



# Tiger in your tank?

**Destruction of Riau's Bukit Batabuh tiger corridor for palm oil**



**Investigative Report**

**Eyes on the Forest**

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Eyes on the Forest (EoF) is a coalition of environmental NGOs in Riau, Sumatra: Friends of the Earth "Walhi" Riau Office, Jikalahari "Riau Forest Rescue Network" and WWF-Indonesia, Riau Program. EoF monitors the status of the remaining natural forests in Sumatra's Province of Riau and disseminates the information worldwide.

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## **Front cover**

Photo: Encroachment area of "SAK" group, burnt after clearance of protected natural forest in the Bukit Batabuh Tiger Corridor. Photo taken by Eyes on the Forest at 0°54'57.74"S and 101°42'8.92"E on 4 September 2012.

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## Glossary

The Bukit Batabuh tiger corridor is habitat of the critically endangered Sumatran tiger and part of the 4 million hectares "Rimba Corridor" running through Riau, Jambi and West Sumatra provinces which was designated as one of only five pilot areas for ecosystem based land use planning by Presidential Decree No.13/2012.

The Forest Estate classifies land managed by the Ministry of Forestry based on the 1986 "Consensus of Forest Land Use" (TGHK, Ministry of Forestry Decree No 173/Kpts-II/1986) and 1994 "Riau Spatial Planning" (RTRWP 1994) regulations. The "Forest Estate" does not allow development of agricultural commodities, such as oil palm plantations. The designation "Forest Estate" does not necessarily mean that the land is covered by natural forest. The Bukit Batabuh tiger corridor is almost exclusively categorized as "Forest Estate".

"Illegal" or "illicit" palm oil or FFB in this report refers to palm oil or Fresh Fruit Bunches (FFB) derived from plantations unlawfully grown inside the Forest Estate, in this case, the Bukit Batabuh tiger corridor. "Tainted" or "contaminated" palm oil refers to batches which may have been produced at least in part with unlawfully grown FFB.

Encroachment in this report refers to unlawful activities such as occupying, controlling and operating in the Forest Estate in the Bukit Batabuh tiger corridor based on TGHK 1986 and RTRWP 1994.



## TIGER IN YOUR TANK: Findings and Conclusions

Eyes on the Forest investigated chains-of-custody of fresh oil palm fruit bunches (FFB) from plantations unlawfully planted in one of Sumatra's most important tiger corridors to crude palm oil (CPO) mills and ports. Crude palm oil from illicitly grown fruit appeared to travel far by ship from tiger habitat deep inside Sumatra possibly all the way to refineries of some of the most well known brands in the world in Indonesia, Malaysia and Singapore. It is essential that responsible palm oil product providers trace the origin of their products to the plantation level.

1. Eyes on the Forest investigated oil palm plantation development inside Riau province's "Bukit Batabuh tiger corridor" connecting Bukit Rimbang-Bukit Baling Wildlife Sanctuary with Bukit Tigapuluh National Park. The 95,824 ha area provides vital habitat for the critically endangered Sumatran tiger, though its forest cover has declined to only 36% due to rampant encroachment.
2. Based on currently legal land use plans in Riau province, RTRWP (Riau Province Land Use Plan) and TGHK 1986 (the Consensus of Forest Land Use), oil palm plantation development is not allowed in almost all of the Bukit Batabuh tiger corridor. Transactions of FFB originating in such plantations are indicated to be illegal.
3. We surveyed close to 30,000 ha of encroachment areas in 2012-2013. The majority of over 1,500 GPS sample locations recorded oil palm plantations, either already planted or to be planted. Most of the recorded, existing oil palm plantations are not allowed based on Riau's RTRWP and TGHK 1986 land use plans.
4. Our survey identified 27 distinctive encroacher groups in the corridor. 18 groups were considered "small scale" with self-funded, independent plantations with an average 8 ha or less per family. The majority of group members were not residents but had arrived from other provinces. The remaining were considered "large scale" with a minimum plantation size of 250 ha, funded by investors from outside the area and managed as companies. One of these was a "plasma estate" under the "KKPA scheme (Members' Primary Credit for Cooperatives)" of a Sarimas group company, PT. Tri Bakti Sarimas, who operates two CPO mills near the corridor. The survey did not find any nucleus estate in the corridor.
5. Our survey estimated around 19,000 ha of fully established oil palm plantations, half of which were mature producing FFB. In addition, we found close to 4,000 ha of newly cleared lands and almost 9,000 ha of shrub, a lot of which we suspect will be planted with oil palm. Once the immature and still to-be-planted oil palm become mature in possibly three years, we expect the illicit FFB supply from the area to triple.
6. We identified 19 CPO mills around the Bukit Batabuh tiger corridor between May 2012 and January 2014, including: 5 mills of the *Darmex* group, 2 mills of the *Sarimas* group, 1 mill each of the *Anugerah*, *Asian Agri*, *Astra*, *Incasi Raya*, *KSL*, *Mahkota*, *Salim* and *Sinar Mas* groups and 4 mills which appeared to not be associated with any group. 14 mills had their own plantations, 5 mills did not. The latter, so-called "independent mills" likely provide an important market for encroachers in the corridor. These mills are often privately owned by small companies without corporate purchasing policies and ignore the origins and legality of the FFB they purchase to fulfill their mills' demands.
7. Our investigation successfully followed 14 chains-of-custody of FFB transferred from 11 encroachment groups to eight CPO mills and 12 chains-of-custody of CPO trucked from these eight CPO mills to refineries or ports of six groups (see summary table below) on the Indragiri river and the coast of West Sumatra. The corporate palm oil groups associated with these chains-of-custody of illicit FFB include the *Agro Muko*, *Asian Agri*, *Darmex*, *Incasi Raya*, *Mahkota*, *Sarimas* and *Wilmar* groups.

**Summary table.** *Illicit FFB sources, CPO mills who received them and destination of CPO trucks from these mills.*

<b>Encroacher groups confirmed to supply FFB from the Bukit Batabuh tiger corridor</b>	<b>CPO mills confirmed to receive FFB from the encroacher group(s)</b>	<b>Final destination (ports) of CPO trucks from CPO mill(s) who received FFB from encroacher group(s)</b>
<ul style="list-style-type: none"> <li>Air Buluh (FFB CoC #5)</li> </ul>	PT. Tri Bakti Sarimas 1 (Sarimas group, with plantation, CPO CoC#1)	PT. Agro Sarimas Indonesia (Sarimas group)
<ul style="list-style-type: none"> <li>Peranap (FFB CoC #4)</li> <li>Sungai Santan (FFB CoC #4)</li> <li>PT. Bagus Indah Perkasa (FFB CoC #11)</li> </ul>	PT. Rigunas Agri Utama (Asian Agri group, with plantation, CPO CoC #2, #10)	CV. Sumber Kencana (SK group)
<ul style="list-style-type: none"> <li>Alim 2 (FFB CoC #8)</li> </ul>	PT. Putera Keritang Sawit (no group info, without plantation, CPO CoC #3)	
<ul style="list-style-type: none"> <li>Sungai Arang (FFB CoC #3)</li> </ul>	PT. Sugih Riesta Jaya (no group info, without plantation, CPO CoC #8)	
<ul style="list-style-type: none"> <li>Sungai Santan (FFB CoC #12)</li> </ul>	PT. Wana Jingga Timur (Darmex group, with plantation, CPO CoC #7)	PT. Duta Palma (Darmex group) port
<ul style="list-style-type: none"> <li>Air Buluh (FFB CoC #5)</li> </ul>	PT. Tri Bakti Sarimas 1 (Sarimas group, with plantation, CPO CoC #4)	PT. Agro Muko Tank Terminal (Agro Muko group)
<ul style="list-style-type: none"> <li>Peranap (FFB CoC #1)</li> <li>P (FFB CoC #2)</li> </ul>	PT. Tri Bakti Sarimas 2 (Sarimas group, with plantation, CPO CoC #5)	
<ul style="list-style-type: none"> <li>SAK (FFB CoC #6)</li> <li>Perhentian Sungkai (FFB CoC #7)</li> <li>Sisip (FFB CoC #9)</li> <li>Tani Farmers' Group (FFB CoC #10)</li> </ul>	PT. Sumbar Andalas Kencana (Incasi Raya group, with plantation, CPO CoC #6)	Incasi Raya group port
<ul style="list-style-type: none"> <li>Sungai Arang (FFB CoC #13, 14)</li> </ul>	PT. Berlian Inti Mekar, without plantation, (Mahkota group, CPO CoC #9, 11, 12)	PT. Wilmar Nabati Indonesia

- Four chains-of-custody ended up in a port of the *SK group*, CV. Sumber Kencana managed the trucking from various CPO mills to the port and PT. Sumber Surya Kencana INHU managed the sea transport of CPO from the port. The SK group's customers included *Asian Agri/Royal Golden Eagle, Astra, Cargill, Darmex, Salim, Sarimas* and *Sinar Mas groups*. The CPO from all these producers' mills may be contaminated with CPO made with illegal FFB from the Bukit Batabuh tiger corridor during transfer between trucks, storage tanks and barges unless it is segregated at each transfer point.
- Two of the companies involved were members of the Roundtable on Sustainable Palm Oil (RSPO): *PT. Tri Bakti Sarimas* is an Oil Palm Grower member and *Wilmar International Ltd.* is a Palm Oil Processors and Traders member. On 5 December 2013, *Wilmar* published a policy to protect forests and communities and committed to "no deforestation, no peat, no exploitation policy to meet rising market demand for traceable, responsibly produced vegetable oil"<sup>1, 2</sup>.

10. None of the companies involved had received the mandatory Indonesian Sustainable Palm Oil (ISPO) certificate.
11. The chain-of-custody cases highlighted in this report show that both FFB and CPO could travel considerable distance for processing. It appears that the CPO may either be barged to other refineries within Indonesia or exported to foreign refining facilities, most likely in Malaysia and / or Singapore. Given that both FFB and CPO appeared to travel far, regions often considered safe from illegal products may have been contaminated.
12. Sourcing based solely on geographic criteria does not prevent purchasing of products contaminated with illegally grown FFB. Diligent back-tracing from refinery to CPO mill and from there to the plantation is the only way to insure that illegally FFB or palm oil is not entering the supply chain. Corporate ports potentially comingling CPO from various mills, especially those operated by third parties like the SK Group appear especially vulnerable to spreading contaminated CPO.

## INTRODUCTION

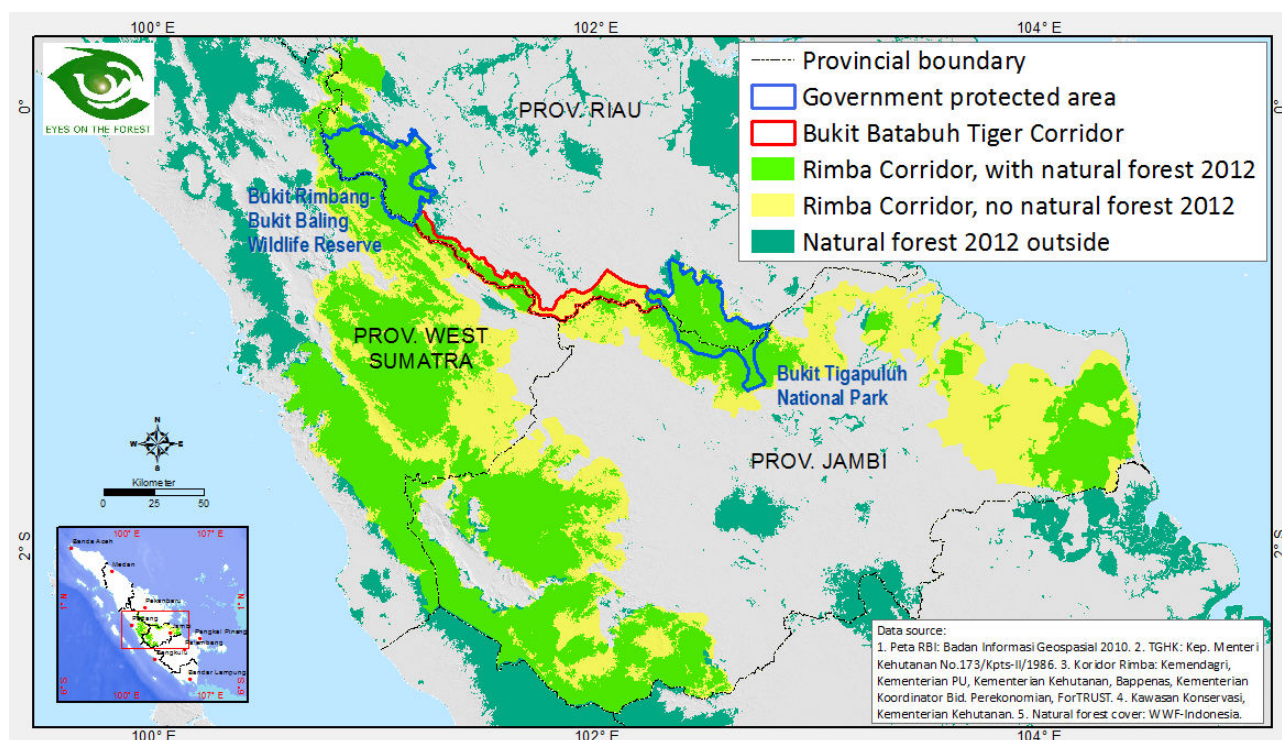
In 2013, WWF-Indonesia published its investigation of the trade of illegally grown oil palm fruit (FFB) from inside Tesso Nilo National Park in Riau Province, Sumatra, to crude palm oil (CPO) mills and refineries operated by the world's largest palm oil company Wilmar and another lead producer, Asian Agri<sup>3</sup>.

Tesso Nilo National Park is just one example with rampant illegal development of oil palm plantations in Riau and elsewhere in the country. Riau is top palm oil producing and exporting province of the world's top CPO producer, Indonesia (Table 1), and has been devastated by deforestation for development of illegal oil palm plantations. Following the Tesso Nilo case, the Eyes on the Forest coalition investigated the issue in another key conservation area, the "Bukit Batabuh tiger corridor" in Riau Province.

**Table 1.** CPO production and export by Indonesia and its single province Riau.

	Indonesia (million ton)	Riau (million ton)	Riau (% national)
CPO production	26.5 (in 2012) <sup>4, 5</sup> 26.0 (in 2013) <sup>6</sup>	7.34 (in 2012) <sup>7</sup> No data found	27.7% (in 2012)
CPO export	18.2 (in 2012) <sup>8, 9</sup> 21.2 (in 2013) <sup>10, 11</sup>	5.1 (in 2012) <sup>12</sup>	28.2% (in 2012)

The 95,824 ha Bukit Batabuh tiger corridor connecting the Bukit Rimbang-Bukit Baling Wildlife Sanctuary and Bukit Tigapuluh National Park is part of the 4 million ha "Rimba Corridor" in Riau, Jambi and West Sumatra provinces (Map 1). It was designated as one of five pilot areas for ecosystem based land use planning by Presidential Decree No. 13/2012 on Sumatra Island Spatial Planning<sup>13</sup>. The designation is based on a joint commitment in 2010 of four Indonesian ministries (Environment, Public Works, Forestry and Home Affairs) and the Governors of Sumatra's 10 provinces to ecosystem-based spatial planning, restoration of critical areas and protection of high conservation value areas<sup>14, 15, 16, 17</sup>.



**Map 1.** The Bukit Batabuh tiger corridor within the RIMBA Corridor.

The Rimba Corridor is ecologically important to secure the connectivity of fragmented natural forest landscapes and allow movement of wildlife, such as, critically endangered



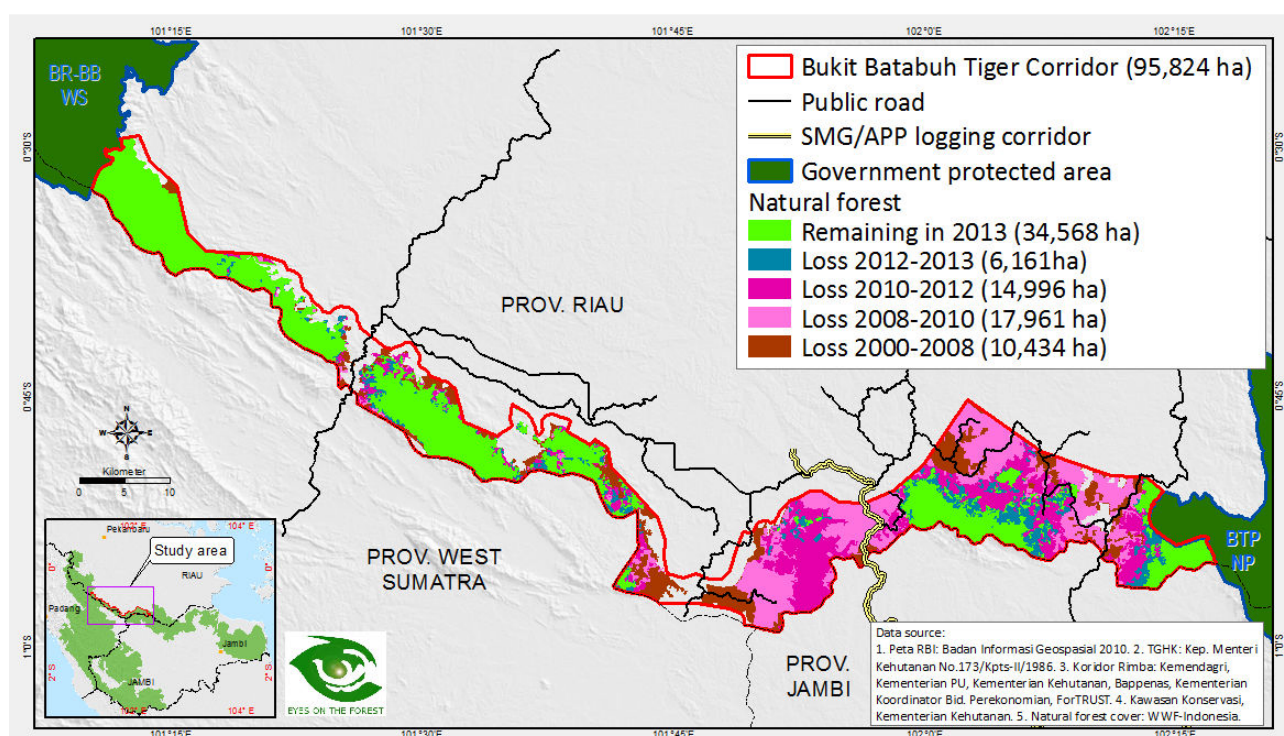
Sumatran elephants and tigers. The Bukit Batabuh tiger corridor itself is estimated to support between 7 and 17 tiger individuals<sup>18</sup>. In March 2011, WWF camera traps recorded an astounding 12 tigers in just two months in just one natural forest block inside the corridor<sup>19</sup>.

The fate of the 12 tigers and any additional individuals living in and around the corridor is uncertain. The corridor has suffered fast deforestation in recent years and continues to lose natural forest rapidly. Deforestation has been mainly driven by oil palm plantation development. According to the two currently legal land use plans for Riau (the Consensus of Forest Land Use based on the Ministry of Forestry Decree No 173/Kpts-II/1986 and the Riau Regional Regulation Number 10 Year 1994 on Provincial Land Use Plan), oil palm plantation development is considered illegal in almost all of the Bukit Batabuh tiger corridor (Appendix 1). Transactions of FFB originating in such plantations are thus considered illegal and anyone involved in the transaction process could face criminal charges.

## INVESTIGATION FINDINGS

### 1. Oil Palm Plantations Inside the Bukit Batabuh Tiger Corridor

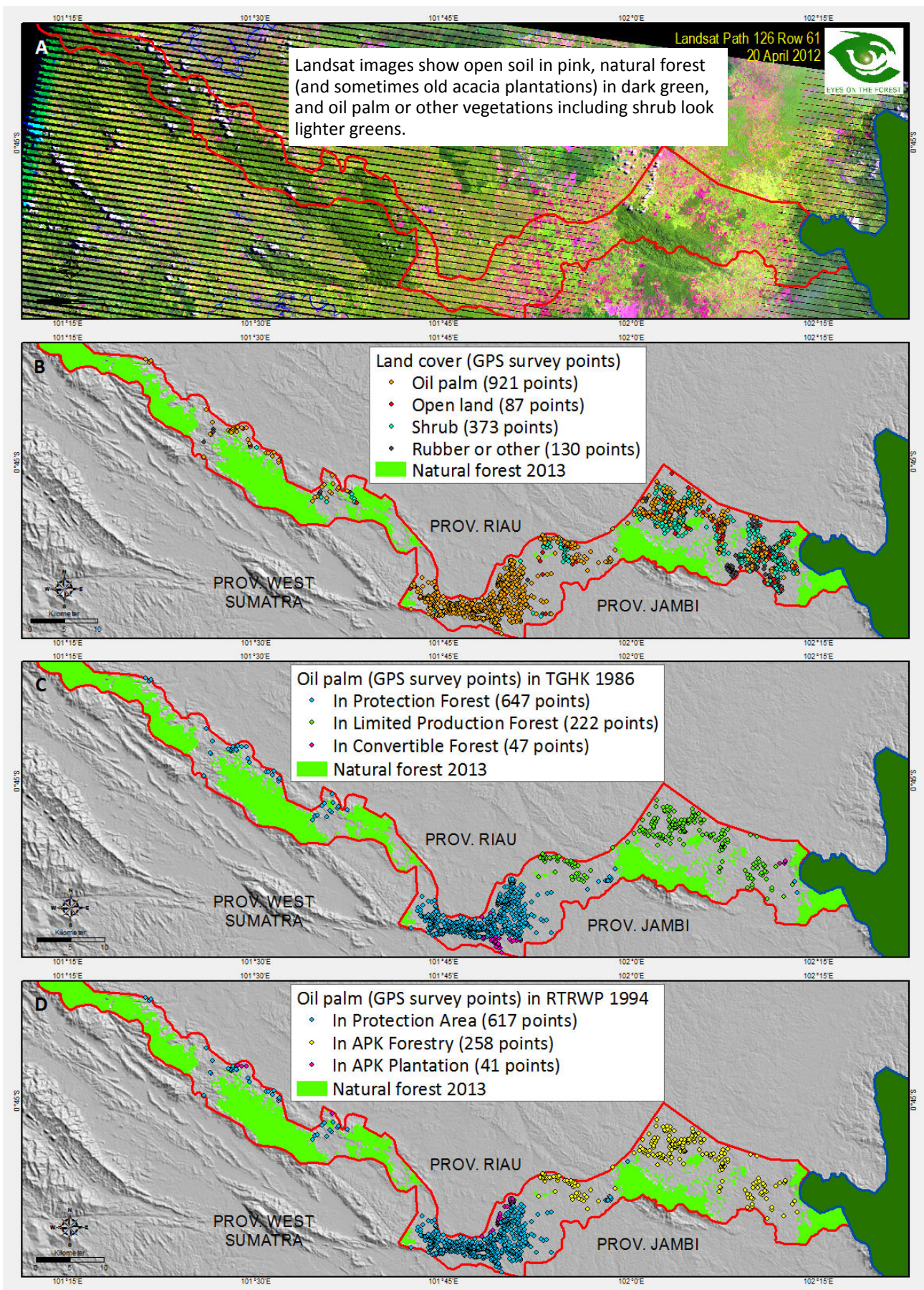
Analysis of Landsat images acquired between 2000 and 2013<sup>20</sup> identified less than 35,000 hectares of natural forest in mid 2013, providing the area with only 36% forest cover (Map 2). Deforestation was slow up to 2008, but then surged until 2010, resulting in the loss of about a fourth of the forest left in 2008. By 2012, a fourth of the 2010 forest had disappeared, and 15% of the 2012 forest were lost by 2013. This deforestation by “encroachment” occurred mainly in flat lowland areas around the Bukit Tigapuluh national park, mainly along roads and forestry logging corridors including the legally questionable logging highway constructed by the Sinar Mas Group’s Asia Pulp & Paper in 2007. The main underlying causes of illegal development not only in this area, but also in many areas throughout Indonesia are summarized in Box 1.



