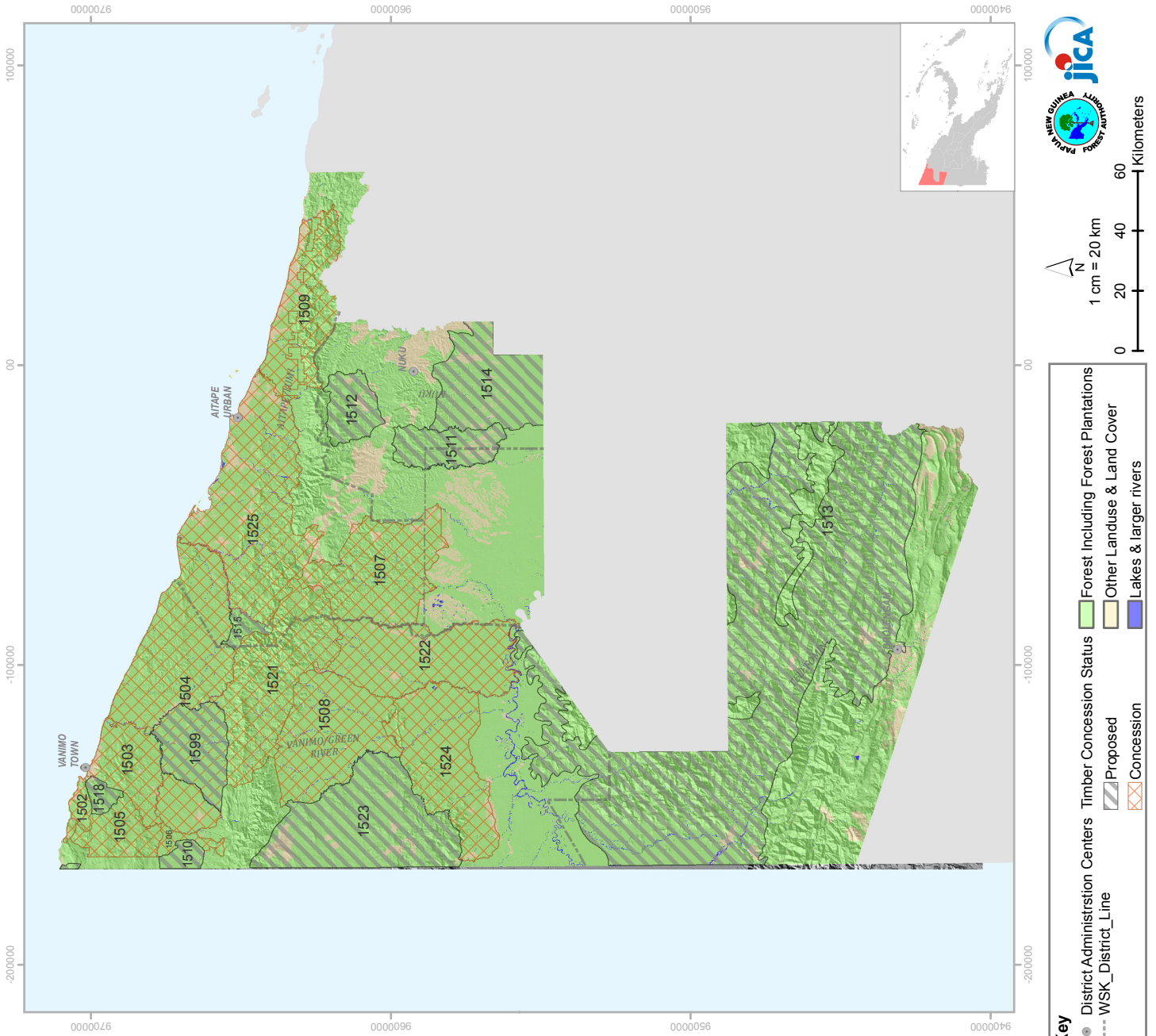


TIMBER CONCESSION MAP OF WEST SEPIK PROVINCE



Key

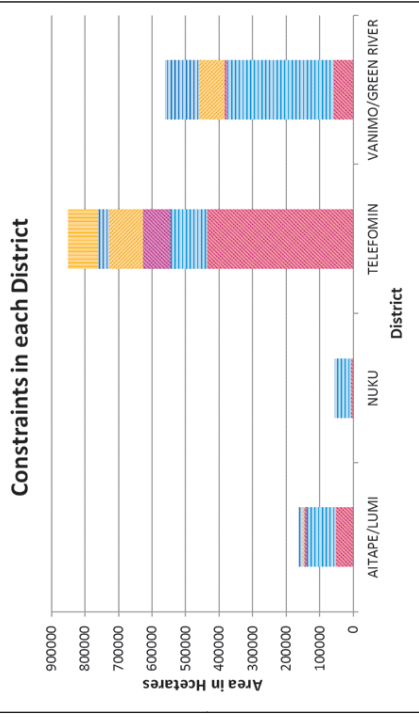
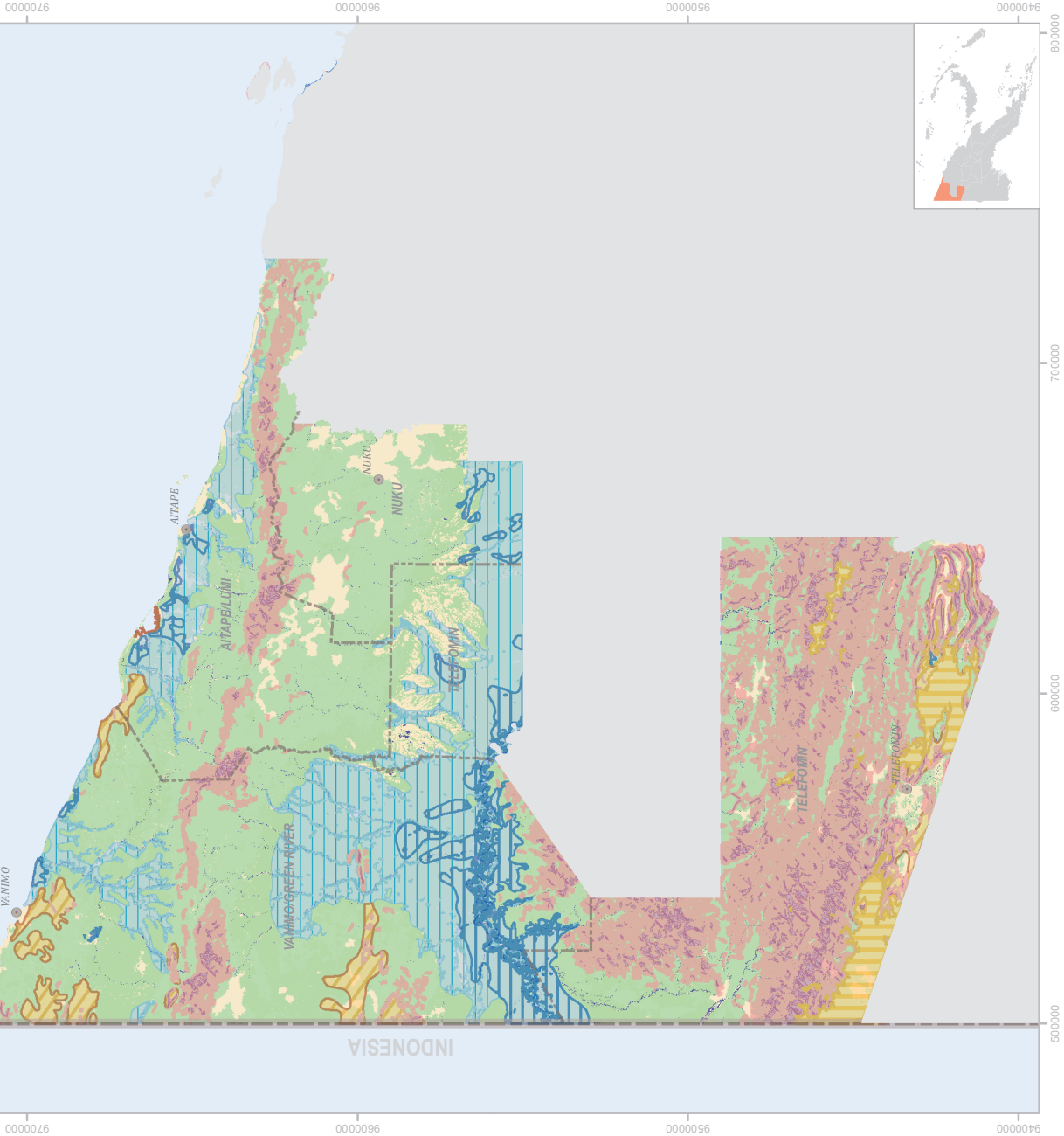
- District Administration Centers
- WSK_District_Line
- Forest Including Forest Plantations
- Other Landuse & Land Cover
- ▨ Proposed
- ▨ Concession
- Lakes & larger rivers

PLAN_ID	NAME	AREA (ha)	Concession Type	STATUS
1.509	Aitape East Coast	86,677.38	FMA	Concession
1.524	Amanab 1&2	126,567.36	FMA	Concession
1.522	Amanab 6	129,702.79	FMA	Concession
1.523	Amanab 7	167,474.14	FMA	Proposed
1.508	Amanab Block 3-4	120,449.30	FMA	Concession
1.521	Amanab5	137,717.94	FMA	Concession
1.510	Arko-Samei	10,702.96		Proposed
1.511	Au East West	43,494.32		Proposed
1.505	Bewani	39,097.26	LFA	Concession
1.512	east west pallai	34,703.16		Proposed
1.513	Idam Siawi	784,442.47		Proposed
1.514	Maimai Wanwan	100,506.74		Proposed
1.515	Make	10,198.03		Proposed
1.501	Musu Saberjin	1,805.29	TRP	Concession
1.506	Pegi Pular	9,605.98	LFA	Concession
1.517	Schotiacho	1,045.90		Proposed
1.518	Sossi	9,263.15		Proposed
1.507	South West Wapei	117,131.91	FMA	Concession
1.503	VANIMO BLK 6	54,147.50	TRP	Concession
1.504	Vanimo Block 1-5	239,310.53	TRP	Concession
1.599	Vanimo Block2	59,676.72		Proposed
1.502	Waromo	8,854.69	TRP	Concession
1.525	Wes Romei Tadjji	197,537.22	FMA	Concession

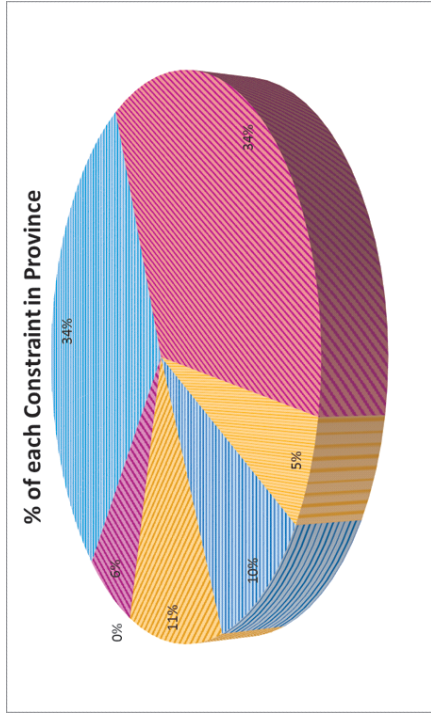
Table Showing Timber Concessions of West Sepik Province. Information updated as at 2016.

CONSTRAINTS TO COMMERCIAL TIMBER PRODUCTION, WEST SEPIK (SANDAUN) PROVINCE

Brief Report on Logging Constraints of West Sepik (Sandaun) Province



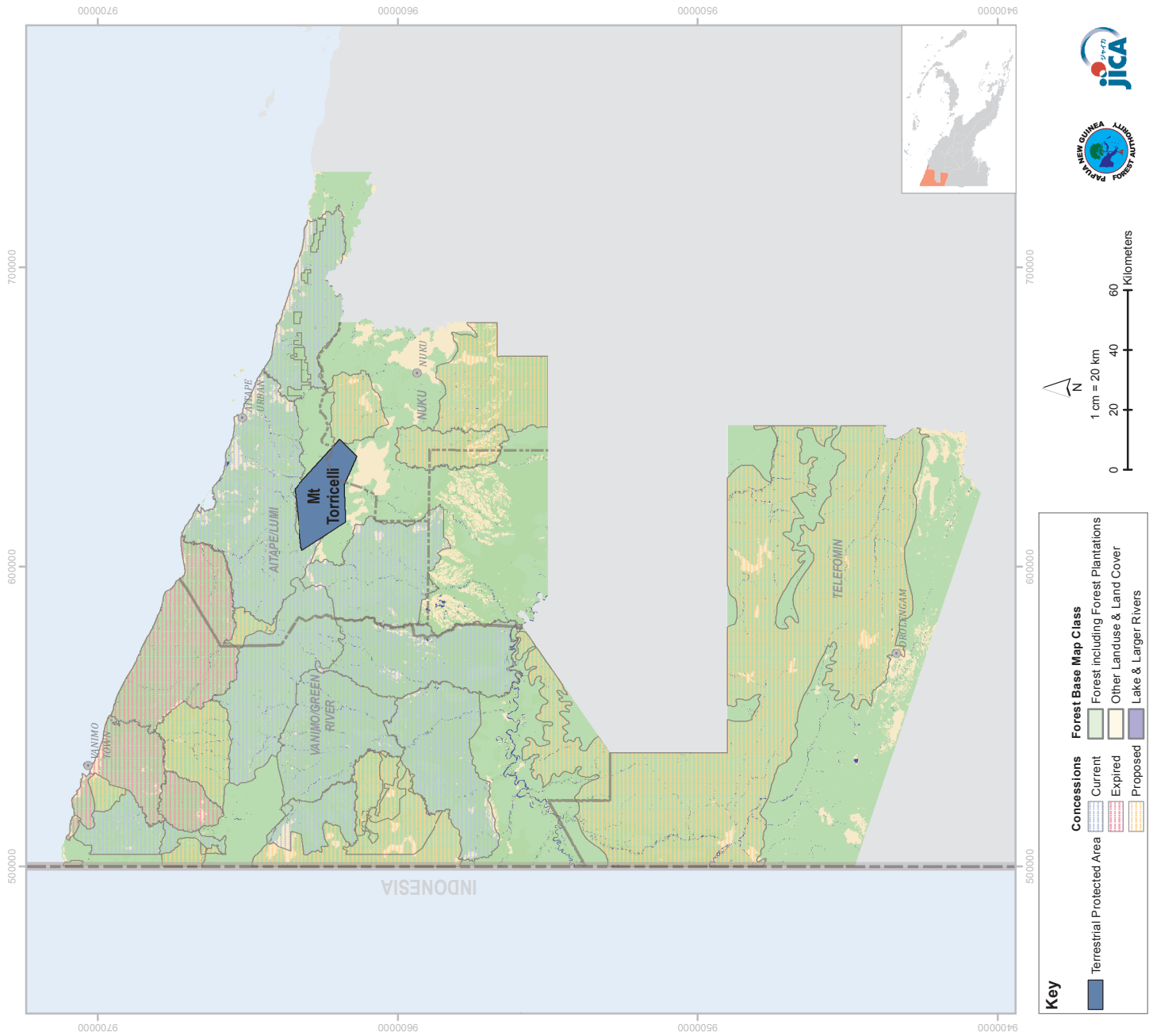
West Sepik (Sandaun) Province is located at the north-western part of Papua New Guinea. The majority of the constraints in the province are the 'Serious Slope' and 'Extreme Slope' areas, found in the Telefomin District, and the 'Serious Inundation' and 'Extreme Inundation' areas in the Vanimo-Green River, Aitape-Lumi, and Nuku Districts. There are some inclined areas in the mid-northern part of the province, as well as 'Extreme Altitude' constrained areas along the edges in the southern and northern parts of the province. In the Aitape-Lumi District along the coast, are some of the 'Mangrove' constrained areas.



