been much damaged (degraded) due to forest exploitation activities (logging) before any fields/cultivation, and forest encroachment activities (illegal logging), then some of the functions and benefits of ecosystems have degraded.

With regard to technical aspects of the management of oil palm plantations, the presence of lowland forest can be utilized as a land of oil palm cultivation. Similarly shallow peat lands, also technically can be used for oil palm cultivation.

But ecologically, particularly in peat ecosystems (with land system under GBT) will need to consider the legal aspects (relating to Regulation of the Minister of Agriculture No.14 years of 2009 and Presidential Decree No.32 of 1990), as well as other aspects (Prinsip.7 RSPO).

As a form of highly commitment, an area of  $\pm$  809 hectares which located in Tanjung Harapan village (adjacent to Tanjung Puting National Park) and within the location permit of PT ASMR, handed over to government as a conservation area to be managed by Tanjung Puting National Park.

#### Regions that serves as a natural insulation to prevent the spread of forest fires and land

Regions that serves as a natural insulation to prevent the spread of forest fires and land. In the area of PT. ASMR there is no found area that can serve as a fire breaker.

#### Economy, Socio Culture of Local Community

Administratively, oil palm plantation of PT ASMR is located in Kumai distric (Kumai Hilir, Sungai Sekonyer and Teluk Pulai Villages), Kotawaringin Barat Regency, Central Kalimantan Province. Based on the results of field observation and review of existing maps show that areas of High Conservation Value (HCVA) planned in the area of Oil Palm Plantations in the Area of PT Andalan Sukses Makmur, Central Kalimantan Province is 930.84 ha, with details as in **Table 8**.

The identification result of HCV availability at area of Oil Palm Plantation PT ASMR is detaily presented bellow **Table 7.** 

|     | HCV  |               |  |
|-----|--|---------------|--|
|     | HCV  | AVAILABILITY  |  |
| 1   | Area Has Important Biodiversity Level                            |               |  |
| 1.1 | Area Posses or Give Supporting Function of Biodiversity for      | Available     |  |
|     | Protected Area and/or Conservation Area                          | Available     |  |
| 1.2 | Critically Endangered species                                    | Not Available |  |
| 1.3 | Area Has Habitat for Viable Population of Threatened,            | Available     |  |
|     | Circumscribed or Protected Species                               | Available     |  |
| 1.4 | Area Has Temporary Habitat for Species or Group of Species       | Not Available |  |
| 2   | Area Has Important Landscape for Naturally Ecological Dynamics   |               |  |
| 2.1 | The Area of Wide Landscape which has Capacity to Maintain the    | Not Available |  |
|     | Process and Dynamics of Naturally Ecology                        | NOT AVAIIABLE |  |
| 2.2 | The Natural Area which has Two or More Ecosystem with not        | Not Available |  |
|     | Fragmented Contour (Continuously)                                | Not Available |  |
| 2.3 | Area which has Representative Population of Natural Species      | Not Available |  |
| 3   | Area which has Rare or Threatened Ecosystem                      | Not Available |  |
| 4   | Area Provides Natural Environmental Services                     |               |  |
| 4.1 | Important Area or Ecosystem to Provide Water and Flood Control   | Available     |  |
|     | for Community at Downstream Area                                 | Available     |  |
| 4.2 | Important Area to Control Erosion and Sedimentation              | Not Available |  |
| 4.3 | Area which Has Function as Natural Border to Avoid the Spread of | Not Available |  |
|     | Forest Fire  | NOT AVAIIABLE |  |
| 5   | Natural Area which Has Important Function to Fulfill Basic Needs | Not Available |  |

# **Table 7.** The Identification Result of HCV Availability at PT Andalan Sukses Makmur Oil PalmPlantation Area

|   | HCV   | HCV<br>AVAILABILITY |
|---|---|---------------------|
|   | of Local Community  |                     |
| 6 | Area has Important Function to Identify Traditional Culture of<br>Local Community | Not Available       |

# Analysis Result of the Availability of HCV

The area of Oil Palm Plantation PT ASMR has 20 HCV Area with 930,84 ha in total area or it is about 10,03% out of the total area of Management Unit (9.276,5 ha). The HCV Area at the area of Oil Palm Plantation PT ASMR are presented at **Table 8**.

 Table 8.
 The HCV Area of PT Andalan Sukses Makmur Oil Palm Plantation

| No | HCV Area                         | Area (ha) | HCV Attribute |
|----|----------------------------------|-----------|---------------|
| 1  | Riparian of Seluang River        | 15.32     | 1.3, 4.1      |
| 2  | Riparian of Kapak River          | 17.94     | 4.1           |
| 3  | Riparian of Bakung River         | 23.22     | 4.1           |
| 4  | Riparian of Kumai Seberang River | 3.49      | 4.1           |
| 5  | Riparian of Jerumbun River       | 9.93      | 1.3, 4.1      |
| 6  | Riparian of Kanal 4              | 1.63      | 4.1           |
| 7  | Riparian of Kanal 3              | 0.94      | 4.1           |
| 8  | Riparian of Kanal 2              | 1.41      | 4.1           |
| 9  | Riparian of Kanal 1              | 1.78      | 4.1           |
| 10 | Riparian of Kanal Trans          | 1.48      | 4.1           |
| 11 | Riparian of Kanal Maru           | 1.17      | 4.1           |
| 12 | Riparian of Kanal Marjan         | 0.87      | 4.1           |
| 13 | Riparian of Kanal Samsuri        | 0.63      | 4.1           |
| 14 | Riparian of Kanal Kamis          | 0.68      | 4.1           |
| 15 | Riparian of Kanal Imin           | 1.67      | 4.1           |
| 16 | Riparian of Kanal Aspawi         | 1.71      | 4.1           |
| 17 | Riparian of Kanal Rambai         | 0.91      | 4.1           |
| 18 | Riparian of Kanal Pulut          | 2.28      | 4.1           |
| 19 | Nypa / Mangrove ecosystem        | 34.78     | 4.1           |
| 20 | Feeding area of Orangutan        | 809.00    | 1.1,1.3       |
|    | Total                            | 930.84    |               |



#### Figure 4. HCV Map PT ASMR over lay with Permitted Area (9,276.5 Ha)

Figure 5. New Planting Plan Map PT. ASMR



# DOCUMENTATION OF FREE PRIOR AND INFORMED CONSENT

In accordance with RSPO requirements PT ASMR needs to obtain free, prior and informed consent from the local community that would be affected by the development of the concession area or land that would be opened. The documents are as follows:

