



**NATIONAL STRATEGIC PLAN OF ACTION
HEART OF BORNEO
2015-2019**

HEART OF BORNEO NATIONAL WORKING GROUP

2014

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FOREWORD

Let me express my deeply thank to the God Almaythy for His blessing and permission to allow the completion of the second National Strategic Plan of the Heart of Borneo (HoB) of 2015-2019. This document is notably important for us, the Coordinating Ministry for Economic Affairs, to guide the relevant Ministries, provinces and districts in moving the implementation of sustainable development in the region.

Let me also underline that even though the idea HoB was created on the basis of conservation of biodiversity among the neighboring countries in the Borneo Island, it is clearly indicated in the agreed vision that biodiversity conservation should go along in harmony with sustainable development in the region. Keeping that in mind, our goal and missions in HoB should also extent to focus on the issues of prosperity of the people in the region, developing sustainable economic, providing with good education and supported by reliable and environmentally sound infrastructures.

The period of this document is in agreement with the period of the incoming National Strategic Plan of Indonesian Development 2015-2019, which will be implemented under the new government. Hence, it is crucial to integrate the important elements in this document into the National Development Plan. At the implementation level, it is imperative to maintain a good coordination among the stakeholders, both at national and regional level, so that synergy of programs between sectors and provinces as well as districts could be well in place.

Funding wise, I would like to reemphasize the need of efficiency, accountable, transparent and of course always follow the regulation. Do prioritize in accordance to the need in the region or on the order of the sequences of the development. Equally important is to find the proper balance on financial support to the HoB between central government and provincial/district government. On the long term basis, I strongly recommend to keep searching the possibility of having sustainable financial support to the HoB. The Community Social Responsibility (CSR) of the land base and mining companies operated in HoB a good possible start to set up as a model of sustainable funding.

Finally, I would urge all the stakeholders relevant to the HoB programs to commit their support and energy in developing HoB sustainably. May God allow us to commit our effort in developing HoB.

Coordinating Minister for Economic Affairs

Chairul Tanjung

ACRONYMS AND ABBREVIATIONS

APBD	Aggaran Pembangunan dan Belanja Daerah
BAPPENAS	Badan Perencanaan Pembangunan Nasional
BUMN	Badan usaha Milik Negara, State-Owned Enterprise
DPR	Dewan Perwakilan Rakyat
DPRD	Dewan Perwakilan Rakyat Daerah
FMU	Forest Management Unit
FPIC	Free, Prior, Informed Consent
GDP	Gross Domestic Product
GHG	Green House Gasses
HDI	Human Development Index
HoB	Heart of Borneo
IDR	Indonesian Rupiah
IUPHHK	Ijin Usaha Pengelolaan Hasil Hutan Kayu
IUPHTI	Ijin usaha Pengelolaan Hutan Tanaman Industri
ISPO	Indonesian Sustainable Palm Oil System
KAPET	Kawasan Pengembangan Ekonomi Terpadu
MoU	Memorandum of Understanding
MP3EI	Master Plan Percepatan Pembangunan Ekonomi Indonesia
NSA	National Strategic Area
NSPA	National Strategic Plan of Action
NTFP	Non-Timber Forest Product
RSPO	Roundtable for Sustainable Palm Oil
SFM	Sustainable Forest Management
SPA	Strategic Plan of Action
TDA	Tourist Destination Area
WWF	World Wide Fund for Nature

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Robertus Tutong

I. INTRODUCTION

1. BACKGROUND

The Heart of Borneo (HoB) Initiative is a conservation and sustainable development program adopted by three neighboring countries (Brunei Darussalam, Malaysia and Indonesia), with the objective to sustainably manage the area in Borneo which cover approximately 265,000 km² (26.5 million ha)¹. The initiative was adopted and declared by the three Ministers of the contracting parties at the first Ministerial Meeting held in Denpasar (Indonesia) on 12 February 2007. Further, at the Trilateral Meeting held in Pontianak, Indonesia, on 4-5 April 2008, the three countries adopted the Strategic Plan of Action (SPA) of HoB as guideline for member of country in developing National Strategic Plan of Action (NSPA) for each country.

Following the adoption of SPA, Indonesia has developed and adopted NSPA for Indonesia's Kalimantan region in July 2008² as the national framework for sectors, provinces and districts, as well as for relevant stakeholders in HoB area. The period of Indonesia's NSPA was 2008 to 2014, and therefore as the period of the document plan is approaching to the end, it is needed to develop an updated plan, which suit with the current and predicted future condition of HoB in Kalimantan area.

2. OBJECTIVES

The objectives of the HoB National Strategic Plan of Action 2015-2019 is to provide a broad but clear guidance for relevant stakeholders and key players in dealing with conservation and sustainable use of resources in the area of Indonesia's part of HoB.

3. SCOPE OF WORK

The Strategic Plan provides proxy program and key activities fitted under each mission of HoB which suit with programs of relevant government sectors, provinces and districts located within Indonesia's HoB. The area of HoB Indonesia covers 17 districts (kabupaten) within the administrative jurisdiction of four provinces, i.e. North Kalimantan, East Kalimantan, Central Kalimantan, and West Kalimantan³. As the plan is sector based and - to some extent - regional/local based approach, the programs and key activities are addressed to significant issues occurring or potentially occur in the HoB area. The period of the plan is valid for January 2015 to December 2019.

¹ The Heart of Borneo Strategic Plan of Action: Bridging Conservation and Sustainable Development in Three Countries. Heart of Borneo Ministerial Meeting, 12 February 2007, Bali Indonesia.

² National Strategic Plan of Action of Heart Borneo Indonesia. Ministry of Forestry of the Republic of Indonesia, 2008.

³ Profil Fisik dan Ekosistem Kawasan Heart of Borneo, WWF File-unpublished document.

4. VISION

The vision of HoB was adopted in the first Ministerial Meeting in 2007 in Bali, Indonesia:

“Bridging conservation and sustainable development in three countries”

This vision will be maintained as it is, until the three countries agreed to revise or adjust the current vision.

5. MISSION

Same as the vision, the mission of HoB is also maintained as adopted by the Ministerial Meeting in 2007 held in Bali, Indonesia. The following are the adopted mission of HoB. However, for the purpose of HoB Indonesia and recalling the sovereignty of HoB principles, the third mission (socio-economic welfare) and fourth mission (ecotourism development) are slightly adjusted to suit with the current needs for the local community wellbeing and condition of sustainable ecotourism development in Indonesia.

The following are the mission of HoB applied to this National Strategic Plan of Action:

- 1) To manage the natural resources outside the protected areas network through the development and implementation of sustainable land uses;
- 2) To enhance and promote effective management of protected areas within the HoB area, with the emphasis at those situated on the common border, in order to conserve and maintain forest biodiversity and the ecological linkage;
- 3) To address issues of socio-economic welfare of local people on the border areas;
- 4) To recognize, conserve and promote the sustainable use of the value of special natural and cultural places or sites within the HoB area; and
- 5) To ensure the effective implementation of HoB initiative at all levels, including for public, private sectors, and at the local community.

6. STEP OF ANALYSIS

The HoB’s National Strategic Plan of Action for 2015-2019 is developed based on six steps and each step is depicted in Fig. 1. Every step is evaluated based on the framework of triple bottom lines of the sustainable development principle (i.e. economic, social and environment) against the need and role of relevant stakeholders.

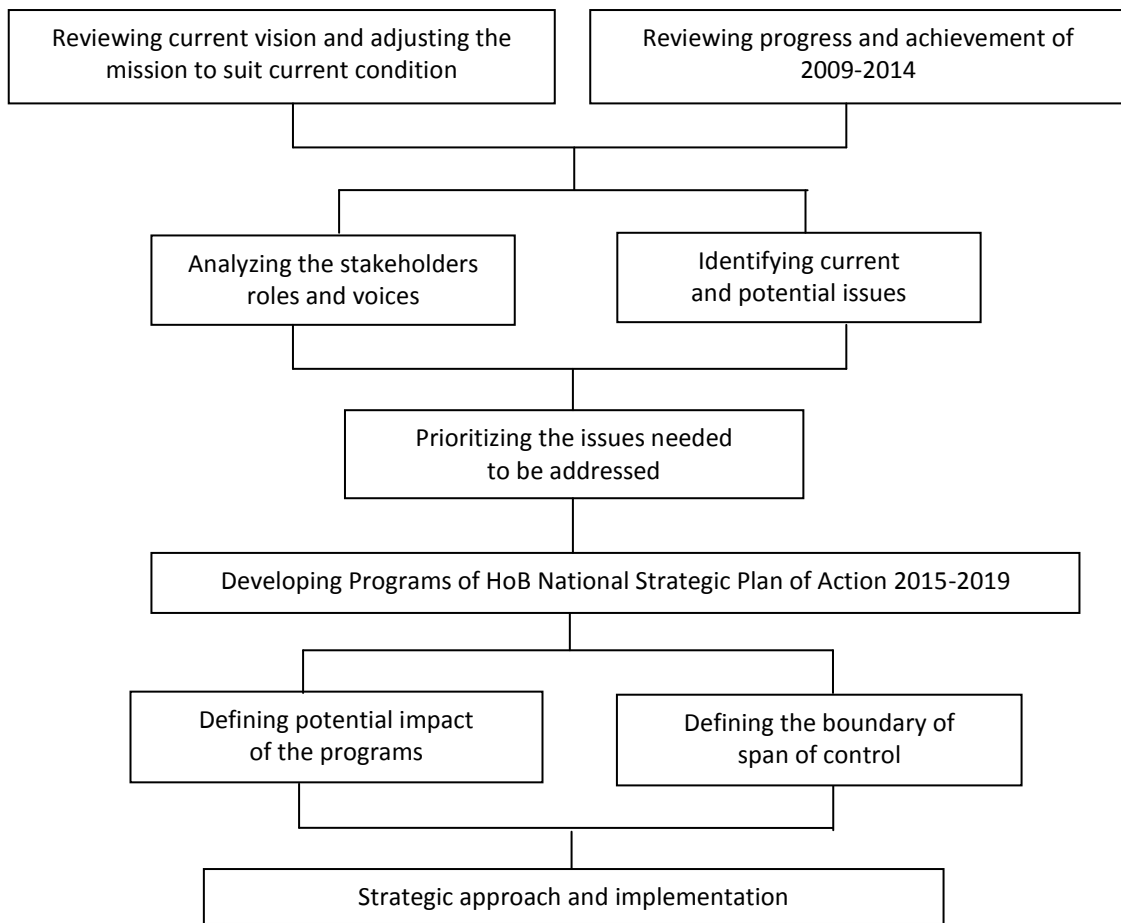


Figure 1. Steps of the analysis and formulation of Heart of Borneo National Strategic Plan of Action.



Yusni

II. FEATURES OF THE HEART OF BORNEO

1. BOUNDARIES

In accordance to the decision of the last HoB Meeting in 2009, the HoB area administratively is located under four provinces: North Kalimantan, East Kalimantan, Central Kalimantan, and West Kalimantan. North Kalimantan Province was a new province, established on 25 October 2012. All areas of this new Province formerly were part of East Kalimantan Province.

The size of area covered by HoB is approximately 16.8 million ha, spreads out in 17 districts and 82 sub-districts. There is a new district, Mahakam Ulu, established in January 2013, dissected from the area of Kutai Barat District. At this moment, the new administrative area was not ready to provide any information related to economic, population and other administration of the district (see Table 1 and Annex 1).

Table 1. Area of Indonesia's HoB based on province and district.

Province	District	Area (ha)
North Kalimantan	Nunukan	956,642.93
	Malinau	3,493,256.73
	Bulungan	552,591.30
Total North Kalimantan (%)		5,002,490.96 (29.8%)
East Kalimantan	Berau	651,586.35
	Kutai Timur	394,131.54
	Kutai Kartanegara	850,097.32
	Kutai Barat	1,977,054.42
	Mahakam Ulu*	n.a.
Total East Kalimantan (%)		3,872,869.63 (23.1%)
Central Kalimantan	Murung Raya	2,038,698.14
	Kapuas	127,376.81
	Gunung Mas	250,701.89
	Katingan	530,489.83
	Barito Utara	42,873.04
	Seruyan	34,336.15
Total Central Kalimantan (%)		3,024,475.85 (18.0%)
West Kalimantan	Kapuas Hulu	3,088,025.81
	Melawi	432,305.69
	Sintang	1,372,187.48
Total West Kalimantan (%)		4,892,518.99 (29.1%)
Total Kalimantan		16,792.355.43

* recently established 11 January 2013 through Act no. 2/2013, covering 15.315 km², with a population of 28.000, formerly part of Kutai Barat District.

n.a.: data not available

The delineation of the HoB area actually has been undergone three times. The area covers by HoB has been increased from the first delineation in 2007 compare to the last (third) delineation in 2009 (see Fig. 2).

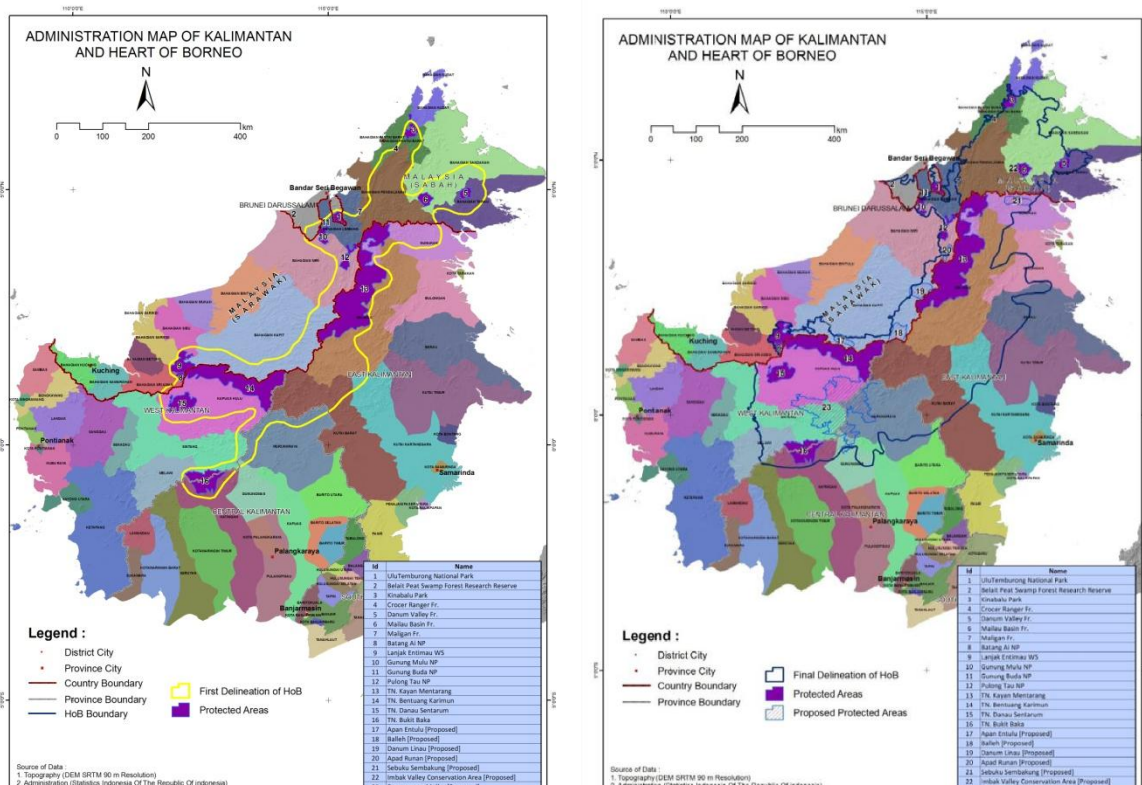


Figure 2. The boundary delineation of Indonesia’s Heart of Borneo based on administrative area: first delineation in 2007 (left) and final delineation (right).

