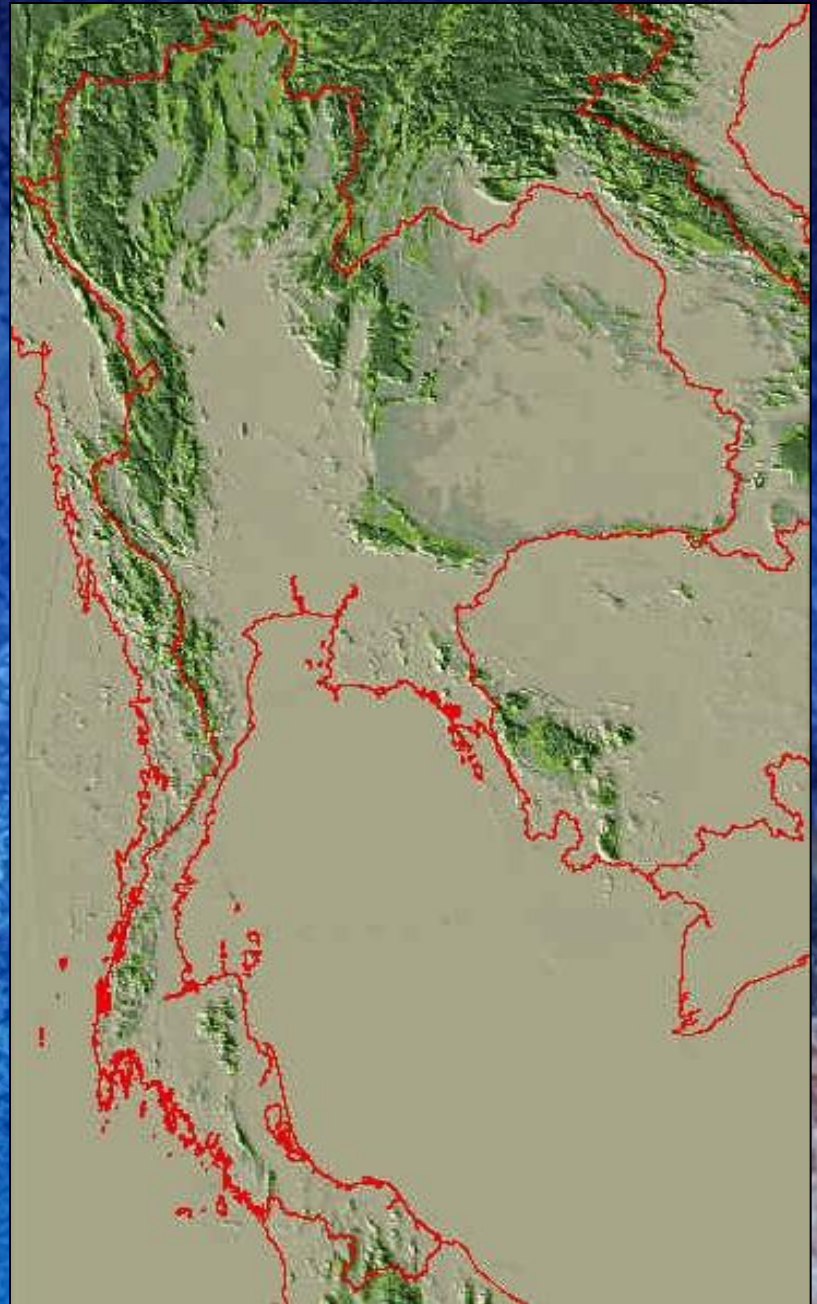
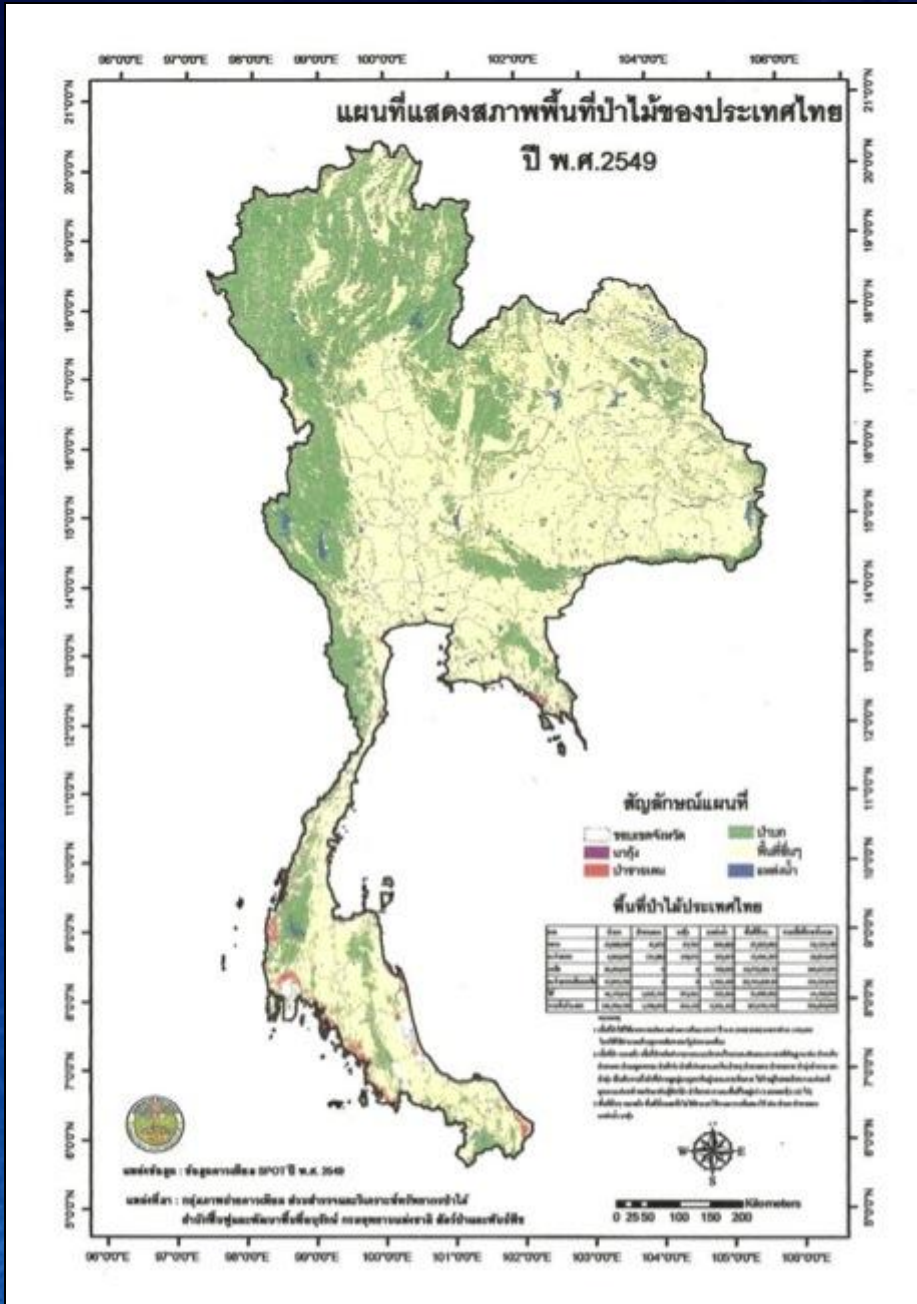


Forest Inventory in Thailand

**Department of National Parks, Wildlife
and Plant Conservation**



แผนที่แสดงสภาพพื้นที่ป่าไม้ภาคเหนือ
ปี พ.ศ. 2549



กรมอุทยานแห่งชาติ สัตว์ป่าและพันธุ์พืช

North

แผนที่แสดงสภาพพื้นที่ป่าไม้ภาคตะวันออกเฉียงเหนือ
ปี พ.ศ. 2549



สัญลักษณ์

- ป่าไม้
- ป่าชุมชน
- ป่าสงวน
- พื้นที่อื่นๆ
- แหล่งน้ำ



กรมอุทยานแห่งชาติ สัตว์ป่าและพันธุ์พืช

North-East



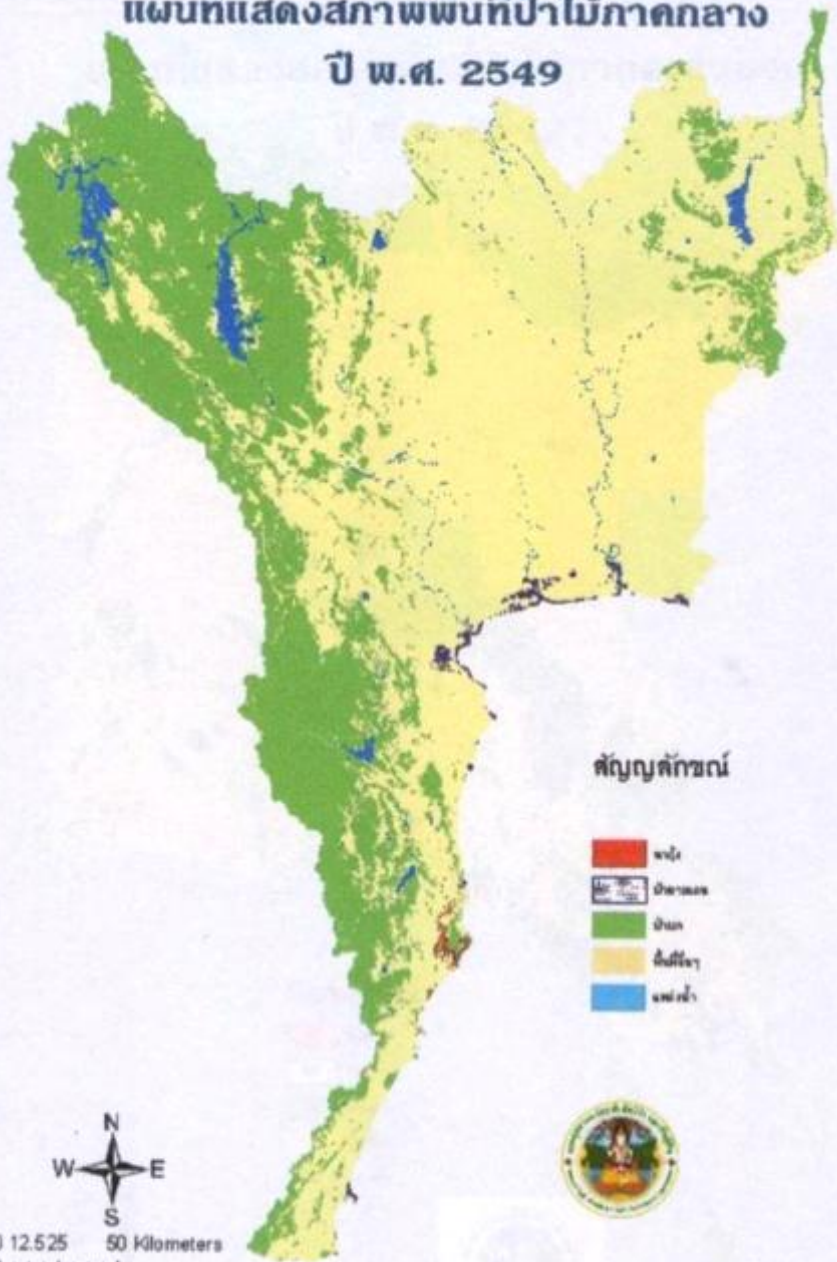
แผนที่แสดงสภาพพื้นที่ป่าไม้ภาคตะวันออก
ปี พ.ศ. 2549



