

## Summary Report of SEIA and HCV Assessments PT Siringo - Ringo Jayapura Regency–Papua Province

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### Executive Summary

PT Siringo - Ringo which located at Soskotek Village Kaureh District and Pagai Village Airu District, Jayapura Regency - Papua Province, is one of palm oil plantations companies that adopted the sustainable palm oil practices based on RSPO New Planting Procedures which was enforced 1st January 2010. As part of a sustainable palm oil management, PT Siringo - Ringo conducted the Social Environment Impact Assessment (AMDAL), High Conservation Value (HCV) identification and Social Impact Assessment (SIA). The HCV and SIA assessment were conducted from 12<sup>th</sup> February 2013 – 13<sup>th</sup> March 2013 by Aksenta; the key consultants conducting these assessments have been accredited and approved by RSPO.

The Permitted Area (Izin Lokasi) was approved on 9<sup>th</sup> May 2011 by the Jayapura Regent decree (Surat Keputusan Bupati Jayapura) No 117 Year 2011; the total area based on Permitted Area is ± 31,571 ha. Revision of Permitted Area (Perubahan Luas Izin Lokasi) was approved on 3<sup>rd</sup> October 2013 by Jayapura Regent Decree (Surat Keputusan Bupati Jayapura) No 250 Year 2013; the total area based on Revision Permitted Area ± 29,278 ha. The Consent License (Izin Prinsip) for PT Siringo - Ringo was approved on 30<sup>th</sup> May 2011 by the Investment Coordinating Board Papua Province No 525/ 238; the total area based on Consent License is 31,571 ha. Release of Production forest areas can be converted to oil palm plantations of PT Siringo - Ringo is located in Kaure District Jayapura Regency Papua Province was approved on 20<sup>th</sup> January 2012 by the Minister of Forestry Republic of Indonesia (Keputusan Menteri Kehutanan) No SK. 21/MENHUT-II/2012. The Social Environment Impact Assessment (AMDAL) was approved by AMDAL Commission of Jayapura Regency No 660.1/03-ANDAL/XII/2012 dated on 12<sup>th</sup> December 2012 and for the Environmental Feasibility of Oil Palm Plantation Development Plan and Processing was approved by Regent of Jayapura Regency decree (Surat Keputusan Bupati Jayapura) No. 4 year 2013 dated on 15<sup>th</sup> January 2013. The Environmental Permit (Izin Kelayakan Lingkungan) was approved by Regent of Jayapura Regency No. 7 dated on 16<sup>th</sup> January 2013. The Plantation Permit (Izin Usaha Perkebunan, IUP) was approved on 11<sup>th</sup> April 2013 by the Investment Coordinating Board Papua Province (Badan Koordinasi Penanaman Modal) Nomor : 05/94/IUP/PMDN/2013; the total area is 29,278 ha.

The results of the HCV assessment based on Permitted Area (Izin Lokasi) and map of Forest Area & Water (2012) shown that the concession areas of PT Siringo - Ringo is area for other uses (Areal Penggunaan Lain, APL). Based on The Social Environment Impact Assessment (AMDAL) report of PT Siringo - Ringo, area concession is logged-over ex-convertible production forest (HPK). The land which is now the Permitted Area of PT Siringo - Ringo and its surrounding area consists of the logged area (SK.21/MENHUT-II/2012 The release of the convertible production forest); the total area is ±19,198 ha, and primary forest ± 2,277 ha. Primary forests are indicated in the Decree (SK.21/MENHUT-II/2012) will serve the purpose as wildlife corridors, habitat of protected flora

and fauna and also buffer zone of the conservation area. The said primary forest area has been included into the HCV area. The Report of Evaluation on Land Suitability for Oil Palm Plantation by consultant (Aksenta) indicated that the soil of project site comprised of mineral soil 72.55% and peat soil 27.45% are indicated.

Permitted Area still holds important HCV biodiversity elements, i.e. species that are globally endangered, endemic species or distribution-limited, and natural ecosystems that are threatened with extinction. There are five types of HCV identified in the PT Siringo - Ringo, these are HCV 1, HCV 3, HCV 4, HCV 5 and HCV 6. The HCV area identified was  $\pm 8,135.9$  ha or  $\pm 27.79\%$  of the total Forest Release Decree (Pelepasan Kawasan Hutan) PT Siringo - Ringo. The important elements of HCV 1 are a. conservation areas within or adjacent to the Permitted Area PT Siringo - Ringo (HCV 1.1), b. Threatened and endangered species (HCV 1.2), c. Endemic species and restricted range (HCV 1.3), d. Areas that contain habitat of temporary use by species or congregations of Species, such as reproduction and population genetic enrichment (HCV 1.4). The elements of HCV 3 cover the natural ecosystems that are endangered/ threatened like Peat Swamp Forest with still good condition. Key elements of HCV 4 cover water catchments area at hilly area, water source and temporary water catchments area (HCV 4.1), erosion control and sedimentation area (HCV 4.2) and area providing barriers to destructive natural fire (HCV 4.3). HCV 5 covers area). Element HCV 5 covers area fundamental to meet basic needs of local communities. HCV 6 covers area that is sacred to local community.

The presence and development of oil palm plantations and mills in the Permitted Area of PT Siringo - Ringo will have an impact on components of livelihoods assets. 1) Changes in tenure and land use. 2) Open access to the public and trade flows of forest products. 3) Substantial funds for the community as a consequence of compensation, 4) potential rift between tribes / clans and communities because of social resentment.

Positive perception of most people as well as good communication support from staff in company makes levels of social risk relatively low. Social risks that need to be considered is the risk associated with the issues that arise both because given issue or a new issue due to the presence of the company. Some possible risks will arise and need to be anticipated are: mass action by the younger generation of the agreement taken by the current generation, social disturbance of the community or tribe/ clan that does not have the right to compensation process, and social damage caused by the lack of credible institutions and mutual suspicion to manage the smallholder (Finance).

## Scope of SEIA and HCV Assessment

### General Data of the Company

Company Name	:	PT Siringo - Ringo
Company Address	:	Spring Tower 02-22 Jl. K.L. Yos Sudarso Kelurahan Tanjung Mulia - Kecamatan Medan Deli Medan – Sumatera Utara - 20241
Deed of Establishment	:	No. 20 dated on 18 <sup>th</sup> November 1977, Notary B. Ar. Poeloengan, S.H.
Adjustment Article of Association	:	No. 39 dated on 7 <sup>th</sup> June 2011, Notary Eddy Simin, S.H.
Capital Status	:	Domestic Investment (Penanaman Modal Dalam Negeri, PMDN)
Type of business	:	Oil Palm Plantation & Processing
Status of concession land	:	Permitted Area (Izin Lokasi) No 117 Dated on 9 <sup>th</sup> May 2011 Revision of Permitted Area (Perubahan Luas Izin Lokasi) No 259 Year 2013 dated on 3 <sup>rd</sup> October 2013. Consent License (Izin Prinsip) (No. 525/238 dated on 30 <sup>th</sup> May 2011) Release of Forest Area (No SK.21/MENHUT-II/2012 dated on 20 <sup>th</sup> January 2013). AMDAL (SEIA) (No. 660.1/03-ANDAL/XII/2012 dated on 12 <sup>th</sup> December 2012) Environmental Feasibility of Oil Palm Plantation Development Plan and Processing (No 4 Year 2013 dated on 15 <sup>th</sup> January 2013). Environmental Permit (Izin Kelayakan Lingkungan) (No 7 years 2013 dated on 16 <sup>th</sup> January 2013). Plantation Permit (Izin Usaha Perkebunan) No. 05/94/IUP/PMDN/2013 dated on 11 <sup>th</sup> April 2013.
Contact person	:	Mr. Go Swee Aun
Geographic Location	:	Kaureh Distrik and Airu Distrik. Jayapura Regency, Papua Province.
Surrounding Entities	:	North : Protected Forest East : Area for other uses (APL, PT Megasurya Mas) West : Production forest that can be converted/HPK South : Wildlife Conservation Area Mamberamo Foja.

# RSPO

The scope of Social and Environment Impact Assessment of PT Siringo - Ringo covers the social entities within the Permitted Area (Izin Lokasi). Geographically, the High Conservation Value assessment covers the Permitted Area (Izin Lokasi) PT Siringo - Ringo. HCV assessment in this area have not opened (landbank) are intended to comply with the requirements of the RSPO Criterion 7.3 about New Planting Procedures (NPP). The maps shown are the release of forest area map, based on Forest Release Decree (Surat Keputusan Pelepasan Kawasan Hutan) No. SK.21/MENHUT-II/2012.

Based on the scope of the steps activities, studies of HCV PT Siringo - Ringo is a full assessment, assessment process which carrying out all stages of the process of identification of HCV, ie: (i) *desktop study, pre-assessment*, (ii) plann of field activities, (iii) implementation of field activities: HCV Identification, assess the current status and the landscape context, and (iv) preparation results of HCV assessment reports.