TERRESTRIAL PROTECTED AREAS, WEST NEW SEPIK PROVINCE

Information on Terrestrial Protected Areas in West New Sepik Province

Name	Mt Torricelli Proposed Conservation Area
Protected Area ID	<NA>
Conservation Area Type	Conservation Area
Province	West Sepik
Location	Mt Torricelli
Area (ha)	43, 744
Longitude	142° 6' 48" E
Latitude	4° 36' 21" S



11. East Sepik Province



General information/Overview

1. Location

East Sepik Province is on the northwest of mainland of PNG and dominated by coastal plains and islands, the ranges in the northern part of the province, hill from the south and in the middle of the province is dominated by plains, floodplains, swamps and lakes of the Sepik River and its tributaries.

Provincial Administration Centre: Wewak

Land area: 4, 368, 599 ha

Population: 450, 530 (2011)

Number of District: 6 (Ambunti-Dreikikir, Angoram, Maprik, Wewak, Wosera-Gawi, Yangoru-Saussia)

Number of Local Level Governments (LLGs): 26 LLGs

2. Forest Information




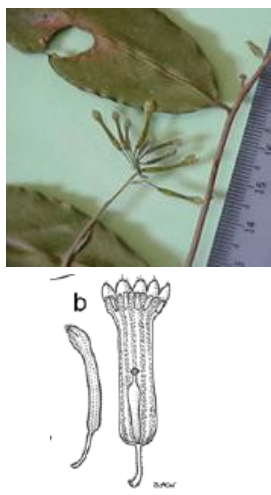

Forest Area: 2, 899, 490 ha

Provincial Tree

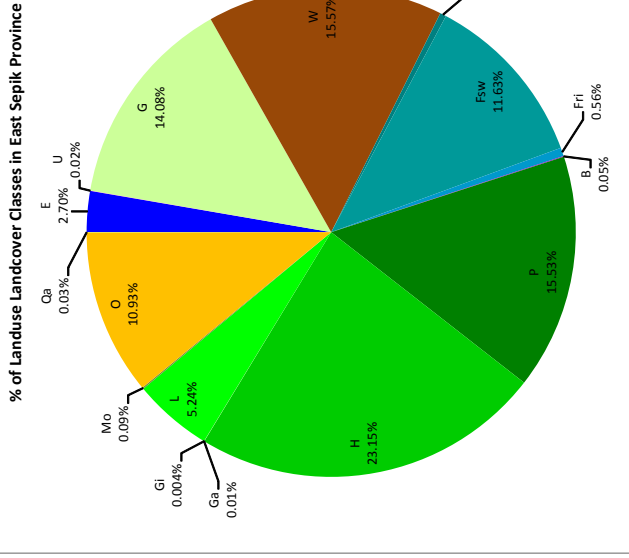
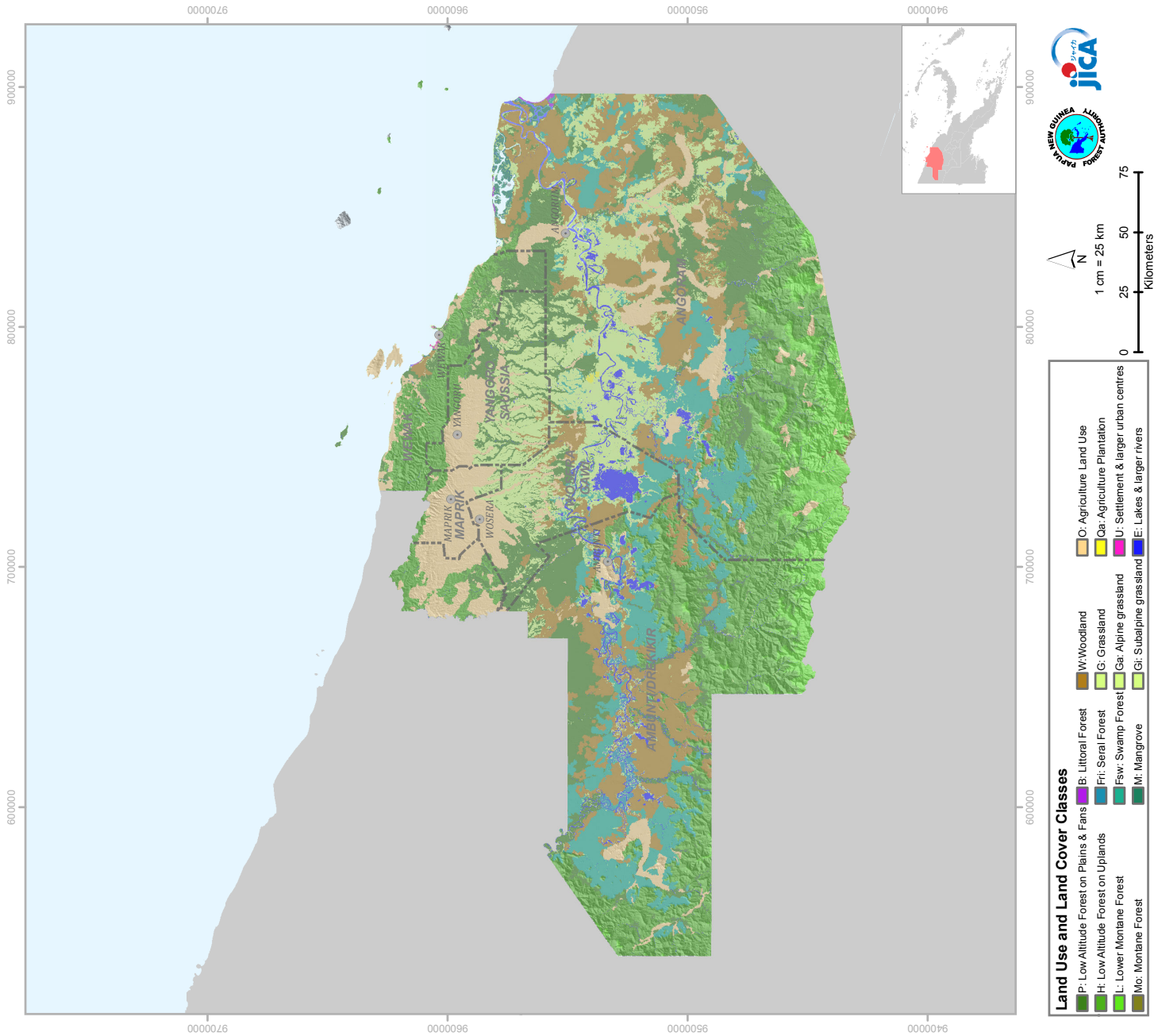
The provincial tree is 'Eaglewood' (scientifically known as *Gyrinops leddermanii*) and is commonly found in Low Altitude Forest on Plains and Fans, and Low Altitude Forest on Uplands.

Significance of Provincial tree:

It is a rare, valuable tree species and is highly sought for its resin that is used in the production of aromatic oils, perfumes, etc. Very little is known on its cultural values however, the local people are generating an income from selling the trunk and bark that are used to produce fragrance oil.

Scientific name: <i>Gyrinops leddermanii</i>	Family: <i>Thymelaeaceae</i>	Common Name/Trade name: <i>Eaglewood/agarwood/gaharu</i>
<p>Description</p> <p>A small sub-canopy tree with straight cylindrical bole. Outer bark slightly white or pale brown, slightly rough, peeling (papery) and inner bark pale brown, fibrous and pleasant aromatic from the bark. Leaf; spiral, simple, upper surface of leaf is dark green glossy and underneath is light green shiny in colour, stringy-thread like feature when leaf is snapped. Flowers small yellow or pale green trumpet-like (tubular). Fruit: green when immature, pale to yellowish green when mature, non-fleshy. Seeds: contains 1-2 black seeds.</p>		
Tree	Bark	Leaf/Leaves
 <p>Source: http://forestpathology.cfans.umn.edu/Papua%20New%20Guinea%20Agarwood%20Research.htm </p>	 <p>Source: http://www.pngplants.org/PNGtrees/TreeDescriptions/Gyrinops_ledermannii_Domke.html </p>	 <p>Photo source: EKaidong, Adaptation and Low Carbon Growth Officer, FPPD, HQ</p>
<p>Note:</p> <p>Short description was from the PNG Plant database website (link below)</p> <p>http://www.pngplants.org/PNGtrees/TreeDescriptions/Gyrinops_ledermannii_Domke.html</p> <p>b. Flower bud source: B. Gunn, et, al (2004) "Eaglewood in Papua New Guinea", RMAP Working Paper No. 51</p>	Flower	Fruit/Seed
		 <p>Source: http://www.pngplants.org/PNGtrees/TreeDescriptions/Gyrinops_ledermannii_Domke.html </p>

VEGETATION AND LAND COVER MAP OF EAST SEPIK PROVINCE (2012 FOREST BASEMAP VERSION 1.1)

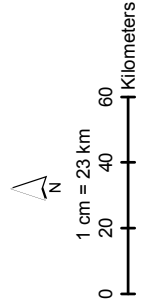
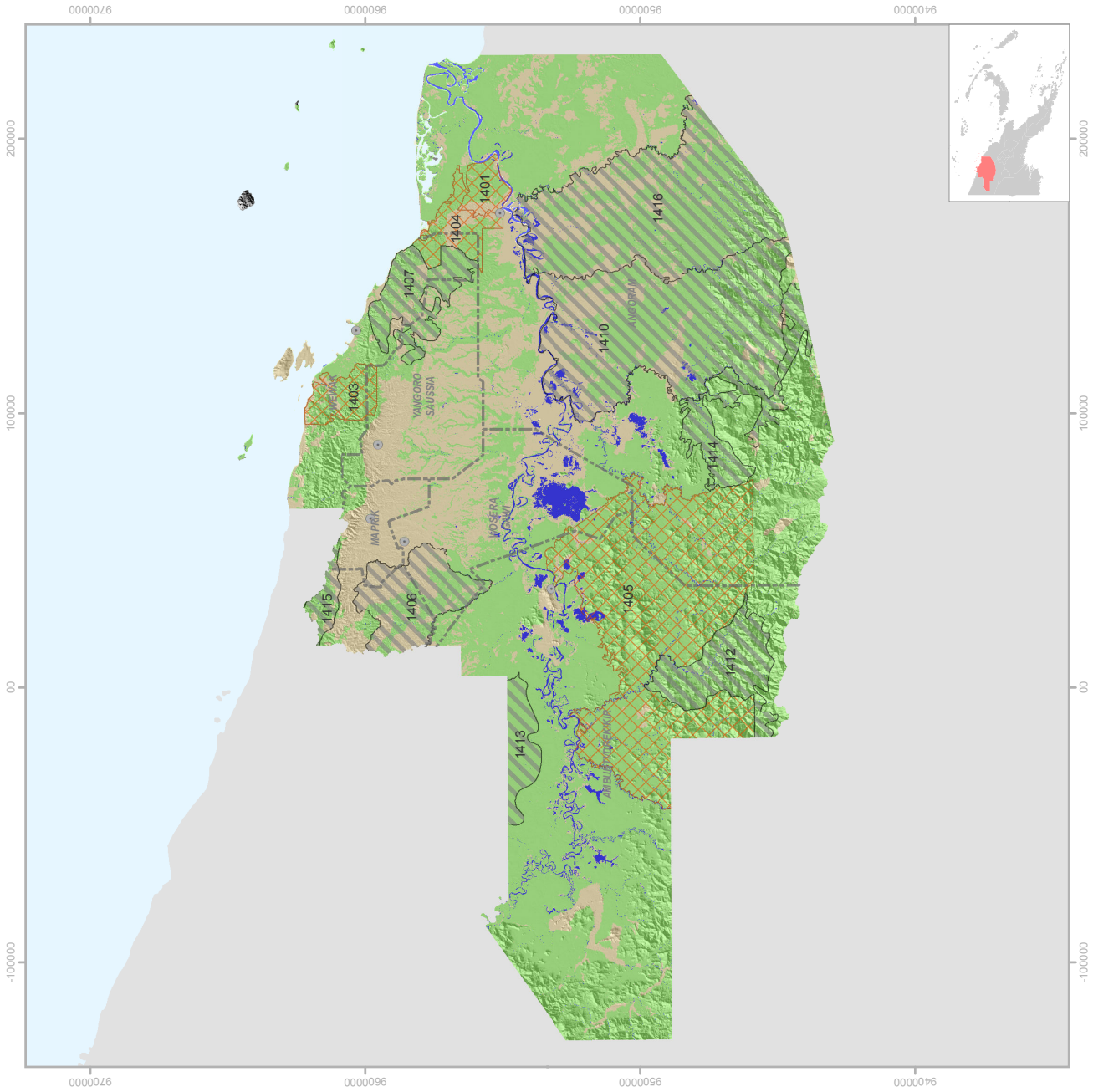


Pie Chart showing percentage in Landuse, Landcover of East Sepik Province.

Code	% of Landuse Landcover					Yangoro Saussia
	Ambunti Dreikirik	Angoram	Maprik	Wewak	Wosera Gawi	
P	13.40%	15.03%	1.52%	22.99%	19.05%	25.49%
H	33.36%	17.72%	11.52%	53.83%	1.71%	9.19%
L	3.69%	8.72%	0.05%	0.14%		0.004%
Mo		0.20%				
B		0.10%		0.07%		
Fri	1.54%	0.06%			0.05%	
Fsw	16.47%	11.80%			8.75%	
M		0.88%		0.08%		
W	18.08%	18.16%		1.88%	12.61%	1.89%
G	2.90%	17.57%	6.96%	3.30%	33.61%	39.54%
Ga	0.00%	0.02%				
Gi		0.01%				
O	7.74%	7.33%	79.94%	17.23%	15.20%	23.69%
Ca		0.06%			0.03%	
U				0.28%		
E	2.81%	2.34%	0.01%	0.20%	8.98%	0.20%
Land Area (ha)	1,492,785.61	1,989,989.56	84,650.56	225,628.69	314,167.77	259,466.57

Table showing percentage in Landuse, Landcover of Districts in East Sepik Province. Percentage calculated from area in hectares.