East



แผนที่แสดงสภาพพื้นที่ป่าไม้ภาคกลาง
ปี พ.ศ. 2549



สัญลักษณ์

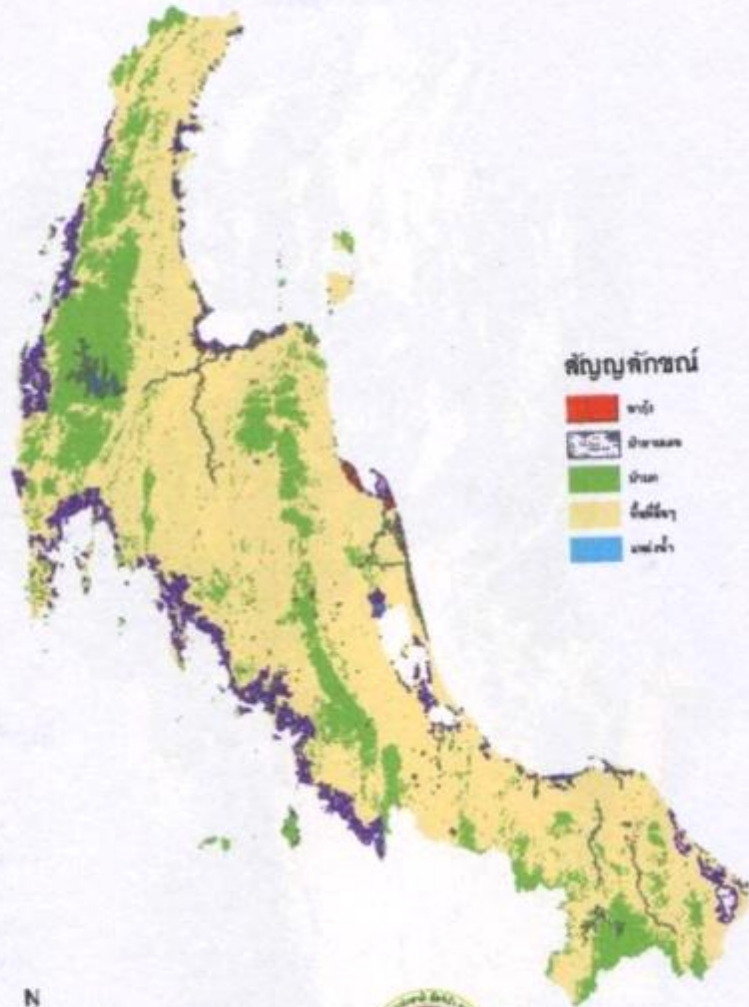
- ป่าไม้
- เมือง
- พื้นที่เกษตร
- พื้นที่ว่าง
- น้ำ