- Letter from Head of Sekonyer Village No.005/003/KDS/KM/V/2012 dated 14 May 2012 concerning Proposal of Scheme Smallholders to BGA Group which agreed by 234 villagers (KK) within 15,666 Ha of administrative territory and plans of oil palm plantation development for 6,159 ha.
- 2. Letter from Head of Teluk Pulai Village No.006/DTP/KM/V/2012 dated 14 May 2012 concerning Proposal of Scheme Smallholders to BGA Group which agreed by 100 villagers (KK) within 3,000 Ha of administrative territory.
- 3. Letter from Headman of Kumai Hilir urban village No.525/III/KHR/VII-2012 dated 12 July 2012 Proposal of Scheme Smallholders to BGA Group with 2 ha/lot as required.
- 4. Petition of Support from Head of Sekonyer Village for BGA Group No.005/004/KDS/KM/V/2012 dated 14 May 2012 to all related stakeholders in order to be given of permission for oil palm plantation development.
- 5. Petition of Support from Head of Teluk Pulai Village for BGA Group No.007/DTP/KM/V/2012 dated 14 May 2012 to all related stakeholders in order to be given of permission for oil palm plantation development.
- 6. Petition of Support from Headman of Kumai Hilir urban village for BGA Group No.525/III/KHR/VII-2012 dated 12 Juli 2012 to all related stakeholders in order to be given of permission for oil palm plantation development.
- Agreement between PT. ASMR and Kumai Hilir Urban Village (Kelurahan Kumai Hilir) No. 001/PT ASMR-SK/X/2012 (No. 001/KHL-SK/X/2012) related to partnership of scheme smallholders development with pattern Owned Estate (80 %) : Smallholders (20 %) based on planted area.
- Agreement between PT. ASMR and Sungai Sekonyer Village No. 001/PT ASMR-SK/X/2012 (No. 001/DSK-SK/X/2012) related to partnership of scheme smallholders development with pattern Owned Estate (80 %) : Smallholders (20 %) based on planted area.
- 9. Agreement between PT. ASMR and Teluk Pulai Village No. 001/PT ASMR-SK/X/2012 (No. 001/DTP-SK/X/2012) related to partnership of scheme smallholders development with pattern Owned Estate (80 %) : Smallholders (20 %) based on planted area.
- 10. Statement Letter of Land Submission to PT. ASMR:
  - A. Sekonyer Village. 18 January 2013 represented by Head of Village, Secretary of Village and Consultative Board of Village (Ketua BPD) known by Head of Kumai Sub-district, stated as follows:
    - Villagers have ceded of their land (5,507 Ha) which located in Sungai Sekonyer village and within Location Permit to be managed by PT ASMR for oil palm plantation development with scheme smallholder's pattern.
    - Area 5,507 Ha consists of 980 Ha owned by certain villagers (submitted to PT ASMR); 3,527 Ha is non-ownership land but under administrative territory of Sekonyer village (submitted to PT ASMR with proper compensation further); 1,000 Ha is enclave and some part of its land are still managed by illegal mining (Zircon). Currently, socialization is in progress to the entire communities/villagers through participatory approaches by village team, so that it can be submitted as managed land by PT ASMR.

- B. Teluk Pulai Village. 18 January 2013 represented by Head of Village, Secretary of Village and Consultative Board of Village (Ketua BPD) known by Head of Kumai Sub-district, stated as follows:
  - Villagers have ceded of their land (2,502 Ha) which located in Teluk Pulai village and within Location Permit to be managed by PT ASMR for oil palm plantation development with scheme smallholder's pattern.
  - Area 2,502 Ha consists of 306 Ha owned by certain villagers and has been submitted to PT ASMR through Village Team (Tim Desa); 1,446 Ha is non-ownership land but under administrative territory of Teluk Pulai village (submitted to PT ASMR with proper compensation further); 300 Ha is enclave area and socialization is in progress to the entire communities/villagers through participatory approaches by village team, so that it can be submitted as managed land by PT ASMR.
- C. Kumai Hilir (Kumai Hilir Seberang) urban village. 18 January 2013 represented by Headman, Headman Secretary and Head of Seberang Jaya Sejati Cooperative, Consultative Board of village which known by Head of Kumai Sub-district, stated as follows:
  - Villagers have ceded of their land (1,717 Ha) which located in Kumai Hilir Seberang village and within Location Permit to be managed by PT ASMR for oil palm plantation development with scheme smallholder's pattern.
  - Area 1,717 Ha consists of 846 Ha owned by certain villagers and has been submitted to PT ASMR with proper compensation further through Village Team (Tim Desa); 759 Ha is non-ownership land but under administrative territory of Kumai Hilir Seberang village (submitted to PT ASMR with proper compensation further); 112 Ha is enclave area and socialization is in progress to the entire communities/villagers through participatory approaches by village team, so that it can be submitted as managed land by PT ASMR.
- 11. Evidence of land acquisitions process on project area of PT ASMR contains of 457 parcels of land (persil) with covering area 986 ha only for Teluk Pulai village. Total compensation IDR 1,599,000,000 has been paid in the period from 3<sup>rd</sup> August until 2<sup>nd</sup> November 2013, the rest of lands (Kumai Hilir and Sungai Sekonyer villages) currently are in progress to be verified by company. All documentations of entire land acquisitions are in place.
  - Land Acquisition Data / List of Ceding Land.
  - Identity of Land Owner. Minutes of Land Measurement (Berita Acara Pengukuran)
  - Location Map of Land Measurement (Peta Lokasi Yang diukur/digantirugi).
  - Minutes of Price Agreement (Berita Acara Kesepakatan Harga)
  - Land Submission Statement (Surat Pernyataan Penyerahan Lahan).
  - Certificate of Land Acquisition Property/ Rights Recognition Letter and Land Tenure (Surat Keterangan Garap (SKGR) Kepemilikan Lahan/Surat Pengakuan Hak Kepemilikan dan Penguasaan Lahan)
  - Land Rights Letter (Surat Penguatan Atas Hak)
  - Origin of Land Letter (Surat Keterangan Asal Usul Tanah)
  - A Brief History of Land Tenure (Riwayat Singkat Penguasaan Tanah)
- 12. Interviews with local community of Kumai Hilir Village, Sekonyer Village and Teluk Pulai Village at PT ASMR project area (18 19 December 2013). Information obtained from interviews was:
  - All villagers from 3 affected villages pleading and urged the companies to immediately start the activities and develop of plantations, particularly smallholder's scheme. Thus, entire communities could feel a positive impact of plantation development and prosperity increasingly assured.

- All villagers and employees will responsible and fully support of company activities, as a form of desire we invite PT ASMR to invest in our village.
- Currently, nursery activity has commenced on land belonging to villagers who have been permitted. This activity was carried out due to pressure/insistence from us as villagers to the company, so we can move forward and grows, have a decent life with an established economy like other villages, stop the poverty that bound our lives on decades before.

# SUMMARY OF PLAN:

The management New Planting Plan has incorporated the findings from EIA (AMDAL), Social Impact Assessment (SIA) and HCV assessment for implementing the operational plans. Recommendations and also conclusion from the results of EIA and HCV have also been integrated into the management plan and this is consistent with RSPO P&C for New Plantings.

