

# Way Kambas National Park Collaborative Management Plan Lampung Province 2018-2023



2018

# Way Kambas National Park Collaborative Management Plan Lampung Province 2018 - 2023

© 2018, YOSL/OIC-PILI

Published by YOSL/OIC-PILI

ISBN

Editor: Iwan Setiawan

Authors: Evi Indraswati, Muchamad Muchtar, Thomas Oni Veriasa, Anwar Muzakkir, Ajeng Miranti Putri

Contributing authors: Wiyogo S, A. Edison, Andytia Pratiwi, Rini Susanti, Ayusrina Syaka, Anjar BS, Iin Meylina, Teguh Ismail, Prayitno, Sugeng, Suryanto, Elly L. Rustiati, Muniful Hamid, Danang Wibowo, Sumianto, Bambang Lesmana, Febrilia EW, Sugiyo

Consortium of YOSL/OIC-PILI



Supported by





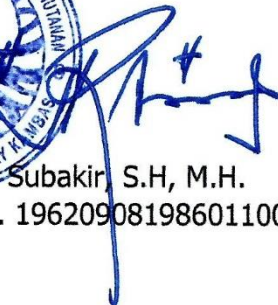

## ENDORSEMENT

This collaborative management plan has been developed in order to provide a disciplined approach to the collaborative management of Way Kambas National Park over the next 2018 – 2023 period as well as to be a reference for the implementation of the Small Grants Programme (SGP) under the ASEAN Centre for Biodiversity (ACB)

August 2018



Approved by,

Head of Way Kambas National Park,



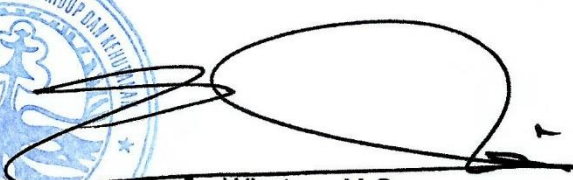
Subakir, S.H, M.H.  
NIP. 196209081986011001

Director of Biodiversity Conservation,



Drh. Indra Eksploitasia, M.Si.  
NIP. 19660618199203200

Director General of Nature Resources and Ecosystem Conservation,



Ir. Wiratno, M.Sc.  
NIP. 196203281989031003

## PREFACE

Way Kambas National Park (WKNP) is very rich with biological diversity especially for the five big mammal species including Sumatran tiger, Sumatran rhino, Sumatran elephant, tapir, and sun bear. Due to its high biodiversity and ecosystem conservation important value and uniqueness, WKNP was assigned as one of the ASEAN Heritage Park (AHPs) site on July 27<sup>th</sup>, 2016.

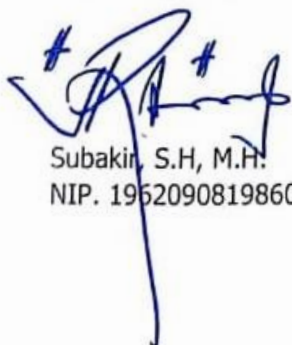
The support from ASEAN Centre for Biodiversity (ACB) from the German Government Funding (*Kreditanstalt für Wiederaufbau* – KfW) for the biological diversity of WKNP begins with the development of Collaborative Management Plan (CMP) document for the next five years. The document preparation process involves multi-stakeholders from the internal management team of WKNP, buffer Village Government to Provincial Government as a form of mutual concern for the sustainability of this conservation area.

The YSOL-OIC and PILI-Green Network Consortium has started this by reviewing documents and stakeholder mapping since April 2018. The results of this study has been compiled into the WKNP Collaborative Management Plan (CMP) document which will be used by the managers and other stakeholders to actualize the vision of WKNP. The long process of the study to public consultation, also participation of the stakeholders from the surrounding community; NGOs; village, District & Provincial Governments; academics also researchers were included in this document to support WKNP.

The CMP document will be used by ACB to support the management of WKNP through the Small Grants Programme (SGP) scheme which can be accessed by the partners of WKNP. Lots of gratitude and also our hope as representatives of the WKNP management to be able to oversee this collaboration process in the future for the sustainability of the biological diversity of WKNP.

Hopefully this CMP document can be a reference for the stakeholders and make the management of WKNP more effective. Finally, collaborative is the key to the agreement and communication of the stakeholders in realizing the conservation of WKNP in the future. Let's do conservation!

Lampung, August 31<sup>st</sup> 2018



Subakir, S.H., M.H.  
NIP. 196209081986011001



## FOREWORD

We are grateful to God for the completion of this document of the Collaborative Management Plan of Way Kambas National Park. This document presents the strategy and action plan of the WKNP collaborative management for five years period from 2018 through 2023. This document serves as a guidance for the implementation of various programs and actions in the protection and conservation of natural resources and ecosystem as well as improvement of people's welfare in surrounding the Way Kambas National Park. This document is also a result of mutual commitment of all parties concerned for "The Way Kambas National Park as an ideal habitat for the Sumatra protected wild species that brings self-sufficiency and prosperity to local communities".

Sincerity and commitment of all stakeholders have been seen during the process of producing this document, in a series of focused group discussions from the site to national level, as well as public consultation that involved representatives from the Lampung Provincial, East Lampung and Central Lampung District administrations, village administrations, the Ministry of Environment and Forestry, in particular the Directorate General of Natural Resources and Ecosystem Conservation, Directorate of Biodiversity Conservation, the WKNP management, academics and NGOs.

We greatly hope that this document will gives benefits to related stakeholders, and serves as a reference for those who will take part in the collaborative management of the Way Kambas National Park.

Bogor, August, 2018

Authors

## ACKNOWLEDGEMENT

We'd like to express our sincere gratitude for the Director General of Natural Resources and Ecosystem Conservation, Director of Biodiversity Conservation, Head of the WKNP and all staff members for their direction and supports during the CMP drafting processes. We thank the officials at Lampung Provincial, the East Lampung District, and Central Lampung District administrations, as well to the communities at the WKNP buffer zone for their cooperation and participation in collaborative ways. We appreciate the National Working Team members, especially to Ms. Ratna Kusuma Sari, Mr. Ratna Hendratmoko, Ms. Sri Ratnaningsih, Mr. Agung Nugroho for the supports and feedbacks to the draft.

We'd like to extend our appreciation to the ASEAN Centre for Biodiversity (ACB) and the *Kreditanstalt für Wiederaufbau* (KfW) for their technical and financial supports for the document making processes. Thanks are for the executive director and staff members of the PILI-Green Network for their time, energy and ideas to make the project running smoothly.

On behalf of the YOSL/OIC-PILI Consortium, the team highly appreciate all the contributions made by individuals, groups and organizations to this document.

## ABBREVIATIONS

ACB	ASEAN Centre for Biodiversity
ADD	<i>Anggaran Dana Desa</i> (Village Fund Budget)
AHP	ASEAN Heritage Park
Alert	<i>Aliansi Lestari Rimba Terpadu</i> , (The Alliance of Integrated Forest Conservation). It is an association not NGO.
APL	<i>Areal Penggunaan Lain</i> (Other Use Area)
ASEAN	Association of South East Asian Nations
Bappenas	<i>Badan Perencanaan Pembangunan Nasional</i> (National Development Planning Agency)
BAPPEDA	<i>Badan Perencanaan Pembangunan Daerah</i> (Regional Development Planning Agency)
BKSDA	<i>Balai Konservasi Sumber Daya Alam</i> (Natural Resources Conservation Office)
BPDAS	<i>Balai Pengelolaan Daerah Aliran Sungai</i> (Management of Watersheds Office)
BUMDES	<i>Badan Usaha Milik Desa</i> (Village Owned Enterprise)
CA	<i>Cagar Alam</i> (Strict Nature Reserve)
CBD	Convention on Biological Diversity
CMP	Collaborative Management Plan
DAS	<i>Daerah Aliran Sungai</i> (Watershed Area)
DED	Detailed Engineering Design
DEPHUT	Departemen Kehutanan (Department of Forestry), former name of Ministry of Environment and Forestry in 1983-1998
DJKSDAE	<i>Direktorat Jenderal Konservasi Sumber Daya Alam dan Ekosistem</i> (Directorate General of Natural Resources and Ecosystem Conservation)
ERU	Elephant Response Unit
FGD	Focussed Group Discussion
FRDP	<i>Forum Rembug Desa Penyangga</i> (Discussion Forum of WKNP Buffer Zone Villages)
Ha	Hectare
ILEU	Intelligence and Law Enforcement Unit
IMI	<i>Ikatan Motor Indonesia</i> (the Indonesian Motorcycle Association)
Inpres	Instruksi Presiden (Presidential Instruction)
IPD	<i>Indeks Pembangunan Desa</i> (Village Development Index)
ITERA	<i>Institute Teknologi Sumatera</i> (Sumatra Institute of Technology)
IUPJL	<i>Izin Usaha Pemanfaatan Jasa Lingkungan</i> (Business License for the Environmental Services Utilization)
IUPJWA	<i>Ijin Usaha Penyediaan Jasa Wisata Alam</i> (Business Permit for Providing Natural Tourism Services)
IUPSWA	<i>Ijin Usaha Penyediaan Sarana Wisata Alam</i> (Business Permit for Providing Natural Tourism Facilities)
KAGAMA	<i>Keluarga Alumni UGM</i> (the Alumni Family of Gajahmada Univ.)
Keppres	<i>Keputusan Presiden</i> (Presidential Decree)
KLHK	<i>Kementerian Lingkungan Hidup dan Kehutanan Republik Indonesia</i> (Ministry of Environment and Forestry, MoEF).
KPA	<i>Kawasan Pelestarian Alam</i> (Nature Conservation Area), which include National Park, Grand Forest Park and Nature Tourism Park.



KSA	<i>Kawasan Suaka Alam</i> (Sanctuary Reserve Area), which includes Strict Nature Reserve and Wildlife Sanctuary.
KSDAE	<i>Konservasi Sumber Daya Alam dan Ekosistem</i> (Conservation of Natural Resources) ( <i>see</i> DJKSDAE)
KTH	<i>Kelompok Tani Hutan</i> (Forest Farmer Group)
LSM	<i>Lembaga Swadaya Masyarakat</i> (Non Government Organization/NGO)
MDK	<i>Model Desa Konservasi</i> (Village Conservation Model), one of the Ministry of Forestry programmes since 2006, transformed to 'Assisted Village' ( <i>Desa Binaan</i> )
METT	Monitoring and Evaluation Tracking Tool
MMP	<i>Masyarakat Mitra Polhut</i> (Forest Guard Community Partner)
NWT	National Working Team
PBB	<i>Pajak Bumi dan Bangunan</i> (the National Property Tax)
Perda	<i>Peraturan Daerah</i> (Regional Regulation)
Permenhut	<i>Peraturan Menteri Kehutanan</i> (Minister of Forestry Regulation)
Perpres	<i>Peraturan Presiden</i> (Presidential Regulation)
PHPA	<i>Perlindungan Hutan dan Konservasi Alam</i> (Forest Protection and Nature Conservation), which become KSDAE
PHVA	Population Habitat Viability Analysis
PILI	<i>Pusat Informasi Lingkungan Indonesia</i> (Indonesia Environment Information Center)
PKS	<i>Perjanjian Kerja Sama</i> (Memorandum of Understanding)
PLG/ETC	<i>Pusat Latihan Gajah</i> (Elephant Training Centre)
POKDARWIS	<i>Kelompok Sadar Wisata</i> (Tourism Awareness Group)
POLINELA	<i>Politeknik Negeri Lampung</i> (Lampung State Polytechnic)
RPTN	<i>Resor Pengelolaan Taman Nasional</i> (National Park Management Resort)
PKHS	<i>Pusat Konservasi Harimau Sumatera</i> (the Sumatran Tiger Conservation Centre)
PNBP	<i>Penerimaan Negara Bukan Pajak</i> (Non-Tax State Revenue)
PP	<i>Peraturan Pemerintah</i> (Government Regulation)
PRA	Participatory Rural Appraisal
RIPPDA	<i>Rencana Induk Pengembangan Pariwisata Daerah</i> (Master Plan for Regional Tourism Development)
RPU	Rhino Protection Unit
RBM	Resort-Based Management
RPJMD	<i>Rencana Pembangunan Jangka Menengah Daerah</i> (Regional Medium-Term Development Plan)
RPJMDES	<i>Rencana Pembangunan Jangka Menengah Desa</i> (Village Medium-Term Development Plan)
RTRW	<i>Rencana Tata Ruang Wilayah</i> (the National/Regional Spatial Plan)
RTRWP	<i>Rencana Tata Ruang Wilayah Provinsi</i> (the Provincial Spatial Plan)
SK	<i>Surat Keputusan</i> (Decree)
SOAR	Strengths, Opportunities, Aspirations, Results
SPTN	<i>Seksi Pengelolaan Taman Nasional</i> (National Park Management Section)
SRS	Sumatran Rhino Sanctuary
TAGANA	<i>Taruna Siaga Bencana</i> (Community-based Disaster Preparedness Cadre)
Tahura	<i>Taman Hutan Raya</i> (Grand Forest Park)
TERMA	Tiger Elephant Rhino Monitoring Area
TFCA	Tropical Forest Conservation Action

TIMA	Tiger Intensive Management Area
TN	<i>Taman Nasional</i> (National Park)
UNILA	<i>Universitas Lampung</i> (University of Lampung)
UU	<i>Undang-undang</i> (Act)
VESSWIC	Veterinary Society for Sumatran Wildlife Community
WCS	Wildlife Conservation Society
WKNP	Way Kambas National Park
YABI	<i>Yayasan Badak Indonesia</i> (the Indonesian Rhino Foundation)
YOSL/OIC	<i>Yayasan Orangutan Sumatera Lestari</i> /Orangutan Information Center
YMR	<i>Yayasan Mitra Rhino</i> (the Rhino Partner Foundation), transformed to YABI
YAPEKA	<i>Yayasan Pendidikan Konservasi Alam</i> (Nature Conservation Education Foundation)

## EXECUTIVE SUMMARY

Way Kambas National Park (WKNP) was officially designated as the 36<sup>th</sup> ASEAN Heritage Parks on July 27<sup>th</sup>, 2016. In Indonesia, the other AHPs include Gunung Leuser, Kerinci Seblat, Lorents, Kepulauan Seribu and Wakatobi. The AHP's Programme was a follow up to the signing of the ASEAN Heritage National Parks Declaration by Ministers of Environment of the ASEAN countries earlier on December 18<sup>th</sup>, 2003. Goal of the AHPs' Programme is to synchronize the biodiversity conservation and the community's livelihood living around the AHP's site. This programme was technically conducted by the ASEAN Centre for Biodiversity (ACB) as the AHP implementing secretariat, which is financially supported by *Kreditanstalt für Wiederaufbau* (German Finance Cooperation – KfW) through Small Grants Programme – SGP scheme.

The implementation of SGP is initiated by the drafting of the Collaborative Management Plan 2018-2023 in Way Kambas National Park and Gunung Leuser National Park, as pilot sites of the SGP in Indonesia. The document aims to become a reference for local partners to the Parks to access the Small Grants Programme (SGP) in order to support the achievement of collaborative management on both National Parks. A consortium of *Yayasan Orangutan Sumatera Lestari* – Orangutan Information Centre (YOSL/OIC) and *Pusat Informasi Lingkungan Indonesia* (PILI-Green Network) was chosen and appointed as the implementing agencies to develop the CMP documents on each national park, respectively.

A general objective of CMP documents preparation is to strengthen an effective and efficient national park management system by developing a five-year collaborative management plan (2018 - 2023). The document integrates an existing national park management plans with various plans, aspirations and commitments of the relevant stakeholders.

During drafting the document, a participatory approach through a series of consultation with multi-stakeholders was taken from April – August 2018. From the processes, several findings were revealed. At planning level, the WKNP already has several management and development plan documents that can become the basic capital for collaborative management. The document is the 2015-2019 Strategic Plan and the 2017-2026 Long Term Management Plan. In addition to the general management plan, WKNP has prepared plans for thematic activities including the ecosystem recovery plan, initial plan for the development of natural tourism in the form of site designs in the Elephant Training Centre area, Way Kanan Resort, and the main gate area of Plang Ijo, as well as the Buffer zone Community Empowerment Plan.

At implementation level, the WKNP has received the supports from several NGO partners which engages in capacity strengthening activities of the park, species and area protection and law enforcement, flora and fauna preservation, ecosystem restoration, natural tourism development, and community empowerment. In addition, Governments of Lampung Province, and East Lampung and Central Lampung Districts, where the WKNP is administratively located, are having aspirations and supports in the context of regional development for the community welfare improvement.



The Provincial and District Governments are particularly involved in the natural and village tourism development and community empowerment. The supports are improvement of accessibility to the WKNP, capacity building at several priority villages' communities, and promotion. In term of promotion, the annual Way Kambas Festival agenda has proven to increase the visitor number resulting in the exceeding of the annual target of Non-Tax State Revenue/PNBP.

On community empowerment of around the buffer zone villages, the Park has increased the forestry extension officer number, and formulated a Community Empowerment at Buffer Zone Plan 2016-2025, which defined the Braja Harjosari and Rantau Jaya Udik II Villages as priority assisted villages. This illustrates the WKNP planning, which becomes more outward-looking and inclusive. From the result of regional development analysis of the buffer zone villages, combined with the designation of priority village criteria by the Park, and tourism village initiative by the District's Tourism and Culture Agency, there are seven (7) potential villages that can be developed in addition to Braja Harjosari and Rantau Jaya Udik villages. These include Braja Yekti, Braja Kencana, Labuhan Ratu 9, and Labuhan Ratu 6 villages at East Lampung district and Rantau Jaya Makmur, Rawa Betik, and Bina Karya Buana at Central Lampung district.

The findings have become the basis input for the CMP drafting that employs a Strategic Map approach analysis. The strategy mapping processes has gained the VISION statement, namely "The Way Kambas National Park as an ideal habitat for the Sumatra protected wild species that brings self-sufficiency and prosperity to local communities".

To achieve the vision, the WKNP has five MISSIONS, that are 1) To protect the entire the park area as a life support system; 2) To preserve the flora and fauna diversity and its ecosystems within the WKNP area; 3) To explore and utilize natural biodiversity resources and its ecosystems within the WKNP area, particularly for natural tourism; 4) To optimize the utilization of the park economic potential in the utilization zones and other zones other than core zone, to improve the local economy, and the community's welfare, especially around the WKNP; and 5) To synergize the ecological, social, and economic benefits of the park with the regional government and related stakeholders of national and international.

In the mean of vision and mission achievement, the CMP-SGP of the Park sets the 5 (five) MAIN GOALS within a 2018-2021 achievements, that is: 1) the strong park manager institutional capacity are already built ; 2) the whole park area, and biodiversity and its ecosystem have been fully protected; 3) the natural biodiversity resources and its ecosystem have been sustainably explored and utilized, particularly in environmental services; 4) the local community independence and welfare to support the WKNP area conservation are already built; and 5) the ecological, social, and economic benefits of the WKNP area for the regional government , stakeholders and related parties in national and international are already synergized.

The Collaborative Management Plan of WKNP 2018-2023 is divided into 7 main strategies, consisting of:

1. Strategy of WKNP institutional strengthening at site level (Resort);

2. Strategy of a whole WKNP area protection, the biodiversity and its ecosystem;
3. Strategy of flora and fauna preservation through data and information update and its development;
4. Strategy of habitat development through ecosystem recovery;
5. Strategy of local community critical awareness enhancing toward the WKNP area sustainability;
6. Strategy of village spatial plan integration through assisted village model, and integrated ecotourism model development;
7. Strategy of integrated WKNP area planning and development with related stakeholders, through the conservation partnerships development defining role and benefit sharing scheme in the natural resources and ecosystem protection and utilization.

The above seven strategies reflect the paradigm of 10 new ways of managing conservation areas in Indonesia that are developed by the Directorate General of KSDAE<sup>1</sup>. By considering the goals of the Collaborative Management Plan, the collaborative management policy in conservation and protection areas in Indonesia, and a guidance from the ACB, the aforementioned MAIN GOALS could be achieved through 2 major programmes and 9 sub-programmes, as well as a number of action plan, which can be conducted collaboratively with the related stakeholders. The Programmes and sub-programmes consists of:

- A. Natural Resources and Ecosystem Conservation Programme
  - Sub-Programme 1. Development of Resort based Management/RBM system
  - Sub-Programme 2. Area Protection & Safeguarding
  - Sub-Programme 3. Flora and Fauna Preservation
  - Sub-Programme 4. Ecosystem Restoration
- B. Community Livelihood Improvement Programme
  - Sub-Programme 5. Community outreach and conservation awareness
  - Sub-Programme 6. Community development focuses on agricultural and forestry commodities
  - Sub-Programme 7. Development of priority village model ('Desa Binaan');
  - Sub-Programme 8. Development of integrated ecotourism model
  - Sub-Programme 9. Strengthening stakeholder collaboration in the area of WKNP (Conservation Partnership)

To measure the achievement of the two Programmes, the Collaborative Management Plan adds the C Programme. Monitoring and evaluation.

---

<sup>1</sup> Wiratno, 2018. Sepuluh Cara (Baru) Mengelola Kaasan Konservasi di Indonesia: Membangun "Learning Organization", Ditjen KSDAE, KLHK

## TABLE OF CONTENTS

ENDORSEMENT .....	<b>Error! Bookmark not defined.</b>
PREFACE.....	iii
FOREWORD .....	iv
ACKNOWLEDGEMENT .....	v
ABBREVIATIONS.....	vi
EXECUTIVE SUMMARY .....	ix
TABLE OF CONTENTS .....	xii
LIST OF TABLES .....	xiv
LIST OF FIGURES .....	xv
LIST OF APPENDIXES.....	xvi
1. INTRODUCTION .....	1
1.1. Background.....	2
1.2. Objective and Outcome.....	2
1.3. Scoping .....	2
1.4. Methods .....	2
1.4.1. Literary study .....	3
1.4.2. Process and stage.....	5
1.4.3. Strategy and Action Plan making.....	6
2. WAY KAMBAS NATIONAL PARK .....	8
2.1. History and Status .....	8
2.2. Institutional Arrangement.....	11
2.3. Existing Management Activities .....	17
2.3.1. Institutional Capacity Strengthening .....	18
2.3.2. Species and Area Protection, and Law Enforcement.....	21
2.3.3. Flora and Fauna Preservation .....	23
2.3.4. Ecosystem Restoration .....	25
2.3.5. Development of Ecotourism.....	26
2.3.6. Community Empowerment .....	27
2.4. WKNP In the Regional Development Framework.....	53
2.4.1. The Lampung Province Development.....	53
2.4.2. Development of East and Central Lampung.....	54
3. CONCEPTUAL AND POLICY REVIEW ON COLLABORATIVE MANAGEMENT IN COSERVATION AREAS.....	57
3.1. Basic concept .....	57
3.2. Policy on collaborative management.....	58
3.3. Cooperation on ecotourism development .....	59
3.4. Cooperation on community empowerment.....	59
3.5. Conservation Village Development .....	60
4. CHALLENGES OF WKNP MANAGEMENT .....	64
5. STRATEGY AND ACTION PLAN .....	69



5.1. Vision and Mission .....	69
5.1.1. Vision of Collaborative Management of Way Kambas National Park .....	69
5.1.2. Mission of Collaborative Management of Way Kambas National Park ....	69
5.2. Main Goals .....	70
5.3. Strategy and Action Plan of WKNPs Collaborative Management.....	72
5.3.1. Strategy of institutional strengthening of WKNP at site level.....	73
5.3.2. Strategy of a whole WKNP area protection, the biodiversity and its ecosystem.....	74
5.3.3. Strategy of flora and fauna preservation through data and information update and its development. ....	75
5.3.4. Strategy of habitat development through ecosystem restoration.....	76
5.3.5. Strategy of local community critical awareness enhancing toward the WKNP area sustainability.....	77
5.3.6. Strategy of village spatial plan integration through assisted village model (desa binaan), and integrated ecotourism model development. ....	78
5.3.7. Strategy of integrated WKNP area planning and development with related stakeholders, through the conservation partnerships development defining role and benefit sharing scheme in the natural resources and ecosystem protection and utilization.....	80
5.4. Monitoring and Evaluation of WKNP Collaborative Management Plan.....	81
5.4.1. Indicator of the Monitoring and Evaluation for the institutional strengthening at site level (Resort) .....	82
5.4.2. Indicator of the Monitoring and Evaluation of the whole WKNP area protection, the biodiversity and its ecosystem .....	83
5.4.3. Indicator of the Monitoring and Evaluation of the flora and fauna preservation through data and information update and its development .....	83
5.4.4. Indicator of the Monitoring and Evaluation of the habitat development through ecosystem restoration.....	84
5.4.5. Indicator of the Monitoring and Evaluation of the local community critical awareness enhancing toward the WKNP area sustainability .....	84
5.4.6. Indicator of the Monitoring and Evaluation of the village spatial plan integration through assisted village model (desa binaan), and integrated ecotourism model development .....	85
5.4.7. Indicator of the Monitoring and Evaluation of integrated planning and development of the WKNP area with those of related stakeholders, through the creation of conservation partnerships defining role and benefit sharing scheme in the natural resources and ecosystem protection and utilization .....	86
CLOSING REMARKS .....	101
LITERATURE .....	102
APPENDICES .....	103

## LIST OF TABLES

<b>Table 1</b>	List of Reviewed Regulation, Legislation, Planning Documents .....	3
<b>Table 2</b>	Resorts division, size, and management area coverage .....	15
<b>Table 3.</b>	Explanation of METT Assessment on 100% % score of context aspect (2017) .....	19
<b>Table 4</b>	Evaluation of pre-condition and implementation of Resort-based Management in National Park.....	20
<b>Table 5</b>	Status category of the RBM by pre-condition and implementation stage .....	21
<b>Table 6</b>	Activities of the Braja Harjosari Village Community around and inside the area of WKNP .....	31
<b>Table 7</b>	Village and Community Group Institutions in Braja Harjosari Village who are already working together with WKNP.....	33
<b>Table 8</b>	Institutions have been cooperatively working at Braja Harjosari .....	39
<b>Table 9</b>	Activity of Rantau Haya Udik II Community Around and Inside the Area of WKNP. ....	42
<b>Table 10</b>	Lists of Identified Village Institution and Community Group at Rantau Jaya Udik II Village. ....	44
<b>Table 11.</b>	WKNP Partner Institutions that have worked in Rantau Jaya Udik II Village. ....	46
<b>Table 12</b>	Scalogram Analysis of Village Area Development around WKNP. ....	51
<b>Table 13</b>	Regulation related to the Involvement of Various Parties on the Conservation Area Management .....	61
<b>Table 14</b>	The METT scoring points in conservation area management.....	63
<b>Table 15.</b>	Programme and Action Plan on the Strengthening WKNP's Institution at the Site Level (Resort). ....	74
<b>Table 16.</b>	Programme and Action Plan on the Overall WKNP area Protection and Biodiversity and its Ecosystem.. ....	74
<b>Table 17</b>	Programmes and Action Plans for Flora and Fauna Preservation through Data and Information Updating and Development. ....	76
<b>Table 18.</b>	Programmes and Action Plans for Habitat Development through Ecosystem Restoration .....	77
<b>Table 19</b>	Programmes and Action Plans for Arising of Community Critical Awareness of the WKNP Areas Conservation .....	77
<b>Table 20</b>	Programmes and Action Plans for Integrating Village Spatial Planning through Development of Assisted Village Models and Integrated Ecotourism Models. ....	79
<b>Table 21</b>	Programme and Action Plan for the Integration of Planning and Development of WKNP Areas through Conservation Partnership in the Role Scheme and Benefit Sharing from Natural Resources and Ecosystem Protection and Utilization.....	81
<b>Table 22</b>	Programme Monitoring and Evaluation of Collaborative Management Plan of WKNP.....	82
<b>Table 23.</b>	Programme Indicators and Action Plan for the institutional strengthening at site level (Resort). ....	82
<b>Table 24.</b>	Programme Indicators and Action Plan for the whole WKNP area protection, the biodiversity and its ecosystem. ....	83

<b>Table 25.</b> Programme Indicators and Action Plans for the flora and fauna preservation through data and information update and its development.....	83
<b>Table 26.</b> Programme Indicators and Action Plans of the habitat development through ecosystem restoration. ....	84
<b>Table 27.</b> Programme Indicators and Action Plans of the local community critical awareness enhancing toward the WKNP area sustainability. ....	84
<b>Table 28.</b> Programme Indicators and Action Plans of the village spatial plan integration through assisted village model (desa binaan), and integrated ecotourism model development. ....	85
<b>Table 29.</b> Programme Indicators and Action Plans of Planning and Development of the integrated WKNP area planning and development with related stakeholders, through the conservation partnerships development defining role and benefit sharing scheme in the natural resources and ecosystem protection and utilization. ....	86
<b>Table 30.</b> LFA Matrix (Logical Framework Approach), Strategy, Programme, Activity and Indicator of Collaboratif Management at WKNP in Period 2018-2023 .....	87
<b>Table 31</b> Recapitulation of indicative budget of WKNP collaborative management plan 2018-2023 implementation.....	93
<b>Table 32.</b> Indicative Budget of Collaborative Management Programme in WKNP, Period 2018-2023 .....	94

## LIST OF FIGURES

<b>Figure 1</b> Summary of the CMP document preparation processes.....	6
<b>Figure 2.</b> Administrative Map of the WKNP .....	100
<b>Figure 3</b> Organizational structure of the WKNP Office Management .....	111
<b>Figure 4.</b> Map of the zoning system in Way Kambas National Park and the locations of directly bordering villages .....	144
<b>Figure 5.</b> Map of WKNP Working Area. ....	16
<b>Figure 6.</b> A degraded land overgrown by imperata grass after forest fire .....	25
<b>Figure 7</b> Braja Harjosari Village office.....	29
<b>Figure 8</b> Map of landuse of Braja Harjosari village. ....	310
<b>Figure 9</b> Participatory conflict and potential conflict mapping at Braja Harjosari with the WKNP.....	38
<b>Figure 10</b> Rantau Jaya Udik II Village Gate. ....	41
<b>Figure 11</b> Map of landuse of Rantau Jaya Udik II village. ....	43
<b>Figure 12</b> Map of Village Development Index 2011 (left) and 2014 (right). ....	52
<b>Figure 13</b> Map of Forest Fire Prone Areas in WKNP (Amalina et al. 2016).....	65
<b>Figure 14</b> Buffalo belongs to the people who are grazed in the WKNP area.....	67
<b>Figure 15</b> The Strategy Map of WKNP Collaborative Management Plan.....	71



## LIST OF APPENDIXES

<b>Appendix 1.</b> Field survey activity of the CMP Team in WKNP.....	104
<b>Appendix 2.</b> Internal discussion and Input document activities of CMP of WKNP preparation .....	108
<b>Appendix 3.</b> Public consultation on the preparation of CMP documents of WKNP.....	111
<b>Appendix 4.</b> Landsat 8 imagery in the Way Kambas National Park area .....	114
<b>Appendix 5.</b> Location Map of Way Kambas National Park on the Status of Forest Area Functions .....	115
<b>Appendix 6.</b> Map of Orthophoto the Village of Braja Harjosari .....	116
<b>Appendix 7.</b> Map of the Spatial Planning of Braja Harjosari Village .....	117
<b>Appendix 8.</b> Map of Orthophoto the Village of Rantau Jaya Udik II.....	118
<b>Appendix 9.</b> Map of the Rantau Jaya Udik II Village Spatial Planning .....	119
<b>Appendix 10.</b> Sumatran rhino distribution map of Way Kambas National Park.....	120
<b>Appendix 11.</b> Sumatran tiger distribution map of Way Kambas National Park.....	121
<b>Appendix 12.</b> Sumatran elephant distribution map of Way Kambas National Park .....	122
<b>Appendix 13.</b> Malayan sun-bear distribution map of Way Kambas National Par.....	123
<b>Appendix 14.</b> Tapir distribution map of Way Kambas National Par.....	124
<b>Appendix 15.</b> Map of Way Kambas National Park Key Species distribution .....	125

# 1. INTRODUCTION

## 1.1. Background

To many, the Way Kambas National Park (WKNP) is known for long as a tourist destination in the Province of Lampung, which is often associated with the Elephant Training Centre (PLG). In the sense of biodiversity, however, Lampung is more than that. It is home for five keys of Sumatran endangered animals, they are: Sumatran Elephant, Sumatran Rhino, Sumatran Tiger, Malay Tapir, and Sun Bear – not to mention some other rare animal species. The high biodiversity wealth, enriched with various forest ecosystem and landscape, makes this province more attractive.

On the other hand, WKNP is isolated from other forest areas because it directly borders with 37 villages of East Lampung and Central Lampung Districts. These villages can become a threat as well as an opportunity to the WKNP sustainability. Tourism is one of the efforts intended to improve the rural economy and the people's participation in the park management. The sector brings high number of visitors and Non-Tax State Revenue to the local government. Still, other efforts are needed to bring more prosperity and support the conservation of the WKNP.

On July 27<sup>th</sup>, 2016, the WKNP was announced as the 36th ASEAN Heritage Park, which followed five other national parks in Indonesia – Gunung Leuser, Kerinci Seblat, Lorentz, Kepulauan Seribu and Wakatobi. The Park is acknowledged to possess uniqueness, diversity and extraordinary values of ecosystem. In efforts to support the implementation of the AHPs, ASEAN Centre for Biodiversity (ACB) make a programme to combine the conservation works with improvement of the community income around AHPs areas. This programme received support from the *Kreditanstalt für Wiederaufbau* (Germany Financial Cooperation – KfW) through Small Grants Programme (SGP), with pilot projects in Myanmar and Indonesia.

The Directorate General of Natural Resources and Ecosystem Conservation (DG of KSDAE) of Indonesia's Ministry of Environment and Forestry (MoEF) and the ACB agreed to go ahead with the SGP's AHPs Programme that starts in the WKNP and GNLP. The implementation of SGP begins with drafting a collaborative management plan (CMP) for 2018 – 2023, which can be used by local partners to the WKNP and GLNP to access the fund. The ACB assigned *Yayasan Orangutan Sumatera Lestari* – Orangutan Information Centre (YOSL/OIC) and *Pusat Informasi Lingkungan Indonesia* (PILI) to draft CMP documents for GLNP and WKNP.

The document making involves the WKNP Office as the Technical Implementing Unit for Natural Resources and Ecosystem Conservation, and stakeholders concerned ranging from provincial, district, and village government, local community, NGOs and university. The document aims at bringing interests and aspirations of all stakeholders concerned together into conservation and economic works around the Park.

## 1.2. Objective and Outcome

The document making is intended to make the park management more efficient and effective for five years by putting a collaborative management plan with contribution and commitment of all stakeholders concerned.

More specifically, the document making is aimed:

1. To build commitment of all parties concerned in an effective and efficient collaborative management planning in WKNP;
2. To develop programmes and actions of collaborative management and the financing in WKNP; and
3. To increase public awareness about the protection and sustainable use of biodiversity, and improving the welfare of priority communities in WKNP.

The outcome includes:

1. Mutual understanding among parties concerned on how to facilitate an effective and efficient collaborative management;
2. Availability of a document of collaborative management and financing as agreed upon; and,
3. Raising awareness and understanding on the vitality of biodiversity conservation values in the WKNP and getting more welfare to groups of communities in the WKNP buffer zone villages.

## 1.3. Scoping

The CMP document covers a collaborative management plan integrating all stakeholders concerned in the sustainability of the Way Kambas National Park. It describes the existing management, policies, and direction of the WKNP and its shareholders and stakeholders that lead to the formulation of the collaborative management plan's strategy and actions. The document consists of 6 (six) chapters namely Chapter 1) Introduction, which contains the background, objectives, outputs, scope and methodology of the study; Chapter 2) Way Kambas National Park, which contains the history and status, institutions, management activities and WKNP in the framework of the region; Chapter 3) Theoretical Assessment Towards Policies on Collaborative Management of Conservation Areas, which contains basic concepts, collaborative management policies, cooperation in the development of natural tourism, cooperation in community empowerment and development of conservation villages; Chapter 4) Challenges of WKNP Management; Chapter 5) Strategies and Action Plans, which are outlined in the vision and mission, key objectives, strategies and action plans and monitoring and evaluation, and a closing .

## 1.4. Method

In the context of building collaborative management in the WKNP, collaborative planning efforts are needed that involves relevant stakeholders. The planning process employed a participatory approach built through stakeholder consultation processes, conducted from

April - August 2018. A literature study was conducted to review various stakeholder planning documents and related policies. The process of disclosing facts from the field was conducted to verify the results of literature studies through focus group discussions in selected villages, and semi-structured interviews with key stakeholders.

#### 1.4.1. Literature Study

Literature study is made to learn regulations that enable the development of the WKNP collaborative management scheme. Studies on other documents are also made to bring plans of the stakeholders concerned into a synergy in the park management.