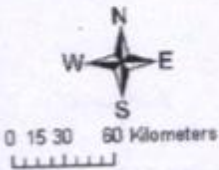
กรมอุทยานแห่งชาติ สัตว์ป่าและพันธุ์พืช

Central

แผนที่แสดงสภาพพื้นที่ป่าไม้ภาคใต้
ปี พ.ศ. 2549



South



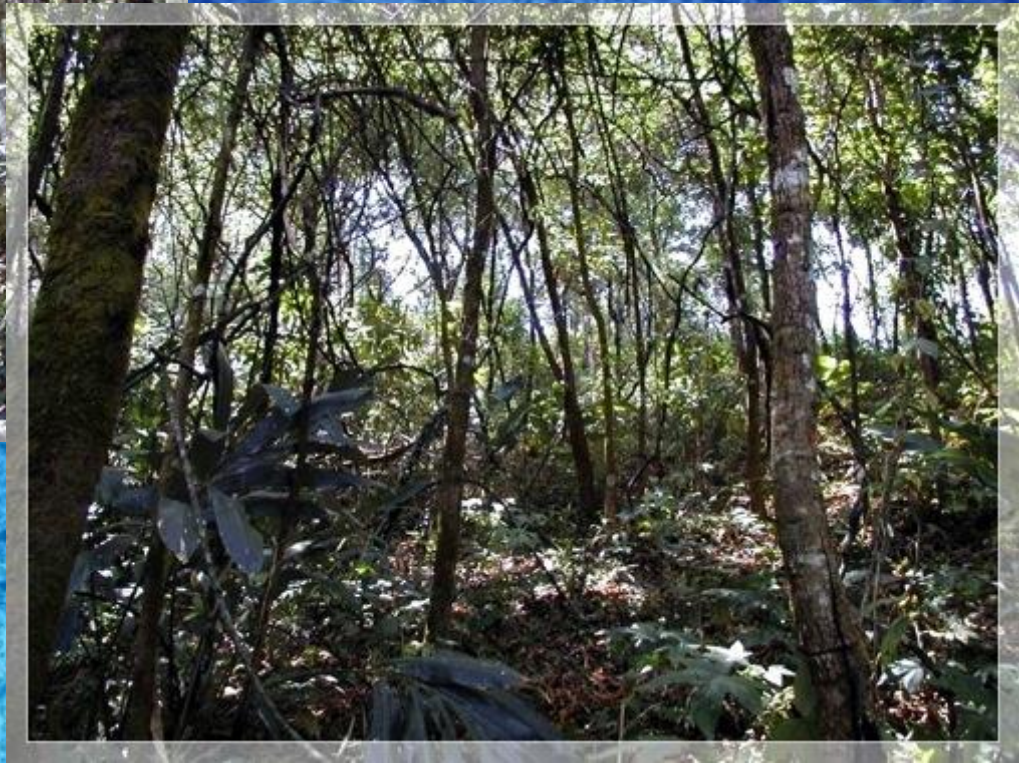
กรมอุทยานแห่งชาติ สัตว์ป่าและพันธุ์พืช

FOREST TYPE

Evergreen Forest



Dry Evergreen Forest



Hill Evergreen Forest



Pine Forest



Dry Dipterocarp with Pine Forest



Mixed Deciduous Forest



Dry Dipterocarp Forest



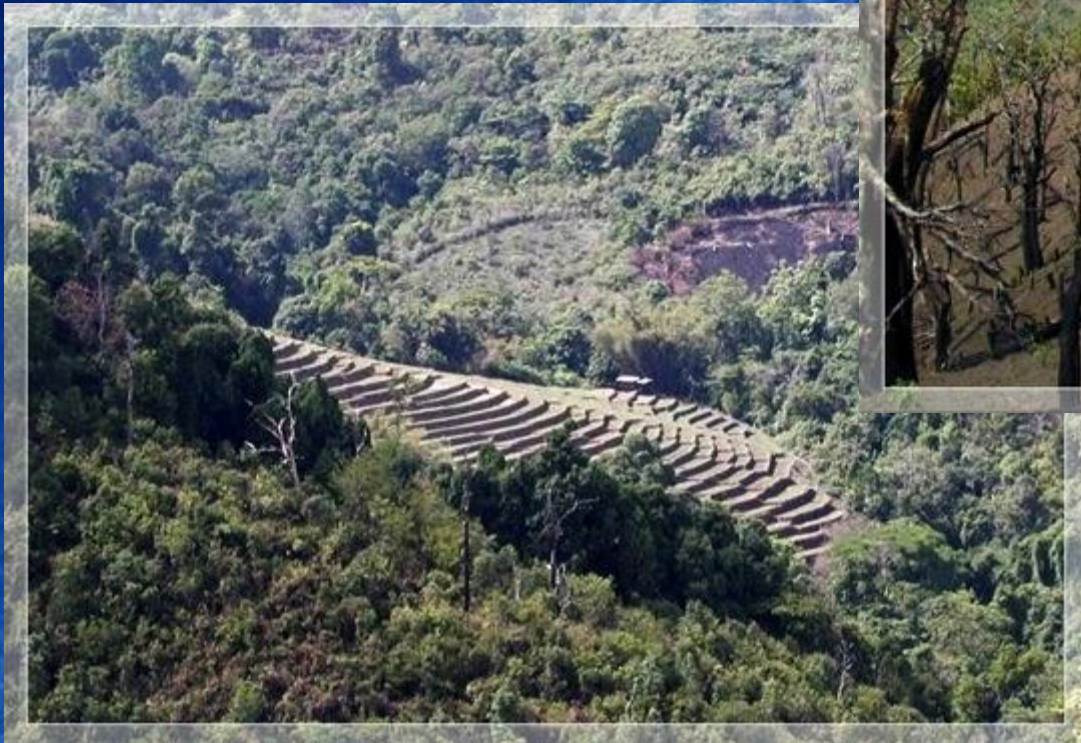
Mangrove Forest Plantation



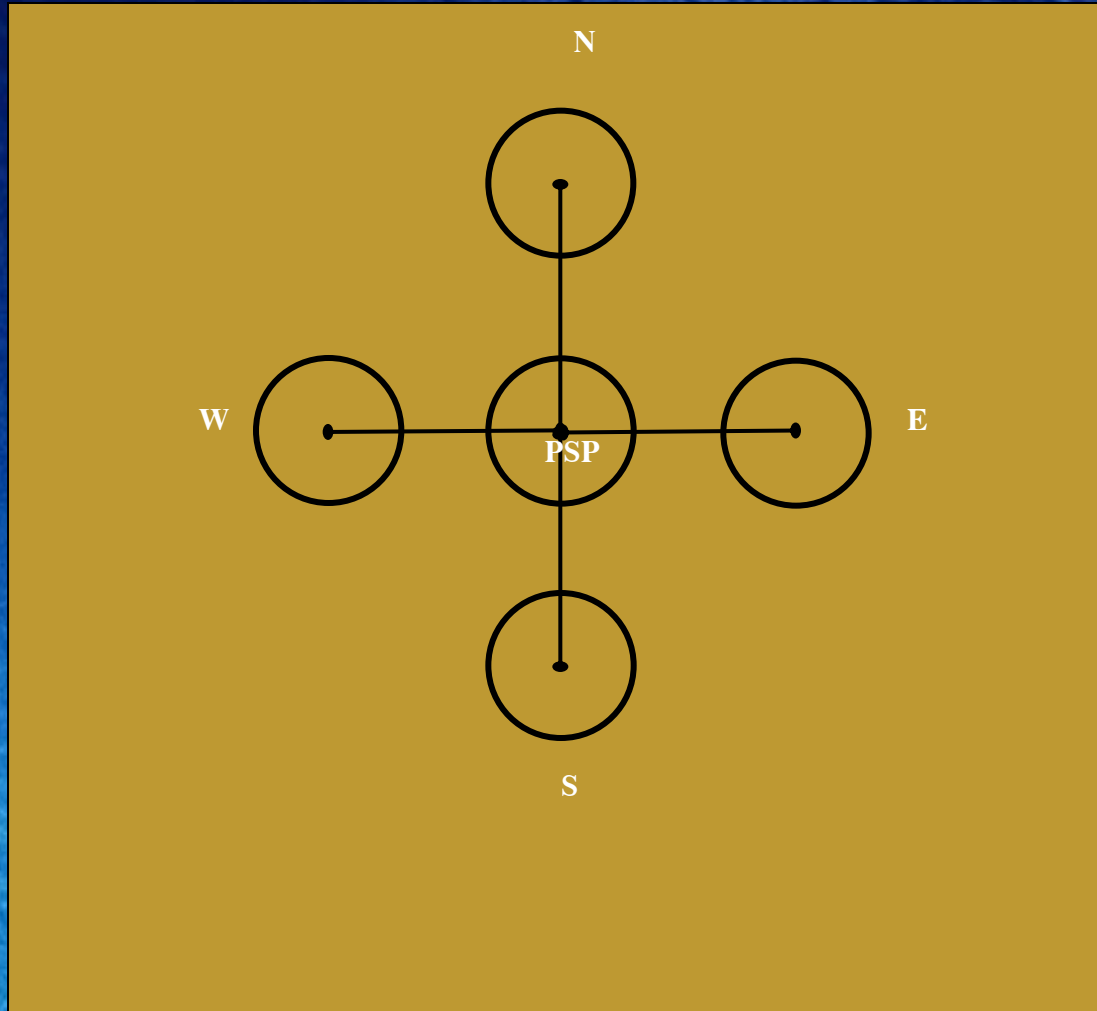
Agriculture



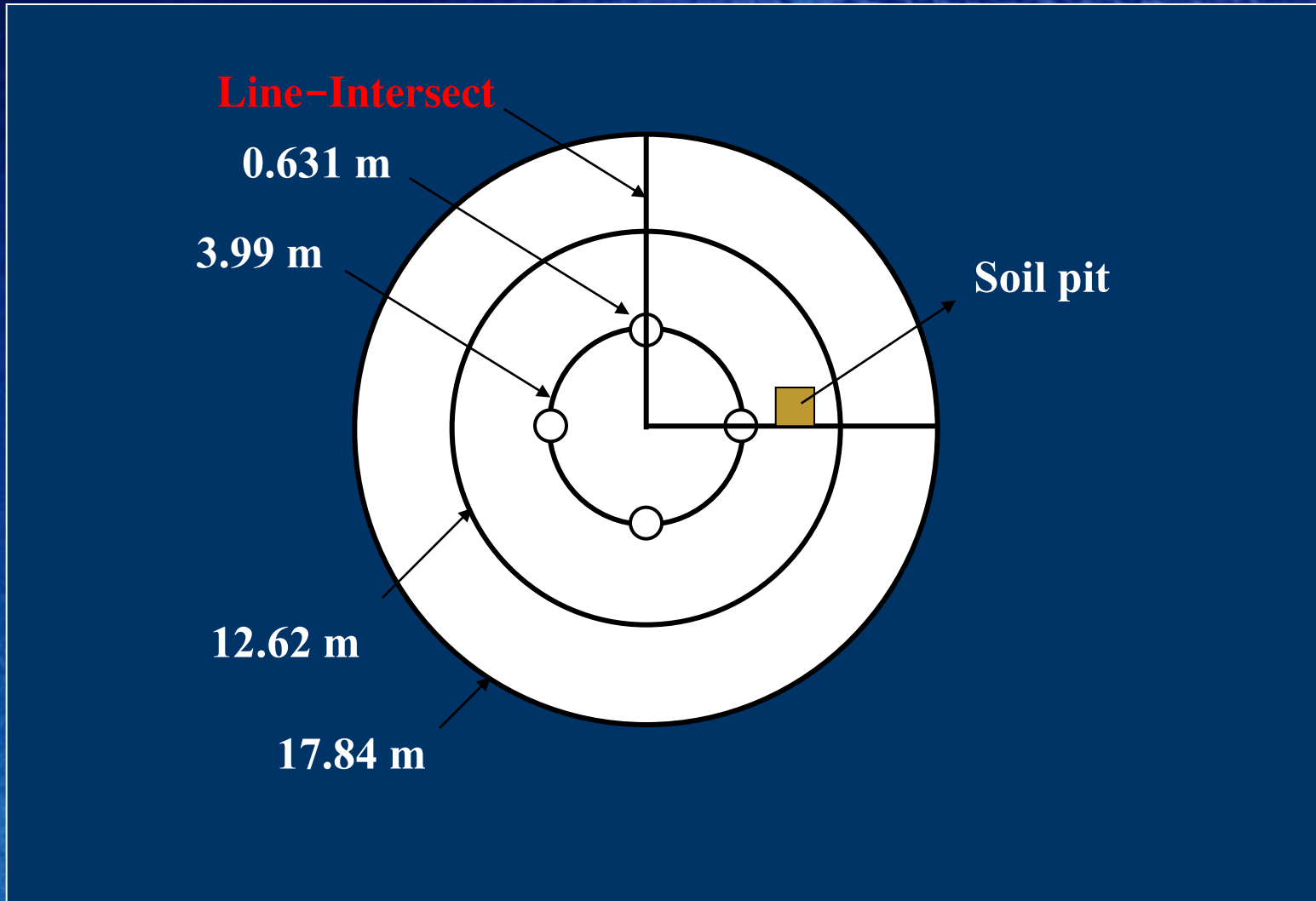
Disturbed Forest



PLOT ESTABLISHMENT



PLOT ESTABLISHMENT



Data collected and sampling method

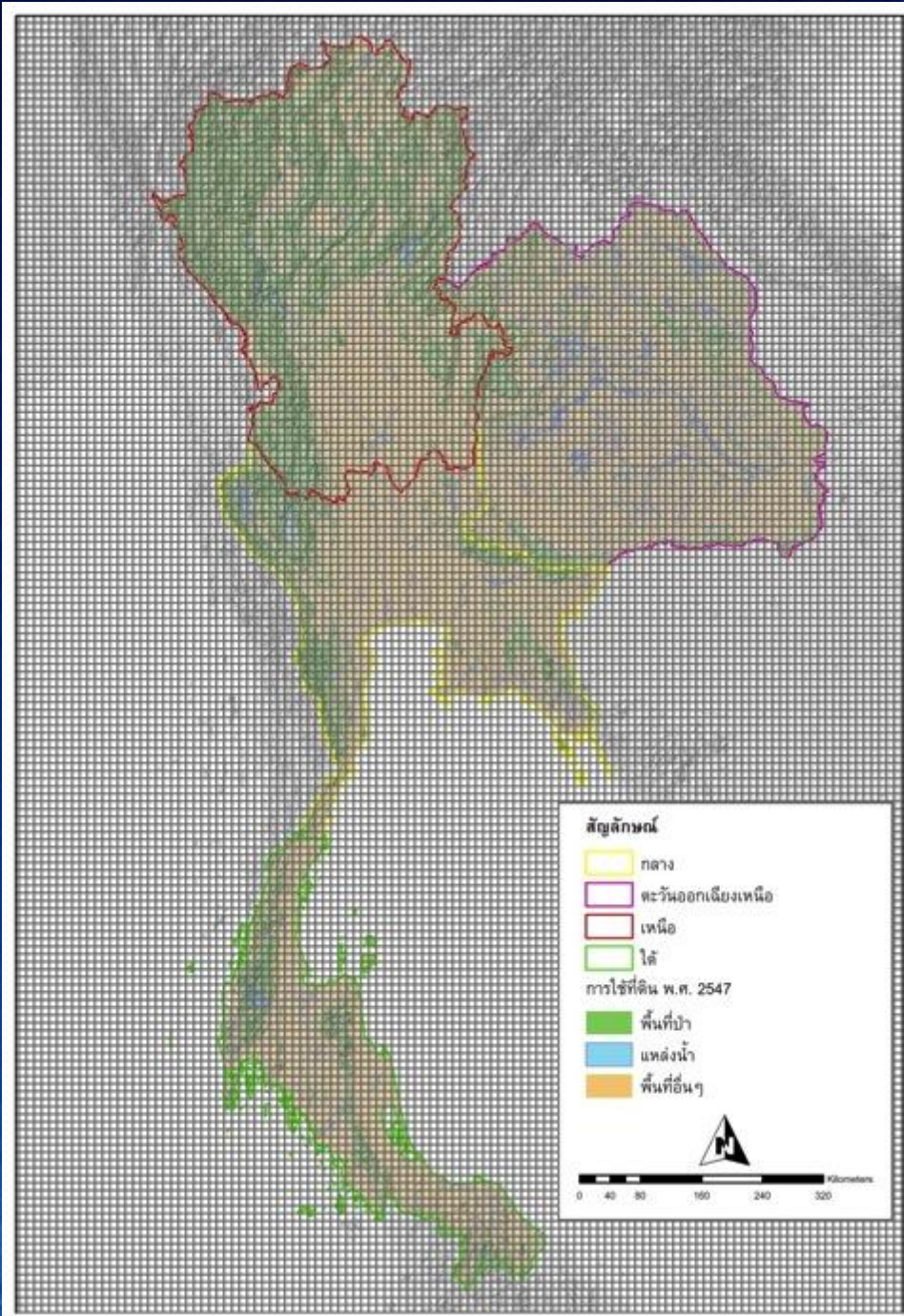
<i>Data Gathered</i>	<i>Sampling Method (See Figure 1)</i>			
	<i>Plot Type</i>	<i>Number</i>	<i>Radius (m)</i>	<i>Total Area (ha)</i>
Seedling density	Circular	4	0.631	0.0005
Understory vegetation & sapling density	Circular	1	3.99	0.0050
Bamboo and erect rattan length & tree stump volume; site description	Circular	1	12.62	0.0500
Tree attributes; human & natural site disturbance; wildlife habitat use	Circular	1	17.84	0.1000
Coarse woody debris (CWD), rattan & climbers volume and length	17.84 m line-intersect	2		