**Map 2.** Estimated encroachment areas in the Bukit Batabuh tiger corridor based on Landsat image analysis between 2000 and 2013.

Between July and October 2012, Eyes on the Forest collected information from close to 30,000 ha of encroachment areas, focusing on recently deforested areas (pink areas showing cleared land in Map 3A). The investigators kept recording the land cover types they encountered along their travels and interviewed the crop owners they met. Of 1,511 GPS locations recorded, 61% (921) had oil palm, an additional 6% (87) had just been cleared and most likely were to be planted with oil palm; 25% (373) were shrublands either to be planted or abandoned after forest clearance; and the remaining locations were rubber or had other covers (Map 3B).

Investigators estimated, visually and/or based on interviews, close to 19,000 ha of oil palm plantations in total but did not delineate the actual areas (Chapter 2.2, Table 2). Of the 921 GPS locations of existing oil palm plantations recorded, 95% or 96% were considered illegal because they were found in land use zones which prohibit oil palm plantation development according to TGHK 1986 (“Protection Forest” & “Limited Production Forest”) or to RTRWP 1994 (“Kawasan Lindung” or “APK Kehutanan”) (Map 3C & D, Appendix 1).



**Map 3.** Landsat image of 20 April 2012 (A), GPS survey points of land covers recorded (B), GPS survey points of oil palm plantations coloured according to the zoning of TGHK 1986 (C) or RTRWP 1994 (D).

## **Box 1. Main causes of rampant encroachment in the Bukit Batabuh tiger corridor, likely applicable to other areas in Riau and other provinces in Indonesia**

### **1. Public roads and logging roads by the local forestry industry through natural forest areas**

Operational roads used by Industrial Timber Plantation (HTI) and former Selective Logging concessions (HPH) inside and next to the Bukit Batabuh tiger corridor provide access roads for encroachers to go into otherwise inaccessible natural forest areas. Increasing encroachment since 2008 near the Riau-Jambi-West Sumatra border was made possible by a legally questionable logging corridor built by the Sinar Mas Group's Asia Pulp & Paper through several concessions with, at that time, dense tropical forest.

### **2. Forest protection and law enforcement by government which need to be strengthened**

Forest protection and law enforcement by government are urgently needed to prevent forest crimes, such as illegal encroachment. Lack of those is especially devastating for the economy of the resident population as the majority of the encroachers in this and in 2013's Tesso Nilo study were "immigrants", from other provinces (Table 2).

### **3. Local institution and customary crises**

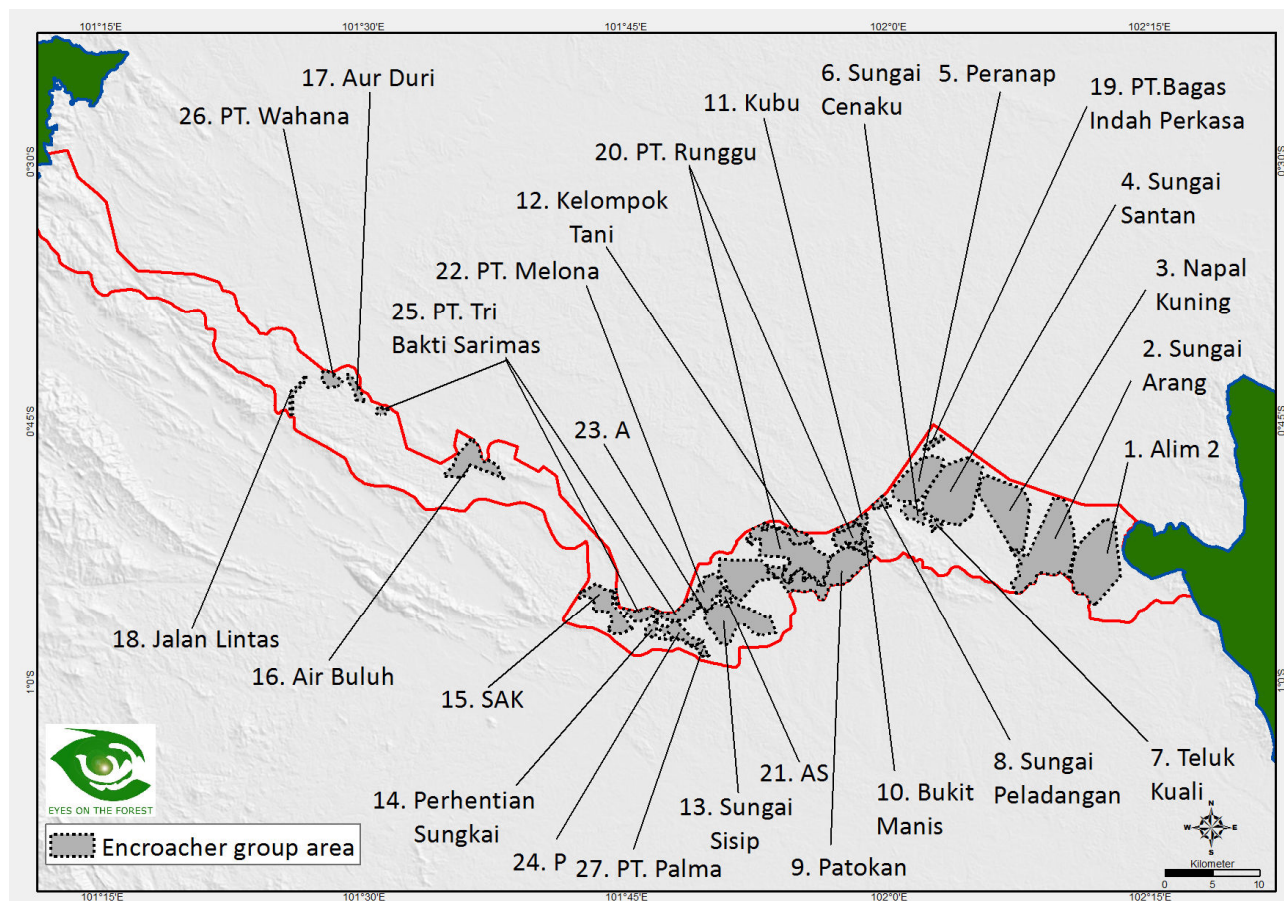
In the past, forest areas claimed as tribal areas were jointly owned by the community, a social value and social bonds forbidden to be sold. However, values and behaviour have changed recently and now forest is treated as real estates to be traded as agricultural land. Farming has changed from farmers' groups or family based fields and rubber plantations to profit based agriculture focused on palm oil plantation.

### **4. Global market demand**

Increasing global demand for palm oil has driven the expansion of oil palm plantations. Profits have increased so much that plantation companies and smallholders, especially plasma plantation in cooperation with companies through the KKPA scheme (Member's Primary Credit for Cooperative / Kredit Koperasi Primer untuk Anggota) are more willing than ever to deforest illegally.

## 2. Owners, Size and Productivity of Oil Palm Plantations

Investigators recorded ownership, management style and age of oil palm plantations and identified 27 distinctive encroacher groups in the Bukit Batabuh tiger corridor (Map 4). Groups were assigned names taken from local administrative or geographic areas in or near which they currently operate. The names do not reflect the origin of the people involved as most of them have come from outside the province.



**Map 4.** Approximate areas controlled by 27 groups of encroachers. Investigators delineated the actual encroachment areas of only three groups (25, 26, 27). Operational areas of the other groups are only indicative, based on investigators' survey points (Data source: Eyes on the Forest field survey July to October 2012).

Our findings are summarized in Table 2 to describe:

- The number of households per group of encroachers as mentioned by group members during interviews in the field. We did not further investigate these data which thus should be seen as indicative.
- The origins of the interviewees and sometimes also of the friends and/or family members they mentioned. We did not further investigate these data which thus should be seen as indicative.
- The type of land cover observed at survey points and the size of a group's area based on visual estimates and interviews. Except for groups 25, 26 and 27, these areas were not mapped in detail and only recorded as the number provided in the interview.

In summary:

- 18 encroachment groups were considered "small scale" with plantations of an average 8 ha per family or less, which can be considered "independent smallholdings / kebun swadaya". Group members seem to come mostly from outside Riau, mainly from

North Sumatra, but also from West Sumatra and Jambi provinces. Individual owners used their own money for plantation development and in general built new settlements in their encroachment areas.

- Nine encroachment groups were considered large scale developments with a minimum 250 ha of planted area (PT. Wahana), funded by investors (we identified three from Riau and four from outside Riau, two remained unknown) and managed as companies. We did not further investigate these cases.
- Our analysis of the modus operandi of the encroachers is explained in Box 2.
- We found one plasma estate (kebun plasma, plantations based on collaboration between the mills' owners and communities) of a Sarimas group company, PT. Tri Bakti Sarimas (#25 in Table 2). It developed 12,316 ha of oil palm plantations using the "KKPA scheme" (Members' Primary Credit for Cooperative / Kredit Koperasi Primer untuk Anggota) with lending from Bank Mandiri for two cooperatives (9,316 ha with the "Prima Sehati Village Cooperative (KUD)" involving many villages and 3,000 ha with the "Kuantan Sarimas Cooperative"). Of the total development area, 1,200 hectares were indicated to be inside the tiger corridor, inside the "Protection Forest" (TGHK 1986) and "Protection Area" (RTRWP 1994) zones. This case has been reported by various media<sup>21</sup>.
- There was no nucleus estate (kebun inti, plantations under mills' ownership / management).
- The plantation of another company, PT. Runggu (#20 in Table 2), has been reported by the media as "looting" and "encroachment"<sup>22</sup>. The Riau and Indragiri Hulu District Forestry Service's Forest Rangers were quoted to have arrested and seized heavy equipment working in the area. However, after the seizure, PT. Runggu continued to encroach the corridor. According to the company, the forest clearance and plantation development in this location was based on the land they purchased from Peranap and Pesajian village elders.
- Around 19,000 ha of already planted oil palm plantation were identified, half of it mature producing FFB. In addition, close to 4,000 ha of newly cleared lands and almost 9,000 ha of shrub were identified, a lot of which may be planted with oil palm once funds are available. The FFB supply from the area could triple in three years, once the immature and to-be planted oil palm are mature.

**Table 2.** 27 groups of encroachers identified in the Bukit Batabuh tiger corridor. Data are indicative only as they are based on interviews with people encountered during the field survey or on visual estimates of the investigators. Data were not verified by other means. Groups were assigned names taken from local administrative or geographic areas in or near which they currently operate. The names do not reflect the origin of the people involved as most of them have come from outside the province.

No	Encroacher group				Land cover area (based on visual estimate/interview)						
	Name	Number of household	Immigrants	Locals	Sawit				Other crop (ha)	Shrub (ha)	Total (ha)
					Immature (ha)	Mature (ha)	To be planted (ha)	Total (ha)			
<b>I</b>	<b>Small groups, individuals coming mainly from outside the area, self-funded and living in new settlements.</b>										
1	Alim 2	500	NI	NI	316	8	115	439	334	1,002	1,775
2	Sungai Arang	150	NI	NI	97	103	52	252	483	556	1,291
3	Napal Kuning	80	NI	NI	287	206	146	639	6	615	1,260
4	Sungai Santan	90	NI	NI	365	220	80	665	20	888	1,573
5	Peranap	NI	NI	NI	134	309	54	497	24	275	796
6	Sungai Cenaku	4	NI	NI	325	-	-	325	6	-	331
7	Teluk Kualii	7	4	NI	1,017	-	-	1,017	-	-	1,017
8	Sungai Peladangan	8	5	2	834	-	18	852	-	-	852
9	Patokan	76	2	NI	831	-	12	843	6	-	849
10	Bukit Manis	25	76	NI	213	-	-	213	164	-	377
11	Kubu	5	22	3	130	-	-	130	-	-	130
12	Kelompok Tani	NI	5	NI	512	23	66	601	-	125	726
13	Sungai Sisip	150	32	1	2,432	102	130	2,664	85	107	2,856
14	Perhentian Sungkai	500	15	1	-	120	70	190	47	5	242
15	SAK	NI	40	20	144	1,015	912	2,071	20	190	2,281
16	Air Buluh	3	5	NI	3	478	71	552	50	383	985
17	Aur Duri	NI	9	1	-	600	172	772	-	164	936
18	Jalan Lintas	NI	1	NI	-	7	1	8	22	25	55
	<b>Sub total</b>	<b>1,598</b>	<b>216</b>	<b>28</b>	<b>7,640</b>	<b>3,191</b>	<b>1,899</b>	<b>12,730</b>	<b>1,267</b>	<b>4,335</b>	<b>18,332</b>
<b>II</b>	<b>Large groups, with investors, and managed as a company.</b>										
19	PT. Bagas Indah Perkasa	-	-	-	-	1,200	-	1,200	-	-	1,200
20	PT. Runggu	-	-	-	1,147	-	259	1,406	-	193	1,599
21	AS	-	-	-	370	-	500	870	-	4	874
22	PT. Melona	-	-	-	410	765	850	2,025	600	13	2,638
23	A	-	-	-	5	-	385	390	-	10	400
24	P	-	-	-	6	2,109	20	2,135	4	20	2,159
25	PT. Tri Bakti Sarimas	-	-	-	-	1,200	-	1,200	-	-	1,200
26	PT. Wahana	-	-	-	-	250	-	250	-	-	250
27	PT. Palma	-	-	-	-	700	-	700	-	-	700
	<b>Sub total</b>				<b>1,938</b>	<b>6,224</b>	<b>2,014</b>	<b>10,176</b>	<b>604</b>	<b>240</b>	<b>11,020</b>
	<b>Total</b>				<b>9,578</b>	<b>9,415</b>	<b>3,913</b>	<b>22,906</b>	<b>1,871</b>	<b>4,575</b>	<b>29,352</b>

## Box 2. Modus operandi of encroachment in the Bukit Batabuh tiger corridor

Based on our field survey, we found three types of encroachers:

1. **Local people** who had encroached the forest to develop rubber plantations but did not expand due to lack of resources.
2. **Immigrants** who purchased land from local communities' elders or administration staff and in general had more than 2 ha and up to 25 ha per family. They were the most dominant encroachers in the corridor. Proof of their "land ownership" was in the form of "Land Ownership Letter (Surat Keterangan Tanah)", "Compensation letter (Surat Keterangan Ganti Rugi)" or proof of land purchase.
3. **Investors** who were always immigrants but with big financial resources and acquired land through intermediaries who helped them obtain letters for land sales or purchase from customary elders or village administration staff. In general, they had more than 25 ha. They used the same proof as immigrants and managed the plantations as companies.

The second and third type of encroachers were driven by connivance and lack of law enforcement by the government, exploiting local communities who had decided to speculate in land, whether covered by natural forest or not. After identifying lands to sell, local community members would work with customary elders or village administration staff to sell land titles to an outside buyer. The land then was considered legal property of the buyer according to local adat. The documents are not considered legal by Indonesian laws and regulations.



### 3. Large Private Company Involvement in Oil Palm Plantation Development

In 2009, Riau province had 173 palm oil mills with a total processing capacity of 8,161 tons of FFB per hour (Table 3). Assuming CPO mills to work 20 hours per day and 25 days per month<sup>23</sup> with an oil extraction level of around 20%<sup>24</sup>, Riau's CPO production could reach almost 10 million tons per year, close to half of the total Indonesian production in 2009<sup>25</sup>.

46 mills processing 22% (1,792 tons per hour) of Riau's FFB owned no plantations. These so-called "independent mills" rely heavily on FFB purchased from plasma estates or "independent smallholdings (kebun swadaya)", thus provide business incentives for encroachers operating in land use zones not allowing oil palm plantation development. These independent mills are often privately owned by small companies without corporate purchasing policies and buy FFB from any supplier without legality and sustainability concerns.

**Table 3. Palm oil mills in Riau province's districts and city in 2009.**

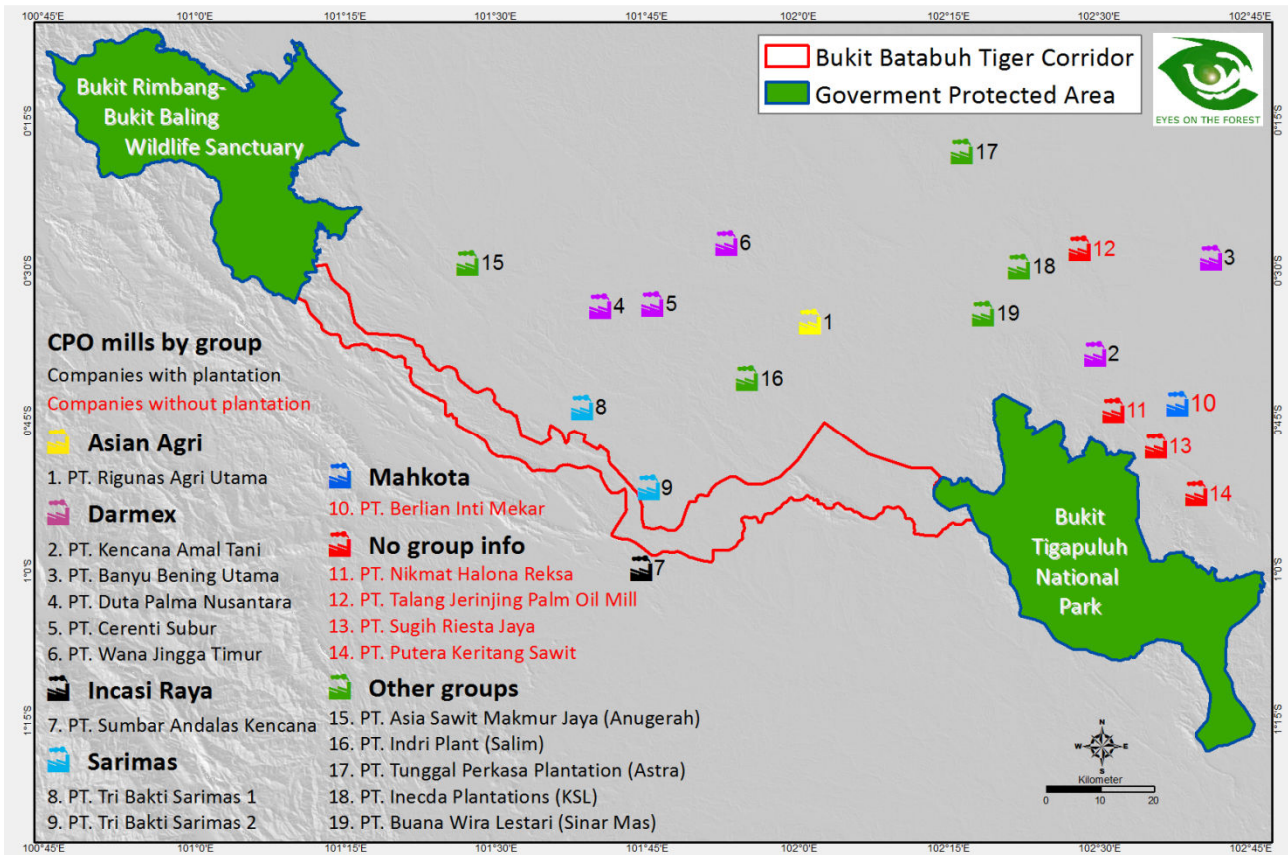
No	District/City	Number of Palm Oil Mills (unit)			Combined FFB Processing Capacity of Palm Oil Mills (ton/hour)		
		With own plantation	Without own plantation	Total	With own plantation	Without own plantation	Total
1	Kampar	28	9	37	1,280	375	1,655
2	RokanHulu	18	6	24	939	202	1,141
3	Pelalawan	13	4	17	900	145	1,045
4	Indragiri Hulu	22	6	28	960	225	1,185
5	Kuantan Singingi	11	-	11	615	-	615
6	Indragiri Hilir	8	-	8	385	-	385
7	Bengkalis	3	5	8	180	170	350
8	Siak	9	6	15	435	225	660
9	RokanHilir	14	10	24	615	450	1,065
10	Dumai	1	-	1	60	-	60
11	Pekanbaru	-	-	-	-	-	-
<b>TOTAL</b>		<b>127</b>	<b>46</b>	<b>173</b>	<b>6,369</b>	<b>1,792</b>	<b>8,161</b>

Data sources: Riau Plantation Service (June 2011) Statistics of Riau Plantation Year 2009. Plantation Service and Environment Agency of Kampar District, RokanHulu District, Pelalawan District, Indragiri Hulu District, Kuantan Singingi District, Bengkalis District, RokanHilir District, Dumai City, Siak District, Indragiri Hilir District and Pekanbaru City 2011.