TIMBER CONCESSION MAP OF EAST SEPIK PROVINCE



Key

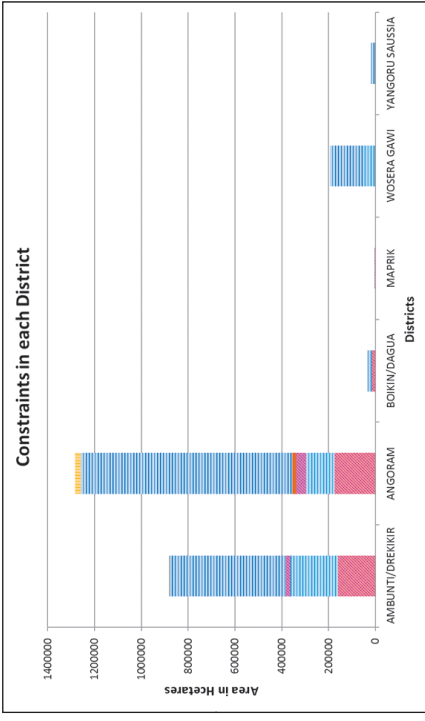
- District Administration Centers
- - - District Boundary
- Forest Including Forest Plantations
 - Proposed
 - Active
- Other Landuse & Land Cover
- Lakes & larger rivers

PLAN_ID	NAME	AREA (ha)	CONCESSION TYPE	STATUS
1403	Hawain	41,665.30	LFA	Concession
1404	Lower-Sepik	46,410.99	LFA	Concession
1405	April Salume	521,708.28	FMA	Concession
1401	Angoram	25,781.97	TRP	Concession
1410	Yuat Amboin	397,009.79		Proposed
1406	Nungwaia Bongos	110,522.77		Proposed
1416	Keram Yuat	364,875.26		Proposed
1413	Border (Nuku)	45,380.81		Proposed
1412	April River	99,142.68		Proposed
1414	Karawari	79,912.47		Proposed
1415	Wamsis East	21,597.89		Proposed
1407	Japaraka Urimo Sossoya	80,246.62		Proposed

Table showing Timber Concessions of East Sepik Province. Information updated as at 2016.

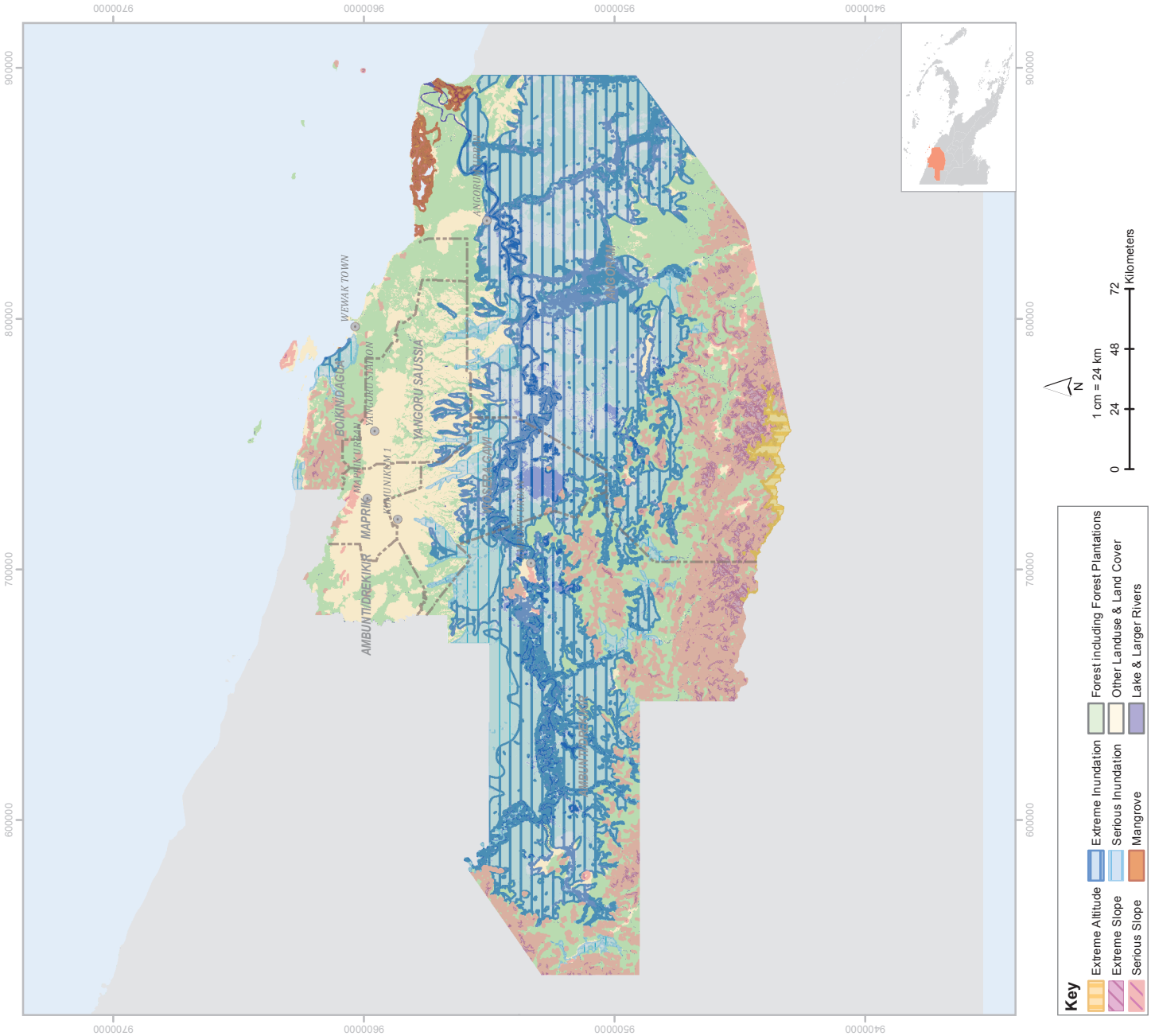
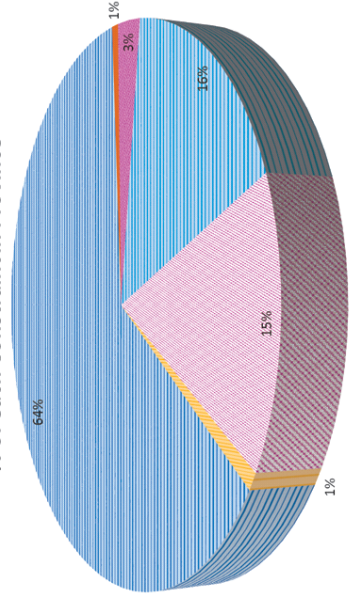
CONSTRAINTS TO COMMERCIAL TIMBER PRODUCTION, EAST SEPIK PROVINCE

Brief Report on Logging Constraints of East Sepik Province

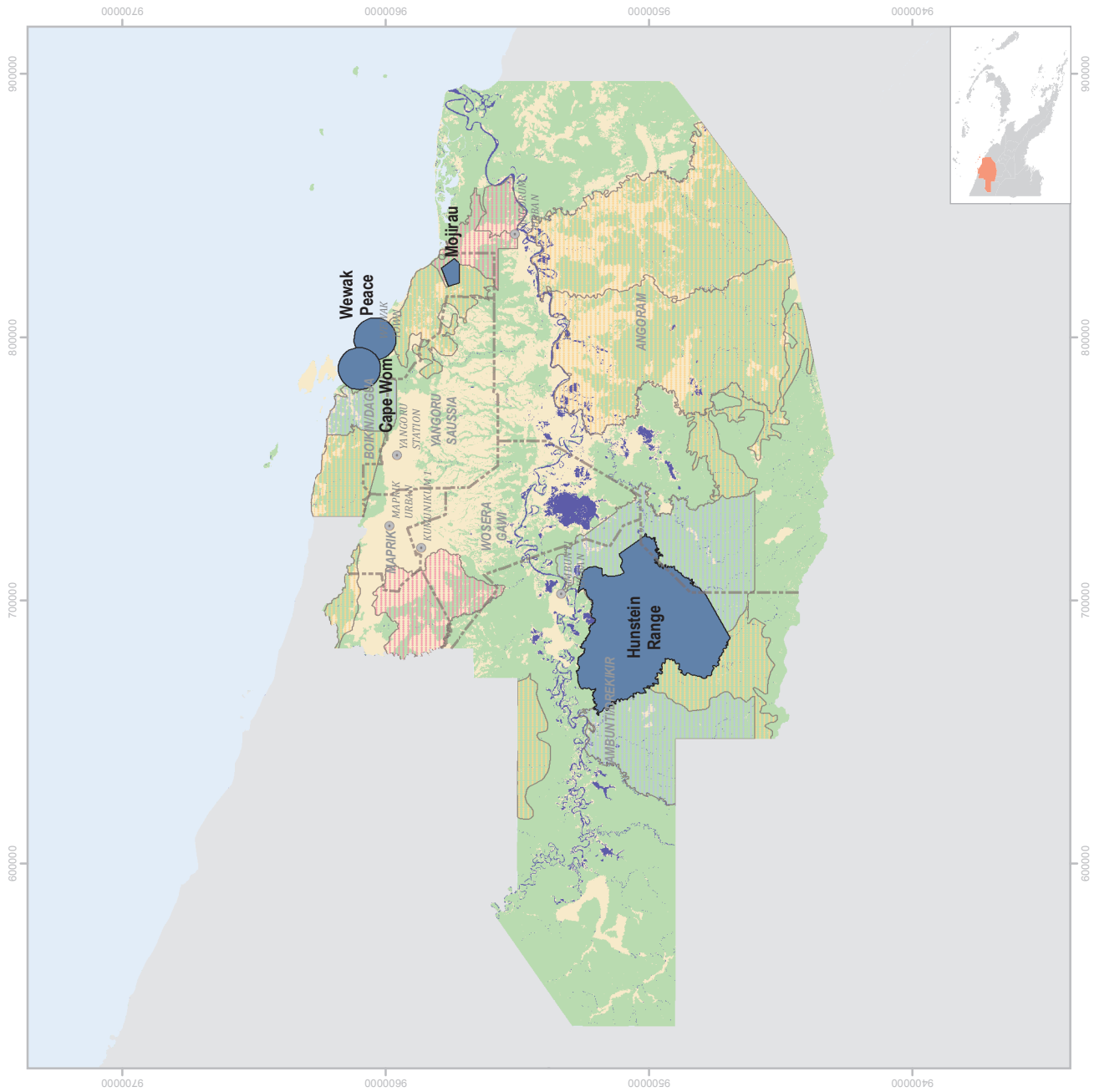


The predominant constraint found in East Sepik Province is the 'Serious Inundation' and the 'Extreme Inundation', which runs right through the centre of the province from the eastern side to the western side (from Angoram to Wosera-Gawi and then to Ambunti-Drekikir). The sloped and elevated constrained areas are mainly found along the southern part of the province (bordering with the Highlands Region) and also some small areas north of the province in the Boikin-Dagua District. The 'Mangrove' constrained areas can be found situated along the coastline in the Angoram District.

% of each Constraint in Province



TERRESTRIAL PROTECTED AREAS, EAST SEPIK PROVINCE



Key

	Terrestrial Protected Area		Concessions		Forest Base Map Class
	Current		Forest including Forest Plantations		
	Expired		Other Landuse & Land Cover		
	Proposed		Lake & Larger Rivers		

1 cm = 24 km

0 24 48 72 Kilometers



Information on Terrestrial Protected Areas in East Sepik Province

Name	Cape Wom Memorial Park
Protected Area ID	5
Protected Area Type	National Park
Province	East Sepik
Location	Cape Wom
Area (ha)	19, 933
Longitude	143° 35' 25" E
Latitude	4° 28' 34" S
Name	Hunstein Range WMA
Protected Area ID	10
Protected Area Type	Wildlife Management Area
Province	East Sepik
Location	Hunstein Range
Area (ha)	228, 270
Longitude	142° 42' 35" E
Latitude	5° 29' 39" S
Name	Mojirau WMA
Protected Area ID	26
Protected Area Type	Wildlife Management Area
Province	East Sepik
Location	Mojirau
Area (ha)	5, 330
Longitude	143° 55' 7" E
Latitude	4° 9' 37" S
Name	Wewak Peace Memorial Park
Protected Area ID	52
Protected Area Type	Memorial Park
Province	East Sepik
Location	Wewak Peace
Area (ha)	19, 928
Longitude	143° 41' 32" E
Latitude	4° 25' 23" S

12. Madang Province



General information/Overview

1. Location

Madang Province is located on the central north of the mainland of PNG and the landform is dominated by mountains ranges, floodplains, coastal limestone plains, hills and volcanic islands; Manam, Karkar and Long islands.

Provincial Administration Centre: Madang

Land area: 2, 890, 325 ha

Population: 493, 906 (2011)

Number of District: 6 (Bogia, Madang, Middle Ramu, Rai Coast, Sumkar, Usino Bundi)

Number of Local Level Governments (LLGs): 16 LLGs

2. Forest Information

Forest Area: 2, 118, 089 ha








Provincial Tree

The provincial tree is '*Kwila*' (scientifically known as *Intsia bijuga*) and is commonly found in Low Altitude Forest on Plains and Fans, Low Altitude Forest on Uplands.