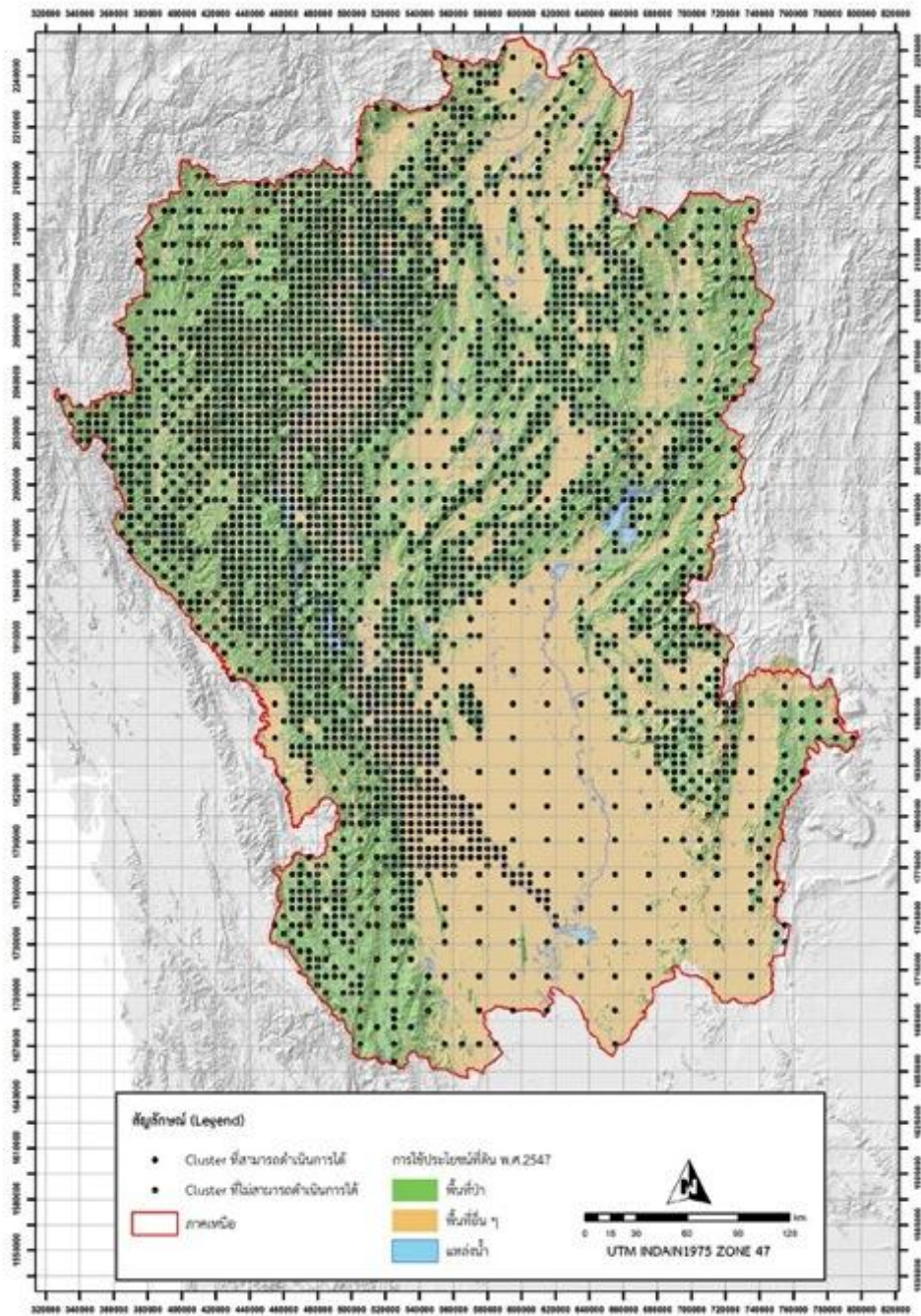


DATA ANALYSIS

NATIONAL FOREST INVENTORY

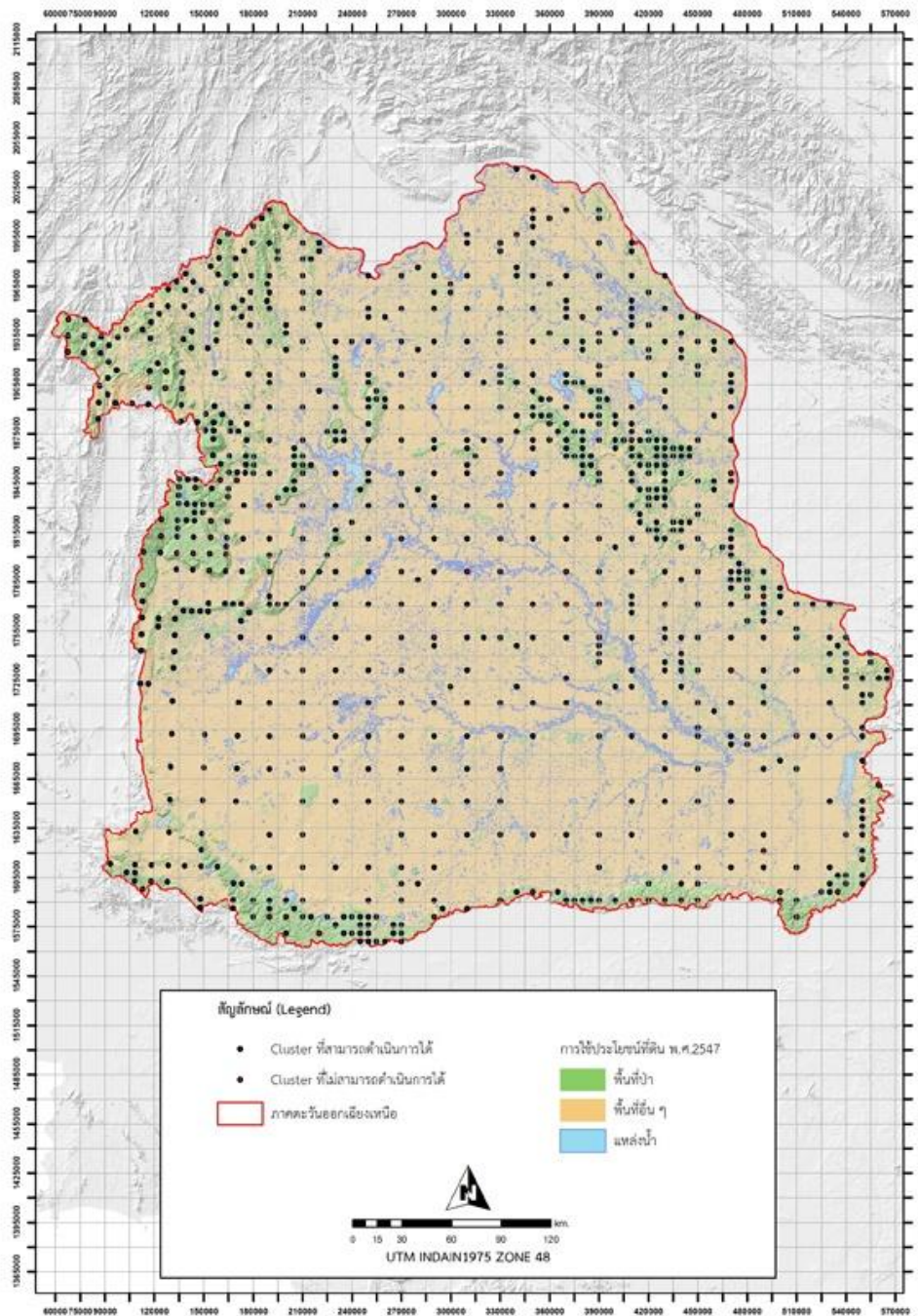
Thailand Map Showing the 10x10 km. grid (Only in Forest)