Source of map: WWF Indonesia.

2. PHYSICAL FEATURES

Most of the Indonesian part of HoB is located almost along the northern mountain ranges of Borneo. It covers 13 mountain areas which have elevation varies from 1,681 meter above sea level at Cemaru Mount in West Kalimantan to 2,987 m above sea level at Makita Mount at Kayan Mentarang National Park. The topographical condition of the area is mostly rugged. The area also has three big lakes: Jempang Lake (15,000 ha), Semayang Lake (13,000 ha) and Melintang Melintang (11,000 ha).

Climatic condition is heavily influence by wet monsoon climate with annual rainfall between 2,800 mm to 3,600 mm and temperatures varies between 22°C during wet season which falls from September to March, and 33°C during the dry period between April to August. The humidity is around 85% - 88% throughout the year⁴.

⁴ Profil Fisik dan Ekosistem Kawasan Heart of Borneo, WWF File-unpublished report.

3. NATURAL RESOURCES

The area of HoB in Indonesia stretches along the border of Kalimantan and Malaysian States of Sarawak and Sabah, which then extended to the south where the key catchment areas of Borneo Island are located. The 16.8 million ha of HoB mostly are tropical mountain forests. It is an immensely biodiversity corridor which connects four major protected areas with a total of 4.465 million ha: Kayan Mantarang National Park, Danau Sentarum National Park, Bukit Baka - Bukit Raya National Park, and Betung Kerihun National Park.

These protected areas, which accounts approximately 40.89% of the HoB, is an extremely important habitat of about 900 wildlife species, the highest species richness in Indonesia, as well as thousands of plant species. The wildlife includes 221 species of mammals, 358 resident birds and 254 species of reptiles. About 34% of the species are endemic to Borneo, which include the famous Orangutan *Pongo pygmaeus* and Pigmy Elephant *Elephas maximus borneensis*.

The protected areas are also serve as important catchment areas for the 14 major rivers in Kalimantan (managed in 9 watersheds and 8 sub-watersheds), among others are Mahakam River, Barito River, Kahayan River, Katingan River, Sesayap River, Sembakung River, Melawi River and Kapuas River, which provides and regulates freshwater to the downstream area in the province of East Kalimantan, Central Kalimantan and West Kalimantan⁵.

4. LAND BASED DEVELOPMENT

There are about 9.08 million ha of permanent production forest and limited production forest within the HoB area. However, due to its high elevation and rugged terrain condition, most of the production forests in the area may only be harvested with caution measures and limited level. The current registered forest/timber concession operated in HoB area is 79 units (Annex 2), of which 10 units are operated under Industrial Forest Plantation (HTI) scheme. The concessions occupied about 4.48 million ha of production and limited production forest areas (Annex 3).

Part of the HoB area of about 1.7 million ha, in particular the lowland side, have been allocated for the purpose of non-forestry development. Of that area approximately 658,000 ha have been granted for the development of oil palm plantations. At the moment there are 47 oil palm companies registered in the HoB area (Annex 4).

The HoB area is also rich in non-renewable resources for energy in particular minerals such as gold and coals. At this moment there are 486 mining companies registered to operate in the HoB areas with the concession area of 2.05 million ha, of which 11 are big coal companies (Annex 5). Indonesia's Borneo has been known to have a high deposit of coal: 25,131 million ton in East Kalimantan and North Kalimantan Provinces, 1,227 million ton in Central Kalimantan, and 527 million ton in West Kalimantan.

There seems to be indication that some of the concession area such as forest, oil palm and mining are overlap each others. These are happened owing to the lack of coordination among the sectors mandated to issue the permit for the land base operation. Recently, the government also delegated the permit issuance for small scale mining operation to the head of district⁶ which lead to even more difficulties in coordinating the development of land based activities as well as monitoring environmental and social impact of their operations.

⁵ Kelompok Kerja Nasional Heart of Borneo document, unpublished report.

⁶ Peraturan Pemerintah No. 23/2010 tentang Pertambangan Mineral dan Batubara dan Peraturan Pemerintah No. 1/2014 tentang Perubahan Kedua atas Peraturan Pemerintah No. 23/2010.

5. FOREST MANAGEMENT UNIT (FMU)

The operational of FMU in Indonesia is mandated by the Act no. 41 of 1999⁷ regarding Forestry and the Government Regulation no. 44 of 2004⁸ regarding Forestry Planning. Further in 2008, through the enactment of Government Regulation no.3 of 2008⁹ pertaining Forest Management Plan, required that the entire forest area in Indonesia shall be managed under the system of FMU. Up to 2014 the Ministry of Forestry has targetted to establish 120 FMUs across the nation. Of that number, 6 FMUs are located in Kalimantan. In the long run, the Ministry of Forestry has planned to set up 86 FMUs in the region of Kalimantan.

6. DISTRICT DEVELOPMENT

The HoB area is a home of more than 3.2 million people (Table 2). Statistics of each district reveals that high discrepancies in population density, education, number of poor people, APBD, PDRB, and income per capita are still exist amongst the district within the HoB area (Table 2, 3, 4).

Table 2. Some important statistics related to people resides in the Heart of Borneo area (compiled from various sources, in the last three years).

No	District	Population	Density per Km ²	Growth (%)	Sex Ratio	Productive Age	Education* (%)
1	Nunukan	146,286	10.71	9.53	115.1	92,643	72.47
2	Malinau	83,339	1.63	18.18	118.0	30,685	71.34
3	Bulungan	123,800	9.15	4.00	115.1	81,497	87.40
4	Berau	179,079	**8.15	2.47	117.1	122,418	69.98
5	Kutai Timur	253,847	4.74	4.08	119.0	174,294	75.11
6	Kutai Kartanegara	674,464	22.99	4.13	110.0	456,274	71.26
7	Kutai Barat	184,394	5.83	1.92	112.5	94,460	66.60
8	Mahakam Ulu	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
9	Murung Raya	100,100	4.00	7.46	102.0	60,220	20.17
10	Kapuas	329,646	21.97	0.93	104.0	74,440	n.a.
1	Gunung Mas	100,157	9.27	17.36	113.2	52,489	42.15
12	Katingan	146,439	8.58	2.81	110.0	66,211	31.94
13	Barito Utara	123,781	15.00	1.36	108.0	62,916	41.55
14	Seruyan	149,915	8.96	3.26	116.3	94,146	n.a.
15	Kapuas Hulu	231,512	8.00	1.80	104.0	116,291	52.40
16	Melawi	187,003	18.00	1.65	101.0	97,792	43.07
17	Sintang	195,267	17.00	1.80	107.0	202,488	32.28
Average		200,564.3	9.50	4.91	110,76	111,575.8	55.55
Total		3,209,029				1,785,212	

*Up to middle school (9 years of education), data of Nunukan is from 2004

**compare to the terrestrial area

n.a.: data not available

The population growth in districts within the HoB area seems to be alarming. Of the 17 districts only 6 districts which show the growth rate equal or below the national level, the rest of the districts indicated their rate level are high and very high. Districts that need to have special attention on this matter are Nunukan, Malinau, Bulungan, Kutai Timur, Kutai Kartanegara, Murung Raya, and Gunung Mas. Their population rates are more than 4% per annum. In addition, the sex ratio of population

⁷ Undang-Undang Kehutanan No. 41/1999.

⁸ Peraturan Pemerintah No. 44/2004 tentang Perencanaan Kehutanan.

⁹ Peraturan Pemerintah No. 3/2008 tentang Tata Hutan dan Penyusunan Rencana Pengelolaan Hutan serta Pemanfaatan Hutan.

across the HoB area suggests a uniform trend where the number of males is higher than females (Table 2), probably due to a significant number of males migrated to the area to work in oil palm plantations or in mining companies.

Table 3. Human Development Index (HDI), gini ratio, number of poor people, threshold line for poor people and average of government investment (APBD) according to District in the Heart of Borneo area (compiled from various sources).

No	District	HDI	Gini Ratio	Number of Poor People ¹⁰	Threshold Line for Poor People (IDR)	Average APBD for 5 Years (Trillion IDR)
1	Nunukan	74.38	0.27	14,043	260,990	1.239
2	Malinau	73.26	0.25	10,559	360,485	1.384
3	Bulungan	75.11	0.24	16,475	248,653	1.670
4	Berau	75.56	0.38	11,847	302,117	1.325
5	Kutai Timur	72.05	0.15	28,916	300,108	2.153
6	Kutai Kartanegara	72.89	0.22	58,544	272,835	6.798
7	Kutai Barat	73.69	0.22	15,267	312,192	1.882
8	Mahakam Ulu	n.a.	n.a.	n.a.	n.a.	n.a.
9	Murung Raya	72.84	0.35	6,838	272,809	0.804
10	Kapuas	73.60	0.33	20,702	n.a.	0.455
11	Gunung Mas	73.43	0.35	7,807	277,660	0.674
12	Katingan	72.65	0.35	10,687	264,374	0.850
13	Barito Utara	75.15	0.35	8,684	267,603	0.799
14	Seruyan	72.55	0.33	14,692	n.a.	0.531
15	Kapuas Hulu	70.52	0.38	22,500	290,026	0.977
16	Melawi	69.57	0.38	22,627	239,162	0.428
17	Sintang	69.32	0.38	31,446	239,162	0.764
Average		72.91	0.294	18,852.1	279,155.4	1.420,8
Total				301,634		

n.a.: data not available

Although the Human Development Index (HDI) of all districts in HoB are relatively high (i.e., most of them are above 70%), the education level up to nine years in school for people in all districts in HoB area appears to not in the very good shape. In some of the districts, the percentage of people receiving at least nine years of education was more than 70%. However, there are districts which indicated that their percentage of people receiving at least nine years of education level was below 50% or even 20%. In this particular issue, a special attention needs to be given to the Districts of Murung Raya, Gunung Mas, Katingan, Barito Utara, Melawi and Sintang (Table 2 and Table 3).

¹⁰ Sistem Informasi Statistik Pembangunan Daerah Tertinggal. <http://kpdt.bps.go.id>; Tim Nasional Percepatan Penanggulangan Kemiskinan, Propinsi Kalimantan Tengah. <http://data.tnp2k.go.id>

Table 4. Regional income, growth, average income of people and main contributor to the regional income (compiled from various sources) of the districts in the Heart of Borneo.

No	District	Gross District Revenue (IDR Billion)	Growth	Average Income (IDR Million)	Main Contributor to PDRB
1	Nunukan	5.362	7.13	31,860,071	Mining and agriculture
2	Malinau	2.772	10.26	35,898,533	Mining and agriculture
3	Bulungan	3.010	9.38	26,095,000	Mining and agriculture
4	Berau	10.761	8.03	56,106,820	Mining and agriculture
5	Kutai Timur	54.580	3.43	184,346,000	Mining
6	Kutai Kartanegara	29.084	4.00	189,712,083	Mining
7	Kutai Barat	8.946	7.85	51,632,837	Mining and agriculture
8	Mahakam Ulu	n.a.	n.a.	n.a.	n.a.
9	Murung Raya	2.456	5.21	18,794,490	Agriculture and mining
10	Kapuas	2.167	5.61	9,001,239	Agriculture and mining
11	Gunung Mas	1.459	6.26	7,021,342	Agriculture and mining
12	Katingan	3.036	6.24	22,609,192	Agriculture and trader
13	Barito Utara	1.063	5.23	19,286,428	Agriculture and mining
14	Seruyan	1.020	5.51	7,289,879	Agriculture and mining
15	Kapuas Hulu	2.131	3.71	5,320,489	Agriculture and construction
16	Melawi	0.846	4.21	6,050,000	Trade and agriculture
17	Sintang	3.484	5.40	11,858,360	Agriculture and trade
Average		8.2611	6.091	42,680,172.7	

n.a.: data not available

The number of poor people in the districts within the HoB area is also not showing a good picture. Districts which granted highest annual development budget (APBD) within the last five years such as Kutai Timur and Kutai Kertanegara surprisingly indicated the highest number of poor people in HoB region (Table 3). In addition, with the high APBD the two Districts appeared to have the lowest economic growth in the HoB area (Table 4). Other districts that indicated high population of poor people are Kapuas, Kapuas Hulu, Melawi and Sintang (Table 7).

7. COMMUNITIES

The majority of local community in HoB area belongs to Dayak tribes. There are of course other community groups such as Malay or Malayu and Chinese origin or even Javanese who migrated in to the HoB in the early 1960's. As for the Dayak tribes, there are at least seven ethnic groups of Dayak community in the HoB area: Kayan, Kenyah, Iban, Penan or Punan, Lundayeh or Lun Bawang, Kelabit and Barito-Ngaju. They vary in languages, traditional knowledge, cultures and geographic location.

Dayak Barito-Ngaju in general lives in central part of Kalimantan and they are famous for having special spiritual ceremony. They usually perform a second funeral ceremony, months or year after the first funeral. Dayak Penan or Punan, live in east Kalimantan, known as nomad community and heavily rely on wildlife hunting and other forest resources for their subsistence. Sago or forest palm is their normal staples. The Iban community mostly live in west Kalimantan are famous for their ability in exercising *berladang*, traditional shifting agriculture, as well as *bejalai* (migrate to other area for better live and fortune). The Kenyah and Kayan who live in east Kalimantan are famous for their talented in wood carving and producing accessories as well as dancing and playing music instruments. Last but not least, the Lundayeh who live in East Kalimantan is known for their expertise in developing traditional rice field¹¹.

¹¹ The Human Heart of Borneo. WWF Global; Http: www.panda.org

8. NATIONAL STRATEGIC AREA (NSA)

Starting March 2008, upon the enactment of Government Regulation No. 26 of 2008¹² the HoB area was designated as one of the 40 National Strategic Area (NSA) in Indonesia. The NSA is defined as prioritized area to have spatial plan due to its utmost important for sovereignty, defense, economic development, social and culture, and environment or world heritage establishment. With that new title, the government has more obligation and responsibility to sustainably develop the HoB area into prosperous region. On the other hand, the people in the region have wide open opportunity to tap the upcoming government investment and contribute the development in the region.