#### Summary of Management and Mitigation Plans Environment Impact Assessment

| No.  | Types of<br>Impact that<br>Managed                                | Benchmark Impact  | Environmental Management  | Location and Management Period  | Environmental Monitoring   | Location and Management<br>Period   |
|------|---|---|---|---|--|---|
| I    | PRA CONSTRUC  | TION PHASE  |   |   |  |   |
|      | Attitude and<br>Community<br>Perceptions                          | <ul> <li>The emergence of<br/>negative or positive<br/>attitude and<br/>perceptions from<br/>community to plan<br/>activities.</li> <li>Providing insight to the<br/>public on the activities<br/>of oil palm plantations<br/>and mills along its<br/>impact.</li> <li>Reducing the negative<br/>and increasing the<br/>positive attitudes and<br/>perceptions of the<br/>community.</li> </ul> | <ul> <li>Socialization and transparency to<br/>community regarding company plan to<br/>build Palm Oil Mill and Oil Palm Plantation.</li> <li>Receiving advice, aspirations and<br/>expectations from community.</li> <li>Strengthen relationships and<br/>communication with community.</li> <li>Engaging relevant agencies in activities of<br/>socialization, boundary demarcation and<br/>land acquisition.</li> <li>Forming a counseling team consisting of<br/>community leaders / traditional leaders /<br/>religious leaders.</li> </ul> | <ul> <li>Location of management:<br/>Sekonyer, Teluk Pulai and Kumai<br/>Hilir villages (Kumai sub district)</li> <li>Period of management: at pre<br/>construction phase and during the<br/>project (if necessary).</li> </ul>   | <ul> <li>Interviews and questionnaires<br/>regarding community attitudes<br/>and perception, social restlessness<br/>and the mindset of community,<br/>either positive or negative.</li> </ul> | <ul> <li>Location of management:<br/>Sekonyer, Teluk Pulai and<br/>Kumai Hilir villages (Kumai<br/>sub district)</li> <li>Period of monitoring:<br/>periodically once every 6<br/>months</li> </ul> |
| П    | CONSTRUCTIO   | N PHASE   | I   |   |  |   |
| 2.1. | Improvement<br>of<br>employment<br>opportunities<br>and business. | <ul> <li>Increasing the labor<br/>force and business<br/>opportunities for<br/>community especially to<br/>local community that<br/>directly affected, which<br/>can be known from<br/>periodically research<br/>regarding per capita<br/>income, living cost, and<br/>local revenue.</li> </ul>  | <ul> <li>Providing opportunities for local<br/>communities who directly affected by oil<br/>palm plantation activities, to work as an<br/>employee in accordance with qualification.</li> <li>Facilitating and prioriting to the community<br/>who directly affected regarding<br/>employment opportunities.</li> <li>Giving information regarding employment<br/>opportunities in a transparent way.</li> <li>Giving information regarding employment<br/>opportunities to the formal and informal<br/>community leaders.</li> </ul>           | <ul> <li>Location of management:<br/>Sekonyer village, Teluk Pulai village<br/>and Kumai Hilir villages.</li> <li>Period of management: once at<br/>the construction phase or<br/>continuously adjusted to the needs<br/>of labor during ongoing operations.</li> </ul> | <ul> <li>Direct observation, Interviews and<br/>questionnaires regarding<br/>opportunities of employment and<br/>business that can be utilized by<br/>the local community.</li> </ul>          | <ul> <li>Location of management:<br/>Sekonyer village, Teluk Pulai<br/>village and Kumai Hilir village</li> <li>Period of monitoring: once at<br/>the construction phase</li> </ul>                 |

 Table 9: Summary of management and Mitigation plans Environment Impact Assessment

| No.  | Types of<br>Impact that<br>Managed                   | Benchmark Impact   | Environmental Management   | Location and Management Period   | Environmental Monitoring  | Location and Management<br>Period  |
|------|--|--|--|--|---|--|
|      |  |  | <ul> <li>Participate in forming village organizations<br/>or divisions in the environmental<br/>management which is responsible on<br/>economic growth in the communities<br/>surrounding the study area.</li> </ul>   |  |   |  |
| 2.2  | Decreasing Air<br>Quality and<br>Increasing<br>Noise | <ul> <li>Decree of Ministry of<br/>Environment no. KEP-<br/>45/MENLH/10/1997</li> <li>Government regulation<br/>no. 41 of 1999<br/>regarding Controlling<br/>Air Pollution and<br/>Emission.</li> <li>Decree of the Minister<br/>of Environment<br/>Number: KEP-<br/>48/MENLH /11 /1996,<br/>regarding Noise Level<br/>threshold.</li> </ul> | <ul> <li>Adjusting the vehicle speed and equipment<br/>at the location of the project area.</li> <li>Conducting free medical treatment to<br/>people who suffer from diseases caused by<br/>micro-climate changes such as respiratory<br/>diseases, hearing diseases, diarrhea and<br/>others</li> </ul>   | <ul> <li>Location of management :<br/>Residential areas in mobilization<br/>pathways and mill plan area</li> <li>Period of management : three (3)<br/>months after operational regarding<br/>activity</li> </ul>   | <ul> <li>Measurements and laboratory<br/>analysis of air quality and<br/>compared to Decree of Minister of<br/>Environment Number: KEP-<br/>02/MENLH/1998</li> <li>Measurements of Noise Level and<br/>compared to Decree of the<br/>Minister of Environment Number:<br/>KEP-48/MENLH/11/1996.</li> </ul> | <ul> <li>The road which used to<br/>mobilization that near the<br/>local communities settlement<br/>and locations that are close to<br/>the land clearing and<br/>construction of facilities and<br/>infrastructure, which located<br/>in Sekonyer village, Teluk<br/>Pulai village and Kumai Hilir<br/>village.</li> <li>Period of monitoring: Every 6<br/>months during construction<br/>activities</li> </ul> |
| 2.3. | The reduced<br>level of public<br>health             | <ul> <li>Number of accidents,<br/>respiratory diseases<br/>and hearing loss</li> </ul>   | <ul> <li>Development / improvement of health facilities and increasing the number of medical / paramedical.</li> <li>Scheduling medical check up once every 1 month</li> <li>Using masks for road users</li> <li>Providing free health care for local communities.</li> <li>Allocate funding to carry out the activities</li> <li>Coordinate with the clinic / local health center to cope often disease appears in public</li> </ul>  | <ul> <li>Location of management :<br/>Residential areas resident who are<br/>in mobilization pathways and mill<br/>area plan</li> <li>Period of management : three (3)<br/>months after operational<br/>regarding activity</li> </ul>  | <ul> <li>Direct observation in the field</li> <li>Collecting data from surrounding clinic</li> <li>Analyse data of number and type of disease that suffered using statistical descriptive method</li> </ul>   | <ul> <li>Location of monitoring:<br/>residential area in<br/>mobilization pathways and<br/>mill.</li> <li>Every 6 months during<br/>construction activities</li> </ul>   |
| 2.4. | Decreasing of<br>water quality<br>surface            | <ul> <li>There is no decreasing<br/>water quality of rivers<br/>based on Government<br/>Regulation No. 82 of<br/>2001, regarding<br/>Management of Water<br/>Quality and Water<br/>Pollution Control.</li> <li>There is no complaint<br/>from local communities<br/>who use the river<br/>water.</li> <li>There is no disease</li> </ul>     | <ul> <li>Maintaining green belt area (greenbelt)<br/>along the riparian and perform soil and<br/>water conservation.</li> <li>Planting land cover crop that can quickly<br/>grow on the banks of steep slope.</li> <li>Conduct outreach to communities around<br/>the plantations regarding the importance of<br/>the protection and preservation soil and<br/>water</li> <li>Coordinate with the local village institutions<br/>in an effort to optimize conservation and<br/>environmental management</li> </ul> | <ul> <li>Location of management is<br/>conducted in Kumai and Sekonyer<br/>rivers in the study area</li> <li>Period of management are<br/>conducted twice a year during<br/>construction activities, or if there<br/>is reporting or complaints from<br/>communities which using the<br/>water river.</li> </ul> | <ul> <li>Taking sample of River water and<br/>doing analysis laboratory.</li> <li>Analyse data compare to PP no.<br/>82 th 2001</li> </ul>  | <ul> <li>Kumai and sekonyer river</li> <li>Once during construction<br/>activities</li> </ul>  |