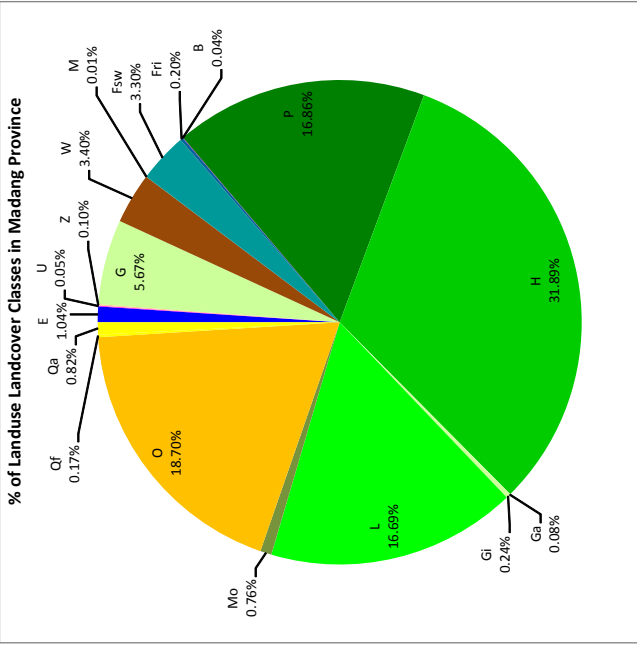
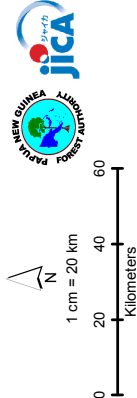
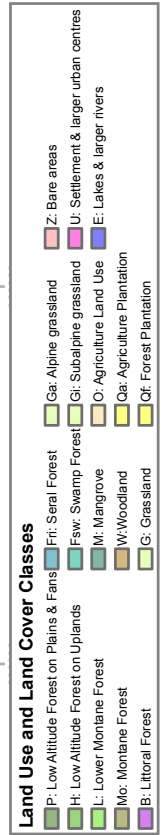
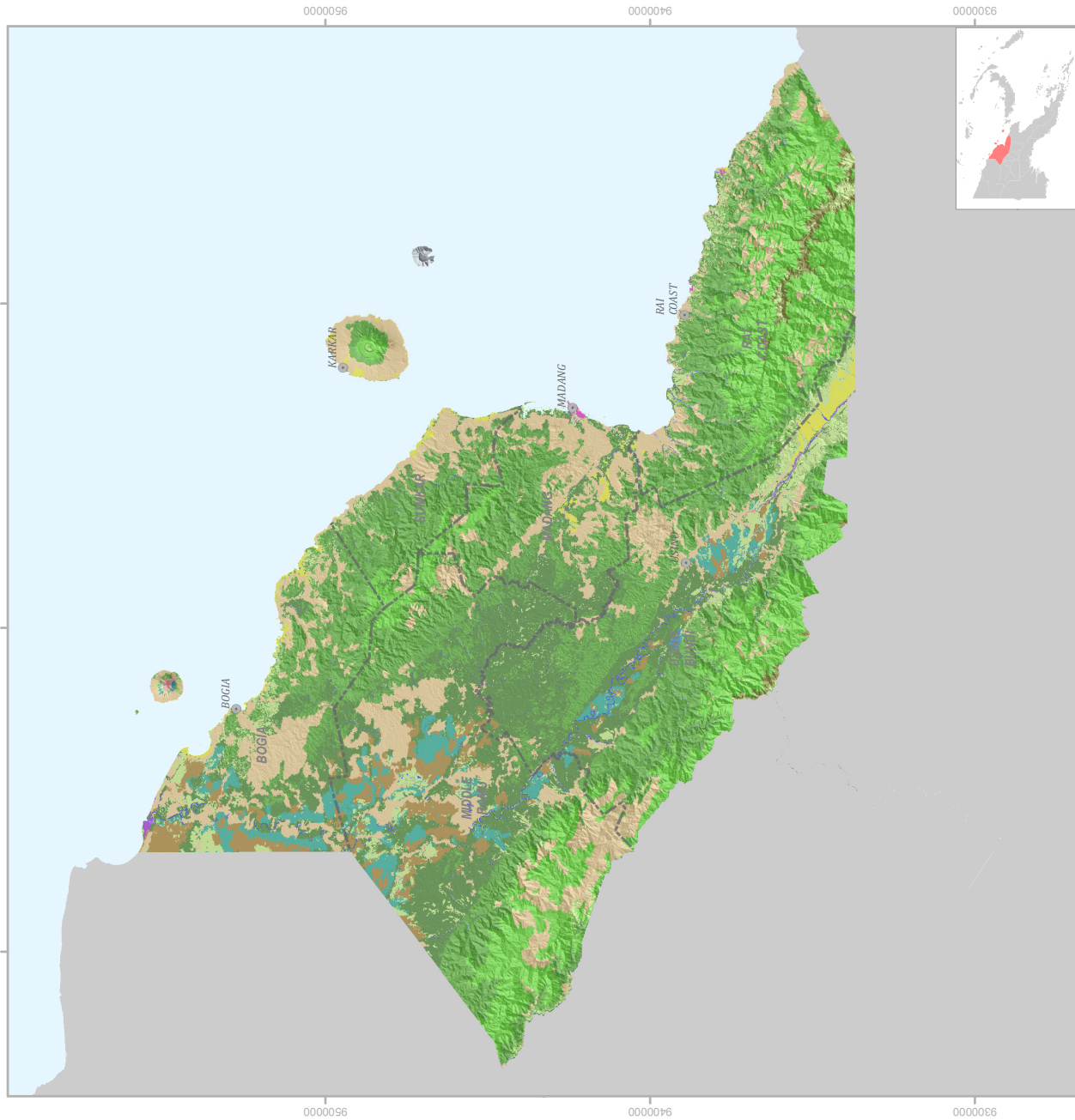
Significance of Provincial tree:

It is a hard wood species which is one of the major commercial species exported in round log form.

Kwila has a significant cultural value to the local people. During feasts or ceremonial occasions, food stuff is hung onto the prepared pole for exchange/distribution to the people within or from other villages/clans.

Scientific name: <i>Intsia bijuga</i>	Family: <i>Fabaceae</i>	Common Name/Trade name: <i>Kwila</i>
<p><u>Description</u></p> <p>A large canopy tree with straight cylindrical bole and buttress present, Outer bark slightly red or bluish grey brown with rough or smooth, scaly or flaky texture. Inner bark white, yellowish brown or green, with non-sticky colourless sap. Leaves: spirally, compound pinnate (two pairs of leaflets), opposite, upper surface dark glossy green and beneath pale green. Flower: small white, pink to reddish flowers. Fruit/Seed: a long green pod/legume (immature) containing 1 to 8 seeds which turns brown or black when it matures.</p>		
Tree	Bark	Leaf/Leaves
	 <p>Outer bark</p>  <p>Inner bark</p> <p>Photo source: KDamas, Senior Botanist, FRI, Lae, Morobe Province</p>	
<p>Note:</p> <p>Short description was from the PNG Plant database website (link below)</p> <p>http://www.pngplants.org/PNGtrees/TreeDescriptions/Intsia_bijuga_Kuntze.html</p> <p>Photo source (tree, leaves, flowers and fruit): EKaidong, Adaptation and Low Carbon Growth Officer, FPPD, HQ</p>	Flower	Fruit/Seed
	  <p>Source: http://www.fiapng.com/Nursery_techniques.pdf</p>	

VEGETATION AND LAND COVER MAP OF MADANG PROVINCE (2012 FOREST BASEMAP VERSION 1.1)



Pie Chart showing percentage in Landuse, Landcover of Madang Province.

Code	% of Landuse Landcover					Sumkar
	Bogia	Madang	Markham	Middle Ramu	Rai Coast	
P	18.27%	17.96%	1.84%	26.11%	1.64%	4.67%
H	27.18%	43.66%	13.66%	21.23%	34.14%	50.46%
L	0.98%	3.34%	50.22%	14.95%	38.55%	7.04%
Mo			3.95%		3.06%	
B	0.26%					
Fri	0.15%		0.26%		0.67%	
Fsw	7.34%			6.18%		
M		0.06%				
W	7.98%		0.41%	7.33%		
G	8.21%	2.37%	10.14%	4.83%	4.51%	1.48%
Ga			0.70%	0.0003%	0.37%	
Gi			2.24%		1.00%	
O	27.21%	30.21%	11.74%	18.62%	13.83%	33.46%
Qa	1.37%	1.61%	3.19%		0.07%	2.47%
Qf			0.18%		0.06%	0.11%
Z	0.37%		0.67%			
U		0.39%			0.05%	
E	0.66%	0.40%	0.80%	0.75%	2.02%	0.31%
Land Area (ha)	371,749.71	268,341.26	800,396.49	778,814.44	566,445.89	189,308.71

Table showing percentage in Landuse, Landcover of Districts in Madang Province. Percentage calculated from area in hectares.

TIMBER CONCESSION MAP OF MADANG PROVINCE

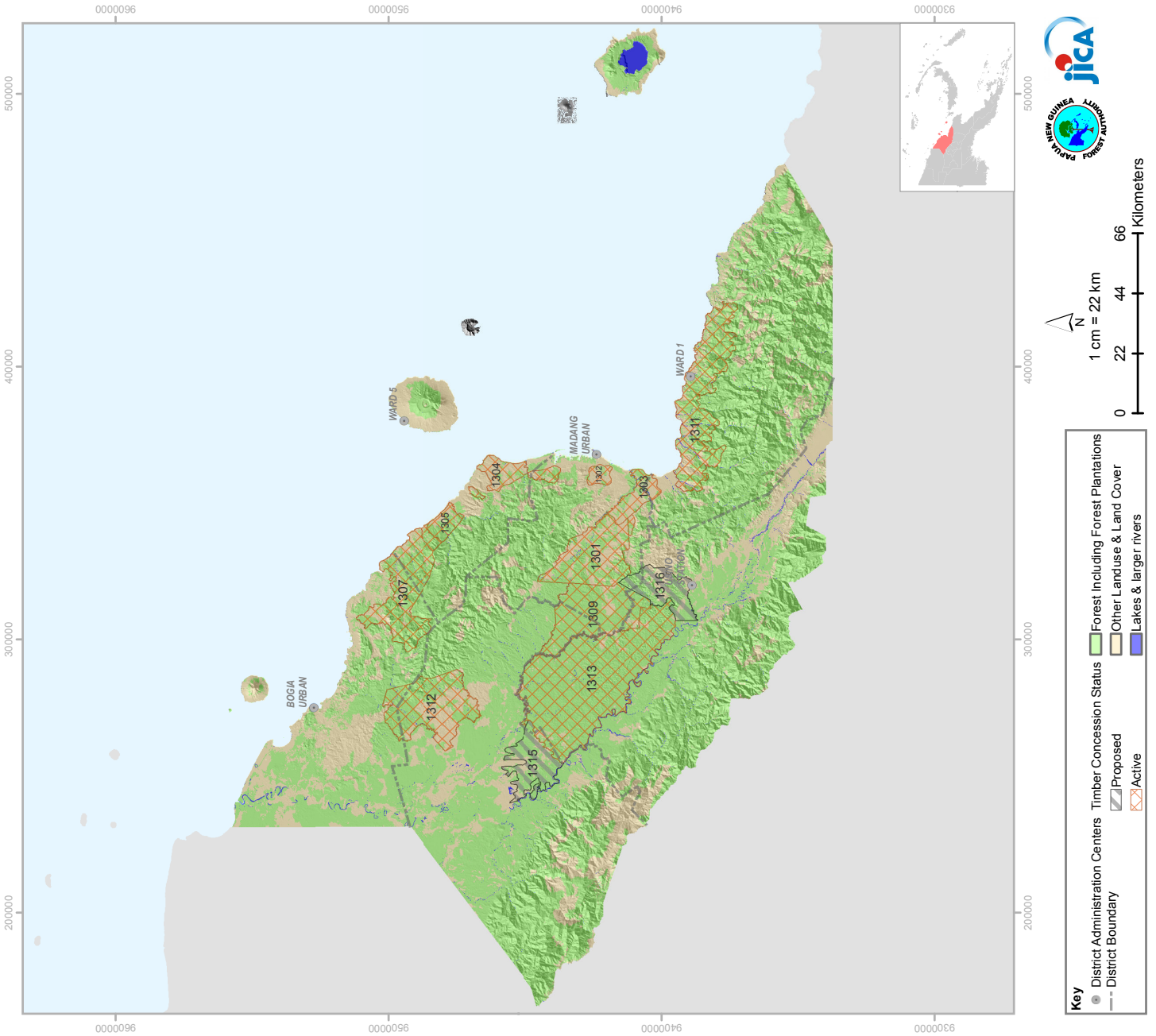
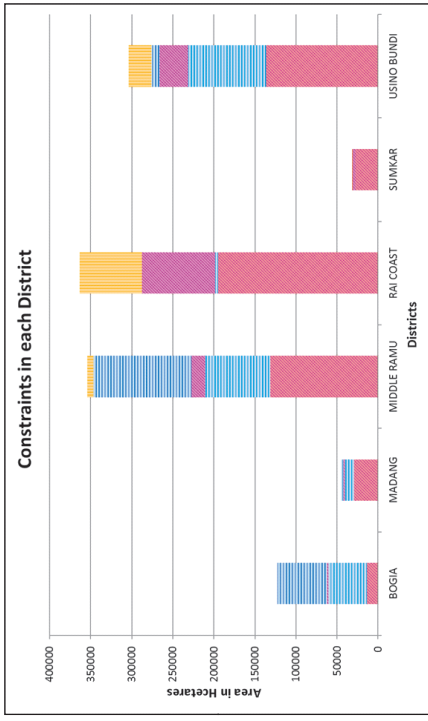


Table showing Timber Concessions of Madang Province.
Information updated as at 2016.

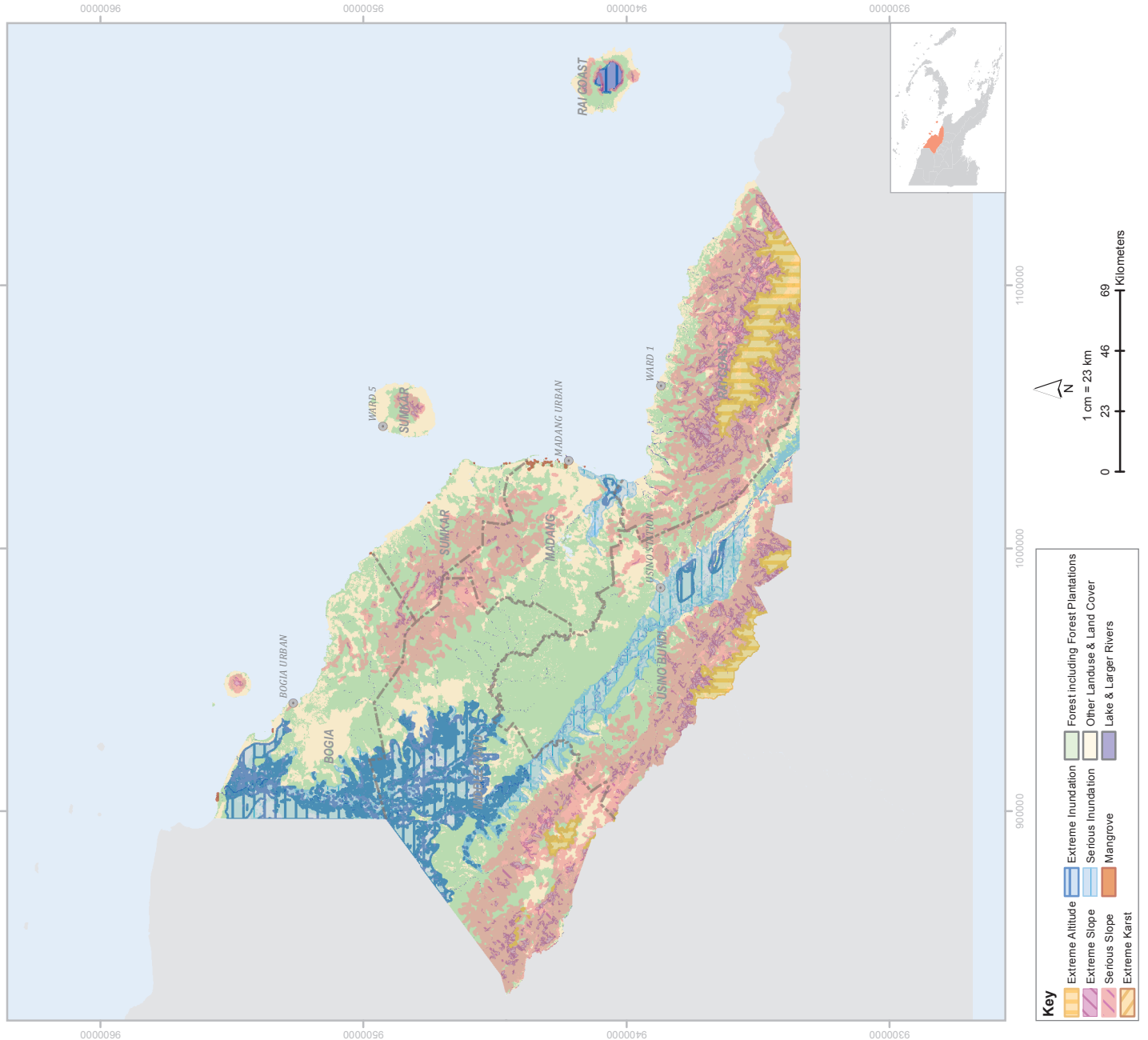
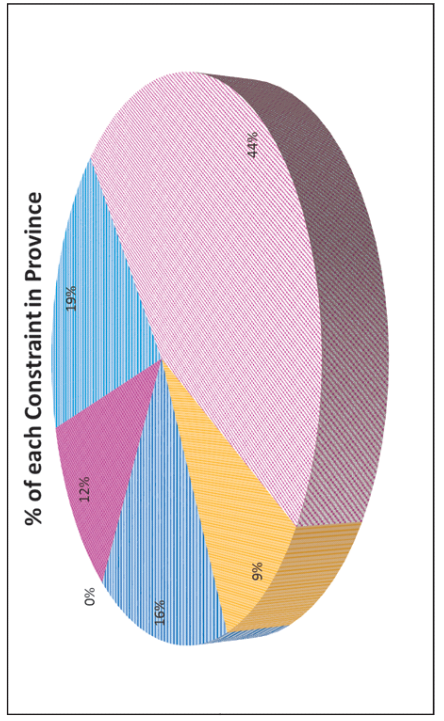
PLAN_ID	NAME	AREA (ha)	CONCESSION TYPE	STATUS
1309	Sogeram	59,675.14	TRP	Concession
1312	Josephstaal	62,083.56	FMA	Concession
1301	Gogol	52,845.85	TRP	Concession
1302	Gum	5,434.18	TRP	Concession
1308	Barum	1,422.07	TRP	Concession
1307	Kumil	56,797.54	TRP	Concession
1310	Far North Coast Blk 3	3,597.86	TRP	Concession
1303	Naru	16,113.81	TRP	Concession
1311	Rai Coast	75,745.97	TRP	Concession
1315	Middle Ramu Block 3	30,804.42	PFD	Proposed
1313	Middle Ramu Block 1	158,343.57	PFD	Concession
1316	Sogi Forest Area	28,729.69		Proposed
1305	Far North Coast	10,765.25	TRP	Concession
1304	North Coast	18,049.89	TRP	Concession