¹² Peraturan Pemerintah Republik Indonesia No. 26/2008 tentang Rencana Tata Ruang Wilayah Nasional



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III. STAKEHOLDERS, ROLES AND VOICES

1. IDENTIFIED STAKEHOLDERS

There are 10 identified stakeholders who now have or likely interested in the future to involve either direct or indirectly with natural resources and its issues within the area of Heart of Borneo. Some of the stakeholders are heavily dependent on the resources of the area, e.g. local and indigenous community who live in the area, or small scale and local businesses that operated based on the local resources, or the investors and private companies who have concession licenses in the area. Other stakeholders may not be too depend on the area but they have significant power and voices to influence other stakeholders or even change dramatically the status of natural resources of the area. The later may include the Government either central or local, politicians or even the investors or potential investors (Table 5).

To clearly show the power of each stakeholders against its dependency to the resources within the Heart of Borneo area a proxy of relationship between the two is depicted in Fig. 3 based on the score given in Annex 6.

Table 5. List of stakeholders and its roles.

No	Stakeholder	Roles and Function	Description
1	Central Government	<ul style="list-style-type: none"> • Driving direction and political will in HoB • Define and formulate policy • Provide support to the regional development • Steward the regional development, including monitoring and evaluation 	Coordinating Minister of Economy, BAPPENAS, Ministry of Forestry, Ministry of Finance, Ministry of Home Affairs, Ministry of Public Works, Ministry of Agriculture, Ministry of Mining, Ministry of Tourism and Creative Economy, Ministry of Foreign Affairs, including technical unit of these sectors operated in the area
2	Local Government	<ul style="list-style-type: none"> • Translate nation policy and direction adapted or suitable to local context (HoB) • Integrate and synergize sector based program into province and district into regional program development • Provide funding, co-funding, and other supports relevant for the development of HoB 	Provincial, district, sub-district government, and desa/ villages
3	Local Parliament	<ul style="list-style-type: none"> • Establishing provincial and district regulation for supporting HoB • Control and evaluate the provincial and district development related to HoB • Echo the voice of local community within the provincial and district in HoB • Support and endorse local funding and initiative for developing HoB 	Provincial Parliament (DPRD Provinsi) and District Parliament (DPRD Kabupaten)
4	State owned enterprises	<ul style="list-style-type: none"> • Invest in developing local commodities • Regulate the price of key local commodities • Facilitate the market of certain local commodities • Provide job opportunities • Promote best practice sustainable use of national resources • Contribute to local economic development 	State owned enterprise (BUMN), provincial/district owned enterprise (BUMD) operated in the HoB area

5	Private companies/investors	<ul style="list-style-type: none"> • Invest in developing commercial and highly demanded commodities in the region • Provide job opportunities • Promote best practice sustainable use of national resources • Contribute to local economic development 	Private companies, potential private investors, business and traders, at all levels (multi-national companies, national, and local)
6	Local communities	<ul style="list-style-type: none"> • Shareholder of the natural resourced within the region • Voice the right and responsibility of local community • Contribute to the assurance of sustainable use of natural resources 	Including traditional/ indigenous people, and long settled migrants
7	Academia and scientists	<ul style="list-style-type: none"> • Provide and improve capacity building • Provide necessary and relevant information and methodology in managing natural resources • Promote scientific basis for sustainable use of natural resources • Provide advice and guidance for conservation and sustainable use of natural resources 	Lecturers, students, and researchers at all level (local, national, and international) who work and interested with ecosystem, natural resources, and socio-economic issues
8	Civil societies	<ul style="list-style-type: none"> • Contribute in conserving and managing natural resources • Echoing the need of sustainable resources 	Local, national and international NGOs who work and are interested with the HoB
9	Donor	<ul style="list-style-type: none"> • Providing funding support for the development of HoB • Liaison the program and activities with other relevant parties • Disseminate the development of HoB to other parties 	Donor and potential donor, including philanthropy and private sector who are interested with the concept and issues of the HoB
10	Neighboring countries	<ul style="list-style-type: none"> • Partner of HoB 	Malaysian State of Serawak and Sabah, and Brunei Darussalam

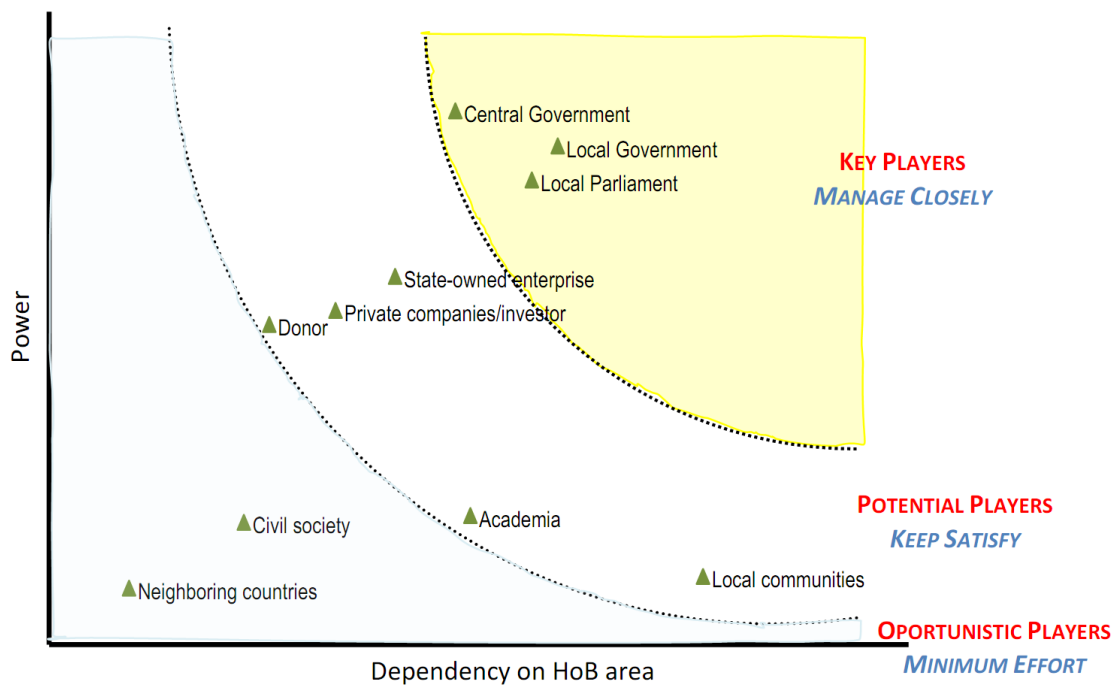


Figure 3. The mapping of stakeholders, analyzed between power against dependency of each stakeholders identified in the Heart of Borneo region.

2. SIGNIFICANT ISSUES

While adequate resources are recognized as an important aspects in preparing National Strategic Plan of Action of Heart of Borneo, there are also issues within the area under each mission of the HoB that need to be thoroughly understand and addressed in the Plan (Table 6). The issues may vary under each mission of the plan, however, by knowing the issues of each mission, it is expected that the plan would entirely achieve the mission.

To simplify the many and complicated issues in the region, the list of issues is summarized into a cross-cutting issues. Further, to prevent an overlook of important issues (i.e. not fall in cross-cutting issues, but need to be addressed in the area), the threshold criteria were applied to re-assess whether the identified issues are valid to be addressed (Table 7).

Table 6. Issues identified within the region of Heart of Borneo.

Mission	Issues
1. Sustainable resources	2. Exploitation of natural resources 3. Agricultural practices ¹³ 4. Forest fire 5. Funding 6. Political will and policy ¹⁴ 7. Infrastructures ¹⁵ 8. Connectivity ¹⁶ 9. Human resources 10. Land-use and spatial plan ¹⁷ 11. Quality of ecosystem ¹⁸ 12. Prosperity ¹⁹ 13. Sustainable energy
2. Protected area management effectiveness	1. Human resources 2. Funding 3. Infrastructures 4. Connectivity 5. Political will and policy 6. Quality of ecosystem 7. Biodiversity ²⁰ 8. Enforcement 9. Exploitation of natural resources 10. Prosperity 11. Right and ownership of resources 12. Trans-border cooperation
3. Socio-economic welfare of local people on the border areas	1. Political will and policy 2. Funding 3. Prosperity 4. Enforcement 5. Exploitation of natural resources 6. Agricultural practices 7. Land-use and spatial plan 8. Human resources 9. Trade and business 10. Connectivity 11. Infrastructures 12. Trans-border cooperation 13. Sustainable energy
4. Ecotourism development	1. Political will and policy 2. Funding 3. Human resources 4. Prosperity 5. Biodiversity 6. Tourism/ecotourism promotion 7. Tourist designated areas 8. Connectivity 9. Infrastructure 10. Trans-border cooperation 11. Culture and traditional knowledge
5. Capacity building	1. Human resources 2. Political will and policy 3. Infrastructure 4. Funding 5. Trans-border cooperation 6. Connectivity 7. Prosperity

Table 7. Threshold criteria for defining significant issues in the region of Heart of Borneo.

Criteria the Issues Become Significant Issues	Remarks
Part of cross-cutting issues	See Table 8 for the cross-cutting issues
Occurred and addressed in most of the regions (provincial and district)	
Addressed under Strategic Plan of Action adopted by the three countries in 2007	

Based on the application of the above threshold criteria, eventually it comes out 21 issues that need to be addressed in the planning (Table 8). These issues is treated as significant issues that need to follow up and communicated to the identified stakeholders.

¹³ Agriculture in general includes horticulture, forestry, fishery and animal husbandry.

¹⁴ Political will derived by central/provincial and district government.

¹⁵ Infrastructures include physics (such as road, railway, education facilities, telecommunication) or non-physics such as systems.

¹⁶ Connectivity of physics and systems.

¹⁷ Landuse including land tenure and land allocation for development purposes.

¹⁸ In particular terrestrial and aquatic ecosystem affected by mining activities, and fragmented wildlife habitat affected by land conversion.

¹⁹ Prosperity of people who live in the area of Heart of Borneo.

²⁰ Including wildlife conservation and sustainable harvest.

Table 8. Significant issues in Heart of Borneo area that need to be addressed.

No	Cross-Cutting Issues	No	Additional Important Issues
1	Agricultural practices	15	Forest fire
2	Biodiversity	16	Right and ownership of resources
3	Connectivity	17	Trade and business
4	Enforcement	18	Tourism/ecotourism promotion
5	Exploitation of natural resources	19	Tourist designated areas
6	Funding	20	Culture and traditional knowledge
7	Human resources	21	Population growth
8	Infrastructure		
9	Land-use and spatial planning		
10	Political will and policy		
11	Prosperity		
12	Quality of ecosystem		
13	Trans-border cooperation		
14	Sustainable energy		

3. MANAGEMENT APPROACH

To indicate the proxy priority issues that need to be resolved or managed in the area, the stakeholders' role are plotted based on the importance of each stakeholder against the potential impact toward the economic, social and environment within the area of Heart of Borneo. Based on each position in the mapping, three management approaches were defined, namely intensively managed, properly managed, and monitor only.

The intensively managed is defined as management that ensures positive direction and improvement of the issues within the area which eventually drive stakeholders to the same directions, e.g. the better the policy and the political will, the more attractive the area for the stakeholders. Further, the properly managed is defined as the management that follows the best practices which uphold the sustainability principles. Monitor is defined as the management to ensure that the issues are in line with the common guidelines (Fig. 4, Annex 7).

Upon the analysis, it appears that there are 8 significant issues that need to be intensively managed, i.e. political will, funding, human resources, land use planning, prosperity, connectivity, infrastructure and quality of ecosystems. This cluster of issues really need a close attention in order for the HoB and its spirit to keep flaring and attracting, as well as supported by the stakeholders. Failure to maintain these issues would significantly affect the entire programs of HoB.

Equally important, the issues in the second layer cluster which contain sustainable energy, agriculture practices, biodiversity, exploitation of natural resources, forest fire, trade and business, tourism promotion, tourist destination area, right and ownership, culture and traditional knowledge, as well as population growth are required to be properly managed to ensure the sustainability resources and economic development in the HoB region are in place. Negligence to manage the issues in this cluster may lead to the environmental, social and economic grievance of the HoB.

The remaining issues which are enforcement and trans-border cooperation are suggested to be monitored to ensure the two are in the right direction and in the short and long term would not affect the other issues placed on the two clusters above.

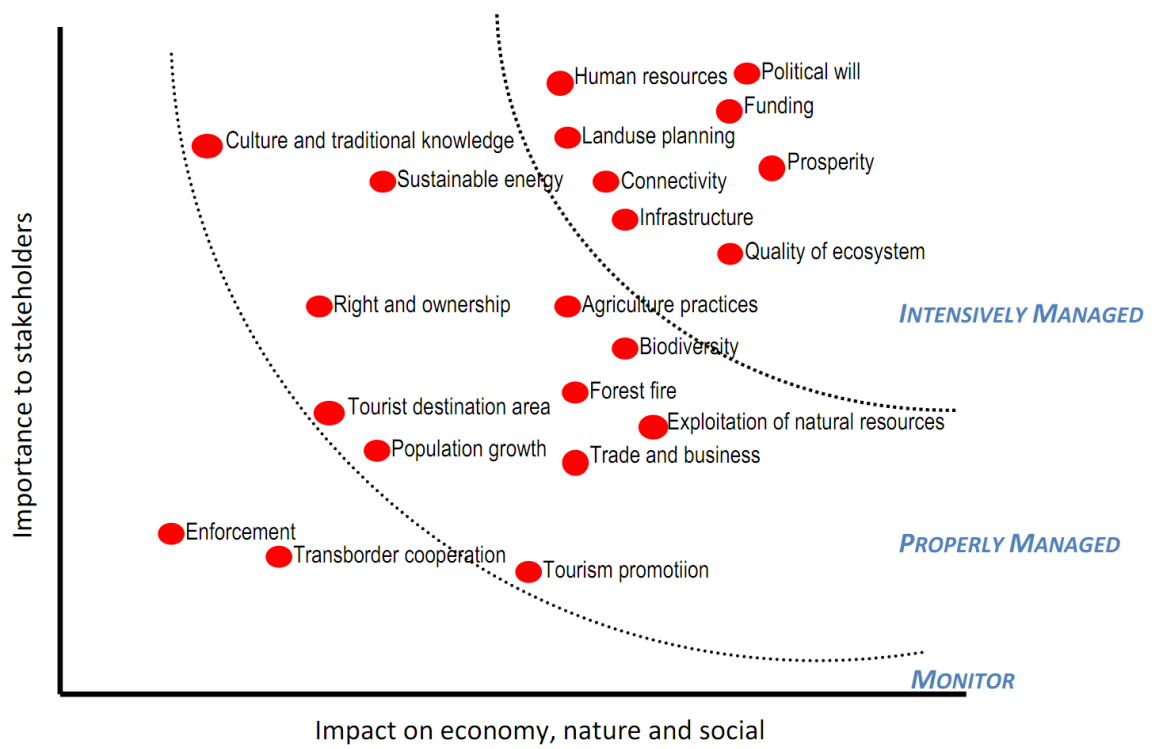


Figure 4. The mapping of issues, analyzed between the importance of stakeholders against impact on economy, nature and social identified in the Heart of Borneo region.