| No.  | Types of<br>Impact that<br>Managed  | Benchmark Impact  | Environmental Management  | Location and Management Period  | Environmental Monitoring   | Location and Management<br>Period  |
|------|---|---|---|---|--|--|
|      |   | caused by the<br>decreasing water<br>quality of river<br>(waterborne diseases).   |   |   |  |  |
| 2.5. | Attitude and<br>Community<br>Perceptions  | <ul> <li>The emergence of<br/>negative or positive<br/>attitude and<br/>perceptions from<br/>community</li> </ul>                   | <ul> <li>Provide media / means to facilitate and accommodate the restlessness and complaints which coming from the local community.</li> <li>Creating a discussion forum with the community and doing counseling that useful for society.</li> <li>Make procedures for communication between communities and companies and socialized to the community.</li> </ul>  | <ul> <li>Location of impact management is<br/>Sekonyer, Teluk Pulai and Kumai<br/>Hilir villages.</li> <li>Period of management conducted<br/>one time at the first year of oil<br/>palm operational.</li> </ul>  | - Direct observation in the field  | <ul> <li>Location of monitoring:<br/>residential area in<br/>mobilization pathways and<br/>mill.</li> <li>Conducted once every 6<br/>months</li> </ul>   |
| 2.6. | Decline of<br>Water<br>Biodiversity   | Decreased levels of<br>species diversity and<br>abundance of aquatic<br>biota.  | <ul> <li>Make a sign board that contains ban to take<br/>/ find fish by exploitation of a destructive<br/>nature / dangerous for ecosystem balance</li> <li>Creating wildlife posters.</li> <li>Training to employees regarding wildlife<br/>awareness.</li> </ul>  | <ul> <li>Location of impact management is<br/>rivers at operational areal.</li> <li>Operational areal of company.</li> <li>Period of Management;<br/>conducted at every six (6) months.</li> </ul>  | <ul> <li>Taking sample of River water and<br/>doing analysis laboratory.</li> <li>Interview and recording of the<br/>different types of fish caught by<br/>communities.</li> </ul> | <ul> <li>Location of monitoring: River<br/>atthe location of activity</li> <li>Conducted once every 6<br/>months.</li> </ul>   |
| 2.7  | The potential<br>occurrence of<br>floods and<br>inundations,<br>Increased<br>erosion and<br>sedimentation | <ul> <li>River water discharge<br/>maximum and<br/>minimum and<br/>sedimentation</li> <li>Soil solum thickness<br/>level</li> </ul> | <ul> <li>Preparation of primary drainage and<br/>sediment storage ponds with a filter</li> <li>Planted on marginal soil with pioneer tree</li> <li>Maintaining drainage and roads by<br/>hardening and smoothing road surface</li> <li>Conduct outreach to community resident<br/>around the plantation regarding the<br/>important of the protection and<br/>conservation of soil and water</li> <li>Zero burning in land clearing operation</li> <li>Pileed tree trunks, cut slopes to hold runoff<br/>and erosion and sedimentation</li> <li>Covercrop planting</li> </ul> | <ul> <li>Location of impact management is<br/>land clearing area.</li> <li>Operational areal of company.</li> <li>Period of Management;<br/>conducted at every six (6) months</li> </ul>  | <ul> <li>Measuring of water level with<br/>measuring device in rainy weather</li> <li>Collecting composite data<br/>sampling and analysis using PP no.<br/>82 th 2001</li> </ul>   | <ul> <li>Location of monitoring:<br/>Sekonyer, Teluk Pulai and<br/>Kumai Hilir Villages and River<br/>at the location of activity</li> <li>Period of monitoring:<br/>beginning and the middle of<br/>rainy weather</li> <li>Once during construction<br/>activities</li> </ul> |
| 2.8  | Decreasing<br>vegetation<br>/flora and<br>fauna   | Reducing types of flora<br>and fauna that serves<br>the ecological life<br>support  | <ul> <li>Protecting the types of flora and fauna and ecology of economicaly important in around the study area</li> <li>Making a signboard to protecting conservation area</li> <li>Planting and maintaining the types of vegetation that serves wildlife ecology</li> <li>Supplying area as a corridor forest of fauna</li> </ul>  | <ul> <li>Location of impact management ;<br/>whole site study of the affected<br/>company activities, riparian, and<br/>areas considered with high<br/>biodiversity.</li> <li>Period of Management; Since land<br/>preparation and performed<br/>continously for the company</li> </ul> | <ul> <li>Collecting and analysis of<br/>biodiversity index data using the<br/>exploration and terraced paths</li> </ul>  | <ul> <li>Location of monitoring:<br/>Riparian and other areas in<br/>the potential decline in the<br/>diversity of flora and fauna</li> <li>Period of monitoring:<br/>conducting in every 6 months<br/>after construction phase.</li> </ul>                                    |

| No.  | Types of<br>Impact that<br>Managed   | Benchmark Impact   | Environmental Management   | Location and Management Period  | Environmental Monitoring   | Location and Management<br>Period  |
|------|--|--|--|---|--|--|
|      |  |  | movement<br>- Coordinate with the relevant technical<br>agencies in an effort protection and<br>preservation of species (BKSDA etc).   | operates  |  |  |
| Ш    | OPERATIONAL F  | PHASE  | ·  |   |  |  |
| 3.1. | Decreasing Air<br>Quality and<br>Increasing<br>Noise                                     | <ul> <li>Decree of the Minister<br/>of Environment<br/>number KEP-<br/>45/MENLH/10/1997</li> <li>Decree of the Minister<br/>of Environment<br/>number KEP-<br/>48/MENLH/11/1996</li> <li>Government regulation<br/>number 41 th 1999</li> </ul>  | <ul> <li>Adjusting the vehicle speed and equipment<br/>at the location of the project area</li> <li>Conducting free medical treatment to<br/>people who suffer from diseases caused by<br/>climate changes as ARI (ISPA), diarrhea and<br/>other.</li> <li>Broadleaf tree planting to absorb road<br/>noise during transport FFB</li> </ul>  | <ul> <li>Location of management :<br/>Residential areas in mobilization<br/>pathways and mill plan area</li> <li>Period of Management;<br/>conducted at every six (6) months</li> </ul>                                     | <ul> <li>Measurements and laboratory<br/>analysis of air quality and<br/>compared Decree of the Minister<br/>of Environment number KEP-<br/>02/MENLH/1998.</li> <li>Measurements of Noise Level and<br/>compared to Decree of the<br/>Minister of Environment Number:<br/>KEP-48/MENLH/11/1996.</li> </ul> | <ul> <li>Emissions: at emission<br/>sources (POM, Genset)</li> <li>Air quality: at settlements<br/>which passed by operational<br/>activities</li> <li>Noise level: at noise source<br/>and settlement</li> <li>Conducted once every 6<br/>months</li> </ul> |
| 3.2  | Improvement<br>of<br>employment<br>opportunities,<br>business and<br>community<br>income | <ul> <li>Increasing capita<br/>income, level of<br/>community<br/>consumerism, living<br/>cost, and local revenue;</li> <li>Implementation of<br/>systems of<br/>remuneration issued by<br/>the government<br/>(Regional Minimum<br/>Wages), and other<br/>allowance that<br/>accordance with<br/>company financial<br/>capability</li> <li>Group or proportion of<br/>community that<br/>receiving extra income.</li> </ul> | <ul> <li>Providing opportunities for local community who directly affected by oil palm plantation activities, to work as an employee in accordance with qualification and labor requirements necessary.</li> <li>Providing training, business guidance and business capital to community who directly affected, regarding new business opportunity outside the agricultural sector.</li> <li>Using labor local maximally and using local businessman.</li> <li>Providing counseling and training regarding entrepreneurship management to community.</li> <li>Participate in providing and complement economy infrastructure.</li> <li>Giving information to community leaders (formal and informal) regarding employment opportunities that necessary.</li> </ul> | <ul> <li>- Location of impact management is<br/>Sekonyer, Teluk Pulai and Kumai<br/>Hilir villages.</li> <li>- Conducted once at the<br/>operational phase or continuously<br/>adjusted to the project activity.</li> </ul> | <ul> <li>Interviews and questionnaires<br/>regarding income, new economic<br/>activities, company benefit to the<br/>community, proportion of<br/>community who get benefit from<br/>the company.</li> </ul>   | <ul> <li>Sekonyer, Teluk Pulai and<br/>Kumai Hilir Villages (Kumai<br/>sub district).</li> <li>Conducted once during<br/>operational phase.</li> </ul>   |
| 3.3  | The reduced<br>level of public<br>health   | The behavior of clean<br>and healthy life in<br>community, number of<br>patients, and the level of<br>health services  | <ul> <li>Helps to increase the frequency of health care to community that affected by "water borne diseases" and "air borne diseases".</li> <li>Development / improvement of health facilities and increasing the number of</li> </ul>   | <ul> <li>Location of management: In palm<br/>oil mill and oil palm plantation and<br/>also in community around study<br/>areal.</li> <li>Period of management: Providing<br/>counseling regarding health and</li> </ul>     | <ul> <li>Direct observation in the field</li> <li>Collecting and analysis data at<br/>surounding clinic using descriptive<br/>statistical method</li> </ul>  | <ul> <li>Location of monitoring:<br/>residential area in seatlement<br/>area of study.</li> <li>Conducted once every 6<br/>months.</li> </ul>  |