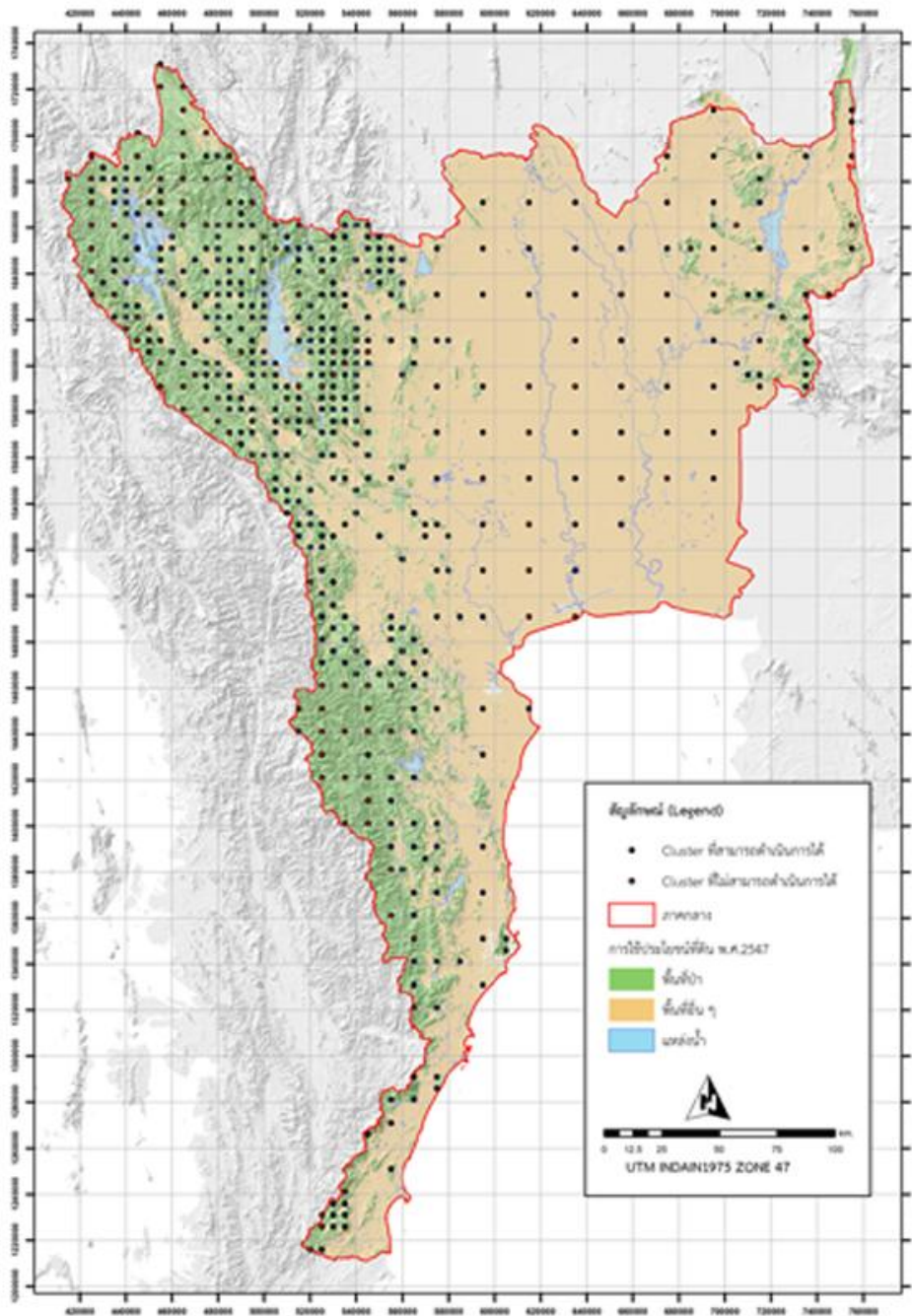


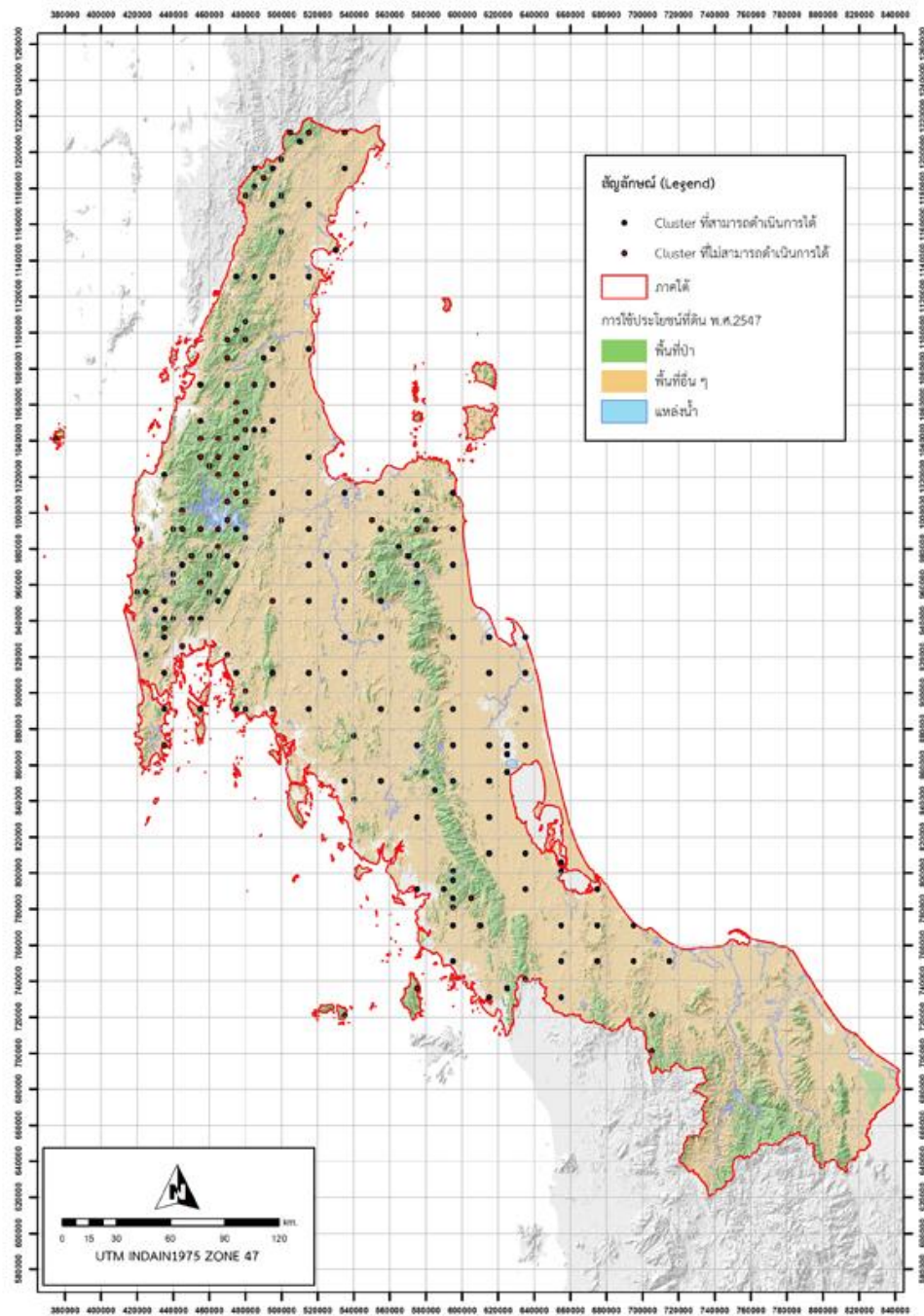
**North of Thailand Map
Showing the 10x10 km. grid
(Only in Forest)**

North-East of Thailand Map Showing the 10x10 km. grid (Only in Forest)



Central of Thailand Map Showing the 10x10 km. grid (Only in Forest)





South of Thailand Map
Showing the 10x10 km. grid
(Only in Forest)

Summary of Sample Plots

Forest Type	No. of Plots	Species	No. of Tree	Live Tree	Dead Tree	Volume (cu.m)	Area of Sample Plots	
							Rai	Hectare
ป่าดิบชื้น (Tropical Evergreen Forest)	322	816	22,879	22,250	629	6,103.36	201.25	32.20
ป่าดิบแล้ง (Dry Evergreen Forest)	942	1,202	52,823	51,569	1,254	10,955.36	588.75	94.20
ป่าดิบเขา (Hill Evergreen Forest)	203	481	12,335	11,799	536	2,440.99	126.88	20.30
ป่าสนเขา (Pine Forest)	24	86	1,377	1,332	45	307.47	15.00	2.40
ป่าพรุหรือป่าบึงน้ำจืด (Fresh Water Swamp Forest)	15	7	866	807	59	37.30	9.38	1.50
สวนป่าชายเลน (Mangrove Forest Plantation)	3	4	301	272	29	6.20	1.88	0.30
ป่าบุง ป่าทาม (Swamp Forest)	7	30	195	194	1	28.93	4.38	0.70
ป่าชายหาด (Beach Forest)	1	5	63	63	0	4.32	0.63	0.10
ป่าเบญจพรรณ (Mixed Deciduous Forest)	2,626	1,267	92,781	90,028	2,753	19,255.60	1,641.25	262.60
ป่าเต็งรัง (Dry Dipterocarp Forest)	1,184	799	88,776	85,992	2,784	10,238.68	740.00	118.40
สวนป่า (Forest Plantation)	223	286	9,905	9,774	131	925.55	139.38	22.30
ป่าเสื่อมโทรม (Disturbed Forest)	149	318	3,180	3,101	79	324.40	93.13	14.90
Total	5,699	2,151	285,481	277,181	8,300	50,628.15	3,561.88	569.90

SAMPLING ERROR

1) % SE of Volume

m_i = number of sampling units in cluster i

$m = \sum_{i=1}^n m_i$, total number of sampling units in all clusters

$\bar{m} = m/n$, average number of sampling units per cluster

y_{ij} = observed value or the variable of interest for sampling unit j in cluster i
($j = 1, 2, \dots, m_i$)

$y_i = \sum_{j=1}^{m_i} y_{ij}$ sum of the observations in cluster i

$\bar{y}_i = y_i / m_i$, mean of the observations in cluster i .

$$\text{std. err. } (\bar{y}) = \sqrt{\left(1 - \frac{n}{N}\right) \frac{S^2}{nm^2}}$$

with s^2 defined as follows:

$$s^2 = \sum_{i=1}^n m_i^2 (\bar{y}_i - \bar{y})^2 / (n-1)$$

$$SE = \sqrt{S^2 / (m \times \bar{m})^2}$$

SAMPLING ERROR

2) % SE of Area

m_i = number of plots

P_i = plot survey / total plot

\bar{P} = P_i / m_i

S^2 = $((m_i \wedge 2) (P_i - \bar{P})^2)$

$SE = \sqrt{S^2 / (\text{Sum of cluster} \times (\sum m_i / \text{Sum of cluster})^2)}$