Eyes on the Forest investigations between May 2012 and January 2014, and government statistics (see data sources for Table 3) identified 19 CPO mills of various corporate groups around the Bukit Batabuh tiger corridor. 18 mills were in Riau and one in West Sumatra province including: 5 mills of the Darmex Group, 2 mills of the Sarimas group, 1 mill each of the Anugerah, Asian Agri, Astra, Incasi Raya, KSL, Mahkota, Salim and Sinar Mas groups and 4 mills with no information on group association (Map 5, Table 4). The 19 mills were categorized into three groups based on FFB sources and risk of sourcing illegal FFB:

- **High risk**, mills of PT. Talang Geringging Palm Oil Mill, PT. Sugih Riesta Jaya, PT. Putera Keritang Sawit, PT. Nikmat Halona Reksa and PT. Berlian Inti Makmur were independent, without own plantations, and sourced FFB only from independent smallholdings.
- **Medium risk**, mills of PT. Kencana Amal Tani, PT. Asia Sawit Makmur, PT. Banyu Bening Utama, PT. Wana Jingga Timur. Mills of PT. Rigunas Agri Utama, PT. Tri Bakti Sarimas 1 & 2 and PT. Buana Wira Lestari and PT. Sumbar Andalan Kencana sourced FFB from nucleus, plasma estate and/or independent smallholdings.

- **Low risk**, mills of PT. Indriplant, PT. Tunggal Perkasa Plantation, PT. Inecda Plantation, PT. Duta Palma Nusantara and PT. Cerenti Subur sourced FFB only from nucleus estate.



**Map 5.** Locations and "associated" groups of 19 CPO mills around the Bukit Batabuh tiger corridor. Companies in red text in the legend and red numbers in the map indicate CPO mills without own plantations.

**Table 4.** CPO mills around the Bukit Batabuh tiger corridor.

#	Company	With or without own plantation	Location		FFB processing capacity (ton/hour)	Corporate group	Province
			Latitude	Longitude			
1	PT. Rigunas Agri Utama	With	00°35'05.2"S	102°01'07.9"E	30	Asian Agri/ RGE	Riau
2	PT. Kencana Amal Tani	With	00°38'16.998"S	102°29'32.035"E	45	Darmex Group	Riau
3	PT. Banyu Bening Utama	With	00°28'40.909"S	102°41'3.308"E	90	Darmex Group	Riau
4	PT. Duta Palma Nusantara	With	00°33'29.153"S	101°40'18.387"E	60	Darmex Group	Riau
5	PT. Cerenti Subur	With	00°33'16.292"S	101°45'29.044"E	45	Darmex Group	Riau
6	PT. Wana Jingga Timur	With	00°27'11.238"S	101°52'51.048"E	45	Darmex Group	Riau
7	PT. Sumbang Andalas Kencana	With	00°59'46.52"S	101°44'21.64"E	60	Incasi Raya	W. Sumatra
8	PT. Tri Bakti Sarimas 1	With	00°43'39.314"S	101°38'30.558"E	60	Sarimas	Riau
9	PT. Tri Bakti Sarimas 2	With	00°51'44.919"S	101°45'5.138"E	60	Sarimas	Riau
10	PT. Berlian Inti Mekar	Without	00°43'17.55"S	102°37'44.21"E	45	Mahkota	Riau
11	PT. Nikmat Halona Reksa	Without	00°43'58.352"S	102°31'21.279"E	45	NI	Riau
12	PT. Talang Jerinjing Palm Oil Mill	Without	00°27'45.846"S	102°27'59.522"E	15	NI	Riau
13	PT. Sugih Riesta Jaya	Without	00°47'35.652"S	102°35'34.761"E	30	NI	Riau
14	PT. Putera Keritang Sawit	Without	00°52'23.21"S	102°39'34.69"E	25	NI	Riau
15	PT. Asia Sawit Makmur Jaya	With	00°29'10.327"S	101°27'5.777"E	45	Anugerah	Riau
16	PT. Indri Plant	With	00°40'44.4"S	101°54'53.0"E	30	Salim Group	Riau
17	PT. Tunggal Perkasa Plantation	With	00°18'03.8"S	102°16'18.2"E	60	Astra	Riau
18	PT. Inecda Plantations	With	00°29'34.0"S	102°21'57.6"E	30	KSL Group	Riau
19	PT. Buana Wira Lestari	With	00°34'14.7"S	102°18'23.4"E	60	Sinar Mas	Riau
TOTAL					880		

Data sources: Riau Plantation Service (June 2011) Statistics of Riau Plantation Year 2009. Plantation Service and Environment Agency of Kampar District, Pelalawan District, Indragiri Hulu District and Kuantan Singingi District 2010 – 2011 and EoF field survey between May 2012 and January 2014.

#### 4. Tracking Illicit FFB from the Bukit Batabuh Tiger Corridor to CPO Mills

Eyes on the Forest conducted investigations between October 2012 and December 2013 and confirmed 14 chains-of-custody of illicit FFB from 11 encroacher groups to eight CPO mills, including 2 mills of the Sarimas group and 1 mill each of the Asian Agri, Darmex, Incasi Raya and Mahkota groups (Table 5, Appendix 2 collects CoC maps). Two mills were without plantations and thus had high risk of sourcing illegal FFB. The other six mills had their own plantations and thus were considered of medium risk.

**Table 5.** Chains-of-custody confirmed for illicit FFB from encroacher groups in Bukit Batabuh tiger corridor to CPO mills.

CoC #	Encroacher group who sold the FFB	FFB source		Land Use Plan Zoning of the FFB origin		Buyer		
		Latitude	Longitude	TGHK	RTRWP	Company	Corporate Group	With or without plantation
1	Peranap	S0°48'5.05"	E102°1'56.48"	HPT	APK K	PT. Tri Bakti Sarimas 2	Sarimas	With
2	P	S0°57'37.12"	E101°48'47.00"	HPK	KL	PT. Tri Bakti Sarimas 2	Sarimas	With
3	Sungai Arang	S0°52'2.83"	E102°10'3.53"	HPT	APK K	PT. Sugih Riesta Jaya	No info	Without
3	Sungai Arang	S0°51'59.53"	E102°10'39.61"	HPT	APK K	PT. Sugih Riesta Jaya	No info	Without
4	Peranap	S0°48'33.05"	E102°1'44.67"	HPT	APK K	PT. Rigunas Agri Utama	Asian Agri	With
4	Sungai Santan	S0°48'52.82"	E102°3'34.48"	HPT	APK K	PT. Rigunas Agri Utama	Asian Agri	With
4	Sungai Santan	S0°49'3.69"	E102°3'19.13"	HPT	APK K	PT. Rigunas Agri Utama	Asian Agri	With
4	Sungai Santan	S0°49'6.07"	E102°3'17.87"	HPT	APK K	PT. Rigunas Agri Utama	Asian Agri	With
4	Peranap	S0°48'58.17"	E102°1'41.84"	HPT	APK K	PT. Rigunas Agri Utama	Asian Agri	With
4	Peranap	S0°48'33.43"	E102°0'56.73"	HPT	APK K	PT. Rigunas Agri Utama	Asian Agri	With
5	Air Buluh	S0°47'48.1"	E101°34'41.6"	HL	KL	PT. Tri Bakti Sarimas 1	Sarimas	With
6	SAK	S0°56'51.93"	E101°45'23.86"	HL	KL	PT. Sumbar Andalas Kencana	Incasi Raya	With
6	SAK	S0°56'55.97"	E101°44'26.60"	HL	KL	PT. Sumbar Andalas Kencana	Incasi Raya	With
7	Perhentian Sungkai	S0°57'22.61"	E101°46'56.35"	HL	KL	PT. Sumbar Andalas Kencana	Incasi Raya	With
8	Alim 2	S0°54'29.95"	E102°10'45.92"	HPT	APK K	PT. Putera Keritang Sawit	No group info	Without
9	Sisip	S0°57'8.36"	E101°50'38.62"	HL	KL	PT. Sumbar Andalas Kencana	Incasi Raya	With
10	Tani	S0°51'5.7"	E101°53'38.8"	HPT	APK K	PT. Sumbar Andalas Kencana	Incasi Raya	With
11	PT. Bagus Indah Perkasa	S0°46'35.13"	E102°1'54.34"	HPT	APK K	PT. Rigunas Agri Utama	Asian Agri	With
12	Sungai Santan	S0°49'37.13"	E102°3'18.35"	HPT	APK K	PT. Wana Jingga Timur	Darmex	With
13	Sungai Arang	S0°53'33.32"	E102°9'18.22"	HPT	APK K	PT. Berlian Inti Mekar	Mahkota	Without
13	Sungai Arang	S0°53'22.09"	E102°8'46.32"	HPT	APK K	PT. Berlian Inti Mekar	Mahkota	Without
13	Sungai Arang	S0°53'44.44"	E102°9'34.73"	HPT	APK K	PT. Berlian Inti Mekar	Mahkota	Without
14	Sungai Arang	S0°53'34.62"	E102°9'42.53"	HPT	APK K	PT. Berlian Inti Mekar	Mahkota	Without

## 5. Tracking Tainted CPO to Ports

Of the eight CPO mills confirmed to have received illegal FFB from the Bukit Batabuh tiger corridor, 12 chains-of-custody of their CPO to six ports were verified (Table 6, Appendix 3 collects CoC maps):

1. PT. Agro Muko Tank Terminal (Agro Muko group) in West Sumatra Province
2. PT. Agro Sarimas Indonesia (Sarimas group) port in Riau Province
3. PT. Duta Palma (Darmex group) port in Riau Province
4. Incasi Raya group port in West Sumatra Province
5. PT. Wilmar Nabati Indonesia (Wilmar group) port in Riau Province
6. CV. Sumber Kencana / PT. Sumber Surya Kencana Inhu (SK group) port in Riau Province

Four chains-of-custody ended in the SK group port, with CV. Sumber Kencana providing trucking and PT. Sumber Surya Kencana INHU providing sea transport of CPO. CoC 6 of the Darmex group also used a CV. Sumber Kencana truck. The SK group's website<sup>26</sup> lists customers including Asian Agri/Royal Golden Eagle (listed as RGM), Astra, Cargill, Darmex, Salim, Sarimas and Sinar Mas groups. Investigators did not check but it is highly likely that CPO from many customers' mills is mixed in SK holding tanks after it arrives by truck. If so, some, if not all of the CPO transported by the SK group is highly likely contaminated by illicit FFB from the Bukit Batabuh tiger corridor.

**Tabel 6.** Chains-of-custody of CPO to ports.

CoC#	CPO mills confirmed to have received illicit FFB from the Bukit Batabuh tiger corridor	Corporate group	Final destination: refinery / port	Corporate group	District / Province	Dates of investigation
1	PT. Tri Bakti Sarimas 1	Sarimas	PT. Agro Sarimas Indonesia	Sarimas	Indragiri Hilir, Riau	1-2 Mar 2013
2	PT. Rigunas Agri Utama	Asian Agri	CV. Sumber Kencana / PT. Sumber Surya Kencana Inhu	SK	Indragiri Hilir, Riau	5 Mar 2013
3	PT. Putera Keritang Sawit	No info	CV. Sumber Kencana / PT. Sumber Surya Kencana Inhu	SK	Indragiri Hilir, Riau	4-5 Mar 2013
4	PT. Tri Bakti Sarimas 1	Sarimas	PT. Agro Muko Tank Terminal	Agro Muko	Teluk Bayur Padang, West Sumatra	3-4 Apr 2013
5	PT. Tri Bakti Sarimas 2	Sarimas	PT. Agro Muko Tank Terminal	Agro Muko	Teluk Bayur Padang, West Sumatra	5-6 Apr 2013
6	PT. Sumbar Andalas Kecana	Incasi Raya	Incasi Raya group	Incasi Raya	Teluk Bayur Padang, West Sumatra	8-10 Apr 2013
7	PT. Wana Jingga Timur	Darmex	PT. Duta Palma	Darmex	Indragiri Hilir, Riau	15 May 2013
8	PT. Sugih Riesta Jaya	No info	CV. Sumber Kencana / PT. Sumber Surya Kencana Inhu	SK	Indragiri Hilir, Riau	30 Mar 2013
9	PT. Berlian Inti Mekar	Mahkota	PT. Wilmar Nabati Indonesia	Wilmar	Indragiri Hilir, Riau	1 Apr 2013,
10	PT. Rigunas Agri Utama	Asian Agri	CV. Sumber Kencana / PT. Sumber Surya Kencana Inhu	SK	Indragiri Hilir, Riau	21 May 2013
11	PT. Berlian Inti Mekar	Mahkota	PT. Wilmar Nabati Indonesia	Wilmar	Indragiri Hilir, Riau	17 Dec 2013
12	PT. Berlian Inti Mekar	Mahkota	PT. Wilmar Nabati Indonesia	Wilmar	Indragiri Hilir, Riau	17 Dec 2013

## Appendix 1. Legality of Oil Palm Plantations in Bukit Batabuh Tiger Corridor

In Riau Province, the currently active land use plan is the 1986 Consensus of Forest Land Use (TGHK, Ministry of Forestry Decree No 173/Kpts-II/1986) issued by the Ministry of Forestry. The regulation allows development of oil palm plantations only in the Non Forest Estate (Non Kawasan Hutan), or land allocated for other purposes (Areal Penggunaan Lain/APL) zone. Oil palm cannot be legally planted inside the Forest Estate (Kawasan Hutan, defined as land managed by the Ministry of Forestry whether it is covered by natural forest or not<sup>27</sup>), unless a Forest Estate Release Permit (Izin Pelepasan Kawasan Hutan)<sup>28</sup> has been issued by the Ministry of Forestry. Forest Estate Release Permit can be issued for Production Forest and Hutan Produksi Yang Dapat di Konversi, but not for "Nature Reserve and Recreation Forest", "Protection Forest" or "Limited Production Forest".

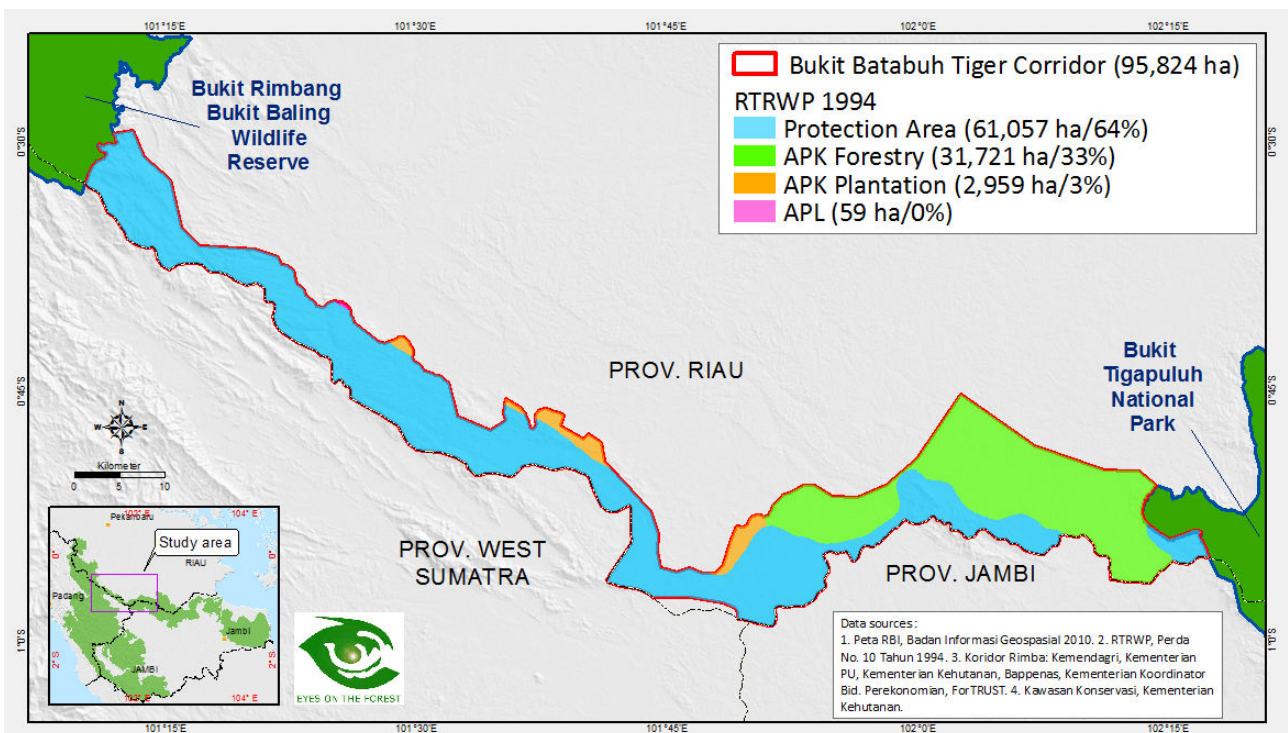
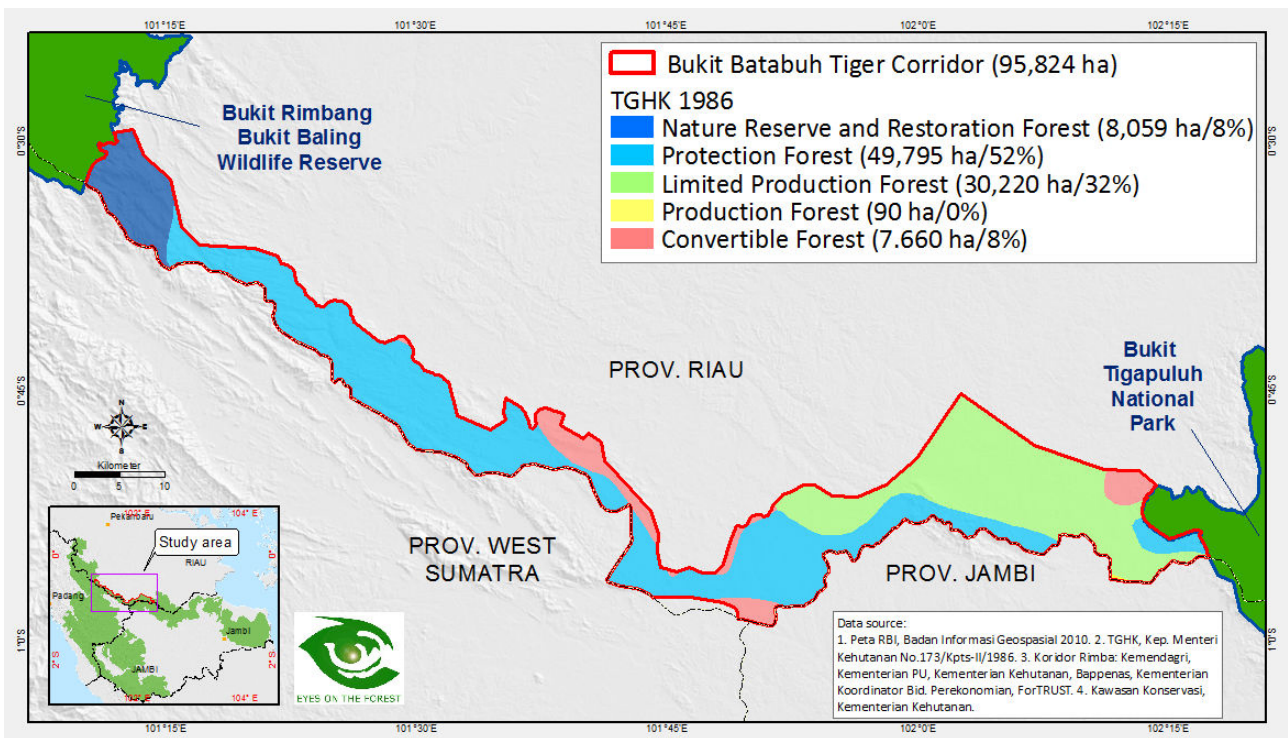
Private and state-run companies need to obtain several permits to develop plantations:

- I. Forest Estate Preparation Principle Permit (Izin Prinsip Pencadangan Kawasan Hutan) from the Ministry of Forestry is always required.
- II. Definitive Business Use Right (Hak Guna Usaha/HGU) from the National Land Affairs Agency (Badan Pertanahan Nasional/BPN) is always required<sup>29</sup>.
- III. Cultivation Business Permit (Izin Usaha Perkebunan/IUP) from the relevant authority is always required<sup>30</sup>.
- IV. Forest Estate Release Permit from the Ministry of Forestry is required only when applying for an area within the Forest Estate<sup>31</sup>.

According to the TGHK of 1986, the whole Bukit Batabuh tiger corridor is inside various zones of the Forest Estate (Map 6). 92% is zoned as Nature Reserve and Recreation Forest (HSA), Protection Forest (HL) and Limited Production Forest (HPT), inside which oil palm plantations can automatically be considered illegal, whether operated by individual farmers or companies. Oil palm plantations inside the Production Forest (HP) and Convertible Forest (HPK) zones managed by a company may be legal if the owner has a Forest Estate Release Permit. Farmers who develop plantations of less than 25 ha<sup>32</sup>, such as those of encroachment groups 1 to 18 (Table 2), are not eligible to apply for any of the above four licenses<sup>33</sup>, so their plantations inside HP and HPK are considered illegal.