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IV. PROGRAM

The strategic programs for the HoB area is set out in accordance to the given missions adopted by the three countries and lay out within the Strategic Plan of Actions of HoB. Nevertheless, each States contracted to the HoB is sovereign and has privileged to develop its owned plan as long as in line with the agreed missions of HoB. In the case of Indonesia and its HoB territory, as mentioned earlier, the HoB area recently has also designated as National Strategic Area (NSA). Consequently, the programs and missions has to be adjusted to meet the objectives of NSA while keep maintaining the themes and mission of HoB itself.

To avoid the complication, the HoB and NSC mission are integrated and synergized into the five existing themes of HoB and translated into five programs priorities (Program 2 to 6) with additional prerequisite program (Program 1) as a foundation for the implementation of the remaining core programs, totaling six programs. The core programs are developed upon the needs to address the emerging and potential issues occur in the HoB Indonesia and the mid and long- term objectives of the HoB and NSC. The following are the HoB program lay out to be achieved in 5 year periods.

PROGRAM 1: Enabling condition for HoB implementation and program acceleration

Objective: to lay out the foundation of programs and activities in developing the HoB

Directive Policy:

- Presidential Decree No. 3/2012 on the Spatial Plan of Kalimantan
- Strategic Plan of Action of HoB adopted by the three countries in 2007

The program framework is set out in Fig. 5 and the program activities are listed in Table 9.

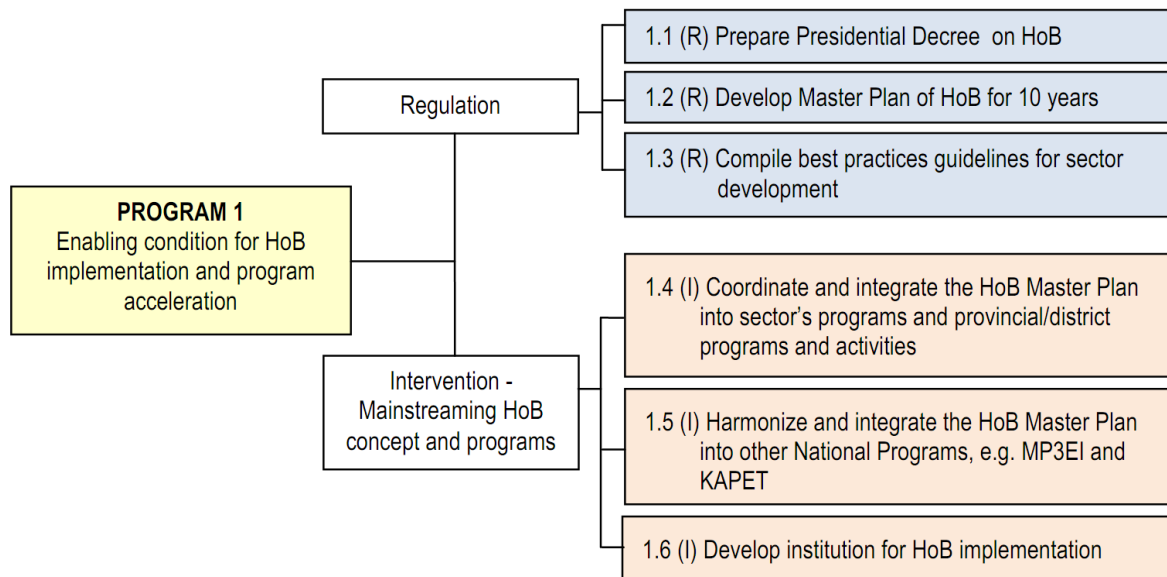


Figure 5. Framework of Program 1: Enabling condition for Heart of Borneo implementation and program acceleration (R: Regulation, I: Intervention).

Table 9. Matrix of the activities for Program 1: Enabling condition for Heart of Borneo implementation and program acceleration (R: Regulation, I: Intervention).

No	Key Activity	Expected Output	Lead Agency	Expected Completion
1.1(R)	Prepare the Presidential Decree on HoB	Presidential Decree on HoB	Coordinating Ministry of Economic Affairs	December 2015
1.2(R)	Develop Master Plan of HoB for 10 years	Master Plan of HoB for 2015-2025	Coordinating Ministry of Economic Affairs	December 2015
1.3(R)	Compile or develop best practice guidelines for sector development e.g., forestry, agriculture, mining, infrastructure and urban development	Best practice guidelines for developing forestry, agriculture, mining, Infrastructures and urban development in HoB	Coordinating Ministry of Economic Affairs	December 2015
1.4(I)	Coordinate and integrate the HoB Master Plan into sector's programs and provincial/district programs and activities	Agreement on HoB developments and programs with sectors and province/district	Coordinating Ministry of Economic Affairs	December 2016
1.5(I)	Harmonize and integrate the HoB Master Plan into other National Programs e.g., MP3EI and KAPET	Agreement on HoB development and programs with other national programs	Coordinating Ministry of Economic Affairs	December 2016
1.6(I)	Develop institution for HoB implementation	Institution responsible for overseeing the implementation of HoB program and activities	Coordinating Ministry of Economic Affairs	July 2015

PROGRAM 2: Sustainable development of natural resources outside the protected area in HoB

Objective: to manage sustainably natural resources located outside the protected area networks within the Indonesian part of Heart of Borneo

Directive Policy:

- Presidential Decree No. 3/2012 on the Spatial Plan of Kalimantan
- Government Regulation No. 26/2008 on the National Spatial Plan
- Relevant government regulations regarding land development

The program framework is set out in Fig. 6 and the program activities are listed in Table 10.

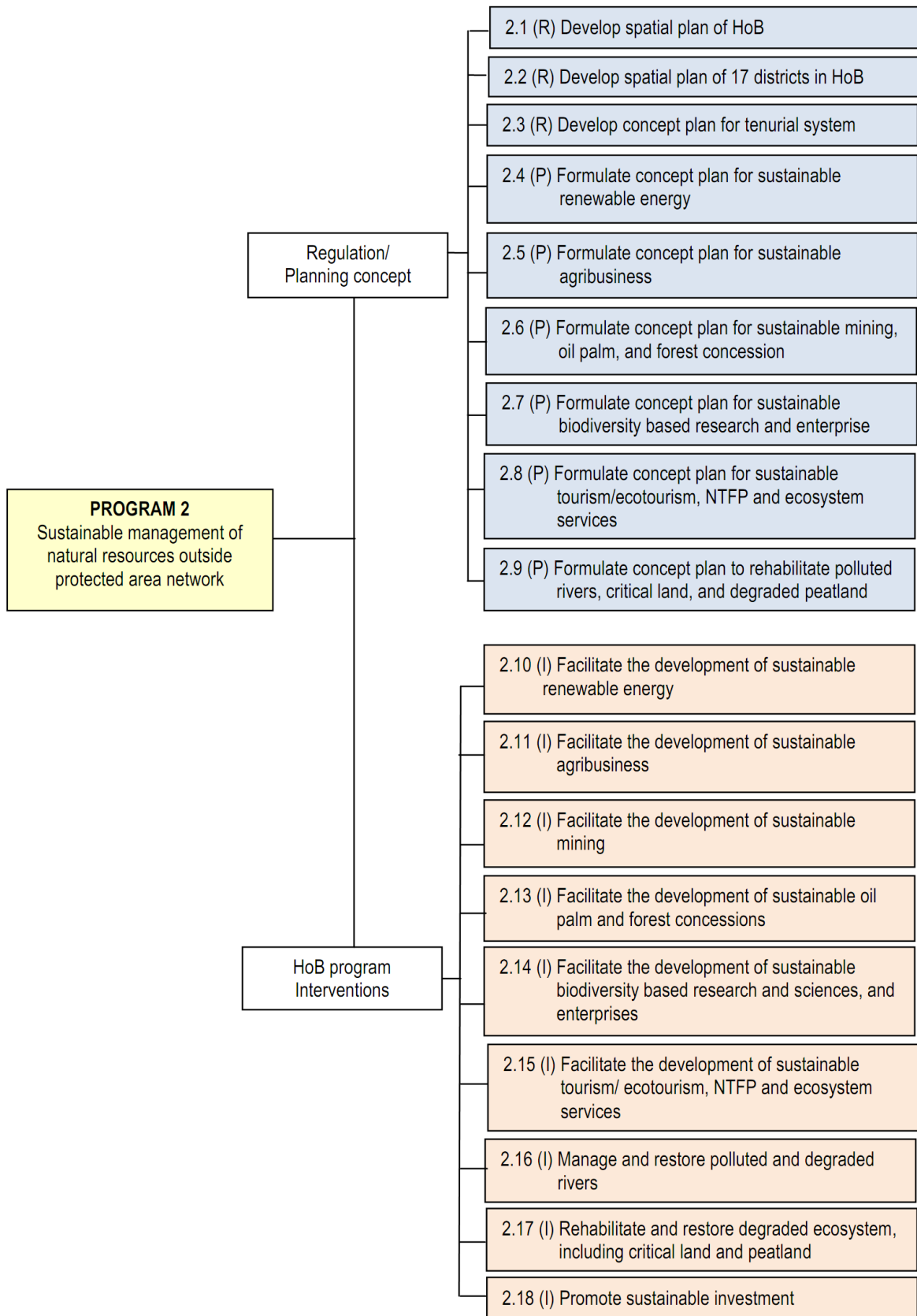


Figure 6. Framework of Program 2: Sustainable development of natural resources outside the protected area in Heart of Borneo (P: Planning, R: Regulation, I: Intervention).

Table 10. Matrix of the activities for Program 2: Sustainable development of natural resources outside the protected area in Heart of Borneo (P: Planning, R: Regulation, I: Intervention).

No	Key Activity	Expected Output	Lead Agency	Expected Completion
2.1(R)	Develop of spatial plan of HoB	Adopted spatial plan of HoB area	Ministry of Public Works	December 2015
2.2(R)	Develop of spatial plan of 17 districts in HoB	Spatial plan of 17 districts in HoB areas	Relevant Province and Districts	December 2015
2.3(R)	Develop a regulation for tenorial system in HoB in accordance with the similar motion at national level	Adopted tenorial system in HoB area	Relevant Ministry	December 2015
2.4(P)	Formulate a concept plan for development of sustainable renewable energy in HoB area	<ul style="list-style-type: none"> Adopted plan on renewable energy in HoB area Standard and procedure for investment in sustainable renewable energy in HoB 	Ministry of Mining	December 2016
2.5(P)	Formulate a concept plan for development of sustainable agribusiness in HoB	<ul style="list-style-type: none"> Adopted plan on agribusiness development in HoB Standard and procedure for investment in sustainable agribusiness in HoB 	Relevant Ministry	August 2017
2.6(P)	Formulate or strengthen a concept plan for developing sustainable mining, oil palm, and forest concessions	<ul style="list-style-type: none"> Adopted plan for developing or strengthening land based development Standard and procedure for investment in sustainable oil palm, mining and forest concession in HoB 	Relevant Ministry	August 2017
2.7(P)	Formulate concept and plan on biodiversity based research and enterprise	<ul style="list-style-type: none"> Adopted plan of biodiversity based research and enterprise Standard and procedure for investment in sustainable biodiversity based and enterprise in HoB 	Ministry of Research and Technology	August 2016
2.8(P)	Formulate a concept plan for tourism/ecotourism, NTFP and ecosystem services	<ul style="list-style-type: none"> Adopted plan on tourism/ecotourism, NTFP and ecosystem services outside the protected area Standard and procedure for investment in sustainable tourism/ecotourism, NTFP and ecosystem services outside protected area in HoB 	Relevant Ministry	August 2015
2.9(P)	Formulate concept plan to rehabilitate polluted rivers, critical land, and degraded peatland	<ul style="list-style-type: none"> Adopted plan on rehabilitation of polluted rivers, critical land, and degraded peatland 	Relevant Ministry	August 2015

2.10(I)	Facilitate the development of sustainable renewable energy in HoB	<ul style="list-style-type: none"> Investment climate on sustainable renewable energy is improved Number and type of investment in renewable energy is increased 	Ministry of Mining	Continue to the next period
2.11(I)	Facilitate the development of sustainable agribusiness in HoB	<ul style="list-style-type: none"> Investment climate on sustainable agribusiness is improved Number and type of investment in agribusiness is increased 	Relevant Ministry	December 2017
2.12(I)	Facilitate the development of sustainable mining in HoB	<ul style="list-style-type: none"> Investment climate on sustainable mining is improved Number of sustainable and environmental sound of mining is increased 	Ministry of Mining	December 2017
2.13(I)	Facilitate the development of sustainable oil palm and forest concession in HoB	<ul style="list-style-type: none"> Investment climate on sustainable oil palm and forest concession improved Number of oil palm companies joining to ISPO and RSPO increased Number of forest concession committed to SFM increased 	Relevant Ministry	December 2017
2.14(I)	Facilitate the development of sustainable biodiversity based research and enterprise in HoB	<ul style="list-style-type: none"> Investment climate on sustainable biodiversity based research and enterprise improved Number of research activities and investment on bio-enterprise increased 	Ministry of Research and Technology	December 2017
2.15(I)	Facilitate the development of sustainable tourism/ecotourism, NTFP, and ecosystem services outside protected area in HoB	<ul style="list-style-type: none"> Investment climate on sustainable ecosystem services outside the protected area improved Number and type of investment of sustainable ecosystem service is increased 	Ministry of Forestry	Continue to the next period
2.16(I)	Manage and restore polluted and degraded rivers in HoB	<ul style="list-style-type: none"> Healthy and functional rivers in HoB is increased 	Ministry of Public Works	December 2019
2.17(I)	Rehabilitate and restore degraded ecosystem, including critical land and peatland	<ul style="list-style-type: none"> Healthy and functional river network in HoB is increased Functional terrestrial ecosystem and watershed area 	Ministry of Public Works	December 2019
2.17(I)	Promote sustainable investment in HoB	Living document on promotion for HoB	National Investment Agency	Continue to the next period

PROGRAM 3: Protected areas management practices

Objective: to improve the effectiveness and participations of stakeholders in managing protected areas within the HoB area for conserving biodiversity and their ecosystems

Directive Policy:

- Presidential Decree No. 3/2012 on the Spatial Plan of Kalimantan
- Government Regulation No. 7/1999 on Species Conservation
- Government Regulation No. 28/2011 on Protected Area Management
- Relevant regulations on protected areas management and biodiversity conservation

The program framework is set out in Fig. 7 and the program activities are listed in Table 11.