# RSPO

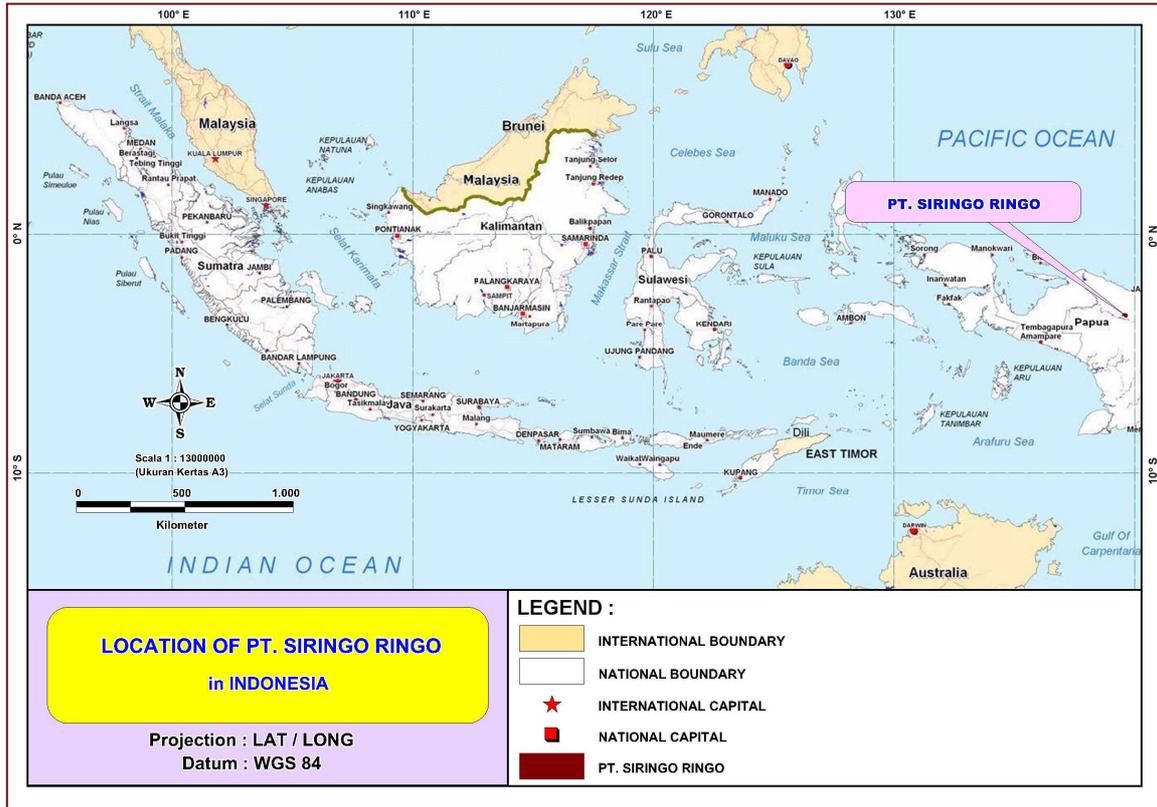


Figure 1. Location of PT Siringo - Ringo in Indonesia

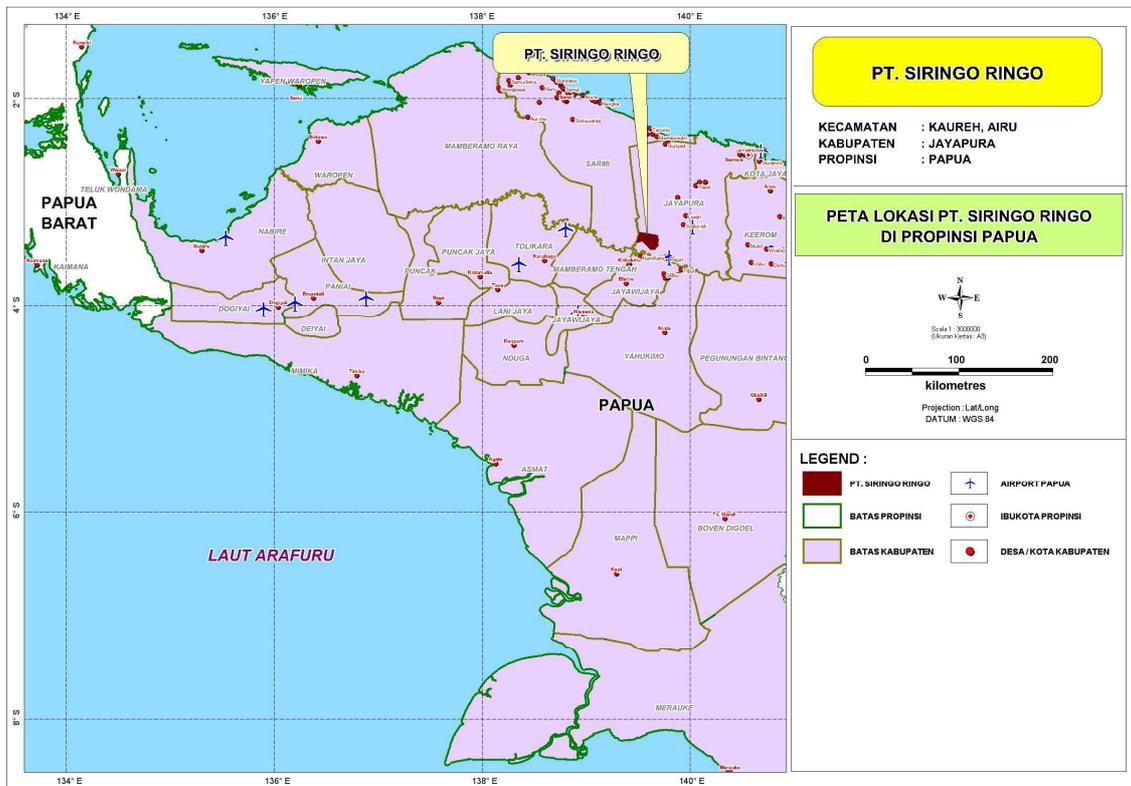


Figure 2. Location of PT Siringo - Ringo in Papua Province

# RSPO

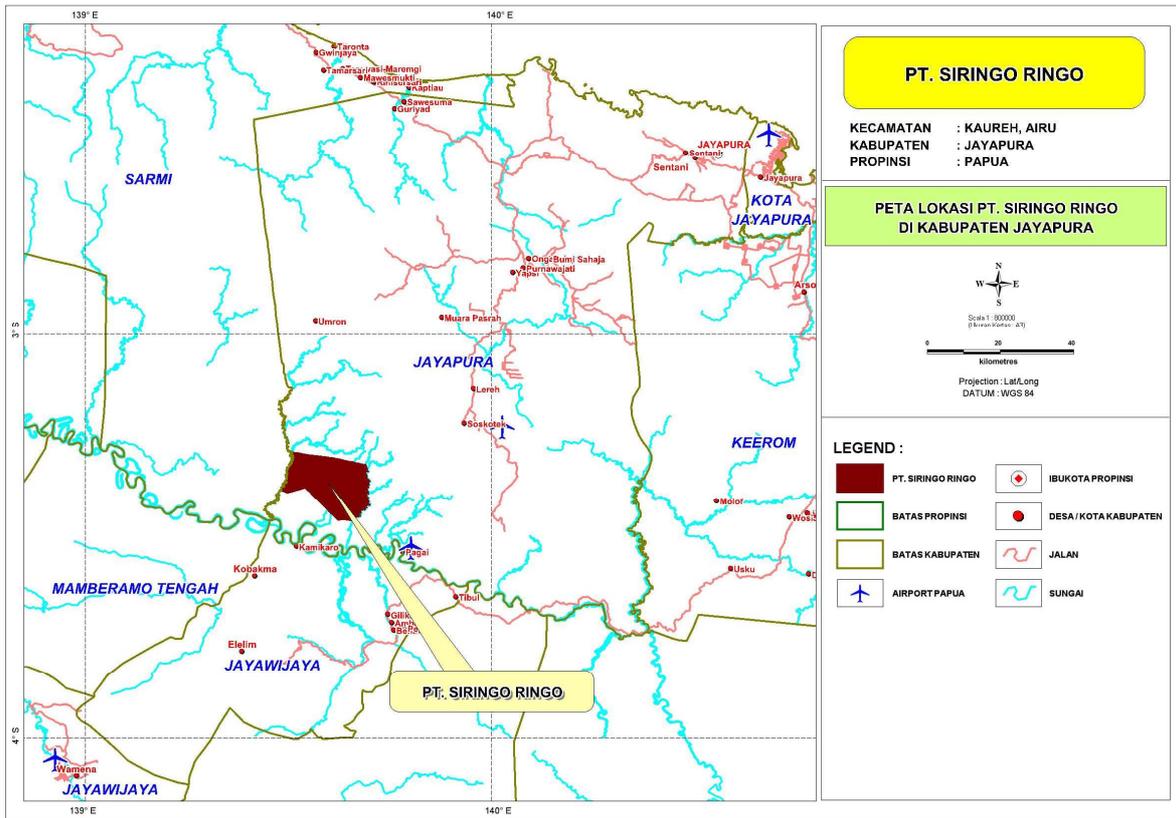


Figure 3. Location of PT Siringo - Ringo Jayapura Regency

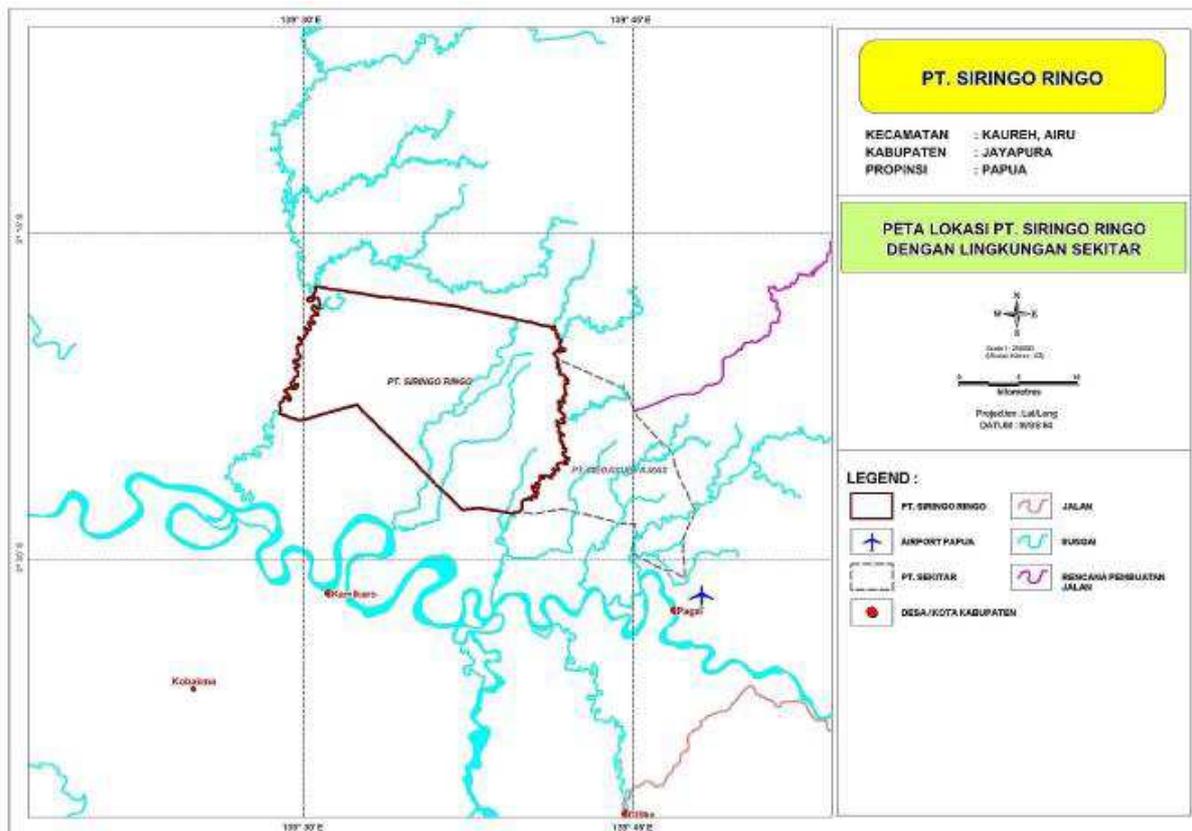


Figure 4. Location of PT Siringo - Ringo and its surrounding entities

## Permits

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

**Table 1.** Types of permits and recommendations of PT Siringo - Ringo

No.	Licenses and recommendations	Issued by	Number and date	Note/ Ha
1	Deed of Establishment	Notary B. Ar. Poeloengan, S.H.	No. 20 Dated on 18 <sup>th</sup> November 1977	
2.	Amendment to Article of Association	Notary Eddy Simin, S.H.	No. 39 Dated on 7 <sup>th</sup> June 2011	
3.	Taxpayer Notification Number	Tax Serve Office (Direktorat Jenderal Pajak)	01.102.430.4-123.000	Registered 27-07- 2001
4.	Permitted Area (Izin Lokasi)	Regent of Jayapura (Bupati Jayapura)	No.117 Dated on 9 <sup>th</sup> May 2011	± 31,571 ha
5.	Revision of Permitted Area (Perubahan Luas Izin Lokasi)	Regent of Jayapura (Bupati Jayapura)	No. 250 Dated on 03 <sup>rd</sup> October 2013	29,278 ha
6.	Consent License (Persetujuan Prinsip Izin Usaha Perkebunan)	Investment Coordinating Board Papua Province	No. 525/238 Dated on 30 <sup>th</sup> May 2011	31,571 ha
7.	Release of Forest Area	Minister of forestry Republic of Indonesia	No. SK.21/MENHUT-II/2012 Dated on 20 <sup>th</sup> January 2012	29,278 ha
8.	AMDAL (Social Environment Impact Assessment)	AMDAL Commission	No. 660.1/03-ANDAL/XII/2012 Dated on 12 <sup>th</sup> December 2012	
9.	Environmental feasibility license	Regent of Jayapura	No 4 Dated on 15 <sup>th</sup> January 2013	
10.	Environmental permit	Regent of Jayapura	No 7 Dated on 16 <sup>th</sup> January 2013	
11.	Plantation Permit (Izin Usaha Perkebunan)	Investment Coordinating Board Papua Province	05/94/IUP/PMDN/2013 Dated on 11 <sup>th</sup> April 2013	29,278 ha

## Area and time-plan for new plantings

The proposed new planting area by PT Siringo - Ringo is located in the Permitted Area (Izin Lokasi) has obtained the release of forest land and Plantation Permit (Izin Usaha Perkebunan) and also agreed by the owners of the land through the Free Prior Informed Consent Process (Report on Process of FPIC – Free Prior Informed Consent). Land development and planting of oil palm will begin in 2014 following the procedures of the RSPO New Planting Procedures (NPP).

## Assessment Process and Procedures

### SEI Assessment

#### Assessors and their credentials:

The Social Impact Assessment of PT Siringo - Ringo was carried out by Aksenta which is located at Jl. Gandaria VIII/10, Kebayoran Baru, Jakarta 12130; Telephone/fax: +62 21 739-6518, E-mail: [aksenta@aksenta.com](mailto:aksenta@aksenta.com). The key consultants conducting these assessments have been accredited and approved by RSPO. The team members are:

1. **Andri Novi**, a Literary from Padjajaran University, Bandung with science culture literature and linguistic culture. Experienced in Participatory Action Research and Community Development. Participate as a consultant, facilitator and trainer in programs such as Partnership Program for Development (YAPPIKA and CUSO), Building Institutions for Good Governance Conference (ICMA-USAID), Local Governance Support Program (USAID), Health Services Program (USAID) and Cities Poverty Eradication Programme. Involved in program and project management of natural resources such as Berau Forest Management Project, Berau Forest Bridging Project, South Central Kalimantan Production Forest Project, Multistakeholder Forestry Programme and Forest Certification Training Project (TNC & WWF). Accredited by the RSPO as Discipline Specialist with specialization HCV 5 and 6. contact: [andri.novi@aksenta.com](mailto:andri.novi@aksenta.com)
2. **Eko Cahyono**, completed his study at the Ushuluddin Faculty, Islamic University of Yogyakarta (2004) and Master of Science at Rural Sociology graduate Bogor Agricultural University (2012). Becoming a Teacher Team (Diploma Bogor Agricultural University) and teaching assistant at the Faculty of Human Ecology Bogor Agricultural University (2011-2012), courses Social Change, Collaborative Management of Natural Resources, and Social Research Methodology. From 2007-present, a researcher and facilitator empowering rural communities in Sajogyo Institute and a researcher (freelance) in the study of socio-agrarian countryside in some other institutions, the Foundation Silvagama, PSP3-IPB, STPN-Yogya, PSB-IPB, etc.. Some research results published in the media / journals / books (Kontan, Seputar Indonesia, Basis Journal, Journal of Politica, Journal Renai). As an independent consultant, he is experienced in conducting social assessment and facilitation of community development-related themes rural sociology, poverty, agrarian, conflicts, social movements and political ecology. Contact: [eko.cahyono@aksenta.com](mailto:eko.cahyono@aksenta.com)
3. **Sabeni**, completing undergraduate studies at the Faculty of Forestry, Bogor Agricultural University. In the course of his career was never away from the things related to the environment, forestry and natural resources. His interest in social development, especially in the processes of community development, he has enriched the sharper will analyze the social impact of the presence of a project. He has extensive expertise and experience in the field of conservation and social-participative decision making, as well as a trainer for the analysis of