**Table 1** List of Reviewed Regulation, Legislation, Planning Documents

No	Regulation/Legislation/Planning Documents
1	Law of the Republic of Indonesia Number 5 Year 1990 concerning the Conservation of Nature Resources Conservation of Biological Natural Resources and their Ecosystems
2	Laws of the Republic of Indonesia Number. 41 Year 1999 concerning Forestry
3	Law of the Republic of Indonesia Number 32 Year 2009 concerning Environmental Protection and Management
4	Law of the Republic of Indonesia Number 18 Year 2013 concerning Prevention and Eradication of Forest Destruction
5	Law of the Republic of Indonesia Number 23 Year 2014 concerning Regional Government
6	Republic of Indonesia Government Regulation Number 7 of 1999 concerning Preservation of Plant and Animal Types
7	Republic of Indonesia Government Regulation Number 8 Year 1999 concerning Utilization of Wild Plants and Animals
8	Republic of Indonesia Government Regulation Number 45 Year 2004 as amended by Republic of Indonesia Government Regulation Number 60 Year 2009 concerning Forest Protection
9	Republic of Indonesia Government Regulation Number 36 Year 2010 concerning Procedures for Implementing Natural Tourism Exploitation in Wildlife Reserves, National Parks, Grand Forest Parks, and Nature Recreation Parks.
10	Republic of Indonesia Government Regulation Number 28 Year 2011 as amended by Republic of Indonesia Government Regulation Number 108 Year 2015 concerning Management of Nature Reserve Areas and Nature Conservation Areas
11	Instruction of the President of the Republic of Indonesia No. 11 Year 2015 dated October 24 <sup>th</sup> , 2015 concerning Increasing Forest and Land Fire Control
12	Regulation of the Minister of Forestry of the Republic of Indonesia Number P.48 Year 2010 concerning the Exploitation of Natural Tourism in Wildlife Reserves, National Parks, Forest Park, and Natural Recreation Parks jo Regulation of the Minister of Forestry of the Republic of Indonesia Number P.4-Menhut-II-2012
13	Regulation of the Minister of Forestry of the Republic of Indonesia No. P.29/Menhut-II/2013 Concerning Guidelines for Facilitation of Forestry Development Activities
14	Regulation of the Minister of Forestry of the Republic of Indonesia Number P.48/Menhut-II/2014 concerning Procedures for Implementing Recovery of Ecosystems in Nature Reserve Areas and Nature Conservation Areas
15	Regulation of the Minister of Forestry of the Republic of Indonesia Number P.81/Menhut-II/2014 concerning Procedures for Carrying Out Potential Inventory in Natural Reserve Areas and Nature Conservation Areas
16	Regulation of the Minister of Environment and Forestry of the Republic of Indonesia No. P.76/Menlhk-Setjen/2015 concerning Criteria for Management of National Parks and Management Blocks of Nature Reserves, Wildlife Reserves, Forest Parks and Nature Parks



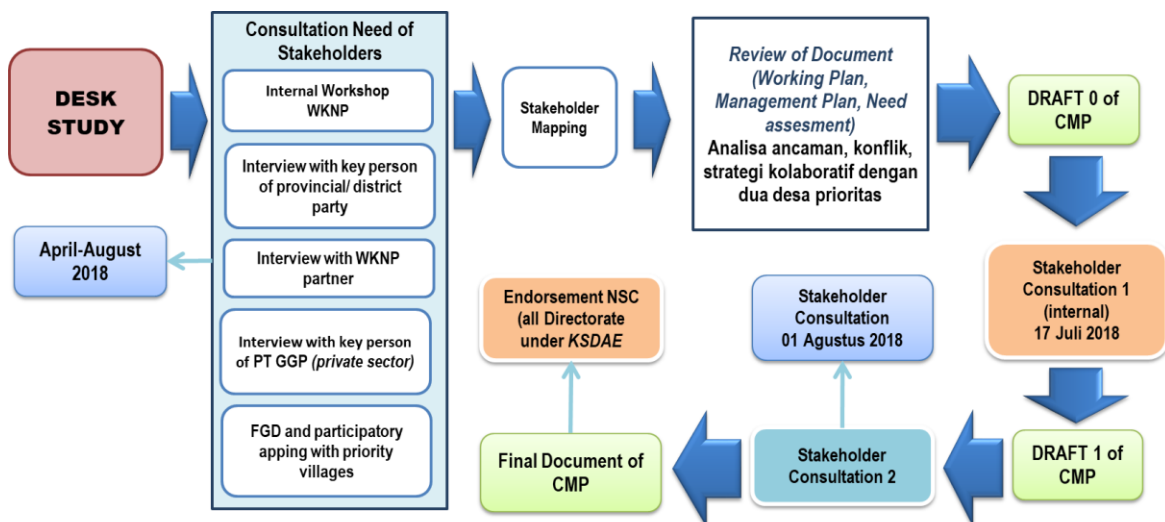
No	Regulation/Legislation/Planning Documents
17	Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.32/MenLHK/Setjen/Kum.1/3/2016 concerning Forest and Land Fire Control
18	Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.83/MenLHK/Setjen/Kum.1/10/2016 concerning Social Forestry
19	Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.35/MenLHK/Setjen/Kum.1/3/2016 concerning Procedures for Preparing Management Plans in Nature Reserve Areas and Nature Conservation Areas
20	Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.43/MenLHK/Setjen/Kum.1/6/2017 concerning Community Empowerment Around in the Nature Reserve and Nature Conservation Area
21	Regulation of the Minister of Forestry No. P.85/MENHUT-II/2014 as amended by Regulation of the Minister of Environment and Forestry No. P.44/MenLHK/Setjen/Kum.1/6/2017 concerning Amendments to the Concerning Procedures for the Implementation of Nature Reserve Areas and Nature Conservation Areas
22	Regulation of the Minister of Environment and Forestry No. P. /MenLHK/Setjen/Kum.1/6/2018 Concerning the Protection of Plants and Animals
23	Decree of the Minister of Forestry and Agriculture No. 670/Kpts-II/1999 concerning Designation of the Way Kambas National Park.
24	Decree of the Lampung Governor No. G/459/HK/V.23/2017 dated 7 September 2017 concerning the Establishment of the Conflict Management Coordination Team Between Human and Wildlife Lampung Province.
25	Decree of Lampung Governor's No. G/460/HK/V.23/2017 dated 7 September 2017 concerning the Establishment of Conflict Management Task Force Between Humans and Wildlife.
26	Decree of the Regent of East Lampung Number: 522/341/B/2008 dated March 6, 2008 concerning the Integrated Working Team for the Management of Human Elephant Conflict.
27	Regulation of the Director General of Nature Resources and Ecosystem Conservation No. P.7/KSDAE-SET/2015 concerning the Strategic Plan of the DG of KSDAE 2015-2019
28	Regulation of the Director General of Social Forestry and Environmental Partnership No. P.23/PSKL/SET/PSL.3/12/2016 concerning Guidelines for the role of business actors in the implementation of environmental and forestry protection and management.
29	Regulation of the Director General of Nature Resources and Ecosystem Conservation Number P.6/KSDAE/SET/Kum.1/6/2018 concerning Technical Guidelines for Conservation Partnerships in Nature Reserve Areas and Nature Conservation Areas
30	Regional Regulation of Lampung Provincial No. 2 of 2012 Regional Tourism Development Master Plan (RIPPPDA Lampung Province in 2012)
31	Regional Regulation of Lampung Provincial No. 6 of 2014 Lampung Province's Medium-Term Regional Development Plan for 2015-2019
32	Regional Regulation of East Lampung No. 15 of 2016 East Lampung District Middle Term Regional Development Plan for 2016-2021
33	Regional Regulation of Central Lampung No. No. 9 of 2016 Central Lampung District Medium Term Regional Development Plan for 2016-2021
34	Strategic Plan of DG of KSDAE 2015 – 2019
35	Strategic Plan of WKNP 2015 – 2019
36	Long-Term Management Plan of WKNP, 2017-2026
37	Site Design Management Plan for Natural Tourism in the Use Zone of Elephant Training Centre, Way Kambas National Park, Lampung Province (2015)
38	Site Design Plan for Natural Tourism Management on the Right Way RPTN Zone, 1 Way Right SPTN Way Kambas National Park, Lampung Province (2015)
39	Site Design Plan of Nature Tourism in Plang Ijo (2015): stakeholder analysis;
40	The METT Assessment in WKNP, 2017
41	Medium Term Development Plan of Rantau Jaya Udik II Village and Braja Harjosari Village
42	The Statistic Centre Bureau (BPS) on village potential of East and Central Lampung.

A study on regional development of villages around the WKNP uses the Scalogram method that utilizes the data of village potentials in East Lampung and Central Lampung. The study used the Statistic Bureau Village Potential Data of 2011 and 2014 that resulted in the Village Development Index (IPD).

#### 1.4.2. Process and stage

The drafting processes of this documentation cover the following steps:

1. Coordination and consultation through interviews, focused group discussions with the WKNP management, Provincial and District Government, villages administration, NGOs and private sector;
2. Data and information assessments that include:
  - Reports by the WKNP management, NGOs and media articles;
  - Analysis on planning documents and regulations related to the WKNP management to measure the upcoming condition. They are:
    - WKNP Strategic Plan 2015-2019, WKNP Long-term plan (RPJP) 2017-2026 and WKNP annual plan;
    - RPJMD and RIPPDA of the Lampung Province, East Lampung and Central Lampung District administration as well as village administration;
    - Programme and work plan of NGOs on WKNP;
    - Site Plan of ecotourism management in the utilization zone of the Elephant Conservation Centre, WKNP, for 2015.
    - Site Plan of ecotourism management in the Way Kanan utilization zone, WKNP, Lampung Province 2015
    - Site Plan of ecotourism management in Plang Ijo (2015);
  - Stakeholders mapping;
  - Study on biodiversity aspect;
  - Study on local social-economy aspect.
3. Document writing and analysis to be confirmed by the key stakeholders.
4. A series of consultative meeting and information assessment with key stakeholders through focused group discussion and interviews.
5. Discussion on the Programme and action plan to get comments and feedback on May 17<sup>th</sup>, 2018, at the Swiss Bell Hotel, Lampung. The discussion involves various stakeholders from government elements (DG of KSDAE, National Park Office, Provincial Forestry Service, Provincial Tourism and Culture Office, BAPPEDA and East Lampung District Tourism and Culture Office, village representatives), academics from UNILA, FRDP representatives, and NGO partners.
6. Joint review of the first draft with the National Work Team, consisting of the flying team and role models of the Directorate General of Natural Resources and Ecosystem Conservation (KSDAE) – MoEF, and final confirmation with relevant stakeholders.
7. Public consultation on the first draft of CMP, which was held on August 1, 2018 at the Aston Hotel, Lampung. The discussion involved various stakeholders from DG of KSDAE, National Park management, Lampung Forestry Office, Lampung Tourism and Cultural Office, Regional Development Planning Body (BAPPEDA) of provincial and district administration, academics from UNILA, and NGOs.



**Figure 1** Summary of the CMP document preparation processes.

### 1.4.3. Strategy and Action Plan making

The strategy and Action plan of the WKNP Collaborative Management Plan is made by strategy mapping, which goes step by step based on the Five Tasks of Strategic Planning and guided by Three Questions of Strategic Planning.

The logical framework of 'strategy mapping' allows us to look forward. Having positive discourse on where to go, not being stuck on the problem encountered. Focusing on what is wanted, not on what is not. Still, we remain aware where we are. The question is "Where are we now?", "Where are we heading for?", "How to get there?" The question is not: "What problem are we dealing with?" and "How to solve it?"

**Strategy Mapping** has four perspectives that are connected with cause-effect logic. Strategy mapping is preceded with hypothesis on what to come up with.

(1) *Shareholders perspective*: beneficiaries, which is in this case is area managers and the community. Two goals to achieve are i) natural resources and ecosystem conservation within the WKNP, and ii) utilization of natural resources and ecosystems for the independence and welfare of the surrounding community. These two goals are step stones to achieve the main goal which is "The Way Kambas National Park as an ideal habitat for the Sumatra protected wild species that brings self-sufficiency and prosperity to local communities."

(2) *Stakeholders perspective*: The objects of management to create: (1) Value and function of the ecology; (2) Value and function of ecological service; (3) the community behaviour and culture, and (4) Value of education and conservation action.

#### Five Strategic Planning Tasks

- 1) Set Strategic Vision & Mission
- 2) Set strategic goal & target of work
- 3) Make strategy to achieve target
- 4) Implement and execute strategy plan
- 5) Evaluate work performance & reformulate strategic plan

#### Three Key Questions in Strategic Plan

- Where are we at present?
- Where we heading for?
- How to get there?

Shareholders perspective will only come into existence if the stakeholder perspective is achieved. In this joint study, technicalities of collaborative management is based on the Environmental and Forestry Minister Regulation No. P.44/MENLHK/SETJEN/KUM.1/6/2017 on Natural Reserves and Natural Conservation Area Management, particularly on restoration of WKNP function. See sub-chapter 5.3.

- (3) Operational perspective: is the efforts or initiatives that need to be done to achieve the conditions to be achieved in the realm of Stakeholders. The efforts or initiatives are then translated into programmes / activities.
- (4) People & Resources and Budget perspective: is about human resources, other resources (materials and work tools / support), and budgets. In order to achieve the main targets that have been determined, it is necessary to have adequate human resources with the knowledge, competency and skills that are in accordance with the demands of the work / activities, the right tools and equipment, which can be relied upon to simplify and speed up the work process, the right budget (right amount, on time).

## 2. WAY KAMBAS NATIONAL PARK

### 2.1. History and Status

The history of the WKNP can be traced back to 1924 during the Dutch colonial administration, when awareness of protecting forest area was growing for its exoticism and essential as home to wild animals, particularly big mammals, birds and other charismatic animal species. There was a need to protect the area from excessive hunting just for hobbies and enjoyment. Area protection outside Java was autonomously carried out by local administration, known as *Zelfbestuur Besluit* in Dutch. The designation was under the surveillance of local surveyor (*controlleur*), forestry office (*Dienst van het Boschwezen*), assistant resident, which was further officiated by the Governor General.<sup>2</sup>

After Way Kambas was designated as protected forest in 1924, for its significance as animal habitat, the status was then elevated into wildlife reserve (*wildreservaat*), by the Lampung Resident Decree in 1936. On January 26, 1937, this area was announced to cover 130,000 hectares by the Dutch East Indies Governor General Decree No. 38/Stbl./1937. After Indonesia's independence, the status of wildlife reserve was further enhanced into KPA, Indonesian acronym for Nature Conservation Area, by a Decree of Agriculture Minister in 1978. On October 12, 1985, the status changed into *KSDA*, Indonesian acronym for Nature Resources Conservation Office and was put under the administration of *Sub-Balai KSDA* based on Decree No. 429/Kpts-II/1985.

On April 1, 1989, Forestry Minister issued Forestry Ministerial Decree No. 444/Menhut-11/1989 to designate the Way Kambas Wildlife Reserve as the Way Kambas National Park. On March 13, 1991, the Park was put under the authority of *Sub-BKSDA*, which was accountable to the Balai BKSDA Tanjung Karang based on Forestry Minister Decree No.144/kpts-II/1991. On March 31, 1997, the *Sub-BKSDA* Way Kambas was promulgated as the Way Kambas National Park management office based on Forestry Ministerial Decree No. 185/Kpts-II/1997. Finally, on August 1999, Forestry and Agriculture Minister announced the national park to cover 125,621.30 hectares, based Decree of Forestry and Agriculture Minister No. 670/Kpts-II/1999.

***Biodiversity and Ecosystem.*** Based on animal distribution area (zoogeography), the WKNP is included in the so-called 'oriental region' and Sundaic sub-region' that is rich with wildlife species. The WKNP has various types of ecosystems with distinctive features on each ecosystem. They are five ecosystem types, which create the main structure of the park: mangrove, coastal, riparian, freshwater swamp forest and lowland forest. This ecosystem diversity makes the WKNP home to various animal species.

There are 50 mammal species recorded in this Park. Five keys yet endangered species of Sumatran mammals are found in WKNP, including Sumatran Rhinos (*Dicerorhinus sumatrensis sumatrensis*), Sumatran Elephant (*Elephas maximus sumatranus*), Sumatran

---

<sup>2</sup> Yudistira, Pandji. 2014. *Sang Pelopor. Direktorat Kawasan Konservasi dan Bina Hutan Lindung, Direktorat Jenderal Perlindungan Hutan dan Konservasi Alam*



Tiger (*Panthera tigris sumatrae*), Malay Tapir (*Tapirus indicus*), Sun Bear (*Helarctos malayanus*), and Siamang (*Hylobates syndactylus syndactylus*).

The list of avifauna according to Parrot & Andrew (1996)<sup>3</sup> shows 314 species (or 315 according to Holmes with additional species of Jerdon's Baza (*Aviceda jerdoni*))<sup>4</sup>. Several endangered species are, among others, White-winged Wood Duck (*Cairina scutulata*), Storm's Stork (*Ciconia stormi*), Lesser Adjutant (*Leptoptilos javanicus*), Bornean-crested Fireback (*Lophura ignita*), Great Argus (*Argusianus argus argus*), Oriental Darter (*Anhinga melanogaster*).

Thanks to easier access, since 1970s ornithologists have frequently visited the WKNP. More systematic bird observation in WKNP began on 1988-1989 by the Southampton University researchers. It was then found that the WKNP's avifauna is more popular than other conservation areas in Sumatra. The Park is known for its easy access for those who want to watch Storm's stork and White-winged wood duck. It is also known for breeding habitat of storks and for its relatively intact lowland forest fauna. The colony of storks is found in the swamp forest adjacent to southern coast of this park.

In addition, there are 17 species of amphibian, 13 species of reptile, 48 species of freshwater fish and 77 species of butterfly.

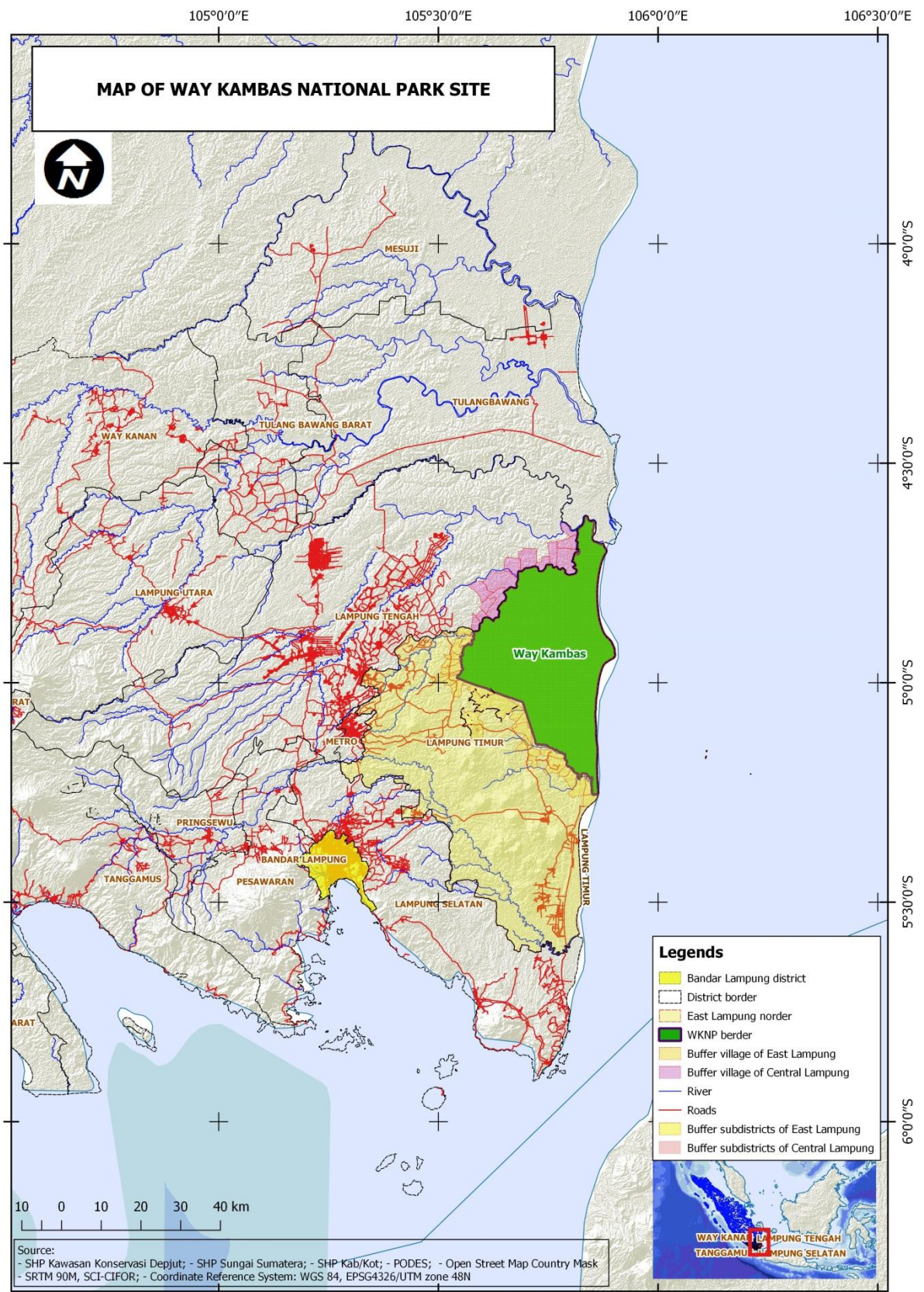
**Site location.** Geographically, the WKNP is located at 105°33' – 105°54' East Longitude and 4°37'– 5°16' South Latitude, straddling two districts of East Lampung and Central Lampung, with 37 buffer villages that border with the WKNP area.

The Park is about 30 kilometres eastward from East Lampung District capital of Sukadana and around 60 kilometres from the Central Lampung capital of Gunung Sugih. From the Lampung Province capital of Bandar Lampung, WKNP is about 110 kilometres northeast. It is easily reached from all direction with relatively improving road and infrastructure. Visitors from the Bakauheuni port can take Sumatra east crossroad of Bakauheuni-Labuhan Maringai-Way Jepara-WKNP route. Option from Bandar Lampung is Sribawono-Way Jepara-WKNP. From Gunung Sugih is Metro-Sukadana-WKNP. Visitors from Manggala or Palembang can take Sumatra east crossroad with Manggala-Sukadana-WKNP route.

---

<sup>3</sup> Parrot, S. and Andrew, P. 1996. An annotated checklist of the birds of Way Kambas National Park, Sumatra. Kukila 8: 57-85.

<sup>4</sup> Holmes, D.A. 1996. Sumatra Bird Report. Kukila 8: 9-56.



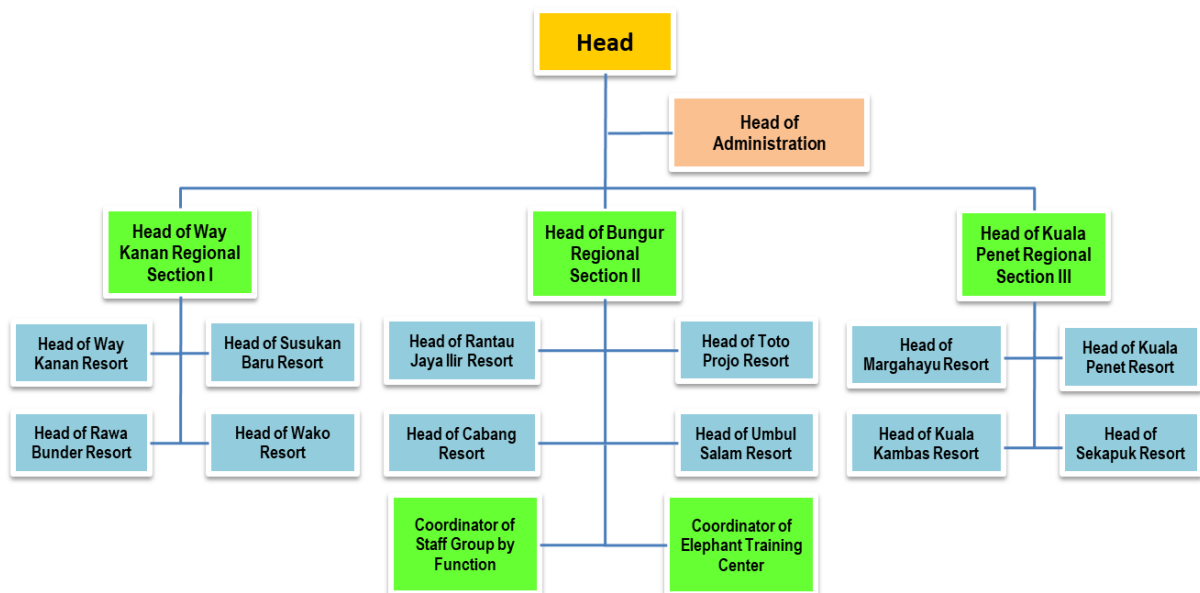
**Figure 2.** Administrative Map of the WKNP

## 2.2. Institutional Arrangement

**Organisational Structure.** The WKNP is led by a head of management office with six staffers under his supervision. The six staffers are<sup>5</sup>:

1. Head of Administration Section;
2. Head of Way Kanan Regional Section I;
3. Head of Bungur Regional Section II;
4. Head of Kuala Penet Regional Section III;
5. Coordinator of Elephant Training Centre;
6. Coordinator of Staffs Group by Function.

By territorial management, the WKNP is divided into three management sections, each led by a head of section. They are Way Kanan region (Section I), Bungur (Section II) and Kuala Penet (Section III). Each section supervises four resorts within the Park, which has 12 resorts in total (**Figure 3**).<sup>6</sup>



**Figure 3** Organizational structure of the WKNP Office Management

The functional assisting officials work on the duty and function of the national park, which are on protection, preservation, and utilization of the Park. The officials are rangers (forestry police), forest ecosystem managers, forestry extension and other functions. The Administration Section is tasked with providing management support. This section plays a role in the management of human resources, facilities, data & information, planning, monitoring, evaluation and reporting.

<sup>5</sup> Forestry Ministerial Regulation Number P.03/Menhut-II/2007 dated February 1, 2007 concerning the Organization and Work Procedure of the National Park Technical Management Unit

<sup>6</sup> Decree of WKNP Office Head No: SK.11/BTN.WK-I/2013 on Working Map of the WKNP dating 22 January 2014

The WKNP has special facility for elephant conservation, popularly known as the Elephant Training Centre, which is led by a coordinator who is responsible for preservation, research and tourism. In its initial stage, the Centre was intended to reduce conflicts between the elephants and the local residents. The elephants were captive from the forest and trained certain skill that can help local residents in safeguarding farm and plantation from the elephant attack, in agriculture and tourism. In the future, the Centre is expected to breed elephants that can be released back into the wild to increase Sumatran elephant population.

The WKNP office restructured its organization in 2017 (WKNP 2018)<sup>7</sup>, that resulted in the following:<sup>8</sup>

1. Establishment of coordinating office that covers administration, program, budgeting, cooperation, human resources, equipment and office operation, finance, data processing, monitoring, evaluation, reporting, library and human relation, service and licensing, promotion and marketing, rangers, forestry extension, forest ecosystem controlling and the Elephant Conservation Centre.
2. Establishment of regional management sections, consisting a) utilization, planning, protection and preservation; b) animal tamer.
3. Establishment of resort management, which now handle 12 resorts. They are: 1) RPTN Way Kanan, 2) RPTN Rawa Bunder, 3) RPTN Susukan Baru, 4) RPTN Wako, 5) RPTN Toto Projo, 6) RPTN Rantau Jaya Ilir, 7) RPTN Umbul Salam, 8) RPTN Cabang, 9) RPTN Margahayu, 10) RPTN Kuala Penet, 11) RPTN Kuala Kambas, dan 12) RPTN Sekapuk.

**Zoning system.** The WKNP Office adopts zoning system based on the zone vulnerability toward exploitation and utilization. This system is regularly evaluated to adjust to the zonal dynamics. The zoning system division took place in 2006<sup>9</sup> is as follow:

- 1) Core zone: The Park area that is highly restricted for any change, reduction and introduction of flora as well as fauna species. The largest part of core zone is located in the central areas of the Park, including Ulung-ulung, Etekewer, Parmin, Sumpah Bincung, Hulu Rasau, Simpang Rajawali, Way Nibung, Camp Meranti, Keramat, Tanjung Tangis, Muara Way Seputih, Pelampung Merah, Ujung Central Wako, Way Batu, Sekopong, Kikuk, Terobosan Satu, Way Bungut, Pedamaran, Tanjung Bohong, Pasir Panjang, K Kerbau, Camp C and Kali Batin. The core zone covers 56,731.219 Hectares (45.1 percent of the Park).
- 2) Wilderness Zone: The Park area that support conservation of the core zone and utilization zone for its potential, location and situation. The Park's wilderness zone is located in areas of Babagan Bambang, Sidodadi, Botol, Pasir Panjang to Tanjung Bohong, Pedamaran, Way Bunut, Kuala Kambas, Sekapuk, Sekopong, Way Batu, Muara Wako, Cabang, Kertosono, Tutung, Hulu Rasau outward, Parmin to the Park

<sup>7</sup> Performance Report of 2017 Work Plan, the Way Kambas National Park Management Office

<sup>8</sup> Decree of Head of the Park Office Number: SK.04/BWKNP-1/2017 dated January 3, 2017 concerning Arrangement of Non-Structural Position of Civil Servants at the Way Kambas NP Office

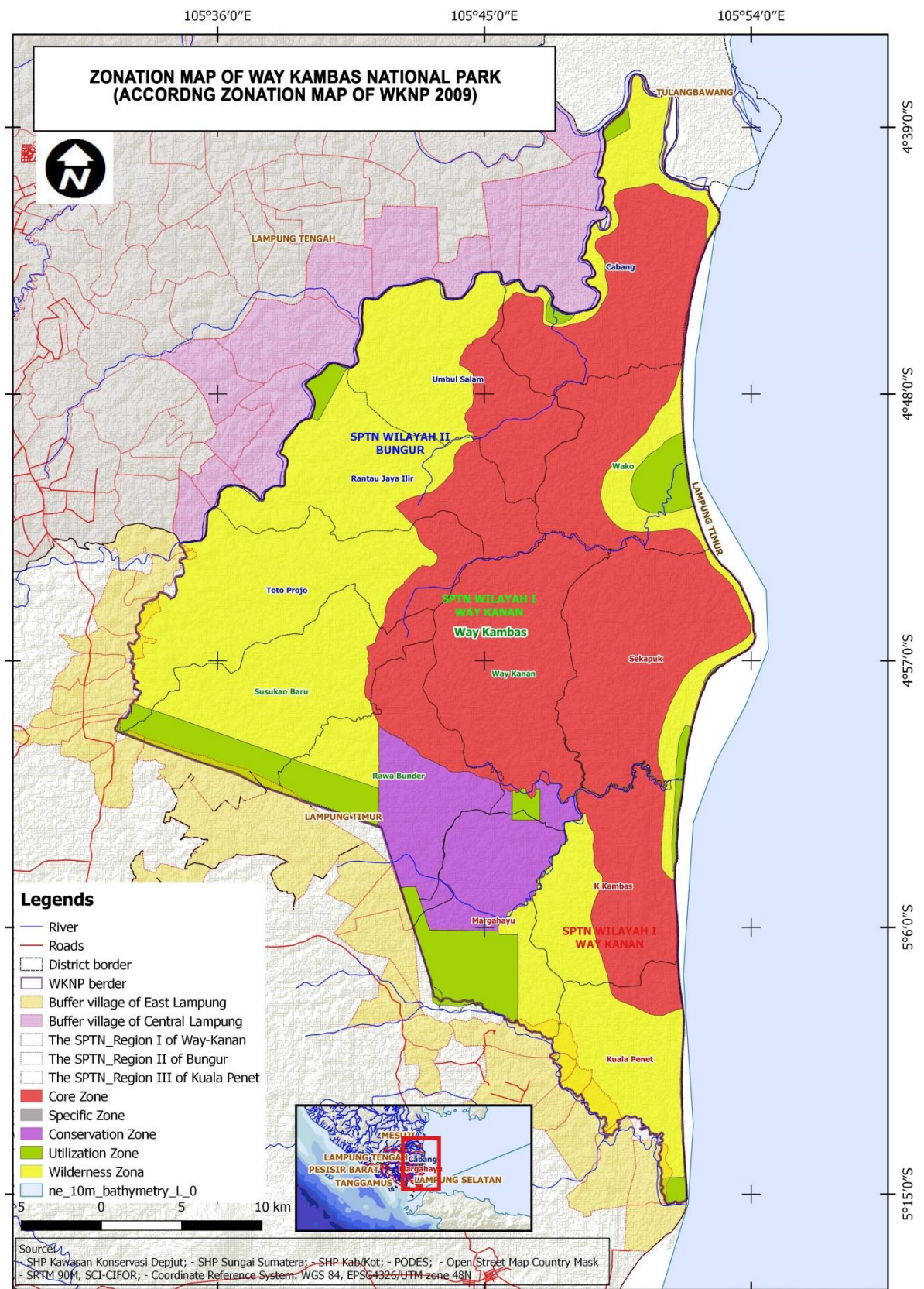
<sup>9</sup> Forestry Minister Regulation Number: P.56/Menhut-II/2006 concerning National Park Zoning Guidelines; Forestry Minister Regulation No. P.76/Menhk-Setjen/2015 concerning Criteria for National Park Management Zones and Management Blocks of Nature Reserves, Wildlife Reserves, Forest Park and Nature Parks



border in Pegadungan river. The wilderness zone covers 52,501.632 Hectares (41.8 percent).

- 3) Specific conservation zone: This part of the Park is used to conserve Sumatran Rhinos (*Dicerorhinus sumatrensis*) for its location, situation and potential. The zone straddles areas of Plang Ijo, Kali Batin, Way Kanan, around Ulung-Ulung, with total coverage of 9,254.589 hectares (7.4 percent).
- 4) Intensive use zone: The part of the Park that is utilized for tourism and other services for its location, situation and potentials. This zone stems from Plang Hijau through Karang Sari, Way Kanan Resort, Kuala Kambas Resort, Sekapuk, Wako Kali, Cabang Resort, Muara Rasau, Penanggungan Resort, Susukan Baru to Rawa Bunder Resort, covering area of 7,133.293 hectares (5.7 percent).
- 5) Specific Utilization Zone: The part of the Park, for its history record, is used for public old graveyard. It has been there before the Park came into existence. This zone is located in Susukan Baru, bordering with Rantau Jaya Udik II Village, Sukadana Sub-district, Empat Lampung District. It covers an area of 0.5625 Ha (0.0004 percent).





**Figure 4.** Map of the zoning system in Way Kambas National Park and the locations of directly bordering villages

**Resort Profile.** Based on the Decree of the WKNP Head No. SK.11 / BTN.WK-I / 2013, Way Kambas National Park consists of 3 regional management section offices, supervising 12 resorts. Each section office manages 4 resorts. The Way Kanan regional section I office is located at Plang Ijo, Bungur section II at Totoprojo, and Kuala Penet Section III located at Margahayu. The WKNP divides resort areas based on natural boundaries (rivers and swamps), in order to facilitate effective technical management and clarify boundary markings in the field. The aforementioned Decree replaces the previous decree regulating the division of the resort area, which divided the park to nine resort that was mainly based on imaginary latitude and longitude, and were considered too large for the resort management area. The recent 2013 Decree also includes villages bordering the national park area, locations that are commonly known by the local, and natural boundaries (**Table 2** and **Figure 5**).

Table 2 Resorts division, size, and management area coverage

Section	Resort	Size	Site name according to local knowledge
Section 1 Way Kanan	Rawa Bunder	9.824,47	PT. NTF, Way Pies, Jembat Ireng, Camp Parmin, Camp 5000, Camp Macan Loncat, Camp etekewer, Ulung-Ulung, Way Kanan, around SRS, Way Negara Bathin, Labuhan Ratu IX, Rajabasa Lama I, Rajabasa Lama II
	Susukan Baru	10.363,68	Tambah Dadi, Mura Jaya, Rantau Jaya Udik II, Way Pies, Way Tulung Sula, Hulu Way Tidung, Camp Lembat, Camp Mentru, Simpang Andi, Simpang Tarsan, Kali Pasir
	Wako	8.788,98	Laut Jawa, Way Batu, Menara, Central Wako, Way Wako, Babakan Suren, Pinang Merah, Way Binang
	Way Kanan	12.254,2	Way Kanan, Ulung-ulung, Camp Etekewer, Camp Macan Loncat, Camp 5000, Hulu Way Wako, Central Wako, Camp Air Hitam, Simpang Tarsan, Camp Sore, Kali Biru, Post Kali Biru, Camp C, Satkorlak, Rawa Mistirius.
Section 2 Bungur	Cabang	12.228,97	Laut Jawa, Way Binang, Pinang Merah, Babakan Suren, Way Nibung, Way pegadungan, Rasau, Cabang, Way Seputih, Kramat, Lampung Meranti
	Rantau Jaya	10.609,4	Ugai, Kertosono, Simpang Rantau Panjang, Way Pegadungan, Rantau Jaya, Way Meranggi, Joharan, Kali Pasir, Camp Opu, Hulu Way Wako, Hulu Way Binang
	Toto Projo	12.984,21	Way Meranggi, Way Pegadungan, Pertigaan Way Sukadana, Bungur, Tanjung Tirto, Toto Projo, Tegal Ombo, Tanjung Kesuma, Tegal Yoso, Taman Fajar, Taman Endah, Tambah Dadi, Kali Pasir, Simpang Sartam, Simpang Andi, Camp Mentru, CampLembat, Camp Parmin, Hulu Way Wako, Camp Opu, Hulu Tidung, Gunung Kerikil
	Umbul Salam	10.460,75	Way Nibung, Way Bincung, Ugai, Way Pegadungan, Penanggungan, Sekuang
Section 3 Kuala Penet	Kuala Kambas	9.236,64	Laut Jawa Pedamaran, Jembat seling, Rawa Jambu, Babakan Bambang, Camp C, Pos Kalibiru, Way Kambas, Kuala Kambas.
	Kuala Penet	7.174,46	Kuala Penet, Karang Anyar, Braja Luhur, Braja Kencana, Braja Harjosari, Kedung Sih, Jembat Seling, Way Pedamaran, Margasari, Sukorahayu, Laut Jawa

Section	Resort	Size	Site name according to local knowledge
	Margahayu	8.692,68	Labuhan Ratu VII, Labuhan Ratu VI, Way Negara Bathin, Sekitar SRS, Rawa Mistirius, Way Kanan, Satkorlak, Camp C, Babakan Bambang, Rawa Jambu, Kedung Sih, Braja Yekti, Braja Asri
	Sekapuk	13.002,63	Capangan, Camp D 1, Kali Biru, Tarsan, Camp Sore, Air Hitam, Murai, Camp Bari, Way Wako, Way Batu, Laut Jawa

Source: Resort Profile Book (WKNP-WCS, 2018)





**Figure 5.** Map of WKNP Working Area.

### 2.3. Existing Management Activities

National Park is one of the Technical Management Units, which is under the supervision of the DG of KSDAE. National parks, including WKNP, is tasked with carrying out 'National Park Management' Activities, as part of the 'Conservation of Biological Resources and Ecosystems' Program which is the responsibility of DG KSDAE.<sup>10</sup>

The WKNP Office work plan is written in these two documents:

- 1) The WKNP Strategic Plan, 2015-2019 (published in 2015), and
- 2) The WKNP Long term management plan, Lampung Province, 2017-2026 (Published in 2016)

#### 1. The Strategic Plan of WKNP, 2015-2019

The Strategic Plan of WKNP 2015-2019 refers to the Strategic Plan of Ministry of Environment and Forestry (MoEF) 2015-2019 as part of the targets of the National Mid-term Development Plan in forestry and environment affairs.

The DG of KSDAE is mandated to realize two of the MoEF's three strategic goals. The strategic goals are: (1) Utilizing the potential of biological resources and environment in a sustainable manner to improve equitable economic and social welfare (second strategic goal); (2) Preserve the balance of ecosystems and biodiversity and the existence of natural resources as a life support system to support sustainable development (third strategic target).<sup>11</sup>

The performance indicators of the aforementioned strategic goals are: (1) the amount of state revenue and non-tax state revenue earned from environmental services of conservation areas and from utilization of wild animals and plants; (2) increase of the value index of Management Effectiveness Tracking Tool (METT) and population increase of 25 endangered animal species.

#### 2. Long term management plan of WKNP, 2017-2026

In reference to the Government Regulation No 28 Year 2011 on Nature Reserve and Conservation Area management, the WKNP Office comes up with a 10-year work plan that is documented in the Long-Term Management Plan, 2016 – 2026. This plan highlights the WKNP in the national and Lampung Province development framework, and East Lampung District in particular.