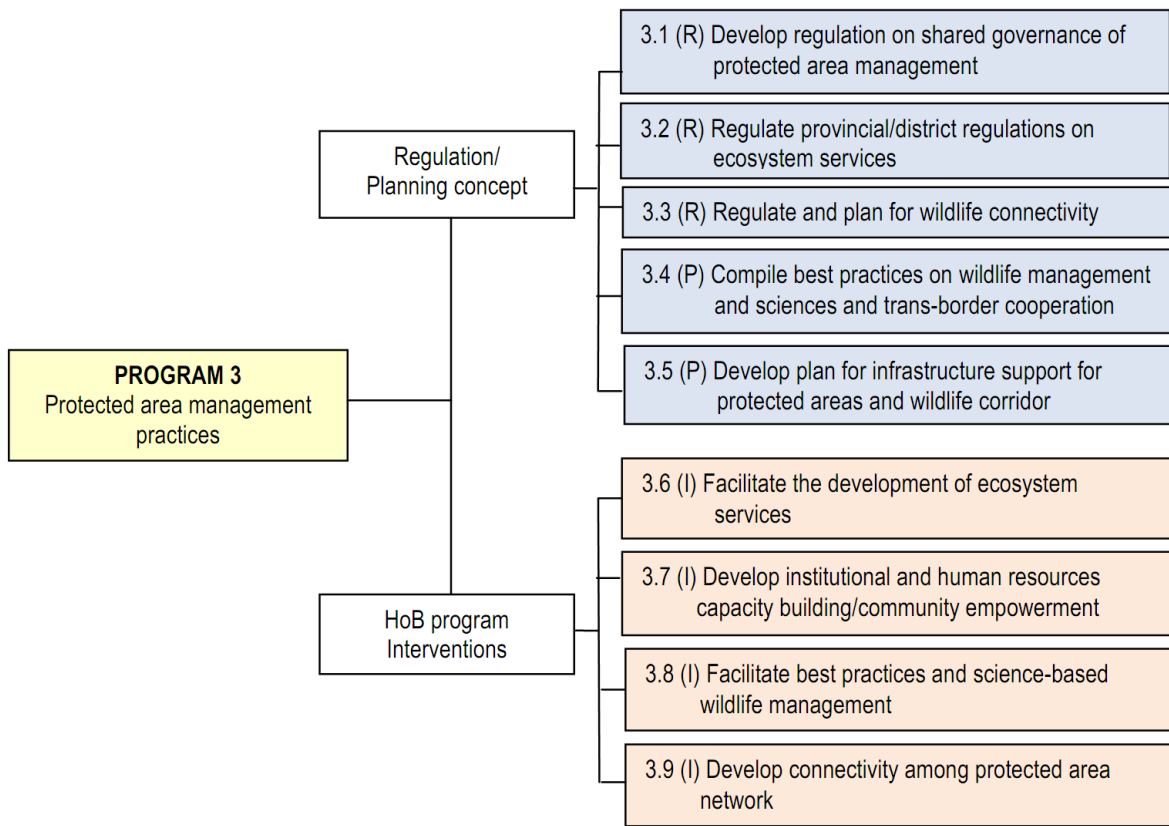


Figure 7. Framework of Program 3: Protected areas management practices (P: Planning, R: Regulation, I: Intervention).

Table 11. Matrix of the activities for Program 3: Protected areas management practices (P: Planning, R: Regulation, I: Intervention).

No	Key Activity	Expected Output	Lead Agency	Expected Completion
3.1(R)	Develop regulations on shared governance of protected area management	Regulation on collaborative management of protected area in HoB	Ministry of Forestry	December 2017
3.2(R)	Develop provincial and district regulation on ecosystem services	Provincial and district regulation on ecosystem services	Relevant provinces and districts	December 2017
3.3(R)	Develop regulation and plan for wildlife connectivity	Regulation and plan for wildlife corridor among the protected area	Ministry of Forestry	December 2017
3.4(P)	Develop/compile best practices on wildlife sciences and management, and trans-border cooperation	<ul style="list-style-type: none"> Guideline for best practices on wildlife management Guideline for wildlife research in HoB Trans-border cooperation on wildlife management and research 	Ministry of Forestry	December 2017
3.5(P)	Develop infrastructures support for protected area and wildlife corridor	<ul style="list-style-type: none"> Infrastructures support for protected area management Healthy wildlife corridor among the protected area 	Ministry of Forestry	Continue to the next period
3.6(I)	Facilitate and promote ecosystem services in protected area including water, carbon, and GHG in HoB	<ul style="list-style-type: none"> Standard and procedure for investment in sustainable ecosystem services in protected area within HoB Awareness of ecosystem services is improved Investment for ecosystem services in protected area is increased 	Ministry of Forestry	December 2019
3.7(I)	Develop institutional and human resource capacity building/ community empowerment in protected area of HoB	<ul style="list-style-type: none"> Strong institutional capacity to support the protected area Significant support from the community toward the protected area management 	Relevant Ministries	December 2017
3.8(I)	Facilitate best practice and science based wildlife management in HoB	<ul style="list-style-type: none"> Well managed wildlife species in protected area Population of endangered species in protected area is stable or increased 	Ministry of Forestry	December 2019
3.9(I)	Develop connectivity among protected area network in the HoB	<ul style="list-style-type: none"> Healthy wildlife corridor among the protected area network in HoB Flow of genetic resources between the protected area is in placed 	Ministry of Forestry	Continue to the next period

PROGRAM 4: Trans-border sustainable economic development

Objective: wellbeing of the people in border area based on sustainable development of natural resources

Directive Policy:

- The Act No. 41 of 1999 on Forestry
- The Act No. 18/2004 on Estate Plantation
- The Act No. 4/2009 on Mineral Mining and Coal
- The Act No. 18/2009 on Animal Husbandry and Animal Health
- The Act No. 19/2013 on Farmer Empowerment and Protection
- The Act No. 32 of 2009 on Protection and Management of Living Environment
- The Act No. 45/2009 on Fishery
- The Act No. 18/2013 on the Prevention and Eradication of Forest Destruction
- Presidential Decree No. 3/2012 on the Spatial Plan of Kalimantan
- Relevant and valid regulations regarding the use of natural resources in Indonesia

The program framework is set out in Fig. 8 and the program activities are listed in Table 12.

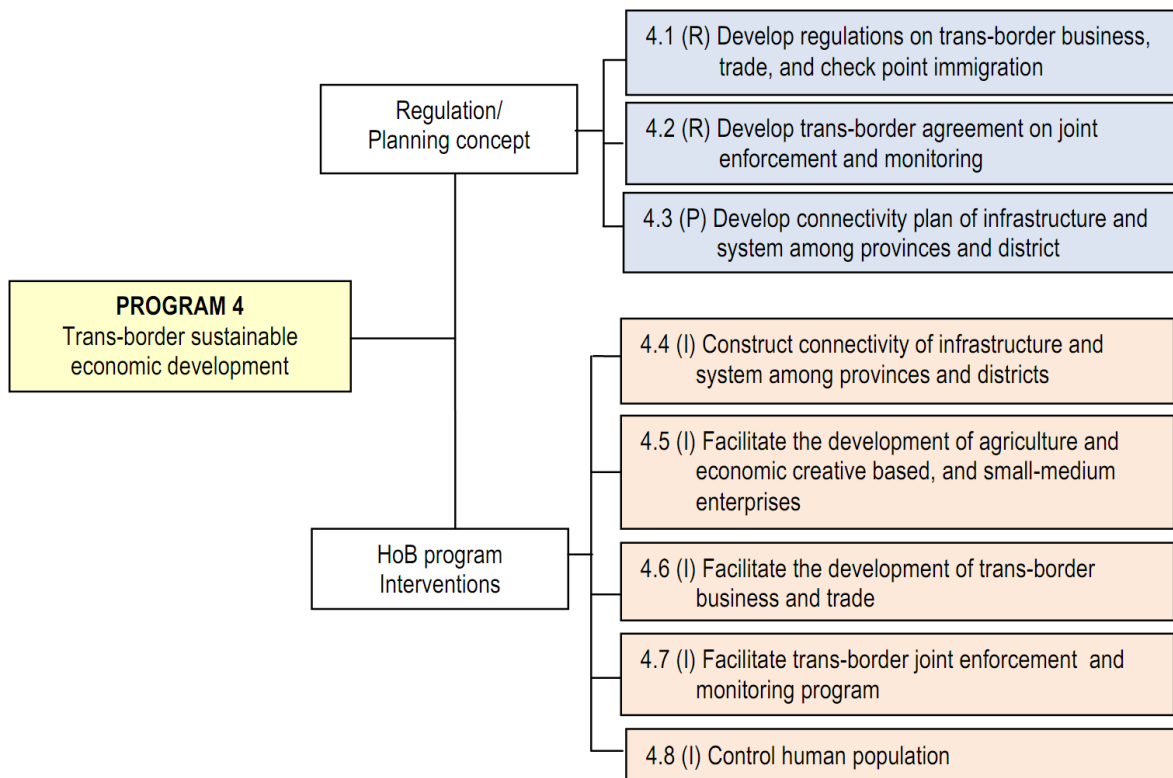


Figure 8. Framework of Program 4: Trans-border sustainable economic development (P: Planning, R: Regulation, I: Intervention).

Table 12. Matrix of the activities for Program 4: Trans-border sustainable economic development (P: Planning, R: Regulation, I: Intervention).

No	Key Activity	Expected Output	Lead Agency	Expected Completion
4.1(R)	Develop regulation on trans-border business, trade, and check point immigration	<ul style="list-style-type: none"> Adopted regulation on trans-border business and trade Adopted agreement and immigration gate 	Ministry of Trade, Ministry of Foreign Affairs	December 2017
4.2(R)	Develop trans-border agreement on joint enforcement and monitoring	MoU on joint enforcement and monitoring on trade and businesses	National Police Agency	December 2017
4.3(P)	Develop connectivity plan of infrastructures and system among provinces and districts in HoB	Adopted planning document of interconnection of infrastructure and systems among the provinces and district in HoB area	BAPPENAS	December 2017
4.4(I)	Construct connectivity of infrastructure and systems among the provinces and districts in HoB	Interconnection of infrastructures and systems among the provinces and district in HoB area	Ministry of Public Works	Continue to the next period
4.5(I)	Facilitate the development of sustainable agriculture and creative economic based for small and medium enterprises	Number of small and medium enterprises focusing on agriculture and creative economic is increased	Ministry of Cooperative and Small and Medium Enterprise or Ministry of Tourism and Creative Economic	Continue to the next period
4.6(I)	Facilitate the development of trans-border business and trade	<ul style="list-style-type: none"> Significant activities of trans-border business and trade Substantial trans-border economic contribution to the Gross Domestic Products of the districts in HoB 	Ministry of Trade	Continue to the next period
4.7(I)	Facilitate trans-border joint enforcement programs	Well managed and safe atmosphere of trans-border business and trade	National Police Agency	Continue to the next period
4.8(I)	Control human population	Population growth decline to the level of national	Ministry of Health	Continue to the next period

PROGRAM 5: Ecotourism development

Objective: Identify and promote sustainably development of ecotourism in HoB area

Directive Policy:

- The Act No. 10/2009 on Tourism
- Presidential Decree No. 3/2012 on the Spatial Plan of Kalimantan
- Government Regulation No. 36/2010 on Nature Tourism Businesses in Wildlife Sanctuary, National Park, Grand Forest Park and Nature Recreation Area
- Relevant and valid regulations regarding tourism and ecotourism

The program framework is set out in Fig. 9 and the program activities are listed in Table 13.

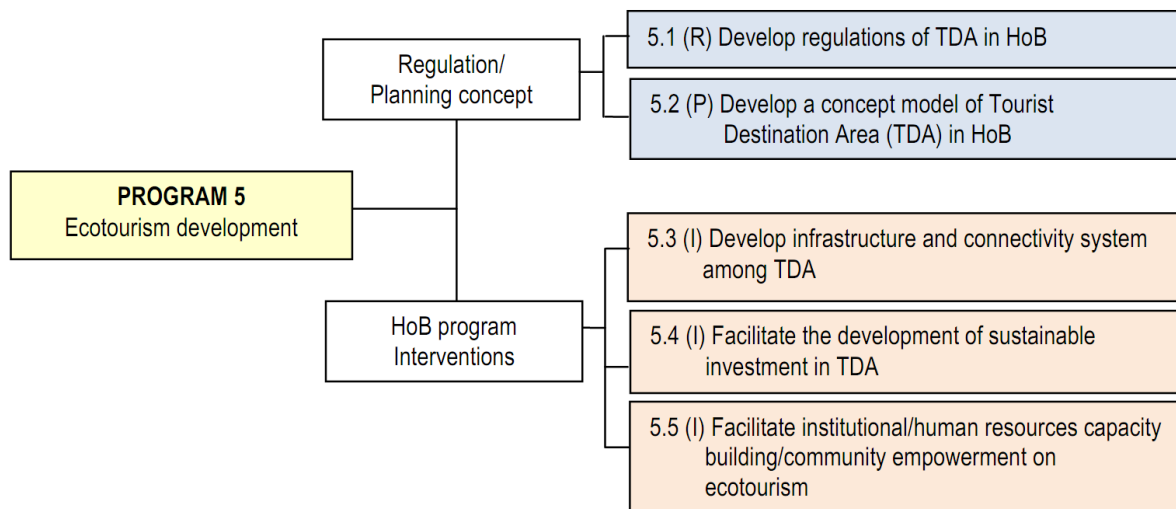


Figure 9. Framework of Program 5: Ecotourism development (P: Planning, R: Regulation, I: Intervention).

Table 13. Matrix of the activities for Program 5: Ecotourism development (P: Planning, R: Regulation, I: Intervention).