environmental processes and environmental audits. He is experienced in conducting social analysis in the forestry sector, especially for industrial plantations, and is currently in the process of registration as a disciplin Specialist RSPO accreditation. In this assessment it conducted a study in social institutions and policies. contact: [sabeni@aksenta.com](mailto:sabeni@aksenta.com)

4. **Wahono**, completing undergraduate education Faculty of Agriculture, Plant Protection Bogor Department of Agricultural University. His experience in the field of agriculture and rural environments do with IPM-FAO, Nastari Institute and the People's Coalition for Food Sovereignty through social studies, sustainable agriculture and environmental health as well as info-mobilization for community development. He deepened his expertise in bio-ecology by following Certificate Course for Conservation Biology and People on the Landscape, Center of Environmental Research and Conservation (CERC), Columbia University, New York City. As an independent consultant he experienced in rural social studies, community facilitation and field surveys related to capital socio-ecology, sustainable livelihood and community development. His role in this study was as Chairman of the Social Impact Assessment. Contact: [wahono@aksenta.com](mailto:wahono@aksenta.com)

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

Consistent with the the assessment model, and considering the time limit available, SIA assessment using the principles of the methodology of rapid rural appraisal (RRA). One of the principles used in the RRA SIA study is the principle of triangulation (round triangle / check and recheck). This triangulation principle includes three things;

- 1) The composition of the multi-disciplinary team of researcherswith scientific.
- 2) Observation units were purposively selected through three types of strata, categories or classes.
- 3) Methods, tools or techniques used in data collection were also done with a variety of techniques. The SIA study using the technique of literature studies, in-depth interviews, Focus Group Discussion (FGD) and observations on the ground (List of stakeholders in a participatory process contained in **Appendix 1**).

The methods and techniques applied in the Social Impact Assessment were:

1. **Literature Study**; this method was used for the purpose of gathering the understanding on the socio-context and environmental aspect of the location which was evaluated. It was carried out in the early phase-before going to the field and at the result analysis phase.
2. **Dialogue**; this method was used to identify the nature of the relevant parties, identify the potential issues to impact, gathering information about expectations, ideas, and opinions to bring the solutions for the actual issues. The process was carried out through the meetings both in formal and in non-formal sequence with definite topics (Focus Group Discussion),

3. **Field Observation;** this method was used to understand directly the actual facts which will be indicator of the issues and social impact happened,
4. **In-depth Interview;** it was used to get a deeper understanding about the issues. It was done in-depth by interviewing the key socialite who will act as respondents. The criteria of choosing the respondents were based on the knowledge possessed or their direct experience over the impact or impacts,

The stages in the Social Impact Assessment, are as follows;

- Secondary data analysis (pre-ground)
- Socialization of SIA to the to the management, management unit and staff of the company through presentation and discussion.
- Field Assessment, conducted through interviews and discussions.
- Consult internal and external stakeholder representatives through group discussion.
- Review of relevant documents
- Convey the preliminary result of the study to the management, management unit and staff of the company through presentation, discussion and input

The data obtained from the documents and the field are then processed and analyzed in accordance with the facts and the findings of field resources and supporting field data. The approaches used in this study consist of participatory, consultative and in rapid approach, then part of the analysis process was also carried out with the community. Participatory analysis is conducted primarily with regard to socio-economic conditions in the Permitted Area or around the location of PT Siringo - Ringo. Summarized the effect of the issue on the ground, and then analyzed using the framework of livelihood sustainability or pentagon capital. 1) *Human capital*, 2). *Natural capital*, 3). *Social capital*, 4). *Physical capital*, and 5). *Financial capital*. Social impact and potential risks assessment arising from the development of oil palm plantations are analyzed with several analysis tools besides stakeholder analysis and social risk analysis.

## HCV Assessment

### Assessors and their credentials

The HCV assessment in the Permitted Area (Izin Lokasi) of PT Siringo - Ringo was carried out by the RSPO accredited assessor. The HCV assessment was conducted from 14<sup>th</sup> – 13<sup>th</sup> March 2013 in the Permitted Area (Izin Lokasi) of PT Siringo - Ringo was carried by Aksenta, located at Jl. Gandaria VIII/10, Kebayoran Baru, Jakarta 12130; Telephone/fax: +62 21 739-6518, E-mail: [aksenta@aksenta.com](mailto:aksenta@aksenta.com). Key consultants from Aksenta have been accredited and approved by RSPO. The team members are:

1. **Resit Sozer**, Master's degree in Tropical Ecology at the University of Amsterdam (UvA). Expertise and experience in the field of wildlife management; study habitat and population, as well as wildlife conflict mitigation. Currently, in addition to consulting with HCV, manage wildlife rescue center in Sukabumi. Competence in the assessment of HCV has been recognized by the RSPO and the entry in the list of RSPO HCV Accredited Assessor - Team Leader, and in charge of identifying HCV 1, 2, and HCV 3. Contact: [resit@aksenta.com](mailto:resit@aksenta.com)
2. **Andri Novi**, a Literary from Padjajaran University, Bandung with science culture literature and linguistic culture. Experienced in Participatory Action Research and Community Development. Participate as a consultant, facilitator and trainer in programs such as Partnership Program for Development (YAPPIKA and CUSO), Building Institutions for Good Governance Conference (ICMA-USAID), Local Governance Support Program (USAID), Health Services Program (USAID) and Cities Poverty Eradication Programme. Involved in program and project management of natural resources such as Berau Forest Management Project, Berau Forest Bridging Project, South Central Kalimantan Production Forest Project, Multistakeholder Forestry Programme and Forest Certification Training Project (TNC & WWF). Accredited by the RSPO as Discipline Specialist with specialization HCV 5 and 6. Contact: [andri.novi@aksenta.com](mailto:andri.novi@aksenta.com)
3. **Fersely G. Feliggi**, Bachelor of Geophysics and Meteorology, F-MIPA, Bogor Agricultural University. Active in assessment related to meteorology, climatology and hydrology. Experienced in the field of mapping, spatial analysis, and remote sensing applications for natural resource management, water resource management and watershed management (DAS), and environmental risk assessment. In this study he identifies and handles affairs HCV 4 GIS. Contact: [getsa@aksenta.com](mailto:getsa@aksenta.com)
4. **Yanto Ardianto**, graduated from agrometeorology IPB, he is now working as GIS officer. His part of job that frequently done related to the spatial modeling to hydrology and agriculture and the analyze system to development the system. The activities that he has done are the system arranging of budget planning information in the Direktorat Jenderal RLPS Forest Department, the Arranging of Spatial Decision Support System to land use arranging (Central Java Province), the Arranging of IWMS (Industrial Waste Monitoring System) to The Ministry of

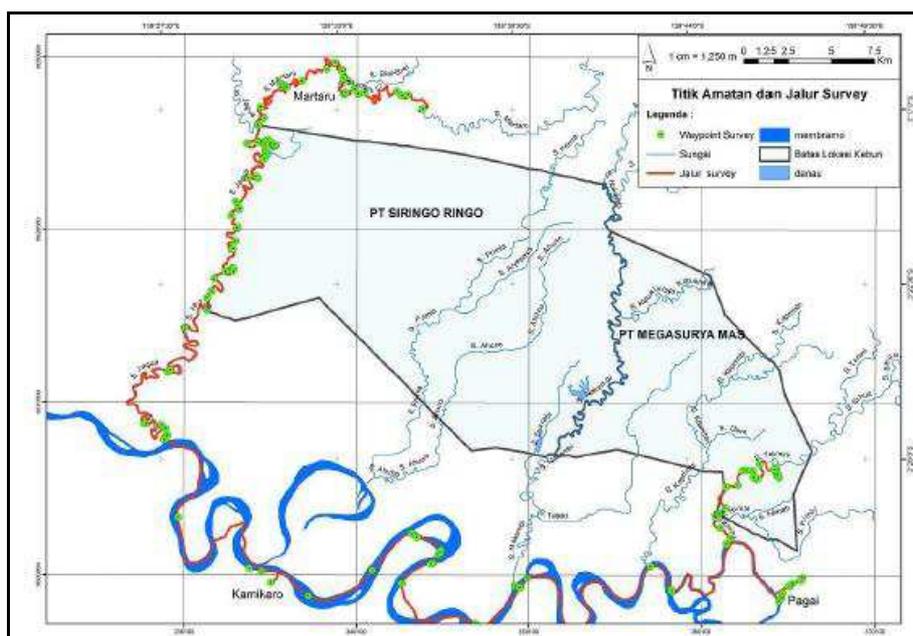
State For The Environment, Critical Land's mapping in the area of BP DAS Sadang, South Sulawesi. In this study he identifies and handles affairs HCV 4 GIS. contact: [yanto@aksenta.com](mailto:yanto@aksenta.com)

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

Geographically, the High Conservation Value assessment covers the Permitted Area (Izin Lokasi) of PT Siringo - Ringo. HCV assessment in this unopened area (landbank) are intended to comply with the requirements of the RSPO Criterion 7.3 about New Planting Procedures (NPP). The maps shown are the release of forest area map, based on Forest Decree Release (Surat Keputusan Pelepasan Kawasan Hutan) No. SK.21/MENHUT-II/2012.

HCV assessment covers the entire Permitted Area of PT Siringo - Ringo ± 31,571 ha, it includes the release of forest land area of 29,278 ha, and the area around it. Based on the scope type of HCV that assessed, HCV assessment in PT Siringo - Ringo is a complete assessment, covering all types of HCV (HCV-1 to HCV-6) and all the sub-type (HCV-1 consists of HCV 1.1-1.4; HCV 4 consisted of HCV 4.1-4.3). Based on the scope of the steps activities, study of HCV PT Siringo - Ringo is a full assessment, assessment process which carrying out all stages of the process of identification of HCV from preparation and design to drafting assessment reports.

Field surveys were conducted from 14<sup>th</sup> February – 13<sup>th</sup> March 2013, with assistance of PT Siringo - Ringo management team. Total sites visited during the assessment process were as much as 166 points with 160 miles trails survey. The distribution of sites visited during the HCV assessment is shown in **Figure 5**.



**Figure 5.** Distribution of the observation spots

The understanding and scope of HCV for the oil palm plantation sector refers to the HCVF definitions which apply to the forestry sector. The Identification of High Conservation Value in Indonesia was developed by the Konsorsium Revisi HCV Toolkit Indonesia (2008), *The High Conservation Values Forest Toolkit* (ProForest, 2003); *Good Practice Guidelines for High Conservation Value Assessment: a Practical Guide for Practitioners and Auditors* (ProForest, 2008). Other references are such as IUCN, CITES, and other guidelines as well as the relevant laws of Indonesia were also subjects of consideration in HCV Assessment of PT Siringo - Ringo.

**Table 2.** The main sources of data and information assessment HCV

HCV Type	The main sources data
HCV 1	<ul style="list-style-type: none"> <li>• Peta Penunjukan Kawasan Hutan dan Perairan Provinsi Papua (Kementerian Kehutanan, Direktorat Jenderal Planologi Kehutanan, 2012).</li> <li>• Tutupan lahan dari citra satelit Landsat ETM+ 7 SLC-Off (USGS, 2012).</li> <li>• Burung-burung di Mimika (van Balen et al. 2005).</li> <li>• Freshwater Fishes of the Timika Region (Allen et al. 2000).</li> <li>• Keystone Species Papua. Indonesia Biodiversity CHM, <a href="http://www.indonesianchm.or.id">http://www.indonesianchm.or.id</a></li> <li>• Kura-kura dan Buaya Indonesia &amp; Papua Nugini, dengan Catatan mengenai Jenis-jenis di Asia Tenggara. IUCN, ITB dan World Bank (Iskandar, D.T., 2000).</li> <li>• Status Keterancam Species, sumber: <a href="http://www.iucnredlist.org">www.iucnredlist.org</a>, Downloaded in January 2012.</li> <li>• Appendices I, II and III, valid from 3 April 2012. UNEP, Geneva, Switzerland. Downloaded in 1 October 2012. (CITES, 2012).</li> <li>• The Ecology of Papua. The Ecology of Indonesia Series, Volume V &amp; VI. Periplus Edition, HK. (Marshall A. J. &amp; Beehler, B. M. 2007).</li> <li>• Endemic Bird Area Factsheet: Sumatera and Peninsular Malaysia (BirdLife International, 2012). Downloaded from <a href="http://www.birdlife.org">http://www.birdlife.org</a> on 29/08/2012.</li> <li>• Important Bird Areas in Asia: Key Sites for Conservation. (Birdlife Conservation Series No. 13. Cambridge, UK. (Birdlife International, 2004)</li> <li>• Area Ramsar di Indonesia, sumber: <a href="http://www.ramsar.org/cda/en/ramsar-pubs-notes-anno-indonesia/">http://www.ramsar.org/cda/en/ramsar-pubs-notes-anno-indonesia/</a></li> </ul>
HCV 2	<ul style="list-style-type: none"> <li>• The Ecology of Papua. The Ecology of Indonesia Series, Volume V &amp; VI. Periplus Edition, HK. (Marshall A. J. &amp; Beehler, B. M. 2007).</li> <li>• Tutupan lahan dari citra Landsat ETM+7 tahun 2012.</li> <li>• Area Ramsar di Indonesia, sumber: <a href="http://www.ramsar.org/cda/en/ramsar-pubs-notes-anno-indonesia/">http://www.ramsar.org/cda/en/ramsar-pubs-notes-anno-indonesia/</a></li> <li>• Terrestrial Ecosystems of New Guinea. WWF, <a href="http://wwf.panda.org">http://wwf.panda.org</a></li> </ul>
HCV 3	<ul style="list-style-type: none"> <li>• The Ecology of Papua. The Ecology of Indonesia Series, Volume V &amp; VI. Periplus Edition, HK. (Marshall A. J. &amp; Beehler, B. M. 2007).</li> <li>• Tutupan lahan dari citra Landsat ETM+7 tahun 2012.</li> <li>• Peta-peta Sebaran Lahan Gambut dan Kandungan Karbon di Pulau Papua (Wetlands International, 2006)</li> <li>• Indonesia Biodiversity CHM, <a href="http://www.indonesianchm.or.id">http://www.indonesianchm.or.id</a></li> <li>• Heathland; Terrestrial Ecosystems of New Guinea. WWF, <a href="http://wwf.panda.org">http://wwf.panda.org</a></li> </ul>
HCV 4	<ul style="list-style-type: none"> <li>• Tipe genetik pola curah hujan di Indonesia (Winarso dan Mc.Bride, 2002).</li> <li>• Data curah hujan di wilayah kajian dan sekitarnya tahun 2002-2011 (TRMM).</li> <li>• Data iklim di wilayah kajian dan sekitarnya tahun 1979-2010 (NCEP CSFR)</li> <li>• Peta sistem lahan (RePPPProT, 1989).</li> <li>• Data Digital Elevation Model Shuttle Radar Topography Mission (USGS, 2000).</li> </ul>