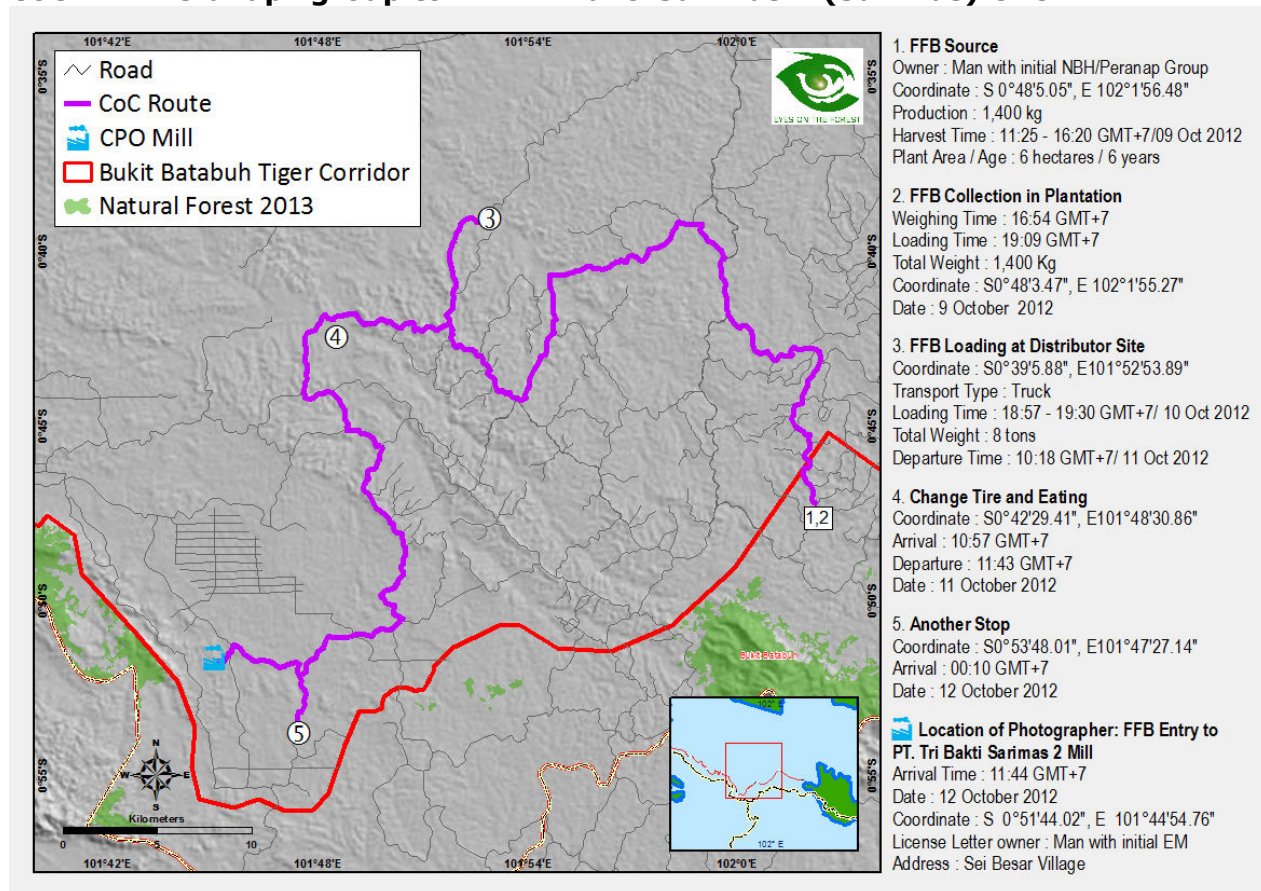
In the other relevant land use plan for Riau Province, the Riau Regional Regulation Number 10 Year 1994 on Provincial Land Use Plan, 97% of the Bukit Batabuh tiger corridor is zoned as Conservation Area or is "Arahan Pengembangan Kawasan (APK) Kehutanan" (Forestry Area Development Guideline) based. This zoning does not allow any oil palm plantation development (Map 7)<sup>34</sup>.

Transactions of FFB originating from these illegal oil palm plantations are considered illegal and anyone involved in the transaction process could face criminal charges<sup>35</sup>.

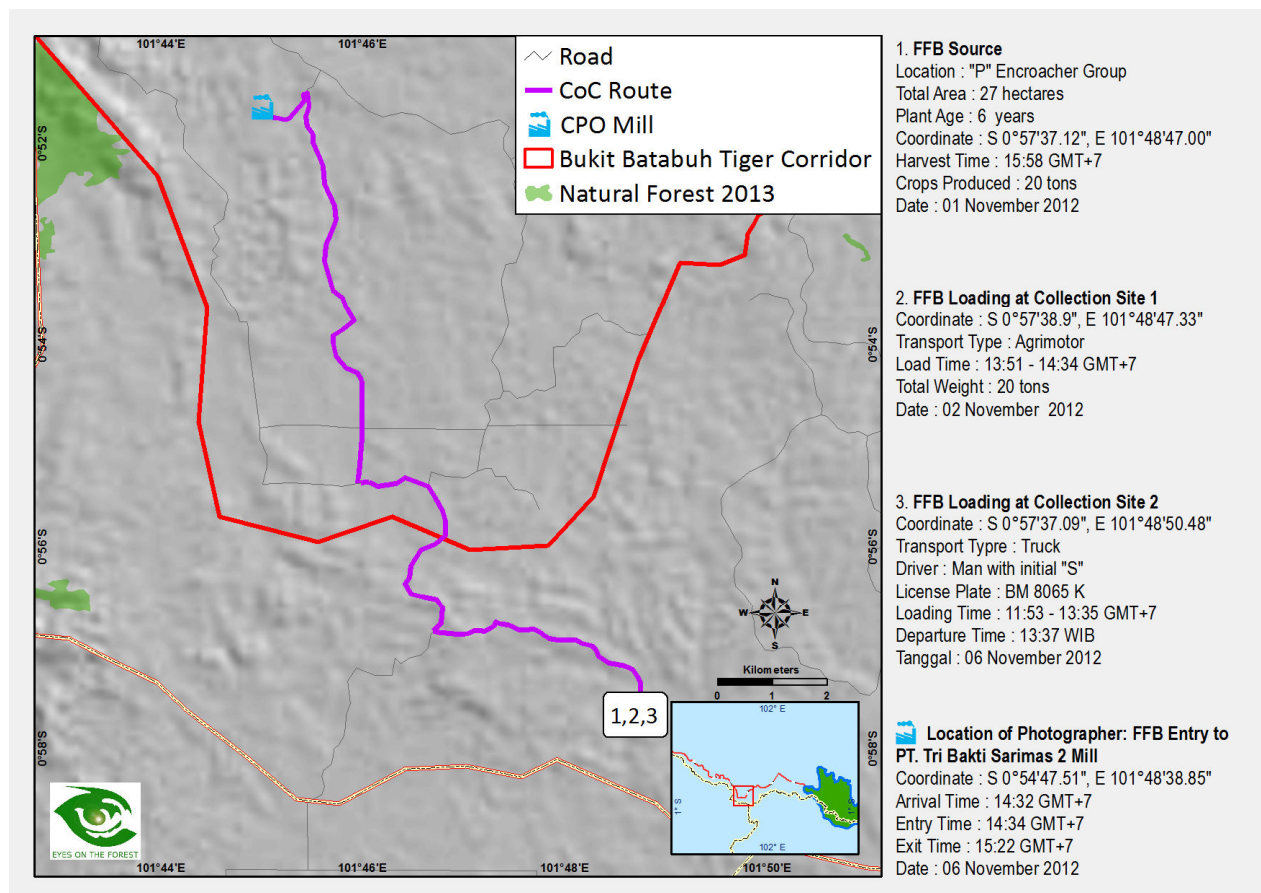


## Appendix 2. Maps of CoC of Illicit FFB to CPO Mills

### CoC 1 – “Peranap” group to PT. Tri Bakti Sarimas 2 (Sarimas) CPO mill.

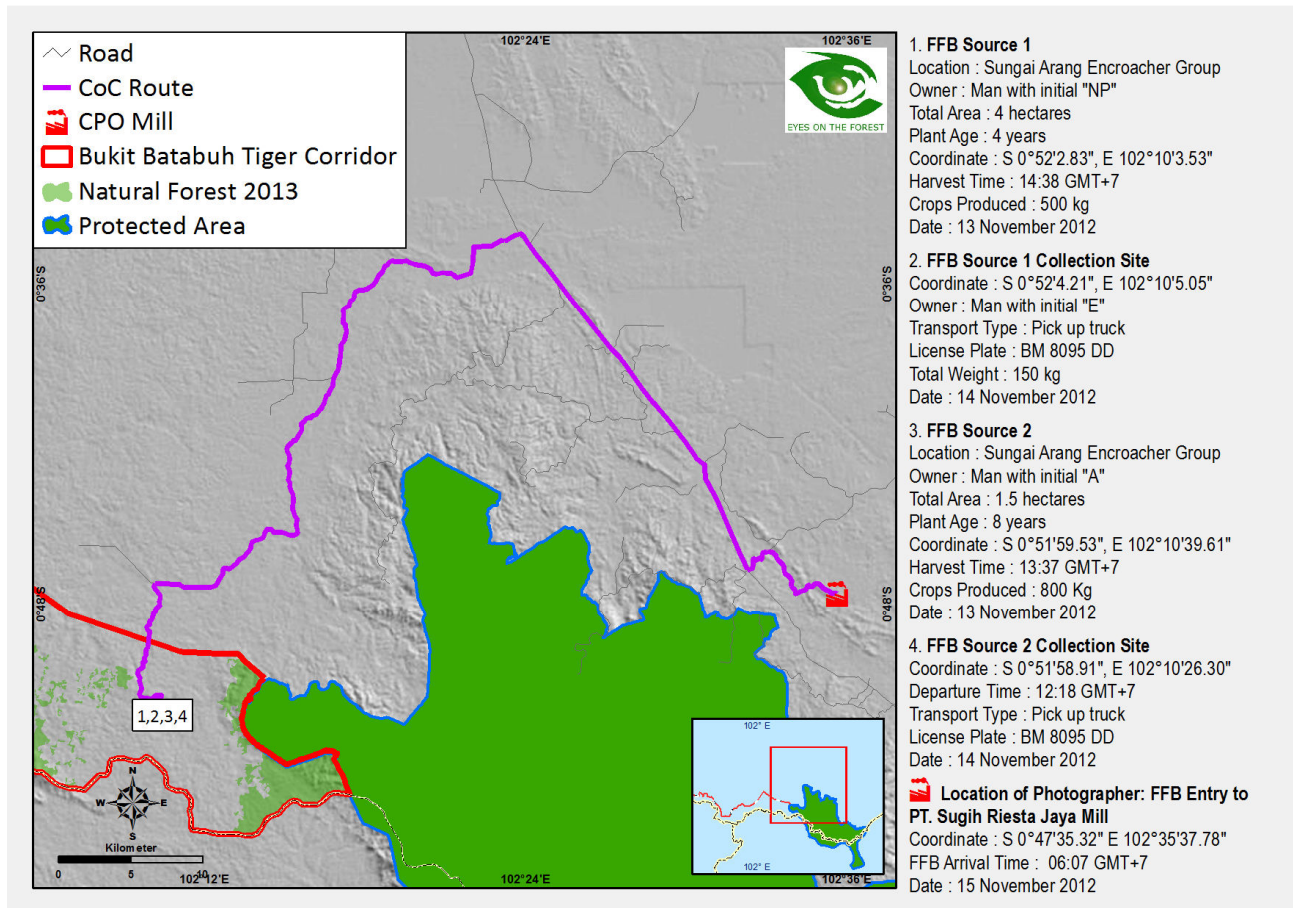


### CoC 2 – “P” group to PT. Tri Bakti Sarimas 2 (Sarimas) CPO mill.

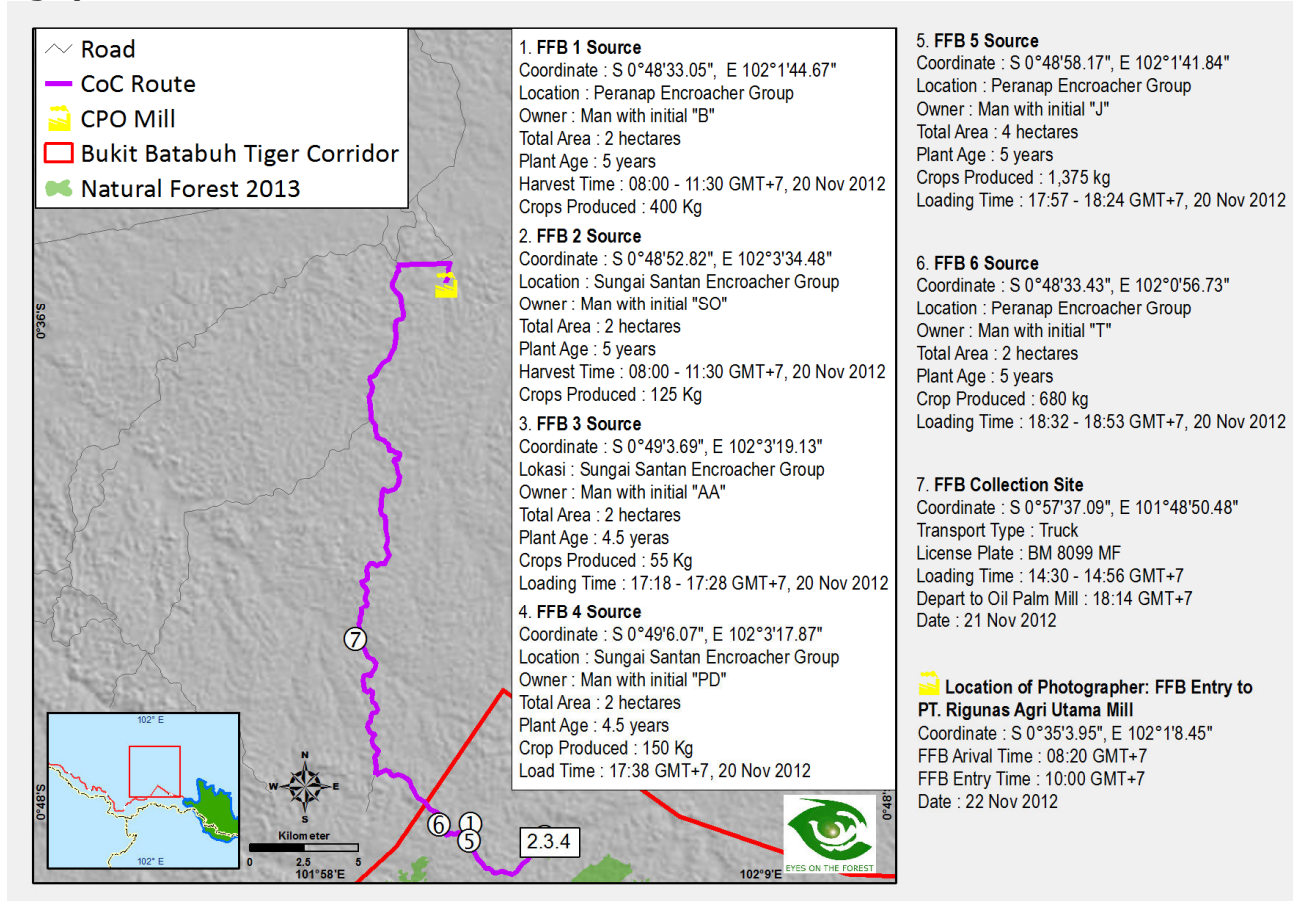




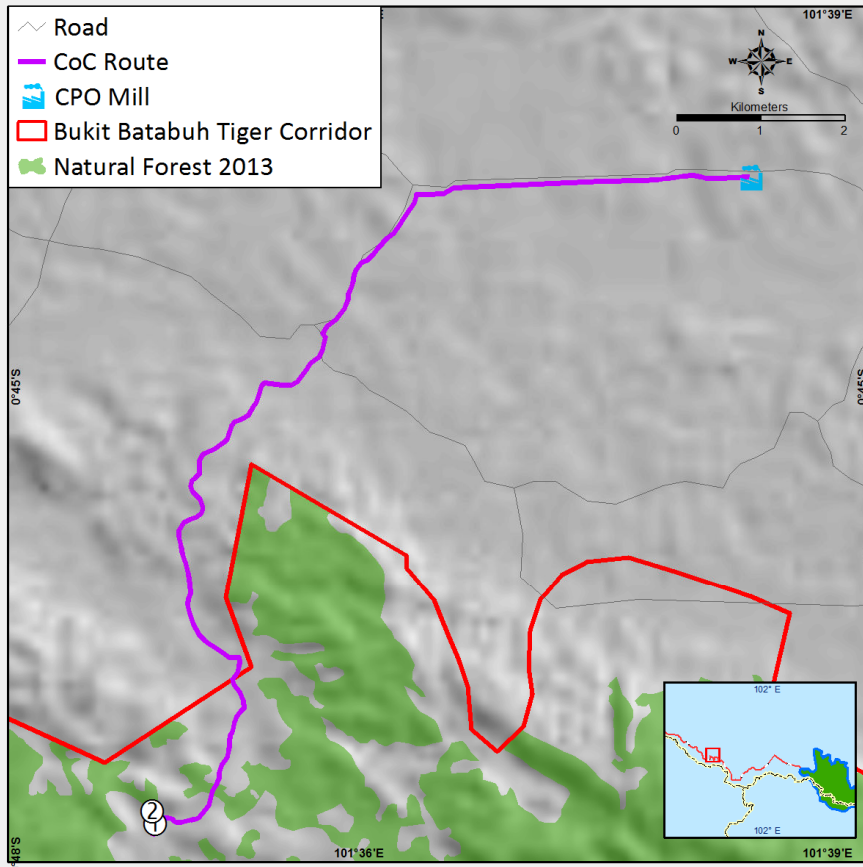
### CoC 3 – “Sungai Arang” group to PT. Sugih Riesta Jaya CPO mill.



### CoC 4 – “Peranap” and “Sungai Santan” groups to PT. Rigunas Agri Utama (Asian Agri) CPO mill.



## CoC 5 – “Air Buluh” group to PT. Tri Bakti Sarimas 1 (Sarimas) CPO mill.



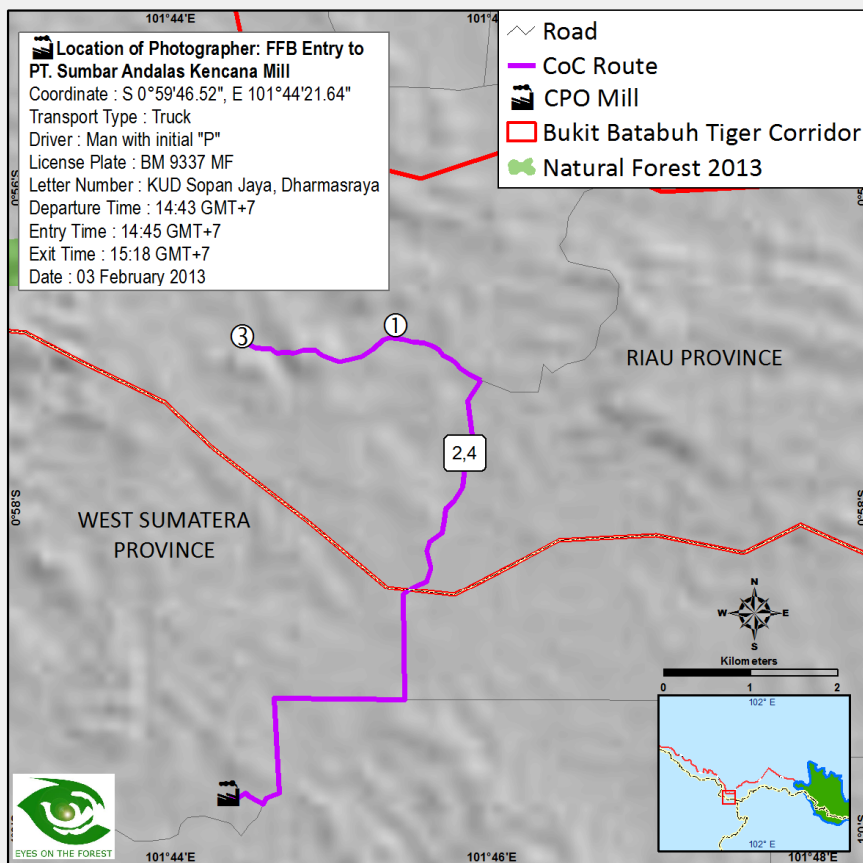
**1. FFB Source & Collection Site**  
 Location : Air Buluh Encroacher Group  
 Owner : Man with initial "AD"  
 Gardener : Man with initial "UM"  
 Total Area : 50 hectares  
 Plant Age : 3-4 years  
 Coordinate : S 0°47'48.1", E 101°34'41.6"  
 Crops Produced : 3 tons  
 Transport Type : Cab-Forward Pickup  
 License Plate : BM 8595 AC  
 Date : 18 January 2013

**2. Distributor**  
 Distributor : Man with initial "R"  
 Coordinate : S 0°47'43.24", E 101°38'30.6"  
 Transport Type : Cab-Forward Pickup  
 License Plate : BM 9539 KB  
 Load Time : 14:15 – 14:50 GMT+7  
 Depart to Oil Palm Mill : 14:57 WIB  
 Date : 18 January 2013

**Location of Photographer: FFB Entry to PT. Tri Bakti Sarimas 1 Mill**  
 Coordinate : S 0°43'39.3", E 101°38'30.6"  
 FFB Arrival Time : 15:43 GMT+7  
 FFB Entry Time : 15:46 GMT+7  
 Truck Exit Time : 15:58 GMT+7  
 Letter Number : 01796 ( DO. HR )  
 Serial Number : 53109  
 Reference Number : 092328  
 Date : 18 January 2013