Forest Land Assessment By Forest Type in 2006

Forest Type	North		North-East		Central		South		East		Total	
	ha	% of region	ha	% of region	ha	% of region	ha	% of region	ha	% of region	ha	% of region
Tropical Evergreen Forest	0.00	0.00	0.00	0.00	0.00	0.00	1,266,389.23	21.18	12,054.46	0.33	7,990,273.08	2.55
Dry Evergreen Forest	1,118,879.42	6.60	454,978.47	2.69	449,071.69	6.66	0.00	0.00	472,535.02	12.95	15,596,653.75	4.97
Hill Evergreen Forest	498,433.52	2.94	26,066.47	0.15	0.00	0.00	0.00	0.00	0.00	0.00	3,278,124.99	1.04
Pine Forest	62,304.19	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	389,401.19	0.12
Fresh Water Swamp Forest	7,788.02	0.05	0.00	0.00	0.00	0.00	47,939.02	0.80	0.00	0.00	348,294.05	0.11
Mangrove Forest Plantation	0.00	0.00	0.00	0.00	10,952.97	0.16	0.00	0.00	0.00	0.00	68,456.05	0.02
Swamp Forest	0.00	0.00	16,587.76	0.10	0.00	0.00	0.00	0.00	0.00	0.00	103,673.48	0.03
Beach Forest	0.00	0.00	0.00	0.00	0.00	0.00	3,994.92	0.07	0.00	0.00	24,968.24	0.01
Mixed Deciduous Forest	4,678,006.29	27.58	924,175.02	5.47	1,263,242.31	18.74	35,954.27	0.60	190,460.54	5.22	44,323,990.24	14.12
Dry Dipterocarp Forest	2,089,786.39	12.32	751,188.41	4.45	204,455.40	3.03	0.00	0.00	14,465.36	0.40	19,124,347.25	6.09
Forest Plantation	236,236.72	1.39	130,332.37	0.77	73,019.79	1.08	91,883.13	1.54	81,970.36	2.25	3,834,014.84	1.22
Disturbed Forest	145,376.44	0.86	151,659.49	0.90	54,764.84	0.81	27,964.43	0.47	16,876.25	0.46	2,479,009.10	0.79
Total	8,836,811.00	52.09	2,454,988.00	14.54	2,055,507.00	30.50	1,474,125.00	24.66	788,362.00	21.60	97,561,206.25	31.08

Remark : Yala Province, Narathiwat Province and Pattani Province are not included.

Total Tree Stock of The Country

Forest Type	North		North - East		Central		South		East		Total (Country)	
	Trees	Volume (cu.m.)	Trees	Volume (cu.m.)	Trees	Volume (cu.m.)	Trees	Volume (cu.m.)	Trees	Volume (cu.m.)	Trees	Volume (cu.m.)
Tropical Evergreen Forest	-	-	-	-	-	-	594,180,101	165,545,913.50	15,256,457	1,627,573.13	609,436,558	167,173,486.64
Dry Evergreen Forest	476,702,645	121,505,049.76	404,912,388	68,105,792.63	267,960,353	34,128,220.61	-	-	262,920,518	76,332,616.68	1,412,495,903	300,071,679.68
Hill Evergreen Forest	288,256,644	59,988,314.06	34,922,769	6,871,380.62	-	-	-	-	-	-	323,179,413	66,859,694.68
Pine Forest	36,484,022	8,421,845.24	-	-	-	-	-	-	-	-	36,484,022	8,421,845.24
Fresh Water Swamp Forest	712,151	39,831.11	-	-	-	-	21,391,908	981,765.80	-	-	22,104,059	1,021,596.91
Mangrove Forest	-	-	-	-	7,450,191	169,808.50	-	-	-	-	-	-
Swamp Forest	-	-	5,313,739	792,324.63	-	-	-	-	-	-	-	-
Beach Forest	-	-	-	-	-	-	1,725,596	118,214.01	-	-	1,725,596	118,214.01
Mixed Deciduous Forest	1,594,203,864	370,199,016.14	512,474,517	76,042,932.85	280,203,865	57,343,508.66	5,176,787	955,954.37	73,844,538	22,877,309.89	2,465,903,569	527,418,721.91
Dry Dipterocarp Forest	1,603,763,116	205,587,666.17	614,120,317	63,533,303.49	125,502,845	10,296,211.59	-	-	11,969,608	1,024,396.89	2,355,355,886	280,441,578.14
Forest Plantation	107,863,423	12,864,429.67	55,821,650	2,335,636.46	11,640,923	1,942,180.55	18,488,525	5,080,012.34	73,899,318	3,129,045.63	267,713,839	25,351,304.66
Disturbed Forest	34,018,886	3,430,703.23	38,894,378	4,256,334.07	5,806,766	336,962.79	2,903,383	464,867.52	3,314,239	396,498.32	84,937,652	8,885,365.92
Total	4,142,004,750	782,036,855.39	1,666,459,758	221,937,704.75	698,564,942	104,216,892.70	643,866,299	173,146,727.54	441,204,677	105,387,440.55	7,579,336,498	1,385,763,487.80

Remark : Yala Province, Narathiwat Province and Pattani Province are not included.

Tree Stem (per-ha), Tree Volume (per-ha) of The Country

Forest Type	North		North-East		Central		South		East		Total (Country)	
	Density	Volume	Density	Volume	Density	Volume	Density	Volume	Density	Volume	Density	Volume
	(trees/ha)	(cu.m/ha)	(trees/ha)	(cu.m/ha)	(trees/ha)	(cu.m/ha)	(trees/ha)	(cu.m/ha)	(trees/ha)	(cu.m/ha)	(trees/ha)	(cu.m/ha)
Tropical Evergreen Forest	0	0.00	0	0.00	0	0.00	684	190.66	1,114	118.84	691	189.55
Dry Evergreen Forest	404	102.92	770	129.50	795	101.30	0	0.00	490	142.19	547	116.30
Hill Evergreen Forest	548	114.07	1,159	228.06	0	0.00	0	0.00	0	0.00	581	120.25
Pine Forest	555	128.11	0	0.00	0	0.00	0	0.00	0	0.00	555	128.11
Fresh Water Swamp Forest	87	4.85	0	0.00	0	0.00	651	29.87	0	0.00	538	24.87
Mangrove Forest Plantation	0	0.00	0	0.00	907	20.67	0	0.00	0	0.00	907	20.67
Swamp Forest	0	0.00	277	41.32	0	0.00	0	0.00	0	0.00	277	41.32
Beach Forest	0	0.00	0	0.00	0	0.00	630	43.16	0	0.00	630	43.16
Mixed Deciduous Forest	323	75.00	480	71.19	296	60.51	210	38.78	341	105.73	343	73.33
Dry Dipterocarp Forest	727	93.24	707	73.17	818	67.13	0	0.00	728	62.33	726	86.48
Forest Plantation	433	51.61	371	15.50	213	35.45	293	80.64	794	33.60	438	41.50
Disturbed Forest	222	22.37	222	24.28	141	8.20	151	24.25	173	20.68	208	21.77
Average	444	83.88	587	78.21	453	67.58	637	171.31	493	117.66	486	88.84

Remark : Yala Province, Narathiwat Province and Pattani Province are not included.

Total Tree Volume of The Country (cu.m.) by Forest Type

Forest Type	Volume (cu.m)	SE %
ป่าดิบชื้น (Tropical Evergreen Forest)	242,882,980.12	22.85
ป่าดิบแล้ง (Dry Evergreen Forest)	286,760,438.40	13.98
ป่าดิบเขา (Hill Evergreen Forest)	62,800,493.84	12.97
ป่าสนเขา (Pine Forest)	7,982,056.26	37.25
ป่าพรุหรือป่าบึงน้ำจืด (Fresh Water Swamp Forest)	1,469,666.52	159.12
สวนป่าชายเลน (Mangrove Forest Plantation)	226,345.31	0.00
ป่าบึง ป่าทาม (Swamp Forest)	685,479.21	808.62
ป่าชายหาด (Beach Forest)	172,416.34	-
ป่าเบญจพรรณ (Mixed Deciduous Forest)	514,622,219.39	9.11
ป่าเต็งรัง (Dry Dipterocarp Forest)	264,443,623.98	8.94
สวนป่า (Forest Plantation)	26,965,565.73	31.94
ป่าเสื่อมโทรม (Disturbed Forest)	8,410,079.84	37.34
Total	1,417,421,364.94	

Volume / Area (cu.m./Ha)

Forest Type	Volume (cu.m/ha)	Volume (cu.m/rai)
ป่าดิบชื้น (Tropical Evergreen Forest)	189.55	30.33
ป่าดิบแล้ง (Dry Evergreen Forest)	116.30	18.61
ป่าดิบเขา (Hill Evergreen Forest)	120.25	19.24
ป่าสนเขา (Pine Forest)	128.11	20.50
ป่าพรุหรือป่าบึงน้ำจืด (Fresh Water Swamp Forest)	24.87	3.98
สวนป่าชายเลน (Mangrove Forest Plantation)	20.67	3.31
ป่าบึง ป่าทาม (Swamp Forest)	41.32	6.61
ป่าชายหาด (Beach Forest)	43.16	6.91
ป่าเบญจพรรณ (Mixed Deciduous Forest)	73.33	11.73
ป่าเต็งรัง (Dry Dipterocarp Forest)	86.48	13.84
สวนป่า (Forest Plantation)	41.50	6.64
ป่าเสื่อมโทรม (Disturbed Forest)	21.77	3.48
เฉลี่ย (Average)	88.84	14.21

Total Tree Volume in North of Thailand (cu.m.) by Forest Type

ชนิดป่า (Forest Type)	Volume (cu.m)	SE %
ป่าดิบแล้ง (Dry Evergreen Forest)	115,160,052.90	24.85
ป่าดิบเขา (Hill Evergreen Forest)	56,855,722.74	13.34
ป่าสนเขา (Pine Forest)	7,982,056.26	37.25
ป่าพรุหรือป่าบึงน้ำจืด (Fresh Water Swamp Forest)	37,751.13	0.00
ป่าเบญจพรรณ (Mixed Deciduous Forest)	350,867,213.89	11.92
ป่าเต็งรัง (Dry Dipterocarp Forest)	194,851,872.90	11.04
สวนป่า (Forest Plantation)	12,192,648.82	40.97
ป่าเสื่อมโทรม (Disturbed Forest)	3,251,551.82	60.46
รวม (Total)	741,198,870.47	