CONSTRAINTS TO COMMERCIAL TIMBER PRODUCTION, MADANG PROVINCE

Brief Report on Logging Constraints of Madang Province



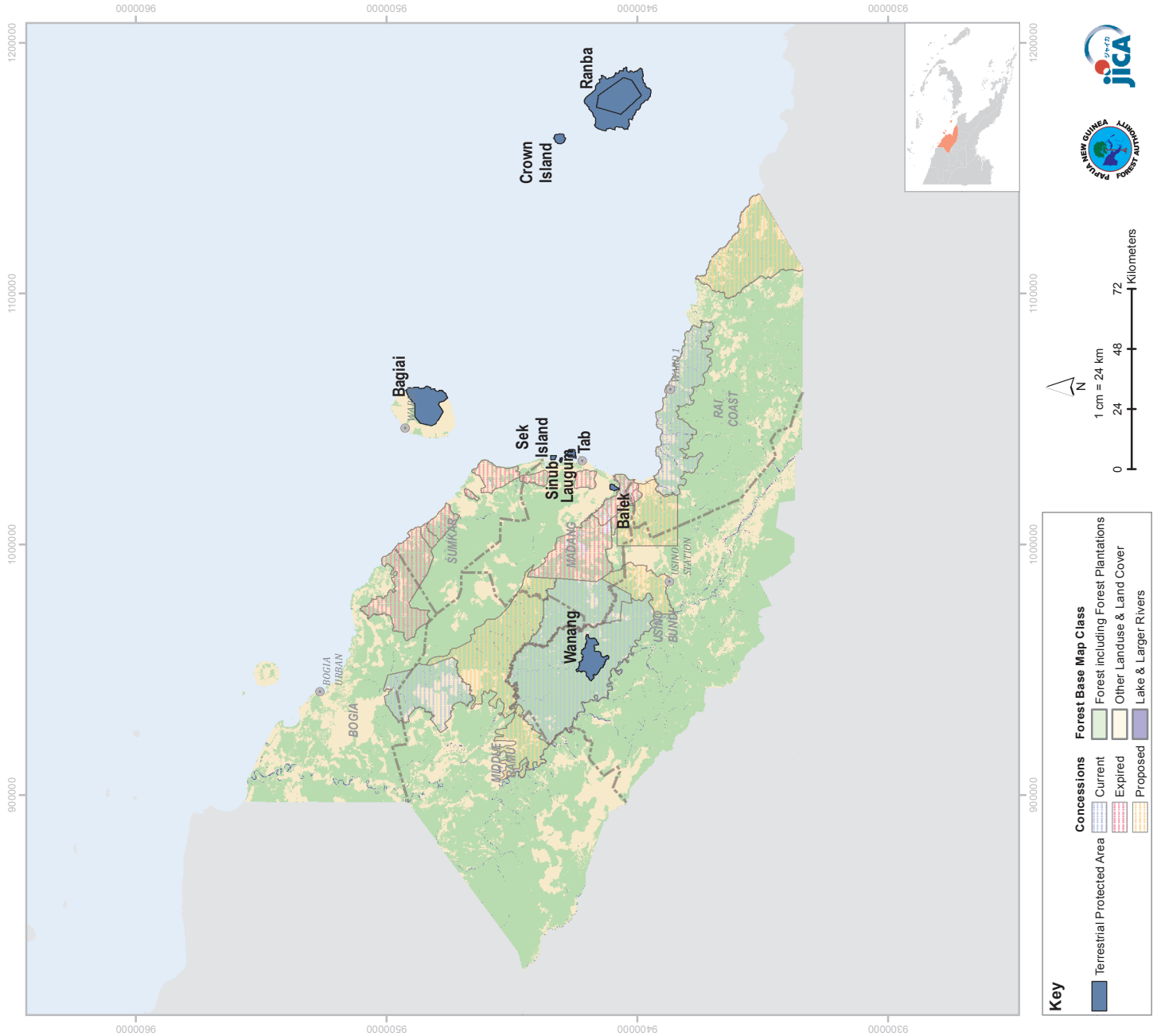
A lot of the 'Serious Slope' and 'Extreme Altitude' constrained areas in Madang Province are found towards the middle of the Island of New Guinea in the Rai Coast, Middle Ramu, and Usino Buni Districts. There are also a mountainous area ('Serious Slope') stretching over the Sumkar, Madang and Bogia districts in the mid-Northern part of the province. The inundated areas ('Serious Inundation' and 'Extreme Inundation') can be found along the base of the inclined areas in the Usino Buni and Middle Ramu Districts as well stretching up all the way into the Bogia District. This has left the geographical centre of the province to be generally free of these logging constraints.



TERRESTRIAL PROTECTED AREAS, MADANG PROVINCE

Information on Terrestrial Protected Areas in Madang Province

Name	Bagiai WMA	Ranba WMA
Protected Area ID	1	41
Protected Area Type	WMA	Wildlife Management Area
Province	Madang	Madang
Location	Bagiai	Ranba
Area (ha)	16, 885	25, 678
Longitude	146° 0' 12" E	147° 5' 42" E
Latitude	5° 20' 57" S	6° 40' 35" S
Name	Balek Wildlife Sanctuary	Sek Island
Protected Area ID	3	43
Protected Area Type	Wildlife Sanctuary	Wildlife Management Area
Province	Madang	Madang
Location	Balek	Sek Island
Area (ha)	575	300
Longitude	145° 42' 36" E	145° 48' 58" E
Latitude	6° 40' 36" S	6° 53' 40" S
Name	Crown Island Wildlife Sanctuary	Sinub
Protected Area ID	6	44
Protected Area Type	Wildlife Sanctuary	Wildlife Management Area
Province	Madang	Madang
Location	Crown Island	Sinub
Area (ha)	1365	17
Longitude	146° 57' 31" S	145° 48' 43" E
Latitude	6° 52' 52" E	6° 52' 5" S
Name	Laugum	Tab
Protected Area ID	20	46
Protected Area Type	Wildlife Management Area	Wildlife Management Area
Province	Madang	Madang
Location	Laugum	Tab
Area (ha)	87	1, 005
Longitude	145° 48' 17" E	145° 49' 47" E
Latitude	6° 52' 2" S	6° 49' 44" S
Name	Ranba Wildlife Sanctuary	Wanang Proposed Protected Areas
Protected Area ID	40	<NA>
Protected Area Type	Wildlife Sanctuary	Protected Area
Province	Madang	Madang
Location	Ranba	Wanang
Area (ha)	15, 701	10, 657
Longitude	147° 6' 36" E	145° 5' 36" E
Latitude	6° 40' 12" S	6° 45' 4" S



13. Morobe Province



General information/Overview

1. Location

Morobe Province lies in the central north of mainland PNG and is dominated by mountains, valleys, coastal plains. The Markham Valley runs in the middle of the province and the border of Madang Province.

Provincial Administration Centre: Lae

Land area: 3, 368, 621 ha

Population: 674, 810 (2011)

Number of District: 9 (Bulolo, Finschhafen, Huon, Kabwum, Lae, Markham, Menyamya, Nawae, Tewae-Siassi)

Number of Local Level Governments (LLGs): 33 LLGs

2. Forest Information

Forest Area: 2, 458, 844 ha



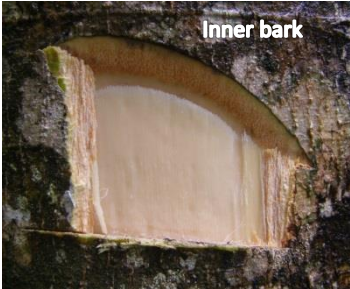



Provincial Tree

The provincial tree is 'Mersawa' (scientifically known as *Anisoptera thurifera*) and is commonly found in Low Altitude Forest on Plains and Fans, and Low Altitude Forest on Uplands.

Significance of Provincial tree:

It is a hard wood species which is one of the major commercial species exported in round log form.

The local people use it mostly for building homes, fences and gather grubs in dead mersawa logs.

Scientific name: <i>Anisoptera thurifera</i>	Family: <i>Dipterocarpaceae</i>	Common Name/Trade name: <i>PNG Mersawa</i>
<p>Description</p> <p>A large canopy tree with straight cylindrical bole and has a low buttress. Bark Outer bark is white or grey with rough, scaly or slightly flaky texture. Leaves: spiral, simple, upper surface dark green (glossy) and under surface green or pale brown. Flowers: small white flowers with distinct sepals and petals. Fruit/Seed: pale brown, non-fleshy, nut (with 2 sepal-forming long wings) and containing a single seed.</p>		
Tree	Bark	Leaf/Leaves
 <p>Source: http://www.phytoimages.siu.edu//users/pelserpb/1_16_18/16Jan18/Anisopterathurifera3.jpg </p>	 <p>Outer bark</p>  <p>Inner bark</p> <p>Photo source: KDamas, Senior Botanist, FRI, Lae, Morobe Province</p>	 <p>Source: http://www.pngplants.org/PNGtrees/TreeDescriptions/Anisoptera_thurifera_Blume.html </p>
<p>Note:</p> <p>Short description was from the PNG Plant database website (link below)</p> <p>http://www.pngplants.org/PNGtrees/TreeDescriptions/Anisoptera_thurifera_Blume.html</p> <p>Source (flower): http://tropical.theferns.info/plantimages/9/5/957138ff2c56bbd81b59917d9c1c6adef99b3a7f.jpg </p>	Flower	Fruit/Seed
		 <p>Source: http://www.phytoimages.siu.edu/imgs/pelserpb/r/Dipterocarpaceae_Anisoptera_thurifera_86652.html </p>

VEGETATION AND LAND COVER MAP OF MOROBE PROVINCE (2012 FOREST BASEMAP VERSION 1.1)

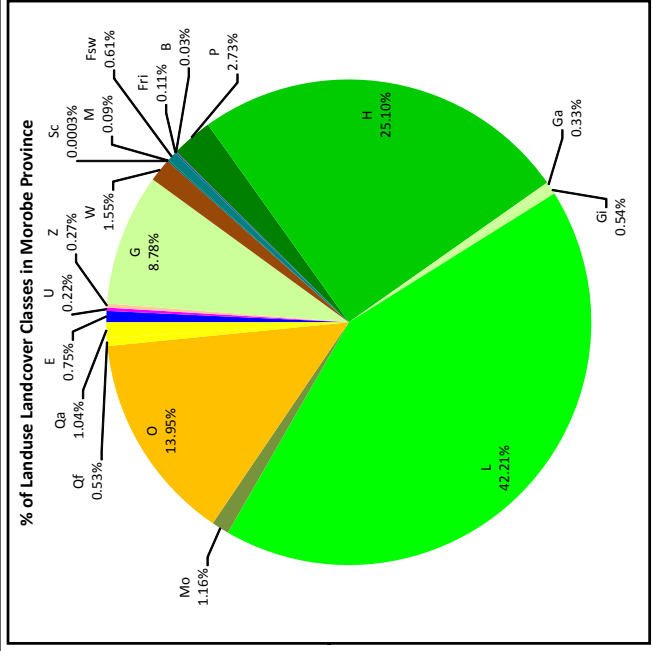


Land Use and Land Cover Classes

- P: Low Altitude Forest on Plains & Fans
- H: Low Altitude Forest on Uplands
- L: Lower Montane Forest
- Mo: Montane Forest
- B: Littoral Forest
- Fri: Serai Forest
- Fsw: Swamp Forest
- Mt: Mangrove
- W: Woodland
- Sc: Scrub
- G: Grassland
- Ga: Alpine grassland
- Gi: Subalpine grassland
- O: Agriculture Land Use
- Qa: Agriculture Plantation
- Qf: Forest Plantation
- Z: Bare areas
- U: Settlement & larger urban centres
- E: Lakes & larger rivers

NEW GUINEA
PAPUA NEW GUINEA
WESTERN PROVINCE

1 cm = 20 km
 0 20 40 60
 Kilometers

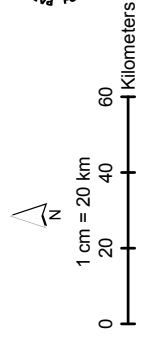


Pie Chart showing percentage in Landuse, Landcover of Morobe Province.