HCV Type	The main sources data
	<ul style="list-style-type: none"> <li>• Tutupan lahan dari citra satelit Landsat 7 ETM+ tahun 2000 dan 2009 SLC-Off (USGS).</li> <li>• Peta Jenis Tanah (Tim Soil Survei Aksenta, 2013)</li> <li>• Soil Taxonomy: A Basic System of Soil Classification for Making and Interpreting Soil Surveys (Soil Conservation Service USDA, 1975)</li> <li>• Section 4: Hydrology In National Engineering Handbook (SCS USDA, 1972)</li> <li>• Peta Indikatif Penundaan Pemberian Izin Baru Pemanfaatan Hutan, Penggunaan Kawasan Hutan, dan Perubahan Peruntukan Kawasan Hutan dan Areal Penggunaan Lain (Revisi III) - Lembar 3312 dan 3412 (Kementerian Kehutanan, 2012)</li> <li>• Peta Luas Sebaran Lahan Gambut dan Kandungan Karbon di Pulau Papua (Wetlands International, 2006)</li> <li>• Peta Daerah Aliran Sungai Mamberamo (BP DAS Mamberamo, 2008)</li> <li>• Peta Batas sub DAS (hasil pengolahan yang dilakukan oleh tim berdasarkan data DEM-SRTM)</li> <li>• Peta Jaringan Aliran Permukaan (hasil pengolahan yang dilakukan oleh tim berdasarkan data DEM-SRTM)</li> <li>• Peta Sebaran Curah Hujan Wilayah (hasil pengolahan yang dilakukan oleh tim berdasarkan data curah hujan TRMM)</li> <li>• Peta Sebaran Evapotranspirasi Potensial (hasil pengolahan yang dilakukan oleh tim berdasarkan data curah hujan TRMM dan data iklim NCEP CFSR)</li> <li>• Peta Sebaran Limpasan Permukaan (hasil pengolahan yang dilakukan oleh tim berdasarkan data curah hujan TRMM, penutupan lahan dan jenis tanah)</li> <li>• Peta Kelas Lereng (hasil pengolahan yang dilakukan oleh Tim berdasarkan data DEM-SRTM).</li> <li>• Peta Tingkat Bahaya Erosi (hasil pengolahan yang dilakukan oleh Tim berdasarkan data kelerengan, jenis tanah, dan tutupan lahan).</li> <li>• Ecohydrology of The Mamberamo Basin: An Initial Assessment of Biophysical (Murdiyarso and Kurniyanto, CIFOR, 2008)</li> <li>• River Corridor Protection Guide. Fluvial Geomorphic-Based Methodology to Reduce Flood hazards and Protect Water Quality (Vermont Agency of Natural Resources, 2008)</li> <li>• Fire Management Today Vol 64: 1 (USDA Forest Service, 2004)</li> <li>• Peat Moisture dan Water Level Relationship in a Topical Peat Swamp. Journal of Applied Sciences 6 (11): 2517-2519 (Nuruddin et. al., 2006)</li> <li>• Where the Land and Water Meet: A Guide for Protection and Restoration of Riparian Areas (USDA NRCS, 2003)</li> <li>• Managing Riparian Widths (Price et. al., 2004)</li> <li>• Lahan Gambut: Potensi untuk Pertanian dan Aspek Lingkungan (Agus dan Subiksa, ICRAF, 2004)</li> </ul>
HCV 5 and HCV 6	<ul style="list-style-type: none"> <li>• Distrik Airu dalam Angka 2012 (Pemerintah Kabupaten Jayapura).</li> <li>• Profil Distrik Kaureh Tahun 2012 (Pemerintah Kabupaten Jayapura).</li> <li>• Ethnologue: Languages of the World, Seventeenth edition. Dallas, Texas: SIL International (Lewis, M. Paul, et al. (eds.), 2013). Online Version: <a href="http://www.ethnologue.com">http://www.ethnologue.com</a>.</li> <li>• On the Origin of The Name Papua, "Bijdragen tot de Taal-, Land- en Volkenkunde", (J. H. F. Sollewijn Gelpke, 1993)</li> <li>• Irian Jaya; Membangun Masyarakat Majemuk, Seri Etnografi Indonesia 5, Penerbit Djambatan, Jakarta (Koentjaraningrat dkk., 1994).</li> <li>• Sistem Politik Tradisional di Irian Jaya, Indonesia; Studi Perbandingan, Proefschrift ter verkrijging van de grad van Doctor aan de Rijksuniversiteit te Leiden, (Johszua Robert Mansoben, April 1994)</li> <li>• Manusia Irian; Dahulu, Sekarang, Masa Depan, Penerbit PT Gramedia, Jakarta (Jan Boelaars, 1986).</li> <li>• Tutupan lahan dari citra satelit Landsat 7 ETM+ SLC-Off (USGS, 2012).</li> <li>• Peta Infrastruktur Provinsi Papua (Kementerian Pekerjaan Umum, 2012).</li> <li>• Peta Infrastruktur Kabupaten Jayapura (Kementerian Pekerjaan Umum, 2012).</li> <li>• Peta Wilayah Sungai Provinsi Papua (Pusat Pengeolahan Data, Kementrian Pekerjaan Umum, 2013)</li> </ul>

## **Identifying Methods for HVC 1, 2, and 3**

The target of identifying HCV 1, 2, and 3 was to find out the areas which have important values in the biological context. Such areas were marked by the location status, the origin of the communities, or the existence of the ecosystem of flora and fauna with high values. The significant values of flora and fauna refer to the status defined by the law, endemics (endemic, limited spread), and scarcity (scarce, facing extinction or almost extinct) was in accordance to the national and international law (IUCN and CITES) which protect such flora and fauna. Moreover, the significance of the value of the wildlife as well as the habitat was also based on the ecology roles of the species and from the cultural and traditional point of view.

The method of inventories was done using reconnaissance survey to analyze the existence of the important flora and fauna. The existence of every fauna was recorded through:

- Direct observation, either through the identification of visual appearance or sound (for both diurnal and nocturnal animals),
- The existence of the marks or residual from the animals' activities in their former habitat (such as tracks, scars on trees, nest, scales, snake skin, bird feathers, or mammal hair, etc.)
- The finding of the residual of animals' body parts (skull, horn, skin, hair, tusk, scales, and other recognized part of the animals' body) which were possibly hunted or caught by the local people in the observed locations. Interviews were carried out to complement the information about the time and location of the hunting activities.
- The secondary information was the existence of the animals which were documented based on external information, such as local people information or the local authorities. The consistency of such information was always monitored through cross checking (check and recheck) with other relevant parties as well as checking the validity of the description on every species of animals from the interviewed people. All information was then matched with the natural distribution and the history of the existence of such species in the locations (as mentioned in the literature references). The data was then compared to the type and condition of the habitat at the time when the survey was done. Any mismatching between the description and their natural distribution zone and habitat, will put the existence of such species in doubt.

## **HCV 4 Identification Methodology**

In order to identify the existence of HCV 4 in an oil palm plantation, two approaches were applied. The first approach was analysis to find out the interactions and correlations between the water system and the plantation land in a wide context. The approach also covered the area outside the plantation area. The second approach was another analysis to find out the significant values of such locations and their impacts to the plantation location. Thus, in this analysis, the perspective used was the inside area in the plantation. Based on both approaches, the phases of identifying HCV 4 were analysis of the secondary data, field survey, and the integrated data analysis of secondary data

and the field survey. The identification of the HCV 4 areas was done by analyzing the area from the metrology point of view, the soil analysis, topography, watershed, and the field survey and interviews. The field observation was carried out on the chosen locations; i.e. springs, river, river condition, land clearing, plantation in production, and other locations representing the condition of the water management in the plantation.

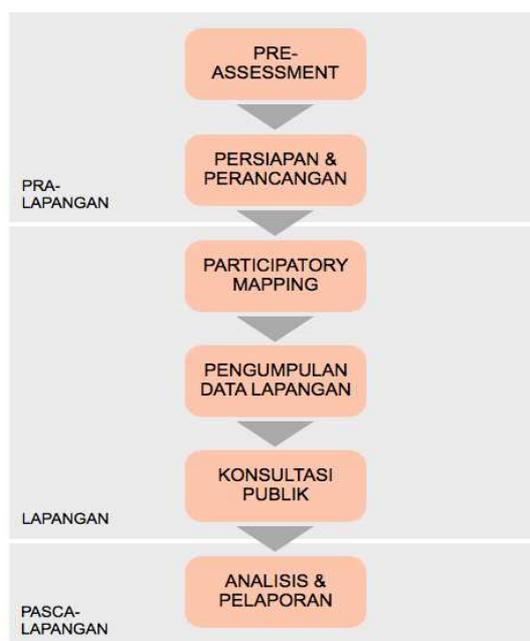
## HVC 5 and HCV 6 Identification Methodology

The focus of the HCV 5 assessment was the area inside the plantation which has significant values to fulfill the basic needs of the local community. The focus of the HCV 6 assessment was the area inside the plantation which has the significant values for identification and sustainability of the tradition or culture living of local community. The methods adopted in the assessment of HCV 5 or 6 are:

- Mapping participation of locations containing elements of HCV 5 and 6,
- Interview the local community, either with individual or Focus Group Discussion (FGD),
- Ground assesment and analysis.

## The HCV Assessment Phases

This HCV assessment is generally carried out through a series of phases such as: Desk Study, Field Survey, Data Analysis, Spatial Analysis of HCV area, and indicative HCV mapping as shown in **Figure 6**, while the details of each stage (stages, objectives, and activities in each phase) are presented in **Table 3**.



**Figure 6.** The HCV Assessment Phases

**Table 3.** Assessment phases, purpose, and the identification of HCV

Phases	Purpose	Activities
<b>PRE-FIELD ACTIVITIES</b>		
<i>Pre-assessment and Preparation</i>	<ul style="list-style-type: none"> <li>• Identify potential and indicate the presence of an attribute or HCV element</li> <li>• Identify areas of potential HCV</li> <li>• Understand the context of landscape</li> <li>• Knowing the conservation issues and potential threats to HCV</li> <li>• Establish methods, survey design, implementation team assessment, and planning future field activities</li> </ul>	<ul style="list-style-type: none"> <li>• Collect data and initial information from the company regarding the status of development and farm management</li> <li>• Collect data and initial information from secondary sources (reports, journals, books, statistical data, base maps) and resource</li> <li>• Perform data analysis and spatial analysis</li> </ul>
<b>FIELD ACTIVITIES</b>		
<i>Opening meeting &amp; basic training on HCV</i>	<ul style="list-style-type: none"> <li>• Communicate the purpose and objective HCV study</li> <li>• Obtain data and additional information regarding the status of development and farm management</li> <li>• Develop an understanding of the management of HCV units: background, aims and objectives, concepts, types of HCV, attributes or key elements, and methods of identification</li> <li>• Establish a working team (HCV assessment team + management team as the counterpart of the unit) and the agreed work schedule</li> </ul>	<ul style="list-style-type: none"> <li>• Workshop with unit management of company</li> <li>• Training for unit management of company</li> </ul>
<i>Participatory mapping</i>	<ul style="list-style-type: none"> <li>• Clarify areas of HCV potential from pre-assessment results</li> <li>• Collecting data is additional information about the existence of an attribute or element HCV</li> </ul>	<ul style="list-style-type: none"> <li>• Workshop with the informant</li> </ul>
Field surveys	<ul style="list-style-type: none"> <li>• Verify the presence of an attribute or element HCV</li> <li>• Identify areas of HCV and map the boundaries of the indicative HCV area</li> <li>• Identify threats and potential threats to HCV</li> </ul>	<ul style="list-style-type: none"> <li>• Checking the field of land cover</li> <li>• Field data collection</li> <li>• Interviews with triangulation</li> </ul>
Public Consultation (List of participants in <b>Appendix 3</b> )	<ul style="list-style-type: none"> <li>• Describe the identification of HCV to others (society, local governments, NGOs)</li> <li>• Data-Collecting additional information and clarification regarding the existence of an attribute or element of threat or potential HCV and threats or potential threats to HCV</li> <li>• Gathering input for the development of recommendations and options for HCV management plan</li> </ul>	<ul style="list-style-type: none"> <li>• Workshop with key stakeholders</li> <li>• Focus group discussions with key stakeholders</li> <li>• Interviews with speakers</li> </ul>
Field analysis and Interim Report preparation	<ul style="list-style-type: none"> <li>• Present the preliminary results of a field assessment activities <sup>1)</sup></li> </ul>	<ul style="list-style-type: none"> <li>• interim report preparation</li> </ul>
<i>Closing meeting</i>	<ul style="list-style-type: none"> <li>• Delivering results and the identification of HCV to the management</li> </ul>	<ul style="list-style-type: none"> <li>• Presentation and discussion</li> <li>• Submission of Interim Report</li> </ul>
<b>POST-FIELD</b>		
Analysis and reporting	<ul style="list-style-type: none"> <li>• Presenting the results of HCV assessment in an article with systematic format and scientific principles, but simple, coherent and easily to understood by the management as the primary report users</li> </ul>	<ul style="list-style-type: none"> <li>• Data Analysis</li> <li>• Spatial Analysis</li> <li>• Write a report</li> </ul>