## CoC 6 – “SAK” group to PT. Sumbar Andalas Kencana (Incasi Raya) CPO mill.



**Location of Photographer: FFB Entry to PT. Sumbar Andalas Kencana Mill**  
 Coordinate : S 0°59'46.52", E 101°44'21.64"  
 Transport Type : Truck  
 Driver : Man with initial "P"  
 License Plate : BM 9337 MF  
 Letter Number : KUD Sopan Jaya, Dharmasraya  
 Departure Time : 14:43 GMT+7  
 Entry Time : 14:45 GMT+7  
 Exit Time : 15:18 GMT+7  
 Date : 03 February 2013

**1. FFB Source 1 and Collection Site**  
 Location : SAK Encroacher Group  
 Coordinate : S 0°56'51.93", E 101°45'23.86"  
 Owner : Man with initial "SP"  
 Total Area/ Age : 2.5 hectares/ 7 years  
 Harvester : Man with initial "K"  
 Harvest Time : 09:00 -12:30 GMT+7/ 2 Feb 2013  
 Crops Produced : 950 Kg

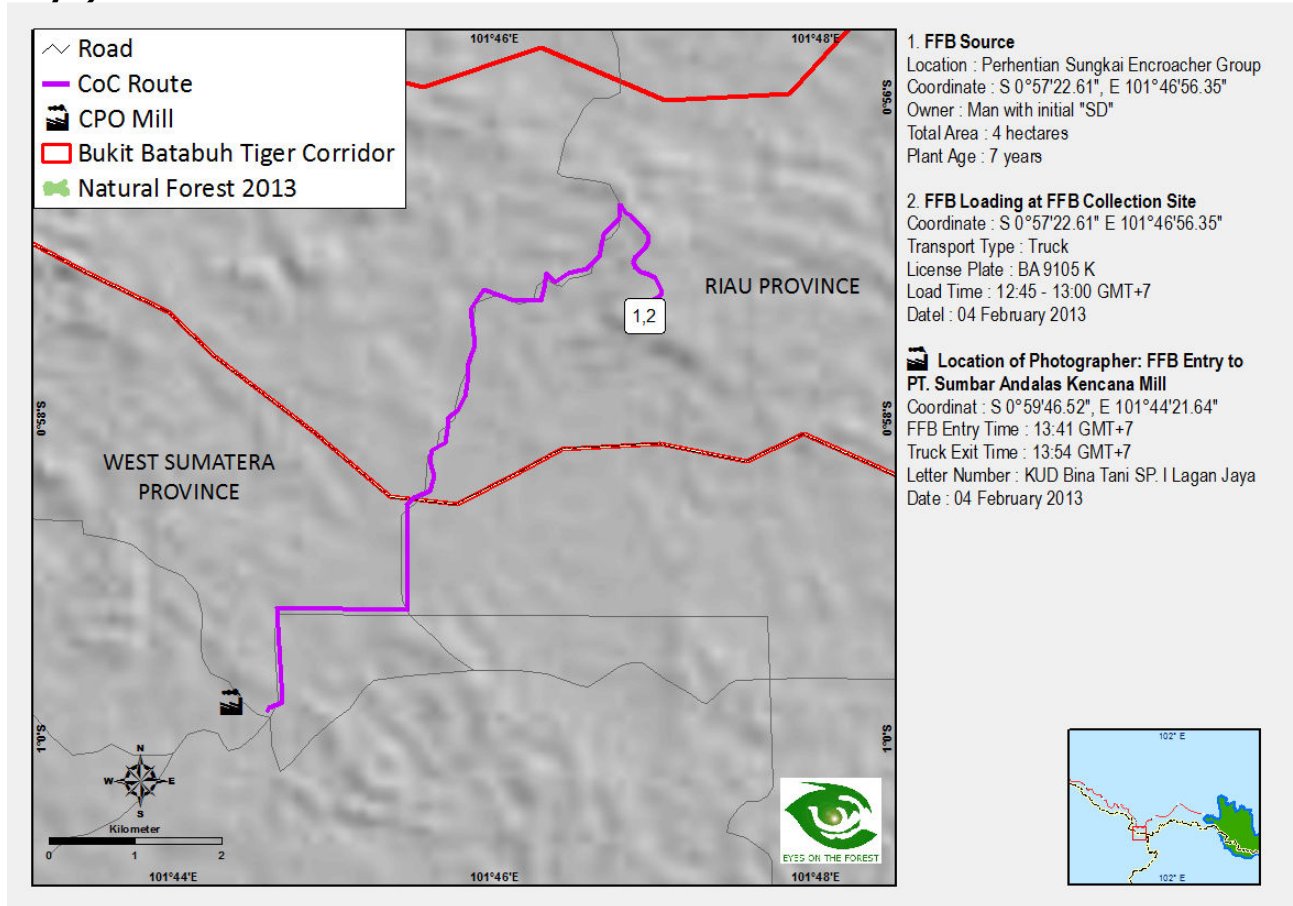
**2. FFB Source 1 Arrival at Distributor**  
 Distributor : Man with initial "M"  
 Coordinate : S 0°57'40.18" E 101°45'49.94"  
 Transport Type : Truck  
 License Plate : BA 9279 JF  
 Arrival Time : 17:29 GMT+7/ 2 Feb 2013

**3. FFB Source 2 and Collection Site**  
 Location : SAK Encroacher Group  
 Owner : Man with initial "SR"  
 Total Area/ Age : 6 hectares/ 7 years  
 Coordinate : S 0°56'55.97" E, 101°44'26.60"  
 Crops Produced : 3 tons  
 Load Time : 10:20 - 11:11 GMT+7/ 3 Feb 2013  
 Depart to Distributor : 13:00 GMT+7/ 3 Feb 2013

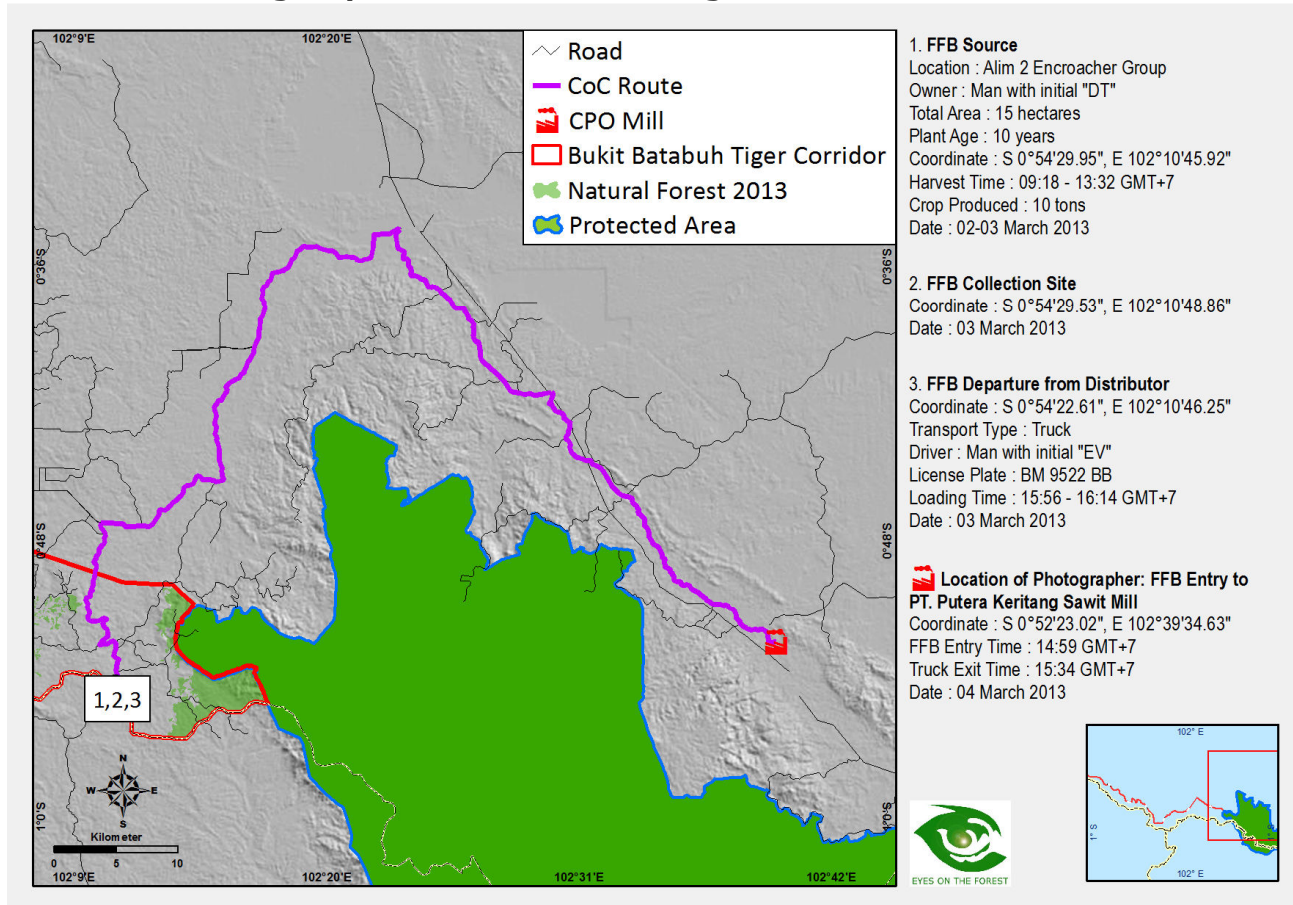
**4. FFB Source 2 Arrival at Distributor**  
 Coordinate : S 0°57'40.18", E 101°45'49.94"  
 Transport Type : Truck  
 Arrival Time : 13:00 GMT+7/ 3 Feb 2013

**4. FFB Departure from Distributor**  
 Coordinate : S 0°57'40.18", E 101°45'49.94"  
 Transport Type : Truck  
 Driver : Man with initial "P"  
 License Plate : BM 9337 MF  
 Departure Time : 14:03 GMT+7/ 3 Feb 2013

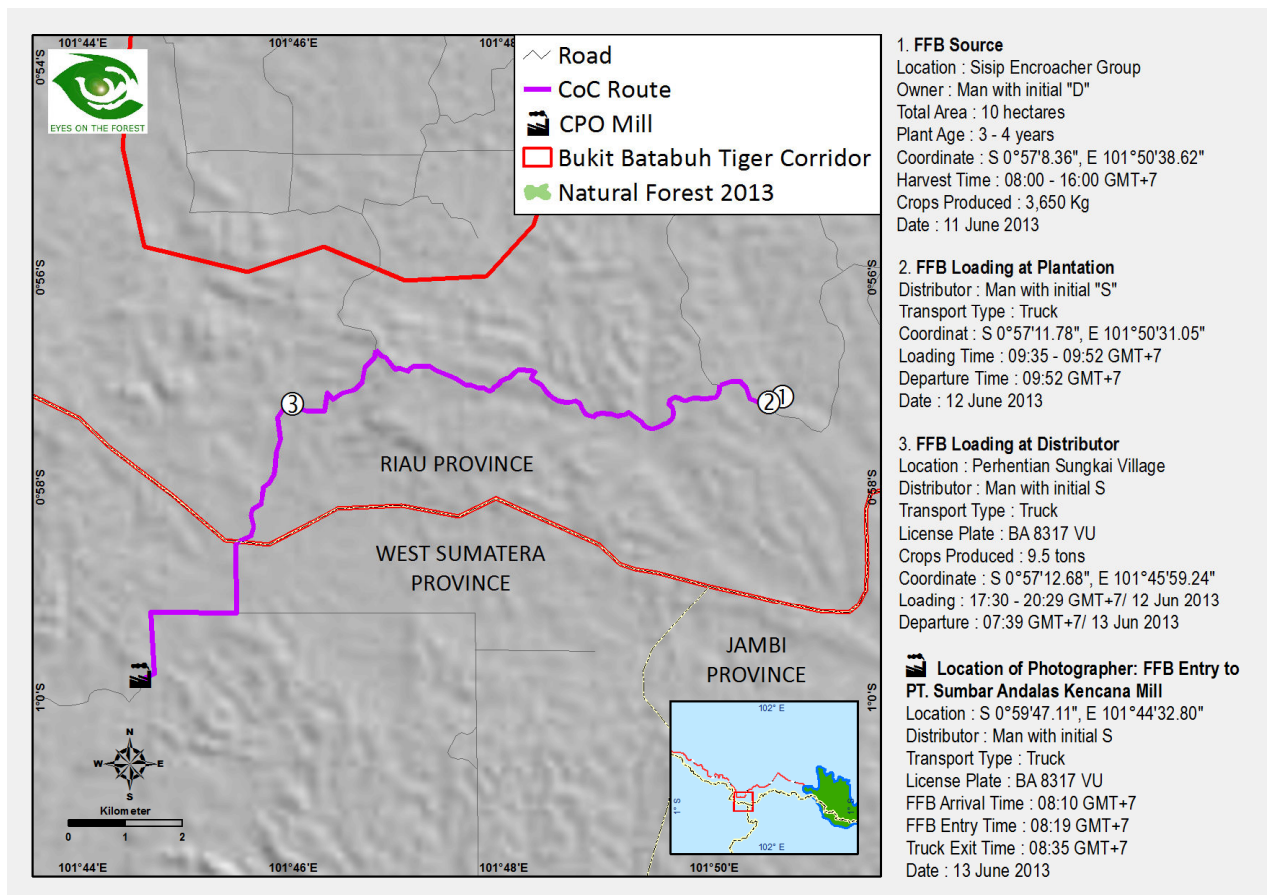
**CoC 7 – “Perhentian Sungkai” group to PT. Sumbar Andalas Kencana (Incasi Raya) CPO mill.**



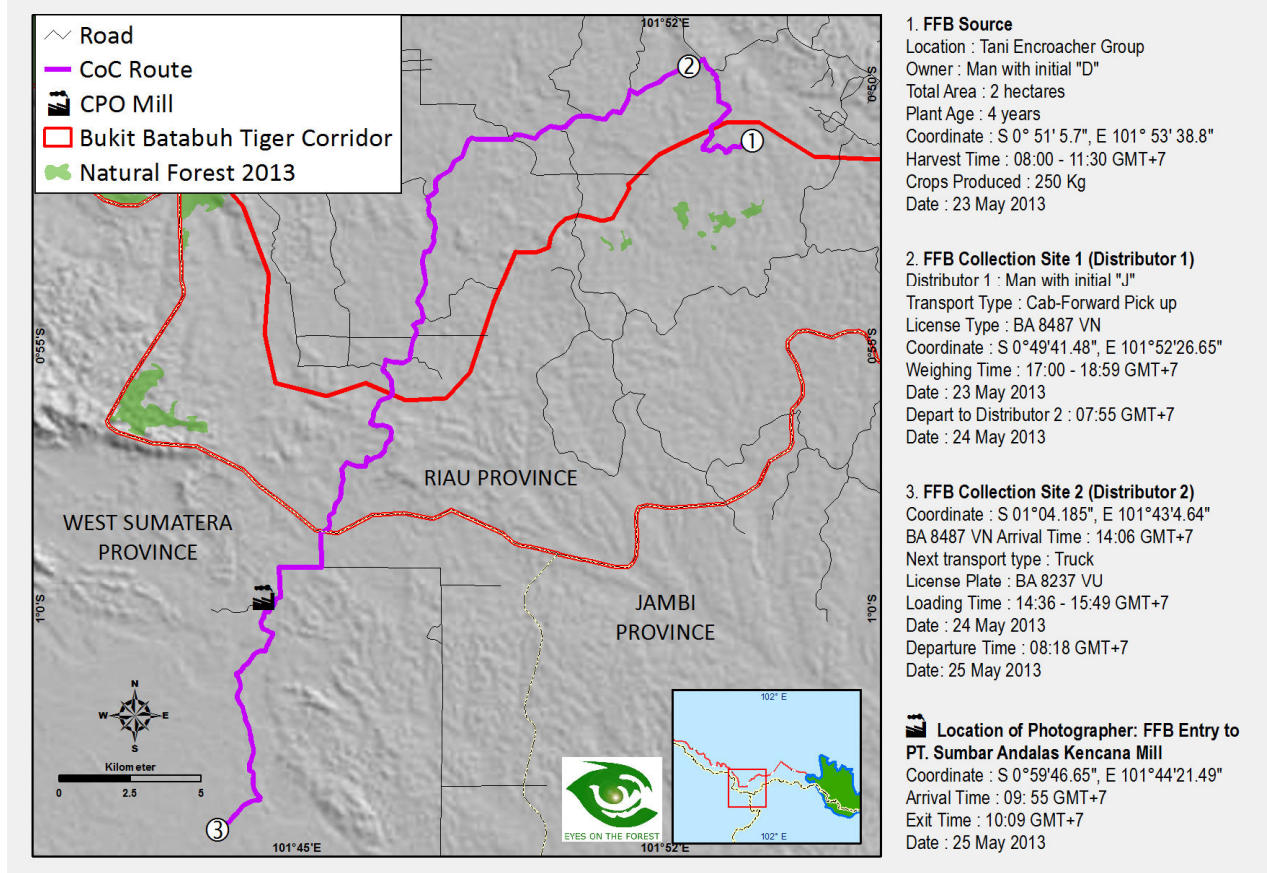
**CoC 8 - “Alim 2” group to PT. Putera Keritang Sawit CPO mill.**



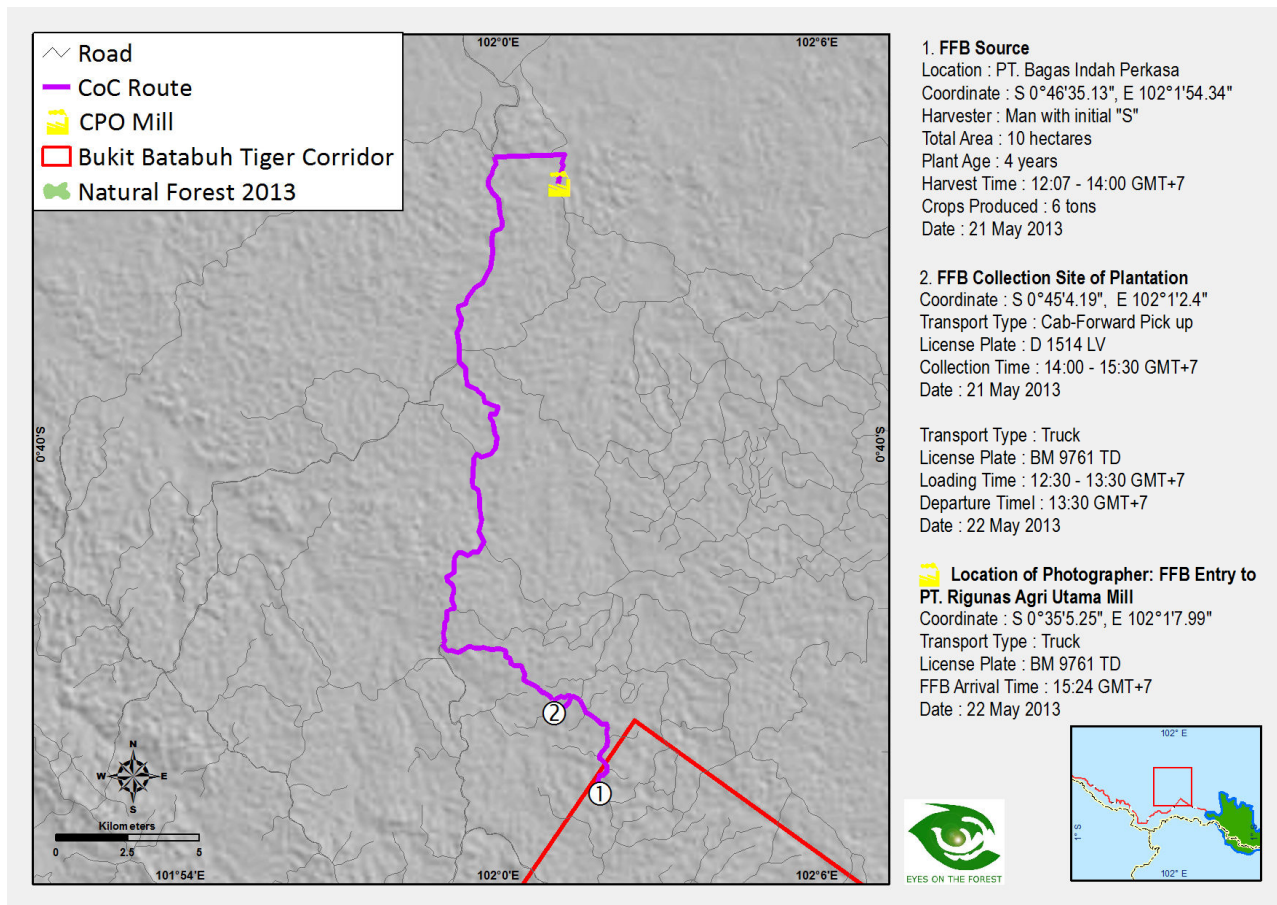
## CoC 9 - "Sisip" group to PT. Sumbar Andalas Kencana (Incasi Raya) CPO mill.