Code	% of Landuse Landcover							
	Bulolo	Finchafen	Huon	Lae	Menyamya	Nawae	Tawae Siassi	
P	0.50%	1.74%	5.46%	2.74%		3.31%	10.40%	
H	17.49%	39.43%	44.79%	25.11%	14.81%	30.71%	40.83%	
L	66.15%	32.75%	9.88%	42.21%	50.08%	36.77%	12.08%	
Mo	0.48%	0.89%	0.19%	1.16%	0.19%	0.18%		
B			0.19%	0.03%				
Fri			0.29%	0.11%			0.50%	
Fsw	0.01%		3.41%	0.61%			0.38%	
M		0.01%	0.31%	0.09%				
W	0.02%		8.65%	1.55%				
Sc			0.002%	0.0004%				
G	6.74%	1.43%	12.32%	8.79%	7.87%	7.41%	13.20%	
Ga	0.57%	0.06%	0.33%	0.33%	0.01%	0.06%		
Gi	0.01%	0.03%	0.54%	0.02%				
O	5.74%	23.22%	10.84%	13.95%	26.80%	20.13%	22.31%	
Qa	0.02%		1.42%	1.04%		0.53%	0.01%	
Qf	1.80%		0.09%	0.26%		0.04%		
Z			0.51%	0.22%				
U	0.11%		0.18%	0.22%	0.01%			
E	0.35%	0.45%	1.65%	0.75%	0.19%	0.86%	0.30%	
Land Area (ha)	875,487.60	241,097.18	560,941.20	3,368,653.40	367,147.36	249,837.00	254,956.20	

Table showing percentage in Landuse, Landcover of Districts in Morobe Province. Percentage calculated from area in hectares.

TIMBER CONCESSION MAP OF MOROBE PROVINCE



Key

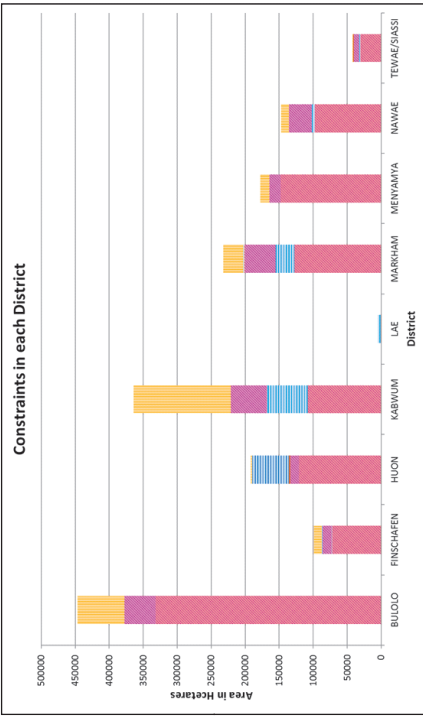
- District Administration Centers
- ▭ Forest Including Forest Plantations
- ▭ Other Landuse & Land Cover
- ▭ Proposed
- ▭ Active
- ▭ District Boundary
- ▭ Lakes & larger rivers

PLAN_ID	NAME	AREA (ha)	CONCESSION		STATUS
			TYPE		
1213	Watut West	33273.49	TRP		Concession
1204	Wau Area 4, Block A	13460.87	TRP		Concession
1211	Oomsis Block 10A	2725.97	TRP		Concession
1201	Oomsis Block 2	3654.32	TRP		Concession
1203	Were Were	2767.75	TRP		Concession
1209	Morobe Coast	169028.24			Proposed
1207	Umboi Block 3 (KAIMANGA)	32033.39	TRP		Concession
1206	Umboi Block 2 (KOWAI)	15985.53	TRP		Concession
1205	Umboi Block 1 (BUNSIL)	9412.62	TRP		Concession
1214	MONGI BUSIGA	52786.71	FMA		Concession
1215	BUHEM MONGI	37545.01	FMA		Concession
1218	Lake Trist	37106.19	PFD		Proposed
1219	Salamaua	33157.33	PFD		Proposed
1220	Wampit A&B	6394.06	PFD		Proposed
1221	Maziye/Dzia	49467.88			Proposed
1296	Bunsi-Awom	1878.91			Proposed
1226	Watut Ongawafa	60556.31	FMA		Concession
1229	Watut West Extension	14802.59			Proposed
1228	Yagoman Timber Area	38001.62			Proposed
1227	Borong Timber Area	17999.88			Proposed
1231	Timbe-Kwama Forest Area	109951.77			Proposed
1232	Kwama-Masaweng Forest Area	95967.03			Proposed

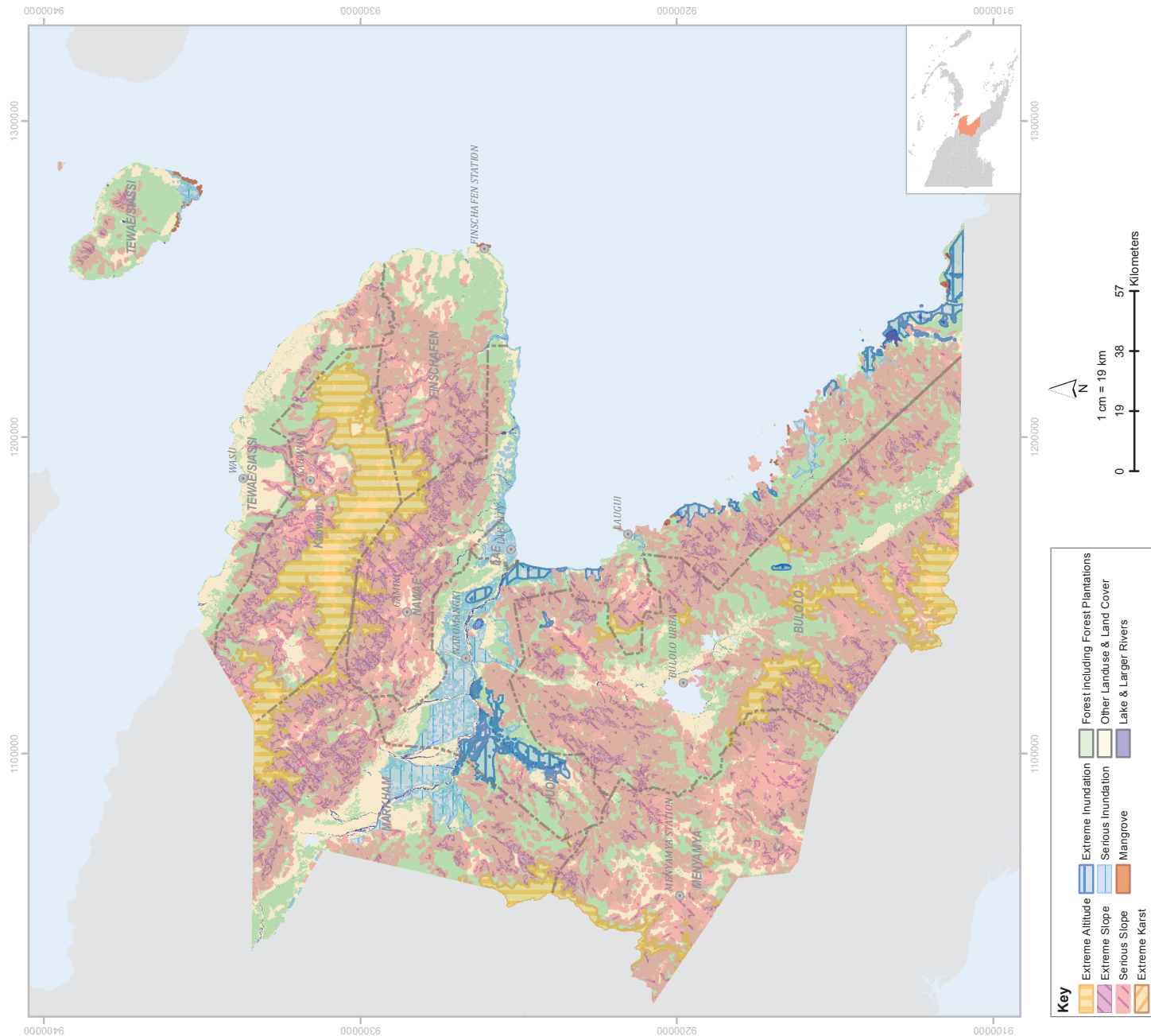
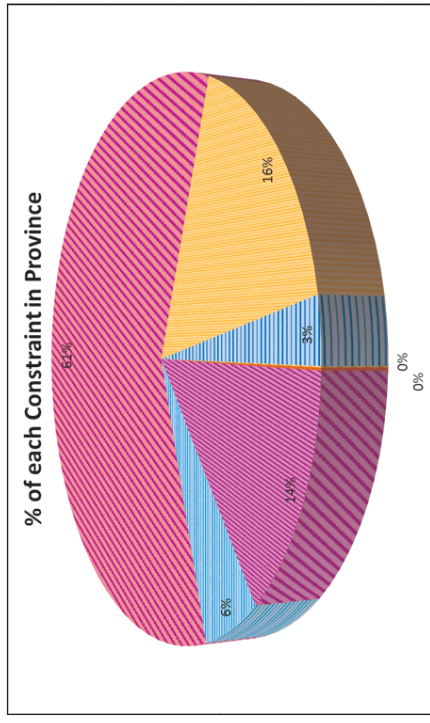
Table showing Timber Concessions of Morobe Province. Information updated as at 2016.

CONSTRAINTS TO COMMERCIAL TIMBER PRODUCTION, MOROBE PROVINCE

Brief Report on Logging Constraints of Morobe Province



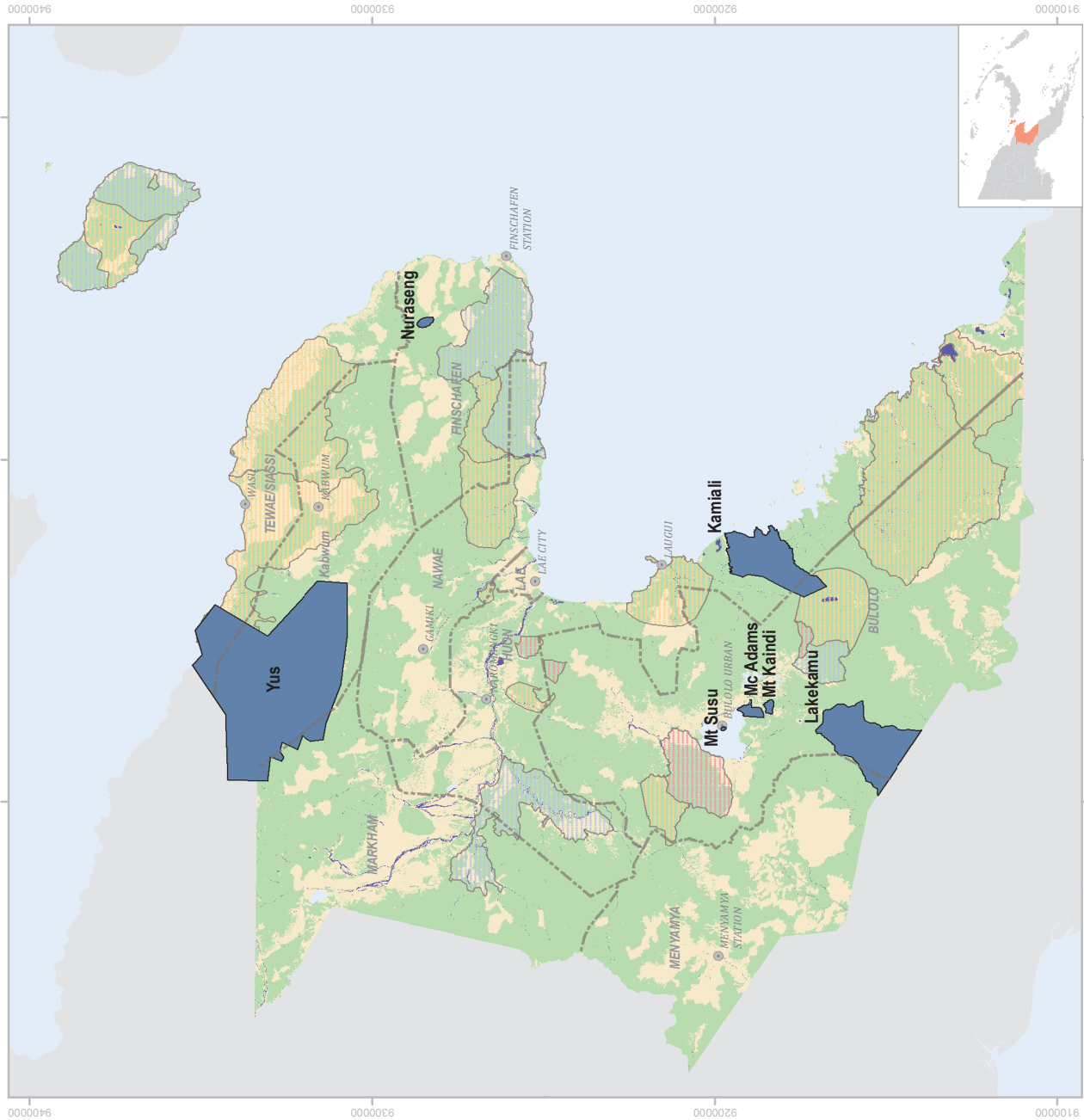
In Morobe, more than half of the total constraint area are classified as 'Serious Slope' which is dispersed across the provincial land mass, with the majority found in the Bulolo District. The 'Extreme Altitude', 'Extreme Slope', 'Serious Inundation' and 'Extreme Inundation' account for the remaining percentage of constraints. The 'Mangrove' and 'Karst' constraints make up less than 1% of the total constraints in the province. Lae District, being an urban area, does not have any of the constraints, except for 'Serious Inundation', which is also predominantly found in the Huon, Kabwum and Markham Districts. The areas of 'Extreme Altitude' are mostly found in the Bulolo and Kabwum Districts.



TERRESTRIAL PROTECTED AREAS, MOROBE PROVINCE

Information on Terrestrial Protected Areas in Morobe Province

Name	Kamiali WMA
Protected Area ID	13
Protected Area Type	Wildlife Management Area
Province	Morobe
Location	Kamiali
Area (ha)	30, 148
Longitude	147° 3' 38" E
Latitude	8° 39' 37" S
Name	Lakekamu Proposed CA
Protected Area ID	<NA>
Protected Area Type	Conservation Area
Province	Morobe
Location	Lakekamu
Area (ha)	37121
Longitude	146° 35' 17" E
Latitude	8° 23' 52" S
Name	Mc Adams National Park
Protected Area ID	24
Protected Area Type	National Park
Province	Morobe
Location	Mc Adams
Area (ha)	2, 106
Longitude	146° 40' 0" E
Latitude	8° 42' 10" S
Name	Mt Kaindi WMA
Protected Area ID	28
Protected Area Type	Wildlife Management Area
Province	Morobe
Location	Mt Kaindi
Area (ha)	861
Longitude	146° 40' 42" E
Latitude	8° 39' 15" S
Name	Mt Susu National Reserve Park
Protected Area ID	29
Protected Area Type	National Park
Province	Morobe
Location	Mt Susu
Area (ha)	118
Longitude	146° 37' 8" E
Latitude	8° 46' 36" S
Name	Nuraseng WMA
Protected Area ID	35
Protected Area Type	Wildlife Management Area
Province	Morobe
Location	Nuraseng
Area (ha)	1, 019
Longitude	147° 40' 38" E
Latitude	7° 34' 20" S
Name	Yus CA
Protected Area ID	56
Protected Area Type	Conservation Area
Province	Morobe
Location	Yus
Area (ha)	163, 941
Longitude	146° 44' 28" E
Latitude	7° 57' 20" S



Key

	Terrestrial Protected Area		Forest Base Map Class
	Current		Forest including Forest Plantations
	Expired		Other Landuse & Land Cover
	Proposed		Lake & Larger Rivers

1 cm = 19 km
0 19 38 57
Kilometers



14. West New Britain Province



General information/Overview

1. Location

West New Britain Province is approximately located about 150km north-east of mainland PNG and is on the western half of the New Britain Island.