## Summary of Assessment Findings

### a. SEI Assessment

The SEI was conducted with a social sustainability approach, an approach that includes continuation of social production and reproduction processes. The company's presence and operational processing views affect local communities. Methodological approach in SIA are: 1) Participatory: involving the stakeholders be actively in the process of impact identification, 2) Consultation: the stakeholders representative to be involved actively to explore the impact of aspiration or idea management, 3) Triangulation: conduct field studies combining with observation interview, and verification techniques, 4) Rapid; conducted quickly to explore issues and substance.

The presence and development of oil palm plantations and mills in the Permitted Area of PT Siringo - Ringo will have an impact on components of livelihoods assets. 1) Changes in tenure and land use. 2) Open access to the public and trade flows of forest products. 3) Substantial funds for the community as a consequence of compensation, 4) potential rift between tribes / clans and communities because of social resentment.

Stakeholders in the surrounding of permitted area not so many, but keep in mind is the role and strong position of Ondoafi, the chieftain/ clan and head of village. Position in the tradition system makes Ondoafi have a strong effect to mobilize local communities, moreover they have the example of the case of a boycott (bars) in the nearby oil palm companies. Church institution is an institution that has a small interest but with the power and moral effect, these institutions can be partners to anticipate future problems.

Positive perception of most people as well as good communication support from staff in company makes levels of social risk relatively low. Social risks that need to be considered is the risk associated with the issues that arise both because given issue or a new issue due to the presence of the company.

The social risks if not anticipated early will accumulate and bring collective actions of the community. Hence, the communication strategy needs to be designed so that social activities can be carried out effectively without disrupting the production processes of the company. For those reasons, the social management happens to be designed with a more systematically.

A humanist approach and empathy, paying close attention to the actors and the involvement of representatives of the community representative, documenting all agreements that are known by the community, identifying and liaising with institutions that could potentially support program for community development. Therefore, the main recommendations from the results of this study are that the company immediately drew up a social management plan. General checkout process can be started by building bridges of effective communication with the parties and the public key figure.

## **General Recommendations of social impact management:**

1. Complete a list of key stakeholders and representatives from each clan/tribe and other institutions related to the process of release of land, compensation and development partnerships in the future
2. Involvement of the main actors (multi stakeholders) intensively in any deal, the Church, Ondoafi, Tribe and representatives of the Government. Need sorting representative and legitimate community to be involved in the various deliberations and agreements.
3. Documenting all agreements with indigenous communities both in positive law (administrative) and culturally, if it is possible can take advantage of traditional rituals to document the agreement. It is necessary that the process of land release agreement and partnership/ plasma management becomes more meaningful for the community (sacred).
4. Engage with the church, which has potential as a change agent through the spiritual field. Physical construction of plantation, and the economic welfare of the community must be followed by development to change for the better.
5. Mapping parties are more effective and appropriate for the preparation of plantation development agreement process. In this regard the importance of involvement of major stakeholders such as, Ondoafi, ethnic/ heads of clan, institutional church, the village government and the district administration.
6. Preparing the formulation of institutional mechanisms that can be a key pillar of cooperation and compensation administration, so it can be sustainable and long-term. This is to ensure that the results of the compensation to the community can be further processed for long-term economic capital.
7. Mapping the food sources and local economic and community development opportunities, so that people do not only depend on the company. It also means encouraging people to be more independent. Companies can encourage and facilitate government institutions or social organizations that exist in Sentani to develop a Community Development program.
8. Give more attention and priority on improving the welfare of the people, especially the youth and children in the community empowerment program.
9. Compile Social Management Plan to manage issues and social impact, managing the company's internal environment in order to effectively work with the community.
10. Initiating forum involving government both at the village, District to Regency, company, community representatives from ethnic / clans who give the land, and the church. To build on the vision of community development scenarios around the plantation.
11. Building partnerships with governments (provincial and Regency) to synergize the program in two villages, in the the long term this activity can also be expanded to include institutional church (GKI) or non-governmental organizations that exist.

## b. HCV assessments

HCV report based on the results of field activities conducted in the Permitted Area of PT Siringo - Ringo, particularly in the area of Forest Release Decree, located in Jayapura Regency, Papua Province. Assessment was conducted by HCV Team Aksenta, consisting of four HCV experts, two of which have been holds the RSPO approved HCV assessors, and a GIS specialist. The field activities was carried out on from 14<sup>th</sup> February until 13<sup>th</sup> March 2013, in cooperation with a team of management PT Siringo - Ringo.

HCV assessment covers the entire Permitted Area of PT Siringo - Ringo ± 31,571 ha, it includes the release of forest land area of 29,278 ha, and the area around it. Based on the scope type of HCV that assessed, HCV assessment in PT Siringo - Ringo is a complete assessment, covering all types of HCV (HCV-1 to HCV-6) and all the sub-type (HCV-1 consists of HCV 1.1-1.4; HCV 4 consisted of HCV 4.1-4.3). Based on the scope of the steps of the activities, study of HCV PT Siringo - Ringo is a full assessment, assessment process which carrying out all stages of the process of identification of HCV from preparation and design to drafting assessment reports.

HCV identification results, which include: (i) the presence of HCV area and attributes or key constituent elements, (ii) a map of the distribution of HCV areas, (iii) the landscape context, (iv) the current status of HCV areas and attributes or key elements, (v) the pressure or the threat of its sustainability, and (vi) recommendations for the protection, management, and monitoring. This report does not include the management and monitoring of HCV. Management and monitoring of HCV remains the domain and company responsibility. To achieve the objectives of HCV, which is to protect, preserve, and enhance the value of HCV, the HCV management and monitoring activities should be an integral part of the company's operating system, in this case the development and management of oil palm plantations.

The result showed that the Permitted Area of PT Siringo - Ringo is in the lowlands (<200 m asl.) located at upstream of the five Watershed (DAS), namely: Mamberamo, Sihua, Nakambi, Jagua, and Martaru. The five watersheds are very important as water catchment areas for Mamberamo. Permitted Area is outside the Forestry Zone, which is located in the area of Non-Forestry Aquaculture (other land uses). Permitted Area is bordering with two conservation areas that have been set by the Government, namely Mamberamo Foja Wildlife and Protected Forest areas.

The local community is dominated by ethnic Kapauri. Communities in this region has a long history of usege of natural resources, especially in the form of sago-making and hunting. Interaction with the local community in the areas of land Permitted Area is not too high. Use of natural resources is still used traditionally.

In the Permitted Area there is still a critical element to HCV biodiversity element, namely species that are globally endangered, endemic species or distribution-limited, and the natural ecosystems that are threatened with extinction. During field survey in the Permitted Area, at least 8 species of mammals, 9 species of reptiles, and 63 species of birds was recorded. Based on IUCN status, in

the Permitted Area of PT Siringo - Ringo found one species status of wildlife found has endangered species globally threatened status, or critical (Critically Endangered), namely Golden-mantled Tree Kangaroo (*Dendrolagus pulcherrimus*), which in Kapauri called Tikalong, and 1 species which include critical (Endangered) , Cantor's Giant Softshell (*Pelochelys cantorii*). In addition, one bird species was also found and have made into the list of CITES Appendix I, Palm Cockatoo (*Probosciger aterrimus*), and 6 species with vulnerable status, except Timor deer excluded, are: Tree Kangaroos gray, Kangaroo Ground, Northern Cassowary, Papuan Eagle, Victoria Crowned Pigeon, and Pesquet's Parrot. Moreover, in the Permitted Area of PT Siringo - Ringo found 41 species found are endemic in New Guinea, which is 51% of the total species found during the survey.

The HCV identification study in the Permitted Areas (Izin Lokasi) of PT SRR has five types of HCV were identified by Aksenta, i.e. HCV 1, HCV 3, HCV 4, HCV 5, and HCV 6

**Table 4.** Summary of HCV existence in PT Siringo - Ringo

Type of HCV	Existence	Description
<b>HCV 1</b>		
HCV 1.1	<b>Present</b>	There are conservation areas within or along the boundary of PT SRR concession
HCV 1.2	<b>Present</b>	There are threatened species with the status Endangered and Vulnerable
HCV 1.3	<b>Present</b>	There are wildlife species with limited distribution
HCV 1.4	<b>Present</b>	There are important areas used as wildlife corridors by several threatened species.
<b>HCV 2</b>	N/A	There are no large natural landscapes, or landscapes significant for Papua island.
<b>HCV 3</b>	<b>Present</b>	There are rare/threatened natural ecosystems such as peat swamp forest that is still in good condition.
<b>HCV 4</b>		
HCV 4.1	<b>Present</b>	There are lakes with vegetation that still function as important water catchment areas.
HCV 4.2	<b>Present</b>	There are several sites of river buffers that are still covered with vegetation with important hydrological and ecological functions.
HCV 4.3	<b>Present</b>	There are areas that effectively function as natural fire break.
<b>HCV 5</b>	<b>Present</b>	There are important areas that provide irreplaceable basic needs for local communities.
<b>HCV 6</b>	<b>Present</b>	There are areas with important function for unique/traditional cultural identity of local communities.