No	Key Activity	Expected Output	Lead Agency	Expected Completion
5.1(P)	Develop regulation of TDA in HoB	Provincial and district regulation for TDA in HoB, e.g. standard and procedure of investment in TDA	Relevant provinces and districts	December 2017
5.2(R)	Develop a concept model for Tourist Destination Area in HoB	<ul style="list-style-type: none"> Adopted Plan of Tourist Destination Area (TDA) in HoB Standard and criteria of TDA in HoB 	Ministry of Tourism and Creative Economic	December 2017
5.3(I)	Develop infrastructure and connectivity system among TDA	Required infrastructures and connectivity systems for TDA in HoB well constructed	Ministry of Public Works	December 2019
5.4(I)	Facilitate the development of sustainable investment in TDA	<ul style="list-style-type: none"> Number of well managed and attracted TDA is improved Number of tourist to TDA is increased Significant contribution of tourism sector to Gross Domestic Product of districts in HoB 	Ministry of Tourism and Creative Economic	Continue to the next period
5.5(I)	Facilitate institutional/human resources capacity building/ community empowerment on ecotourism	<ul style="list-style-type: none"> Strong institutional capacity of ecotourism in provinces and districts in HoB Adequate of qualified and certified human resources to support ecotourism development in HoB Number of community enterprises in ecotourism is improved and flourished 	Ministry of Tourism and Creative Economic	Continue to the next period

PROGRAM 6: Capacity building

Objective: strengthening local capacity in dealing with sustainable resources of natural resources, protected area management and ecotourism development

Directive Policy:

- Act No. 20/2003 on National Education System
- Presidential Decree No. 3/2012 on the Spatial Plan of Kalimantan
- Government Regulation No. 32/2013 on the National Standard for Education
- Relevant and valid regulations regarding capacity building and educations

The program framework is set out in Fig. 10 and the program activities are listed in Table 14.

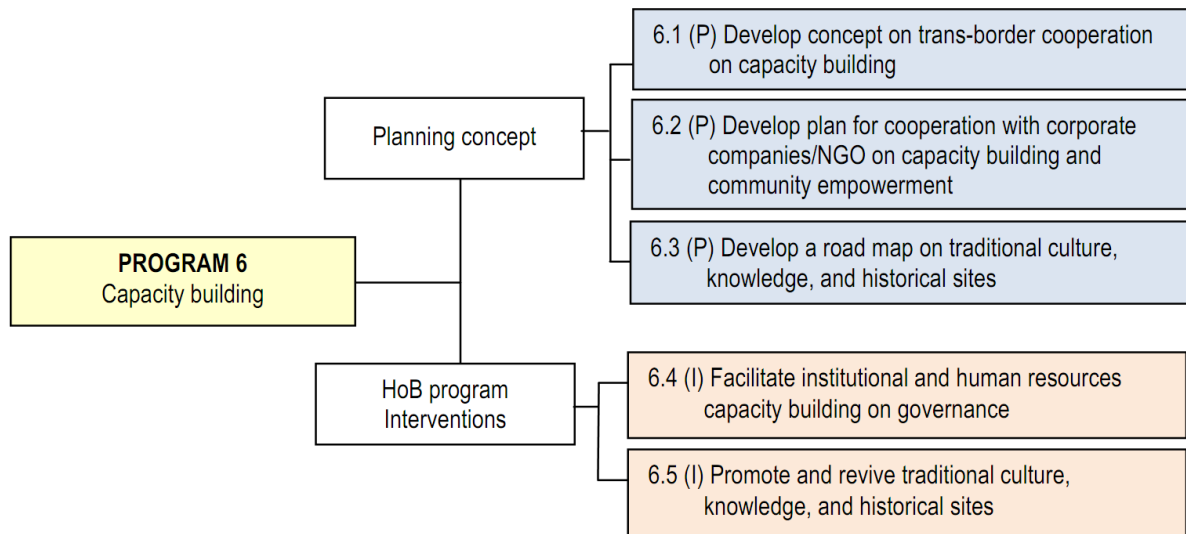


Figure 10. Framework of Program 6: Capacity building (P: Planning, I: Intervention).

Table 14. Matrix of the activities for Program 6: Capacity building (P: Planning, I: Intervention).

No	Key Activity	Expected Output	Lead Agency	Expected Completion
6.1(P)	Develop concept on trans-border cooperation on capacity building	MoU on trans-border cooperation on capacity building	Ministry of Home Affairs	December 2017
6.2(P)	Develop cooperation with corporate company on capacity building	MoU on capacity building between provinces/district in HoB and relevant corporate companies	Relevant Ministry	December 2017
6.3(P)	Develop a road map on promoting traditional culture, knowledge and historical site	Adopted plan on promoting traditional culture, knowledge and historical site	Ministry of Tourism and Creative Economic	December 2017
6.4(I)	Facilitate institutional capacity building on governance of protected area and natural resources	Strong institutional capacity on governance of protected area and natural resources	Relevant Ministry	Continue to the next period
6.5(I)	Promote and revive traditional culture, knowledge and historical sites	<ul style="list-style-type: none"> • Traditional culture and knowledge are flourishing in HoB area • Historical site in HoB are well maintained and become tourist destination • Significant support of province, district government and local community in HoB toward traditional practices and knowledge 	Relevant Ministry	Continue to the next period



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V. STRATEGIC APPROACH

1. IMPACT OR POTENTIAL IMPACT OF THE PROGRAMS

The introduction of large scale programs into certain area without proper enabling condition may create manifold effect either positive or negative. The scale of impact on economic, social and environment may vary from one programs to the others depending on how proper and caution are implied during the program's execution.

To avoid unexpected problems it is imperative to understand the nature of the programs prior to its implementation so that potential risk and negative impact can be minimized or even avoided. Table 15 indicates the potential impact from each program on economic, social and environment in the HoB.

2. BOUNDARY OF THE SPAN OF CONTROL

Having known the potential impact of the identified HoB programs, it is important to comprehend in managing the potential impact, optimize the positive aspect and minimize the negative one. To be able to do that properly - while at the same time to speed up the programs - it is advisable to recognize the nature and the complexity of each program, as well to apprehend the proxy occurrence of the impact. Once the impact or issues are well recognized, the next step is to determine whether these impacts are under span of control. If the impacts are likely located within the span of control, then the management option are much straightforward or uncomplicated. On the other hand, once the impact or issues appear to be beyond of the boundary of span control, then the management coordination among the key stakeholders become a reasonable option. Knowing that the impact has positive and negative outcome, in order to avoid a negative perception, hereafter the word 'impact' is replaced with 'aspect' which appear to be more positive impression (Table 16).

3. APPROACH OF PROGRAM IMPLEMENTATION

The success and achievement of the designated programs are depending entirely on the approach of the program implementation. In the case of HoB, the live and flare - as well as the spirit of the noble idea - are in the hand of the Coordinating Ministry of Economic Affairs as the conductor of the orchestra. Surely the Ministry cannot work alone and all stakeholders need to support and working together with the Coordinating Ministry of Economic Affairs. The key activities are coordination and integration of relevant programs under HoB framework (Fig. 10).

Table 15. Potential impact of Heart of Borneo Program.

Program	Key Activity	Economic		Social		Environment	
		Positive Impact	Negative Impact	Positive Impact	Negative Impact	Positive Impact	Negative Impact
1. Enabling condition for HoB implementation and program acceleration	1.1 (R) Prepare the Presidential Decree on HoB	Direct and indirect economic performance		Clear public policy		Reduce of environmental risk	
	1.2(R) Develop Master Plan of HoB for 10 years	Direct and indirect economic performance		Clear public policy		Reduce of environmental risk	
	1.3(R) Compile or develop best practice guidelines for sector development	<ul style="list-style-type: none"> • Direct and indirect economic performance • Increase market presence 	<ul style="list-style-type: none"> • Increased cost • Limited supply 	<ul style="list-style-type: none"> • FPIC in place • Avoided or less conflict with local community 		Reduce of environmental risk	
	1.4(I) Deliberation and coordination of HoB Program	<ul style="list-style-type: none"> • Accelerate HoB Programs • Direct and indirect economic performance 		<ul style="list-style-type: none"> • Improve communication 		Reduce of environmental risk	
	1.5(I) Harmonize and integrate the HoB Master Plan into other National Program	Direct and indirect economic performance		<ul style="list-style-type: none"> • Improve communication • Clear public policy 		Reduce of environmental risk	
	1.6(I) Develop institution for HoB implementation						
2. Sustainable development of natural resources outside protected areas	2.1(R) Develop spatial plan of HoB Districts	<ul style="list-style-type: none"> • Investment reliability • Direct and indirect economic performance 		<ul style="list-style-type: none"> • Clear public policy • Avoid or less conflict 		Reduce of environmental risk	
	2.2(R) Develop spatial plan of 17 districts in HoB	<ul style="list-style-type: none"> • Investment reliability and direction • Direct and indirect economic performance 		<ul style="list-style-type: none"> • Clear public policy • Avoid or less conflict on land 		Reduce of environmental risk	
	2.3(R) Develop a regulation or plan for tenurial system in HoB in accordance with similar motion at national level						
	2.4(P) Formulate concept plan for development of sustainable renewable energy in HoB area	<ul style="list-style-type: none"> • Investment reliability and direction of sustainable renewable energy development • Direct and indirect economic performance 		Clear public policy on renewable energy			Increased environmental Risk
	2.5(P) Formulate concept plan for developing sustainable agribusiness in HoB	<ul style="list-style-type: none"> • Investment reliability and direction of sustainable agribusiness development • Direct and indirect economic performance 		Clear public policy on sustainable agribusiness development		Reduce of environmental risk	Increased of environmental risk
	2.6(P) Formulate or strengthen a concept plan for developing sustainable mining,oil palm, and forest concession	<ul style="list-style-type: none"> • Investment reliability and direction of sustainable development of oil palm, mining and forest concession • Direct and indirect economic performance 		Clear public policy on sustainable oil palm, mining and forest concession		Reduce of environmental risk	Increased of environmental risk

2. Sustainable development of natural resources outside protected areas	2.7(P) Formulate a concept and plan on biodiversity based research and enterprise	<ul style="list-style-type: none"> Investment reliability and direction of sustainable development of biodiversity based research and enterprise Direct and indirect economic performance 		Clear public policy on sustainable development of biodiversity based research and enterprise		Reduce of environmental risk	
	2.8(P) Formulate a concept plan for tourism/ ecotourism, NTFP, and ecosystem services	<ul style="list-style-type: none"> Investment reliability and direction of sustainable ecotourism/NTFP and ecosystem services development Direct and indirect economic performance 		Clear public policy on sustainable ecotourism/NTFP and ecosystem services development		Reduce of environmental risk	
	2.9(P) Formulate concept plan to rehabilitate polluted rivers, critical land, and degraded peatland	<ul style="list-style-type: none"> Direct and indirect economic performance 				Reduce of environmental risk	
	2.10(I) Facilitate the development of sustainable renewable energy in HoB	Direct and indirect economic performance		<ul style="list-style-type: none"> Employment Education and capacity building Local community involvement 	<ul style="list-style-type: none"> Discriminative Corruption Compliance Labor problems 	Reduce of environmental risk	
	2.11(I) Facilitate the sustainable development of sustainable agribusiness in HoB	<ul style="list-style-type: none"> Direct and indirect economic performance Market presence 	<ul style="list-style-type: none"> Increased cost and energy Supply limited 	<ul style="list-style-type: none"> Employment Education and capacity building Local community involvement 	<ul style="list-style-type: none"> Discriminative Corruption Compliance Labor problems 		Water, energy, biodiversity, emission, compliance, effluent and waste and transportation
	2.12(I) Facilitate the development of sustainable mining in HoB	<ul style="list-style-type: none"> Direct and indirect economic performance Market presence 	<ul style="list-style-type: none"> Increased cost and energy Supply limited 	<ul style="list-style-type: none"> Employment Education and capacity building Local community involvement 	<ul style="list-style-type: none"> Discriminative Corruption Compliance Labor problems 		Water, energy, biodiversity, emission, compliance, effluent and waste and transportation
	2.13(I) Facilitate the development of sustainable oil palm and forest concession in HoB	<ul style="list-style-type: none"> Direct and indirect economic performance Market presence 	<ul style="list-style-type: none"> Increased cost and energy Supply limited 	<ul style="list-style-type: none"> Employment Education and capacity building Local community involvement 	<ul style="list-style-type: none"> Discriminative Corruption Compliance Labor problems 		Water, energy, biodiversity, emission, compliance, effluent and waste and transportation
	2.14(I) Facilitate the development of biodiversity based research and enterprises in HoB	<ul style="list-style-type: none"> Direct and indirect economic performance Market presence 		<ul style="list-style-type: none"> Employment Education and capacity building Local community involvement 	<ul style="list-style-type: none"> Discriminative Corruption Compliance Labor problems 		Water, energy, biodiversity, emission, compliance, effluent and waste
	2.15(I) Facilitate the development of sustainable tourism/ecotourism, NTFP and ecosystem services outside protected area in HoB	<ul style="list-style-type: none"> Direct and indirect economic performance Market presence 		<ul style="list-style-type: none"> Employment Education and capacity building Local community involvement 	<ul style="list-style-type: none"> Discriminative Corruption Compliance Labor problems 		Water, energy, biodiversity, emission, compliance, effluent and waste

	2.16(I) Manage and restore polluted and degraded rivers in HoB	Direct and indirect economic performance	Cost for investment and management increased	<ul style="list-style-type: none"> • Employment • Education and capacity building • Local community involvement 	<ul style="list-style-type: none"> • Discriminative • Corruption • Compliance • Labor problems 	Improve the ecosystem quality	
	2.17(I) Rehabilitate and restore degraded ecosystem, including critical land and peatland	Direct and indirect economic performance				Improve the ecosystem quality	
	2.17(I) Promote of sustainable investment	<ul style="list-style-type: none"> • Direct and indirect economic performance • Market presence 		<ul style="list-style-type: none"> • Employment • Education and capacity building • Local community involvement 			
3. Protected area management practices	3.1(R) Develop regulations on shared governance of protected areas management with province, district and communities	Increase potential investment in protected areas		Clear public policy		Reduce of environmental risk	
	3.2(R) Develop provincial/district regulation on ecosystem services (water, tourism and carbon)	<ul style="list-style-type: none"> • Investment reliability and direction of sustainable development of biodiversity based research and enterprise • Direct and indirect economic 		Clear public policy		Reduce of environmental risk	
	3.3(R) Develop regulation and plan for wildlife connectivity	•	Investment on biodiversity corridor	<ul style="list-style-type: none"> • Clear public policy • FPIC in place 	Potential conflict on land with local community	Reduce of environmental risk	
	3.4(P) Develop/compile best practices on wildlife management, sciences and trans-border cooperation	<ul style="list-style-type: none"> • Direction of sustainable development of biodiversity based research and enterprise • Direct and indirect economic 		Compliance to the sustainable regulation		Reduce of environmental risk	
	3.5(P) Develop plan for infrastructure support for protected area wildlife corridor						
	3.6(I) Facilitate and promote ecosystem services in protected areas, including water, carbon and GHG in HoB	<ul style="list-style-type: none"> • Direct and indirect economic performance • Market presence 		<ul style="list-style-type: none"> • Employment • Education and capacity building • Local community involvement 	<ul style="list-style-type: none"> • Discriminative • Corruption • Compliance • Labor problems 		Water, energy, biodiversity, emission, compliance, effluent and waste
	3.7(I) Develop institutional and human resources capacity building/ community empowerment in protected area of HoB	Direct and indirect economic performance		<ul style="list-style-type: none"> • Education and capacity building • Equal opportunity • Improve collective bargaining 		Improve ecosystem quality	
	3.8(I) Facilitate best practices and science based wildlife management in HoB		Investment on biodiversity management system	<ul style="list-style-type: none"> • Education and capacity building • Local community involvement 		Reduce of environmental risk	
	3.9(I) Develop connectivity among protected area network in the HoB			•			