The WKNP vision also highlights three endangered key species: Sumatran Tiger (*Panthera tigris sumatrae*); Sumatran Elephant (*Elephas maximus sumatranus*) and the Elephant Training Centre; and Sumatran Rhino (*Dicerorhinus sumatrensis sumatrensis*) and the Sumatran Rhino Sanctuary. The vision, read **"The Way Kambas National Park as an ideal habitat for the Sumatra protected wild species that brings self-sufficiency and prosperity to local communities"**, guides the WKNP toward the conservation of

---

<sup>10</sup> DG of KSDAE Regulation No. P.7/KSDAE-SET/2015 on Strategic Plan of DG of KSDAE 2015-2019

<sup>11</sup> Ibid



the “umbrella species’. Umbrella species are species that require a very large area, so the protection of these species offers protection for other species that share the same habitat.<sup>12</sup>

The WKNP will achieve its vision and mission through a number of programmes, grouped into three conservation principles including:

A. Protection Programme:

- 1) Programme on the protection and security of WKNP area
- 2) Programme on the fire control in the area of WKNP
- 3) Programme on the conservation socialization and promotion
- 4) Programme on the law enforcement on WKNP trespassers

B. Preservation Programme:

- 5) Programme on the biodiversity and ecosystem conservation in WKNP
- 6) Programme on the preservation of endemic plants and animals, particularly flagship species of WKNP

C. Utilization Programme:

- 7) Programme on the exploration of ecosystem potentials for ecotourism and environmental services in WKNP
- 8) Programme on the exploration of plant and animal species potential for economic benefit
- 9) Programme on the professional management of the Elephant Conservation Centre in WKNP as favourite tourism destination
- 10) Programme on the development programme of the Sumatran Rhino Sanctuary (SRS) as a specific-purpose tourism destination
- 11) Programme on the production of new packages of ecotourism and environmental services
- 12) Programme on the economic utilization of plant and animal species through cooperation with the community around the Park
- 13) Programme on the coordination and synchronization of the Park management with the local development policies
- 14) Programme on the collaboration with the communities around the Park
- 15) Programme on the Non-tax revenue improvement for the Park’s self-reliance.

Based on the aforementioned plan, the following sections present what the WKNP Office is working on both independently and in partnership with other stakeholders.

### 2.3.1. Institutional Capacity Strengthening

**METT.** Improving management effectiveness tracking tool index to 70 percent is one of the work performance indicators (IKK) of the national park management project. Since the METT assessment in 2015, the METT value of the WKNP has increased, although it is still below the target of at least 70% as the achievement of the IKK Directorate General of KSDAE. In 2015, an independent assessment was carried out by representatives of WKNP staff to get a score of 65%. In the second assessment conducted by the Directorate of

---

<sup>12</sup> Wikipedia undated. Umbrella species

Area Conservation, WKNP received a score of 75%, while the multi-stakeholder assessment conducted in 2017 received a score of 69%.

Based on the 2017 evaluation, WKNP's score is the highest on context yet the lowest on process. The complete result of the evaluation is: context (100 percent), planning (71 percent), input (72 percent), process (66 percent), output (67 percent), and outcome (67 percent). The score 100% on context is earned from some aspects as seen in **Table 3**.

**Table 3.** Explanation of METT Assessment on 100% % score of context aspect (2017)

Response	Measures
<ul style="list-style-type: none"> <li>- There has been a mutual understanding with PT NTF (Nusantara Tropical Fruit) about conflict management by taking care of canal.</li> <li>- Linking tourism objects within the Park with tourism objects within the PT NTF area by involving local communities.</li> <li>- Cleaning up tourism routes within the Park by PT NTF.</li> <li>- The District administration build canal to control animal conflicts.</li> </ul>	<p>Strengthening cooperation mechanism with PT. NTF through cooperation agreement.</p>
<ul style="list-style-type: none"> <li>- Monitoring on elephants and tigers. During the last two years, babies of tiger, elephant and rhino were found in Tegal Ombo and Braja Asri (2015). Whilst, death of key animals was found of elephant: 4 year old in 2016/ 2017.</li> <li>- Research on land coverage is yet to make since 1990. There have yet to be estimates on key animal population, but cameras catch some babies of key animals.</li> </ul>	<ul style="list-style-type: none"> <li>- Regular monitoring on key species on determined sites.</li> <li>- A series of data collection on land coverage since 1990.</li> </ul>

**Resort-based Management (RBM).** 'Definitive management' is now a new effort in conservation area management, where the technical management unit (UPT) of the National Park offices are demanded to be available and to work in the field and know well the situation.<sup>13</sup> This paradigm become the key management at the site level, or known Resort-based Management paradigm, following the issuance of a Circulation Letter by DG of PHKA No. 279/KKBHL/Juni/2011 for 50 national parks.

As time goes by, the RBM changes because it is no longer part of the work performance indicator (IKK) and Strategic Plan of DG of KSDAE 2014-2019 as it was before (former IKK and Strategic Plan of DG of KSDAE 2008-2013). It was replaced by METT, an assessment tool for 260 conservation areas in Indonesia. In 2013, a workshop to assess the implementation of RBM in national parks in Yogyakarta was held, which resulted in **Table 3**.

**Table 4** Evaluation of pre-condition and implementation of Resort-based Management in National Park

<sup>13</sup> Wiratno (2018) Ten new ways of the conservation area management in Indonesia: Building 'Learning Organisation' (in Indonesian). DG of KSDAE, MoEF

<b>I. PRE-CONDITION</b>	<b>II. IMPLEMENTATION</b>
<b>A. Establishment of RBM in Working Team of WKNP</b>	<b>A. Determination of Resort Work Area attached with Field/Section Area Work Map and Resort</b>
1. Decree of the Head of National Park regarding the RBM Working Team 2. Representation of elements in the RBM Working Team (Resort, Area or Section, Administration Section (budget and equipment), Functional) 3. Division of team assignments	1. Decree for the determination of Resort working area 2. Resort Working Area Map that has been printed with an adequate scale size 3. Determination of Resort working area based on written typology studies (regional pressure, potential, accessibility, topography, etc) on each Resort. 4. Information (road, river, building, problem, potency, land-use) on the Resort Map contained in the map legend
<b>B. Development of Resort-based Management Plan</b>	<b>B. Development of Resort Institution</b>
1. RBM Plan Document 2. Process of preparing the Resort-based Management Plan document 3. Decree of the Head of National Park regarding personnel placement 4. Availability of Resort Office or Work Station which is used for Resort Office 5. Availability and distribution of transportation 6. The availability and distribution of resort's minimal work tool (GPS, work map and digital camera) 7. RBM Implementation Budget Planning	1. Minimum assignment of resorts 2. Quality improvement (knowledge and skill) for the Resort staffs (conducted at the Hall or sending representative) 3. Average number of personnel at each resort 4. Activity budget support (distribution) on the resort level for each year (2011) 5. Implementation of resort's minimum working infrastructure distribution
<b>C. Information Management</b>	<b>C. Information Management</b>
1. Availability of SIM RBM UPT application 2. Decree of the Head of National Park regarding the manager of SIM RBM UPT 3. Availability of data protocol from the Resort to the Hall 4. Availability of tally sheet which is used for data collecting activity	1. Completeness of Data 2. Accuracy of Data 3. Punctuality and continuity of data flow 4. Analysis of data 5. Data use as planning and policy materials
	<b>D. Evaluation</b>
	1. RBM implementation evaluation is done regularly 2. Use of evaluation result as feedback for the upcoming planning

According to the above RBM assessment, then the following is an achievement of the pre-condition and implementation of RBM management in WKNP, as follows:

**Table 5** Status category of the RBM by pre-condition and implementation stage

<b>Achievement</b>			
<b>Pre-condition</b>	<b>Score</b>	<b>Implementation</b>	<b>Score</b>
Supportive	> 90	Intensive	> 90
Quite Supportive	70-90	Quite Intensive	70-90
Less Supportive	<70	Less Intensive	<70

The Yogyakarta workshop has resulted the formulation of summary of RBM precondition and implementation evaluation in national parks. The summary is resulting four categories of action plan against the precondition and implementation such as follows:

- (1) **Development** aimed to the Technical Management Unit (UPT), which has the supporting category of its precondition and intensive category of its implementation.
- (2) **Strengthening** aimed to the Technical Management Unit (UPT), which has the quite supporting precondition and quite intensive in its implementation.
- (3) **Facilitating** aimed to the Technical Management Unit (UPT), which has the enough supporting precondition and enough intensive in its implementation.
- (4) **Constructing** aimed to the Technical Management Unit (UPT), which has the less supporting precondition and less intensive in its implementation.

Regarding those categories, the WKNP is categorized as need further 'facilitating' because the park has 'Quite Supportive' precondition and 'Quite Intensive' in its implementation. It means that the RBM at the WKNP is anyway not developed as yet. But the initial assessment included in the facilitating category was not continued by the national team for the facilitation. Yet, the WCS Indonesia Programme, as a park partner, has been beginning to support the RBM activity through the establishment of Management Information System and rewriting the resort profile by SMART tool since 2015.

### 2.3.2. Species and Area Protection, and Law Enforcement

**SMART Patrol.** Due to its location that borders with 37 buffer villages, the WKNP become relatively accessible, making it susceptible to illegal hunting, illegal trade of animals, animal-human conflicts, forest fire and illegal logging. The WKNP along with NGO partners and community have been regularly patrolling the area and enforcing the law. The NGO partners that regularly work in the field are YABI with its Rhino Protection Unit (RPU) and Intelligence and Law Enforcement Unit (ILEU), Wildlife Conservation Society Indonesia Program (WCS-IP) with its Wildlife Response Unit, PKHS and Alert. The WKNP Office also establish a community-based security unit called *Masyarakat Mitra Polhut* (MMP), which previously dealt with human - elephant conflicts. There are 220 MMP personnel that are taken from the 22 surrounding conflict prone villages. They earn Rp 250,000 a month, allocated from national budget.

The Rhino protection program is carried out by forming and operationalizing the Rhino Protection Unit (RPU), which is supported by Intelligence and Law Enforcement Units (ILEU) as intelligence units to detect potential hunting and other forestry crimes. This programme is run by the WKNP Office and YABI, with national and international funding. When it started in 1996, the WKNP had only two RPU team. By 2007, it has 9 team. The composition of the patrol team averages 4-5 people. The team was led by a Forest Police, consisting of Forest Police, assistants from partners, and members of *Masyarakat Mitra Polhut* (Forest Guard Community Partner). Activities carried out in the WKNP are security patrols and help in law enforcement, population monitoring, and education to schools and communities in buffer villages, especially in the northern regions.

Although hunting specifically for rhinos is almost non-existent, cases and potential threats from hunting are still quite high. This is indicated by the increasing number of snares found for large mammals, as the frequency of patrols increases. In 2017, 11 cases of poaching and illegal fishing were reported. On February 12, 2018, the RPU team on SPTN 3 Margahayu found an elephant carcass, teeth and horn. Previously in 2015 elephant ivory had been found to make smoking pipes which was ready to be distributed. From the RPU's record, the distribution of parts of animals occurs for domestic and international scale.

For law enforcement, The Forest Police of WKNP and RPU provide assistance to law enforcers in collecting information material and increasing knowledge of animal crime. The level of coordination in handling criminal cases at the resort and regional police level tends to increase after assistance. Poaching cases have become a concern after the Lampung Police Chief issued an appeal to improve handling of wildlife trade cases in 2017. In addition the response of the East Lampung Police was higher than Central Lampung. Socialization and increasing knowledge of criminal law for wildlife cases need to be improved.

The Sumatran Tiger Conservation Program (PKHS) is a collaboration program between WKNP, DG of PHPA (at the time), The Tiger Foundation (TTF), Canada and The Sumatran Tiger Trust, UK. This program began in WKNP from 1995 - 1999. Like the RPU, PKHS formed 2 units of Tiger Protection Unit (TPU) which later joined the RPU. PKHS activities include protection, research and monitoring activities, and conservation education campaigns to the public.

Wildlife Conservation Society initiated a tool named Spatial Monitoring and Reporting Tool (SMART) to enhance security patrolling and law enforcement in the conservation area. This tool started in Thailand, and used by the WKNP in early 2016. SMART is used to make planning, document, to process data, to analyse and report its result. The data collected were on biodiversity, patrolling, threat, and action taken in the field. SMART uses three approaches: software, capacity building, and the standard of area protection.

Nowadays in WKNP, the Park office and WCS-IP are developing information management system (software) and improving planning and data management capacity. Meanwhile, analysis capacity building on vulnerability map needs to carry on. There is also a need for a standard operating procedure for an integrated work mechanism among partners working within the Park.

**Elephant Response Unit (ERU).** Conflict between elephants and human frequently happen along the settlement and the WKNP forest border. In efforts to mitigate the conflict, the WKNP Office and Veterinary Society for Sumatran Wildlife Community (VESSWIC) came up with employing the captive elephants and mahout (elephant handler) to prevent the wild elephants from invading into villages, which started in 2008. By the end of 2010, the first ERU Camp in Bungur came into existence, followed by Tegal Yoso camp in 2013, Margahayu camp in 2014, and Braja Harjosari in 2018. The Community for Sumatran Forest (KHS) began to join in supporting ERU in 2016. With the development of ERU into 4 locations, the institutional aspects must be addressed. This is related to the number of elephants utilized in Camp ERU, Mahout, and other related staff.

The way in which ERU works is participatory with the general public and MMP of Elephants, totalling 10 people in 22 buffer villages. People's participation can be seen at flow of information on the elephant movement and herding. In general, ERU's function is to patrol, monitor and herd wild elephants as well as prevent wild elephants from going out of the Park.

### 2.3.3. Flora and Fauna Preservation

Preservation of flora and fauna is carried out through monitoring in priority species, and providing facilities and special area for elephants and rhino conservation: Elephant Training Centre for elephants and Sumatran Rhino Sanctuary for rhinos.

**TERMA.** The government, through a trilateral meeting between BAPPENAS, DG PHKA, and the Ministry of Finance in 2015, has determined 25 endangered species that become a priority for a population increase by 10% during the administration of President Joko Widodo (RPJM 2015-2019).<sup>14</sup> The WKNP, due to consideration of species data baseline stability (2013-2014), defines Sumatran elephant species, Sumatran rhinoceros, and Sumatran tiger as priority species. Baseline population data for each species are 39 individuals, 10 individuals, and 9 individuals.

WKNP Office adopted an intensive monitoring for the priority species (site monitoring), called Tiger, Elephant, Rhino Monitoring Area (TERMA) covering 169 km<sup>2</sup> since 2015. TERMA is a further development of the Tiger Intensive Management Area (TIMA) initiated by The Tiger Foundation (TTF) through the Sumatran Tiger Conservation Programme (PKHS).<sup>15</sup>

The species monitoring is supported by PKHS, RPU, YABI, WCS and VESSWIC, NGO partners that are also engaged in the park area patrolling.<sup>16</sup> The monitoring needs coordination and work mechanism for research theme and methods, as well as data sharing.

**Elephant Training Centre (ETC).** This centre, built in 1985, was initially aimed at reducing conflicts between elephants and humans. Land clearing for settlements and plantations, left by the transmigration in the 1980s, caused severe damages to the habitat of elephants. Since 2000, the ETC transformed into the Elephant Conservation Centre, and its function was improved to conserve the elephants, although it has not been officiated as yet.<sup>17</sup> Protection and preservation are intended to conserve the elephants, while utilization facilitates research and tourism.

Until July 2018, the ETC managed 42 elephants, and 25 elephants were entrusted to 4 ERU Camps which was run by 66 officers, including two elephant doctors, four paramedics,

---

<sup>14</sup> Decree of DG of KSDAE No. 180/2015 on 25 priority endangered species population to be increased by 10% during 2015-2019 period.

<sup>15</sup> Decree of Head of WKNP No. S.2623/BWKNP-1/2017 on Report on the increase of priority endangered species population in Way Kambas National Park in 2017

<sup>16</sup> Decree of Head of WKNP No. SK.13/BTN.WK-1/2015 Designation of monitoring sites for Sumatran elephant, Sumatran rhinos and Sumatran tiger population

<sup>17</sup> Interview with the ETC Coordination



mahout (elephant handler), and community's MMP. Now the ETC has its own elephant hospital namely Prof. Dr. Ir. Rubini Atmawidjaja Hospital, which was inaugurated on November 5<sup>th</sup>, 2016. The hospital has facilities for care, treatment, disease prevention and rehabilitation for either tamed or wild elephants. This hospital is projected to handle other wildlife, especially priority animals. Tourism development can be seen at section 2.3.5 Development of Nature Tourism.

**Sumatran Rhino Sanctuary (SRS).** SRS was built in 1996 as a follow-up to the Population and Habitat Viability Analysis (PHVA) analysis the semi-in situ Sumatran rhinoceros rescue. SRS was established by the Ministry of Forestry through the DG of PHPA, at that time, in collaboration with the Rhino Partner Foundation / YMR, which is currently transformed into the Indonesian Rhino Foundation (YABI). SRS land allocation covers 100 hectares, which is divided into 10 plots surrounded by electric fences to prevent disturbance of wildlife or to secure rhinos in the area. The SRS facility aims to protect and preserve (reproduction), research and education.

In 1998, SRS began accepting the first rhinoceros. The reproductive programme was deemed successful, as it produced one baby each in 2012 and 2016. Currently, this facility accommodates 7 Sumatran Rhinos, consisting of 4 females and 3 males. The 7 individuals were named Bina, Harapan, Ratu, Rosa, Andalas, and children named Andatu and Delilah. The offspring are expected to survive and breed in the wild.

Although semi-wild, care is carried out every day by several special officers who feed, bathe and observe the animals. Some veterinarians are in charge of medical care if needed, and research to look at behaviour, fertility and its kind. Rhino feed is currently supplied from within the WKNP area, and purchasing from the community who started planting about 10 types of feed plants. Additional feed such as fruits are purchased from the local market.

SRS also functions as a limited tourism site, communication and education centre for school children, local residents and tourists. Facilities available at SRS Way Kambas are visitor centre, toilets, and guest house. The revenue earned from tourism is used for the protection of rhinos and is treated as non-tax state revenue.

Being regarded successful, the WKNP and YABI/SRS Centre, supported by the International Rhino Foundation, planned to expand SRS land and its supporting facilities so that it can accommodate 10 to 15 rhino individuals or more than double from the current capacity. In the long run, SRS will become a sanctuary that receives Sumatran rhinos from all other parts of Sumatra. The extended land will also increase limited tourism capacity and the need for feed supplies.

#### **2.3.4. Ecosystem Restoration**

The WKNP's forest cover tends to decline, indicated by an increase of Imperata grasslands that reaches 33 percent of the WKNP area. This is due to repeated forest fires and previous encroachment (Amalina et al. 2016). To overcome this problem, the WKNP Office developed an Ecosystem Recovery Plan, although which part of the Park to be recovered has yet to be decided. For this reason, a zoning review is needed to implement the ecosystem recovery plan in WKNP.



Figure 6 A degraded land overgrown by *Imperata* grass after forest fire

From the identification of WKNP and Alert, there are at least 3 resorts that are fire-prone and ex-encroachment areas that can be prioritized for ecosystem recovery planning, namely at Susukan Baru Resort, Rawa Bunder, Kuala Penet, and Toto Projo. With the support of USAID's Tropical Forest Conservation Action Programme (TFCA), an NGO Consortium consisting of Alert, Sumatran Tiger Conservation and Conservation (*PKHS*), Lampung University Biology Department, Buffer Village Discussion Forum (*FRDP*), Sajogyo Institute (SAINS), Silvagama Foundation, Saka Wana Bakti Way Kambas, Save Indonesian Endangered Species (SIES), conducted ecosystem restoration at Susukan Baru Resort and Bambang area.

Additionally, the WKNP Office cooperating with YABI-RPU, Biology Faculty of UNILA, Alert and the community in the Rawa Kijang Restoration SPTN III Kuala Penet planted 200 plant species, three of them are used for rhino feed. They are Medang (*Phoebe hainanensis*), Puspa (*Schima wallichii*), and Pulai (*Alstonia scholaris*). The project is also intended to enrich the Sumatran Rhino feed collection.

### 2.3.5. Development of Ecotourism

The increase in foreign exchange and non-tax state revenues (PNBP) and the number of tourist are one of the IKK to achieve the strategic goals of the Directorate General of KSDAE through national park management activities.

Non-tax state revenues earned from the WKNP tourism continue to increase annually. WKNP's non-tax state revenue targets set by the Ministry of Finance in 2016 and 2017 amounted to Rp 250 million per year. In 2016, WKNP recorded a non-tax state revenue of Rp 811 million, and increased in 2017 to Rp 900 million. This income increase was obtained through a vigorous promotion carried out both by the WKNP Office and the Lampung Provincial Government and the East Lampung District Government. This is especially after the regular Way Kambas Festival has been held since 2000. In addition, there are many

visitors during holidays on national holidays such as New Year holidays and religious holidays with the main objective of ETC.

The Way Kambas Tourism Festival 2017 was held for three days from 11/11 to 13/11, with 20 series of events held during the implementation of the tourism festival in the conservation area to cheer and invite tourists visiting East Lampung District. The East Lampung Culture and Tourism Office noted that during the 2017 Way Kambas Festival there were 129,921 visits from both local and foreign tourists, from an estimated target of 120 thousand visits. In addition, 621 vendors from mostly local communities took part in the event and 526 people were hired.<sup>18</sup>

In addition to promotion through social media, the factors supporting the revenue achievement are the improvement of tourism facilities and infrastructures in the ETC area built by the Provincial and East Lampung District administration such as toilets, merchant stalls, children's play areas, pedestrian tracks for visitors to ensconce themselves from the heat of the sunshine; and gazebos for family relaxing. Support is also provided by the Lampung Provincial Government who is currently and has been improving road infrastructure towards the WKNP.

**Ecotourism Development.** To support the use of natural tourism in the WKNP area, through this optimization, WKNP Office strengthen the licensing, promotion and tourism marketing services. In addition, the WKNP has conducted studies and models of regional development planning through the preparation of natural tourism site designs at three points, namely ETC, Way Kanan resort, and Plang Ijo in the Rawa Bunder resort.

The preparation of site design is the division of ecotourism management in the utilization and protection zones, which are provided for public and tourism services (Perdirjen No. P.5/IV-SET/2015). This utilization can jointly carried out third parties.<sup>19</sup> Site design documents in three locations were made in 2015, which will be followed by the preparation of a Detailed Engineering Design (DED). They are:

- Site design of ecotourism management in the utilization zone of ETC, Way Kambas National Park, Lampung Province (2015). This document recommends the concept of 'ecotourism in elephant habitat', where ETC is urged to optimize habitat functions for recreation and tourism by paying attention to ecological functions, socio-economic functions, and socio-cultural functions.

There are at least five important locations that can become mainstays in ecotourism in ETC, including elephant cages, elephant bathing pools, savanna, lowland forests and swamps. The land allocation for ecotourism covers all areas in the ETC utilization zone with a total area of 2,030 hectares. This area is divided into public spaces with an area of 1,994 hectares and business space with an area of 36 hectares. The public space is plotted on the site area that has five tourism thematic potentials, including Forest, Savanna, Swamp, Pond and Cage Park. On the business area a various kind of accommodation can be built, and facilities and services for tourism businesses.

---

<sup>18</sup> Wawancara dengan Kepala Balai WKNP (2018) dan Antara Lampung (2017) Realisasi Pendapatan Way Kambas Capai 300 Persen. Edisi 17 November 2017

<sup>19</sup> Wawancara dengan Kepala Balai dan staf terkait (2018)

- Site Design of ecotourism management was made in Way Kanan Resort area, Way Kanan SPTN I Way Kambas National Park, Lampung Province (2015). The utilization zone at the Way Kanan Resort is side by side with the core zone and special conservation zone. Therefore, the limited tourism design must consider the continuity of ecological functions. In this site design, Way Kanan Resort utilization zone is around 400 hectares, which is divided into 337-hectare public space and 63 hectare business court the riparian of the Way Kanan River.
- The site design of ecotourism in Plang Ijo. The Plang Ijo is located in Rawa Bunder Resort, the gateway to the WKNP's tourism areas in the Way Kanan Resort and the Elephant Training Center. Plang Ijo located at Labuhan Ratu IX Village which is near to Labuhan Ratu VI Village and Labuhan Ratu VII Village. The site design recommends business space allocation in Plang Ijo - Way Kanan located after 12.80 hectares of Environmental Education Forest, and Plang Ijo area - Margahayu in JICA's ex-rehabilitation area there is a rather open area of 1.5 hectares. Activities that can be done in Plang Ijo include camping and environmental education outside the school, because it is close to the camping ground area and the Forest of Environmental Education. Other activities include adventure tourism and educational tourism through jungle tracking to observe and study the flora and fauna in the forest.

#### 2.3.6. Community Empowerment

Institutionally, the WKNP office has recently increased the forestry extension officers from 2 to 7 staffs, and prepared WKNP Buffer Zone Community Empowerment Plan 2016-2025. The additional number of the forestry extension officers is resulted from staff transfer from other position starting from 2018 Fiscal Year, which have been assigned by the Head of NP Office letter. They will have a capacity building training at the Ministry of Environment and Forestry's Rumpin Training Centre in Bogor<sup>20</sup>.

The Plan contains action plans and priority village designation in the development of buffer zones by WKNP for 2016-2025. The plan analyses 38 existing buffer zone villages, which would be selected and designated as priority villages based on several criteria. The selected villages are: a) Rantau Jaya Udik II, which had the highest forest fire rate in 2015, and b) Braja Harjosari, which has good tourism potential, agriculture, fisheries and buffalo husbandry, and is relatively more advance than the other villages.

At Rantau Jaya Udik II, WKNP initiated the establishment of Forest Farmers Group for the development of honey bees, while in Braja Harjosari assisted in capacity building and infrastructure for managing village tourism. The CMP team conducted a brief survey and assessment in the two priority villages of the WKNP, the results of which were submitted in the next sub-chapter. In addition, the Team carried out an analysis of village-based regional development to assess the potential of other buffer villages that were suitable for further development, after these two priority villages. The buffer village covered is 35 (from 38) buffer villages in East Lampung and Central Lampung districts based on the existence of supporting data.

---

<sup>20</sup> Ibid

The additional number of forestry extension and the community empowerment planning have illustrated a more outward-looking management planning to facilitate the existing community living in buffer zone villages. Improvement in the WKNP institution should be followed by the needs to improve the knowledge and skills needed, especially regarding community assistance methods and approaches, training on Participatory Rural Appraisal and conflict mitigation.

In addition to the WKNP's activities, the partner NGOs such as Consortium of YABI, WCS, the Nature Conservation Education Foundation (YAPEKA), and the Consortium of Alert and Lampung University conducted projects with support from the USAID's TFCA Programme.<sup>21</sup> The YABI Consortium, WCS and YAPEKA run creative economic development programmes in accordance with the potential of the environment around the village. The activities carried out were demonstration plot, cultivation and formation of tourism, handicraft, natural farming, fisheries, and introduction of appropriate technology for the manufacture of biogas, fertilizers and pesticides. The facilitated villages are Labuan Ratu 7 and Labuan Ratu 9 in Labuhan Ratu Sub-district and Braja Yekti Village, Braja Selehah District.

Lampung University and Alert Consortium have built a tourism village programme, one of which activity is to increase the tourism management capacity at Braja Harjosari Village and building a conservation house at Margahayu Village. (Eco)-tourism development begins with training in guidance, service, interpretation, homestay and tour packages. The conservation house is currently more functioned as a community centre, supporting activities such as the Margahayu Jaya women farmer group (KWT) regular meeting for training and social gathering activities. Meanwhile, the surrounding land is utilized for cultivation of horticultural crops managed by the group.

#### 2.3.6.1 Braja Harjosari Village

Braja Harjosari Village is the capital village of Braja Selehah Sub-district, East Lampung district. This village was originated from the land opening by the then Transmigration Bureau of Lampung in 1958. The village size is 1,075 hectares, which is divided into eight hamlets. The land-use of paddy field at 439.75 hectares, non-paddy field at 296 hectares, and non-agricultural land at 339.25 hectares.

Most of the households work as farmers, breeders and seller. The main production of the agricultural sector are of rice, cassava, corn, soybeans, and peanuts, while animal husbandry are of cattle, goat and chicken. Due to its location located in the capital of the Selehah sub-district, and being the centre of trade and shopping, the community members run household business, in particular producing cassava crackers. Livestock also support Braja Harjosari villagers, especially chickens and cattle. Number of beef cattle is 889, buffalo is 55, goat is 972, pig is 40, chicken is 2100, and duck is 500 (2017 Braja Selehah sub-district in numbers).

---

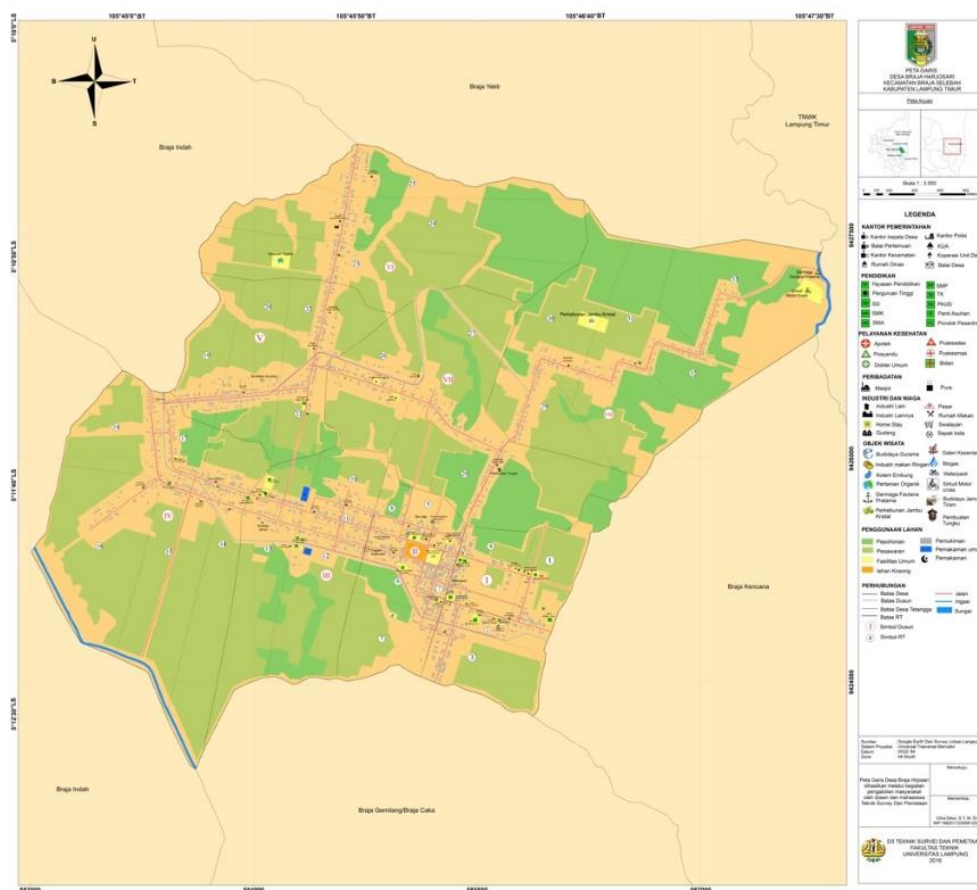
<sup>21</sup> WKNP (2016) Rencana Pemberdayaan Masyarakat Daerah Penyangga Taman Nasional Way Kambas Periode 2016 – 2025





**Figure 7** Braja Harjosari Village office

Braja Harjosari village borders with Braja Yekti and the WKNP to northern boundary, Braja Gemilang Village/ Braja Caka to the south, Braja Indah Village to the west, and Braja Kencana Village to the east. Braja Harjosari village has a distance of 49 km from the capital district, and 120 km from the capital city of province.



**Figure 8** Map of land use of Braja Harjosari Village.

The Braja Harjosari population was 5,874 in 2016 (3,088 male and 2,866 female). Population density is 191 people/km<sup>2</sup>. The education level is mostly junior high school graduates (1,069 people) and the smallest master course graduates (5 people).

There are 50 household-scale processing industries and 11 medium-scale industries in the village. These include 24 food and beverage industries, 21 wood-based manufactures and other industries. There are 127 grocery stalls, 2 restaurants and 25 food stalls.

Braja Harjosari has enormous potential, especially in tourism sector. There have been many tourists entering this village both local and foreign tourists interested in traveling to this village. The Braja Harjosari tourism potential is as follows: 1) horse riding on the savanna; 2) Take a boat trip down to the Way Penet river; 3) Visit Bali residents by enjoying Balinese culture and arts; 4) Crystal Guava and Dragon Fruit Agro Tourism; and 5) Circuit Motor Trail. This rich diversity makes Braja Harjosari feel special. This feature is used and developed by the community as a village thematic tour. In 2016, Braja Harjosari was designated as one of the tourism villages and food self-sustain villages by the District government. Goal of both tourism and food self-sufficient village is for improving the welfare of the village community itself. Village location adjacent to WKNP is also the reason why this village attractive. At present, Braja Harjosari has a number of home stays to support village tourism development.

Braja Harjosari Village development budget in 2016 is originated from the Village Fund Budget (ADD) at Rp 851,391,000, profit-sharing/assisting budget and grant from the East Lampung District at Rp 68,600,000, and Village Revenue at Rp 16,000,000. This amount excluded the Village Fund from the central government programme.

The economic activities of the communities around and in the WKNP area are divided into 4 (four) categories, namely land-based activities, forest resource-based activities, cultural and social site-based activities, water resource-based activities. Detailed explanations can be seen in **Table 6**.

**Table 6** Activities of the Braja Harjosari Village Community around and inside the area of WKNP

No	Economic Activity Category	Distribution*	Information
1.	<b>Land-based Activity</b>		
	<b>Food Crops Farming Business</b>		
	1 Rice	Outside	Corn and cassava are intercrops in the 400 ha area
	2 Corn	Outside	
	3 Cassava	Outside	
	<b>Timber Crops Farming Business</b>		
	4 Albizzia	-	5 ha
	5 Sengon		5 ha
	6 Gaharu		3 ha
	<b>Plantation Crops Farming Business</b>		
	7 Rubber	Outside	100 ha
	8 Pal Oil Plantation	Outside	50 ha
	9 Orange		8 ha
	10 Guava Crystal		2,5 ha
	11 Dragon Fruit		1 ha
	<b>Vegetable Farming Business</b>		
	12 Chilli		5 ha
	13 Tomato		5 ha
	14 Oyster mushroom		250 m2 including 5x10 (3 rack), 10x20 m (field)
	<b>Livestock Business</b>		
2.	15 Cow	Outside	
	16 Goat	Outside	
	17 Chicken		
	18 Pig		
	<b>Fishery Business</b>		
	19 Catfish	Outside	
	Forest Resource-based Activity		
	<b>Forest Preservation</b>		
	20 None	-	
	<b>Timber Forest Product Utilization</b>		
	21 None	-	
	<b>Non-Timber Forest Product Utilization</b>		
	22 Grass for animal feed	Inside	
	23 Fishing	Inside	
	24 Buffalo grazing	Inside	

No	Economic Activity Category	Distribution*	Information
	25 Village Tourism	Outside	
	26 Orchid cultivation	Outside	
3.	<b>Cultural and Social-based activity</b>		
	27 Utilization of river banks for the Ngaben Ceremony	Inside	
4.	<b>Water resource-based activity</b>		
	28 Boreholes	Outside	

*Distribution of activities inside or outside the WKNP area*

Source: Result of the Focus Group Discussion and Depth Interview

Results from the field observation, interviews and FGDs with the community shows that several groups or village institutions in the Braja Harjosari Village were identified have been engaging a cooperation with the WKNP. However, there are other potential groups to be encouraged to participate in the collaborative management with the WKNP. The existing community groups and village institutions are listed in **Table 7**.

**Table 7** Village and Community Group Institutions in Braja Harjosari Village who are already working together with WKNP.