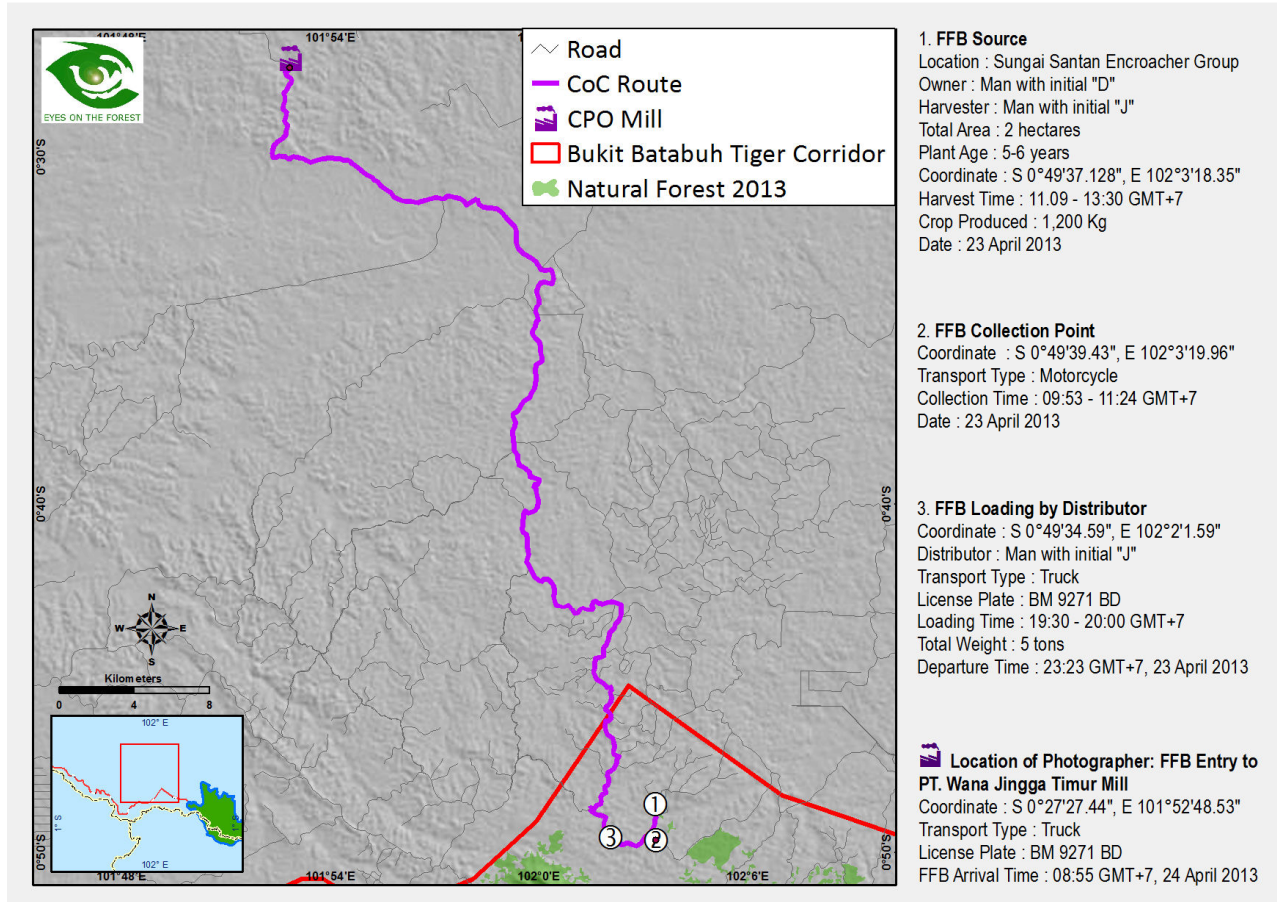
## CoC 10 - "Tani" farmers' group to PT. Sumbar Andalas Kencana (Incasi Raya) CPO mill.



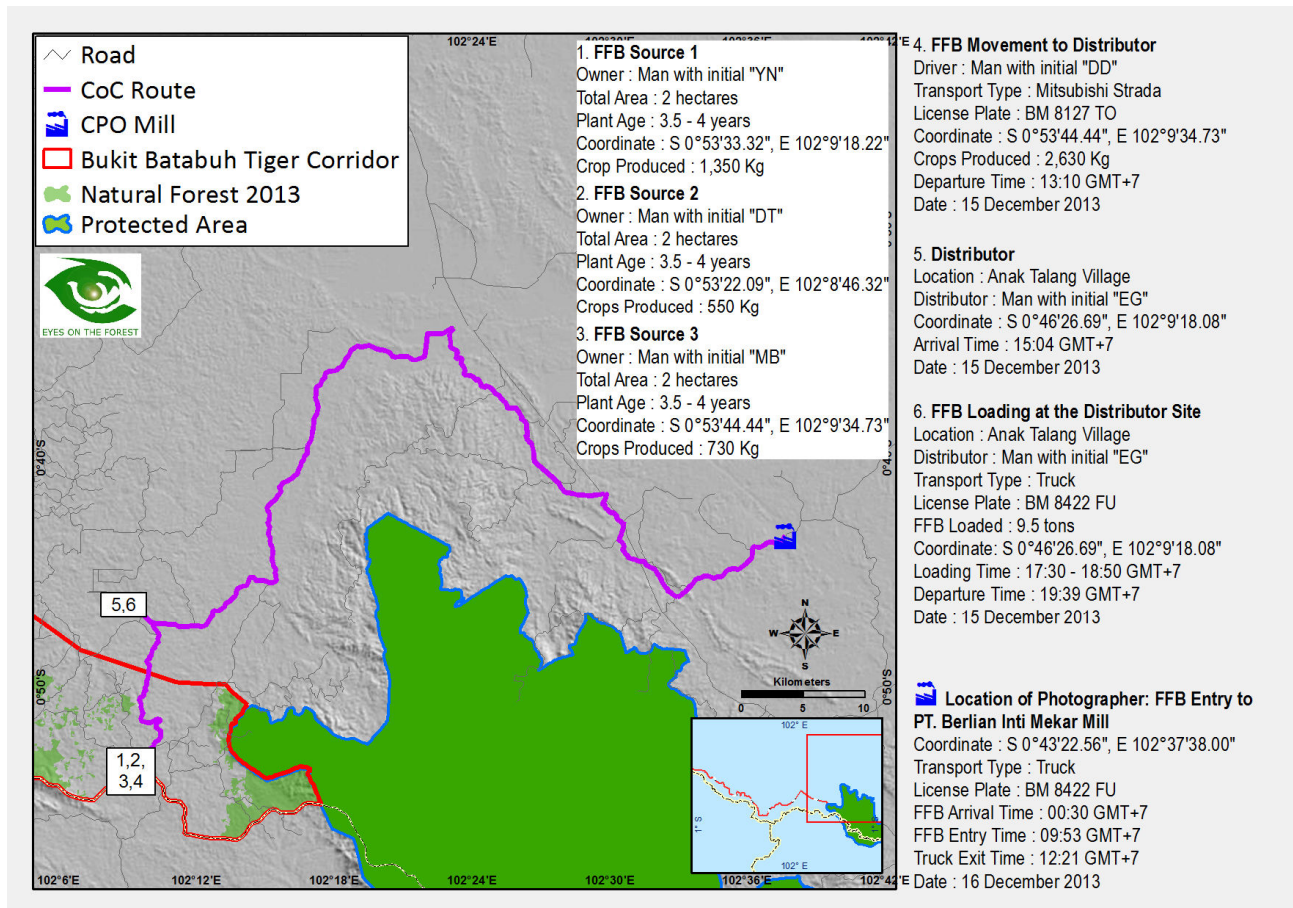
## CoC 11 - PT. Bagus Indah Perkasa to PT. Rigunas Agri Utama (Asian Agri) CPO mill.



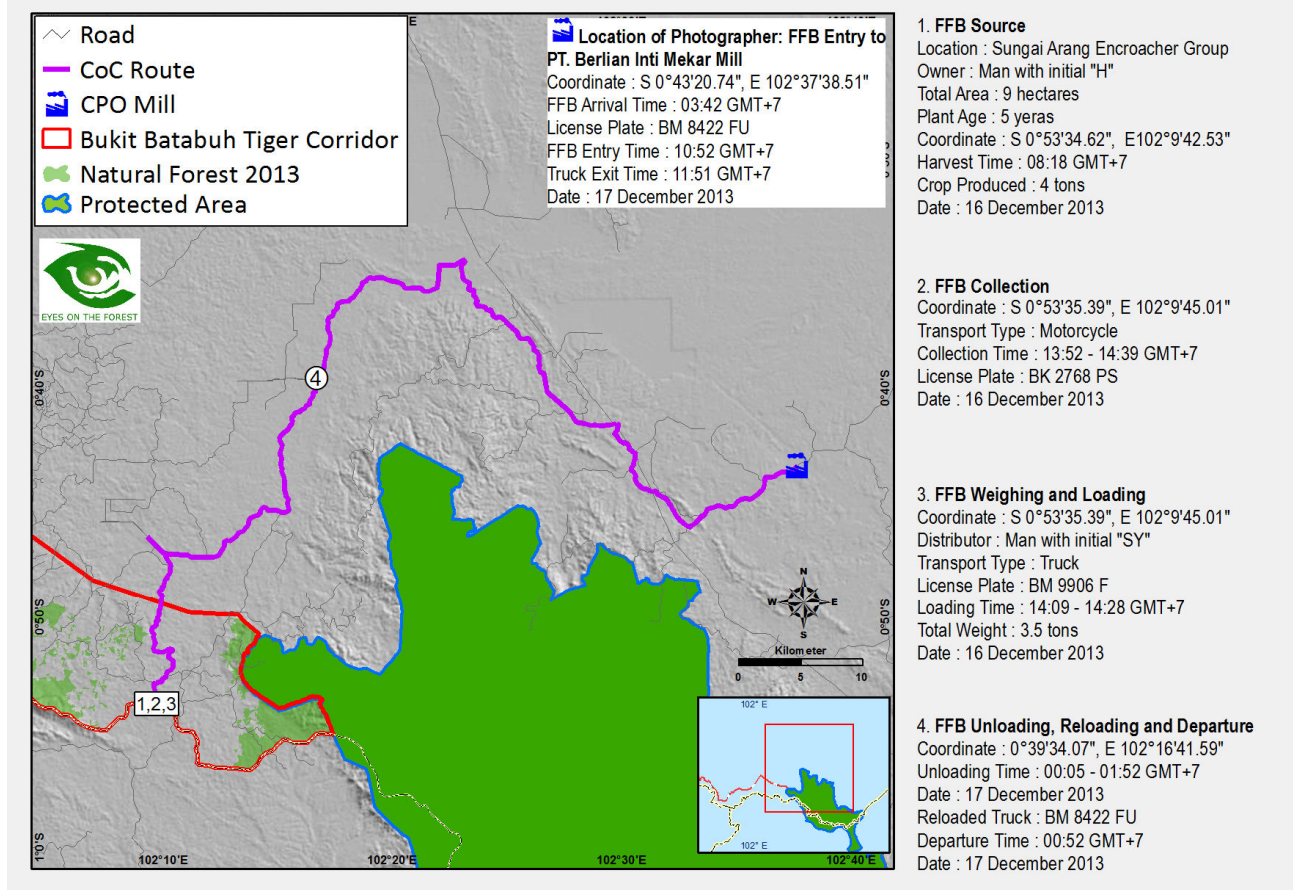
## CoC 12 - "Sungai Santan" group to PT. Wana Jingga Timur (Darmex) CPO mill.



## CoC 13 - "Sungai Arang" group to PT. Berlian Inti Mekar (Mahkota) CPO mill.

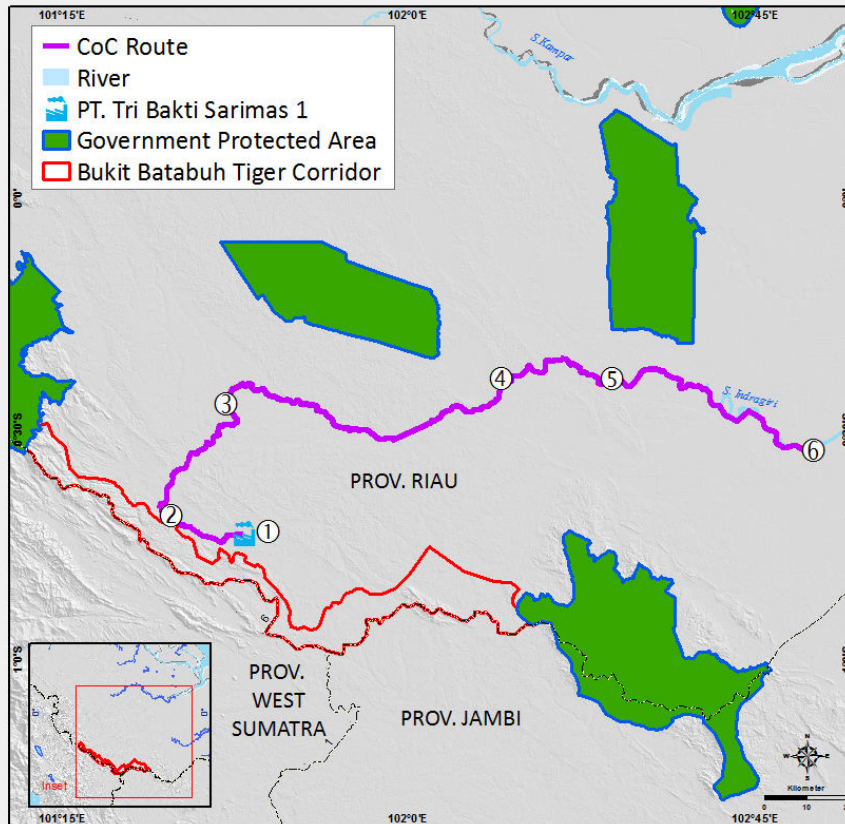


## CoC 14 - "Sungai Arang" group to PT. Berlian Inti Mekar (Mahkota) CPO mill.



## Appendix 3. Maps of CoC of Tainted CPO to Ports

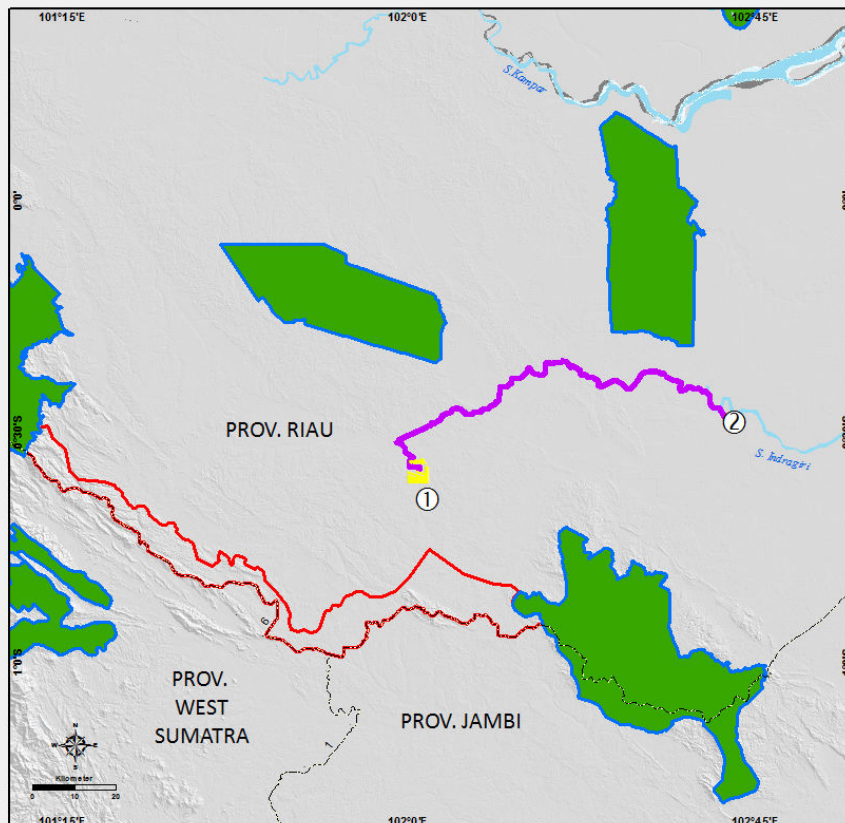
### CoC 1 – PT. Tri Bakti Sarimas 1 (Sarimas) CPO mill to PT. Agro Sarimas Indonesia (Sarimas) port.



1. CPO Source : PT. Tri Bakti Sarimas 1  
Coordinate : S0°47'43.24", E101°34'40.56"  
Transport Type : Tanker truck  
License Plate : BA 8174 BU  
Name of Driver : A man with initial "NB"  
Departure Time : 17:27 GMT+7, 01 March 2013
2. 1st Stop  
Coordinate : S0°41'14.87", E101°29'7.55"  
Arrival Time : 18:55 GMT+7  
Departure Time : 19:59 GMT+7  
Date : 01 March 2013
3. 2nd Stop  
Coordinate : S0°26'46.16", E101°36'16.23"  
Arrival time : 22:17 GMT+7, 01 March 2013  
Departure time : 07:40 GMT+7, 02 March 2013
4. 3rd Stop  
Coordinate : S0°23'25.26", E102°13'15.09"  
Arrival Time : 12:21 GMT+7  
Departure Time : 13:06 GMT+7  
Date : 02 March 2013
5. Truck crossed through Patin Roundabout, at Pematang Reba  
Coordinate : S0°23'25.03", E102°26'23.63"  
Crossing time : 14:35 GMT+7, 02 March 2013
6. Location of Photographer: CPO Entry to PT. Agro Sarimas Indonesia Harbour  
Coordinate : S0°32'46.26", E102°52'35.11"  
CPO Arrival Time : 17:19 GMT+7  
CPO Weighing Time : 17:34 GMT+7  
Date : 02 March 2013

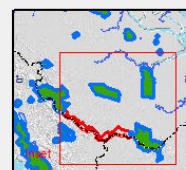


### CoC 2 – PT. Rigunas Agri Utama (Asian Agri) to CV. Sumber Kencana (SK) port.

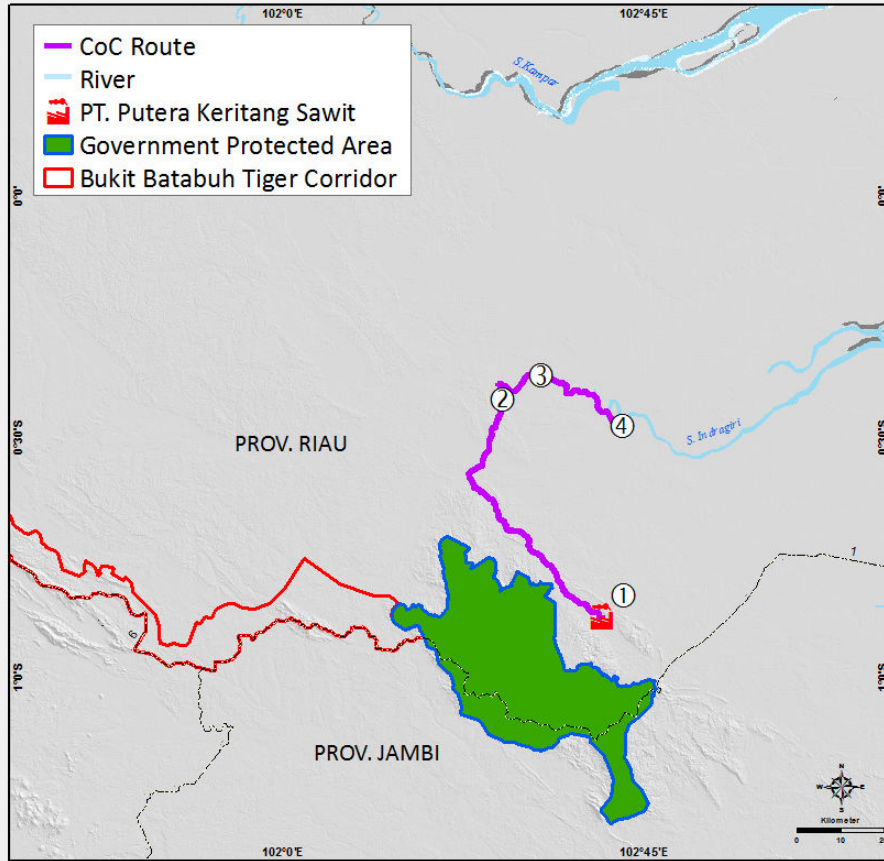


- CoC Route
- River
- PT. Rigunas Agri Utama
- Government Protected Area
- Bukit Batabuh Tiger Corridor

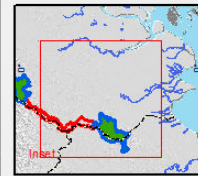
1. CPO Source : PT. Rigunas Agri Utama  
Coordinate : S 0°35'5.61" E 102°1'8.42"  
Transport Type : Tanker truck  
License Plate : BM 8858 BU  
Departure Time : 12:39 GMT+7, 05 March 2013
2. Location of Photographer: CPO Entry to CV. Sumber Kencana Harbour  
Coordinate : S 0°28'49.88" E 102°42'14.09"  
CPO Arrival Time : 16:43 GMT+7  
CPO Weighing Time : 16:45 GMT+7  
Date : 05 March 2013