| No. | Types of<br>Impact that<br>Managed       | Benchmark Impact   | Environmental Management  | Location and Management Period  | Environmental Monitoring   | Location and Management<br>Period   |  |
|-----|--|--|---|---|--|---|--|
|     |  |  | <ul> <li>medic / paramedic.</li> <li>Providing free health care for local communities who are underprivileged.</li> <li>Allocate funding to perform free health care activities.</li> <li>Providing counseling regarding behavior of clean and healthy life.</li> <li>Coordinate with the clinic / local health center.</li> </ul>  | <ul> <li>environmental sanitation<br/>periodically twice every year.</li> <li>Period of management: Providing<br/>medical checks periodically twice<br/>every year or if there are<br/>complaints from employee and<br/>community regarding health<br/>problems.</li> </ul> |  |   |  |
| 3.4 | Attitude and<br>Community<br>Perceptions | - The emergence of<br>anxiety in communities<br>in study area due to a<br>shift in values and<br>norms in the<br>communities around<br>the sutdy area. | <ul> <li>Doing transfer of knowledge and<br/>technology to community especially in<br/>terms of socialization the program of<br/>empowerment community.</li> <li>Doing socialization in form focus group<br/>discussion to group of community<br/>regarding empowerment community which<br/>will be implemented by the company.</li> <li>Performing approach with participatory<br/>methods (Participatory Rural Appraisal).</li> <li>Perform proactive approach to community<br/>leaders and people in form socialization<br/>the company planning by transparency.</li> <li>Facilitate and accommodate the wishes<br/>and expectations of community that<br/>affected by company activities.</li> <li>Involving society organizations that located<br/>in study areal.</li> <li>Participating directly in youth activities,<br/>arts and sport, by increasing the facilities<br/>and infrastructure that support the<br/>activities.</li> </ul> | <ul> <li>Location of impact management is<br/>Sekonyer, Teluk Pulai and Kumai<br/>Hilir villages.</li> <li>Period of management:<br/>periodically once in operational<br/>phase.</li> </ul>   | - Direct observation in the field.                                     | <ul> <li>Location of monitoring:<br/>Sekonyer, Teluk Pulai and<br/>Kumai Hilir Villages (Kumai<br/>sub district).</li> <li>Conducted once during<br/>operational phase.</li> </ul>                              |  |
| IV. | POST OPERATIONAL PHASE                   |  |   |   |  |   |  |
| 4.1 | Decreasing<br>community<br>income        | <ul> <li>Decreasing per capita<br/>income, level of<br/>community<br/>consumerism, living<br/>cost, and local revenue.</li> </ul>                      | <ul> <li>Providing training, business guidance and<br/>business capital to community who<br/>directly affected, regarding new business<br/>opportunity outside the agricultural<br/>sector.</li> <li>Giving information clearly regarding labor<br/>dismissals accordance to employment<br/>contract.</li> <li>Providing counseling and training<br/>regarding entrepreneurship management</li> </ul>   | <ul> <li>Location of impact management is<br/>Sekonyer, Teluk Pulai and Kumai<br/>Hilir villages.</li> <li>Conducted once at the post-<br/>operational phase or continuously<br/>adjusted to the project activity.</li> </ul>   | <ul> <li>Interviews and collecting<br/>secondary data (UMR)</li> </ul> | <ul> <li>Location of monitoring:<br/>Sekonyer, Teluk Pulai and<br/>Kumai Hilir Villages (Kumai<br/>sub district).</li> <li>Period of monitoring:<br/>Conducting in the end of<br/>operational phase.</li> </ul> |  |

| No.  | Types of<br>Impact that<br>Managed       | Benchmark Impact  | Environmental Management   | Location and Management Period   | Environmental Monitoring  | Location and Management<br>Period   |
|------|--|---|--|--|---|---|
|      |  |   | <ul> <li>Involving local communities for<br/>monitoring and manage the<br/>implementation of the project which<br/>implemented after operational phase.</li> </ul>   |  |   |   |
| 4.2  | Decreasing of<br>opportunity<br>work     | <ul> <li>The loss of local<br/>workforce and non-<br/>formal employment in<br/>the business process</li> </ul>  | <ul> <li>Providing counseling and training<br/>regarding entrepreneurship management<br/>to community.</li> <li>Providing severance pay and appreciation<br/>for the dedication service in accordance<br/>with government regulations</li> <li>Invlove local communities together to<br/>perform monitoring and management of<br/>the implementation of the postoperativ<br/>phase</li> </ul>                | <ul> <li>Location of impact management is<br/>Sekonyer, Teluk Pulai and Kumai<br/>Hilir villages.</li> <li>Conducted once at the post-<br/>operational phase</li> </ul>  | <ul> <li>Direct observation, supported by<br/>secondary data</li> <li>Conducting regular research on<br/>community income, level of<br/>consumerism, living expenses and<br/>local revenue</li> </ul> | <ul> <li>Location of monitoring:<br/>Sekonyer, Teluk Pulai and<br/>Kumai Hilir Villages (Kumai<br/>sub district).</li> <li>Period of monitoring:<br/>Conducting in the end of<br/>operational phase.</li> </ul> |
| 4.3. | Attitude and<br>Community<br>Perceptions | <ul> <li>The emergence of<br/>anxiety in communities<br/>in study area due to a<br/>shift in values and<br/>norms in the<br/>communities around<br/>the sutdy area.</li> <li>The occurrence of<br/>change in mindset and<br/>behavior in community<br/>around areal study, due<br/>to the end of company<br/>operation</li> </ul> | <ul> <li>Provide debriefing of entrepreneurship<br/>training.</li> <li>Performing approach with participatory<br/>methods (Participatory Rural Appraisal).</li> <li>Giving information clearly regarding labor<br/>dismissals accordance to employment<br/>contract.</li> <li>Providing severance pay and money<br/>reward for services to the company, in<br/>reasonably and accordance to laws.</li> </ul> | <ul> <li>Location of impact management is<br/>Sekonyer, Teluk Pulai and Kumai<br/>Hilir villages.</li> <li>Conducted once at the post-<br/>operational phase.</li> </ul> | <ul> <li>Interviews, questionnaires and<br/>analysis related of income and the<br/>amount of training that given<br/>during the post operational.</li> </ul>  | <ul> <li>Location of monitoring:<br/>Sekonyer, Teluk Pulai and<br/>Kumai Hilir Villages (Kumai<br/>sub district).</li> <li>Period of monitoring:<br/>Conducting in the end of<br/>operational phase.</li> </ul> |