Provincial Administration Centre: Kimbe

Land area: 2, 034, 000 ha

Population: 264, 264 (2011)

Number of District: 2 (Talasea, Kandrian/Gloucester)

Number of Local Level Governments (LLGs): 11 LLGs

2. Forest Information

Forest Area: 1, 710, 512 ha







Provincial Tree

The provincial tree is 'Malas' (scientifically known as *Homalium foetidum*) and is commonly found in Low Altitude Forest on Plains and Fans, and in Low Altitude Forest on Uplands.

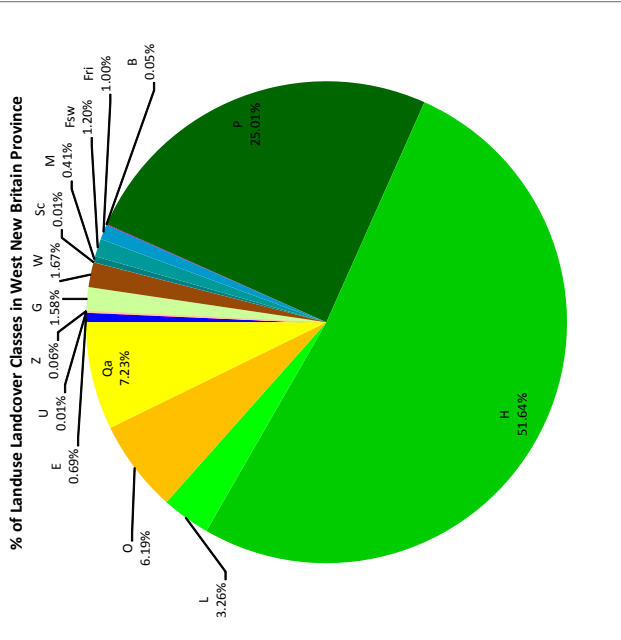
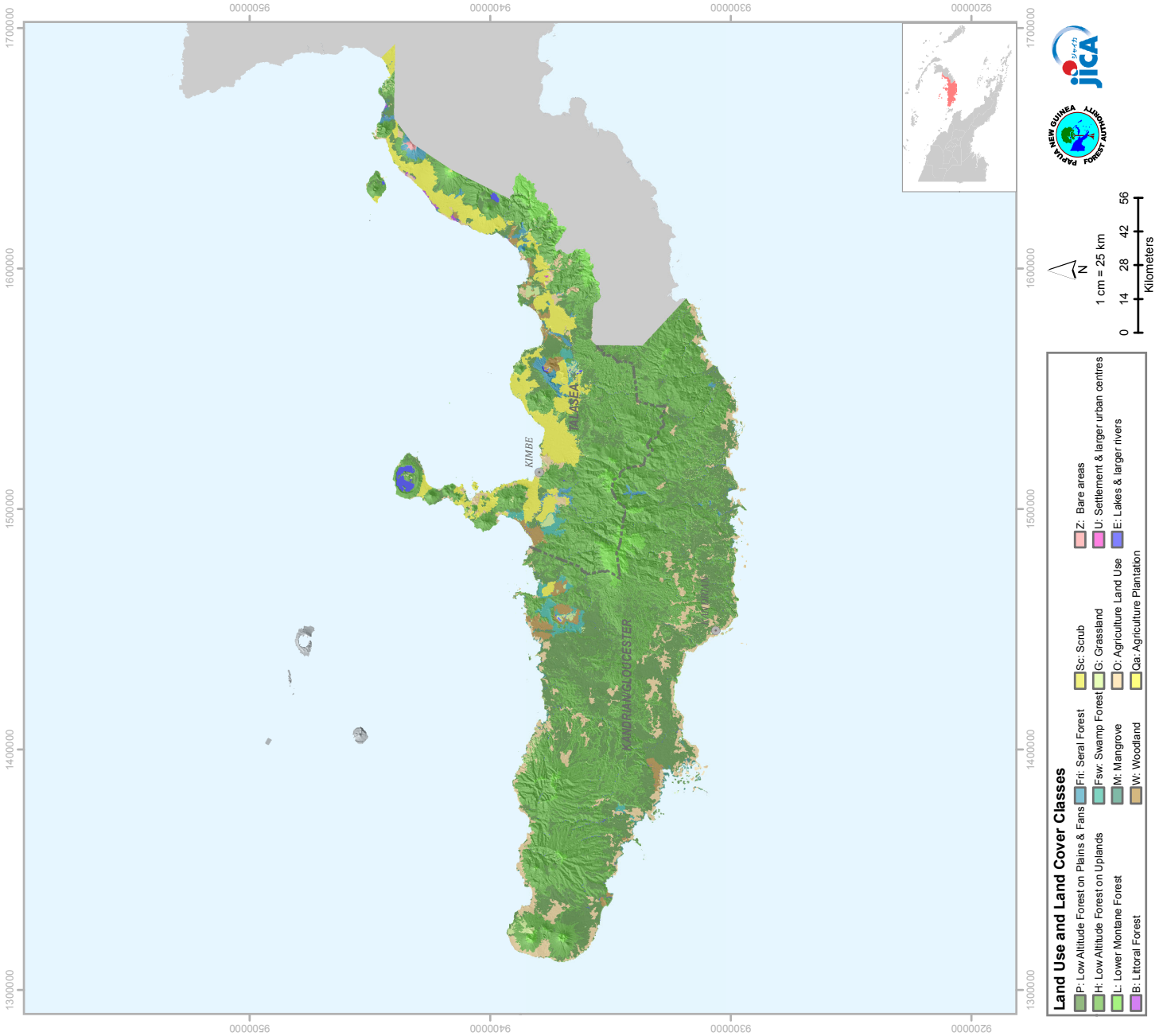
Significance of Provincial tree:

It is a hard wood species and one of the major commercial species exported in round log form.

Malas is one of the dominant tree species in the province and is of high demand both economically and socially. In the social norm, the bole/stem and branches of the tree are used for different purposes; for instance, the bole/stem is carved for paddles, spear, digging stick, carving (wood carved figurines or totems) and posts for houses. Whereas, branches/boles are used for firewood and fencing.

Scientific name: <i>Homalium foetidum</i>	Family: <i>Salicaceae</i>	Common Name/Trade name: <i>Malas</i>
<p>Description</p> <p>A large canopy tree with a straight cylindrical bole and has a low solid buttress. Outer bark is grey or whitish, rough, scaly or flaky. Inner bark blaze orange, pale yellowish, strongly aromatic, unpleasant. Exudate: having colourless non-sticky sap. Leaves: simple, upper surface of leaf is dark green and beneath is green. Juvenile leaves reddish. Flower; small white flowers or cream-colored, sweetly aromatic. Fruit: non-fleshy (leathery), green when immature and turns red or brown when it matures.</p>		
Tree	Bark	Leaf/Leaves
 <p>Photo source: KDamas, Senior Botanist, FRI, Lae, Morobe Province</p>	 <p>Outer bark</p>  <p>Inner bark</p> <p>Source: http://www.pngplants.org/PNGtrees/TreeDescriptions/Homalium_foetidum_Benth.html</p>	 <p>Source: http://wesvironslanggis.blogspot.com/2016/04/new-britain-island-tree-species.html?m=1</p>  <p>Source: http://v3.boldsystems.org/index.php/Taxbrowser_Taxonpage?taxid=446331</p>
<p>Note:</p> <p>Short description was from the PNG Plant database website and few of the photos (link below)</p> <p>http://www.pngplants.org/PNGtrees/TreeDescriptions</p>	Flower	Fruit/Seed
	 <p>http://tropical.theferns.info/image.php?id=Homalium+foetidum</p>	<p><i>*Not available</i></p>

VEGETATION AND LAND COVER MAP OF WEST NEW BRITAIN PROVINCE (2012 FOREST BASEMAP VERSION 1.1)

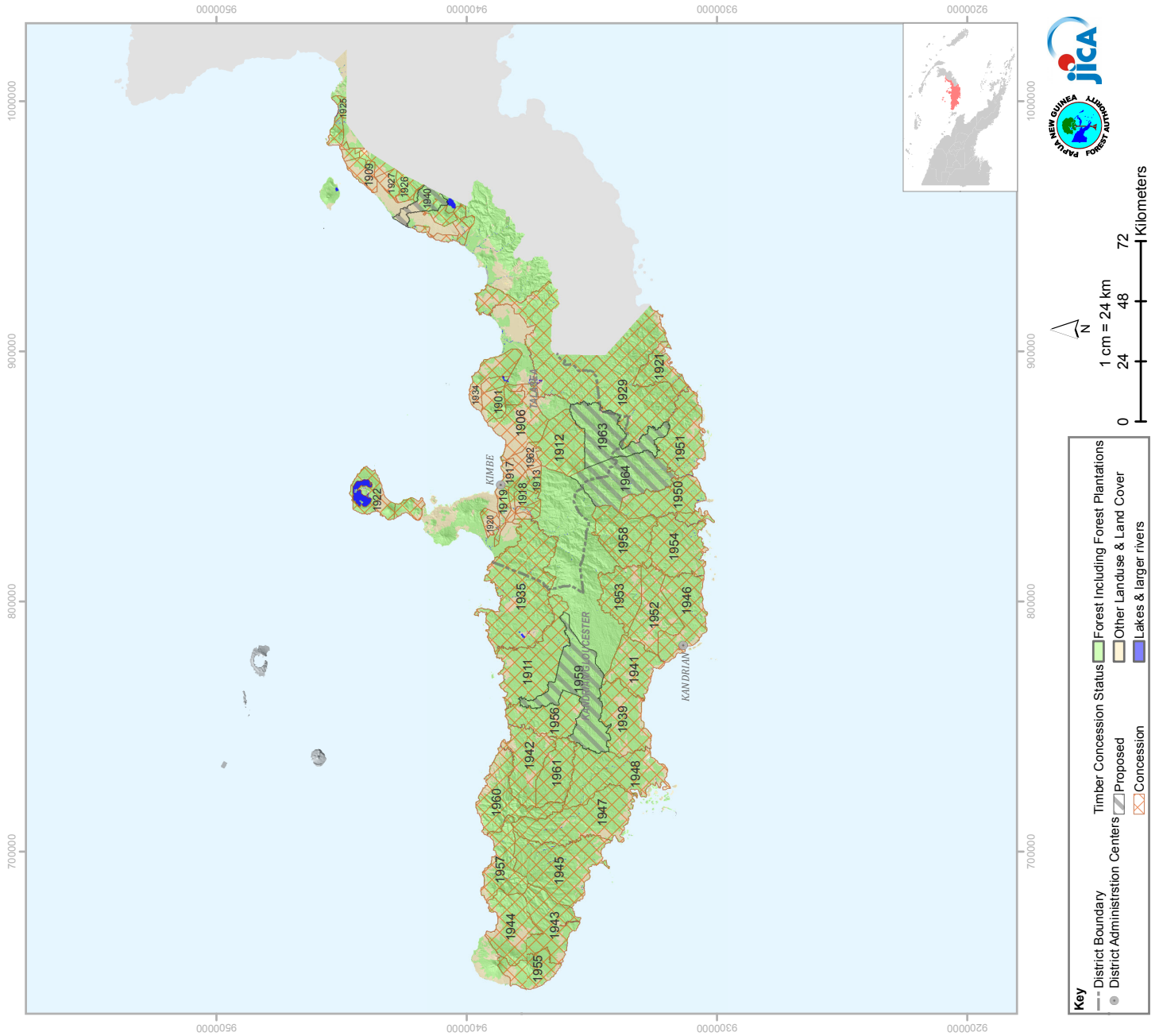


Pie Chart showing percentage in Landuse, Landcover of West New Britain Province.

% of area of Landuse and Cover	Kandrian Gloucester		Talasea	
	Code	Area (ha)	Code	Area (ha)
P	32.10%	11.75%		
H	53.40%	48.99%		
L	1.83%	5.98%		
B	0.15%	0.15%		
Fri	0.17%	2.56%		
Fsw	1.06%	1.46%		
M	0.46%	0.18%		
W	1.38%	2.16%		
Sc		0.02%		
G	1.18%	2.12%		
O	7.87%	2.79%		
Qa	0.16%	20.41%		
Z		0.15%		
U	0.01%	0.02%		
E	0.39%	1.26%		
Land Area (ha)	1,315,750.21	706,509.24		

Table showing percentage in Landuse, Landcover of Districts West New Britain Province. Percentage calculated from area in hectares.