No	Institution Name	Year of Establishment	Existing Activity	Organizational Obstacles	Future Expectations
1	Village Government	1958	<ul style="list-style-type: none"> <li>• Establishment of KTH;</li> <li>• Establishment of Waykambas Tourism Forum;</li> <li>• Raising conservation officer;</li> <li>• Trainings;</li> <li>• Tourist Guides;</li> <li>• Conservation Youth</li> <li>• Minister of Forestry's Target Village (2015-2021)</li> <li>• Community empowerment for the fisheries sector (there are 12 round pools and 6 more ponds will be added this year)</li> </ul>	<ul style="list-style-type: none"> <li>• Work/Programme plan is not yet existed</li> <li>• Lack of knowledge</li> <li>• Lack of communication skill especially in foreign languages</li> <li>• Lack of knowledge on the good fisheries management</li> </ul>	The establishment of MOU with WKNP
2	Tourism Awareness Group (POKDARWIS)	2015	<ul style="list-style-type: none"> <li>• Conducting trainings:</li> <li>• Training on homestay management</li> <li>• Training on the home industry product processing (food)</li> <li>• Training on website management</li> <li>• Training on Foreign Language and Hospitality (With DISPORA)</li> <li>• Training on Environmental Management (yard management and sanitation)</li> <li>• Training on home industry marketing (With PT Aska Jaya)</li> <li>• Training on Village Tourism Management</li> <li>• Training on Homestay</li> <li>• Souvenir Management (Knitted bag, keychain, and stick plate)</li> </ul>	<ul style="list-style-type: none"> <li>• Weak in institutions</li> <li>• There is no decree from relevant agency for the Tourism Awareness Group</li> <li>• Lack of group administration and budget management</li> <li>• Lack of marketing</li> </ul>	<ul style="list-style-type: none"> <li>• Development of tourism</li> <li>• Trainings from WKNP regarding the information of biodiversisty of WKNP</li> <li>• Partnership with WKNP</li> </ul>



No	Institution Name	Year of Establishment	Existing Activity	Organizational Obstacles	Future Expectations
3	Youth Organization ( <i>Karang Taruna</i> )	February 2018	<p>So far there are no activities because they are still waiting for work plans from each division in the Youth Organization (Karang Taruna). The divisions are as follows:</p> <ul style="list-style-type: none"> <li>• Human Resource and Organization Division</li> <li>• Welfare, Cooperative Economic Development and Small &amp; Medium Enterprises Division</li> <li>• Health, Sport, Art and Culture Division</li> <li>• Spirituality and Mental Development Division</li> <li>• Public relation, Publication and Communication Division</li> <li>• Environment and Tourism Division</li> <li>• Woman Empowerment and Child Protection Division</li> <li>• Legal, Advocacy and Human Rights Division</li> <li>• Developing Partnership and Partnership Division</li> </ul>	Work plan from each division has not existed	<p>Establishing environmental cooperation and tourism with outsiders by involving following divisions:</p> <ul style="list-style-type: none"> <li>• Environment</li> <li>• Orchid conservation by cultivating local orchid cultivation with tissue culture then results from it being returned to the WKNP area</li> <li>• White-winged duck (<i>Cairina scutulata</i>) captivity</li> <li>• Tourism: Management and promotion of tourism partnering with Tourism Awareness Group (POKDARWIS)</li> </ul>

No	Institution Name	Year of Establishment	Existing Activity	Organizational Obstacles	Future Expectations
4	Purba Kusuma (Art and Culture)	1963	<ul style="list-style-type: none"> <li>Preserving Balinese art and culture (Balinese and Lampung dance)</li> <li>Gamelan Performance</li> <li>Ogoh-Ogoh Festival</li> <li>Waykambas Festival (Cultural Parade)</li> <li>There are 2 dance studio and 1 staging place. The member of this group are 95 people.</li> <li>There are music activities (angklung) with 25 members.</li> <li>Staging activities in various strategic places once each month</li> </ul>	<ul style="list-style-type: none"> <li>There are no coach for the Lampung dance development</li> <li>Lack of supporting equipment</li> <li>Costume for performances has not exist yet</li> <li>Art stage is inadequate</li> <li>Lack of promotion</li> <li>Incomplete musical instruments</li> <li>There are no coach</li> <li>There are no qualified vocalist and back dancers</li> </ul>	<ul style="list-style-type: none"> <li>Partnering with WKNP in promoting tourism activities</li> <li>Build partnership with Local Government</li> <li>Existence of Lampung Dance coach</li> <li>Existence of a better equipment, costume and dance studio</li> <li>Establishment of new division focusing on performance activity</li> <li>Existence of sustainable performance activities</li> <li>Can support the village tourism development</li> <li>Adding new personnel from other hamlets</li> </ul>
5	Forgoten Family	2017			
6	KTH Wanakaryatirta	2017	<ul style="list-style-type: none"> <li>Fish Cultivation using pools</li> </ul>	<ul style="list-style-type: none"> <li>Not yet able to do marketing on the cultivation result</li> <li>Not yet able to handle pests and diseases</li> <li>Not yet able to produce own fish feed</li> <li>There is no equipment for making fish feed</li> </ul>	<ul style="list-style-type: none"> <li>Existence of training for smoked fish management</li> <li>Existence of promotion support from the Local Government</li> <li>Improve road access from Village to ERU</li> </ul>
7	KTH Bina Warga	2017	<ul style="list-style-type: none"> <li>Fish cultivation using fish cages</li> </ul>	<ul style="list-style-type: none"> <li>Not yet able to do marketing on the cultivation result</li> <li>Not yet able to handle pests and diseases</li> <li>Not yet able to produce own fish feed</li> <li>There is no equipment for making fish feed</li> </ul>	<ul style="list-style-type: none"> <li>Existence of training for smoked fish management</li> <li>Existence of promotion support from the Local Government</li> <li>Improve road access from Village to ERU</li> </ul>

No	Institution Name	Year of Establishment	Existing Activity	Organizational Obstacles	Future Expectations
8	Braja Farmer Group		<ul style="list-style-type: none"> <li>Organic Agriculture:</li> <li>Melon</li> <li>Chilli</li> <li>Tomato</li> <li>Rice (1 ha paddyfield = 5-6 ton, 1 ha swamp= 6-7 ton)</li> <li>Horticulture</li> <li>Farming majority:</li> <li>Rice, cassava, corn</li> <li>Farm field management is used for: paddyfield: 400 Ha and swamp: 80 Ha</li> </ul>	<ul style="list-style-type: none"> <li>Lack of agricultural equipment</li> <li>Agricultural agents are not maximum</li> <li>Lack of marketing</li> <li>Not yet able to handle pests and rat</li> </ul>	<ul style="list-style-type: none"> <li>Able to develop organic agriculture</li> <li>Existence of organic training</li> <li>Existence of organic agriculture motivator</li> <li>Existence of agriculture activity assistance</li> <li>Farmers of paddyfields are more productive of rice farming</li> <li>PU facilities for sodetan</li> </ul>
9	Community Partners of Forest Police (MPP) for Elephant	2011	<ul style="list-style-type: none"> <li>Convoying wild elephant</li> <li>Facilitation between community and WKNP</li> <li>Help forest police on forest monitoring</li> </ul>	<ul style="list-style-type: none"> <li>Lack of mitigation tools</li> <li>Lack of insentives</li> <li>Not supportive weather</li> </ul>	<ul style="list-style-type: none"> <li>Addition of insentive and destination equipment</li> </ul>
10	BUMDES Mapan Sejahtera	2016	<ul style="list-style-type: none"> <li>Cow development livestock business unit</li> </ul>	<ul style="list-style-type: none"> <li>Funding</li> <li>Institution</li> </ul>	<ul style="list-style-type: none"> <li>Strengthening the institution</li> <li>Addition of funding</li> <li>Addition of business unit</li> <li>Economic business management trainings</li> <li>Strengthening from outsiders</li> <li>Fishery Unit Business Management on a 5 ha area</li> </ul>
11	Sirkuit Sepontan	2014	<ul style="list-style-type: none"> <li>Moto Cross Event</li> </ul>	<ul style="list-style-type: none"> <li>Weather</li> </ul>	<ul style="list-style-type: none"> <li>Can be a national circuit</li> <li>Road access improvement</li> <li>Road lighting</li> <li>Existence of networking to the Local Government</li> </ul>

No	Institution Name	Year of Establishment	Existing Activity	Organizational Obstacles	Future Expectations
12	Women Group from Dusun Satu		<ul style="list-style-type: none"> <li>• Producing marning</li> <li>• Producing tiwul</li> <li>• Producing Banana Cracker (sale pisang)</li> <li>• Producing fish crackers</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of funding and equipments</li> </ul>	<ul style="list-style-type: none"> <li>• Development of Home Industry</li> </ul>



**Figure 9** Participatory conflict and potential conflict mapping at Braja Harjosari with the WKNP

Based on the participatory mapping on conflict and its potentiality, the existing conflicts and potential that occur in this village related to the WKNP area are recurring forest fires, animal hunting, elephant conflict, taking grass and firewood. Distribution of conflict in the village can be seen in **Figure 9**.

### Partnership in Braja Harjosari Village

The potential for developing a conservation village model in Braja Harjosari Village is very large. Several pioneering activities related to the conservation of the area already exist and are developed by community groups. However, in general the programmes and activities related to the management of the WKNP have not been integrated and systematically resolved regional problems within the framework of village development. At present, the programmes that run at the village level are managed by partners, the WKNP and related offices are more directed to technical assistance. The legality of activities at the village level (MoU/PKS with the village government) is still considered unclear so the division of roles between village government and WKNP has not yet occurred.



Actually, support from the village government in the efforts to manage the WKNP area already exists in the form of providing 3 hectare of land for the development of village tourism. Its location is directly adjacent to the WKNP area. The tourism development activity is currently managed by community-based Tourism Awareness Group (*Pokdarwis*) of Braja Harjosari Village. The tourism activities are relatively quite developed and integrated, on which several attractions packages, such as Balinese and Lampung arts, agro-tourism (Dragon fruit, Crystal guava and Orchid nursery), horse tour, river trails are usually presented supplied by a number of home stays. Other supports is seen in its village development plan (RPJMDes) 2018-2023, where the village administration of Braja Harjosari includes planning for cottage development, green open space, village internet network, village road improvement, community trainings on economics improvement and appropriate technology application.

Social capital and internal relations within the community groups are relatively established by means of interactive communication and coordination through a monthly meeting held by the existing CSO's groups of *Pokdarwis*, Forest Farmers Group, the Forgotten Family, Purba Kesuma art group. External relations with other parties are also well developed. Intensive relationship between the Village Government and community groups with the WKNP, related agencies, extension agents, BPDAS, DPD RI, Universities (UNILA, Polinela, IPB) and WKNP partners (KHS, Alert, WCS) are group capital in cooperating with other stakeholders.

With regard to the potential development of collaborative management at village level, it is important to note in term of the ability of the village government to coordinate the community. It is reflected in the 100% achievement of Land and Building Tax (PBB) collection target in FY2016 at IDR 24,933,167, - (Braja Slebah District in Numbers 2017). In addition, support and commitment of the village administration in developing programme collaboration is visible. All these aspect could become enabling factors to ensure the successful of the development of conservation village model at the village.

Collaborative institutional planning and development at Braja Harjosari expects to integrate all stakeholder's plans that lead to the development of a conservation village model. The aforementioned existing partnerships and cooperation is expected to become an initial social capital toward the model establishment.

Table 8 Institutions have been cooperatively working at Braja Harjosari

Institution Name	Activity	Partnership Pattern	Activity Period
Tourism Agency	Training for Tourism Aware Group ( <i>Pokdarwis</i> ) Building tourism infrastructures (Gazebo, praying area, toilet, and amphitheater) Future planning are electricity installation on tourist location; building the speed boat dock.	Village granted a 3 ha land area to the District's Tourism Agency enacted by a Decree of the Agency.	2017-now
DISPORA	Socialization Training on sewing	Braja Sub-district with DISPORA	March 2018-now
UNILA BIOLOGI	Assistance of the Tourism Awareness Group ( <i>Pokdarwis</i> ) Orchid nursery with the	UNILA with the group	2015-now

<b>Institution Name</b>	<b>Activity</b>	<b>Partnership Pattern</b>	<b>Activity Period</b>
	Website development		
POLINELA	Making tiwul, local culinary; Packaging Laboratory analysis for food composition	POLINELA with group	2016-now
ALERT	Support for tourism Restoration outside the area (watershed) Mitigation tool	Group Assistancy	2015-2017
WCS	Conflict resolution Activity Facilitation Building guard station Mitigation tool	Group Assistancy	1991-now
Forestry Agency	Granting fruit and timber seedlings (jackfruit and nutmeg)	Agency with village	The end of 2016
KAGAMA (UGM Alumni Family)	Making silage feed branding technology for goat	KAGAMA with community	2014
IPB	Planting water saturated soybean	IPB with community	2017
TAGANA	Lending of speed boat	TAGANA with community	2017
BAPEDAS WAYSEPUTIH	Plan to conduct community trainings	BPDAS with community	2017
IMI (Ikatan Motor Indonesia)	Event participation	IMI with Sepontan	2014-now
WKNP	Conservation Officer training Conservation Camping Updating fish cages donation Updating round pool (bioflok) Environmental and Conservation Socialization Participation in National Conservation Day (HKN)	National Park with community	1978-now
DPD RI	Kudalumping festival initiator Agricultural motivator 30 units of toilets	Senators (DPD RI) with community Senators (DPD RI) with agriculture group	2016
KHS	Community involvement in the team member Community as the supplier for elephant food	KHS with community	2018

### 2.3.6.2. Rantau Jaya Udik II village

Rantau Jaya Udik II Village is one of the 20 villages in Sukadana Sub-district, East Lampung District. Rantau Jaya Udik II has an area of about 30 km<sup>2</sup> or 2,549.69 hectares. With land-use area of paddy farming (38 hectares), non-paddy agriculture (65.38 hectares), and non-agriculture land (2,446.31 hectares). Topographically, the village is averagely flat, with average altitude at 26 meter above sea level. The average temperature is between 26° C to 31° C, with air humidity of 120 ppm, and rainfall of 2,000-3,000 mm.

The village consist of 5 hamlets bordering with the WKNP to the north, with Surabaya Udik Village to the south, Muara Jaya Village to the west, and PT GGP PG4 to the east. Rantau Jaya Udik II is a newly formed village separated from Rantau Jaya Udik Village in 1996, for the village was too large and the population was increasing rapidly. During their Preparatory Village status, the village improved the infrastructure and facilities, as well as the administration and public service system. This village officially established in 1997 becoming Rantau Jaya Udik II.



**Figure 10** Rantau Jaya Udik II Village Gate.

The population number in 2015 was 4366, with male 2264, and women 2102. Whilst the population density of 146 people/km<sup>2</sup>. Most of the education level in the village is elementary school graduates (2,154 individual), followed by junior high school graduates (656 individual), high school (232 individual), and Diploma/Bachelor degrees (22 individual). The majority livelihood is being farmers, either land-owner or labour. The livestock sector has high potential for both cattle and goat farming. Number of beef cattle is 1122, goat is 1172, and sheep 211 (Sukadana sub-district in 2017). Other type of farming potentially to be developed is honey bees farming. There are around 25 boxes for bee keepings managed by the Forest Farmers Group.

Rantau Jaya Udik II village development budget in FY2016 was of the Village Fund Budget (ADD) of Rp 436,150,000, profit-sharing/assisting budget and grant from the East Lampung District at Rp 68,600,000 and the Lampung Provincial Government Rp 6,000,000. Village Fund from the central government programme was excluded.

The economic activities of the communities around and in the WKNP area can be categorised to 4 (four) categories, namely land-based, forest resource-based, cultural and social site-based, and water resource-based activities. A detailed explanation can be seen in **Table 9**.

**Table 9** Activity of Rantau Haya Udik II Community Around and Inside the Area of WKNP.

No	Economy Activity Category	Distribution*	Information
1.	<b>Land Based Activity</b>		
	<b>Food Crops Business</b>		
	1 Rice	Outside	The 38 ha area of paddy field. This area is used for interlude crops.
	2 Corn	Outside	
	3 Cassava	Outside	
	4 Crop	Outside	
	5 Vegetables	Outside	
	<b>Timber Crops Business</b>		An area of 65.38 ha for non-paddy field farming area.
	6 Albasia	Outside	
	<b>Plantation Crops Business</b>		
	7 Rubber	Outside	Non-agricultural land area of 2446.31 ha is used for residential, public road, farm and fisheries.
	8 Palm Oil	Outside	
	<b>Farming Business</b>		
	9 Cow	Outside	
	10 Goat	Outside	
	<b>Fishery Business</b>		
	11 Catfish	Outside	
2.	<b>Forest Resource Based Activity</b>		
	<b>Forest Preservation</b>		
	12 Restoration	Inside	Conducted by Kompag in RPTN Susukan Baru with an area of 50 ha.
	<b>Utilization of Timber Forest Products</b>		
	13 Firewood	Inside	in RPTN Susukan Baru
	<b>Utilization of Non-Timber Forest Products</b>		
	14 Grass for animal feed	Inside	in RPTN Susukan Baru
	15 Fishing	Inside	in RPTN Susukan Baru
	16 Animal hunting (deer, wild boar, bird)	Inside	Community from Dusun I
	17 Bee farming	Outside	by KTH
3.	<b>Social and Cultural Site-Based Activity</b>		
	20 Land utilization for cemetery area	Inside	Combination
4.	<b>Water-Resource Based Activity</b>		

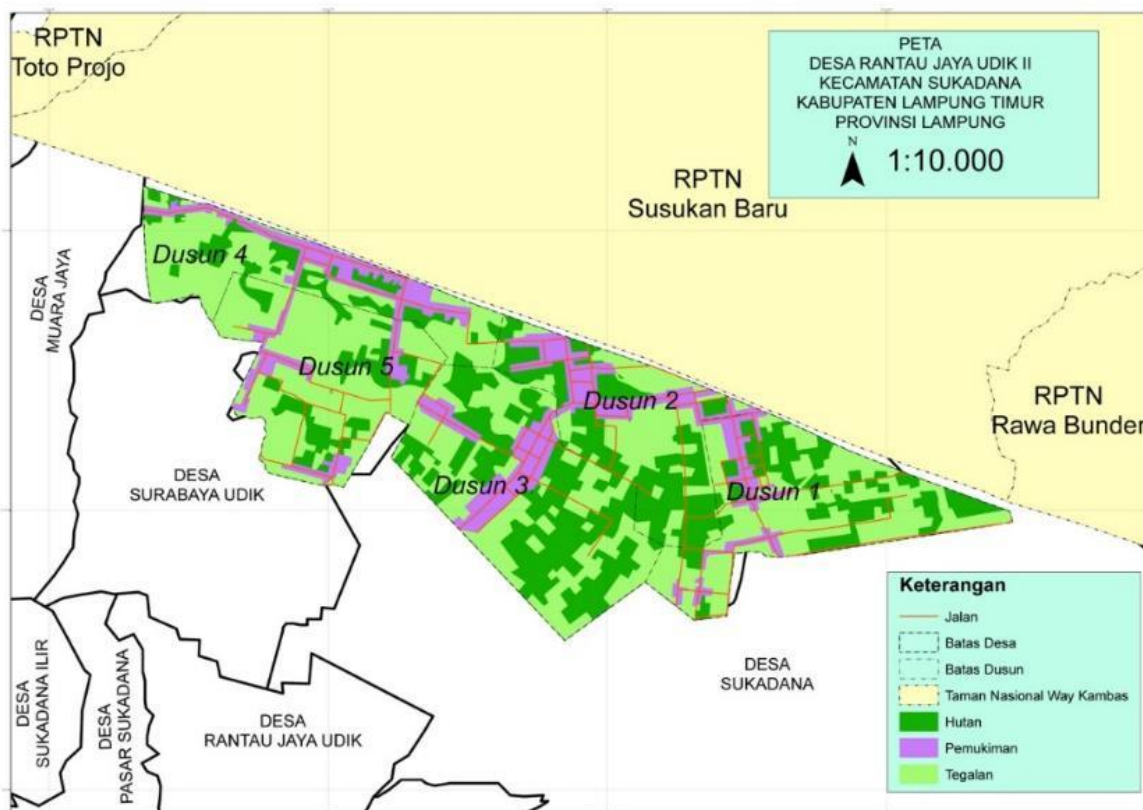
No	Economy Activity Category	Distribution*	Information
	21 Water utilization for paddy field area	Inside	Springs from inside the area of WKNP
	22 Boreholes	Outside	

*Distribution of activities inside or outside the WKNP area*

**Source:** Focus Group Discussion and Depth Interview result

From the results of observations, interviews and FGDs with the community, several groups or institutions in Rantau Jaya Udik II Village, which have collaboration with the WKNP were identified. However, other community groups or village institutions that have the potential to be involved in the collaborative management of WKNP. The community groups and village institutions are listed in **Table 10**.

Conflicts or major problems that occur in this village related to the WKNP area are often forest fires, animal hunting, elephant conflict, taking grass and firewood. The distribution of conflict in the village can be seen in **Figure 11**.



**Figure 11** Map of land use of Rantau Jaya Udik II village.



**Table 10** Lists of Identified Village Institution and Community Group at Rantau Jaya Udik II Village.

No	Institution Name	Year of Establishment	Existing Activity	Obstacles	Aspiration
1	Village Government	<ul style="list-style-type: none"> <li>• 1995-1996 (Definitive Village)</li> <li>• 2002 (Election of Village Head)</li> </ul>	<ul style="list-style-type: none"> <li>• Empowerment</li> <li>• Coaching</li> <li>• Governance</li> <li>• Development of village infrastructure</li> </ul>	MOU with WKNP has not existed	<ul style="list-style-type: none"> <li>• Sustainable Forest, Prosperous Community</li> <li>• Socializing The Decree of the Governor of Lampung No.G/459/V.23/2017 regarding the establishment of human wildlife conflict prevention coordination team of Lampung Province</li> </ul>
2	BUMDES	August 2017	Tarub rental business unit	Lack of rental equipment	Adding more BUMDES business units
3	KTH Wanasari	April 2016	Bee farming development	<ul style="list-style-type: none"> <li>• Weather</li> <li>• Predator attack</li> <li>• Availability of food</li> </ul>	<ul style="list-style-type: none"> <li>• Provision of Calliandra sp. seedling</li> <li>• Adding production</li> <li>• Existence of training on bee pests prevention technique</li> <li>• Existence of weather prevention training for the bee farming</li> <li>• Bee farming training</li> <li>• Existence of support for the bee farming</li> </ul>
4	KTH Mekarsari	April 2016	Bee farming development	<ul style="list-style-type: none"> <li>• Weather</li> <li>• Predator attack</li> <li>• Availability of food</li> </ul>	<ul style="list-style-type: none"> <li>• Provision of Calliandra sp seedling</li> <li>• Adding production</li> <li>• Existence of training on bee pests prevention technique</li> <li>• Existence of weather prevention training for the bee farming</li> <li>• Bee farming training</li> <li>• Existence of support for the bee farming</li> </ul>
5	Community Partners of Forest Police (MPP) for Elephant	2009 (14 members)	<ul style="list-style-type: none"> <li>• Patrol</li> <li>• Guarding conflict-prone locations</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of mitigation tools</li> </ul>	<ul style="list-style-type: none"> <li>• Personnel addition</li> <li>• Talud improvement at 10 elephant prone location</li> <li>• Addition of mitigation tools</li> <li>• Improvement of elephant canal</li> <li>• Making elephant's travel cycle</li> </ul>
6	KOMPAG (Gambas Student Community)	November 2017	<ul style="list-style-type: none"> <li>• WKNP restoration</li> <li>• Member of 60 people, most are students</li> <li>• Taking care of ALERT's restoration activity Merawat in an 1 Ha area. Plant species: puspas, salam, ketapang.</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of funding</li> <li>• Lack of equipment for lawn mower</li> <li>• Lack of fire prevention equipment</li> <li>• There are no mitigation tool</li> </ul>	<ul style="list-style-type: none"> <li>• Existence of institutional/managerial training</li> <li>• Tourism activity can give impact to the community's economy</li> <li>• Programme development</li> <li>• Funding</li> </ul>

No	Institution Name	Year of Establishment	Existing Activity	Obstacles	Aspiration
			<ul style="list-style-type: none"> <li>Establishment of KTH Pengurip</li> <li>Development of village tourism</li> </ul>	<ul style="list-style-type: none"> <li>Lack of support from the parents group member</li> <li>Lack of knowledge from each members</li> </ul>	<ul style="list-style-type: none"> <li>Legality of Cooperation Agreement between Village Government and WKNP regarding the restoration</li> </ul>
7	Farmer Group		Activities; <ul style="list-style-type: none"> <li>Agriculture</li> <li>Livestock (cow/goat)</li> <li>Fishery</li> </ul> There are 33 groups each with 25 members	<ul style="list-style-type: none"> <li>Community has not know about the technology to use livestock dungs.</li> <li>Lack of feed availability</li> </ul>	<ul style="list-style-type: none"> <li>Existence of appropriate technology on the livestock sector, i.e. utilization of cow dung waste (BIOGAS)</li> <li>Provision of livestock feed making equipment</li> <li>Existence of support from the Government</li> </ul>
8	Art Group		Silat and Jaranan activity	Lack of equipment to support the	Programme integration
9	Women Empowerment Group		Production of home industry products (Snack and cake)	Still using simple equipment and packaging	Training of product processing and marketing

## Partnership in Rantau Jaya Udik II Village

Rantau Jaya Udik II village has great potentials to be developed as a conservation village model. Several pioneering activities related to conservation issue have existed, which were developed by community groups. However, in general the programmes and activities related to the management of the WKNP have not been integrated and systematically solves the area problems within the framework of village development. At present, the programmes that run at the village level are more directed for technical assistance managed by partners, both from the WKNP, related district agencies, and NGOs. The legality of activities at the village level is still considered unclear, on which the roles sharing between the village government and WKNP has not yet occurred.

Similar to Braja Harjosari, the Rantau Jaya Udik II village administration has granted a land for environmental education and tourism facility. It is located near to the Susukan Baru RPTN office. The activity is currently managed by the Gambas Student Community (Kompag). In 2014 Village Development Plan (RPJMDes), the village government has included the development plan of a Way Kambas recreational park, strengthening a traditional dance lumping horse, and training in household-scale food industry as a support for village tourism.

Social capital and internal relations in the community groups are built by means of interactive communication and coordination conducting monthly meeting held by groups such as the Forest Farmers Group, Kompag, Farmer Groups and other social groups. External relations with other parties are also well developed by the group. Intensive relationships between groups with WKNP, related province and district agencies, extension officers, and NGOs Alerts exist.

Important notes related to the potential for institutional development of collaboration at the village level are the ability of the village government to coordinate the community as reflected in the realization of the Land and Building Tax (PBB) target of 99.7% of the achievement target of Rp 32,411,138, - (Sukadana sub-District in Number 2017). The support and commitment of the village government in developing program collaboration is also an important note. So, this can provide a guarantee for the success of the development of a conservation village model in the village.

The institutional planning and development collaboration in Rantau Jaya Udik II Village is expected to integrate all stakeholder plans that lead to the development of a conservation village model. Partnerships and cooperation that have been established between groups and village government, at least become the initial capital to pioneer these efforts. WKNP partner institutions that have worked in Rantau Udik II Village are presented in **Table 11**.

**Table 11.** WKNP Partner Institutions that have worked in Rantau Jaya Udik II Village.

Institution Name	Activity	Partnership Pattern	Activity Period
ALERT	1 Area restoration 50 Ha. 2 Goat donation (6 goats).	1 ALERT with KOMPAG. 2 Tnot partnering with Village Government (Community only as workers).	1 Livestock donation starting from February 2018

Institution Name	Activity	Partnership Pattern	Activity Period
		3 KOMPAG support on the treatment.	2 Partnership with KOMPAG starting September 2015-now. 3 Obstacles during this time were forest fires on the restoration area which resulted in 50% of plants dying. There are no collaboration with Village Government.
WCS (WRU)	1 PAM Swakarsa	WRU with Village Government	
WKNP	4 Elephant MMP 5 MMP Patrol 6 Boreholes donation 7 Bee farming donation	8 WKNP with Village Government 9 WKNP with individual 10 WKNP with Village Government 11 WKNP with Village Government	2009-now 2009-now 2017 2017
Animal Husbandry Agency	Livestock donation	Agency with Village	2017
Department of Agriculture	Fruit Plant donation	Agency with Village	2016
PT NTF (Nusantara Tropical Farm)/ PT GGP PG4	Boreholes donation	PT NTF with Village Government	2017

#### 2.3.6.3. Social Economy Analysis of Buffer Village

There are 38 villages directly borders with the WKNP area, which are spread in 11 sub-districts, and included to East Lampung and Central Lampung District. Most of these villages are new villages resulted from splitting programmes of the government.<sup>22</sup>

The population density at the villages directly borders with the WKNP is relatively low, which is under 200 people/km<sup>2</sup>. The main livelihoods of the resident are farmers/ planters. Only a few earn a living as fishermen/fish pond, in particular at Labuhan Maringgai sub-district and Cabang village. Main types of agricultural business are rice fields, dry land agriculture, and plantations, producing main commodities of rice, cassava, corn, cocoa, pepper, and other crops such as bananas and coconuts. Land use for agriculture occurs in almost all villages around WKNP. The average area around the Way Kambas National Park, which is used as an agricultural area, is marginal land.

Around the WKNP, there are also a number of agricultural lands managed by a private company, namely PT Great Giant Pineapple Plantations Group 4 (PT GGP PG4). The land area managed is around 3500 Ha, with agricultural products namely pineapple, banana, crystal guava, dragon fruit, Indian apple (trial) and mango. The working area includes 2 (two) sub-districts, namely Labuhan Ratu and Sukadana with a total number of workers of 6,000 people. The majority of workers involved the communities from villages of Labuhan Ratu VI, Labuhan Ratu VII, Labuhan Ratu VIII, Labuhan Ratu IX, Rantau Jaya Udik I and

<sup>22</sup> WKNP (2016) Community Empowerment Plan for Buffer Zone Villages of WKNP 2016 – 2025

Rantau Jaya Udik II. The rest are workers brought in from outside requiring skills with special qualifications.

In general, the average income of the contracting workers in 1 month (21 working days) is around Rp 2-3 million with additional health insurance and meals. The daily labours for harvesting earn lower fees, based on the volume and each fruits type. For example, picking cost for each pineapple is calculated at Rp 217, for which a group of workers (40 people) can harvest 15,000 pineapples per day. For other types of fruit, the calculation will be different.

The existence of PT GGP has more or less provided opportunities for job alternative for the surrounding communities, although few cases of worker exploitation issue allegedly occurred, as reported by online media. Other issue is land expansion. Land requirement in order to increase the production capacity is expected to affect more pressure and disruption to the WKNP area. The transfer of land ownership from the local community to the company will change the pattern of community livelihoods in the long term.

In the Lampung Provincial Spatial Plan for 2009-2029, policy direction of regional development in the WKNP region is tourism development, especially ecotourism. This policy is supported by the East Lampung District by assigned the WKNP both as a special interest tourism destination, and a strategic area for ecotourism development, mentioned in the Master Plan of Regional Tourism Development (RIPPDA). Related to this plan, the East Lampung District government through the Culture and Tourism Office has established and assisted 5 (five) tourism villages around the WKNP area, namely Labuhan Ratu VI village, Labuhan Ratu VII, Labuhan Ratu IX, Braja Yekti, and Braja Harjosari. Objective of this tourism village initiative is to support the ecotourism development in the WKNP area. In addition, to increase tourist visits to the WKNP, the Culture and Tourism Office of East Lampung District administration annually hold Way Kambas Festival. Tourism village development is expected to be able to improve livelihood and welfare of the rural communities

#### *2.3.6.4 Development Analysis of the Buffer Village Areas*

The regional development of the village area can be determined by measuring the extent to which the village area develops with characteristics of rural development i.e the number and types of rural facilities that already exist. Basically, each region has a developmental condition and a growth rate based on their respective capabilities. In addition, each region has inter-relationship and connectivity with other region. To understand the development of villages around WKNP, we have conducted a scalogram analysis, which is to determine hierarchy of villages, which refers to type and amount of facilities and infrastructure available. This analysis uses 2 (two) year Village Potential Statistics (PODES) data of 2011 and 2014, with parameters measured covering the economic facilities, communication and information facilities, health facilities, educational facilities, which are compared to number of village population. The result is producing the Village Development Index (IPD).

Steps on data analysis employing the scalogram method include (1). Selection of



quantitative data; so that only relevant data is used; (2). Rationalize the selected data; (3). Selection of the data that have been rationalised to obtain variables that characterise the development level of each region to be used for scalogram analysis; (4). Standardize the selected data to the variables prior to determining the village development index (IPD) of each village.

The equation model to determine a value of IPD referring to Rustiadi *et.al* (2011) is:

$$IP_j = \sum_i^n I'_{ij}$$

$$I'_{ij} = \frac{I_{ij} - I_{i\min}}{SD_i}$$

$IP_j$  = Village Development Index of  $j^{th}$   
 $I_{ij}$  = value of Development indicator  $i^{th}$  village to  $j^{th}$  village  
 $I'_{ij}$  = A corrected/standardized value of Development indicator of  $i^{th}$  village to  $j^{th}$  village  
 $I_{i\min}$  = minimum value of Development indicator  $i^{th}$   
 $SD_i$  = Deviation Standard of Development Indicator  $i^{th}$

In order to categorise the village units into hierarchical classes, the following calculations used, as follows:

$IP_j > X \text{ average} + 2\text{Stdev}$  (high – Hierarchy I)  
 $X \text{ average} < IP_j < + 2 \text{ Stdev}$  (Medium – Hierarchy II)  
 $IP_j < X \text{ average}$  (Low – Hierarchy III)

The values obtained from the sum of the above scalogram steps will be used to classify village units to the required classes or village hierarchies. It was assumed that the group obtained was 3, namely group I with a high level of development, group II with a medium level of development, and group III with a low level of development. Furthermore, a consensus is determined. For example, if the value is greater than or equal to 2x standard deviation + average value, so the level of development is high. If the average value is up to 2x standard deviation + average value, it includes to moderate development level, but if the value is less than the average value, it includes to low development level.

Mathematically the group ( $IP_j$ ) is:

$IP_j > X \text{ average} + 2 \text{ Stdev}$  (high)  
 $X \text{ average} < IP_j < + 2 \text{ Stdev}$  (medium)  
 $IP_j < X \text{ average}$  (low)

Results of the scalogram analysis on the development of rural areas in 35 villages

surrounding the WKNP in 2014 show that 12 villages with a low Village Development Index (IPD), which are categorised as hierarchy III, are determined as economic-growth centre supporting villages. Eight villages with high IPD (hierarchy I) are determined as the economic-growth centres for the surrounding villages, including villages of Meranggi Jaya, Joharan, Kali Pasir, Tanjung Kesuma, Taman Pajar, Labuhan Ratu IX, Braja Sakti and Braja Harjosari. Between 2011 and 2014, 5 villages experienced a rapid regional development with a significant increase of IPD values, making it a centre of economic growth for the surrounding villages, namely Meranggi Jaya, Joharan, Kali Pasir, Tanjung Kesuma and Braja Sakti.

As a centre of regional economic growth, villages with high IPD (hierarchy I) tend to have higher levels of public education, better quality of public services, and better administration of village governance. Livelihood patterns have also shifted from primary sector to secondary and tertiary sectors, which provide opportunities for more diverse livelihood options and greater employment

If it is associated with the establishment of tourist village initiative by the East Lampung District Government, the Braja Harjosari and Labuhan Ratu IX, which are of hierarchy I, could become a tourist village model, and a tourism-based regional economic growth centre. Three other villages namely Labuhan Ratu VI (Hierarchy III), Labuhan Ratu VII (Hierarchy II) and Braja Yekti (Hierarchy III) could become economic growth center supporting villages, and should have the potential and supporting capacity for the hierarchy I villages.

In essence, in regional planning and development approach, not all villages surrounding the WKNP area should be pushed to become tourist villages. Each village has their own potential to grow and develop economically according to their potential and carrying capacity of their village area and region. It is expected that the villages surrounding the WKNP area are able to develop according to the characteristics of the village and their region, yet it would be in harmony with the national park development and management.

Furthermore, villages with low IPD (Hierarchy II & III) generally have a low level of education (majority of elementary or junior high school), and still rely on livelihoods from the primary sector, namely agriculture. Since majority of agricultural land in the region is marginal land, it affects on low productivity. Low agricultural productivity influences low level of income and welfare.

In rural communities, different individuals have different potential access to alternative livelihood activities so that differences in income will show various impacts on poverty and income distribution (Ellis 2000). Scoones (1998) describes one of the livelihood strategies is livelihood diversification carried out by applying a variety of livelihood patterns by investing in businesses or looking for other jobs outside the agricultural sector to increase income by involving individuals or family members. Diversification of livelihoods will involve a broad development process for earning income in order to deal with and respond to shocks and pressures of life. Scalogram analysis of the development of rural areas around WKNP is presented in **Table 12**.

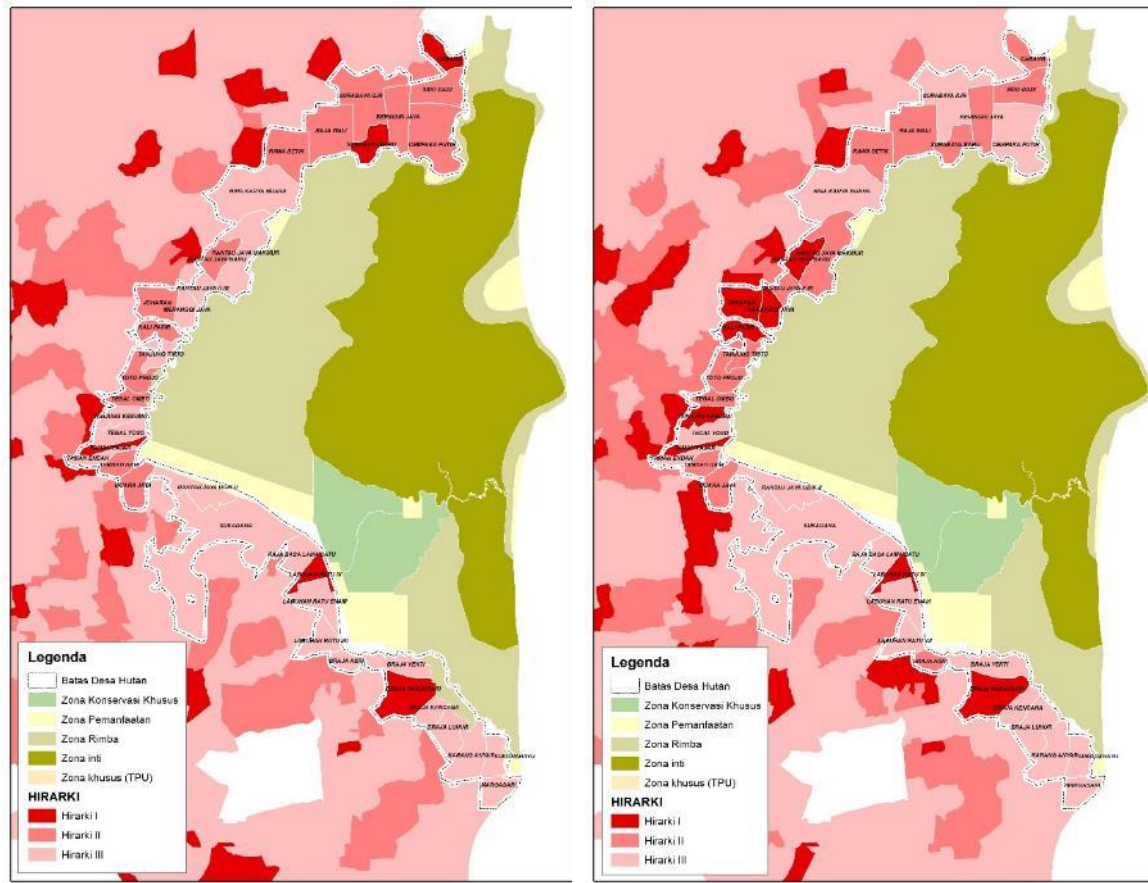
**Table 12** Scalogram Analysis of Village Area Development around WKNP.

NO	REGENCY	DISTRICT	VILLAGE	2011			2014		
				VDI	$\Sigma$ SPECIES	HIERARCHY	VDI	$\Sigma$ SPECIES	HIERARCHY
1	Central Lampung	Bandar Surabaya	Cabang	90.96	25	I	48.82	14	II
2	East Lampung	Sekampung	Sidodadi	39.33	27	III	30.73	19	III
3	Central Lampung	Bandar Surabaya	Surabaya Ilir	39.71	32	III	39.71	32	III
4	Central Lampung	Bandar Surabaya	Cempaka Putih	44.05	22	III	44.05	22	III
5	Central Lampung	Seputih Surabaya	Rawa Betik	48.94	19	II	52.32	18	II
6	Central Lampung	Bandar Surabaya	Raja Wali	49.19	26	II	53.58	26	II
7	Central Lampung	Rumbia	Bina Karya Buana	30.48	25	III	32.14	27	III
8	Central Lampung	Putra Rumbia	Rantau Jaya Makmur	47.28	19	III	51.43	19	II
9	Central Lampung	Putra Rumbia	Rantau Jaya Baru	74.30	23	I	61.29	21	II
10	Central Lampung	Putra Rumbia	Rantau Jaya Ilir	41.88	21	III	54.78	25	II
11	Central Lampung	Putra Rumbia	Meranggi Jaya	46.12	18	III	86.35	26	I
12	Central Lampung	Putra Rumbia	Joharan	55.80	21	II	75.36	26	I
13	East Lampung	Way Bungur	Kali Pasir	60.83	23	II	74.60	27	I
14	East Lampung	Way Bungur	Tanjung Tirta	45.12	24	III	50.44	27	II
15	East Lampung	Way Bungur	Toto Projo	65.52	25	II	56.83	24	II
16	East Lampung	Way Bungur	Tegal Ombo	51.47	25	II	59.37	27	II
17	East Lampung	Purbolinggo	Tanjung Kesuma	42.87	27	III	96.12	41	I
18	East Lampung	Purbolinggo	Tegal Yoso	37.40	20	III	40.32	23	III
19	East Lampung	Purbolinggo	Taman Pajar	93.08	38	I	96.50	41	I
20	East Lampung	Purbolinggo	Taman Endah	42.72	24	III	37.37	22	III
21	East Lampung	Purbolinggo	Tambah Dadi	59.22	26	II	58.05	26	II
22	East Lampung	Sukadana	Muara Jaya	50.33	30	II	54.24	31	II
23	East Lampung	<b>Sukadana</b>	<b>Rantau Jaya Udik II</b>	<b>32.01</b>	<b>24</b>	<b>III</b>	<b>31.61</b>	<b>23</b>	<b>III</b>
24	East Lampung	Labuhan Ratu	Labuhan Ratu Ix	74.25	21	I	83.17	23	I
25	East Lampung	Labuhan Ratu	Labuhan Ratu Vi	41.66	25	III	34.80	23	III
26	East Lampung	Labuhan Ratu	Labuhan Ratu Vii	25.09	21	III	61.04	23	II
27	East Lampung	Way Jepara	Braja Asri	43.24	33	III	52.59	31	II
28	East Lampung	Way Jepara	Braja Sakti	61.23	43	II	75.88	46	I
29	East Lampung	Braja Slebah	Braja Yekti	43.13	25	III	27.46	21	III
30	East Lampung	<b>Braja Slebah</b>	<b>Braja Harjosari</b>	<b>80.36</b>	<b>43</b>	<b>I</b>	<b>105.81</b>	<b>49</b>	<b>I</b>
31	East Lampung	Braja Slebah	Braja Kencana	35.10	19	III	31.73	18	III
32	East Lampung	Braja Slebah	Braja Luhur	30.50	22	III	26.95	19	III
33	East Lampung	Labuhan Maringgai	Karang Anyar	16.59	24	III	55.90	25	II
34	East Lampung	Labuhan Maringgai	Sukorahayu	40.06	25	III	26.91	21	III
35	East Lampung	Labuhan Maringgai	Margasari	35.61	27	III	20.58	22	III

**Resource:** Primary Data, processed from Podes Data 2011 & 2014.

**Information:** VDI= Village Development Index;  $\Sigma$  SPECIES: Facilities such as health, education, road communications, market, bank, etc facilities totalling 94 species in all villages in 2 (two) district.