Volume / Area (cu.m./Ha) in North of Thailand

Forest Type	Volume (cu.m/ha)	Volume (cu.m/rai)
ป่าดิบแล้ง (Dry Evergreen Forest)	102.92	16.47
ป่าดิบเขา (Hill Evergreen Forest)	114.07	18.25
ป่าสนเขา (Pine Forest)	128.11	20.50
ป่าพรุหรือป่าบึงน้ำจืด (Fresh Water Swamp Forest)	4.85	0.78
ป่าเบญจพรรณ (Mixed Deciduous Forest)	75.00	12.00
ป่าเต็งรัง (Dry Dipterocarp Forest)	93.24	14.92
สวนป่า (Forest Plantation)	51.61	8.26
ป่าเสื่อมโทรม (Disturbed Forest)	22.37	3.58
เฉลี่ย (Average)	83.88	13.42

Total Tree Volume in Central of Thailand (cu.m.) by Forest Type

Forest Type	Volume (cu.m)	SE %
ป่าดิบแล้ง (Dry Evergreen Forest)	45,491,025.14	48.47
สวนป่าชายเลน (Mangrove Forest Plantation)	226,345.31	-
ป่าเบญจพรรณ (Mixed Deciduous Forest)	76,435,716.45	27.61
ป่าเต็งรัง (Dry Dipterocarp Forest)	13,724,278.96	34.64
สวนป่า (Forest Plantation)	2,588,818.95	260.75
ป่าเสื่อมโทรม (Disturbed Forest)	449,152.71	74.52
รวม (Total)	138,915,337.53	

Volume / Area (cu.m./Ha) in Central of Thailand

Forest Type	Volume (cu.m/ha)	Volume (cu.m/rai)
ป่าดิบแล้ง (Dry Evergreen Forest)	101.30	16.21
ป่าดิบเขา (Hill Evergreen Forest)	0.00	0.00
สวนป่าชายเลน (Mangrove Forest Plantation)	20.67	3.31
ป่าเบญจพรรณ (Mixed Deciduous Forest)	60.51	9.68
ป่าเต็งรัง (Dry Dipterocarp Forest)	67.13	10.74
สวนป่า (Forest Plantation)	35.45	5.67
ป่าเสื่อมโทรม (Disturbed Forest)	8.20	1.31
เฉลี่ย (Average)	67.58	10.81

Total Tree Volume in East of Thailand (cu.m.) by Forest Type

Forest Type	Volume (cu.m)	SE%
ป่าดิบชื้น (Tropical Evergreen Forest)	1,432,583.54	17.97
ป่าดิบแล้ง (Dry Evergreen Forest)	67,187,671.97	23.01
ป่าเบญจพรรณ (Mixed Deciduous Forest)	20,136,519.08	53.29
ป่าเต็งรัง (Dry Dipterocarp Forest)	901,670.16	359.39
สวนป่า (Forest Plantation)	2,754,173.78	115.44
ป่าเสื่อมโทรม (Disturbed Forest)	348,996.28	
Total	92,761,614.80	

Volume / Area (cu.m./Ha) in East of Thailand

Forest Type	Volume (cu.m/ha)	Volume (cu.m/rai)
ป่าดิบชื้น (Tropical Evergreen Forest)	118.84	19.01
ป่าดิบแล้ง (Dry Evergreen Forest)	142.19	22.75
ป่าเบญจพรรณ (Mixed Deciduous Forest)	105.73	16.92
ป่าเต็งรัง (Dry Dipterocarp Forest)	62.33	9.97
สวนป่า (Forest Plantation)	33.60	5.38
ป่าเสื่อมโทรม (Disturbed Forest)	20.68	3.31
เฉลี่ย (Average)	117.66	18.83

Total Tree Volume in North-East of Thailand (cu.m.) by Forest Type

Forest Type	Volume (cu.m)	SE%
ป่าดิบแล้ง (Dry Evergreen Forest)	58,921,688.39	18.47
ป่าดิบเขา (Hill Evergreen Forest)	5,944,771.10	449.23
ป่าบึง ป่าทาม (Swamp Forest)	685,479.21	808.62
ป่าเบญจพรรณ (Mixed Deciduous Forest)	65,788,500.81	18.04
ป่าเต็งรัง (Dry Dipterocarp Forest)	54,965,801.96	14.87
สวนป่า (Forest Plantation)	2,020,674.57	120.93
ป่าเสื่อมโทรม (Disturbed Forest)	3,682,365.04	57.18
Total	192,009,281.08	

Volume / Area (cu.m./Ha) in North-East of Thailand

Forest Type	Volume (cu.m/ha)	Volume (cu.m/rai)
ป่าดิบแล้ง (Dry Evergreen Forest)	129.50	20.72
ป่าดิบเขา (Hill Evergreen Forest)	228.06	36.49
ป่าบุง ป่าทาม (Swamp Forest)	41.32	6.61
ป่าเบญจพรรณ (Mixed Deciduous Forest)	71.19	11.39
ป่าเต็งรัง (Dry Dipterocarp Forest)	73.17	11.71
สวนป่า (Forest Plantation)	15.50	2.48
ป่าเสื่อมโทรม (Disturbed Forest)	24.28	3.88
เฉลี่ย (Average)	78.21	12.51

Total Tree Volume in South of Thailand (cu.m.) by Forest Type

Forest Type	Volume (cu.m)	SE %
ป่าดิบชื้น (Tropical Evergreen Forest)	241,450,396.59	24.02
ป่าพรุหรือป่าบึงน้ำจืด (Fresh Water Swamp Forest)	1,431,915.39	223.57
ป่าชายหาด (Beach Forest)	172,416.34	-
ป่าเบญจพรรณ (Mixed Deciduous Forest)	1,394,269.16	0.00
สวนป่า (Forest Plantation)	7,409,249.61	86.92
ป่าเสื่อมโทรม (Disturbed Forest)	678,013.99	62.89
Total	252,536,261.07	

Volume / Area (cu.m./Ha) in South of Thailand

Forest Type	Volume (cu.m/ha)	Volume (cu.m/rai)
ป่าดิบชื้น (Tropical Evergreen Forest)	190.66	30.51
ป่าพรุหรือป่าบึงน้ำจืด (Fresh Water Swamp Forest)	29.87	4.78
ป่าชายหาด (Beach Forest)	43.16	6.91
ป่าเบญจพรรณ (Mixed Deciduous Forest)	38.78	6.20
สวนป่า (Forest Plantation)	80.64	12.90
ป่าเสื่อมโทรม (Disturbed Forest)	24.25	3.88
เฉลี่ย (Average)	171.31	27.41

Total Volume of Protected Area

Forest Type	North		North - East		Central		South		East		Total (Country)	
	Trees	Volume (cu.m.)	Trees	Volume (cu.m.)	Trees	Volume (cu.m.)	Trees	Volume (cu.m.)	Trees	Volume (cu.m.)	Trees	Volume (cu.m.)
Tropical Evergreen Forest	-	-	-	-	-	-	654,893,809	183,198,639.79	18,127,503	1,468,142.81	673,021,312	184,666,782.60
Dry Evergreen Forest	421,237,849	121,477,544.32	417,801,177	91,940,806.55	252,576,541	33,775,537.13	-	-	220,211,395	71,481,478.40	1,311,826,962	318,675,366.40
Hill Evergreen Forest	123,304,786	32,226,846.30	41,731,022	8,466,341.87	-	-	-	-	-	-	165,035,808	40,693,188.17
Pine Forest	24,509,895	4,054,796.28	-	-	-	-	-	-	-	-	24,509,895	4,054,796.28
Fresh Water Swamp Forest	981,906	54,918.76	-	-	-	-	17,447,722	945,625.85	-	-	18,429,628	1,000,544.61
Swamp Forest	-	-	4,229,751	779,597.12	-	-	-	-	-	-	4,229,751	779,597.12
Mixed Deciduous Forest	911,171,381	264,569,023.28	287,849,640	58,268,487.63	146,568,414	48,964,492.93	4,305,282	1,247,646.65	54,004,852	18,378,764.34	1,403,899,570	391,428,414.84
Dry Dipterocarp Forest	781,333,142	124,826,518.16	242,002,164	35,315,386.12	44,752,273	4,072,175.78					1,068,087,579	164,214,080.07
Forest Plantation	9,479,173	3,295,750.53					9,970,127	2,327,763.79	10,914,267	1,561,122.18	30,363,567	7,184,636.49
Disturbed Forest	1,699,453	531,680.81	3,625,501	408,883.96							5,324,954	940,564.76
Total	2,273,717,586	551,037,078.44	997,239,255	195,179,503.25	443,897,228	86,812,205.84	686,616,939	187,719,676.08	303,258,018	92,889,507.73	4,704,729,025	1,113,637,971.34

Remark : Yala Province, Narathiwat Province and Pattani Province are not include.

Tree Stem (per-ha), Tree Volume (per-ha) of Protected Area

Forest Type	North		North - East		Central		South		East		Total (Country)	
	Density	Volume	Density	Volume	Density	Volume	Density	Volume	Density	Volume	Density	Volume
	(trees/ha)	(cu.m./ha)	(trees/ha)	(cu.m./ha)	(trees/ha)	(cu.m./ha)	(trees/ha)	(cu.m./ha)	(trees/ha)	(cu.m./ha)	(trees/ha)	(cu.m./ha)
Tropical Evergreen Forest	-	-	-	-	-	-	714	199.63	1,200	97.19	721	197.97
Dry Evergreen Forest	416	120.02	601	132.31	796	106.47	-	-	511	166.03	534	129.82
Hill Evergreen Forest	495	129.29	1,228	249.09	-	-	-	-	-	-	583	143.67
Pine Forest	590	97.61	-	-	-	-	-	-	-	-	590	97.61
Fresh Water Swamp Forest	87	4.85	-	-	-	-	924	50.08	-	-	610	33.12
Swamp Forest	-	-	280	51.61	-	-	228	66.07	-	-	280	51.61
Mixed Deciduous Forest	295	85.64	485	98.27	240	80.03	-	-	386	131.53	315	87.91
Dry Dipterocarp Forest	635	101.39	668	97.41	658	59.90	-	-	-	-	643	98.82
Forest Plantation	359	124.67	-	-	-	-	528	123.27	578	82.67	473	111.91
Disturbed Forest	113	35.20	120	13.53	-	-	-	-	-	-	118	20.75
Average	401	97.08	577	112.84	445	87.07	705	192.66	502	153.73	471	111.57

Remark : Yala Province, Narathiwat Province and Pattani Province are not include.