The HCV area is identified in 11 locations. There are five types of HCV identified in the PT Siringo - Ringo, i.e. HCV 1, HCV 3, HCV 4, HCV 5 and HCV 6.

The HCV Map of PT Siringo – Ringo with HCV types and the coordinates and description of the HCV types is summarized in Table 5 below:

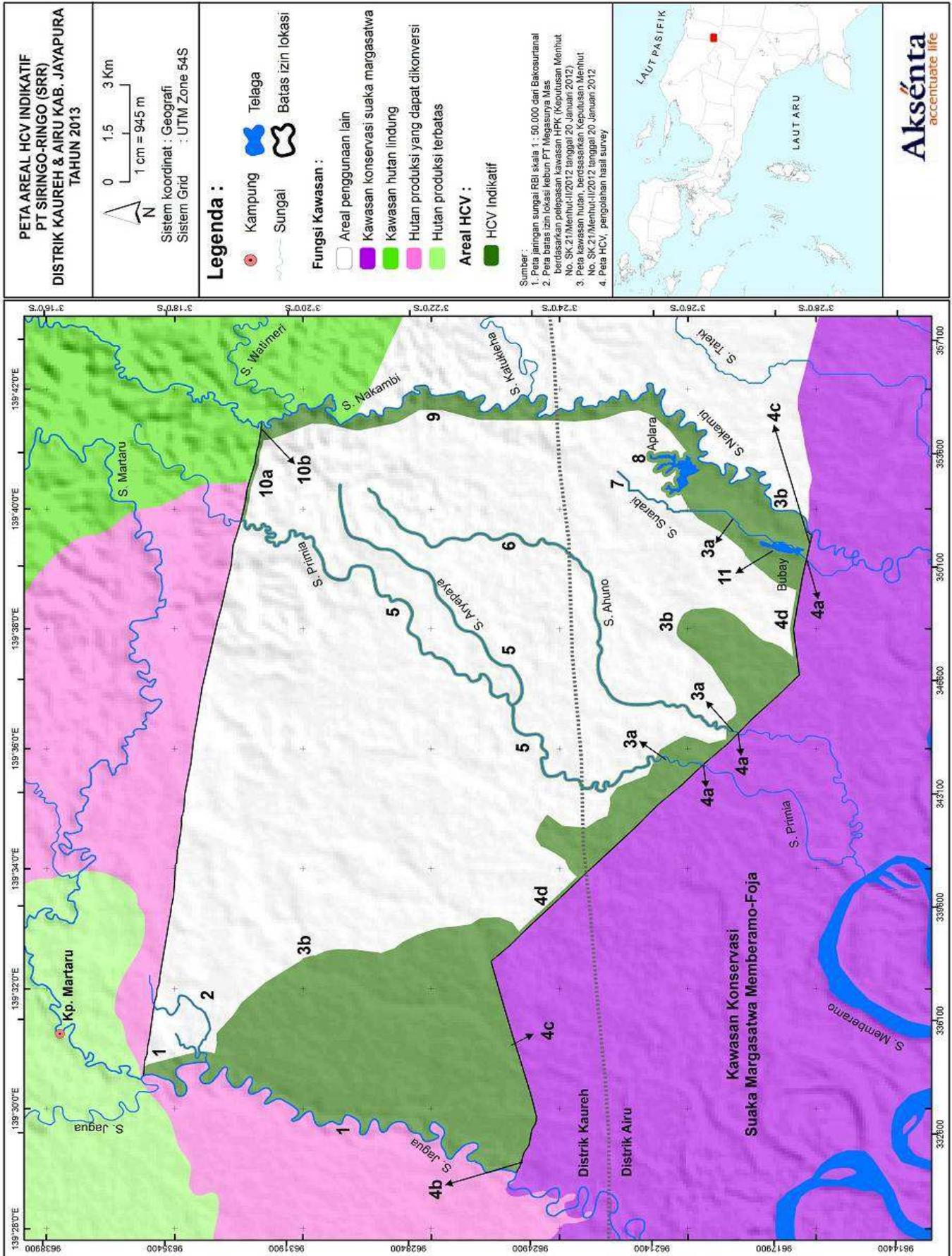


Figure 7. Indicative of HCV Area in PT Siringo - Ringo

**Table 5.** HCV descriptions and indicative areas in PT SRR concession

Index	Remaks	HCV type	HCV element
1	Meandering corridor of Jagua River ±600m from the center of the river	1, 4	Habitat for threatened species, Habitat for endemic species, Corridor for important species, Flood control, Erosion and sedimentation control, Natural fire break
	Part of the Jagua River meander; crocodile hunting site	1, 4, 5	Habitat for threatened species, Habitat for endemic species, Corridor for important species, Flood control, Erosion and sedimentation control, Natural fire break, Provide for basic needs
	Part of the Jagua River meander; site of Sagu Yahuya Hamlet; part of crocodile hunting site	1, 4, 5, 6	Habitat for threatened species, Habitat for endemic species, Corridor for important species, Flood control, Erosion and sedimentation Control, Natural fire break, Provide for basic needs, Historic site
	Part of the Jagua River meander; site of Sagu Yahuya Hamlet	1, 4, 6	Habitat for threatened species, Habitat for endemic species, Corridor for important species, Flood control, Erosion and sedimentation Control, Natural fire break, Historic site
	Part of the Jagua River meander; crocodile hunting site; Saulitike River buffer ±30 m	1, 4, 5	Habitat for threatened species, Habitat for endemic species, Corridor for important species, Flood control, Erosion and sedimentation Control, Natural fire break, Provide for basic needs
	Part of the Jagua River meander; Saulitike River buffer ±30 m	1, 4	Habitat for threatened species, Habitat for endemic species, Corridor for important species, Flood control, Erosion and sedimentation Control, Natural fire break
2	Saulitike River; and river buffer; Buffer zone 30 m	1, 4	Corridor for important species, Flood control, Erosion and sedimentation, control, Natural fire break
3	a Peat swamp forest near Jagua River	1, 3, 4	Habitat for threatened species, Habitat for endemic species, Rare ecosystem, Flood control, Natural fire break
	b Part of peat swamp forest; site of Sagu Yahuya Hamlet	1, 3, 4, 6	Habitat for threatened species, Habitat for endemic species, Rare ecosystem, Flood control, Natural fire break, Historic site
4	a Part of Jagua River meander; crocodile hunting site; 100 m buffer into the Mamberamo-Foja Wildlife Sanctuary	1, 4, 5	Conservation area buffer, Habitat for threatened species, Habitat for endemic species, Corridor for important species, Provide for basic needs
	b Part of Jagua River meander; 100 m buffer into the Mamberamo-Foja Wildlife Sanctuary	1, 4	Conservation area buffer, Habitat for threatened species, Habitat for endemic species, Corridor for important species
	c 100 m buffer into the Mamberamo-Foja Wildlife Sanctuary; part of peat swamp forest near Jagua River	1, 3, 4	Conservation area buffer, Habitat for threatened species, Habitat for endemic species, Rare ecosystem
	d 100 m buffer of the Mamberamo- Foja Wildlife Sanctuary	1	Conservation/protected area buffer
	100 m buffer of the Mamberamo- Foja Wildlife Sanctuary; part of peat swamp forest around Ahuno-Primia River	1, 3, 4	Conservation area buffer, Habitat for threatened species, Habitat for endemic species, Rare ecosystem, Flood control, Natural fire break
	100 m buffer of the Mamberamo- Foja Wildlife Sanctuary; part of peat swamp forest around Ahuno-Primia River; part of Primia	1, 3, 4	Conservation area buffer, Habitat for threatened species, Habitat for endemic species, Corridor for important species, Rare ecosystem, Flood control,

Index	Remaks	HCV type	HCV element
	river buffer		Erosion and sedimentation control, Natural fire break
	100 m buffer of the Mamberamo- Foja Wildlife Sanctuary; part of peat swamp forest around Ahuno-Primia River; part of Ahuno river buffer	1, 3, 4	Conservation area buffer, Habitat for threatened species, Habitat for endemic species, Corridor for important species, Rare ecosystem, Flood control, Erosion and sedimentation control, Natural fire break
	100 m buffer of the Mamberamo- Foja Wildlife Sanctuary; part of peat swamp forest around Nakambi River	1, 3, 4	Conservation area buffer, Habitat for threatened species, Habitat for endemic species, Flood control, Natural fire break
	100 m buffer of the Mamberamo- Foja Wildlife Sanctuary; part of Suarbi River and Bubay Lake buffer, small fragment of peat swamp forest near Nakambi River	1, 3, 4	Conservation area buffer, Habitat for threatened species, Habitat for endemic species, Corridor for important species, Rare ecosystem, Flood control, Erosion and sedimentation control, Natural fire break
	100 m buffer of the Mamberamo- Foja Wildlife Sanctuary; part of peat swamp forest near Nakambi River; part of historic site	1, 3, 4, 6	Conservation area buffer, Habitat for threatened species, Habitat for endemic species, Flood control, Natural fire break
5	Primia River and tributaries; river buffer zone 50 m	1, 4	Habitat for endemic species (New Guinea crocodile), Corridor for important species, Source of water and flood control, Erosion and sedimentation control
6	Baino/Ahuno River; river buffer zone 50 m	1, 4	Habitat for endemic species (New Guinea crocodile), Corridor for important species, Source of water and flood control, Erosion and sedimentation control
7	Suarbi River; buffer zone 30 m	1, 4	Habitat for endemic species (New Guinea crocodile), Corridor for important species, Source of water and flood control, Erosion and sedimentation control
8	Aplara Lake; Sagu swamp	1, 4	Habitat for endemic species (New Guinea crocodile), Corridor for important species, Source of water and flood control, Erosion and sedimentation control
9	Small fragment of peat swamp forest near Nakambi River	1, 3, 4	Habitat for threatened species, Habitat for endemic species, Rare ecosystem, Flood control, Natural fire break,
	Meandering corridor of Nakambi River $\pm$ 500m from the center of the river	1, 4	<ul style="list-style-type: none"> <li>▪ Habitat for threatened species, Habitat for endemic species, Corridor for important species, Flood control, Erosion and sedimentation control, Natural fire break</li> </ul>
10	a Small part of Nakambi River buffer 100 m of protection forest area	1, 4	Conservation area buffer, Habitat for threatened species, Habitat for endemic species, Corridor for important species, Flood control, Erosion and sedimentation control, Natural fire break
	b Buffer zone 100 m of protection forest area	1	Conservation/protected area buffer
11	a Bubay Lake 100 m buffer	1, 4	Habitat for threatened species, Habitat for endemic species, Flood control
	b Suarbi River buffer within Bubay Lake Bubay Lake buffer	1, 4	Habitat for threatened species, Habitat for endemic species, Corridor for important species, Flood control, Erosion and sedimentation control, Natural fire break

The identified indicative HCV area was  $\pm 8,135.9$  ha or  $\pm 27.79\%$  of the total Forest Decree Release (Pelepasan Kawasan Hutan) PT Siringo - Ringo. The important elements of HCV 1 are a. conservation areas within or adjacent to the permitted area PT Siringo - Ringo (HCV 1.1), b. Threatened and endangered species (HCV 1.2), c. Endemic species and restricted range (HCV 1.3), d. Areas that contain habitat of temporary use by species or congregations of Species, such as reproduction and population genetic enrichment (HCV 1.4). The elements of HCV 3 cover the natural ecosystems that are endangered/ threatened like Peat Swamp Forest with still good condition. Key elements of HCV 4 cover water catchments area at hilly area, water source and temporary water catchments area (HCV 4.1), erosion control and sedimentation area (HCV 4.2) and area providing barriers to destructive natural fire (HCV 4.3). HCV 5 covers area). Element HCV 5 covers area fundamental to meet basic needs of local communities. HCV 6 covers area that is sacred to local community.