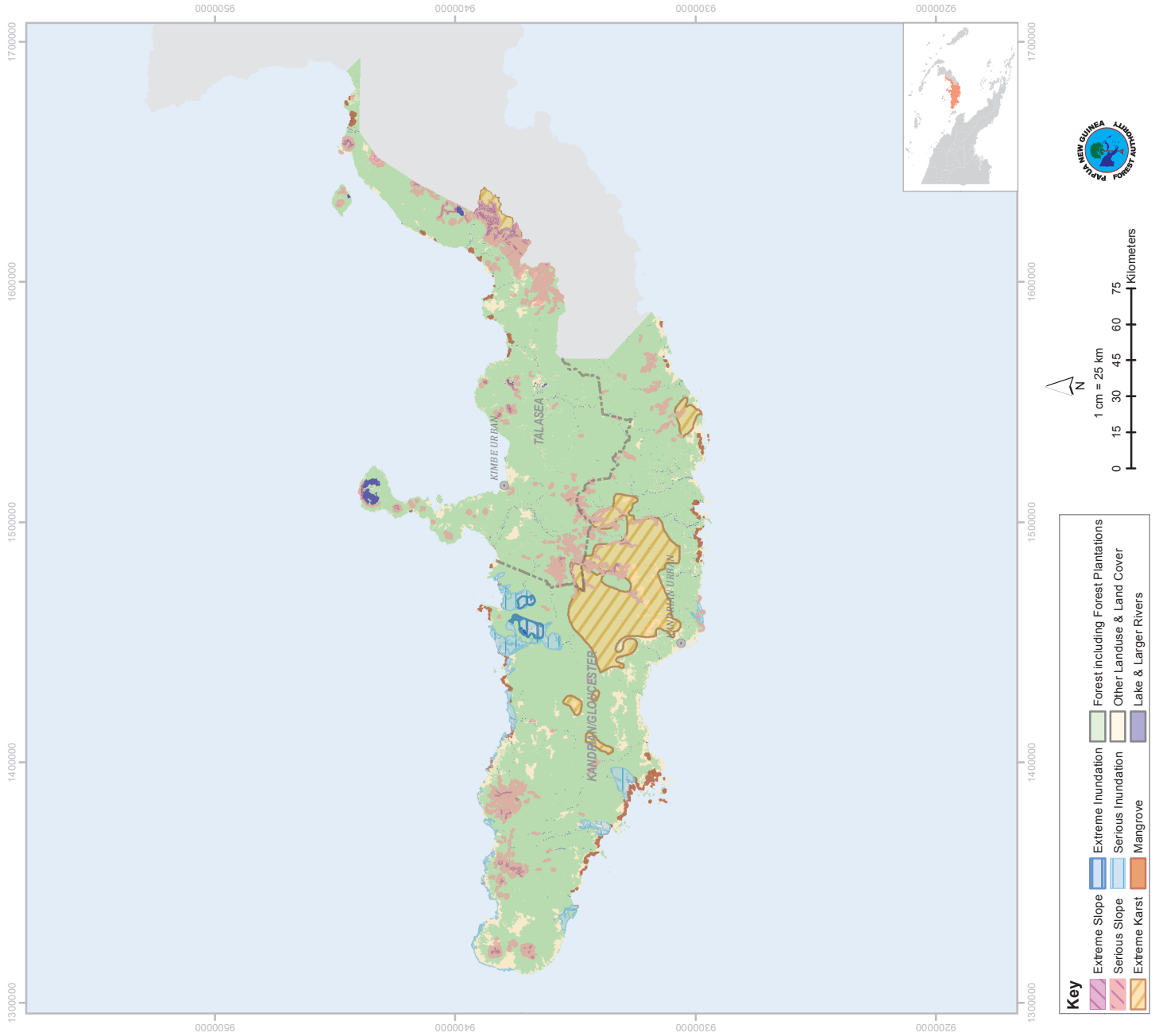
TIMBER CONCESSION MAP OF WEST NEW BRITAIN PROVINCE



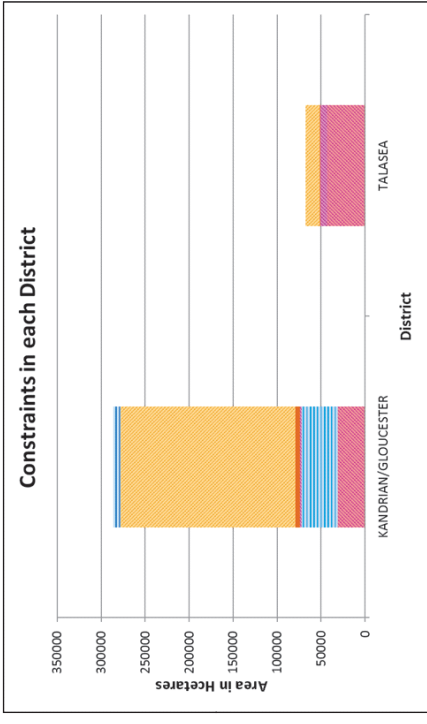
PLAN_ID	NAME	AREA (ha)	CONCESSION TYPE	STATUS
1964	Agulu Reserve	56,513.97		Proposed
1912	Mosa Laeim	37,113.03	TRP	Concession
1952	Passismanua Inland	39,886.56	LFA	Concession
1953	PASSISMANUA LFA EXT	32,583.94	LFA	Concession
1923	Ulamona Ext.	507.16	TRP	Concession
1930	Hargy	14,763.76	TRP	Concession
1933	Sisimi	1,737.94	TRP	Concession
1904	Uletevasa	1,542.55	TRP	Concession
1902	Witori	4,560.48	TRP	Concession
1901	Mami	9,002.03	TRP	Concession
1905	Malalimi	4,372.52	TRP	Concession
1920	South Bagum	5,545.97	TRP	Concession
1962	Mosa	8,025.50	TRP	Concession
1918	Kisang	8,480.26	TRP	Concession
1915	Malum	2,748.03	TRP	Concession
1916	Bunga	1,615.45	TRP	Concession
1914	Toa	1,402.37	TRP	Concession
1913	Keveloha	5,152.94	TRP	Concession
1944	Lolo blk 1	39,613.37	LFA	Concession
1957	Rottok Bay	32,601.29	FMA	Concession
1922	Bulu	17,538.86	TRP	Concession
1908	Wangore	7,105.96	TRP	Concession
1955	Lolo Block 2 ext	23,674.56	LFA	Concession
1943	Lolo Block 2	40,724.24	LFA	Concession
1945	West Arawa	68,446.62	TRP	Concession
1947	Central Arawe	63,907.51	TRP	Concession
1948	East Arawe	60,675.01	TRP	Concession
1939	Puile Anu	42,870.74	LFA	Concession
1941	Alimbit Anu	32,547.43	LFA	Concession
1946	Alimbit Andru	43,715.43	LFA	Concession
1951	Awio Amgen	43,903.49	LFA	Concession
1921	Fulleborne Ext.	20,659.56	TRP	Concession
1911	Kapuluk Ext.	59,530.22	TP	Concession
1956	Ara Vanu Block 3	34,397.24	LFA	Concession
1942	Ara Vanu Block 1	40,049.67	LFA	Concession
1919	Bola	8,057.34	TRP	Concession
1917	Honde - Laulimi	10,919.09	TRP	Concession
1906	Galae	36,239.61	TRP	Concession
1903	Kako	1,526.40	TRP	Concession
1934	Bango	18,744.46	TRP	Concession
1931	Alolo	2,298.68	TRP	Concession
1932	Kau'uli	1,778.08	TRP	Concession
1909	IBANA	10,257.22	TRP	Concession
1910	North Ulamona	2,635.81	TRP	Concession
1925	Madedua	9,734.56	TRP	Concession
1924	IBANA EAST	6,229.70	TRP	Concession
1927	Gulagula	6,379.99	TRP	Concession
1926	Gigipuna	8,163.29	TRP	Concession
1928	Allai	6,038.23	TRP	Concession
1929	Ania Kapiura	187,833.28	TRP	Concession
1949	Andru Johanna	43,932.77	LFA	Concession
1949	Autuvo	5,414.82	LFA	Concession
1950	Autuvo Ext.	35,625.93	LFA	Concession
1960	Vanu Tamu	43,979.00	FMA	Concession
1959	Gahomalasa	65,871.42	FMA	Proposed
1963	Asirim	46,588.99		Proposed
1961	Ara vanu blk 2	29,947.92	FMA	Concession
1935	Kapuluk	105,936.33		Concession
1940	Maututu TRP	13,373.80		Proposed
1958	Asengseng	43,258.54	FMA	Concession

Table showing Timber Concessions of West New Britain Province. Information updated as at 2016.

CONSTRAINTS TO COMMERCIAL TIMBER PRODUCTION, WEST NEW BRITAIN PROVINCE

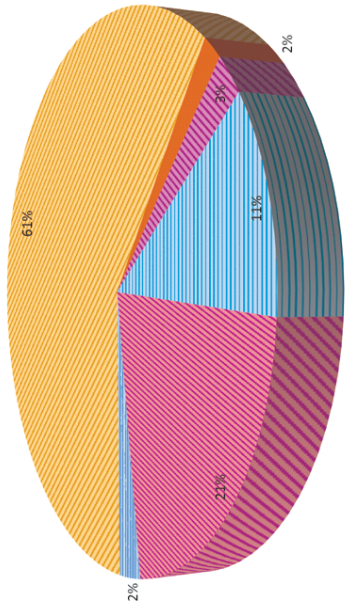


Brief Report on Logging Constraints of West New Britain Province



West New Britain province, unlike most other provinces, is not as heavily constrained. The most dominant constraint is 'Extreme Karst', which embodies 61% of the overall constraints found in the province. 'Extreme Karst' is mainly located in the centre of the Kandrian/GloUCESTER district. The second largest constraint is 'Serious Slope', however, this constraint is widely dispersed throughout the province, leaving much of the land available for commercial timber production.

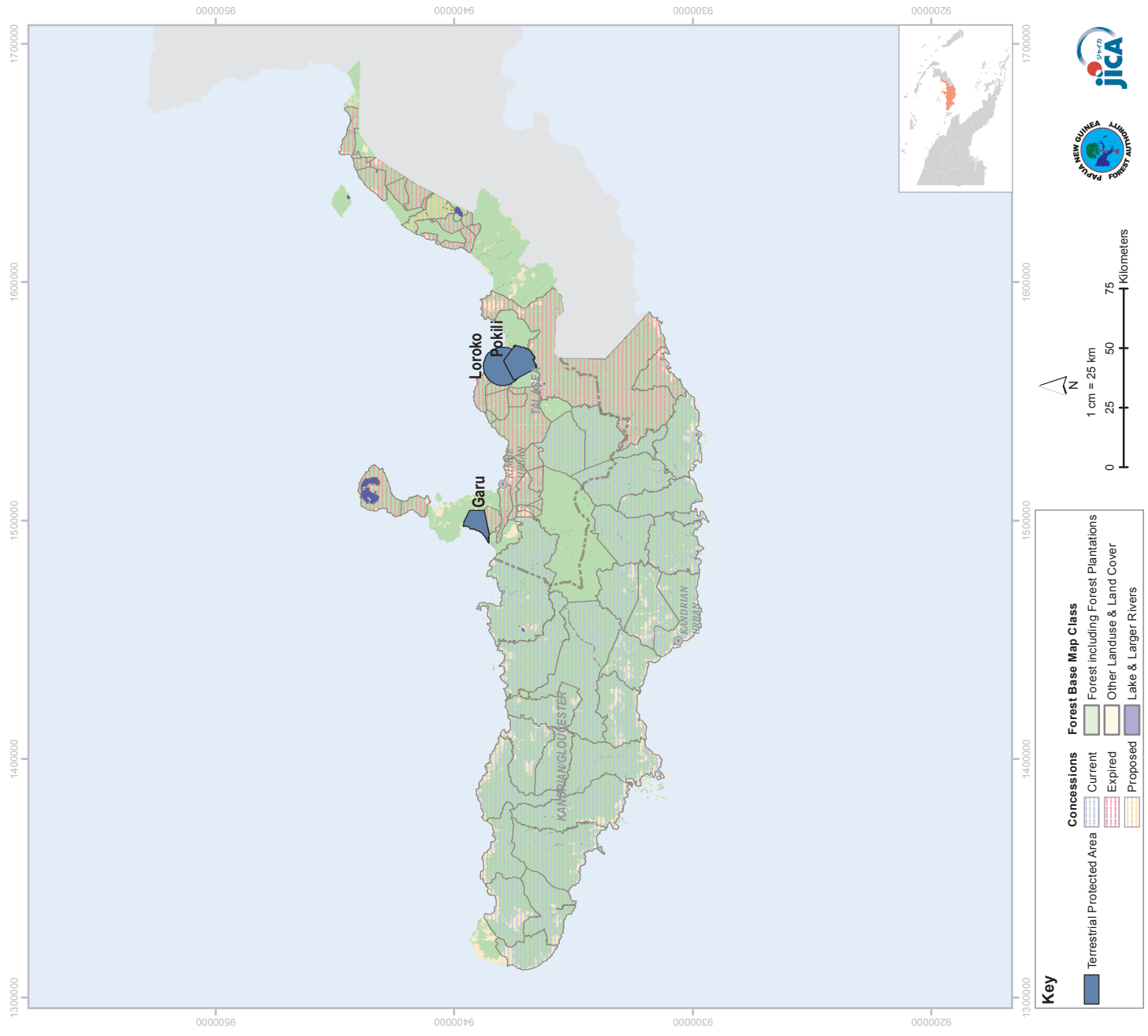
% of each Constraint in Province



TERRESTRIAL PROTECTED AREAS, WEST NEW BRITAIN PROVINCE

Information on Terrestrial Protected Areas in West New Britain Province

Name	Garu WMA
Protected Area ID	8
Protected Area Type	Wildlife Management Area
Province	West New Britain
Location	Garu
Area (ha)	7, 531
Longitude	149° 58' 56" E
Latitude	6° 33' 3" S
Name	Loroko National Park
Protected Area ID	22
Protected Area Type	National Park
Province	West New Britain
Location	Loroko
Area (ha)	19, 885
Longitude	150° 33' 60" E
Latitude	6° 28' 0" S
Name	Pokili WMA
Protected Area ID	39
Protected Area Type	Wildlife Management Area
Province	West New Britain
Location	Pokili
Area (ha)	12, 187
Longitude	150° 35' 2" E
Latitude	6° 24' 9" S



15. East New Britain Province



General information/Overview

1. Location

East New Britain Province is located north-east of mainland of PNG and shares the border with West New Britain Province on the Island of New Britain.

Provincial Administration Centre: Kokopo

Land area: 1, 529, 425 ha

Population: 328, 369 (2011)

Number of District: 4 (Gazelle, Kokopo, Pomio, Rabaul)

Number of Local Level Governments (LLGs): 18 LLGs

2. Forest Information

Forest Area: 1, 264, 344 ha






Provincial Tree

The provincial tree is 'Galip' (scientifically known as *Canarium indicum*) and is commonly found in Low Altitude Forest on Plains and Fans.

Significance of Provincial tree:

It is a valuable hard wood species which is one of the major commercial species exported in round log form. Nuts are popular among the local people for daily consumption when in season and as well are sold to generate an income for the locals.

Sap from the bark is used as herbal remedy for treatment of skin diseases, etc. The leaves are burnt emitting an unpleasant smell which repels insects such as mosquitoes.

Scientific name: <i>Canarium indicum</i>	Family: <i>Burseraceae</i>	Common Name/Trade name: <i>Galip</i>
<p><u>Description</u></p> <p>A large canopy to sub-canopy tree with more or less fluted, straight bole and has a solid buttress. Outer bark is grey or brown, rough, scaly or flaky. Inner bark blaze pink or pale brown and fibrous. Leaves: compound pinnate (two or more pairs of leaflets), leaflets opposite, upper surface dark green and beneath is pale green. Flowers: male and female flowers on the same plant, small white or pale-yellow flowers. Fruit/seed; green when immature and turns blue- black when it matures. Seed: single white oily seed, covered in brown seed coat.</p>		
Tree	Bark	Leaf/Leaves
 <p>Source: https://www.rarepalmseeds.com/canarium-indicum-ambae-giant</p>	 <p>Source: https://sites.google.com/site/efloraofindia/species/a---/b/burseraceae/canarium/canarium-indicum</p>	 <p>Photo source: KDamas, Senior Botanist, FRI, Lae, Morobe Province</p>
<p>Note:</p> <p>Short description was from the PNG Plant database website and few of the photos (link below)</p> <p>http://www.pngplants.org/PNGtrees/TreeDescriptions</p>	Flower	Fruit/Seed
	 <p>Source: https://fr.wikipedia.org/wiki/Canarium_indicum</p>	 <p>Source: https://caloriebee.com/nutrition/Galip-Nut-Canarium-Indicum-Nutritional-Nut</p>