# Summary of Management and Mitigation Plans (SIA)

Based on the identification of impacts assessment predicted to arise from the activities of oil palm plantations PT. ASMR, the major impact is predicted negative perceptions of citizens related to the presence of plantations and palm oil mill. The negative perceptions such as: (1) negative perceptions of causing damage to the ecosystem, especially the destruction of water catchment sources, (2) the negative perception that land acquisition would be detrimental to the community, (3) the potential for social unrest as a result of a variety of things that people will happen with the operation of oil palm plantations and processing plants, and (4) the social changes in the surrounding communities.

To overcome the negative impacts and potential conflicts are predicted, PT. ASMR will conduct two approaches impact management models, namely: (1) the impact of strategic management and (2) based on the potential impact of conflict management.

| No. | Prepared                            | Strategy and Activitiy Alternatives  |  |
|-----|-------------------------------------|--|--|
|     | Components                          |  |  |
|     |                                     | - Prepare a team with competent human resources in community approach  |  |
| 1.  | Land acquisition<br>mechanism       | <ul> <li>Prepare a land acquisition system with socio-cultural and economic condition<br/>consideration and align with the purpose of local govermnetdevelopment<br/>programs</li> </ul> |  |
|     |                                     | <ul> <li>Maintenance the balance of planning and implementation of the oil palm<br/>plantation development</li> </ul>  |  |
|     | Disatellar                          | <ul> <li>Establish open communication with stakeholders, especially recipients of<br/>social impacts both positive and negative</li> </ul>   |  |
| 2.  | Management                          | <ul> <li>Implementing management, leadership, and decision-making mechanisms effectively to build a working relationship with the entire labor intensive</li> </ul>                      |  |
|     |                                     | - Develop procedures on routine task and input from workers  |  |
|     |                                     | <ul> <li>Set up a system and mechanism on industrial relationship by form a labour<br/>union or others</li> </ul>  |  |
| 2   | Management and<br>Labor Recruitment | <ul> <li>Providing employment opportunities to the surrounding community<br/>consistently</li> </ul>   |  |
| 5.  |                                     | <ul> <li>Conducting education/training on employee skill, knowledge and attitude<br/>improvement as company required</li> </ul>  |  |
|     |                                     | - Applying the wage system as the standard regional wage (UMR) consistently  |  |
| 4.  | Wages / Salaries<br>System          | <ul> <li>Made an open communication to the workers regarding remuneration system<br/>and standard</li> </ul>   |  |
|     |                                     | - Set up a standard mechanism on career and promotion of employees   |  |
|     |                                     | - Set up a standard mechanism an socialize welfare allowances  |  |
|     | Contributing on                     | <ul> <li>Develop CSR mechanism with integrated schemes, sustainable, and<br/>transparent by involving the public directly from three villages</li> </ul>                                 |  |
| 5.  | Community<br>Development (CSR)      | <ul> <li>The company plans to continuously community development through CSR<br/>programs by forming a kind open communication forum to community<br/>participation.</li> </ul>          |  |
|     |                                     | <ul> <li>The company applies the principles of conservation in particular maintenance<br/>of watersheds and springs.</li> </ul>  |  |
| 6.  | Environmental<br>Management         | <ul> <li>Develop a transparent mechanism to guarantee the maintenance of<br/>environment with the participation of local residents.</li> </ul>   |  |
|     |                                     | <ul> <li>Consistent on conservation of endangered species (orangutan) around the<br/>plantation and build effective communication with relevant stakeholder</li> </ul>                   |  |
| 7.  | Socio-Economic<br>Development       | <ul> <li>Commited to community development around the plantation by conducting<br/>education and training management of oil palm plantations</li> </ul>                                  |  |

 Table 10. Impact of Strategic Management Model Plan of PT Andalan Sukses Makmur

|    |                        | <ul> <li>Designing mechanism of community development in an integrated manner<br/>based on local resources and needs community</li> </ul> |
|----|------------------------|---|
|    |                        | <ul> <li>Coordinate with BPN and others related agencies for spatial development<br/>plan and development of smallholdings</li> </ul>     |
| 8. | Smallholder Plantation | <ul> <li>Approach the community especially through the figures to formulate a<br/>partnership scheme on plasma development</li> </ul>     |
|    | Development            | <ul> <li>Made a plasa execution plan in a participatory manner by involving all<br/>relevant stakeholders</li> </ul>                      |
|    |                        |   |