### **Several issues which might threaten the HCV areas were identified:**

HCV area and attributes/ elements in the Permitted Area of PT Siringo - Ringo have threats to their sustainability, ie hunting wild animals. Hunting activities commonly done by people in this region. One of the most endangered species due to hunting activity is Mantel Mas Tree Kangaroos (*Dendrolagus pulcherrimus*), which is an attribute/ element HCV 1.2 and HCV 1.3, this animal species is hunted for its meat. Meanwhile, to date, HCV 6 area, in the form of sacred places are relatively safe from threats and harassment.

### **General Recommendations for HCV Management:**

Several general recommendation are made, which can immediately be followed up to protect and manage the HCV areas:

1. Delineation of HCV area, verify the extent of indicative of HCV area, and to determine the end result as definitive HCV Area Map PT Siringo - Ringo.
2. Arrange Management and Monitoring Plan of HCV, as a reference company in protecting and managing the area and attributes/ elements in the HCV area of Permitted Area of PT Siringo - Ringo, in a systematic and well planned, within the next 3-5 years period.
3. Socializing the presence of HCV areas in the Permitted Area to employees and the surrounding community, especially community groups who are key stakeholders of the existence and the protection and management of HCV.
4. Build communication and dialogue with key stakeholders in the local community, village governance, and Jayapura Regency Government – society – company cooperation for the protection and management of government HCV.

## Internal Responsibility

### Formal signing off by assessors and company

This document is summary of assessment result on High Conservation Value (HCV) and Social Impact Assessment (SIA) in PT Siringo Ringo and has been approved by the Management of PT Siringo Ringo.

Aksenta,

The image shows a handwritten signature in blue ink that reads "R Sozer". Below the signature is the logo for "Aksenta" in blue and orange, with the tagline "accentuate life" in smaller orange text below it.

**Resit Sozer**

Date: 18 November 2013

Management PT Siringo Ringo,

A handwritten signature in black ink that reads "Go Swee Aun".

**Go Swee Aun**

General Manager PT Siringo Ringo

Date :18 November 2013

### Statement of acceptance of responsibility for assessments

Assessment result document on High Conservation Value (HCV) and Social Impact Assessment (SIA) of PT Siringo Ringo by Aksenta, will be applied as one of the guidelines in managing palm oil plantation in PT Siringo Ringo.

A handwritten signature in black ink that reads "Go Swee Aun".

**Go Swee Aun**

General Manager PT Siringo Ringo

Date : 18 November 2013

**Appendix 1.** List of respondents and/or Focus Group Discussion (FGD) participants on site during the implementation process of social impact assessment

No.	Name	Position
1.	Oskar Sita	Head of Village Soskotek
2.	Thomas Hirwa	Ondoafi, Head of Clan
3.	Yesaya Hirwa	Youth of Soskotek
4.	Barnabas Sita	Community Leader of Soskotek
5.	Timotius Nakambi	Community of Soskotek
6.	Esau Sita	Community of Soskotek
7.	Silas Hirwa	Community of Soskotek
8.	Isak Hirwa	Youth
9.	Daud Nakambi	Community of Soskotek
10.	Yance Hirwa	Community of Soskotek
11.	Esau Yapri	Youth
12.	Karlos Dalem	Community of Soskotek
13.	Yahya Nakambi	Community of Soskotek
14.	Yafet Nakambi	Community Leader
15.	Titus Hirwa	Community of Soskotek
16.	Titus Nakambi	Head of Pagai Village
17.	David Wintamon	Teachers Evangelist of Pagai Village
18.	Yoel Nakambi	Head of Sabiano Clan
19.	Timotius Yapri	Ondoafi
20.	Linus Marisi	Village Officials
21.	Marten Nakambi	Village Officials
22.	Yakobus Nakambi	Chairman of the Pagai village meetings
23.	Petrus Tigabre	Community of Pagai
24.	Yesaya Nakambi	Chieftain of pagai
25.	Aser Marisi	Community of Pagai
26.	Abenek Kabak	Chieftain
27.	Agus Aimri	Community of Pagai
28.	Markus Nakambi	Student
29.	Kornelis Nakambi	Ondoafi Pagai
30.	Estavianus Nakambi	Youth
31.	Daniel Tigabre	Community of Pagai
32.	Mariam Marisi	Community of Pagai
33.	Markus Marisi	Student
34.	Kostan Marisi	Community of Pagai
35.	Yakonius	Staf BPLHD, Jayapura
36.	Yohana Mandowen	PT PPMA Papua
37.	Paulus Katamap	PT PPMA Papua
38.	Noach Wamebu	PT PPMA Papua
39.	Samsudin	Head of Kaureh District
40.	Marten Luther	Secretary of Airu District

## Appendix 2. List of Informants in the study of HCV in PT Siringo - Ringo

No	Name	G	Job	Address
1.	Samsudin	L	Head of Kaureh District	Sentani
2.	Luther	L	Secretary of Airu District	Sentani
3.	Noerfauzi	L	BPS Staf Jayapura Regency	Sentani
4.	Yaconias Maintindom	L	Kasubbid AMDAL BLHD	Abepura
5.	Yohana Mandoem	P	Gender Activist PT PPMA	Abepura
6.	Jackie Menanti	P	Scientific SIL Jayapura	Sentani
7.	Rocky	L	Staf WWF Bioregion Sahul	Sentani
8.	Titus Nakambi	L:	Head of Village Pagai	Pagai
9.	Oscar Sita	L	Head of Village Soskotek	Soskotek
10.	Matius Tahir Huawu	L	Ondoafi Huawu	Sentani
11	Marthen Sita	L	Ondoafi Sita	Soskotek
12	Markus Marisi	L	Ondoafi Marisi	Martaru
13	Nikolas Nakambi Prina	L	Ondoafi Nakambi Prina	Martaru
14	Yesaya Nakambi Sabiano	L	Ondoafi Nakambi Sabiano	Pagai
15	David Waibara	L	Ondoafi Waibara	Pagai
16	Timotius Nakambi	L	Ondoafi Nakambi 1	Soskotek
17	Korintus Tigabre	L	Community	Pagai
18	Linus Marisi	L	Community	Pagai
19	Musa Sita	L	Religious Leaders	Soskotek
20	Thomas Hirwa	L	Ondoafi Hirwa	Soskotek
21	Kornelis Nakambi Prina	L	Leader of Community	Pagai
22	Markus Nakambi Prina	L	Youth	Pagai
23	Kores Nakambi Prina	L	Youth	Pagai
24	Paulus Nakambi	L	Community	Pagai
25	Abner Foisa	L	Pagai Village board	Pagai
26	Matius Marisi	L	Youth	Martaru
27	Yoel Nakambi	L	Community	Pagai
28	Oto Nakambi Sabiano	L	Teacher	Pagai
29	Agus Wati	L	Community	Pagai
30	Yosep Marisi	L	Youth	Pagai
31	Hengky Marisi	L	Community	Pagai
32	Simon	L	Community	Pagai
33	Lukas	L	Community	Pagai
34	Daniel	L	Community	Pagai
35	Yahya Nakambi Sabiano	L	Community	Pagai
36	Petrus Tigabre	L	Community	Pagai
37	Silas	L	Community	Pagai
38	Isak Marisi	L	Youth	Martaru
39	Pilipus Hirwa	L	Youth	Soskotek
40	Yesaya Hirwa	L	Youth	Soskotek
41	Ji Samsu	L	Survey Manager PT Siringo - Ringo	Sampit
42	Agus Tri Widodo	L	Staf Survey PT Siringo - Ringo	Sampit

## Appendix 3. Attendance Public Consultation HCV

FORM - PROJ - 02F		DAFTAR HADIR PUBLIC CONSULTATION		Aksenta accentuate life	
Nama PT	: MEGA SURYAMAS & SIRINGO RINGO	Tanggal	: 13.3.2013		
Lokasi	: Sentani, Kab. Jayapura	Waktu	: 09.00		
Asesmen	: HCV				

No	Nama	Bagian/Jabatan	Alamat dan Nomor Kontak	Tanda Tangan	
1.	Moh. Yunus	KPPT	085254297100	1.	2.
2.	PITER KOKI A	WWF	081240410590		
3.	Letu Afandi	Damanil	082199622275	3.	4.
4.	MAGAMUDIN, Sp.	Kasi. HCV/Karen	081344747069		
5.	PRIMA S. HAD.	KARDS. AIR.	081344441654	5.	6.
6.	Jackie. Mearufi	SIL	08124812316		
7.	Hans F. Munkabo	ANU	085144057171	7.	8.
8.	Heri Susanto	Kapolsek	085243074069		
9.	M. Odeh W	Ka. PPMN - Papua	085254151315	9.	10.
10.	Okto Hirwa	Kasi. Transk. Karen	081344271648		
11.	Bagir Anggoro	Kabid US/ Divisi Perketumhan	081344990709	11.	12.
12.	Matus Wauw	Ka. SYKUI	085244086757		

No	Nama	Bagian/Jabatan	Alamat dan Nomor Kontak	Tanda Tangan	
13	MARTINUS SER			13.	14.
14	ERWIN D. HUTAGAOL	Humas	085751529010		
15	Agus. T.	Survey	081250826672	15.	16.
16	HASTO TEL. D	SUSTAINABILITY	081318922946		
17	Fernando Santori	Surveyor	082158492587		
18	Joni R	Survey	085334034874		
19	Relit Sizer	Aksenta	081563126331		
20	F. Getsemari F.	Aksenta	08129966535		