In the context of villages around the WKNP, the low income and welfare conditions, and limited livelihood opportunities and alternatives become **driving factors to the increasing public access** to the WKNP area illegally to find alternative livelihood strategies for fulfilling their household's needs.



**Figure 12** Map of Village Development Index 2011 (*left*) and 2014 (*right*).

#### 2.3.6.5. Village Potential Eligible to be Developed for Collaborative Models

WKNP has made criteria for determining priority villages for the development of buffer zones until 2015. These criteria can be summarized as follows:

1. Buffer zone area that directly border with the national park area, which has high values of biodiversity, authenticity of ecosystem, and natural forests;
2. Areas with community target groups that cause high pressure on the integrity of biodiversity and ecosystems of the national park area, such as encroaching farmers, traditional hunters/collectors, or local commercial hunters;
3. Villages that could function as protection or can protect conservation areas from various disturbances;
4. Villages with natural resources that could potentially be developed, as well as could contribute to controlling destruction threatening the national park area.

The above criteria are combined with the results of the regional development analysis in the previous sub-chapter, and the tourism village initiative by the District's Tourism and

Culture Agency. The followings are recommendations of villages that potentially be further developed in addition to the existing two priority villages assigned by the WKNP Office.

1. Braja Yekti (East Lampung District). According to the village development index analysis, the village is categorised a hierarchy III. Under the framework of integrated tourism village development, this village is expected to become a supporting village to Braja Harjosari, which has been prioritised to become a tourism village. The village is one of the priority villages selected by the East Lampung District Government.
2. Braja Kencana (East Lampung District). The village is categorised as hierarchy III. Similar to Braja Yekti, this village is expected to become a supporting village to Braja Harjosari.
3. Labuhan Ratu 9 (East Lampung District). The village is categorised as hierarchy I. This village can be developed to be a village model, due to its proximity to the WKNP gate. The village is one of the priority villages selected by the East Lampung District Government, of which it has built several supporting tourism facilities, such as rest area and parking lots for visitors intended to Elephant Training Centre and SRS.
4. Labuhan Ratu 6 (East Lampung District). The village is categorised as hierarchy III, and become one of the priority villages selected by the East Lampung District Government.
5. Rantau Jaya Makmur (Central Lampung District). The village is categorised as hierarchy I, and close to the utilization zone.
6. Rawa Betik (Central Lampung District). The village is categorised as hierarchy I in 2011, but descended to hierarchy II in 2014. The village has quite high potential poaching, but close to the utilization zone.
7. Bina Karya Buana (Central Lampung District). The village is categorised as hierarchy III, and close to utilization zone.

## **2.4. WKNP within the Regional Development Framework**

By law, implementation of conservation is the full authority of the central government, including management of national parks<sup>23</sup>. However, the implementation of conservation programme should be carried out in synergy with, and provide three main benefits, namely ecology, economics, and social development for national and local development goals both provincial and district. The goals of the development is, in the end, to support the improvement of community welfare and human quality.

### **2.4.1. The Lampung Province Development**

Administratively, Way Kambas National Park belongs to the administrative areas of East Lampung and Central Lampung District, Lampung Province. In accordance with directions from the AHPs' National Working Team and WKNP Office, the Collaborative Management Plan document is focused on buffer zone villages located in East Lampung District.

---

<sup>23</sup> Law No. 41/1990 on Forestry and Law No. 23/2014 on Local Government



However, several villages in Central Lampung District that are directly adjacent to the WKNP are included in the regional analysis to determine their potential for future development.

Lampung Province has an area of 35,288.35 Km<sup>2</sup> including the surrounding islets. The population is around 8,205,141 individual, with an average population density of 234.44 people per km<sup>2</sup> (2015). The province consists of 13 districts and 2 cities. WKNP is administratively included in East Lampung and Central Lampung Districts.

**Economics.** Economically, Lampung coastal communities are mostly fishermen, and crops planters. Whilst, the inland population are mostly gardening pepper, coffee, cloves, and cinnamon. Lampung province focuses on developing land for large plantations such as oil palm, rubber, rice, cassava, cocoa, black pepper, coffee, corn, sugar cane etc. At some coastal areas, fishery commodities such as shrimp ponds are more prominent, even at national and international levels.

**Infrastructure.** There are some alternative ways to access the WKNP. By the sea, Lampung Province has Bakauheni port, which connects Java and Sumatra. From Bakauheni there are several land routes connecting cities to the northern tip of Sumatra Island in Aceh Province. The land routes include networks of Sumatran Central roads, East road, West road, and East coast roads. Currently, a toll road network connecting Bakauheni (South Lampung District) – Bandar Lampung – Terbanggi Besar (Central Lampung District) for 139 kilometers in length is being built, which is planned to be fully operational by 2018. The toll road is planned to connect Lampung to City of Palembang in the neighboring province of South Sumatra.

By air route, the Raden Inten II Airport connects the city of Bandar Lampung with other cities in Indonesia. In 2018, the airport will be upgraded to an international airport, allowing direct flights from abroad to Lampung's cities as well as to the WKNP.

**Development direction.** Lampung Province has been mandated to implement 8 National Strategic Programmes, which are directly oversight by the President. These Programmes include construction of toll roads, upgrading of Radin Inten II Airport, establishment of Sumatran Institute of Technology (ITERA), 2 dams, maritime industrial area, addition of the Bakauheni - Merak executive port, and construction of new electricity resources. Construction of toll road from Bakauheni to Palembang, and improvement of the airport from domestic to international are expected to support the increase of visitors' access to WKNP.

#### **2.4.2. Development of East and Central Lampung**

East Lampung District is one of the districts in Lampung Province, which has an area of approximately 5,325.03 km<sup>2</sup>, consisting of 24 sub-districts and 264 villages. With population of 1,105,990 individual (2014), this district has a variety of potential natural areas of interest to be developed further. This district is located in a strategic area supported by Sumatran East road network, which connects Java Island with the cities on

Sumatra Island. Agricultural sector is a leading sector of main commodities, including food crops such as rice, corn, cassava, and fruits such as rambutan, durian and banana.

In addition to the agribusiness sector, East Lampung District under the leadership of the recent Regent Ms. Chusnunia Chalim gives priority to tourism development for increasing the district revenue and improving the community's welfare. The East Lampung District Government identified two nature-based tourist sites as strategic tourist sites, namely Way Kambas National Park and Pugungraharjo Archaeological Tourism Park. But the management authorities of both site are of the central government.

According to Regional Spatial Plan (RTRW) of East Lampung District, the Way Kambas National Park area is a national strategy area in term of the functional interest, and environmental and economic carrying capacities.<sup>24</sup> Therefore, the East Lampung District Government do:

- Limitation of cultivation activities around the Way Kambas National Park area;
- Strict law enforcement for land use violators in Way Kambas National Park;
- Prevention of illegal hunting activities in conservation areas through supervision and monitoring of the area;
- Protection of green turtle conservation areas; and
- Management of buffer zones around Way Kambas National Park through the development of hardwood planting.

The realization of the tourism designation area as referred to in the Spatial Plan article 60 paragraph [3] letter f includes:

- a) Preparation of a regional master plan of tourism development (RIPPDA);
- b) Preparation of a master plan for tourist destination area development; and
- c) Development of potential tour packages.

Vision of the East Lampung tourism development, namely "Development of East Lampung responsible and global minded tourism". The mission includes:

1. Preservation and protection of nature and culture of the people of East Lampung District as the identity of tourism in East Lampung;
2. Optimization of unique natural resource potentials of East Lampung District, for supporting the creation of environmental-based tourism in East Lampung District;
3. Improvement of tourism competitiveness of East Lampung District at national and international levels by implementing sustainable planning and management of natural and cultural tourism in East Lampung to become Indonesia's centre of excellence;
4. Improvement of economic and social welfare by empowering the communities toward sustainable and environmental-based tourism development in East Lampung District.

One of the tourism development strategies in East Lampung District is by taking advantages of the existing WKNP<sup>25</sup>, through:

---

<sup>24</sup> BAPPEDA Lampung Timur

<sup>25</sup> Interview with Tourism and Culture Office, East Lampung.

- Establishment of tourism villages in potential buffer zone villages, and capacity building of their managers. For example, providing Braja Harjosari homestays for tourists destined to go to WKNP;
- Thematic-based village tourism, such as agribusiness-based at Braja Harjosari, where each household is directed to grow fruits such as crystal guava, oranges, dragon fruit, and others;
- marine and river-based tourism, such as mangrove forest-based tours in Marga Sari village, Labuhan Maringgai sub-district. Marga Sari village borders Kuala Penet Resort in the south. The route is expected to penetrate the Way Kanan River in the WKNP area from coastal area. It needs an infrastructure preparation, such as tracks and speedboats;
- Establishment of Tourism Awareness Group (Pokdarwis).

The Tourism and Culture Agency (Dinparbud) has been actively holding a series of event to increase the WKNP promotion and its surrounding villages. In 2018, the Dinparbud planned as many as 101 events/festivals, which will be closed by the Annual Way Kambas Festival on 11 November. This includes activities carried out in 56 villages, with a target of 1,000,000 participants. In 2017, there were 22 events attended by around 500,000 participants. The Tourism and Culture Office (Dinparbud) allocated Rp 5 million each village for assistance and promotion. The promotion was also carried out by the District Public Relation unit, particularly through social media campaign.

### 3. CONCEPTUAL AND POLICY REVIEW ON COLLABORATIVE MANAGEMENT IN COSERVATION AREAS

#### 3.1. Basic concept

Collaborative management of conservation areas has been advocated by many. Collaborative approach is a framework in which one or more social actors agree to define their own roles and responsibilities in managing a natural resources area and guarantee that the utilization of the sources is fairly shared.<sup>26</sup> So, collaboration is a way of reducing conflicts among stakeholders; building social capital; enabling a sharing solution on social, economic and environmental problems and ensure better decisions (Conley and Moote, 2003).

The following are the substantive reason related to the importance of collaborative management in conservation areas:<sup>27</sup>

- 1) Conservation needs community's capacity and involvement as a whole, not only conservation experts, professionals and government officials;
- 2) Conservation needs to integrate the concern for biodiversity with the culture that gives room to local communities to get involved during the collaborative management;
- 3) Conservation needs to pay emphasize the principle of equality and protection of biodiversity, either in joint financing or in the benefit earned from the protection of biodiversity, natural resources management and its utilization.
- 4) Conservation demands respect for the community's social and economic rights. The principle of 'do no harm' needs to be upheld to avoid adverse impact to the communities living inside and outside the conservation areas. If possible, conservation initiatives needs to be done to give positive impacts for community's welfare.

Institution building is required as a rule of the game, which play an important role in organizing utilization of natural resources, equally and sustainably. There are three components that can be used to identify an institution. They are: (1) Jurisdiction limit, (2) property rights, (3) representation rule. Jurisdiction limit determines who and what is in the institution. Property rights defines rights and obligation on natural resources that is set by the law, tradition, custom or consensus. Representation determines who has the rights in decision making on natural resources. (Rustiadi et al. 2011)

The first step to reach efficiency in natural resources allocation is division of labour, so that each one can work professionally with high productivity. Division of labour then goes to economic specialization, and the continuing specialization will lead to more efficiency and higher productivity (Rustiadi et al. 2011).

---

<sup>26</sup> Borrini-Feyerabend, G, et al. 2007. Co-Management of Natural Resources: Organizing, Negotiating and Learning by Doing.

<sup>27</sup> Borrini-Feyerabend, G. 2015. Governance Diversity, Quality and Vitality: to- wards Shared Language and more Secure and Lasting Prospects for the Conserva- tion of Nature. Presentasi di Workshop COMACON Bangkok: Oktober, 2015

Institution approach and the principles of building collaborative management of forestry resources are (1) combination of technical and social approach is a key to success (2) the power of mutual trust and common goal as well mutual respect among parties involved (3) mutual understanding and common goal, (4) role and responsibility sharing among parties, (5) need fulfilment of each party and (6) frequency of communication (Suharjito 2011).

In the WKNP's long term management plan, 2017-2026, the clue is that the WKNP management will be more specific and integrated into regional and national development. To ensure that the plan will come into practice, a WKNP collaborative management that corporates interested parties is needed.

### **3.2. Policy on collaborative management**

Transformation of Natural Reserves (KSA) and Conservation Areas (KPA), including national park in Indonesia from government-based management to collaborative management has started since the No P.19/Menhut-II/2004 on collaborative management of Natural Reserves and Conservation Areas came into effect. The practice of the collaborative management was further regulated under the Regulation of Forestry Minister No. P.85/Menhut-II/2014 and then revised with the Regulation of Environmental and Forestry Minister (PermenLHK) No. P.44/MENLHK/KUM.1/6/2017. These regulations define collaborative management as a joint action to optimize conservation area management.

Forms of cooperation to restore the function of conservation area and biodiversity which is regulated under the Regulation of Forestry Minister (Permenhut) and Regulation of Environmental and Forestry Minister (PermenLHK) above covers:

- a. Cooperation on institutional reinforcement that includes human resources capacity building, technical assistance, research and development, education and training on conservation, consultation, foreign expert assignment and the use of new technology;
- b. Cooperation on protection of conservation area that includes inventory and mapping of forest vulnerability, prevention of trespassing, border identification, ranger capacity building, self-safeguarding, patrolling and fire fighting;
- c. Cooperation on flora and fauna preservation, such as identification, inventory, habitat and population development, species protection, studies, researches and improvement;
- d. Cooperation on ecosystem restoration, such as rehabilitation and area restoration;
- e. Cooperation on ecotourism development, such advertising, tourism information centre, community facilitation. This activities is conducted outside the ecotourism site licensed area;
- f. Cooperation on the community empowerment, which includes conservation village development, access provision, partnership facilitation, ecotourism licensing and establishment of homestays;



- g. Cooperation on water pipe installation where the source is from outside the non-commercial purpose natural reserves (KSA) and conservation area (KPA), but the goes through the natural reserves (KSA) and conservation area (KPA); and
- h. Conservation partnership, among others, in ecosystem restoration between managers and the community. At present, the Directorate General of KSDAE is preparing technical guidance on the conservation partnership on KSA and KPA.

Partners in KSA and KPA management including stakeholders that provide funds and technical skill owning MOU and partnership agreement with the KSA and KPA technical manager to realize the goal of conservation of natural resources and ecosystem. Partner can be business organization, international institution, government institution, community groups, NGOs, individuals, educational institution or foundation.

### **3.3. Cooperation on ecotourism development**

The implementation of ecotourism development in the national park is inseparable with the technical regulation and implementation procedures. Through the Government Regulation PP No. 36/2010, the government provides the technical rules on ecotourism in wildlife reserves, national park, forest park and natural recreation parks. The government regulation PP No 36/2010 complements the Government Regulation No 18/1994 that is yet to rule ecotourism in the wildlife reserves.

The government now allows utilization of KSA and KPA with special licensing (IUPJWA and IUPSWA). In its implementation, the regulation is further specified in the Regulation of Forestry Minister No. P4-Menhut-II-2012 on ecotourism in wildlife reserves, national park, forest park and natural recreation parks. Article 9, verse 1: Ecotourism is allowed with IUPJWA and/or IUPSWA, which can be obtained by individuals, groups, and cooperatives or private sector.

### **3.4. Cooperation on community empowerment**

Christensen and Robinson (1989) *in* Robinson and Green (2011) see the community empowerment as an effort by groups of people to cooperate in the community order to make a joint decree to initiate a change in economy, social, culture and environment for themselves. In short, it is a joint action to achieve a better life (Batten 1974).

Community empowerment around the KSA and KPA, based on the regulation<sup>28</sup>, aims at building a self-sustained and prosperous community around the conservation area to support the KSA and KPA sustainability. Managers of KSA and KPA determine the site and wich community group to be the object of the programme, by taking KSA/KPA management plan and local development plan into consideration. Later, The Head of Nature Resources

---

<sup>28</sup> Peraturan Pemerintah (PP) Nomor 28 tahun 2011 tentang pengelolaan Kawasan Suaka Alam dan Kawasan Pelestarian Alam dan PermenLHK No. P.43/MENLHK/SETJEN/KUM.1/6/2017 tentang pemberdayaan masyarakat di sekitar kawasan suaka alam dan kawasan pelestarian alam

Conservation Office (BKSDA) and National Park should prepare a 5-year term document of community empowerment plan.

Community empowerment is preceded by community capacity building in knowledge, skill, institution and behavioural change. The capacity building can be in the form of training, advocacy, and consultation on conservation and productive economy to support conservation and community empowerment management.

Advocacy activities are done by facilitation, such as:

- 1) Group establishment;
- 2) Providing group article of association and by law
- 3) Groups/villages;
- 4) Group/village's work plan making;
- 5) Partnership document making;
- 6) Licensing;
- 7) Opening the access to market information; or
- 8) Investment, business choice and market.

Meanwhile, training on community empowerment management include training on community group establishment, community group institution development, reinforcement of community institution, management and community empowerment technique activity, reporting, financial management and marketing.

Community empowerment around KSA and KPA including:

- a) Conservation Villages. Selected conservation villages gets priority of becoming forestry development site and partner with government in conservation works;
- b) Providing access to village community groups within the KPA zone. Access is given through cooperation that includes: a) Non-timber forest product collecting; b) traditional cultivation; c) limited traditional hunting for unprotected species; d) limited utilization of water resources for unprotected species ; and e) limited ecotourism;
- c) Partnership facilitation is carried out by Head of Technical Management Unit (UPT) for the community and third party. This facilitation can be in the form of giving access to capital, marketing, infrastructure, institution and technology;
- d) License for ecotourism service; and
- e) Cottage construction by the community living in special zone or national park's utilization zone.

### **3.5. Conservation Village Development**

Conservation village development is one of the operational forms of collaborative management and community empowerment around the KSA and KPA areas. This is regulated by the DG of KSDAE P.6/KSDAE/SET/Kum.1/6/2018. Nevertheless, community empowerment around the KPA existed in the form of Conservation Village Model (MDK)

concept.<sup>29</sup> The procedure for the implementation of Conservation Village Model (MDK) is stated on the Regulation of Forestry Minister No. P.29/Menhut-II/2013 concerning the Guidelines of Forestry Development Activity Facilitation and the Decree of DG of PHKA No. SK 203/IV-KKBHL/2012 concerning the Technical Guidelines for Community Empowerment Facilitation in the Conservation Area Buffer Zone which is used for developing the master plan. Beside that, MoEF through the Regulation of DG of PSKL No P.23/PSKL/SET/PSL.3/12/2016 concerning guidelines for businessperson role in the implementation of environmental and forest protection and management which includes definition, criteria and activity scope which can be done by business person to support the protection and management of environment, including conservation village.

Conservation Village is a conservation model approach that aims to build and increase community's capacity, reducing reliance on conservation areas and bring positive impacts to the protection, preservation and utilization of conservation area. Conservation village covers:

- 1) Local community empowerment: Building mutual understanding among parties concerned, building village level institution, making Participative Rural Appraisal (PRA) for village administration and build partnership and network of business venture;
- 2) Conservation-based rural area use: Developing People's forest, adopting intercrop system of farming, sustaining land conservation, production of animal feeds, honey, horticulture and herbs. Activism within the conservation area can be adjusted to the area function as defined, such as animal breeding, rare varieties cultivation, development of water environmental service, and village tourism.
- 3) Conservation-based rural economic development: Business diversification based on local potential; eco-friendly product manufacturing; business information networking, marketing networking and partnership between community economic groups with other parties.

**Table 13** Regulation related to the Involvement of Various Parties on the Conservation Area Management

Co-Management	Regulation	Information
Cooperation in organizing KSA and KPA for: 1. Strengthening the KSA and KPA function and biodiversity conservation 2. Strategic development.	Minister of Forestry Regulation No. P.85/2014 regarding the procedure for cooperation on organizing KSA and KPA	Collaboration in order to strengthen the function of KSA and KPA also biodiversity conservation: 1. Collaboration on Institutional strengthening 2. Collaboration on area protection 3. Collaboration on flora and fauna preservation 4. Collaboration on ecosystem restoration 5. Collaboration on natural tourism development 6. Collaboration on community empowerment The establishment of P.85/2014 replaces the Minister of Forestry Regulation No. 19/2004 regarding the Management Collaboration of KSA and KPA where the role of KSA/KPA manager is strengthened as the first party in the management collaboration, while in P.19/2004 other parties can act as the initiator for

<sup>29</sup> Peraturan Menteri Kehutanan No. P.29/Menhut-II/2013 tentang Pedoman Pendampingan Kegiatan Pembangunan Kehutanan

Co-Management	Regulation	Information
Natural Tourism Services Business Permit (IUPJWA) and/or Natural Business Tourism Permit (IUPSWA)	Law No. 5/1990 regarding Conservation of biological natural resources and their ecosystems (KSDAHE)	Article 34 letter (3) Pasal 34 huruf (3) For tourism and recreation activities, the Government can give concession rights to the use of utilization zone of National Park, Grand Forest Park ( <i>Taman Hutan Raya</i> ) and Nature Recreation Park ( <i>Taman Wisata Alam</i> ) by involving the community.”
	Government Regulation No. 36/2010 regarding natural tourism business in Wildlife Reserve ( <i>Suaka Margasatwa</i> ), Grand Forest Parks ( <i>Taman Hutan Raya</i> ) and Nature Recreation Parks ( <i>Taman Wisata Alam</i> )	Government Regulation No. 36/2010 replaces Government Regulation No. 18/1994 regarding natural tourism business at the utilization zone of National Park, Grand Forest Park ( <i>Taman Hutan Raya</i> ) and Nature Recreation Park ( <i>Taman Wisata Alam</i> ) that have not regulated the natural tourism business at the Wildlife Reserve ( <i>Suaka Margasatwa</i> )
	Minister of Forestry Regulation No. P.48/2010 regarding the natural tourism business in Wildlife Reserve ( <i>Suaka Margasatwa</i> ), Grand Forest Parks ( <i>Taman Hutan Raya</i> ) and Nature Recreation Parks ( <i>Taman Wisata Alam</i> )	Article 9 : (1) Natural tourism business is given in the form of IUPJWA and/or IUPSWA. In the area that has been used by the local community, the permit is as stated on paragraph (1) is prioritized to be given to the local community
Community empowerment including: 1. Community capacity development; 2. Providing access to the utilization of KSA or KPA	Article 49 PP No. 28 /2011 jo PP No. 108/2015 regarding the management of KSA and KPA	In the Government Regulation No. 108/2015, community empowerment through: a. Conservation village development; b. Providing access to collect NTFPs in the traditional zone/block or traditional uses; b. Facilitation on the partnership between holders of forest utilization permits with the community; and/or c. Giving natural tourism service business permit

Conservation approach to conservation area management by involving different stakeholders will expectedly lead to an effective management of conservation areas. Assessment on the effectivity of the conservation area management is required by the *Convention of Biological Diversity (CBD) on Protected Areas*, that set the target of at least 30 percent of conservation area is evaluated by 2010.<sup>30</sup> The Indonesian government now uses METT (Management Effectiveness Tracking Tools) to measure the effectivity of conservation area management.<sup>31</sup> The METT tool consists questions and scoring to evaluate various conservation area management.

In effort to optimize management and utilization of conservation areas, the Directorate General of KSDAE, MoEF, adopts METT to be implemented in Indonesia. The Government is committed to achieving the METT score of at least 70 percent. One of the METT scoring points is the significance of multi-stakeholder's involvement in conservation area management (**Table 14**).<sup>32</sup>

<sup>30</sup> <https://www.cbd.int/doc/meetings/sbstta/sbstta.../sbstta-14-05-en.pdf>

<sup>31</sup> Stolton, S. and N. Dudley. 2016. METT Handbook: A guide to using the Management Effectiveness Tracking Tool (METT), WWF-UK, Woking

<sup>32</sup> DG of KSDAE, KLHK. 2015. Pedoman Penilaian Efektifitas Pengelolaan Kawasan Konservasi di Indonesia. Jakarta

**Table 14** The METT scoring points in conservation area management.

METT Point Number	Assessment Score	Information
Government and surrounding private sectors	3	Assessment score will be high if the area manager cooperates with surrounding land and water users
Indigenous community	3	Assessment score will be high if the indigenous community is able to participate directly on making relevant decisions regarding the conservation area management, i.e. co-management
Local community	3	Assessment score will be high if the local community is able to participate directly on making relevant decisions regarding the conservation area management, i.e. co-management. There is an additional point if the community is actively supports the area conservation (with the existence of village regulation and other efforts by the community)
Economic benefit	3	Assessment score will be high if the conservation area gives economic benefit for the surrounding community of the conservation area

Sources: DG of KSDAE, MoEF. 2015. *Guidelines on the Conservation Area Management Effectivity Assessment in Indonesia*. Jakarta

Not only should the local communities get empowered in economy, they also deserve to become equal partners in conservation works, considering that they know well the situation of the area and even many of them have local knowledge and wisdom in conservation. Besides, acknowledgement and incorporation of the community's rights should get priority because it is the foundation for tenurial conflict solution. It also means that the local communities are seen as equal partners of the management.

Essentially, collaboration approach of conservation area management involves research institutions, universities, NGOs, private sector and donors to jointly face challenges. Human resources improvement is important in this collaboration, along with more intensive conservation fund raise.

The long term management plan of 2017-2026 makes the WKNP more focus and integrated to local and national development. To make it happen, a collaborative management of WKNP is needed – a management that involves interested stakeholders, including local communities.



## 4. CHALLENGES OF WKNP MANAGEMENT

There are a number of potentials and challenges, which exist in the WKNP area that were identified by the CMP team through a series of interviews with key stakeholders, focus group discussions, and literature studies conducted in April - June 2018. The existence of the WKNP area was inseparable from the communities living surrounding and interacting with the park. In addition to relatively easy access and close distance, the community's needs for their livelihood have encouraged some of the communities to enter the park area. Various area pressure and challenges on the small and big scale happens.

In general, the main challenges that are considered to be pressures and threats to the WKNP are, as follows:

- 1) **Forest fire.** Forest fires in the WKNP area have long been recurring, with the main trigger being human activities through encroachment and poaching. As of May 2018, cases of forest fires in 2018 have occurred at least three times in the area of the Susukan Baru Resort<sup>33</sup>. A study by Amalina et al. (2016) suggested that of the total area of the WKNP, 42,711.2 hectare of the total area (34%) was identified as having a high level of vulnerability to forest fires, 65,323,1 hectare (52%) as moderate, and 16,330.8 ha (13%) as low. The study also suggested that the highest forest fire prone locations include Susukan Baru Resort (administratively include to Way Kanan Section), Toto Projo Resort, Umbul Salam Resort, and Rantau Jaya Makmur Resort (Bungur Section II), and Margahayu and Kuala Penet Resorts (Kuala Penet Section III). All the resorts with high susceptibility to forest fires have been predominated by grassland (*Imperata cylindrica*). Fire hazard and ecosystem recovery tables and maps (**Figure 13**).

---

<sup>33</sup> Personal communication to the Head of Resort Susukan Baru.

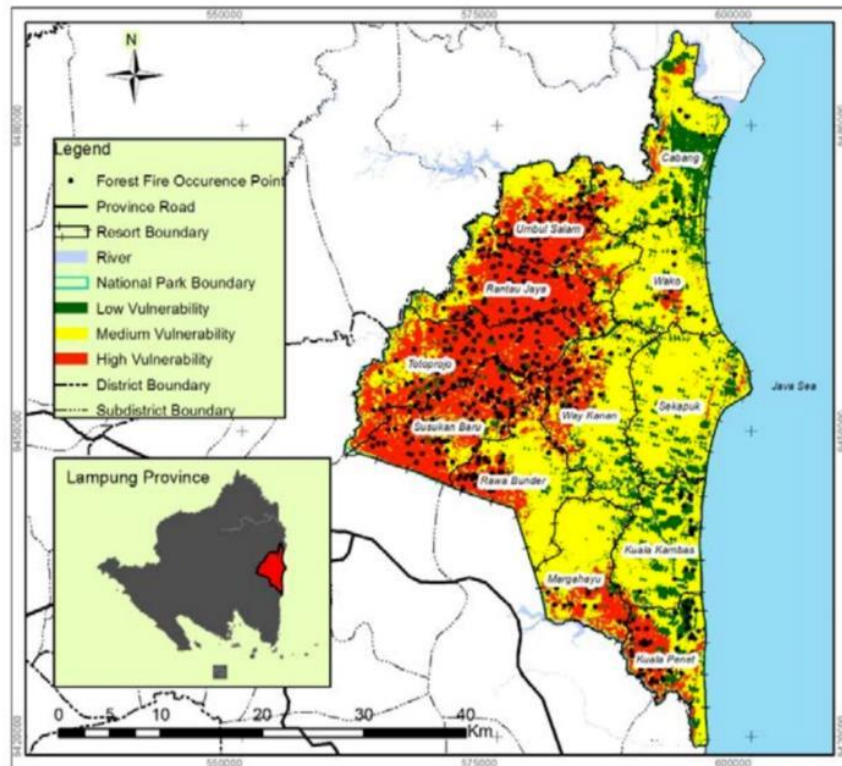


Figure 13 Map of Forest Fire Prone Areas in WKNP (Amalina et al. 2016).

- 2) **Critical land.** Since 1996, the forest cover in WKNP has the highest proportion, but the area has been declining to 51,657.3 hectare due to changes in land cover in 2002-2010. The decline in the forest cover was followed by an increase in the area of Imperata grasslands, which reached 33% of the WKNP's total area. When the forest is damaged, the grassland area will replace it. The succession processes both natural or man-made has often not succeeded due to recurrence forest fires, as well as encroachment activities (Amalina et al. 2016).
- 3) **Human – Elephant Conflict.** According to the Regulation of Forestry Minister No. P.48/Menhut - II/2008, human-wildlife conflicts, including elephant, are all interactions between humans and wildlife, which have negative effects on human social life, economy, culture, as well as on elephant conservation, and/or on the environment. The habitat damage and the decreasing ecosystem quality are considered as factors causing the wildlife, including the elephants, to wander off their habitat looking for their needs causing conflicts with the community. The elephant conflicts generally occurred on cultivated area, in particularly that of directly bordering the forest areas. A study conducted by Gunaryadi et al. (2017) covering 16 villages around the WKNP in July 2008-March 2009 recorded 203 events of elephant attacks on community land. In addition, the Wildlife Response Unit (WCS – WKNP) (2013) estimated  $\pm 314$  events of elephant attacks between October 2013 – September 2014, of which the most frequent conflicting events occurred in December – March, May – June, and August. In the WKNP, there are approximately 200 – 250 elephants, of which 75 individuals were involved in human – wildlife conflicts (Rustiati et al. 2017).

Efforts to build a common understanding in the model and concept of human – elephant conflict mitigation have actually been realized with the policies of both provincial and district governments. The East Lampung District Government issued the District Decree No. 522/341/B/2008 dating March 6, 2008 concerning Integrated Working Team for Human Elephant Conflict Management. The East Lampung District Government also channeled financial assistance to the community, and built infrastructures of canals on the boundary areas of the forest and human settlement and gardens. Furthermore, to improve the conflict mitigation, the Lampung Provincial Government issued a Lampung Governor Decree No. G/459/V.23/2017 concerning Establishment of Human and Wildlife Conflict Management Coordination Team in Lampung Province. This policy took the initiative to coordinate the human and wildlife conflicts integrated management across districts.

Initiatives of the community living surrounding the WKNP, facilitated by WKNP office and the WCS Indonesia Programme, have succeeded in establishing a Forum Discussion of Buffer Village (FRDP). It was historically established on January 16, 2007 with initial name of the Communication Forum of the WKNP Buffer Zone Village. The Forum was declared by 22 village heads and 14 community groups representing villages in buffer zone areas of the WKNP. Purpose of the forum is to act as a medium of communication, information and sharing of experiences of communities living in buffer zone village related to human – elephant conflict mitigation, as well as rural development.

- 4) **Poaching.** The common poaching, which involve the local community, is hunting of wild boars, sambar deer, deer, and birds, as well as fishing of the freshwater fish in the WKNP area. Throughout 2017, the Forest Police officers of the Susukan Baru Resort discovered and confiscated 97 animal snares in its working area<sup>34</sup>. On April 10, 2018, the WKNP Forest Police officers arrested deer hunters in Way Bungur Section II, with evidences of deer's head and meat<sup>35</sup>. In addition, the protected and endangered species, such as Sumatran rhinos, Sumatran tigers and Sumatran elephants become the targets of hunting. It is found that these illegal activities involved professional groups from outside, and the wildlife trade syndicates of endangered species.
- 5) **Illegal Hunting.** Illegal logging occurred in the WKNP for housing and trade in illegal timber could be categorized to small scale category. The common illegal logging was for household firewood and household-scale industries. Locations that occur frequently in logging were Cabang Resort, and Umbul Salam Resort (include the Section II Bungur), and Kuala Penet Resort (Section III Kuala Penet). A study focusing on the community needs for firewood was carried out by Rakatama (2016) covered area of Labuhan Ratu VI village in 2013. The findings show that average demand for community's firewood was approximately 487 kg/household/month, or around 5,840 kg/household/year. The total needs for firewood were met in particular from the WKNP forests, and from backyards and community gardens in small proportion ( $\pm$  10%). The total demand for fuelwood from the WKNP forest in Labuhan Ratu VI village was

---

<sup>34</sup>Personal communication to the Head of Resort Susukan Baru.

<sup>35</sup><https://lampungpro.com/post/11493/polhut-way-kambas-anggota-rpu-tangkap-tersangka-perburuan-liar>

estimated at 2,097.14 tons/year or around 725.66 hectare in area.

- 6) **Illegal grazing.** The WKNP area has quite many open areas, either grassland on marshes or drier areas. The domestic livestock is usually buffalos, roaming in areas of Bungur and Kuala Penet Resorts, and even so to ETC area. Number of buffalo livestock released to roam by their owners reached 3500 individuals. The illegal grazing has provided a competition between domesticated buffalos with the wildlife in the park, especially with the elephant and deer. Likewise, the possibility of infectious diseases to wildlife (*zoonosis*) occurred, which could kill the wildlife.



Figure 14 Buffalo belongs to the people who are grazed in the WKNP area

Various attempts to mitigate the grazing have been made, including dialogues with the community of buffalo owners, officials at villages, sub-districts and related agencies, as well as monitoring and patrolling by the WKNP officers. Based on the monitoring conducted, number of the buffaloes roaming in the forest area is 280 individuals<sup>36</sup>, whilst those of entering the ETC was 57 individuals.

7. **Encroachment.** Large scale forest encroachment currently do not occur, except on coastal areas used by fishermen for temporary sheltering. Some large scale encroachment cases occurred, when local communities set up settlements with a population of more than 2,000 people within the boundary of the park. The communities built settlements and farms to form a village, but were eventually translocated in 1984. In addition, in the mid 2000 – 2008 a large scale forest encroachment for cassava fields covering 6,000 hectare occurred in the Susukan Baru Resort bordering the area of Rantau Jaya Udik II Village. The case was resolved in 2010 by the WKNP officials involving the village government<sup>37</sup>. Recently, the area becomes the area for restoration.

In addition to the challenges identified through the facilitation processes, a number of strategic issues have also identified from SOAR (Strength, Opportunity, Aspiration and Result) mapping, as follows:

- a) The park area protection including its flora, fauna and ecosystem has not been carried out properly
- b) Preservation of the flora and fauna species diversity and their ecosystems in situ to prevent species extinction, maintain the genetic purity and species diversity, as well as maintaining the balance and stability of the ecosystem have not been well implemented.

---

<sup>36</sup> WKNP Data

<sup>37</sup> Personal communication to the PLG Coordinator and ex-Head of Village Rantau Jaya Udik II period 2008-2014.

- c) Extraction of the potential of biological natural resources and their ecosystems in the WKNP area for sustainable use, both at the ecosystem, flora and fauna level has not optimal as yet;
- d) Function of the WKNP area is not fully realized economically as yet, that has not provided tangible benefits for the interests of the WKNP's sustainability, as well as for supporting the community's welfare.
- e) The park management has not been integrated and synergized with the regional development both at village, sub-district, district and provincial levels as well as the interests of various domestic and foreign parties.
- f) Human resources quality and quantity of the park management down to the resort level, in order to support the implementation of the Resort-based Management (RBM) is necessarily to be improved. Improving the quality and quantity of human resources, as well as organizational capacity, are needed to meet the uneven distribution of human resources and technical capabilities.
- g) Mandate of habitat protection of the protected priority species needs to be improved. The management currently focuses on animal management in the Elephant Training Centre (ETC), while the natural habitat management of the Sumatran tiger, species which become the legal basis for the WKNP designation, is less focused on.
- h) Existence of the Sumatran Rhino Sanctuary (SRS), as the first rhino in situ breeding centre in Indonesia and the world. As the first rhino breeding centre, the WKNP has a very strategic position for research and technology development in rhino breeding Programme. Consequently, the SRS should receive full support in term of financial, human resources, with high competence in the rhino breeding area, and their supporting facilities and infrastructure. The SRS was designated with a Decree of the Director General of KSDAE No. 249/KSDAE-KKH/2015 dated November 3, 2015, as one of the sanctuaries in the park. Future development plans of the sanctuary as well as the elephant hospital at the ETC should be strengthened.
- i) Role of partners should also be accommodated, including that of future plans toward the sustainability of the partnership collaboration works (profile of the partners in the appendix).

## 5. STRATEGY AND ACTION PLAN

The strategy mapping process resulted a statement regarding the **Vision and Practice Mission (Mission)** of the Collaborative Management Plan (CMP) of Way Kambas National Park (WKNP). The Vision of WKNP's CMP is in the scope of Stakeholders and Shareholders, which is the results and lag of the initiatives done by the stakeholders, but also as drivers and lead to the final result benefited by the 'owner' (shareholder) in the scope of shareholders.