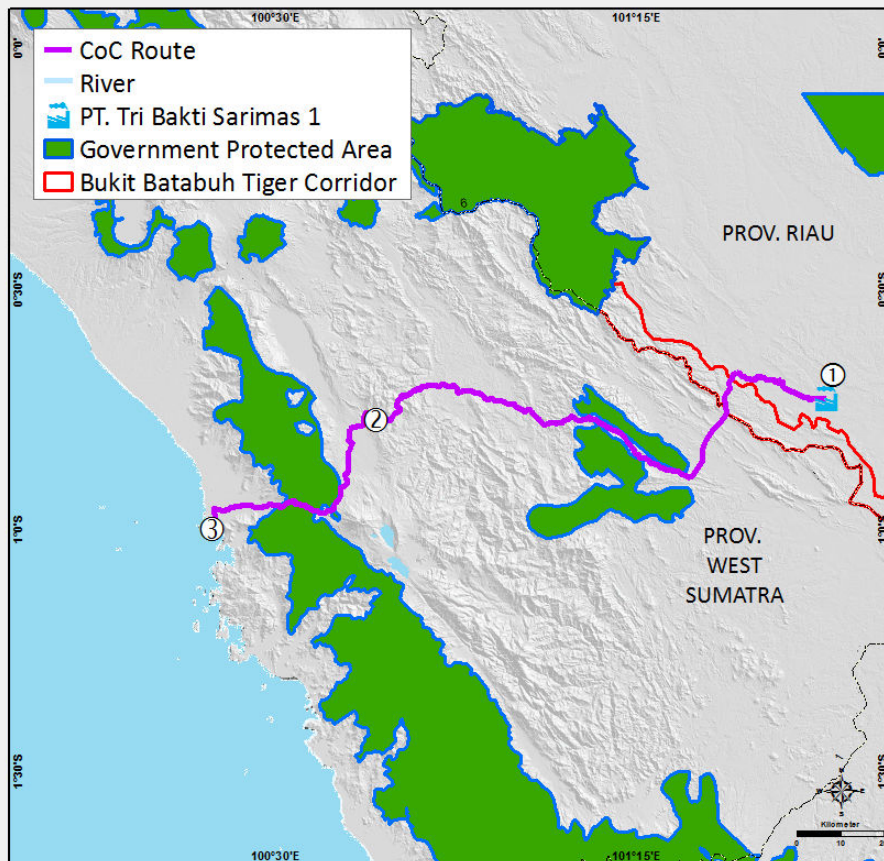
**CoC 3 – PT. Putera Keritang Sawit CPO mill to CV. Sumber Kencana (SK) port.**



- 1. CPO Source : PT. Putera Keritang Sawit  
 Coordinate : S 0°52'23.21" E 102°39'34.69"  
 Vehicle Identity : SK 23 A  
 License Plate : BA 9198 BU  
 Loading Time : 15:05 - 15:28 GMT+7  
 Departure Time : 15:32 GMT+7  
 Date : 04 March 2013
- 2. 1st Stop  
 Location : Talang Lakat Village  
 Coordinate : S 0°25'30.96" E 102°27'14.0"  
 Arrival Time : 15:32 GMT+7, 04 March 2013  
 Departure Time : 08:16 GMT+7, 05 March 2013
- 3. 2nd Stop  
 Location : Rengat  
 Coordinate : S 0°22'23.73" E 102°32'9.05"  
 Arrival Time : 09:26 GMT+7  
 Departure Time : 17:41 GMT+7  
 Date : 05 March 2013
- 4. Location of Photographer: CPO Entry to CV. Sumber Kencana Harbour  
 Coordinate : S 0°28'48.36" E 102°42'12.51"  
 CPO Arrival Time : 18:51 GMT+7  
 Date : 05 March 2013



**CoC 4 – PT. Tri Bakti Sarimas 1 (Sarimas) CPO mill to PT. Agro Muko Tank Terminal (Agro Muko).**

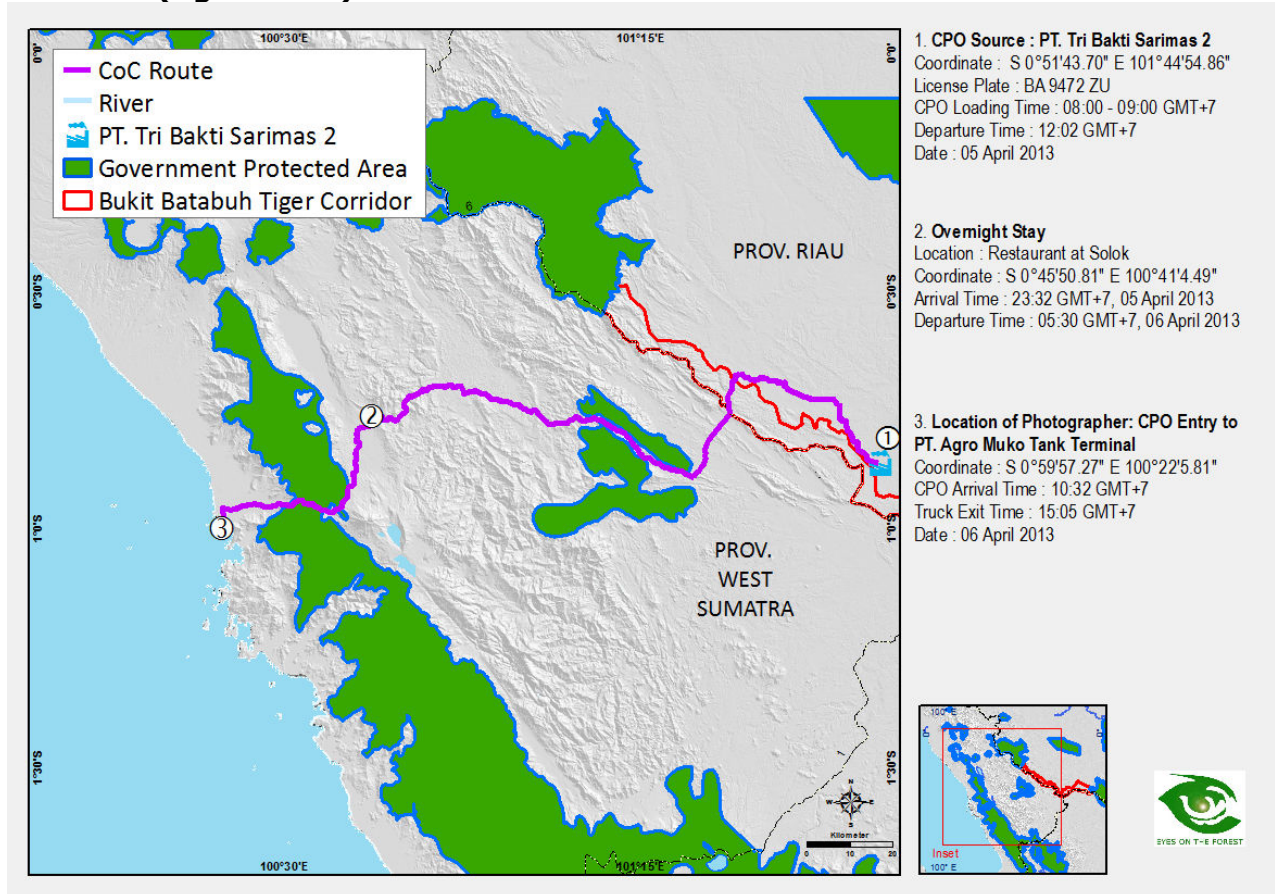


- 1. CPO Source : PT. Tri Bakti Sarimas 1  
 Coordinate : S 0°43'39.314" E 101°38'30.558"  
 License Plate : BA 8344 FU  
 CPO Loading Time : 12:00 - 16:00 GMT+7  
 Departure Time : 16:39 GMT+7  
 Date : 03 April 2013
- 2. Overnight Stay  
 Location : Restaurant at Solok  
 Coordinate : S 0°46'19.32" E 100°42'32.30"  
 Stopping Time : 02:27 GMT+7  
 Departure Time : 07:50 GMT+7  
 Date : 04 April 2013
- 3. Location of Photographer: CPO Entry to PT. Agro Muko Tank Terminal  
 Coordinate : S 0°59'57.27" E 100°22'5.81"  
 Arrival Time : 11:04 GMT+7  
 Exit Time : 15:32 GMT+7  
 Date : 4 April 2013

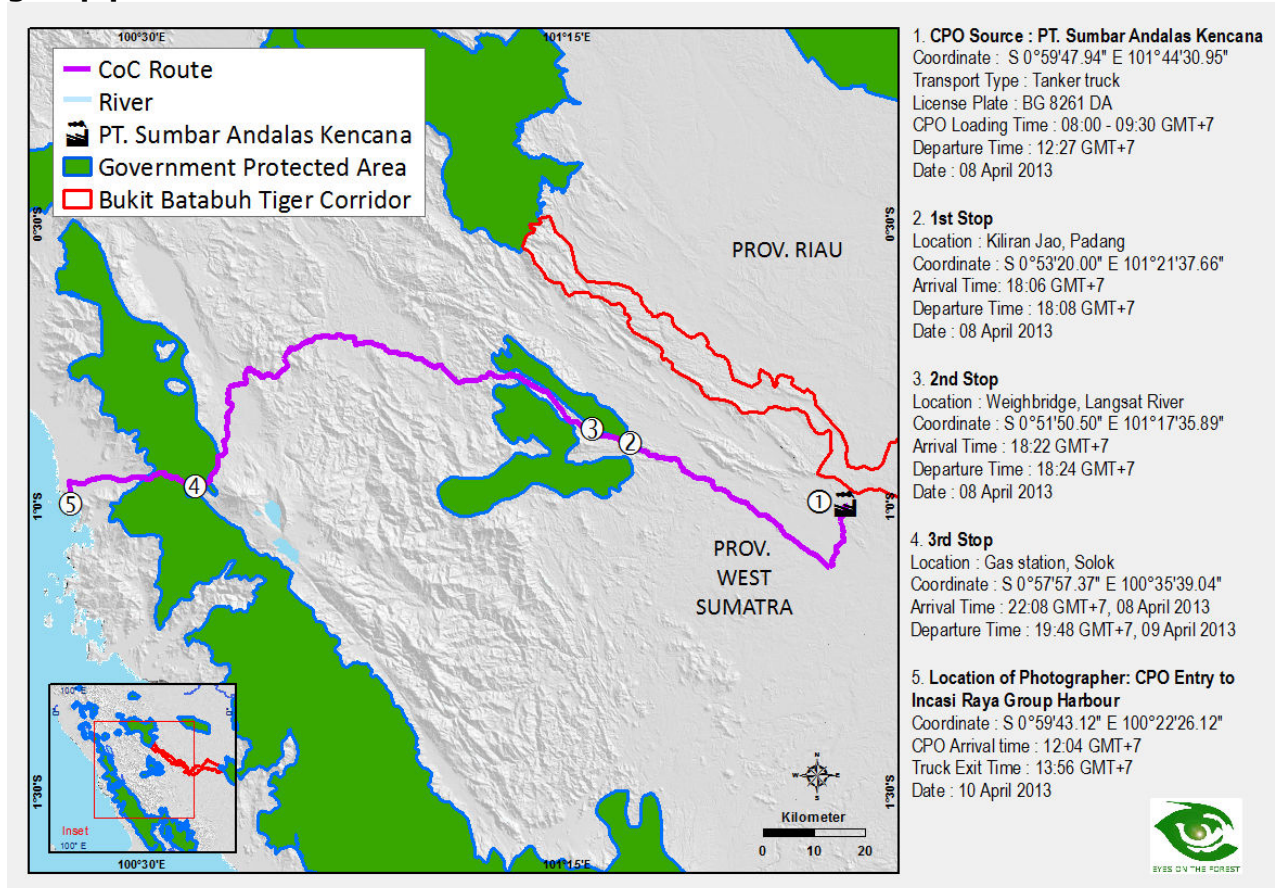




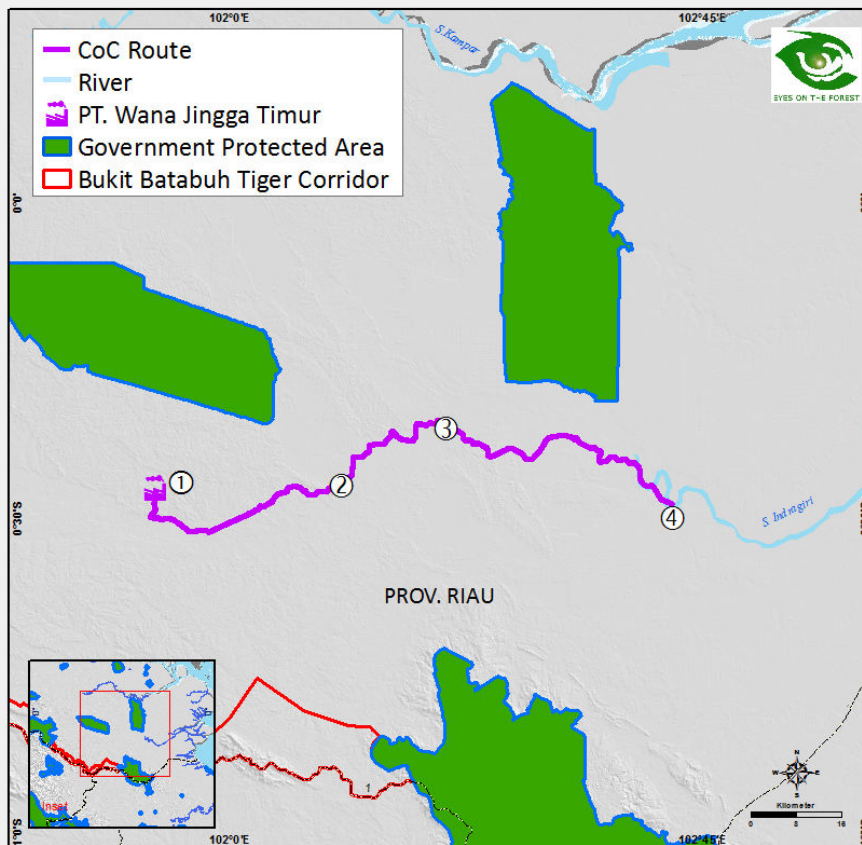
## CoC 5 – PT. Tri Bakti Sarimas 2 (Sarimas) CPO mill to PT. Agro Muko Tank Terminal (Agro Muko).



## CoC 6 – PT. Sumbar Andalas Kencana (Incasi Raya) CPO mill to Incasi Raya group port.

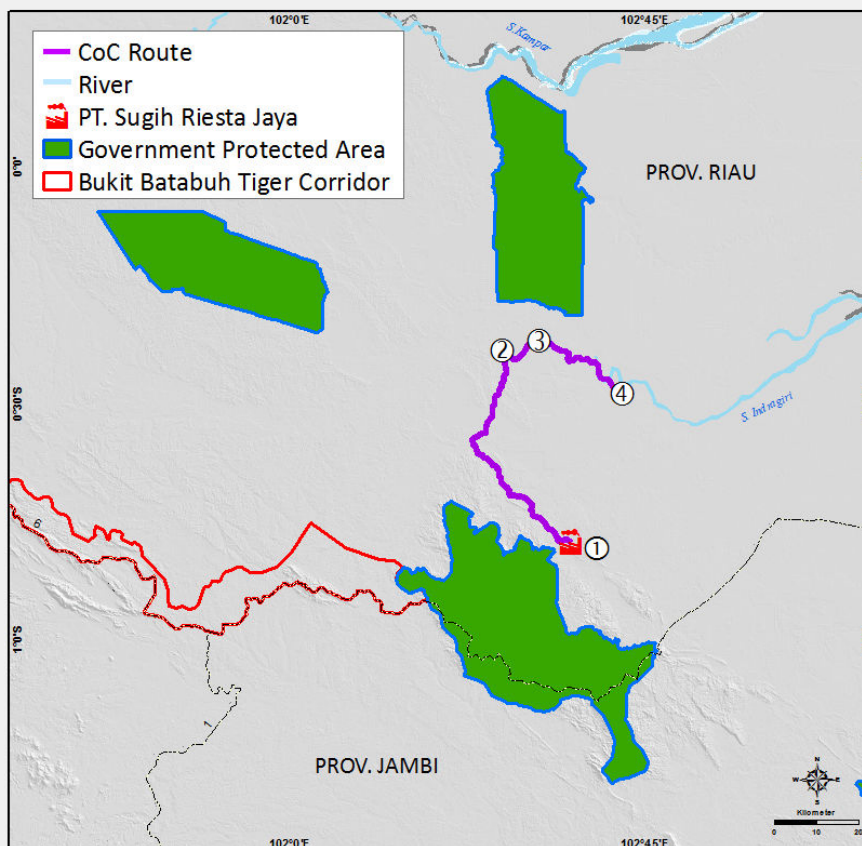


**CoC 7 – PT. Wana Jingga Timur (Darmex) CPO mill to PT. Duta Palma (Darmex) port.**

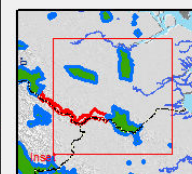


- 1. CPO Source: PT. Wana Jingga Timur**  
 Coordinate : S 0° 27' 26.327" E 101° 52' 48.594"  
 Transport Type 1 : Tanker truck  
 License Plate : BM 8939 BU  
 Vehicle Identity : SK 40 A  
 CPO Loading Time : 08:00 - 09:30 GMT+7  
 Departure Time : 09:30 GMT+7, 15 May 2013  
 Transport Type 2 : Tanker truck  
 License Plate : BM 8808 BU  
 Vehicle Identity : SK 77 A  
 CPO Loading Time : 08:00 - 09:30 GMT+7  
 Departure Time : 09:50 GMT+7, 15 May 2013
- 2. Stop by Truck 1**  
 Location : Restaurant at Bongkal Malang Village  
 Coordinate : S 0° 26' 56.645" E 102° 10' 14.160"  
 License Plate : BM 8939 BU or SK 40 A  
 Arrival Time : 11:24 GMT+7  
 Departure time : 12:45 GMT+7  
 Date : 15 May 2013
- 3. Stop by Truck 2**  
 Location : Restaurant at Japura Village  
 Coordinate : S 0° 21' 32.717" E 102° 20' 41.136"  
 License Plate : BM 8808 BU or SK 77 A  
 Arrival Time : 12:27 GMT+7  
 Departure Time : 13:30 GMT+7  
 Date : 15 May 2013
- 4. Location of Photographer: CPO Entry to PT. Duta Palma (Darmex) Harbour**  
 Coordinate : S 0°27'49.010" E 102°43'22.627"  
 Transport Type : Tanker truck  
 License Plate : BM 8939 BU or SK 40 A  
 BM 8808 BU or SK 77 A  
 Arrival Time : 15:08 GMT+7, 15 May 2013

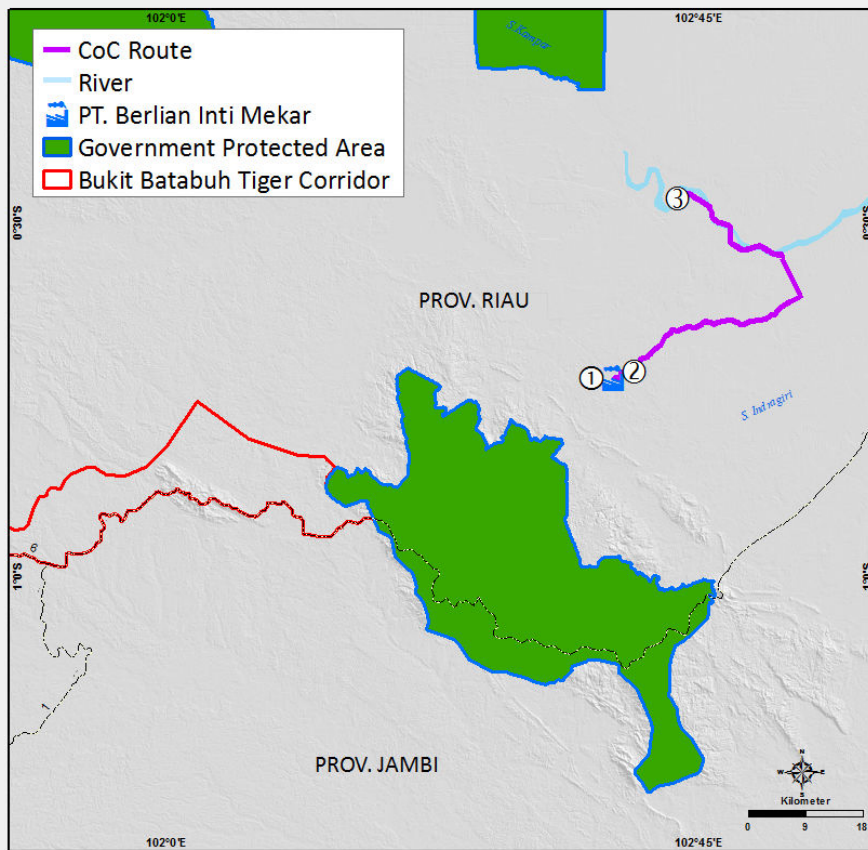
**CoC 8 – PT. Sugih Riesta Jaya (no group info) CPO mill to CV. Sumber Kencana (SK) port.**



- 1. CPO Source : PT. Sugih Riesta Jaya**  
 Coordinate : S 0°47'35.48" E 102°35'39.34"  
 Transport Type : Tanker truck  
 License Plate : BM 8957 BU  
 Vehicle Identity : SK 23  
 Departure Time : 09:46 GMT+7  
 Date : 30 March 2013
- 2. Stop**  
 Location : Rafika Salon, Pematang Reba  
 Coordinate : S 0°23'24.26" E 102°26'52.67"  
 Stopping time : 12:31 GMT+7  
 Date : 30 March 2013
- 3. Tanker truck went through Rengat City Gate**  
 Coordinate : S 0°23'25.26" E 102°13'15.09"  
 Time : 13:44 GMT+7  
 Date : 30 March 2013
- 4. Location of Photographer: CPO Entry to CV. Sumber Kencana Harbour**  
 Coordinate : S 0°28'47.68" E 102°42'9.68"  
 CPO Arrival Time : 14:42 GMT+7  
 CPO Weighing Time : 14:43 GMT+7  
 Date : 30 March 2013



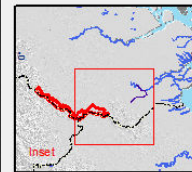
**CoC 9 – PT. Berlian Inti Mekar (Mahkota) CPO mill to PT. Wilmar Nabati Indonesia port.**