# Table 11. Potential Conflict Impact Management Model Plans of Andalan Sukses Makmur

| No | Potential Conflict   | Activity Alternative   | Parties  | Expected Results  | Time<br>Frame  |
|----|--|--|--|---|--|
| 1. | Road conditions between village<br>and plantations predicted to<br>trigger respiratory diseases or<br>accident. Needed anticipation to<br>avoid vertical conflict local<br>communities and company<br>rised.   | <ul> <li>Planning to supplying<br/>hydrant water for<br/>watering when dry</li> <li>Road compacting on<br/>road with high intensity<br/>use by company.</li> <li>Conductiing medical<br/>and assistance of public<br/>health.</li> </ul>                                     | Company,<br>Community, Local<br>Government,<br>Pukesmas and<br>village goverment | <ul> <li>Community<br/>participated in<br/>addressing the dust</li> <li>Reducing the dust</li> <li>Preventing respiratory<br/>diseases affects society</li> </ul>                         | - Continued  |
| 2  | Boundaries between Sekonyer<br>and Kumai Hilir villages are still a<br>secondary forest and potentially<br>can cause boundaries conflict   | <ul> <li>Legal certainy boundary<br/>between villages</li> <li>Facilitate or mediate<br/>the boundary<br/>demarcation</li> <li>Company must be<br/>netral</li> </ul>   | Company, BPN,<br>community<br>leaders, local<br>govermnet                        | <ul> <li>The achievement of<br/>village boundaries<br/>definitively recognized<br/>all parties</li> </ul>   | Beginning on<br>land<br>preparation  |
| 3  | Plantation development<br>realization disinformation that<br>uncertainty will trigger an<br>attitude of resistance, defiance<br>and rejection of the company.  | Company immediately<br>establish<br>communications with<br>the community<br>intensively to clarify<br>information about the<br>realization of plantation<br>development.   | Company,<br>community and<br>local govermnet.                                    | <ul> <li>Disinformation</li> <li>immediately resolved</li> <li>Increased community</li> <li>confidence in the</li> <li>company</li> </ul>   | Priority<br>(within 1-3<br>months) and<br>continued<br>with schedule<br>planning with<br>communities |
| 4  | The weak bargaining position of<br>labor due to be opening up<br>alternative employment could<br>lead to the fulfillment of vertical<br>conflict between the company<br>and the conflict between the<br>local community with a<br>workforce from outside the<br>village  | <ul> <li>Company proactively<br/>developing educational<br/>activities /training for<br/>skill and capacity society<br/>building</li> <li>Education/ training<br/>event packaged as part<br/>of the CSR scheme is<br/>communicated openly<br/>wtih the community.</li> </ul> | Company,<br>Disnaker, and local<br>goverment                                     | <ul> <li>Increased community<br/>knowledge and skill</li> <li>More work<br/>opportunity for<br/>community to work in<br/>the company</li> </ul>   | Will be done<br>periodically<br>as company<br>needed   |
| 5. | Company Strategic approach<br>followed to establish<br>institutional and leadership<br>pattern without considered to<br>the social dynamics that occur<br>can lead to the tension and the<br>conflict between elite groups at<br>the village level with the<br>reformer movement that<br>emerged in the village. | The company must<br>develop open<br>mechanism with the<br>community and be<br>neutral/fair in<br>developing<br>communication<br>strategies with<br>communities around<br>the plantation  | Company, Dinkes,<br>and local<br>goverment                                       | <ul> <li>Increased community<br/>confidence in the<br/>company</li> <li>Horizontal potential<br/>conflict resolved</li> </ul>   | Priority<br>(within 1-3<br>months) and<br>continued  |
| 6. | When health services provided<br>to the public is not programmed<br>properly then it implies the<br>potential to trigger social<br>conflict to be spawned<br>resistance and rejection of<br>public attitudes toward the<br>company.  | <ul> <li>Company to design a<br/>mechanism for public<br/>health services through<br/>CSR schemes that will<br/>large impact to the<br/>community.</li> </ul>  | Company, Dinkes,<br>and local<br>goverment                                       | <ul> <li>Community will get<br/>sustainable health<br/>services</li> <li>The company will<br/>increase the CSR<br/>mechanism of<br/>charitable towards a<br/>sustainable model</li> </ul> | Conducted<br>regularly and<br>continuously   |

# Summary of Management and Mitigation Plans (HCV)

#### The HCV development and preparation of management & monitoring plans

The HCV development and preparation of management & monitoring plans were based on the result of the HCV assessment which was administered in April 2013 by independent consultants from Sonokeling Akreditas Nusantara who has been personality accredited and approved by RSPO. This process provides data and information related to the presence of the HCV areas in the Permitted Location (Ijin Lokasi) of PT ASMR, the key HCV elements, the actual conditions included the potential threats, and the recommendations for the management.

The HCV development and preparation of management & monitoring plans were implemented with the aim to provide guideline for the company in planning and management of its programs or activities in managing the HCV present within the concession area. The purpose was to enable all the available resources to be focused, integrated and effective in order to achieve the HCV management outcome. The purposes of this management and monitoring document were:

- 1) To ensure that the identified and assigned HCV areas are under protection and in a well managed state so that their HCV functions are well preserved,
- 2) To enhance the administration of the management and monitoring in the sense that the process carried out is more systematically according to the legal procedures.

#### Plan for HCV Monitoring and Regular Review of Data

The basic programs and activities that fulfill the HCV management are in regular monitoring and review. The purpose of review is to measure the achievements, effectiveness, efficiencies, impacts, and sustainability of the programs. Thus, the purpose of monitoring is to evaluate whether the activities run as they are expected; whether the outputs of the process are as they were projected previously; and whether the resources investments (human, fund, time) are as they were planned.

Monitoring and review are aimed to a set of indicators as the key performance indicators and should be managed systematically, consistently, and well documented. The monitoring should be implemented regularly and it is dependent on the classifications of the activities and the target indicator to evaluate the review should be conducted at the end of the management periodical plan, that is in the end of the third years (summative review) and every six months (formative review).

#### Management and mitigation plans for threats in HCV areas.

The identified basic activities which are planned to run in order to achieve the basic targets for the enhancement and maintenance of the HCV areas are:

- 1. Improving quality and safety of the conservation area is in the area of the management unit.
- 2. Restore and improve the function of protected area that has been disturbed.
- 3. Structuring and tagging boundaries were identified as HCV area.
- 4. Identification, documentation and recondition of baseline HCV elements and that threatens.
- 5. Socialization to (management, worker, and local peoples) the HCV area about the existence and importance of protecting HCV areas.
- 6. Develop dialogue and facilitate people for making like-minded of HCV management.
- 7. Dialogue with stakeholders, especially government for increasing protecting HCV elements and areas.
- 8. Managing protected areas and improving the function of peat with rehabilitation and proper water management
- Recondition and making the policy and procedure (SOP) which is supporting the effectiveness of HCV management.

# HCV Location to be managed by company

HCV location will be managed by the company is its location within is included in operational as many 7,000 ha. That because the location in permit area has some settlement with local people and other use.

| No | HCV Area                         | HCV<br>Attribute | Total HCV<br>Area Identified<br>(Ha) | HCV Area<br>Managed (Ha)                       |
|----|----------------------------------|------------------|--------------------------------------|--|
| 1  | Riparian of Seluang River        | 1.3, 4.1         | 15.32                                | 15.32  |
| 2  | Riparian of Kapak River          | 4.1              | 17.94                                | 17.94  |
| 3  | Riparian of Bakung River         | 4.1              | 23.22                                | 23.22  |
| 4  | Riparian of Kumai Seberang River | 4.1              | 3.49                                 | 3.49   |
| 5  | Riparian of Jerumbun River       | 1.3, 4.1         | 9.93                                 | 9.93   |
| 6  | Riparian of Kanal 4              | 4.1              | 1.63                                 | 1.63   |
| 7  | Riparian of Kanal 3              | 4.1              | 0.94                                 | 0.94   |
| 8  | Riparian of Kanal 2              | 4.1              | 1.41                                 | 1.41   |
| 9  | Riparian of Kanal 1              | 4.1              | 1.78                                 | 1.78   |
| 10 | Riparian of Kanal Trans          | 4.1              | 1.48                                 | 1.48   |
| 11 | Riparian of Kanal Maru           | 4.1              | 1.17                                 | 1.17   |
| 12 | Riparian of Kanal Marjan         | 4.1              | 0.87                                 | 0.87   |
| 13 | Riparian of Kanal Samsuri        | 4.1              | 0.63                                 | 0.63   |
| 14 | Riparian of Kanal Kamis          | 4.1              | 0.68                                 | 0.68   |
| 15 | Riparian of Kanal Imin           | 4.1              | 1.67                                 | 1.67   |
| 16 | Riparian of Kanal Aspawi         | 4.1              | 1.71                                 | 1.71   |
| 17 | Riparian of Kanal Rambai         | 4.1              | 0.91                                 | 0.91   |
| 18 | Riparian of Kanal Pulut          | 4.1              | 2.28                                 | 2.28   |
| 19 | Nypa / Mangrove ecosystem        | 4.1              | 34.78                                | 34.78  |
| 20 | Feeding area of Orangutan        | 1.1,1.3          | 809.00                               | Planned to be<br>returned to the<br>government |
|    | Total                            | 930.84           | 121.84                               |  |