### 5.1. Vision and Mission

#### 5.1.1. Vision of Collaborative Management of Way Kambas National Park

Vision is the outlook of a condition that is to be achieved in the future within a certain period of time which is the direction of the achievement for all stakeholders. Vision is a dream or measurable dream to be fulfilled in the future and a result of a long-term effort. The vision of WKNP's Collaborative Management Plan is:

"The Way Kambas National Park as an ideal habitat for the Sumatra protected wild species that brings self-sufficiency and prosperity to local communities."

#### 5.1.2. Mission of Collaborative Management of Way Kambas National Park

Mission is the strategic efforts needed to achieve an ideal condition which has been specified in the vision. Mission will at least help the implementing organization to have a clear mind-set to move and work.

In the Long Term Management Plan of WKNP 2017-2026, the following is WKNP's Management Planning:

- 1) To protect the entire the park area as a life support system;
- 2) To preserve the flora and fauna diversity and its ecosystems within the WKNP area;
- 3) To explore and utilize natural biodiversity resources and its ecosystems within the WKNP area, particularly for natural tourism;
- 4) To optimize the utilization of the park economic potential in the utilization zones and other zones other than core zone, to improve the local economy, and the community's welfare, especially around the WKNP; and
- 5) To synergize the ecological, social, and economic benefits of the park with the regional government and related stakeholders of national and international.



## 5.2. Main Goals

There are two strategic goals willing to be achieved through the collaborative management plan in WKNP, including: i) preserving natural resources and ecosystem in the area of WKNP as life support system, and ii) utilizing natural resources and ecosystem of WKNP for the independence and welfare of the surrounding community. Both strategic targets become the pillar to achieve WKNP's Vision.

1. On the Strategy Mapping process, the Practice Vision is interpreted as the Main Goal. Those main goals cover five ideal conditions to be realized through collaborative management in WKNP, including:
2. The strong park manager institutional capacity are already built ;
3. The whole park area, and biodiversity and its ecosystem have been fully protected;
4. The natural biodiversity resources and its ecosystem have been sustainably explored and utilized, particularly in environmental services;
5. The local community independence and welfare to support the WKNP area conservation are already built; and
6. The ecological, social, and economic benefits of the WKNP area for the regional government, stakeholders and related parties in national and international are already synergized.



**Figure 15** The Strategy Map of WKNP Collaborative Management Plan

### 5.3. Strategy and Action Plan of WKNPs Collaborative Management

Strategy is ways that are considered efficient and effective which is designed systematically to achieve the main objectives (Mission) by considering things that will influence it internally and externally<sup>38</sup>. Strategy is also understood as: ... strategy is like a road map. It's a plan for getting from where we are to where we want to go"<sup>39</sup>.

In the mind-set of strategic planning through Strategy Mapping there is a logical framework that a result can be achieved if it is done by one or more efforts or by certain initiative. The logic flow is to actualize the main targets that has been set, it needs one or more strategic, main or principal programme/activity. Inside the Strategy Mapping mind-set, the main targets are in the scope of Stakeholders and main activities are in the scope of Operational. The preparation of collaborative programme/activity plan mainly refers to Minister of Environment and Forestry (MOEF) Regulation No. P.44/MENLHK/SETJEN/KUM.1/6/2017 regarding the Procedures for Cooperation in Organizing Nature Reserve Areas and Nature Conservation Areas.

The preparation of strategy and action plan for WKNP's collaboration management is to guarantee the realization of Way Kambas National Park as the ideal habitat for Sumatran protected wildlife, bringing independence and welfare to the surrounding community. The effort to maximize the entire area protection, natural resources and ecosystem in the area of WKNP becomes the main priority. Other than that, the focus on strengthening WKNP's institutional on the resort-level, cohesive planning and area development through Conservation Cooperation by balanced role and benefit sharing scheme is also needed so the collaboration management in WKNP can work well. The development of Priority Village Model and integrated eco-tourism model is an important achievement target which can accelerate the achievement of independence and welfare of the surrounding community to support the sustainability of WKNP.

Collaboration Management Plan of WKNP for 2018-2023 is divided into 7 main strategies, consisting:

1. Strategy of WKNP institutional strengthening at site level (Resort);
2. Strategy of a whole WKNP area protection, the biodiversity and its ecosystem;
3. Strategy of flora and fauna preservation through data and information update and its development;
4. Strategy of habitat development through ecosystem recovery;
5. Strategy of local community critical awareness enhancing toward the WKNP area sustainability;
6. Strategy of village spatial plan integration through assisted village model, and integrated ecotourism model development;
7. Strategy of integrated WKNP area planning and development with related stakeholders, through the conservation partnerships development defining role and

---

<sup>38</sup> Nawawi, H. 2003. Manajemen Strategis Organisasi Non Profit Bidang Pemerintahan. Gadjah Mada University Press. Yogyakarta. hal. 147

<sup>39</sup> Si Khan. 1982. Organizing , A Guide for Grassroots Leaders. McGraw-Hill Book Company. New York USA.

benefit sharing scheme in the natural resources and ecosystem protection and utilization.

These seven strategies reflect the paradigm of the 10 new ways of managing conservation areas in Indonesia that are developed by the Directorate General of KSDAE<sup>40</sup>.

According to the purpose of Collaboration Management Plan, the strategies above are translated into 2 major programmes and 9 sub-programmes, also some action plans which can be done collaboratively by the stakeholders. The programmes and sub-programmes are:

- A. Programme of natural resources and ecosystem conservation in WKNP
  - Sub-Programme 1. Development of Resort-based Management/RBM system
  - Sub-Programme 2. Area Protection & Safeguarding
  - Sub-Programme 3. Flora and Fauna Preservation
  - Sub-Programme 4. Ecosystem Restoration
- B. Programme of community livelihood improvement
  - Sub-Programme 5. Community outreach and conservation awareness
  - Sub-Programme 6. Community development focuses on agricultural and forestry commodities
  - Sub-Programme 7. Development of priority village model;
  - Sub-Programme 8. Development of integrated ecotourism model
  - Sub-Programme 9. Strengthening stakeholder collaboration in the area of WKNP (Conservation Partnership).

### **5.3.1. Strategy of WKNP institutional strengthening at site level (Resort).**

One of the keys to the success of WKNP's area management is a strong and reliable institution down to the site level (resort). Planning a resort-based management system (RBM) needs to be done in each resort so that the management of WKNP area can be more effective and efficient. The human resources quality and quantity of the park manager up to the resort level, to support the RBM implementation needs to be improved. The improvement is needed to meet the uneven distribution among the park employees. The Programme and action plan of the strategy realization for WKNP institutional strengthening in site level presented in **Table 15**.

---

<sup>40</sup> Wiratno, 2018. Sepuluh Cara (Baru) Mengelola Kaasan Konservasi di Indonesia: Membangun "Learning Organization", Ditjen KSDAE, KLHK

**Table 15.** Programme and Action Plan on the Strengthening WKNP's Institution at the Site Level (Resort).

	DESCRIPTION	LOCATION	PARTNER	INDICATIVE BUDGET (Euro)	TIMELINE
Sub-Programme 1. Development of Resort based Management/RBM system					
1	RBM System Planning	12 Resorts	WKNP, WCS, Alert, PILI	72,727	2018-2021
2	Development of Information Management System	3 SPTN	WKNP, WCS, Alert, PILI	13,636	2018-2021
3	Staff Capacity Development (training)	12 Resorts, 3 SPTN	WKNP, WCS, Alert, PILI	36,364	2018-2021
4	Revision of zoning system based on management goals (zoning revision)	WKNP	WKNP, Provincial Government of Lampung, District Government of East Lampung dan Central Lampung, UNILA, WCS, Alert, PKHS, YABI, PILI, FRDP	21,273	2018-2021
5	Assessment and development of traditional utilization zone.	5 resorts buffering with village	WKNP, WCS, Alert, PILI	13,636	2018-2021

### 5.3.2. Strategy of a whole WKNP area protection, the biodiversity and its ecosystem.

Efforts to protect the area, including flora, fauna and ecosystems, requires a mitigation system and a good handling of regional vulnerability so that the protection of the area can be effective. The mandate to protect the protected wildlife habitat needs to be improved. The current management is more aimed at the Elephant Training Center than the management of tiger habitat, which is the basis for the determination of this area, is still not being addressed. Protection and security activities, including handling fires, wildlife conflicts and forest crimes must continue to be directed, so that, a Mitigation and Design Action Plan, and also conflict management are need to be implemented, including law enforcement Standard Operational Procedure for illegal activities.

The Forest Ranger and its *Masyarakat Mitra Polhut* (the Community of Forest Guard Partner) capacity and skills need to improve, particularly in mitigation, management and handling of area vulnerabilities, because they are the frontline of the protection of the WKNP area. Programmes and action plans of the overall WKNP area protection strategy and, biodiversity and its ecosystem realization are presented in **Table 16**.

**Table 16.** Programme and Action Plan on the Overall WKNP area Protection and Biodiversity and its Ecosystem.

	DESCRIPTION	LOCATION	PARTNER	INDICATIVE BUDGET (Euro)	TIMELINE
Sub-programme 2. Area Protection and Safeguarding					
1	Inventory, mapping, area vulnerability system, including conflict potency and forest crime activity	12 Resorts	WKNP, WCS, Alert, PILI	9,091	2018

DESCRIPTION		LOCATION	PARTNER	INDICATIVE BUDGET (Euro)	TIMELINE
2	Development of mitigation plan and action plan, also development of law enforcement SOP	12 Resorts, 3 SPTN	WKNP, WCS, Alert, PILI	9,091	2018
3	Protection and security activity including forest fire handling, animal conflict and forest crimes.	12 Resorts	WKNP, WCS, Alert, PILI	1,030,303	2018-2023
4	Building Monitoring and Joint Monitoring Post at the border of WKNP area	3 Priority Resorts	WKNP, WCS, Alert, ERU, PILI, District Government of East Lampung, District Level of Central Lampung and Provincial Government of Lampung	6,061	2020-2021
5	Capacity and skill development for the forest police and forest police partner community (MMP)	3 SPTN	WKNP, WCS, Alert, PILI	18,182	2018
6	Establishment of an integrated team at the provincial and district level to handle illegal activities (Regional Leader Communication Forum/FORKOPIMDA)	Central Lampung District, East Lampung District and Lampung Province	WKNP, Muspida of Lampung Province, Muspida of East Lampung and Central Lampung	4,545	2018
7	Escorting forest crime cases	12 Resorts	WKNP, FORKOPIMDA, WCS, Alert, PILI	60,606	2018-2023

### 5.3.3. Strategy of flora and fauna preservation through data and information update and its development.

An updated data and information is important strategy in flora and fauna preservation support of WKNP. Data and information obtained from a series of directed research activities and having measurable achievements will provide information to the area manager about how to protect and preserve the WKNP area. Planned research and monitoring, clear road map is needed for the animal and plant key and native species in WKNP.

Studies on the efforts to develop habitat and key species populations can become management guidelines so that the development of key animal species populations can be increased from year to year. Another important thing in preserving flora and fauna is genetic research and DNA on key species and types of native flora that are vulnerable to extinction.

Studies about habitat management and development should be developed from 2 (two) types of animals whose management has long been focused on WKNP, consisting Elephants in the Elephant Training Center (ETC) and Rhinos in the Sumatran Rhino Sanctuary (SRS). The Programme and action plan for the realization of the flora and fauna preservation strategy through the updating of data and information and its development are presented in **Table 17**.



**Table 17** Programmes and Action Plans for Flora and Fauna Preservation through Data and Information Updating and Development.

DESCRIPTION		LOCATION	STAKEHOLDER(S)	INDICATIVE BUDGET (Euro)	TIME FRAME
<b>Sub-Programme 3. Flora and Fauna Preservation</b>					
1	Preparation of road map for future flora and fauna research	12 Resorts	WKNP, UNILA, YABI, WCS, Alert, PKHS, Vesswic, PILI	9,091	2018
2	Research and monitoring key fauna species	12 Resorts	WKNP, UNILA, YABI, WCS, Alert, PKHS, Vesswic, PILI	212,121	2018-2023
3	Inventory of native vegetation and carbon storage study	12 Resorts	WKNP, UNILA, YABI, WCS, Alert, PKHS, Vesswic, PILI	72,727	2020
4	Research and collection of key species DNA	12 Resorts	WKNP, UNILA, YABI, WCS, Alert, PKHS, Vesswic, PILI	54,545	2018, 2021, 2023
5	Establishment of habitats and populations of key species, including harvesting SOP of pulses, habitat inventory, management of rhino and elephant feed source	12 Resorts	WKNP, UNILA, YABI, WCS, Alert, PKHS, Vesswic, PILI	75,758	2018-2023
6	Strengthening PLG and SRS Management	ETC and Margahayu Resort	WKNP, UNILA, YABI, WCS, Alert, PKHS, Vesswic, PILI	22,727	2018
7	Monitoring and mitigating the impact of cow dung liquid waste on the rivers in the area	1 Resort	WKNP, UNILA, YABI, WCS, PILI	12,121	2018-2023

#### 5.3.4. Strategy of habitat development through ecosystem restoration.

Damage to the WKNP area due to forest fires and other illegal activities nowadays needs to be restored so that the area ecosystem functions can increase again. Since 1996, the forest cover in WKNP has the highest proportion, but its area has been reduced due to land cover changes reaching 51,657.3 hectares in 2002-2010. At present, the increase of critical land is dominated by an increase in the area of Imperata grasslands has reached 33% of the total area of WKNP. Succession process, both artificial and natural, are often fail because of repeated forest fires and forest encroachment activities. Therefore, various ecosystem recovery efforts needs to be integrated with other efforts such as fire management and law enforcement on illegal logging activities, so that these efforts can achieve maximum results. Programmes and action plans for the realization of habitat development strategies through the recovery of ecosystems presented in **Table 18**.

**Table 18.** Programmes and Action Plans for Habitat Development through Ecosystem Restoration.

DESCRIPTION		LOCATION	STAKEHOLDER(S)	INDICATIVE BUDGET (Euro)	TIME FRAME
Sub-programme 4. Ecosystem Restoration					
1	Revitalization of the WKNP ecosystem recovery plan according to zoning changes	12 Resorts	WKNP, UNILA, YABI, WCS, Alert, PKHS, PILI, FRDP, ORIGA	9,091	2018
2	Ecosystem recovery of 2,000 ha	2 Resorts	WKNP, UNILA, YABI, WCS, Alert, PKHS, PILI, FRDP, ORIGA	424,182	2018-2021

### 5.3.5. Strategy of local community critical awareness enhancing toward the WKNP area sustainability.

Efforts to raise critical awareness of the community, especially in the buffer village area, are an important part in realizing the purpose of the collaborative management of the WKNP area. One of them is by developing environmental and conservation education centres around WKNP. Increasing the conservation education and environmental awareness must be carried out to achieve changes in community behaviour towards conservation, especially protection of WKNP area. Community critical awareness of the importance of WKNP area for the living and lives of the surrounding communities will grow positive efforts in collaborative management of the WKNP. Thus it is expected that illegal and destructive activities within the WKNP area can be significantly reduced and able to trigger various community efforts in the buffer zone that support the sustainability of the WKNP area.

These Programmes and action plans should be packaged in a shared learning system with buffer villages in WKNP area. The replication process to surrounding villages will be more quickly achieved when increased awareness and development of knowledge is carried out together with other village communities.

The Programmes and action plans for the realization of a strategy of raising critical awareness of the community toward the WKNP sustainability are presented in **Table 19**.

**Table 19** Programmes and Action Plans for Arising of Community Critical Awareness of the WKNP Areas Conservation

DESCRIPTION		LOCATION	STAKEHOLDER(S)	INDICATIVE BUDGET (Euro)	TIME FRAME
Sub-programme 5. Community outreach and conservation awareness					
1	The construction of community environmental education centre facilities	Rantau Jaya Udik II Village	WKNP, WCS, Alert, PILI, UNILA, FRDP	21,212	2020
2	Awareness and environment education to the community, students and children (school visits, Conservation Education, etc.)	Buffer Village	WKNP, WCS, Alert, PILI, UNILA, FRDP	36,364	2018-2023

### 5.3.6. Strategy of village spatial plan integration through assisted village model, and integrated ecotourism model development.

The existence of buffer villages in the Way Kambas National Park area requires synergy and collaboration in the management of its territory. As part of the Way Kambas landscape, territorial management and spatial planning of buffer villages should be integrated with the WKNP management plan. In this case, the role and important values of WKNP for the buffer villages must be taken into consideration in the preparation of village development plans and buffer village spatial planning so as to minimize various extractive activities that can lead to degradation of the function of WKNP area.

The initiatives of models development and environmental friendly community activity attitudes pilot, especially as an livelihood alternative means , should continue to be encouraged and developed, so that people can understand and wanting to replicate it in their daily activities. The WKNP area benefits, directly and indirectly, need to be realized in the real, regarding economic benefits through various ecotourism, Non-Timber Forest Products (NTFPs) and other environmentally friendly business activities, so that, the community's "sense of belonging" to the WKNP area continues to increase.

The assisted village model and an integrated ecotourism development model are a strong starting point in the village government apparatus improving and developing of knowledge and performance.. Efforts to review and synchronize the Village Medium Management Plan (RPJMD) with a WKNP Collaborative Management Plan, the Village Business Unit (BumDes) institutional strengthening, initiation of village regulations on illegal forestry activities, the assisted villages development to become priority on the village institutional capacity development, particularly in priority villages of WKNP area collaborative management actions.

The programmes and action plans for the realization of Strategy of integration of village spatial plan through development of priority village model, and development of integrated ecotourism model presented in **Table 20**.

**Table 20** Programmes and Action Plans for Integrating Village Spatial Planning through Development of Assisted Village Models and Integrated Ecotourism Models.

DESCRIPTION		LOCATION	STAKEHOLDER(S)	INDICATIVE BUDGET (Euro)	TIME FRAME
<b>Sub-programme 6. Community development focuses on agricultural and forestry commodities</b>					
1	Facilitating on community involvement in organic farming activities	5 Villages	WKNP, WCS, Alert, PILI	10,909	2018-2022
2	Improvement of institutional capacity of community business groups (training series)	5 Villages	WKNP, WCS, Alert, PILI, FRDP	9,091	2018-2020
3	Legal access of cooperation (MoU) and empowerment of business units group of non-timber forest product developers, such as Agarwood nursery, orchids and honey	5 Villages	WKNP, WCS, Alert, PILI	3,030	2018-2020
<b>Sub-programme 7. Development of priority village model ('Desa Binaan')</b>					
1	Facilitate a detailed plan for the spatial layout of the assisted villages in the buffer zone including the preparation of village regulations that regulate punishment for violations (hunting / logging).	Braja Harjosari and Rantau Jaya Udik II Village	WKNP, UNILA, WCS, Alert, PILI	24,242	2018-2020
2	Review and synchronize the RPJMDes and RKP at the Priority Village level	Braja Harjosari and Rantau Jaya Udik II Village	WKNP, WCS, Alert, PILI	2,030	2018-2020
3	Mentoring and optimizing BUMDes as village economic institutions that strengthen the business of community groups.	Braja Harjosari and Rantau Jaya Udik II Village	WKNP, WCS, Alert, PILI, UNILA	7,273	2018-2020
4	Developing non-timber forest product (NTFPs) activities, such as animal breeding, gaharu, orchid and honey breeding (5 units of community business groups have collaborated with WKNP).	Braja Harjosari and Rantau Jaya Udik II Village	WKNP, WCS, Alert, PILI	9,091	2018-2020
5	Assistance and Creation of nursery gardens for the provision of ecosystem restoration, elephants and rhinos feeds, commercial logging (community logging) on community lands.	Braja Harjosari and Rantau Jaya Udik II Village	WKNP, WCS, Alert, PILI	15,152	2018-2020
6	Biogas installation as demonstration plot for fuel wood substitution	Rantau Jaya Udik II Village	WKNP, WCS, Alert, PILI, YAPEKA	12,121	2018-2020
7	Making fishing ponds as DTW	Braja Harjosari Village	WKNP, WCS, Alert, PILI	5,455	2020
8	Land-fires handling	Villages of Braja Harjosari and Rantau Jaya Udik II	WKNP, WCS, YAPEKA Alert	22,727	2018-2023
<b>Sub-programme 8. Development of integrated ecotourism model</b>					
1	Development of an integrated ecotourism business model and site plan, and integrated ecotourism DED in 5 target villages	5 Villages	WKNP, WCS, Alert, PILI, YABI, YAPEKA	10,606	2018-2020

DESCRIPTION		LOCATION	STAKEHOLDER(S)	INDICATIVE BUDGET (Euro)	TIME FRAME
2	Development of community-based ecotourism programmes and other potential environmental services	5 Villages	WKNP, WCS, Alert, PILI, YABI, YAPEKA	27,273	2018-2021
3	Ecotourism development capacity training	5 Villages	WKNP, WCS, Alert, PILI, YABI, YAPEKA	9,091	2018-2020
4	Facilitation and development of Promotion and Marketing	5 Villages	WKNP, WCS, Alert, PILI, YABI, YAPEKA	27,273	2018-2021
5	Study of the impact of integrated ecotourism development	5 Villages	WKNP, WCS, Alert, PILI, YABI, YAPEKA	3,030	2021

### 5.3.7. Strategy of integrated WKNP area planning and development with related stakeholders, through the conservation partnerships development defining role and benefit sharing scheme in the natural resources and ecosystem protection and utilization.

The WKNP Management with quite diverse stakeholders requires adaptive governance. In the 2017-2026 Long Term Management Plan (RPJP), the plan direction is the WKNP management of which is more focused and integrated in the context of regional and national development. To achieve this, a WKNP collaborative management is needed, it is involving the stakeholder's cooperation who have interest to the WKNP area, including the community. A collaborative management is now become a choice in long-term partnerships management of WKNP area. Stakeholder involvement is expected to be dealt with various issues in the WKNP area management.

In the national policy framework, the management of collaboration in KSA and KPA including national parks in Indonesia has been accommodated under the Minister of Forestry Regulation (Permenhut) No. P.19/Menhut-II/2004 regarding the collaboration in the Nature Reserve Areas (KSA) and Nature Conservation Areas (KPA) management. The most recent policy on collaborative management in conservation areas is under the Minister of Environment and Forestry Regulation No. P.44/MENLHK/SETJEN/KUM.1/6/2017 regarding the procedures for cooperation in Nature Reserve Areas and Nature Conservation Areas organizing.

A key to a success on collaborative management of the conservation areas is communication, commitment and share roles. Various communication improvement efforts to build the strong and close cooperative relationships must continue, to be encouraged through structured and systematic communication Programmes, with proportional distribution of roles and benefits. In the conservation partnership scheme, it is necessary to strengthen the institutional governance, regional governance and business governance. Programmes and action plans for the realization of integrated strategies planning and development of the WKNP area with those of related stakeholders, through the creation of conservation partnerships defining role and benefit sharing scheme in the natural resources and ecosystem protection and utilization presented in **Table 21**.

**Table 21** Programme and Action Plan for the Integration of Planning and Development of WKNP Areas through Conservation Partnership in the Role Scheme and Benefit Sharing from Natural Resources and Ecosystem Protection and Utilization.

DESCRIPTION		LOCATION	STAKEHOLDER(S)	INDICATIVE BUDGET (Euro)	TIME FRAME
<b>Sub-programme 9. Strengthening stakeholder collaboration in the area of WKNP (Conservation Partnership)</b>					
1	Consultation meetings and forum coordination and multi-stakeholder dialogue	Central Lampung and East Lampung District	WKNP, Provincial Government, District Government, UNILA, WCS, Alert, PKHS, YABI, PILI, FRDP	36,364	2018-2023
2	Institutional strengthening at the village level, including the Forum Rembug Desa of the WKNP area	Central Lampung and East Lampung District	WKNP, Provincial Government, District Government, UNILA, WCS, Alert, PKHS, YABI, PILI, FRDP	36,364	2018-2023
3	Preparation of SOPs on the protection, conservation and utilization of natural resources and ecosystems including mechanisms of role sharing and benefits for stakeholders	Central Lampung and East Lampung District	WKNP, Provincial Government, District Government, UNILA, WCS, Alert, PKHS, YABI, PILI, FRDP	4,545	2018
4	Synchronization of program plans and budgeting with stakeholders to optimize the WKNP Area Collaboration Plan.	Central Lampung and East Lampung District	WKNP, Provincial Government, District Government, UNILA, WCS, Alert, PKHS, YABI, PILI, FRDP	36,364	2018
5.	Development of business processes related to institutional governance, regional governance and business governance in conservation partnership schemes	5 Villages	WKNP, Provincial Government, District Government, UNILA, WCS, Alert, PKHS, YABI, PILI, FRDP	36,364	2018

#### 5.4. Monitoring and Evaluation of WKNP Collaborative Management Plan

Programmes and activities from the implementation of WKNP's Collaborative Management Plan require systematic and measurable monitoring and evaluation. Some things that are of concern and direction in conducting monitoring and evaluation so that the implementation of Collaborative Management Plan can be efficient and effective are as follows:

1. Using the knowledge management tool (process documentation), SITROOM media.
2. Monitoring is carried out jointly by all relevant stakeholders.
3. Monitoring is carried out periodically every four months (quarterly)
4. Evaluation is carried out every year through annual meetings conducted with stakeholders
5. Annual evaluations must be able to provide feedback to WKNP area managers and improve and revise future work plans.

Therefore, monitoring and evaluation requires baseline data which refers to information describing various aspects related to the WKNP area and the buffer zones of the area. The situation or condition of the WKNP area before various project activities began, needs to be collected as a reference for achieving desired changes through collaborative management of



WKNP. When the WKNP collaborative management project is completed (5 years), the manager can collect information on the same area and compare the "before" and "after" activities carried out and see the changes occurring and the level of achievement of the designated WKNP collaborative management plan targets. The Programme and action plan for the realization of the monitoring and evaluation strategy of the collaborative management plan of WKNP are presented in **Table 22**.

**Table 22** Programme Monitoring and Evaluation of Collaborative Management Plan of WKNP.

DESCRIPTION		LOCATION	STAKEHOLDER(S)	INDICATIVE BUDGET (Euro)	TIME FRAME
<b>Sub-programme 10. Strengthening stakeholder collaboration in WKNP area (Conservation Partnership)</b>					
1	Preparation of the Monev database	Lampung Province	WKNP, Provincial Government, District Government, UNILA, WCS, Alert, PKHS, YABI, PILI, FRDP	1,212	2018
2	Quarterly monitoring and annual evaluation.	Lampung Province	WKNP, Provincial Government, District Government, UNILA, WCS, Alert, PKHS, YABI, PILI, FRDP	9,091	2018-2023

Monitoring and evaluation of the implementation of each Programme and activities based on the indicators of its success.

#### 5.4.1. Indicator of the Monitoring and Evaluation for the institutional strengthening at site level (Resort)

The implementation of WKNP resort-based institutional strengthening strategy success indicators, that will be the monitoring and evaluation targets are presented in **Table 23**.

**Table 23.** Programme Indicators and Action Plan for the institutional strengthening at site level (Resort)

DESCRIPTION		BENCHMARK INDICATOR	TIME FRAME
<b>Sub-Programme 1. Development of Resort Based Management System (RBM)</b>			
1	RBM system planning	Twelve (12) package of resort planning documents.	2018-2021
2	Preparation of information management system.	Three (3) packages of devices and systems.	2018-2021
3	Enhancing staff capacity (by training)	Nine (9) training packages for 60 staff): GPS, GIS, SMART SIM, introduction of species, interpreters, community facilitators, business analysis, environmental valuation, water quality monitoring;	2018-2021
4	Change of zoning in accordance with management objectives (zoning revision)	One (1) package of zonation revision document.	2018-2021
5	Study and development of traditional utilization zones.	Five (5) packages of studies and development of traditional utilization zones at five resorts adjacent to the village.	2018-2021

#### 5.4.2. Indicator of the Monitoring and Evaluation of the whole WKNP area protection, the biodiversity and its ecosystem

Description of the success indicators of the implementation of the whole WKNP area protection, the biodiversity and its ecosystem which will be the target of monitoring and evaluation presented in **Table 24**.

**Table 24.** Programme Indicators and Action Plan for the whole WKNP area protection, the biodiversity and its ecosystem.

DESCRIPTION		BENCHMARK INDICATOR	TIME FRAME
<b>Sub-Programme 2. Area Protection and Safeguarding.</b>			
1	Inventory, mapping, area vulnerability systems, including potential conflicts and forestry crime activities.	One (1) complete document package of vulnerability maps and its information systems.	2018
2	Preparation of mitigation and action plans and conflict management including preparation of law enforcement SOP.	One (1) package of action plan and mitigation of vulnerability and conflict management and one package of Standard Operational Procedure (SOP) of law enforcement	2018
3	Protection and security activities including fire handling, animal conflict and forestry crime activities.	Twelve (12) package of activity reports (12 resorts) of area protection and security including fire handling, animal conflict and forestry crime activities.	2018-2023
4	Capacity building and skills of (forest ranger polhut) and forest ranger partner community (MMP).	Three (3) training packages at Section of National Park Management (SPTN) level involving 220 forest ranger partner community (MMP) elephants and 64 MMP forest guard Pamhut, staff.	2020-2021
5	Guard against forest crime cases.	Five (5) to seventeen (17) cases were escorted until P21 filing.	2018
6	Establishment of an integrated team at the provincial and district level to handle illegal activities (Regional Leader Communication Forum/FORKOPIMDA)	Three (3) packages of minutes of meeting document of the establishment of integrated team at the provincial and district level for handling the illegal activities	2018
7	Escorting forest crime cases	Five (5) to seventeen (17) cases to be escorted until P.21	2018-2023

#### 5.4.3. Indicator of the Monitoring and Evaluation of the flora and fauna preservation through data and information update and its development

Description of the success indicators of the implementation of the flora and fauna preservation through data and information update and its development which will be the target of monitoring and evaluation presented in **Table 25**.

**Table 25.** Programme Indicators and Action Plans for the flora and fauna preservation through data and information update and its development.

DESCRIPTION		BENCHMARK INDICATOR	TIME FRAME
<b>Sub-Programme 3. Flora and Fauna Preservation</b>			
1	Preparation of road map for future flora and fauna research	One (1) document road map research	2018
2	Research and monitor of key fauna species	Seven (7) packages of research documents and monitoring of key species (Sumatran tigers, elephants,	2018-2023

DESCRIPTION		BENCHMARK INDICATOR	TIME FRAME
		Sumatran rhinos, sun bears, tapirs, White-winged wood-duck, Storm stork).	
3	Inventory of native vegetation and carbon storage study	One document of Inventory of native vegetation and carbon storage study	2020
4	Research and collection of key species DNA	Five (5) research documents and five key species.	2018, 2021, 2023
5	Establishment of habitats and populations of key species, including SOP for food harvesting, habitat inventory, food source management of rhino and elephant	Seven (7) habitat management documents, including conditions, populations of key species.	2018-2023
6	Strengthening of elephant training centre (PLG) and SRS Management	Two (2) packages of planning documents and best practices of management of PLG and SRS.	2018
7	Monitoring and mitigating the impact of cow dung liquid waste on the rivers in the area	Four (4) times of monitoring a year. (a quarterly)	2018-2023

#### 5.4.4. Indicator of the Monitoring and Evaluation of the habitat development through ecosystem restoration

Description of the success indicators of the implementation of the habitat development through ecosystem restoration which will be the target of monitoring and evaluation presented in **Table 26**.

**Table 26.** Programme Indicators and Action Plans of the habitat development through ecosystem restoration.

DESCRIPTION		BENCHMARK INDICATOR	TIME FRAME
<b>Sub-Programme 4. Ecosystem Restoration</b>			
1	Revitalization of the WKNP ecosystem recovery plan according to zoning changes	One (1) package of revitalization document of WKNP ecosystem recovery plan according to zoning change.	2018
2	Ecosystem recovery of 2,000 ha	One (1) package of program/activities on technical ecosystem restoration in 2.000 ha.	2018-2021

#### 5.4.5. Indicator of the Monitoring and Evaluation of the local community critical awareness enhancing toward the WKNP area sustainability

Description of the success indicators of the implementation of the local community critical awareness enhancing toward the WKNP area sustainability which will be the target of monitoring and evaluation presented in **Table 27**.

**Table 27.** Programme Indicators and Action Plans of the local community critical awareness enhancing toward the WKNP area sustainability.

DESCRIPTION		BENCHMARK INDICATOR	TIME FRAME
<b>Sub-Programme 5. Community outreach and conservation awareness</b>			
1	The construction of community environmental education centre facilities	One (1) site design package and construction of environmental education centre facilities and conservation education.	2020

DESCRIPTION		BENCHMARK INDICATOR	TIME FRAME
2	Awareness and environment education to the community, students and children (school visits, Conservation Education, etc.)	At least 40-50 thousand people are involved in the awareness and environmental education and conservation processes.	2018-2023

#### 5.4.6. Indicator of the Monitoring and Evaluation of the village spatial plan integration through assisted village model, and integrated ecotourism model development

Description of the success indicators of the implementation of the village spatial plan integration through assisted village model, and integrated ecotourism model development which will be the target of monitoring and evaluation presented in **Table 28**.

**Table 28.** Programme Indicators and Action Plans of the village spatial plan integration through assisted village model, and integrated ecotourism model development

DESCRIPTION		BENCHMARK INDICATOR	TIME FRAME
<b>Sub-programme 6. Community development focuses on agricultural and forestry commodities</b>			
1	Facilitation on community involvement in organic farming activities	One (1) package of activities Organic farming for 6 groups in 6 villages.	2018-2022
2	Improvement of institutional capacity of community business groups (training series)	One (1) series of group business management training packages for 5 units of business groups in 5 priority villages.	2018-2020
3	Legal access of cooperation (MoU) and empowerment of business units group of non-timber forest product developers, such as Agarwood nursery, orchids and honey	One (1) MoU document package and cooperation agreement between WKNP and community groups for each NTFPs activity (Agarwood nursery, natural orchid orchard, honey bee cultivation)	2018-2020
<b>Sub-Programme 7 Development of a Assisted Village Model</b>			
1	Facilitate the detailed of assisted villages spatial planning in the buffer zone.	5 packages of documents in 5 pilot villages). [NOTE The old village of Labuhan Ratu induk has tenurial conflict]	2018-2020
2	Preparation of village area governance and institutional mechanisms at the assisted villages level	Five (5) package of synchronization documents on regional governance and village development plans and institutional mechanisms in the target villages..	2018-2020
3	Mentoring and optimizing BUM Desa as a village economic institution that strengthens the business of community groups	Five (5) packages of business planning, marketing and business development assistance documents	
4	Development of non-timber forest products (NTFPs), such as animal breeding, Agarwood nursery, orchids and honey	5 units of community business groups have collaborated with WKNP	2018-2020
5	Facilitate and creation of nursery to provide restoration of ecosystems, feeding elephants and rhinos, commercial logging (community logging) on community lands (availability of several ha of nursery area).	One (1) package of assistance activities and making nurseries for the provision of ecosystem recovery, elephant and rhinoceros feed, community logging as wide as several hectares.	2018-2020
6	Biogas installation as a demo plot of firewood substitution	Two (2) packages of biogas installation at 2 assisted villages	2018-2020
7	Making a fishing pond as tourism site destination	One (1) package of fishing pond activity in 1 assisted village.	2020

DESCRIPTION		BENCHMARK INDICATOR	TIME FRAME
8	Forest Fire Handling	One (1) package of forest fire handling activity in priority locations	2018-2023
<b>Sub-Programme 8. Development of Integrated Ecotourism Models</b>			
1	Development of an integrated ecotourism business model and site plan, and integrated ecotourism DED in 5 target villages	Five (5) document packages of integrated ecotourism business development model along with the site plan in 5 pilot villages.	2018-2020
2	Development of community-based ecotourism programs and other potential environmental services	Five (5) package of Facilitation activities the Development of ecotourism program in 5 assisted villages	2018-2021
3	Ecotourism development capacity training	Five (5) series of ecotourism training series, including of 'sapta pesona', digital campaign, promotion and marketing plan, home stay construction at 5 assisted villages.	2018-2020
4	Facilitation and development of Promotion and Marketing	Five (5) package of Facilitation and the promotion and marketing network at 5 assisted villages.	2018-2021
5	Study of the impact of integrated ecotourism management	One (1) package of study documents on the impact of integrated ecotourism management in the WKNP area	2021

#### 5.4.7. Indicator of the Monitoring and Evaluation of integrated planning and development of the WKNP area with those of related stakeholders, through the creation of conservation partnerships defining role and benefit sharing scheme in the natural resources and ecosystem protection and utilization

Description of the success indicators of the integrated WKNP area planning and development with related stakeholders, through the conservation partnerships development defining role and benefit sharing scheme in the natural resources and ecosystem protection and utilization which will be the target of monitoring and evaluation presented in **Table 29**.

**Table 29.** Programme Indicators and Action Plans of Planning and Development of the integrated WKNP area planning and development with related stakeholders, through the conservation partnerships development defining role and benefit sharing scheme in the natural resources and ecosystem protection and utilization.

DESCRIPTION		BENCHMARK INDICATOR	TIME FRAME
<b>Sub-Programme 9. Strengthening stakeholder collaboration in WKNP (Conservation Partnership)</b>			
1	Consultation meetings and forum coordination and multi-stakeholder dialogue	One (1) package of consultation meetings and forum coordination and multi-stakeholder dialogue each year.	2018-2023
2	Institutional strengthening at the village level, including the Forum Rembug Desa of the WKNP area	Six (6) packages of Institutional strengthening at the village level, including the Forum Rembug Desa.	2018-2023
3	Preparation of SOPs on the protection, conservation and utilization of natural resources and ecosystems including mechanisms of role sharing and benefits for stakeholders	One (1) package of SOP and role division institution mechanism and benefit for stakeholders.	2018
4	Synchronization of program plans and budgeting with stakeholders to optimize the WKNP Area Collaboration Plan.	One (1) package of synchronization planning and budgeting activities with stakeholders to optimize the WKNP Area Collaboration Plan	2018
5	Development of business processes	One (1) package of business partnership conservation	2018

DESCRIPTION		BENCHMARK INDICATOR	TIME FRAME
	related to institutional governance, regional governance and business governance in conservation partnership schemes	document documents related to institutional governance, regional governance, and business governance.	



Description of all strategy of logical framework analysis matrices, Programme and activities, and indicators of collaborative management plan of WKNP is shown in **Table 30**.