4. Trans-border sustainable economic development	4.1(P) Develop connectivity plan of infrastructures and system among provinces and districts in HoB	<ul style="list-style-type: none"> Investment reliability and direction of infrastructure development Direct and indirect economic performance 		<ul style="list-style-type: none"> Clear public policy FPIC in place 	<ul style="list-style-type: none"> Increased land speculation 	Reduce of environmental risk	
	4.2(R) Develop regulation on trans-border business, trade and check point immigration	<ul style="list-style-type: none"> Investment reliability and direction of trans-border business policy Direct and indirect economic performance 		Clear public policy			Environmental risk
	4.3(R) Develop trans-border agreement on joint enforcement and monitoring	<ul style="list-style-type: none"> Direct and indirect economic performance 		Clear public policy		Reduce of environmental risk	
	4.4(I) Construct connectivity of infrastructure and systems among the provinces and districts in HoB	<ul style="list-style-type: none"> Direct and indirect economic performance Market presence 		<ul style="list-style-type: none"> Employment Equal opportunity Education Security Communication 	<ul style="list-style-type: none"> Crime Indigenous /local right Culture 		Ecosystem, energy, waterbiodiversity, emission, effluent and waste and transportation
	4.5(I) Facilitate the development of sustainable agriculture and creative economic based for small and medium enterprises	<ul style="list-style-type: none"> Direct and indirect economic performance Market presence 		<ul style="list-style-type: none"> Employment Equal opportunity Education Capacity building 			Ecosystem, energy, water, biodiversity, emission, effluent and waste and transportation
	4.6(I) Facilitate the development of trans-border business and trade	<ul style="list-style-type: none"> Direct and indirect economic performance Market presence 		<ul style="list-style-type: none"> Employment Equal opportunity Education Security Communication 	<ul style="list-style-type: none"> Crime Indigenous /local right Culture 		Environmental risk
	4.7(I) Facilitate trans-border joint enforcement program	Investment reliability		Reduce of social problems		Reduce of environmental risk	
	4.8(I) Human population control	Indirect economic performance		Reduce of social problems		Reduce of environmental risk	
5. Ecotourism development	5.1(P) Develop a concept model of Tourist Destination Area (TDA) in HoB	<ul style="list-style-type: none"> Direct and indirect economic performance 		<ul style="list-style-type: none"> Clear public policy FPIC in place 		Reduce of environmental risk	
	5.2(R) Develop regulation of TDA in HoB	<ul style="list-style-type: none"> Direct and indirect economic performance 		<ul style="list-style-type: none"> Clear public policy FPIC in place 		Reduce of environmental risk	
	5.3(I) Develop infrastructure and connectivity system among TDAs	<ul style="list-style-type: none"> Direct and indirect economic performance Market presence 		<ul style="list-style-type: none"> Employment Local community involvement Education and capacity building 	<ul style="list-style-type: none"> Labor problems Corruption Compliance 		Ecosystem, energy, water, biodiversity, emission, effluent and wastes and transportation
	5.4(I) Facilitate the development of sustainable investment in TDAs						
	5.5(I) Institutional/ human resources capacity building/community empowerment on ecotourism	<ul style="list-style-type: none"> Direct and indirect economic performance 		<ul style="list-style-type: none"> Local community involvement Education and capacity 		Reduce of environmental risk	

				building			
6. Capacity building	6.1(P) Develop trans-border cooperation on capacity building	<ul style="list-style-type: none"> • Direct and indirect economic performance 		<ul style="list-style-type: none"> • Equal opportunity 			Reduce of environmental risk
	6.2(P) Develop cooperation with corporate company on capacity building	<ul style="list-style-type: none"> • Direct and indirect economic performance 		<ul style="list-style-type: none"> • Employment • Local community involvement • Education and capacity building • Equal opportunity 			Reduce of environmental risk
	6.3(P) Develop a road map on promoting traditional culture, knowledge and historical sites	<ul style="list-style-type: none"> • Direct and indirect economic performance 		<ul style="list-style-type: none"> • Employment • Local community involvement • Education and capacity building • Equal opportunity 			Reduce of environmental risk
	6.4(l) Facilitate institutional capacity building on governance of protected area and natural resources	<ul style="list-style-type: none"> • Direct and indirect economic performance 		<ul style="list-style-type: none"> • Employment • Local community involvement • Education and capacity building • Equal opportunity 			Reduce of environmental risk
	6.5(l) Promote and revive traditional culture, knowledge and historical sites	<ul style="list-style-type: none"> • Direct and indirect economic performance 		<ul style="list-style-type: none"> • Employment • Local community involvement • Education and capacity building • Equal opportunity 			Reduce of environmental risk

Table 16. Boundary and span of control of the Coordinating Ministry of Economic Affairs for HoB program and activity.

No	Aspect*	Boundary of Span of Control	
		Within	Outside
1	Direct economic performance	✓	✓
2	Indirect economic performance	✓	✓
3	Clear public policy	✓	✓
4	Environmental risk		✓
5	Accelerate program	✓	
6	Compliance to sustainable development	✓	✓
7	Increased cost/investment		✓
8	FPIC in place		✓
9	Avoided or less conflict	✓	✓
10	Improve communication	✓	
11	Investment reliability and direction	✓	✓
12	Investment on biodiversity corridor and management		✓
13	Market presence	✓	✓
14	Supply limited		✓
15	Employment		✓
16	Education and capacity building		✓
17	Local community involvement		✓
18	Non-discriminant policy		✓
19	Corruption	✓	✓
20	Compliance		✓
21	Water		✓
22	Biodiversity		✓
23	Energy		✓
24	Emission		✓
25	Effluent and waste		✓
26	Transportation		✓
27	Crime and speculation		✓
28	Equal opportunity and collective bargaining		✓
29	Security		✓
30	Social problems		✓
31	Indigenous/local right		✓
32	Culture		✓
33	Potential conflict with local community		✓
34	Large scale investment		✓

*Impact

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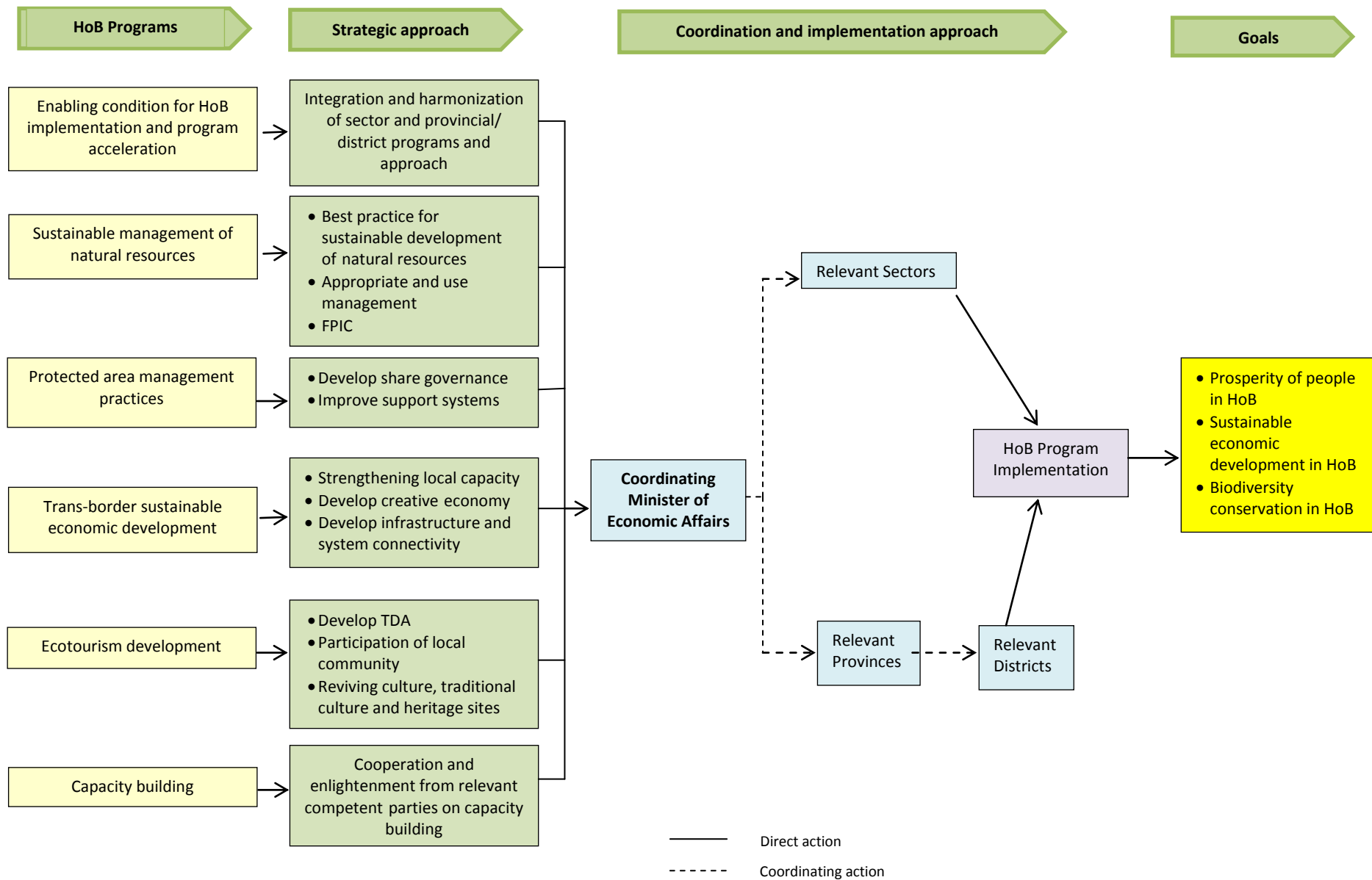


Figure 11. Strategic and implementation approach of Heart of Borneo Programs.

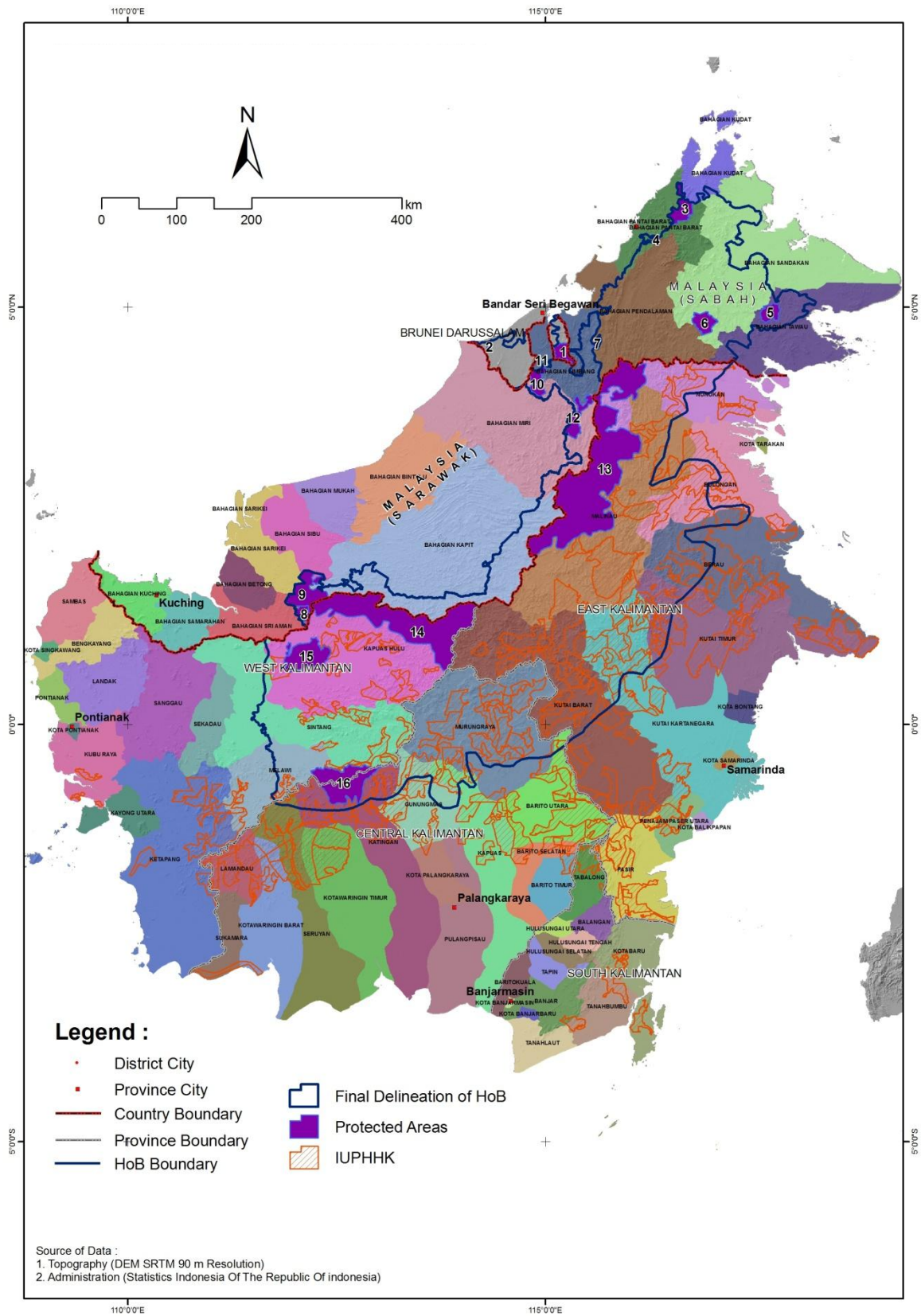
ANNEXES

Annex 1. List of province, district (*kabupaten*) and sub-district (*kecamatan*) within the Indonesia's Heart of Borneo.