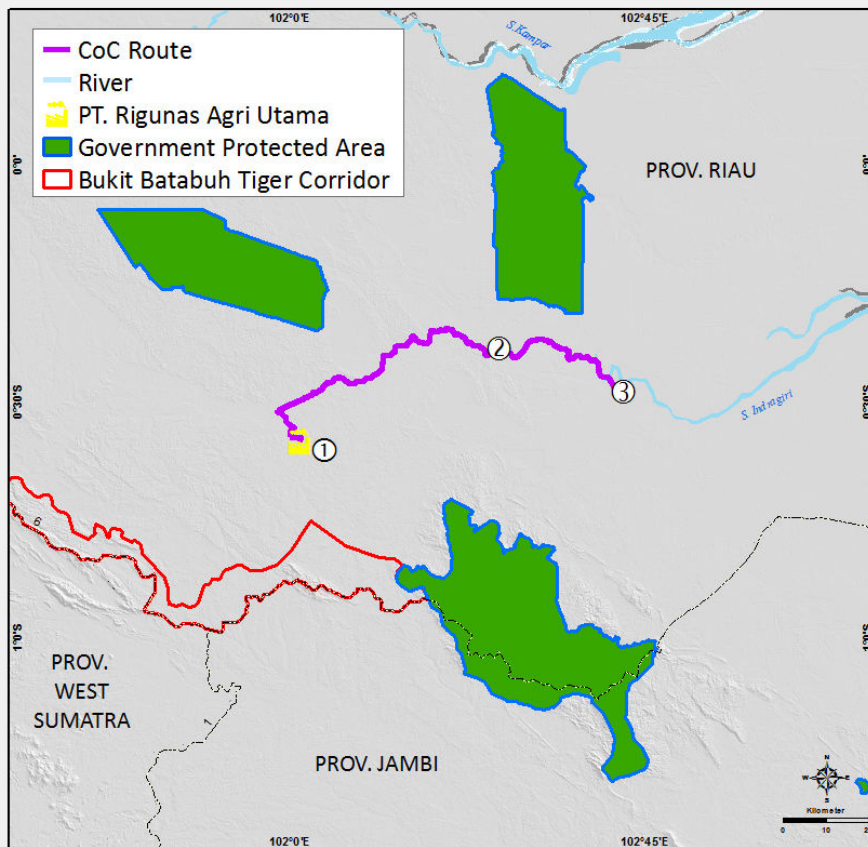
1. CPO Source : PT. Berlian Inti Mekar  
 Coordinate : S 0°43'21.86" E 102°37'41.18"  
 Transport Type : Tanker truck  
 License Plate : BM 9188 BU  
 Vehicle Identity : SK 71  
 CPO Weighing Time : 10:03 GMT+7  
 Departure Time : 12:20 GMT+7  
 Date : 01 April 2013

2. Stop  
 Location : Surabaya Restaurant, Sincalang Village  
 Coordinate : S 0°42'42.94" E 102°39'30.59"  
 License Plate : BM 9188 BU  
 Arrival Time : 12:29 GMT+7  
 Departure Time : 12:31 GMT+7  
 Date : 01 April 2013

3. Location of Photographer: CPO Entry to PT. Wilmar Nabati Indonesia Harbour  
 Coordinate : S 0°28'3.20" E 102°43'9.59"  
 Arrival Time : 15:44 GMT+7  
 Security Check Time : 15:48 GMT+7  
 CPO Unload Time : 16:16 GMT+7  
 Exit Time : 16:45 GMT+7  
 Date : 01 April 2013



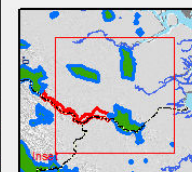
**CoC 10 – PT. Rigunas Agri Utama (Asian Agri) CPO mill to CV. Sumber Kencana (SK) port.**



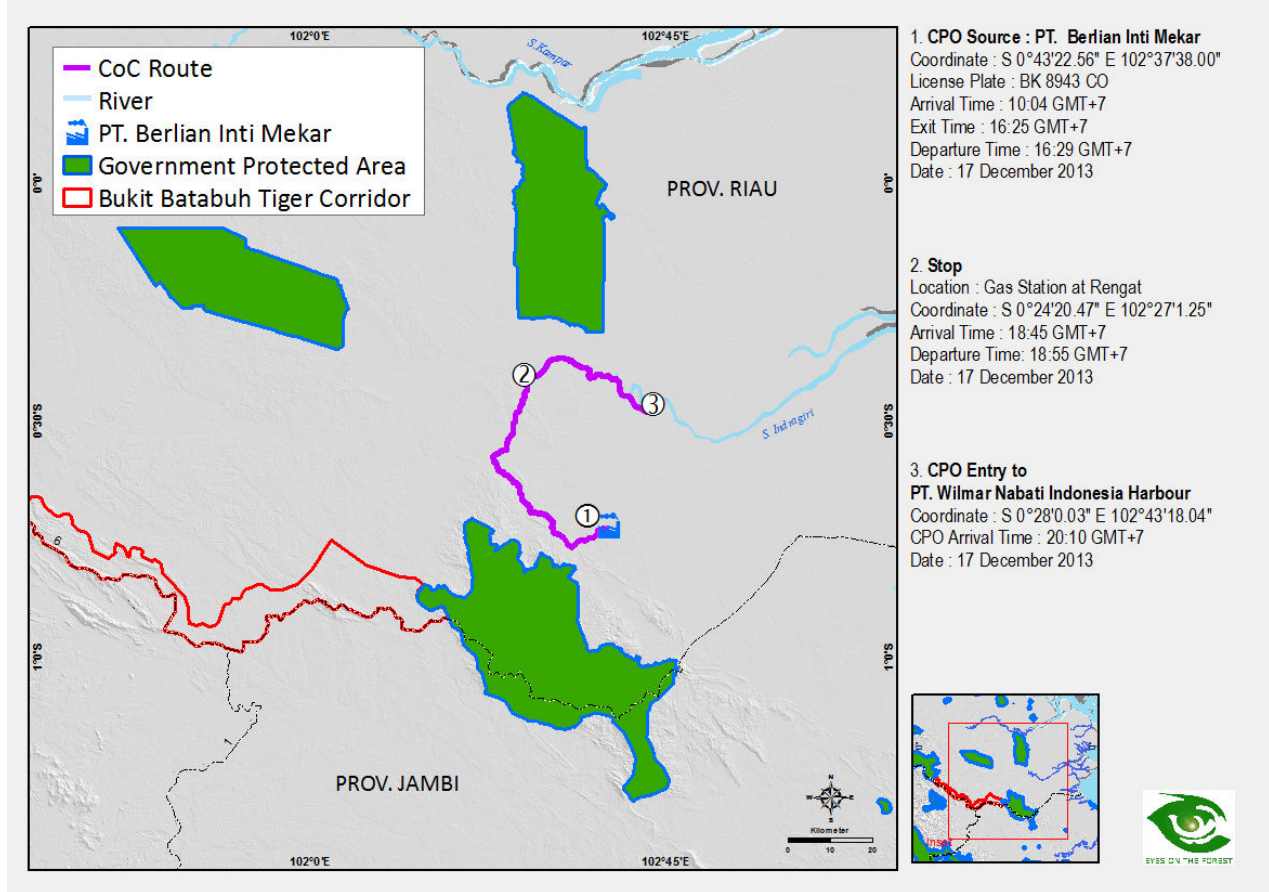
1. CPO Source : PT. Rigunas Agri Utama  
 Coordinate : S 0°43'21.86" E 102°37'41.18"  
 Transport Type : Tanker truck  
 License Plate : BM 9612 RC  
 Vehicle Identity : SK 12 G  
 Arrival Time : 10:04 GMT+7  
 Exit Time : 10:51 GMT+7  
 Date : 21 May 2013

2. Tanker truck went through Patin Roundabout at Pematang Reba  
 Coordinate : S 0°23'24.64" E 102°26'26.75"  
 License Plate : BM 9612 RC  
 Crossing Time : 15:47 GMT+7  
 Date : 21 May 2013

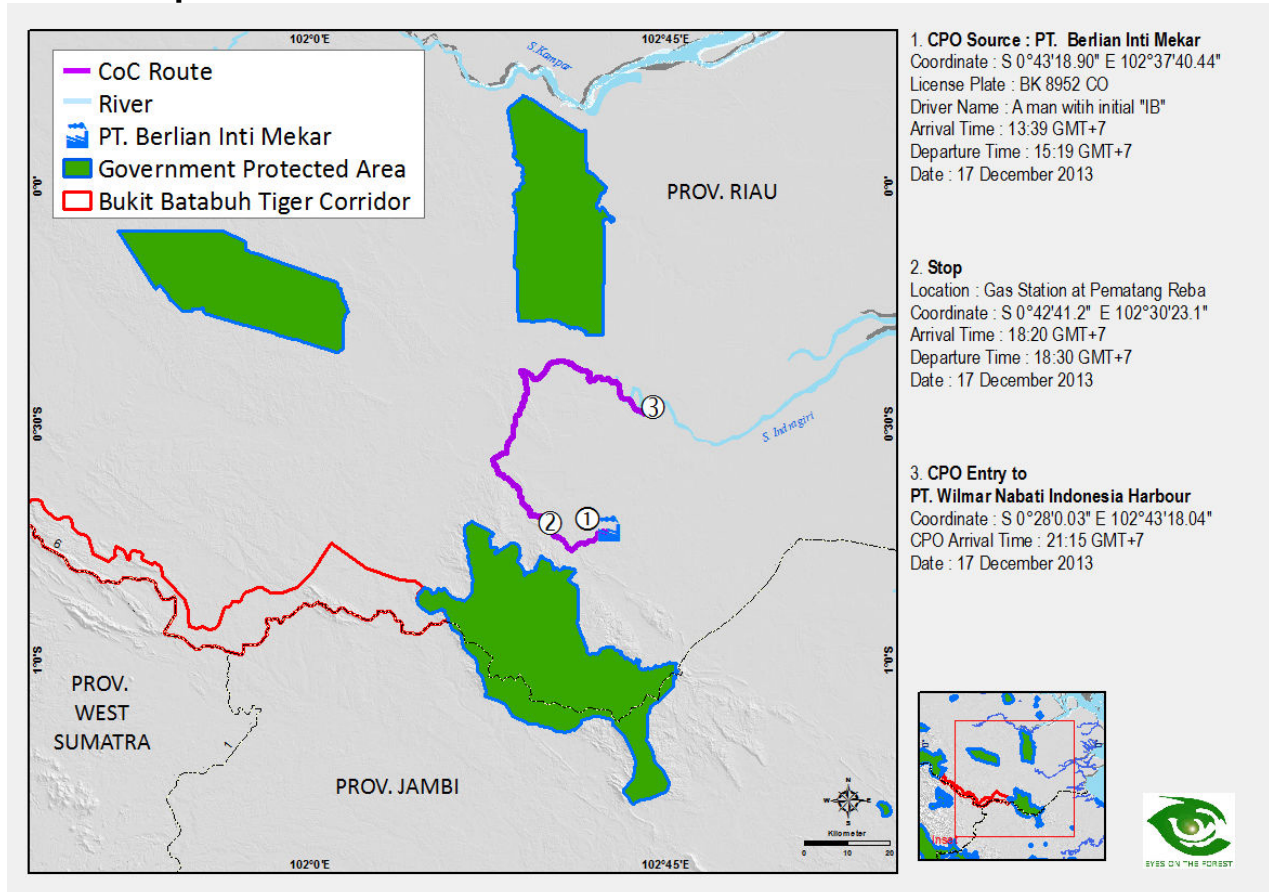
3. Location of Photographer: CPO Entry to CV. Sumber Kencana Harbour  
 Coordinate : S 0°28'49.84" E 102°42'14.42"  
 License Plate : BM 9612 RC or SK 12 G  
 Arrival Time : 17:06 GMT+7  
 Weighing Time : 17:11 GMT+7  
 Date : 21 May 2013



**CoC 11 – PT. Berlian Inti Mekar (Mahkota) CPO mill to PT. Wilmar Nabati Indonesia port.**



**CoC 12 – PT. Berlian Inti Mekar (Mahkota) CPO mill to PT. Wilmar Nabati Indonesia port.**



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- <sup>1</sup> Wilmar International (5 December 2013) Wilmar International Announces Policy to Protect Forests and Communities. No Deforestation, No Peat, No Exploitation Policy to meet rising market demand for traceable, responsibly produced vegetable oil. [http://media.corporate-ir.net/media\\_files/IROL/16/164878/WIL%20Announces%20No%20Deforestation,%20No%20eat%20&%20No%20Exploitaton%20Policy%20-%205%20Dec%202013\\_MR.pdf](http://media.corporate-ir.net/media_files/IROL/16/164878/WIL%20Announces%20No%20Deforestation,%20No%20eat%20&%20No%20Exploitaton%20Policy%20-%205%20Dec%202013_MR.pdf)
- <sup>2</sup> Wilmar International (5 December 2013) No Deforestation, No Peat, No Exploitation Policy. <http://www.wilmar-international.com/wp-content/uploads/2012/11/No-Deforestation-No-Peat-No-Exploitation-Policy.pdf>
- <sup>3</sup> WWF Indonesia (2013) Palming Off a National Park. Tracking Illegal Oil Palm Fruit in Riau, Sumatra. [http://awsassets.wwf.or.id/downloads/wwf\\_indonesia\\_palming\\_off\\_a\\_national\\_park\\_final.pdf](http://awsassets.wwf.or.id/downloads/wwf_indonesia_palming_off_a_national_park_final.pdf)
- <sup>4</sup> Tempo.co (15 January 2014) Target Produksi Sawit Indonesia 28 Juta Ton. <http://www.tempo.co/read/news/2014/01/15/090545104/Target-Produksi-Sawit-Indonesia-28-Juta-Ton>
- <sup>5</sup> GAPKI (15 January 2014) Refleksi Industri Kelapa Sawit 2013 dan Prospek 2014. <http://www.gapki.or.id/Page/PressReleaseDetail?guid=d414bf22-e99e-4cbd-9305-1deb5d019f4e>
- <sup>6</sup> GAPKI (15 January 2014)
- <sup>7</sup> Riau Terkini (20 January 2014) Perputaran Uang di Perkebunan Sawit Riau Capai Rp 4-5 Triliun. <http://www.riauterkini.com/usaha.php?arr=69196>
- <sup>8</sup> GAPKI (15 January 2014)
- <sup>9</sup> Antara (16 January 2014) Ekspor produk sawit 21,2 juta ton 2013. <http://www.antarabengkulu.com/berita/21477/ekspor-produk-sawit-212-juta-ton-2013>
- <sup>10</sup> GAPKI (15 January 2014)
- <sup>11</sup> Antara (16 January 2014)
- <sup>12</sup> FokusRiau.com (13 June 2013) Jumlah Ekspor CPO Triwulan I 2013 Capai 680,990 Ton. <http://fokusriau.com/berita-jumlah-ekspor-cpo-triwulan-i-2013-capai-680990-ton-.html>
- <sup>13</sup> Peraturan Presiden Republik Indonesia Nomor 13 Tahun 2012 tentang Rencana Tata Ruang Pulau Sumatera. <http://www.dephut.go.id/uploads/apl/Perpres-13-2012-Rencana-Tata-Ruang-Pulau-Sumatera1.pdf>
- <sup>14</sup> Ministry of Environment, Ministry of Public Works, Ministry of Forestry and Ministry of Home Affairs (11 May 2010) The Indonesian Government Launches "The Road Map for Saving Sumatra Island and Ecosystem. [http://awsassets.wwf.or.id/downloads/press\\_release\\_sumatra\\_road\\_map\\_launching\\_110520\\_10.pdf](http://awsassets.wwf.or.id/downloads/press_release_sumatra_road_map_launching_110520_10.pdf)
- <sup>15</sup> Joint Agreement of All Sumatra Governors to Save the Sumatra Island Ecosystem. <http://www.savesumatra.org/app/webroot/upload/pdf/Kesepakatan%20Gubernur%20Sumatera%2009%20n%20translation.pdf>
- <sup>16</sup> Sumatra: from extraction to conservation. Official Speech by Mrs. Hermien Roosita, Indonesia's Deputy Minister of Environment, at the 'Celebrating Sumatra' event held during the IUCN World Conservation Congress, in Barcelona, 10 October 2008. [http://www.savesumatra.org/app/webroot/upload/pdf/DeputyMinisterRemarks10Oct08\\_FINAL.pdf](http://www.savesumatra.org/app/webroot/upload/pdf/DeputyMinisterRemarks10Oct08_FINAL.pdf)
- <sup>17</sup> Sumatra: From extraction to conservation. Speech by Vice-Governor Marlis Rahman of West Sumatra, Indonesia, on behalf of all the 10 Governors of Sumatra at the "Celebrating Sumatra" event, IUCN World Conservation Congress, Barcelona, 10 October 2008. [http://www.savesumatra.org/app/webroot/upload/pdf/Remarks%20by%20West%20Sumatra%20Vice%20Governor\\_Final.pdf](http://www.savesumatra.org/app/webroot/upload/pdf/Remarks%20by%20West%20Sumatra%20Vice%20Governor_Final.pdf)
- <sup>18</sup> Based on field monitoring and extrapolation by WWF's tiger research team between 2009 and 2013.
- <sup>19</sup> WWF-Indonesia (9 May 2011) WWF captures Sumatran Tiger Triplets in forest under imminent threat of clearing. <http://www.wwf.or.id/index.cfm?uLangID=1&uNewsID=22341>
- <sup>20</sup> The following Landsat images were used: Landsat 5TM images of P127/R60 on 2 April 2000 and of P126/R61 on 13 May 2000, Landsat 7ETM images of P127/R60 on 19 June 2009 and of P126/R60 on 22 November 2009, of P127/R60 on 9 June 2010 and of P126/R61 on 18 June 2010, of P127/R60 on 27 April 2012 and of P126/R61 on 20 April 2012 and Landsat 8TM images of P127/R60 on 12 August 2013 and P126/R61 on 18 June 2013.

- <sup>21</sup> <http://news.detik.com/read/2013/11/18/203724/2416510/10/hutan-lindung-di-riau-disulap-jadi-kebun-sawit-bupati-dan-menhut-digugat?nd772205mr>, <http://www.goriau.com/berita/hukrim/kemenhut-tak-hadir-sidang-perambahan-hutan-lindung-ditunda.html>, <http://kuansingterkini.com/berita/detail/3437/2013/11/19/digugat-karena-dituding-babat-hutlin-bukit-batabuh,-pt-tbs-siapkan-pengacara#.Uw7M9LTN3b8>, <http://riauterkini.com/hukum.php?arr=66933>, <http://regional.kompas.com/read/2010/06/09/13203070/PT.BTS.Warga.Diminta.Bersabar>
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- <sup>23</sup> Interviews with some CPO mills.
- <sup>24</sup> 18-26%: <http://informasi-perkebunan.blogspot.com/2012/10/faktor-konversirendemen-pada-berbagai.html> 16-24%: Fauzi, Yan Ir. 2002. Kelapa Sawit, Budidaya, Pemanfaatan Hasil dan Limbah Analisa, Usaha dan Pemasaran. Edisi Revisi. Jakarta: Penebar Swadaya.
- <sup>25</sup> 20.8 million tonnes of CPO, according to Teoh, C. H. (2010) Key sustainability issues in the palm oil sector. A discussion paper for multi-stakeholders consultations. World Bank Group, Washington, DC. [http://siteresources.worldbank.org/INTINDONESIA/Resources/226271-1170911056314/Discussion.Paper\\_palmoil.pdf](http://siteresources.worldbank.org/INTINDONESIA/Resources/226271-1170911056314/Discussion.Paper_palmoil.pdf)
- <sup>26</sup> SK Group "Our Valued Customers" <http://www.skgroup.co.id/customers.php>, visited on 27 February 2014.
- <sup>27</sup> **Article 50 (3) (a) of Forestry Law 1999** (known as Undang-Undang No 41 Tahun 1999 Tentang Kehutanan) provides that no one is allowed to cultivate and/or use and/or occupy illegally a forest area.
- <sup>28</sup> **Article 1 (14) of Ministry of Forestry's Regulation No.50** (Peraturan Menteri Kehutanan RI No: P.50/Menhut-II/2009 tentang Penegasan Status Dan Fungsi Kawasan Hutan) states that Forest Estate Release Permit is a letter of authority confirming the release of forest area to be used for the development of transmigration, settlements, agriculture and plantations that has been established by the Ministry of Forestry.
- <sup>29</sup> **Article 28 (1) of Basic Agrarian Law 1960** (Undang-Undang No 5/1960) defined Hak Guna Usaha as the right to cultivate the land which is directly controlled by the State for a period of time as stipulated in Article 29 for enterprises in the field of agriculture, fishery or cattle breeding.
- <sup>30</sup> **Article 1 (10) of Ministry of Agriculture Decree No.26** (Peraturan Menteri Pertanian NOMOR:26/Permentan /OT.140/2/2007 tentang Pedoman Perizinan Usaha Perkebunan) defines Plantation Business License for Cultivation as a written permission from an authorized office and is a compulsory possession for plantation cultivation businesses. **Article 17 (5) of Plantation Law 2004** (Undang-Undang No. 18 Tahun 2004 tentang Perkebunan) states that the Plantation Business License should be given out by Governors and Mayors of the relevant regions/cities.
- <sup>31</sup> **Article 15 (g) of Ministry of Agriculture Decree No.26** (Peraturan Menteri Pertanian NOMOR:26/Permentan /OT.140/2/2007 tentang Pedoman Perizinan Usaha Perkebunan)
- <sup>32</sup> **Article 5(1) Ministry of Agriculture Decree No.26** (Peraturan Menteri Pertanian NOMOR: 26/Permentan/OT.140/2/2007 tentang Pedoman Perizinan Usaha Perkebunan) provides that the only necessary procedure for plantations less than 25 hectares is registration with the region government's office.
- <sup>33</sup> **Article 3(5) in Joint Decision of Ministry of Forestry and Ministry of Agriculture** (Keputusan Menteri Kehutanan Dan Perkebunan Nomor : 376/Kpts-II/1998) provides that forest area that can be released for the plantation of oil palms has to be a minimum of 10,000 hectares in size.
- <sup>34</sup> **Article 37(2) in Riau Regional Regulation Number 10 Year 1994 on Provincial Land Use Plan Year 1994** provides that everyone is under an obligatory legal duty to adhere with the determined spatial planning for the region.
- <sup>35</sup> Supra Note 11.