**Table 30.** LFA Matrix (Logical Framework Approach), Strategy, Programme, Activity and Indicator of Collaborative Management at WKNP in Period 2018-2023

DESCRIPTION	STRATEGY	PROGRAMME AND ACTIVITY	INDICATOR(S)
<b>VISION</b> : The Way Kambas National Park as an ideal habitat for the Sumatra protected wild species that brings self-sufficiency and prosperity to local communities			
<b>OBJECTIVE1:</b> Conserving natural resources and ecosystems in WKNP as life support systems			
<b>A. Natural Resources and Ecosystem Conservation in WKNP Programme</b>			
<b>Output 1:</b> Institutional capacity built that can meet the achievement targets of the WKNP area management	Strengthening of WKNP Institutional at resort level	<b>Sub-Programme 1: Development of Resort based Management/RBM system</b>	
		<u>Activity direction</u>	-
		1.RBM system planning at 12 Resorts.	Twelve (12) package of resort planning documents.
		2.Preparation of information management system at 3 Park Section Office (SPTN).	Three (3) packages of devices and systems.
		3.Enhancing the staff capacity;	Nine (9) training packages for 60 staff): GPS, GIS, SMART SIM, introduction of species, interpreters, community facilitators, business analysis, environmental valuation, water quality monitoring;
		4. Zoning changes according to governance objectives.	One (1) package of zonation revision document.
		5.Study and development of traditional utilization zones..	Five (5) packages of studies and development of traditional utilization zones at five resorts adjacent to the village.
<b>Output 2:</b> protected and well-managed on biodiversity and its ecosystems	Overall Area Protection and Biodiversity and Ecosystems in the WKNP Area	<b>Sub-Programme 2: Area Protection and Safeguarding</b>	
		<u>Activity direction</u>	-
		1.Inventory, mapping, area vulnerability systems, including potential conflicts and forestry crime activities.	One (1) complete document package of vulnerability maps and its information systems.
		2. Preparation of mitigation and action plans and conflict management including preparation of law enforcement SOP.	One (1) package of action plan and mitigation of vulnerability and conflict management and one package of Standard Operational Procedure (SOP) of law enforcement

DESCRIPTION	STRATEGY	PROGRAMME AND ACTIVITY	INDICATOR(S)
		3. Protection and security activities including fire handling, animal conflict and forestry crime activities at 12 sites	Twelve (12) package of activity reports (12 resorts) of area protection and security including fire handling, animal conflict and forestry crime activities.
		4. Construction of monitoring posts and joint supervision at the WKNP border	Seven (7) packages for building monitoring posts and joint supervision in priority resorts.
		5. Capacity building and skills of (forest ranger polhut) and forest ranger partner community (MMP).	Three (3) training packages at Section of National Park Management (SPTN) level involving 220 forest ranger partner community (MMP) elephants and 64 MMP forest guard Pamhut, staff.
		6. Establishment of an integrated team at the provincial and district level to handle illegal activities (Regional Leader Communication Forum/FORKOPIMDA)	Three (3) packages of minutes of meeting document of the establishment of integrated team at the provincial and district level for handling the illegal activities
		7. Escorting forest crime cases	Five (5) to seventeen (17) cases to be escorted until P.21
<b>Output 3:</b> Available scientific data of flora and fauna and its natural resources sustainable use	Preservation of flora and fauna through data and information updates and development	<b>Sub-Programme 3: Flora and Fauna Preservation</b>	
		<u>Activity direction</u>	-
		1. Preparation of road map for future flora and fauna research	One (1) document road map research
		2. Research and monitor of key fauna species	Seven (7) packages of research documents and monitoring of key species (Sumatran tigers, elephants, Sumatran rhinos, sun bears, tapirs, White-winged wood-duck, Storm stork).
		3. Inventory of native vegetation and carbon storage study	One document of Inventory of native vegetation and carbon storage study
		4. Research and collection of key species DNA	Five (5) research documents and five key species.
		5. Establishment of habitats and populations of key species, including SOP for food harvesting, habitat inventory, food source management of rhino and elephant	Seven (7) habitat management documents, including conditions, populations of key species.
		6. Strengthening of elephant training centre (PLG) and SRS Management	Two (2) packages of planning documents and best practices of management of PLG and SRS.
		7. Monitoring and mitigating the impact of cow dung liquid waste on the rivers in the area	Four (4) times of monitoring a year. (a quarterly)

DESCRIPTION	STRATEGY	PROGRAMME AND ACTIVITY	INDICATOR(S)
	Habitat development through ecosystem recovery sub-Programmes	<b>Sub-Programme 4: Ecosystem Restoration</b>	
		<u>Activity direction</u>	-
		1.Revitalization of the WKNP ecosystem recovery plan according to zoning changes	One (1) package of revitalization document of WKNP ecosystem recovery plan according to zoning change.
		2.Ecosystem recovery of 2,000 ha	One (1) package of program/activities on technical ecosystem restoration in 2.000 ha.
<b>OBJECTIVE 2:</b> Improving the welfare and prosperity of buffer village community through the sustainable use of natural resources and ecosystems in WKNP			
<b>B. Programme of self-reliance enhancing and community welfare</b>			
<b>Output 4:</b> Build independence and community welfare of WKNP surroundings to support the WKNP sustainability	Enhancing the community critical awareness of WKNP sustainability	<b>Sub-Programme 5: Community outreach and conservation awareness</b>	
		<u>Activity direction</u>	-
		1.The construction of community environmental education centre facilities	One (1) site design package and construction of environmental education centre facilities and conservation education.
		2.Awareness and environment education to the community, students and children (school visits, Conservation Education, etc.)	At least 40-50 thousand people are involved in the awareness and environmental education and conservation processes.
	The integration of village spatial plans through the development of assisted village models and the development of integrated ecotourism models	<b>Sub-Programme 6: Community development focuses on agricultural and forestry commodities</b>	
		<u>Activity direction</u>	-
		1.Facilitation on community involvement in organic farming activities	One (1) package of activities Organic farming for 6 groups in 6 villages.
		2.Improvement of institutional capacity of community business groups (training series)	One (1) series of group business management training packages for 5 units of business groups in 5 priority villages.
		3.Legal access of cooperation (MoU) and empowerment of business units group of non-timber forest product developers, such as Agarwood nursery, orchids and honey	One (1) MoU document package and cooperation agreement between WKNP and community groups for each NTFPs activity (Agarwood nursery, natural orchid orchard, honey bee cultivation)
		<b>Sub-Programme 7: Development of priority village model ('Desa Binaan')</b>	
		<u>Activity direction</u>	
		1.Facilitate the detailed of assisted villages spatial planning in the buffer zone.	5 packages of documents in 5 pilot villages). [NOTE The old village of Labuhan Ratu induk has tenurial conflict]]

DESCRIPTION	STRATEGY	PROGRAMME AND ACTIVITY	INDICATOR(S)
		2.Preparation of village area governance and institutional mechanisms at the assisted villages level	Five (5) package of synchronization documents on regional governance and village development plans and institutional mechanisms in the target villages.
		3.Mentoring and optimizing BUM Desa as a village economic institution that strengthens the business of community groups	Five (5) packages of business planning, marketing and business development assistance documents
		4.Development of non-timber forest products (NTFPs), such as animal breeding, Agarwood nursery, orchids and honey	5 units of community business groups have collaborated with WKNP
		5.Facilitate and creation of nursery to provide restoration of ecosystems, feeding elephants and rhinos, commercial logging (community logging) on community lands (availability of several ha of nursery area).	One (1) package of assistance activities and making nurseries for the provision of ecosystem recovery, elephant and rhinoceros feed, community logging as wide as several hectares.
		6.Biogas installation as a demo plot of firewood substitution	Two (2) packages of biogas installation at 2 assisted villages
		7.Making a fishing pond as tourism site destination	One (1) package of fishing pond activity in 1 assisted village.
		8. Forest Fire Handling	One (1) package offorest fire handling in priority locations.
		<b>Sub-Programme 8: Development of Integrated Ecotourism Model</b>	
		<i>Activity direction</i>	-
		1.Development of an integrated ecotourism business model and site plan, and integrated ecotourism DED in 5 target villages	Five (5) document packages of integrated ecotourism business development model along with the site plan in 5 pilot villages.
		2.Development of community-based ecotourism programs and other potential environmental services	Five (5) package of Facilitation activities the Development of ecotourism program in 5 assisted villages
		3.Ecotourism development capacity training	Five (5) series of ecotourism training series, including of 'sapta pesona', digital campaign, promotion and marketing plan, home stay construction at 5 assisted villages.
		4.Facilitation and development of Promotion and Marketing	Five (5) package of Facilitation and the promotion and marketing network at 5 assisted villages.

DESCRIPTION	STRATEGY	PROGRAMME AND ACTIVITY	INDICATOR(S)
		5. Study of the impact of integrated ecotourism management	One (1) package of study documents on the impact of integrated ecotourism management in the WKNP area
<b>Output 5:</b> The synergy of ecological, social and economic benefits of the WKNP for regional interests and related parties at the national and international levels	Integration of WKNP area planning and development through Conservation Partnerships in the role scheme and sharing benefits from natural resources and protection & utilization of ecosystems	<b>Sub-Programme 9: Strengthening stakeholder collaboration in the area of WKNP (Conservation Partnership)</b>	
		<i>Activity direction</i>	-
		1. Consultation meetings and forum coordination and multi-stakeholder dialogue	One (1) package of consultation meetings and forum coordination and multi-stakeholder dialogue each year.
		2. Institutional strengthening at the village level, including the Forum Rembug Desa of the WKNP area	Six (6) packages of Institutional strengthening at the village level, including the Forum Rembug Desa.
		3. Preparation of SOPs on the protection, conservation and utilization of natural resources and ecosystems including mechanisms of role sharing and benefits for stakeholders	One (1) package of SOP and role division institution mechanism and benefit for stakeholders.
		4. Synchronization of program plans and budgeting with stakeholders to optimize the WKNP Area Collaboration Plan.	One (1) package of synchronization planning and budgeting activities with stakeholders to optimize the WKNP Area Collaboration Plan
		5. Development of business processes related to institutional governance, regional governance and business governance in conservation partnership schemes	One (1) package of business partnership conservation document documents related to institutional governance, regional governance, and business governance.
<b>C. Monitoring and Evaluation</b>			
	Preparing the MONEV Action Plan undertaken by involving the beneficiaries	<b>Programme : Development of monitoring and evaluation</b>	
		<i>Activity direction</i>	-
		1. Preparation of Monev baseline data	One package of Monev baseline data development
		2. Quarterly monitoring and annual evaluation.	Fifteen (15) packages of monitoring documentation and one package evaluation.

Description of Indicative Budget to implementation of Programme and activities, and sub Programme of collaborative management plan of WKNP is shown in **Table 31**.

**Table 31** Recapitulation of indicative budget of WKNP collaborative management plan 2018-2023 implementation

STRATEGY	PROGRAMME AND ACTIVITY	INDICATIVE BUDGET (Euro)	TIME FRAME					FUNDING	
			2018	2019	2020	2021	2022	SGP	Other Sources
A. Natural resources and ecosystem Conservation in WKNP Programme		2,187,879	572,121	547,879	493,333	278,182	296,364	277,085	1,910,794
1. Strengthening of WKNP Institutional at resort level	Sub-Programme 1: Development of Resort based Management/RBM System	157,636	52,545	52,545	52,545	-	-	77,600	80,036
2. Overall Area Protection and Biodiversity and Ecosystems in the WKNP Area	Sub-Programme 2: Area Protection and Safeguarding	1,137,879	259,091	221,212	221,212	218,182	218,182	32,576	1,105,303
3. Preservation of flora and fauna through data and information updates and development	Sub-Programme 3: Flora and Fauna Preservation	459,091	110,000	132,727	78,182	60,000	78,182	91,667	367,424
4. Habitat development through ecosystem recovery sub-Programmes	Sub-Programme 4: Ecosystem Restoration	433,273	150,485	141,394	141,394	-	-	75,242	358,030
B. Community Livelihood Improvement Programme		321,818	97,879	123,939	50,000	26,364	23,636	124,394	197,424
2. Enhancing the community critical awareness of WKNP sustainability	Sub-Programme 5: Communtiy outreach and conservation awareness	57,576	7,273	28,485	7,273	7,273	7,273	28,788	28,788
3. The integration of village spatial plans through the development of assisted village models and the development of integrated ecotourism models	Sub-Programme 6: Community development focuses on agricultural and forestry commodities	23,030	8,788	8,788	2,727	2,727	-	11,515	11,515
	Sub-Programme 7: Development of priority village model ('Desa Binaan')	76,364	30,909	43,030	2,424	-	-	30,909	45,455
	Sub-Programme 8: Development of Integrated Ecotourism Model	77,273	28,788	27,273	21,212	-	-	22,273	55,000
4. Integration of WKNP area planning and development through Conservation Partnerships in the role scheme and sharing benefits from natural resources and protection & utilization of ecosystems	Sub-Programme 9: Strengthening stakeholder collaboration in WKNP (Conservation Partnership)	77,273	19,091	14,545	14,545	14,545	14,545	25,758	51,515
Preparing the MONEV Action Plan undertaken by involving the beneficiaries	Monitoring and Evaluation	10,303	3,030	1,818	1,818	1,818	1,818	5,152	5,152



Total	2,509,697	670,000	671,818	543,333	304,545	320,000	401,479	2,108,218
-------	-----------	---------	---------	---------	---------	---------	---------	-----------

**Table 32.** Indicative Budget of Collaborative Management Programme in WKNP, Period 2018-2023

STRATEGY	PROGRAMME AND ACTIVITY	LOCATION	STAKEHOLDER	INDICATIVE BUDGET (Euro)	TIME FRAME					SGP	Other funding	
					2019	2020	2021	2022	2023			
A. Programme pelestarian sumber daya alam dan ekosistem di WKNP				TOTAL	2,187,879	572,121	547,879	493,333	278,182	296,364	277,085	1,910,794
Strengthening of WKNP Institutional at resort level	Sub-Programme 1: The RBM system development			157,636	52,545	52,545	52,545	-	-			
	Activity direction											
	1. RBM system planning at 12 Resorts.	12 Resorts	WKNP, WCS, Alert, PILI	72,727	24,242	24,242	24,242			36,364	36,364	
	2. Preparation of information management system at 3 Park Section Office (SPTN).	3 SPTN	WKNP, WCS, Alert, PILI	13,636	4,545	4,545	4,545			9,091	4,545	
	3. Staff Capacity Development (training);	12 Resorts, 3 SPTN	WKNP, WCS, Alert, PILI	36,364	12,121	12,121	12,121			14,545	21,818	
	4. Revision of zoning system based on management goals (zoning revision)	WKNP	WKNP, Provincial Government of Lampung, District Government of East Lampung dan Central Lampung, UNILA, WCS, Alert, PKHS, YABI, PILI, FRDP	21,273	7,091	7,091	7,091			8,509	12,764	
	5. Assessment and development of traditional utilization zone.	5 resorts buffering with village	WKNP, WCS, Alert, PILI	13,636	4,545	4,545	4,545			9,091	4,545	
Overall Area Protection and Biodiversity and Ecosystems in the WKNP Area	Sub-Programme 2: Area Protection and Security			459,091	110,000	132,727	78,182	60,000	78,182	32,576	1,105,303	
	Activity direction											
	1. Inventory, mapping, area vulnerability system, including conflict potency and forest crime activity	12 Resorts	WKNP, WCS, Alert, PILI	9,091	9,091					4,545	4,545	
	2. Development of mitigation plan and action plan, also development of law enforcement SOP	12 Resorts, 3 SPTN	WKNP, WCS, Alert, PILI	212,121	42,424	42,424	42,424	42,424	42,424	4,545	4,545	
	3. Protection and security activity including forest fire handling,	12 Resorts	WKNP, WCS, Alert, PILI	72,727		72,727					1,030,303	

STRATEGY	PROGRAMME AND ACTIVITY	LOCATION	STAKEHOLDER	INDICATIVE BUDGET (Euro)	TIME FRAME					SGP	Other funding
					2019	2020	2021	2022	2023		
	animal conflict and forest crimes.										
	4. Building Monitoring and Joint Monitoring Post at the border of WKNP area	3 Priority Resorts	WKNP, WCS, Alert, ERU, PILI, District Government of East Lampung, District Level of Central Lampung and Provincial Government of Lampung	54,545	18,182		18,182		18,182		6,061
	5. Capacity and skill development for the forest police and forest police partner community (MMP)	3 SPTN	WKNP, WCS, Alert, PILI	75,758	15,152	15,152	15,152	15,152	15,152	9,091	9,091
	6. Establishment of an integrated team at the provincial and district level to handle illegal activities (Regional Leader Communication Forum/FORKOPIMDA)	Central Lampung District, East Lampung District and Lampung Province	WKNP, Muspida of Lampung Province, Muspida of East Lampung and Central Lampung	22,727	22,727					2,273	2,273
	7. Escorting forest crime cases	12 Resorts	WKNP, FORKOPIMDA, WCS, Alert, PILI	12,121	2,424	2,424	2,424	2,424	2,424	2,121.21	48,485
Preservation of flora and fauna through data and information updates and developmen	<b>Sub-Programme 3: Preserving Flora and Fauna</b>			<b>459,091</b>	<b>110,000</b>	<b>132,727</b>	<b>78,182</b>	<b>60,000</b>	<b>78,182</b>	<b>78,182</b>	<b>91,667</b>
	<i>Activity direction</i>										
	1. Preparation of road map for future flora and fauna research	12 Resorts	WKNP, UNILA, YABI, WCS, Alert, PKHS, Vesswic, PILI	9,091	9,091					4,545	4,545
	2. Research and monitoring key fauna species	12 Resorts	WKNP, UNILA, YABI, WCS, Alert, PKHS, Vesswic, PILI	212,121	42,424	42,424	42,424	42,424	42,424	26,515	185,606
	3. Inventory of native vegetation and carbon storage study	12 Resorts	WKNP, UNILA, YABI, WCS, Alert, PKHS, Vesswic, PILI	72,727		72,727				12,121	60,606
	4. Research and collection of key species DNA	12 Resorts	WKNP, UNILA, YABI, WCS, Alert, PKHS, Vesswic, PILI	54,545	18,182		18,182		18,182	27,273	27,273
	5. Establishment of habitats and populations of key species,	12 Resorts	WKNP, UNILA, YABI, WCS, Alert, PKHS,	75,758	15,152	15,152	15,152	15,152	15,152	9,470	66,288

STRATEGY	PROGRAMME AND ACTIVITY	LOCATION	STAKEHOLDER	INDICATIVE BUDGET (Euro)	TIME FRAME					SGP	Other funding
					2019	2020	2021	2022	2023		
	including harvesting SOP of pulses, habitat inventory, management of rhino and elephant feed source		Vesswic, PILI								
	6. Strengthening PLG and SRS Management	ETC and Margahayu Resort	WKNP, UNILA, YABI, WCS, Alert, PKHS, Vesswic, PILI	22,727	22,727					5,682	17,045
	7. Monitoring and mitigating the impact of cow dung liquid waste on the rivers in the area	1 Resort	WKNP, UNILA, YABI, WCS, PILI	12,121	2,424	2,424	2,424	2,424	2,424	6,061	6,061
Habitat development through ecosystem recovery sub-Programmes	<b>Sub-Programme 4: Pemulihan ekosistem</b>			<b>433,273</b>	<b>150,485</b>	<b>141,394</b>	<b>141,394</b>	<b>-</b>	<b>-</b>	<b>75,242</b>	<b>358,030</b>
	<i>Activity direction</i>										
	1. Revitalization of the WKNP ecosystem recovery plan according to zoning changes	12 Resorts	WKNP, UNILA, YABI, WCS, Alert, PKHS, PILI, FRDP, ORIGA	9,091	9,091					4,545	4,545
	2. Ecosystem recovery of 2,000 ha	2 Resorts	WKNP, UNILA, YABI, WCS, Alert, PKHS, PILI, FRDP, ORIGA	424,182	141,394	141,394	141,394			70,697	353,485
B. Programme peningkatan kemandirian dan kesejahteraan masyarakat				<b>356,667</b>	<b>114,545</b>	<b>128,485</b>	<b>54,545</b>	<b>30,909</b>	<b>28,182</b>	<b>124,394</b>	<b>232,273</b>
Enhancing the community critical awareness of WKNP sustainability	<b>Sub-Programme 5: Environmental Education Center and Community Awareness</b>			<b>57,576</b>	<b>7,273</b>	<b>28,485</b>	<b>7,273</b>	<b>7,273</b>	<b>7,273</b>	<b>28,788</b>	<b>28,788</b>
	<i>Activity direction</i>										
	1. The construction of community environmental education centre facilities	Rantau Jaya Udik II Village	WKNP, WCS, Alert, PILI, UNILA, FRDP	21,212		21,212				10,606	10,606
	2. Awareness and environment education to the community, students and children (school visits, Conservation Education, etc.)	Buffer Village	WKNP, WCS, Alert, PILI, UNILA, FRDP	36,364	7,273	7,273	7,273	7,273	7,273	18,182	18,182
The integration of village spatial plans through the	<b>Sub-Programme 6: Community development on agricultural and forestry commodities focused</b>			<b>23,030</b>	<b>8,788</b>	<b>8,788</b>	<b>2,727</b>	<b>2,727</b>	<b>-</b>	<b>11,515</b>	<b>11,515</b>
	<i>Activity direction</i>										

STRATEGY	PROGRAMME AND ACTIVITY	LOCATION	STAKEHOLDER	INDICATIVE BUDGET (Euro)	TIME FRAME					SGP	Other funding
					2019	2020	2021	2022	2023		
development of assisted village models and the development of integrated ecotourism models	1. Facilitating on community involvement in organic farming activities	5 Villages	WKNP, WCS, Alert, PILI	10,909	2,727	2,727	2,727	2,727		5,455	5,455
	2. Improvement of institutional capacity of community business groups (training series)	5 Villages	WKNP, WCS, Alert, PILI, FRDP	9,091	4,545	4,545				4,545	4,545
	3. Legal access of cooperation (MoU) and empowerment of business units group of non-timber forest product developers, such as Agarwood nursery, orchids and honey	5 Villages	WKNP, WCS, Alert, PILI	3,030	1,515	1,515				1,515	1,515
	Sub-Programme 7: Development of a Assisted Village Model				76,364	30,909	43,030	2,424	-	-	30,909
Activity direction											
	1. Facilitate a detailed plan for the spatial layout of the assisted villages in the buffer zone including the preparation of village regulations that regulate punishment for violations (hunting / logging).	Braja Harjosari and Rantau Jaya Udik II Village	WKNP, UNILA, WCS, Alert, PILI	24,242	12,121	12,121				4,848	19,394
	2. Review and synchronize the RPJMDes and RKP at the Priority Village level	Braja Harjosari and Rantau Jaya Udik II Village	WKNP, WCS, Alert, PILI	3,030	1,515	1,515				1,515	1,515
	3. Mentoring and optimizing BUMDes as village economic institutions that strengthen the business of community groups.	Braja Harjosari and Rantau Jaya Udik II Village	WKNP, WCS, Alert, PILI, UNILA	7,273	2,424	2,424	2,424			3,636	3,636

STRATEGY	PROGRAMME AND ACTIVITY	LOCATION	STAKEHOLDER	INDICATIVE BUDGET (Euro)	TIME FRAME					SGP	Other funding
					2019	2020	2021	2022	2023		
	4. Developing non-timber forest product (NTFPs) activities, such as animal breeding, gaharu, orchid and honey breeding (5 units of community business groups have collaborated with WKNP).	Braja Harjosari and Rantau Jaya Udik II Village	WKNP, WCS, Alert, PILI	9,091	4,545	4,545				4,545	4,545
	5. Assistance and Creation of nursery gardens for the provision of ecosystem restoration, elephants and rhinos feeds, commercial logging (community logging) on community lands.	Braja Harjosari and Rantau Jaya Udik II Village	WKNP, WCS, Alert, PILI	15,152	7,576	7,576				7,576	7,576
	6. Biogas installation as demonstration plot for fuel wood substitution	Rantau Jaya Udik II Village	WKNP, WCS, Alert, PILI, YAPEKA	12,121		12,121				6,061	6,061
	7. Making fishing ponds as DTW	Braja Harjosari Village	WKNP, WCS, Alert, PILI	5,455	2,727	2,727				2,727	2,727
	8. Land-fires handling	Villages of Braja Harjosari and Rantau Jaya Udik II	WKNP, WCS, YAPEKA Alert	22,727	4,545	4,545	4,545	4,545	4,545	-	22,727
<b>Sub-Programme 8: . Development of Integrated Ecotourism Models</b>				<b>77,273</b>	<b>28,788</b>	<b>27,273</b>	<b>21,212</b>	<b>-</b>	<b>-</b>	<b>22,273</b>	<b>55,000</b>
<b><u>Activity direction</u></b>											<b>22,273</b>
	1. Development of an integrated ecotourism business model and site plan, and integrated ecotourism DED in 5 target villages	5 Villages	WKNP, WCS, Alert, PILI, YABI, YAPEKA	10,606	6,061	4,545			5,303	5,303	

STRATEGY	PROGRAMME AND ACTIVITY	LOCATION	STAKEHOLDER	INDICATIVE BUDGET (Euro)	TIME FRAME					SGP	Other funding
					2019	2020	2021	2022	2023		
	2. Development of community-based ecotourism programmes and other potential environmental services	5 Villages	WKNP, WCS, Alert, PILI, YABI, YAPEKA	27,273	9,091	9,091	9,091		5,455	21,818	5,303
	3. Ecotourism development capacity training	5 Villages	WKNP, WCS, Alert, PILI, YABI, YAPEKA	9,091	4,545	4,545			4,545	4,545	21,818
	4. Facilitation and development of Promotion and Marketing	5 Villages	WKNP, WCS, Alert, PILI, YABI, YAPEKA	27,273	9,091	9,091	9,091		5,455	21,818	4,545
	5. Study of the impact of integrated ecotourism development	5 Villages	WKNP, WCS, Alert, PILI, YABI, YAPEKA	3,030			3,030		1,515	1,515	21,818
Integration of WKNP area planning and development through Conservation Partnerships in the role scheme and sharing benefits from natural resources and protection & utilization of ecosystems	<b>Sub-Programme 9: Strengthening stakeholder collaboration in WKNP (Conservation Partnership)</b>			<b>77,273</b>	<b>19,091</b>	<b>14,545</b>	<b>14,545</b>	<b>14,545</b>	<b>14,545</b>	<b>25,758</b>	<b>51,515</b>
	<u>Activity direction</u>										<b>51,515</b>
	1. Consultation meetings and forum coordination and multi-stakeholder dialogue	Central Lampung and East Lampung District	WKNP, Provincial Government, District Government, UNILA, WCS, Alert, PKHS, YABI, PILI, FRDP	36,364	7,273	7,273	7,273	7,273	12,121	24,242	
	2. Institutional strengthening at the village level, including the Forum Rembug Desa of the WKNP area	Central Lampung and East Lampung District	WKNP, Provincial Government, District Government, UNILA, WCS, Alert, PKHS, YABI, PILI, FRDP	36,364	7,273	7,273	7,273	7,273	12,121	24,242	24,242
	3. Preparation of SOPs on the protection, conservation and utilization of natural resources and ecosystems including mechanisms of role sharing and benefits for stakeholders	Central Lampung and East Lampung District	WKNP, Provincial Government, District Government, UNILA, WCS, Alert, PKHS, YABI, PILI, FRDP	4,545	4,545				1,515	3,030	24,242
	4. Synchronization of program plans and budgeting with stakeholders to optimize the	Central Lampung and East Lampung District	WKNP, Provincial Government, District Government, UNILA,	9,091	9,091					-	9,091



STRATEGY	PROGRAMME AND ACTIVITY	LOCATION	STAKEHOLDER	INDICATIVE BUDGET (Euro)	TIME FRAME					SGP	Other funding
					2019	2020	2021	2022	2023		
	WKNP Area Collaboration Plan.		WCS, Alert, PKHS, YABI, PILI, FRDP								
	5. Development of business processes related to institutional governance, regional governance and business governance in conservation partnership schemes	5 Villages	WKNP, Provincial Government, District Government, UNILA, WCS, Alert, PKHS, YABI, PILI, FRDP	3,030	3,030					-	3,030
	<b>Programme : Development of monitoring and evaluation</b>			<b>10,303</b>	<b>3,030</b>	<b>1,818</b>	<b>1,818</b>	<b>1,818</b>	<b>1,818</b>	<b>5,152</b>	<b>5,152</b>
	<i>Activity direction</i>										<b>5,152</b>
Preparing the MONEV Action Plan undertaken by involving the beneficiaries	1. Preparation of the Monev database	Lampung Province	WKNP, Provincial Government, District Government, UNILA, WCS, Alert, PKHS, YABI, PILI, FRDP	1,212	1,212				606	606	
	2. Quarterly monitoring and annual evaluation.	Lampung Province	WKNP, Provincial Government, District Government, UNILA, WCS, Alert, PKHS, YABI, PILI, FRDP	9,091	1,818	1,818	1,818	1,818	4,545	4,545	606
<b>Grand Total</b>				<b>2,544,545</b>	<b>686,667</b>	<b>676,364</b>	<b>547,879</b>	<b>309,091</b>	<b>324,545</b>	<b>401,479</b>	<b>2,143,067</b>

## CLOSING REMARK

The WKNP collaborative management plan is a management plan that involves stakeholders in the drafting process to strengthen an effective and efficient management system in WKNP. This plan has integrated the existing national park management plans and various commitments and contributions of stakeholders.

The collaborative management plan making processes is useful as an exercise to build a mutual understanding among stakeholders toward effective and efficient support. The processes also help to build awareness and understanding of the important values of the biodiversity conservation, which will contribute to the enhancing community's welfare.

An important lesson learned of the document drafting process is that the WKNP has become a learning organization which has transformed from an exclusive into inclusive processes. Thus, it reflects the ten (new) ways of conservation areas management paradigm in Indonesia, which is promoted by the Directorate General of Natural Resources and Ecosystem (KSDAE) of MoEF. Furthermore, consistency in facilitation processes of drafting to implementation is necessary toward the achievement of vision and mission of the WKNP area management.

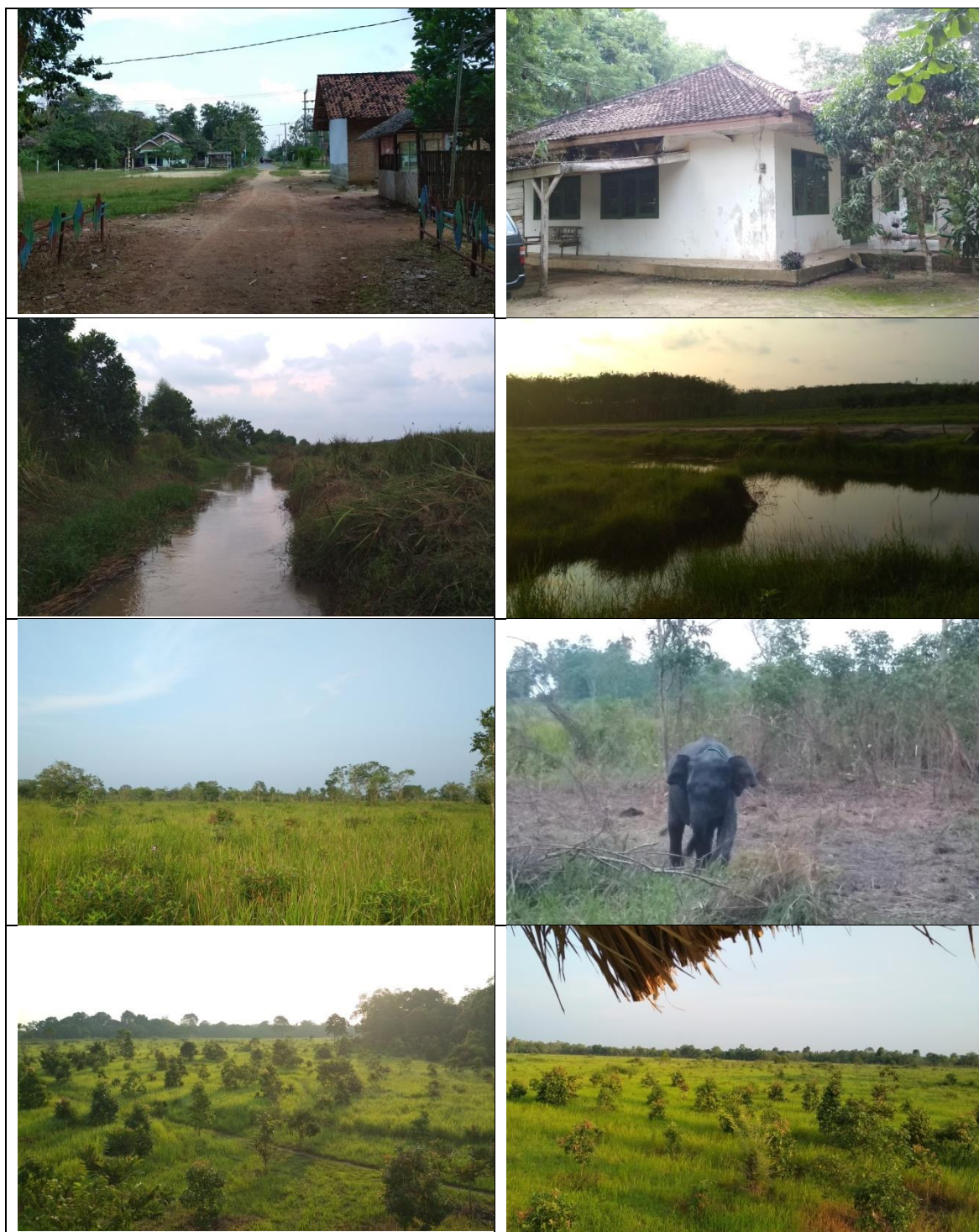
## LITERATURE

- Akamani K, Hall TE. 2015. Determinants of The Process and Outcomes of Household Participation in Collaborative Forest Management in Ghana: A Quantitative Test of a Community Resilience Model. *Journal of Environmental Management*. 147: 1-11. Doi: 10.1016/j.jenvman.2014.09.007
- Batten TR. 1974. The major issues and future direction of *community development*. *Community Development Journal*. 9(2): 96–103.
- Borrini-Feyerabend, G, et al. 2007. *Co-Management of Natural Resources: Organizing, Negotiating and Learning by Doing*.
- Borrini-Feyerabend, G. 2015. *Governance Diversity, Quality and Vitality: to- wards Shared Language and more Secure and Lasting Prospects for the Conservation of Nature. Workshop Presentation COMACON Bangkok: Oktober, 2015*.
- Campfens, Hubert (Eds). 1997. *Community Development Around The World: Practice, Theory, Research, Training*. University of Toronto Press. Toronto, Canada.
- Chambers, Robert. 1992. *Rural Appraisal: Rapid, Relaxed, and Participatory*. Institute of Development Studies Discussion Paper 311. Sussex: HELP.
- Conley A, Moote MA. 2003. Evaluating Collaborative Natural Resource Management. *Society and Natural Resources* 16(5):371-386. DOI: 10.1080/08941920309181
- Ellis F. 2000. *Rural Livelihoods and Diversity in Developing Countries*. New York (US): Oxford University Press.
- Frank, Flo and Anne Smith. 1999. *The Community Development Handbook: A Tool To Build Community Capacity*. Canada. Minister of Public Works and Government Services Canada.
- Grimble, Robin dan Kate Wellard. 1997. Stakeholders Methodologies in Natural Resource Management: a Review of Principles, Experiences and Opportunities. *Agricultural System*. Vol. 55, No. 2, pp. 173-193.
- Holmes, D.A. 1996. Sumatra Bird Report. *Kukila* 8: 9-56.
- Lawrence A dan Gillett S. 2004. *Joint and Collaborative Forest Management in Evans J. and Youngquist JA. (eds.). Encyclopedia of Forest Sciences*. Reading (GB): Academic Press. p 1143.
- Moeliono I, Fisher L, Wodicka S, Suporahardjo. 2003. *Memadukan Kepentingan, Memenangkan Kehidupan: Buku Acuan Metodologi Pengelolaan Sengketa Sumberdaya Alam*. Bandung (ID): Studi Driya Media/World Neighbors/Konsorsium Pengembangan Masyarakat Nusa Tenggara/Ford Foundation.
- Nawawi, H. 2003. *Manajemen Strategis Organisasi Non Profit Bidang Pemerintahan*. Gadjah Mada University Press. Yogyakarta. hal. 147
- Ozaki, Kenichi; Isono, Masahiro; Kawahara, Takayuki; Iida, Shigeo; Kudo, Takuma; Fukuyama, Kenji. 2006. A Mechanistic Approach to Evaluation of Umbrella Species as Conservation Surrogates. *Conservation Biology*. 20 (5): 1507–1515. doi:10.1111/j.1523-1739.2006.00444.x
- Parrot, S. and Andrew, P. 1996. An annotated checklist of the birds of Way Kambas National Park, Sumatra. *Kukila* 8: 57-85.
- Robinson, Jerry W dan Gary Paul Green. 2011. *Introduction to Community Development: Theory, Practice, and Service-Learning*. SAGE Publication Inc. USA

- Rustiadi E, Saefulhakim S, Panuju DR. 2011 (2<sup>nd</sup> ed.). *Perencanaan dan Pengembangan Wilayah*. Jakarta (ID). Yayasan Obor Indonesia.
- Scoones I. 1998. *Sustainable Rural Livelihoods: A Framework For Analysis*. IDS Working Paper 72. Brighton (GB): Institute of Development Studies, University of Sussex, Brighton.
- Si Khan. 1982. *Organizing , A Guide for Grasroots Leaders*. McGraw-Hill Book Company. New York USA.
- Stolton, S. and N. Dudley. 2016. *METT Handbook: A guide to using the Management Effectiveness Tracking Tool (METT)*, WWF-UK, Woking.
- Suharjito D. 2014. *Devolusi Pengelolaan Hutan Dan Pembangunan Masyarakat Pedesaan*. Orasi Ilmiah Guru Besar. Bogor (ID). Institut Pertanian Bogor.
- Svendsen, Gert Tinggaard dan Gunnar Lind Haase Svendsen. 2009. *Handbook of Social Capital: The Troika of Sociology, Political Science and Economics*. Edward Elgar Publishing Limited. UK.
- Swanepoel, Henni dan Frik De Beer. 2006. *Community Development: Breaking The Cycle Of Poverty*. Fourth Edition. Juta and Co Ltd. Lansdowne, South Africa.
- Tiwari, Reena, Marina Lommerse, Dianne Smith. 2014. *M2 Models and Methodologies for Community Engagement*. Springer Science – Business Media Singapore. Singapore.
- Tony Djogo Dkk, 2003 *Kelembagaan dan Kebijakan Dalam Pengembangan Agroforestri*. ICRAF
- Wiratno. 2018. *Sepuluh cara baru kelola kawasan konservasi di Indonesia: Membangun 'Organisasi Pembelajar'*. Ditjen KSDAE, KLHK. Jakarta.
- Wollenberg, Eva, Edmunds, David, Buck Louise. 2001. *Mengantisipasi Perubahan: Skenario Sebagai Sarana Pengelolaan Hutan Secara Adaptif. Suatu Panduan*. Center For International Forestry Research/ CIFOR, Bogor, Indonesia.
- Yustika, Ahmad Erani. 2013. *Ekonomi Kelembagaan: Paradigma, Teori dan Kebijakan*. Jakarta. Penerbit Erlangga.
- Yudistira, Pandji. 2014. Sang Pelopor. Direktorat Kawasan Konservasi dan Bina Hutan Lindung, Direktorat Jenderal Perlindungan Hutan dan Konservasi Alam