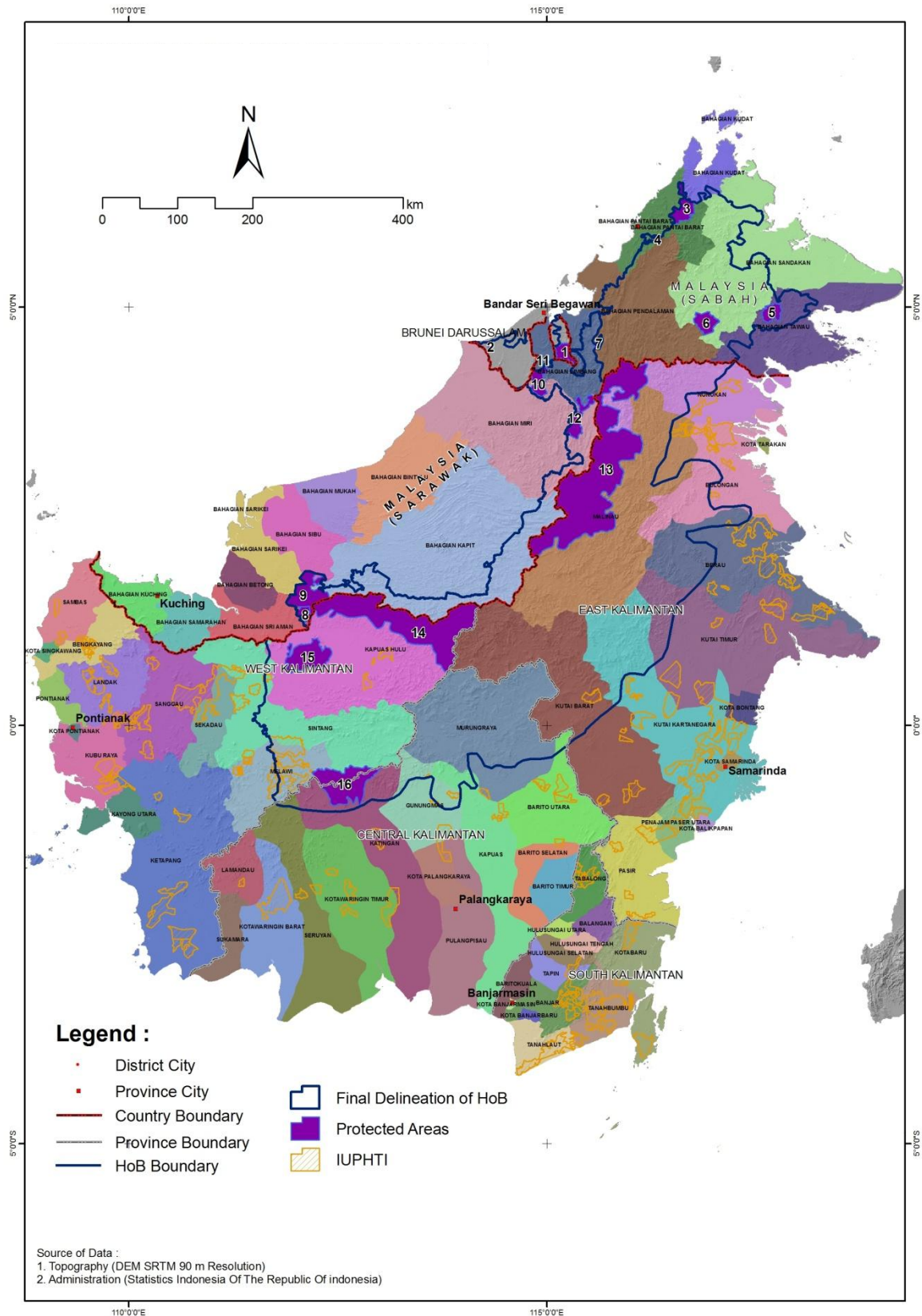
Province	District	Regency	
		Number	Name
North Kalimantan			
	Nunukan	3	Krayan, Lumbis, Nunukan
	Malinau	5	Kayan Hilir, Kayan Hulu, Malinau, Mentarang, Pujungan
	Bulungan	3	Peso, Sekatak, Tanjung Palas
East Kalimantan			
	Berau	3	Gunung Tabur, Kelai, Segah
	Kutai Timur	2	Muara Ancalong dan Muara Wahau
	Kutai Kartanegara	2	Kembang Janggut, Tabang
	Kutai Barat	3	Damai, Long Iram, Melak
	Mahakam Ulu	4	Long Apari, Long Bagun, Long Hubung, Long Pahangai
Central Kalimantan			
	Murung Raya	5	Laung Tuhup, Murung, Permata Intan, Sumber Barito, Tanah Siang
	Kapuas	2	Kapuas Hulu, Kapuas Tengah
	Gunung Mas	5	Kahayan Hulu Utara, Kurun, Munuhing, Rungan, Tewah
	Katingan	3	Katingan Hulu, Marikit, dan Sanaman Mantikei
	Barito Utara	1	Lahei
	Seruyan	1	Seruyan Hulu
West Kalimantan			
	Kapuas Hulu	23	Badau, Batang Lupar, Batu Datu, Boyan Tanjung, Bunut Hilir, Bunut Hulu, Embaloh Hilir, Embaloh Hulu, Embau, Empanang, Hulu Gurung, Kalis, Kedamin, Manday, Mentebah, Puring Kencana, Putussibau, Seberuang, Selimbau, Semitau, Silat Hilir, Silat Hulu, Suhaid
	Melawi	5	Belimbing, Ella Hilir, Menukung, Nanga Pinoh, Sayan
	Sintang	12	Ambalau, Binjai Hulu, Dedai, Kayan Hilir, Kayan Hulu, Kalam Permai, Ketungau Hilir, Ketungau Tengah, Serawai, Sintang, Sungai Tebelian

Note: Total number of district: 17; total number of sub-district: 82

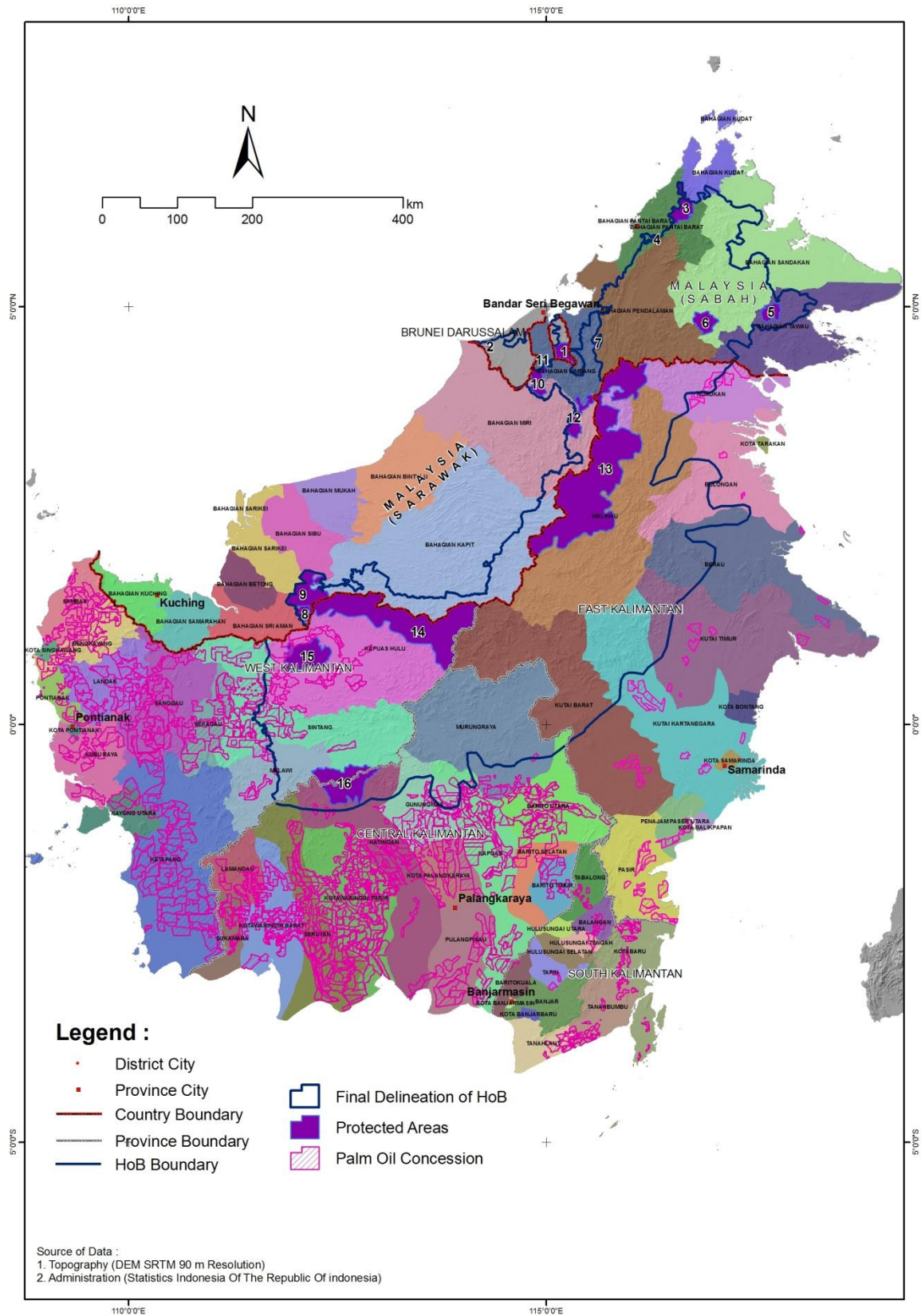
Annex 2. Distribution of forest concessions (IUPHHK) within Heat of Borneo area.
 Source of map: WWF



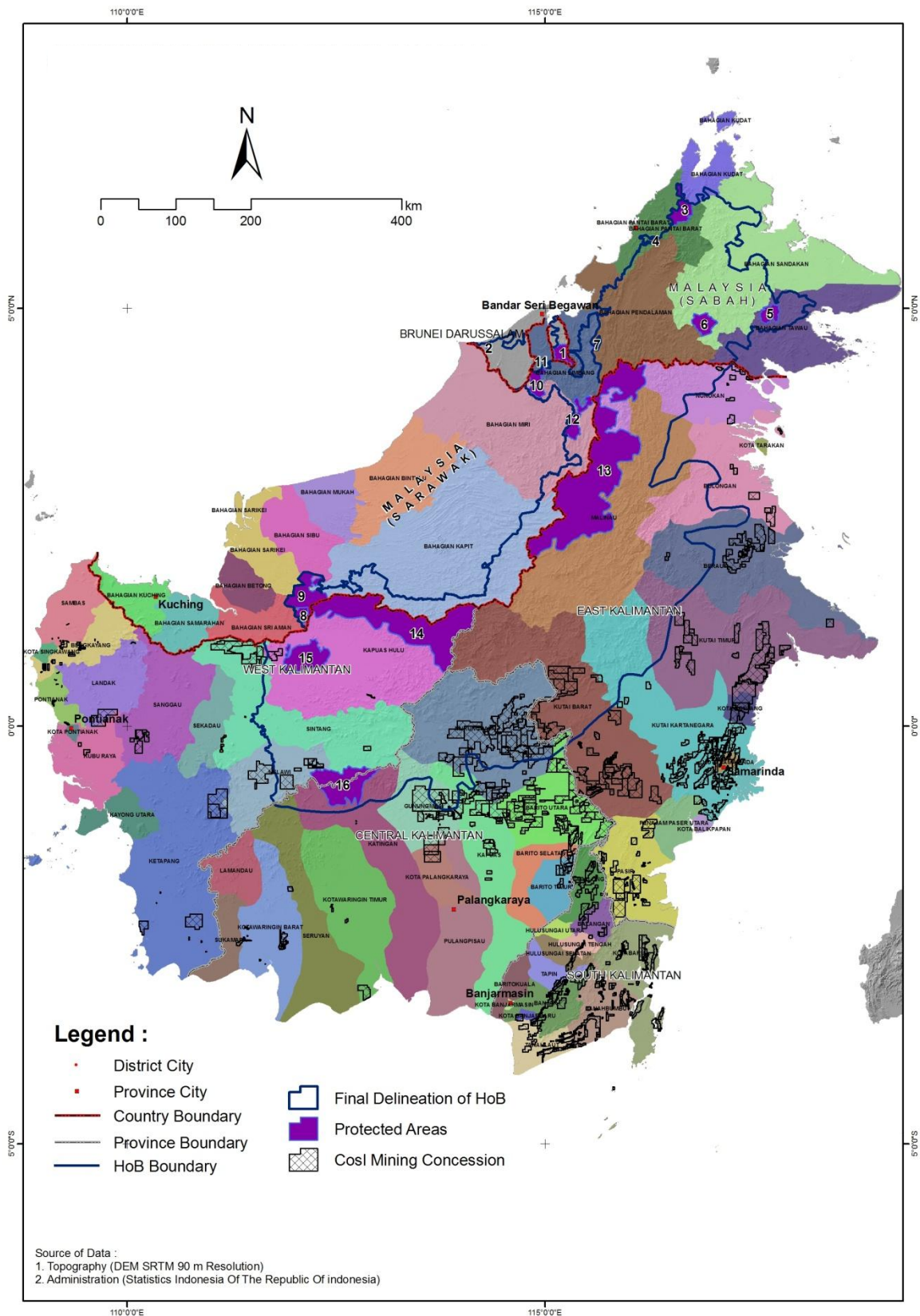
Annex 3. Distribution of forest industrial plantation concession (IUPHTI) within Heat of Borneo area.
 Source of map: WWF



Annex 4. Distribution of oil palm plantation within Heat of Borneo area.
 Source of map: WWF



Annex 5. Distribution of coal mining concession within Heat of Borneo area.
 Source of map: WWF



Annex 6. Scores for stakeholder mapping based on power and dependency.

No	Stakeholder	Power	Dependency
1	Central Government	3	2
2	Local Government	3	3
3	Local Parliament	3	3
4	State owned enterprises	2	2
5	Private companies/investors	2	2
6	Local communities	1	3
7	Academia and scientists	1	2
8	Civil societies	1	1
9	Donor	2	1
10	Neighboring countries	1	1

Scoring line: High: 3; Moderate: 2; Low: 1

Annex 7. Scores for issues mapping based on the importance to stakeholders and the impact to the socio-economic and environment.

No	Identified Issues	Importance to Stakeholders	Impact to the Socio-Economic and Environment
1	Agricultural practices	2	3
2	Biodiversity	2	3
3	Connectivity	3	3
4	Enforcement	1	1
5	Exploitation of natural resources	2	3
6	Funding	3	3
7	Human resources	3	3
8	Infrastructure	3	3
9	Land-use and spatial planning	3	3
10	Political will and policy	3	3
11	Prosperity	3	3
12	Quality of ecosystem	3	3
13	Trans-border cooperation	1	1
14	Forest fire	2	3
15	Right and ownership of resources	2	2
16	Trade and business	2	3
17	Tourism/ecotourism promotion	1	2
18	Tourist designated areas	2	2
19	Culture and traditional knowledge	3	1
20	Sustainable energy	2	3
21	Population growth	2	2

Scoring line: High: 3; Moderate: 2; Low: 1



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