# Table 12. HCV Area Management Plan PT ASMR

| нсу   | Location   | HCV's Management   | Time Plan  | Monitored Indicators  | Departement in Charge   |
|---|--|--|--|---|---|
| HCV 1.3<br>Area that contain<br>habitat for viable<br>populations of<br>endangered,<br>restricted range or<br>protected species | <ul> <li>Riparian of the<br/>Seluang River</li> <li>Riparian of the<br/>Jerumbun River</li> </ul>  | <ul> <li>Socialization HCV 1.3 area to staff and the communities</li> <li>Put signboards HCV 1.3 areas and prohibiton of illegal hunting &amp; wildlife disturbance in that areasCoordinate with Forestry Agency and regional conservation center for the management of the wildlife population</li> <li>Enrichment of plants in that protected areas, especially with local plants</li> <li>Securing HCV 1.3 areas from land conversion, illegal logging and illegal hunting</li> <li>Made a SOP of HCV</li> <li>Cooperation with related stakeholders to HCV 1.3 &amp; 4.1 Management</li> </ul> | <ul> <li>Every 1 year</li> <li>6 month</li> <li>3 Year</li> <li>Continous</li> <li>1 month</li> <li>Temporary</li> </ul> | <ul> <li>intensity of interference to area which<br/>have HCV 1.3, including prohibiton of<br/>illegal hunting &amp; wildlife disturbance,<br/>usage of hazardous &amp; toxic materials and<br/>also fire hazard</li> <li>variety conditions and wealth of flora<br/>fauna species periodically</li> <li>Presentation growth and death of<br/>enrichment plants</li> <li>Actual implementation of activities and<br/>the survival of rehabilitated against HCV<br/>1.3 areas</li> </ul> | <ul> <li>Estate Manager &amp;<br/>Sustainability Team</li> <li>Sustainability Team</li> <li>Estate Manager &amp;<br/>Sustainability Team</li> <li>Sustainability Team</li> <li>Sustainability Team</li> <li>Estate Manager &amp;<br/>Sustainability Team</li> </ul> |
| HCV 4.1.<br>Areas or<br>ecosystem<br>important for the<br>provision of water<br>and prevention of<br>flood for                  | <ul> <li>Riparian of the<br/>Seluang River</li> <li>Riparian of the Kapak<br/>River</li> <li>Riparian of the Bakung<br/>River</li> <li>Riparian of the Kumai<br/>Seberang River</li> <li>Riparian of Jerumbun<br/>River</li> </ul> | <ul> <li>Arrange and measurement of<br/>boundary, and also laying<br/>demarcation for HCV 4.1 Areas</li> <li>Socialization the HCV 4.1 areas<br/>to all staf and stakeholders</li> <li>Put signboards in HCV 4.1 areas</li> <li>Enrichment of plants in HCV 4.1<br/>area, especially with feed crops</li> </ul>  | <ul> <li>6 month</li> <li>Every 1 year</li> <li>6 month</li> </ul>   | <ul> <li>intensity of interference to area which<br/>have HCV 4.1 (erosion, clearing, logging,<br/>fire hazzard)</li> <li>Implementation of activities and<br/>percentage of land cover plant in the area<br/>of rehabilitaton, also care monitoring<br/>against HCV 4.1</li> <li>debit and water qualty of the river,<br/>periodically.</li> </ul>   | <ul> <li>GIS &amp; Sustainability Team</li> <li>Sustainability Team</li> <li>Sustainability Team</li> </ul>   |

# Table 13. Summary of Management and Mitigation Plans (HCV)

| нсv                       | Location  | HCV's Management   | Time Plan      | Monitored Indicators   | Departement in Charge  |
|---------------------------|---|--|----------------|--|--|
| downstream<br>communities | <ul><li> Riparian of the Kanal 1</li><li> Riparian of the Kanal 2</li></ul>   | • Securing HCV 4.1 areas from<br>land conversion, illegal logging  | • 3 Year       | <ul><li> Erosion rates in steep slope areas</li><li> River sedimentation rates</li></ul> | <ul> <li>Estate Manager &amp;<br/>Sustainability Team</li> </ul> |
|                           | Riparian of the Kanal 3   | and illegal hunting, usage of  |                |  |  |
|                           | <ul> <li>Riparian of the Kanal</li> </ul>   | hazardous & toxic materials<br>and also fire bazard  |                |  | <ul> <li>Sustainability Team</li> </ul>                          |
|                           | Transand an• Riparian of the Kanal<br>Maru• Vegeta<br>area• Riparian of the Kanal<br>• Riparian of the Kanal• Coope | <ul> <li>Vegetation iventory in HCV 4.1<br/>area</li> <li>Cooperation with related</li> <li>takeholdem to UCV 4.2.8 4.1</li> </ul> | Continous      |  |  |
|                           | • Riparian of the Kanal   | Management   |                |  |  |
|                           | Samsuri   |  |                |  |  |
|                           | <ul> <li>Riparian of the Kanal</li> </ul>   |  |                |  | <ul> <li>Sustainability Team</li> </ul>                          |
|                           | Riparian of the Kanal   |  | • Every 1 year |  | - Estate Manager 9   |
|                           | Imin  |  |                |  | <ul> <li>Estate Manager &amp;<br/>Sustainability Team</li> </ul> |
|                           | <ul> <li>Riparian of the Kanal</li> <li>Aspawi</li> </ul>   |  |                |  | Sustainability realin  |
|                           | <ul> <li>Riparian of the Kanal<br/>Rambai</li> </ul>  |  |                |  |  |
|                           | <ul> <li>Riparian of the Kanal<br/>Pulut</li> </ul>   |  |                |  |  |
|                           | <ul> <li>Mangrove Palm<br/>Ecosystem</li> </ul>   |  |                |  |  |

Note : Orangutan feeding area (HCV 1.1 & 1.3) planned to be returned to the government

# **VERIFICATION STATEMENT:**

PT. Andalan Sukses Makmur opted for document verification and field observation. Three (3) auditors of PT Mutuagung Lestari have conducted desk study at their office in Jakarta from  $16^{th} - 17^{th}$  December, 2013 and field visit in Pangkalan Bun from  $18^{th} - 20^{th}$  December; and also held interviews with the management representatives of PT Andalan Sukses Makmur and related stakeholders (affected villagers) during the NPP verification.

The SEIA (AMDAL) was conducted by the government-accredited consultant whereas the SIA and HCV assessments were conducted by RSPO-approved assessors. Therefore PT Andalan Sukses Makmur has adhered to RSPO New Planting Procedure. Documentation of assessments and plans are comprehensive and professionally carried out in accordance with RSPO requirements and comply with RSPO Principles and Criteria for new plantings.

Signed on behalf of,

PT. Mutuagung Lestari

Yudwi Wisnu Rahmanto Lead Auditor 20<sup>th</sup> January 2014

PT. Andalan Sukses Makmur

Francisca Tiurma Damanik Group Department Head CCS 20<sup>th</sup> January 2014