## APPENDICES

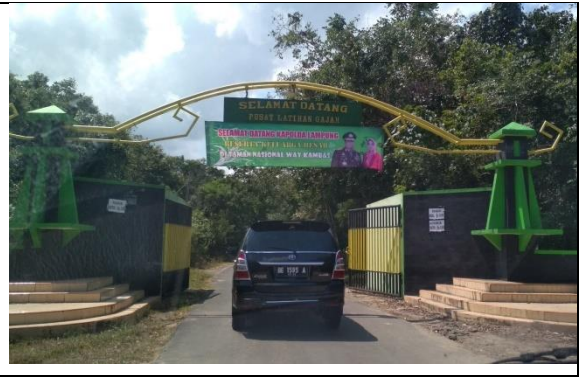
### Appendix 1. Field survey activity of the CMP Team in WKNP

















**Appendix 2.** Internal discussion and Input document activities of CMP of WKNP preparation













**Appendix 3.** Public consultation on the preparation of CMP documents of WKNP



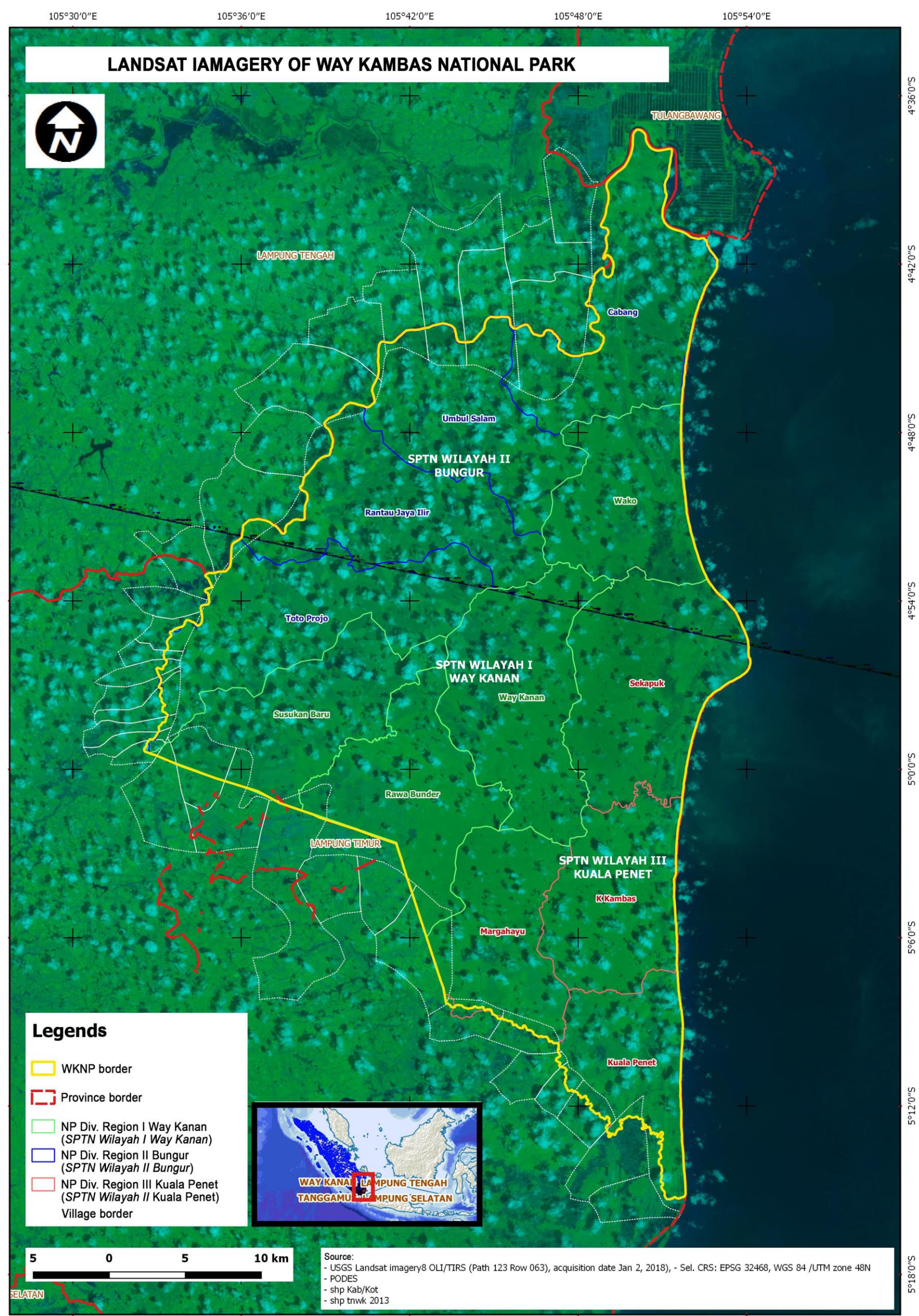






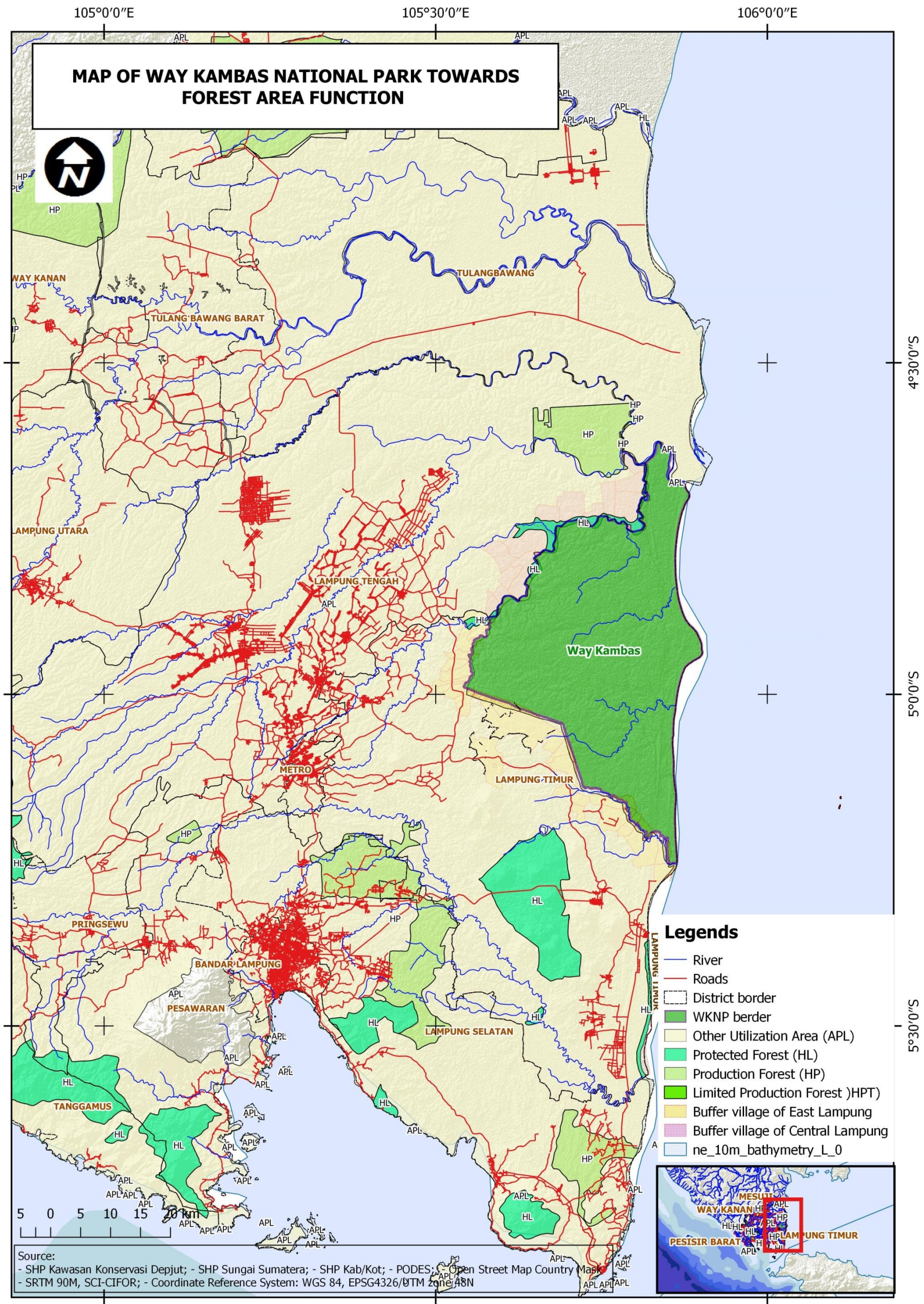


**Appendix 4.** Landsat 8 imagery in the Way Kambas National Park area



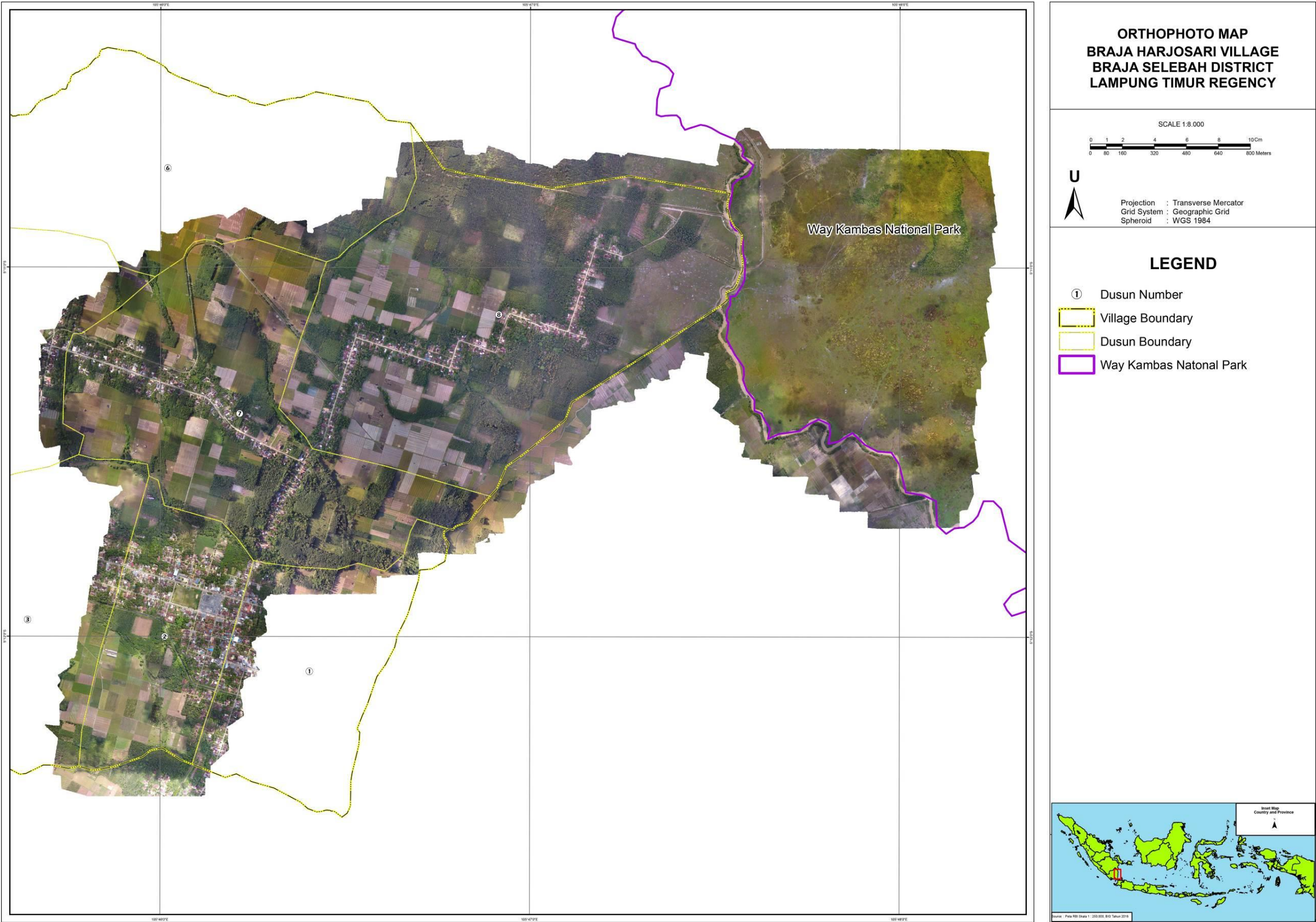


**Appendix 5.** Location Map of Way Kambas National Park on the Status of Forest Area Functions



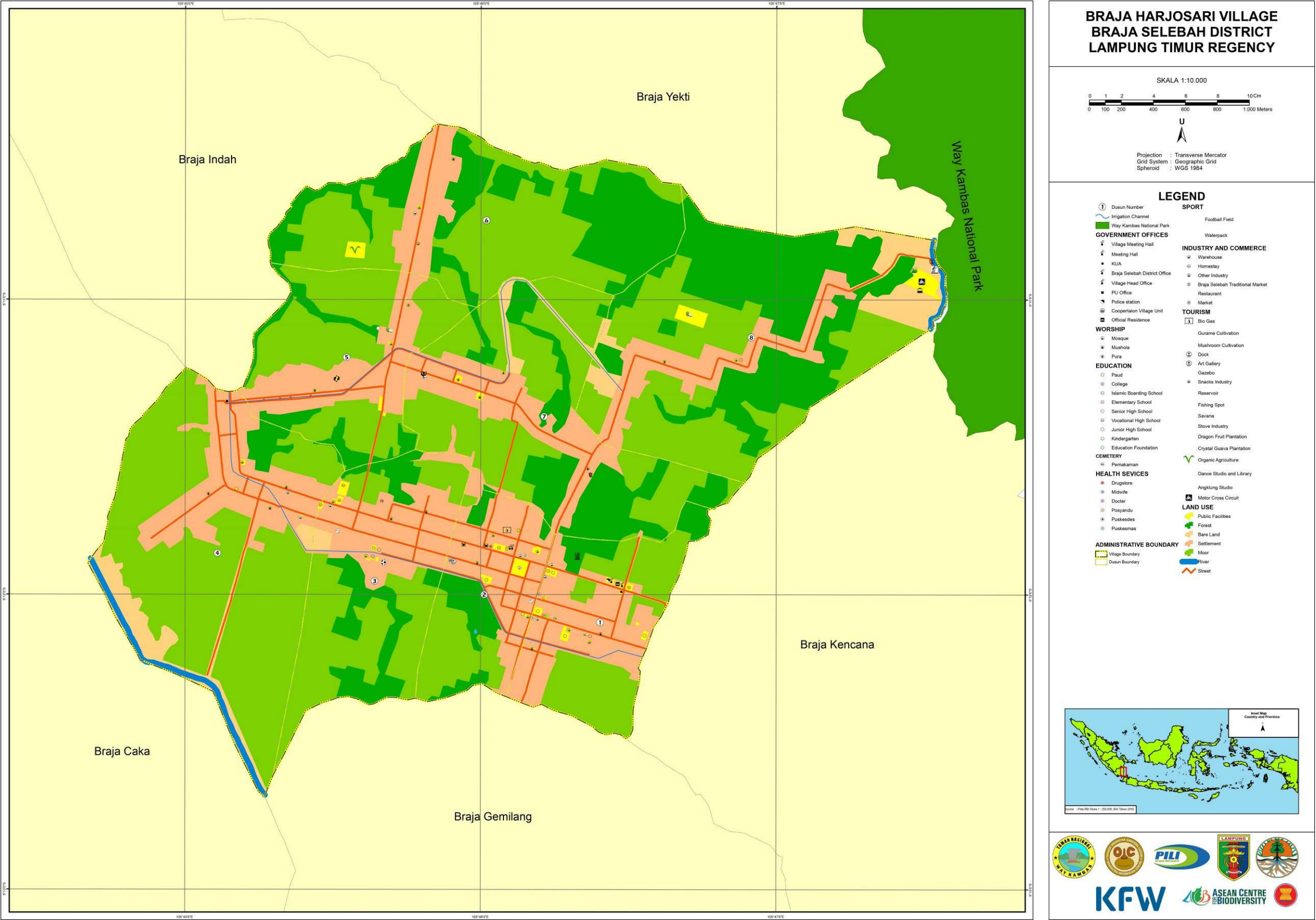


**Appendix 6.** Map of Orthophoto the Village of Braja Harjosari





Appendix 7. Map of the Spatial Planning of Braja Harjosari Village

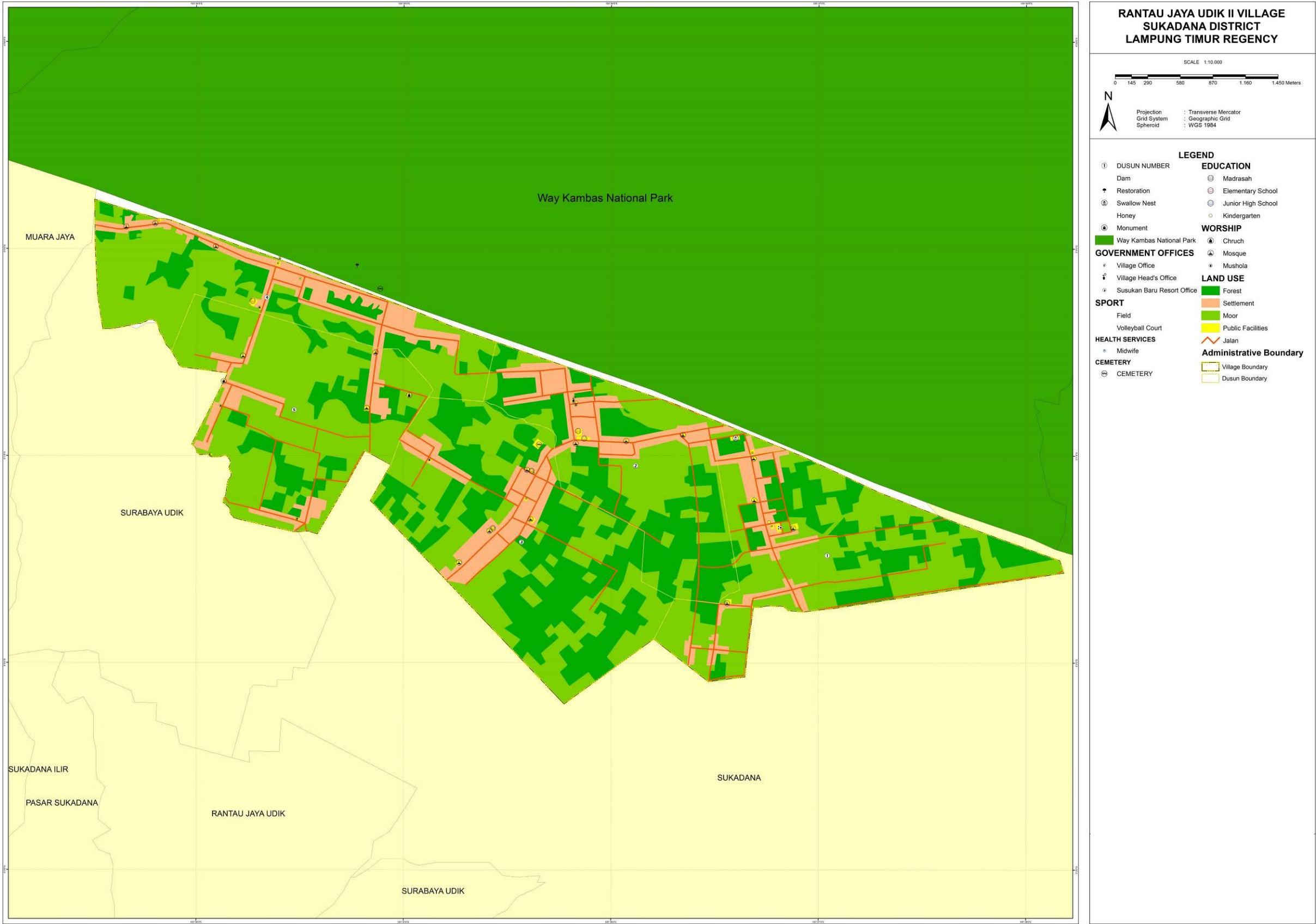




**Appendix 8.** Map of Orthophoto the Village of Rantau Jaya Udik II

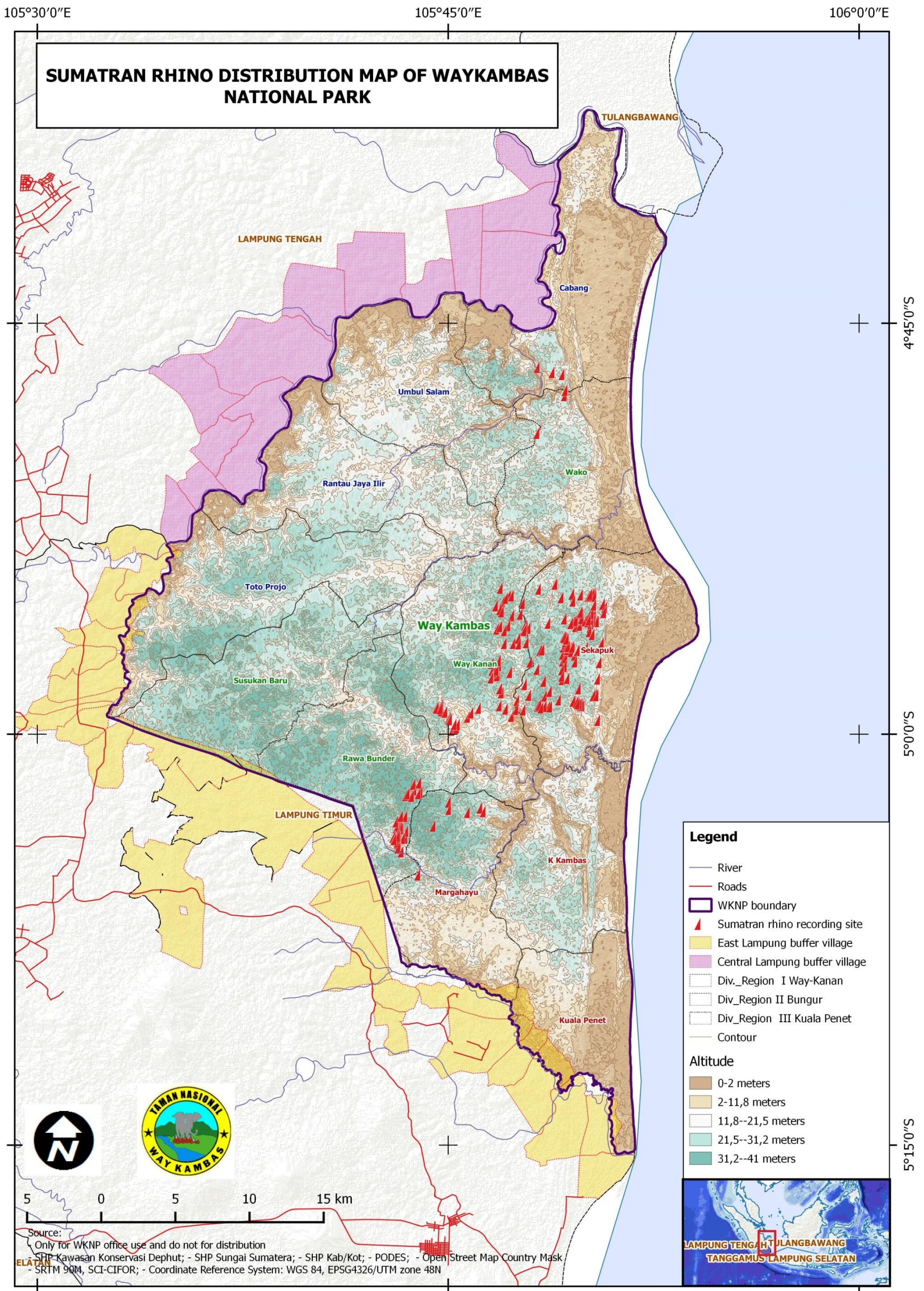


Appendix 9. Map of the Rantau Jaya Udik II Village Spatial Planning



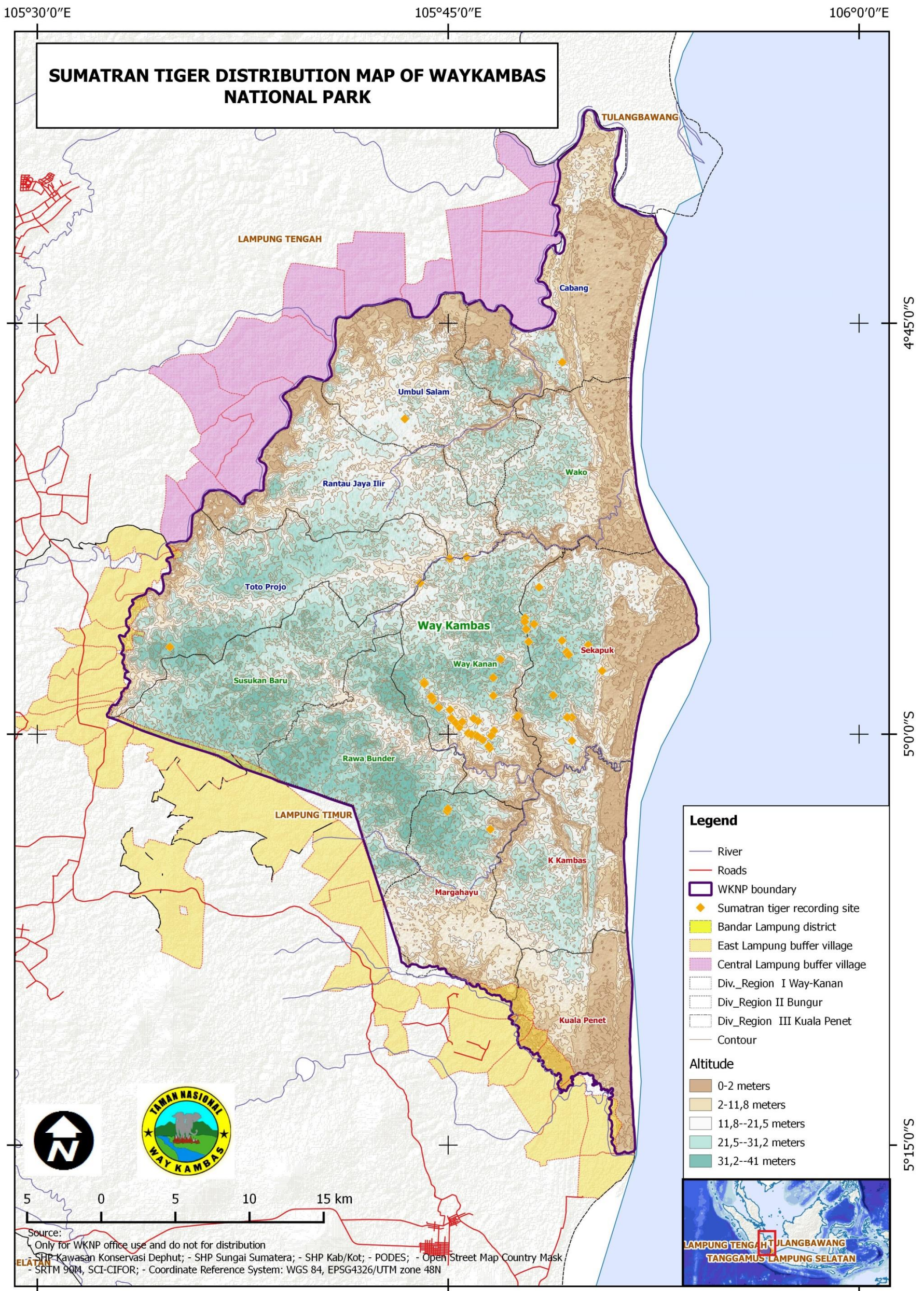


Appendix 10. Sumatran rhino distribution map of Way Kambas National Park



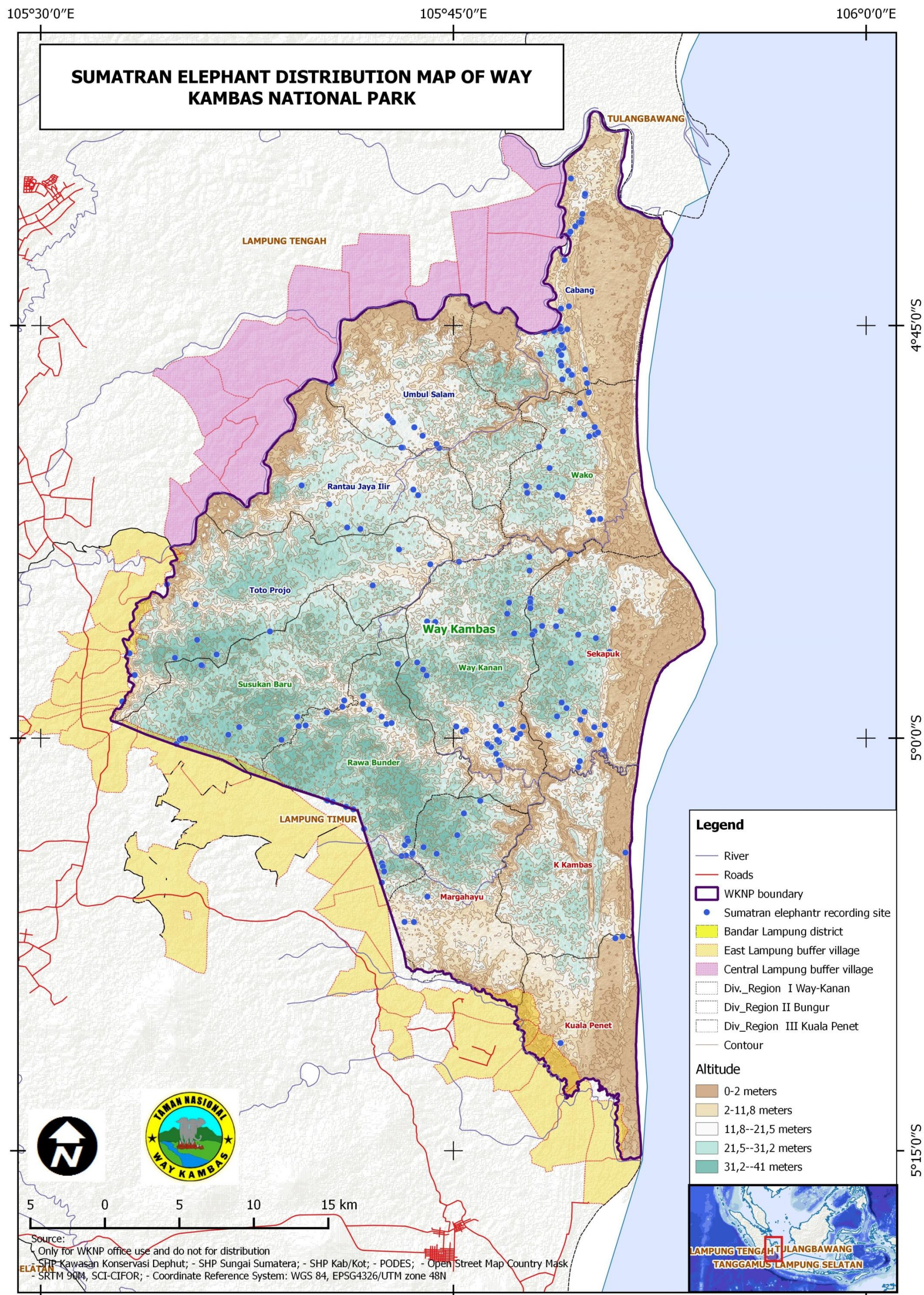


Appendix 11. Sumatran tiger distribution map of Way Kambas National Park



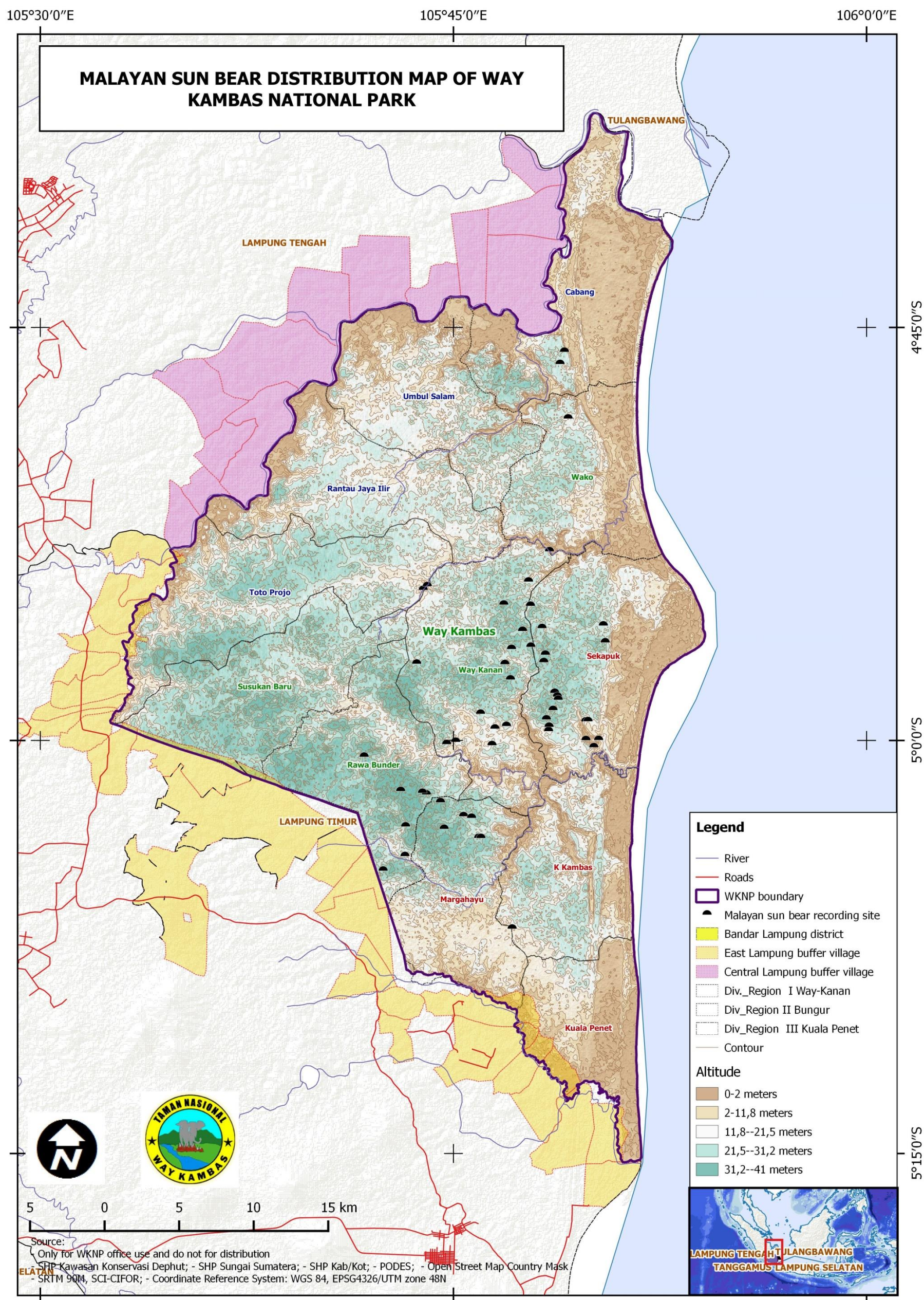


**Appendix 12.** Sumatran elephant distribution map of Way Kambas National Park



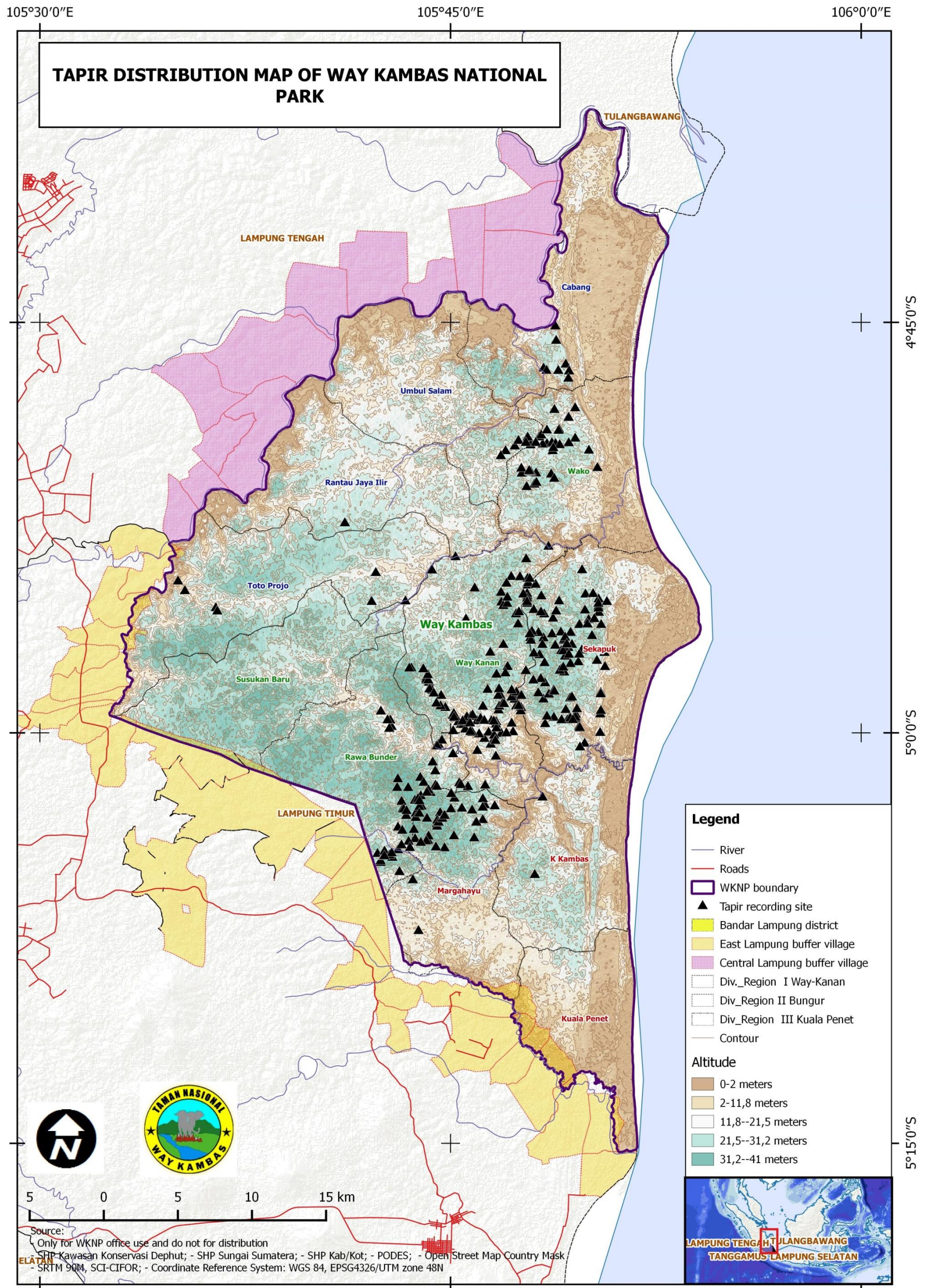


**Appendix 13.** Malayan sun-bear distribution map of Way Kambas National Par





Appendix 14. Tapir distribution map of Way Kambas National Par





**Appendix 15.** Map of Way Kambas National Park Key Species distribution