Total Stock of National Parks

Forest Type	North		North - East		Central		South		East		Total (Country)	
	Trees	Volume (cu.m.)	Trees	Volume (cu.m.)	Trees	Volume (cu.m.)	Trees	Volume (cu.m.)	Trees	Volume (cu.m.)	Trees	Volume (cu.m.)
Tropical Evergreen Forest	-	-	-	-	-	-	261,917,371	70,158,870.98	17,630,113	1,427,859.32	279,547,484	71,586,730.30
Dry Evergreen Forest	283,844,824	87,224,840.03	267,059,487	60,837,848.06	238,777,847	31,440,544.17	-	-	126,312,416	35,032,771.37	915,994,574	214,536,003.63
Hill Evergreen Forest	77,241,934	19,254,883.09	-	-	-	-	-	-	-	-	77,241,934	19,254,883.09
Pine Forest	15,095,785	2,731,317.81	-	-	-	-	-	-	-	-	15,095,785	2,731,317.81
Fresh Water Swamp Forest	954,964	53,411.88	-	-	-	-	-	-	-	-	954,964	53,411.88
Mixed Deciduous Forest	524,459,141	145,555,260.36	171,636,499	33,127,844.71	112,061,408	37,089,288.53	4,187,152	1,213,413.23	12,928,750	7,162,153.83	825,272,949	224,147,960.66
Dry Dipterocarp Forest	386,834,069	66,121,701.35	177,549,933	26,882,861.70	27,179,758	2,130,637.13	-	-	-	-	591,563,760	95,135,200.18
Forest Plantation	6,501,104	2,973,256.49	-	-	-	-	9,696,562	2,263,893.68	-	-	16,197,667	5,237,150.16
Disturbed Forest	1,652,823	517,092.34	3,452,564	396,445.36	-	-	-	-	-	-	5,105,387	913,537.69
Total	1,296,584,645	324,431,763.34	619,698,483	121,244,999.83	378,019,013	70,660,469.84	275,801,085	73,636,177.89	156,871,279	43,622,784.52	2,726,974,504	633,596,243.17

Tree Stem (per-ha), Tree Volume (per-ha) of National Parks

Forest Type	North		North - East		Central		South		East		Total (Country)	
	Density	Volume	Density	Volume	Density	Volume	Density	Volume	Density	Volume	Density	Volume
	(trees/ha)	(cu.m./ha)	(trees/ha)	(cu.m./ha)	(trees/ha)	(cu.m./ha)	(trees/ha)	(cu.m./ha)	(trees/ha)	(cu.m./ha)	(trees/ha)	(cu.m./ha)
Tropical Evergreen Forest	-	-	-	-	-	-	631	169.04	1,200	97.19	651	166.58
Dry Evergreen Forest	394	121.16	543	123.61	823	108.36	-	-	537	149.03	527	123.49
Hill Evergreen Forest	568	141.69	-	-	-	-	-	-	-	-	568	141.69
Pine Forest	685	123.94	-	-	-	-	-	-	-	-	685	123.94
Fresh Water Swamp Forest	87	4.85	-	-	-	-	-	-	-	-	87	4.85
Mixed Deciduous Forest	298	82.73	502	96.98	256	84.86	228	66.07	320	177.27	318	86.32
Dry Dipterocarp Forest	602	102.87	653	98.91	740	58.01	-	-	-	-	622	100.01
Forest Plantation	295	134.92	-	-	-	-	528	123.27	-	-	401	129.62
Disturbed Forest	113	35.20	134	15.42	-	-	-	-	-	-	126	22.61
Average	390	97.49	548	107.18	495	92.49	610	162.99	541	150.34	457	106.22

Total Stock of Wildlife Sanctuary

Forest Type	North		North - East		Central		South		East		Total (Country)	
	Trees	Volume (cu.m.)	Trees	Volume (cu.m.)	Trees	Volume (cu.m.)	Trees	Volume (cu.m.)	Trees	Volume (cu.m.)	Trees	Volume (cu.m.)
Tropical Evergreen Forest	-	-	-	-	-	-	442,645,125	127,494,801.02	-	-	442,645,125	127,494,801.02
Dry Evergreen Forest	111,181,271	27,318,927.51	142,406,337	29,222,283.08	17,127,965	3,793,842.42	-	-	68,506,267	26,891,518.96	339,221,840	87,226,571.96
Hill Evergreen Forest	37,709,468	10,680,078.57	41,497,627	8,418,990.94	-	-	-	-	-	-	79,207,095	19,099,069.51
Pine Forest	7,723,626	1,071,056.40	-	-	-	-	-	-	-	-	7,723,626	1,071,056.40
Swamp Forest	-	-	4,206,094	775,236.96	-	-	-	-	-	-	4,206,094	775,236.96
Mixed Deciduous Forest	274,772,860	93,122,369.03	110,747,966	24,070,642.97	87,754,391	30,316,234.78	-	-	19,818,703	7,688,805.67	493,093,920	155,198,052.45
Dry Dipterocarp Forest	291,518,200	44,603,098.84	47,844,323	6,235,772.36	47,049,041	5,267,222.09	-	-	-	-	386,411,564	56,106,093.30
Forest Plantation	2,401,464	205,039.74	-	-	-	-	-	-	8,276,886	1,183,884.33	10,678,349	1,388,924.07
Disturbed Forest	-	-	75,109	1,246.87	-	-	-	-	-	-	75,109	1,246.87
Total	725,306,888	177,000,570.09	346,777,457	68,724,173.18	151,931,397	39,377,299.29	442,645,125	127,494,801.02	96,601,855	35,764,208.96	1,763,262,722	448,361,052.54

Tree Stem (per-ha), Tree Volume (per-ha) of Wildlife Sanctuary

Forest Type	North		North - East		Central		South		East		Total (Country)	
	Density	Volume	Density	Volume	Density	Volume	Density	Volume	Density	Volume	Density	Volume
	(trees/ha)	(cu.m./ha)	(trees/ha)	(cu.m./ha)	(trees/ha)	(cu.m./ha)	(trees/ha)	(cu.m./ha)	(trees/ha)	(cu.m./ha)	(trees/ha)	(cu.m./ha)
Tropical Evergreen Forest	-	-	-	-	-	-	785	226.21	-	-	785	226.21
Dry Evergreen Forest	476	116.92	758	155.63	405	89.71	-	-	478	187.79	555	147.43
Hill Evergreen Forest	401	113.48	1,228	249.09	-	-	-	-	-	-	597	145.60
Pine Forest	476	66.01	-	-	-	-	-	-	-	-	476	66.01
Swamp Forest	-	-	280	51.61	-	-	-	-	-	-	280	51.61
Mixed Deciduous Forest	285	96.62	461	100.15	193	66.68	-	-	301	116.72	303	95.22
Dry Dipterocarp Forest	691	105.72	749	97.67	556	62.27	-	-	-	-	690	102.60
Forest Plantation	740	63.18	-	-	-	-	-	-	578	82.67	605	79.43
Disturbed Forest	-	-	20	0.33	-	-	-	-	-	-	20	0.33
Average	419	102.14	637	126.21	261	67.72	785	226.21	432	160.10	495	125.76

Total Stock of Wildlife Non-hunting Area

Forest Type	North		North - East		Central		South		East		Total (Country)	
	Trees	Volume (cu.m.)	Trees	Volume (cu.m.)	Trees	Volume (cu.m.)	Trees	Volume (cu.m.)	Trees	Volume (cu.m.)	Trees	Volume (cu.m.)
Dry Evergreen Forest	-	-	-	-	7,277,750	715,587.99	-	-	-	-	7,277,750	715,587.99
Fresh Water Swamp Forest	-	-	-	-	-	-	231,707,784	12,558,021.96	-	-	231,707,784	12,558,021.96
Mixed Deciduous Forest	13,386,713	1,678,122.90	-	-	-	-	-	-	5,201,993	312,511.21	18,588,706	1,990,634.11
Dry Dipterocarp Forest	11,380,160	1,266,271.28	36,616,200	4,535,127.63	-	-	-	-	-	-	47,996,360	5,801,398.91
Total	24,766,872	2,944,394.19	36,616,200	4,535,127.63	7,277,750	715,587.99	231,707,784	12,558,021.96	5,201,993	312,511.21	305,570,600	21,065,642.98

Tree Stem (per-ha), Tree Volume (per-ha) of Wildlife Non-hunting Area

Forest Type	North		North - East		Central		South		East		Total (Country)	
	Density	Volume	Density	Volume	Density	Volume	Density	Volume	Density	Volume	Density	Volume
	(trees/ha)	(cu.m./ha)	(trees/ha)	(cu.m./ha)	(trees/ha)	(cu.m./ha)	(trees/ha)	(cu.m./ha)	(trees/ha)	(cu.m./ha)	(trees/ha)	(cu.m./ha)
Dry Evergreen Forest	-	-	-	-	250	24.58	-	-	-	-	250	24.58
Fresh Water Swamp Forest	-	-	-	-	-	-	924	50.08	-	-	924	50.08
Mixed Deciduous Forest	329	41.22	-	-	-	-	-	-	1,287	77.30	393	43.62
Dry Dipterocarp Forest	559	62.21	600	74.31	-	-	-	-	-	-	567	64.53
Average	406	48.21	600	74.31	250	24.58	924	50.08	1,287	77.30	484	50.86

Permanent Plots (Plot C)

Forest Type	Density		Volume		Total	
	Trees/rai	Trees/ha	cu.m./rai	cu.m./ha	Trees	Volume
Tropical Evergreen Forest	144	898	34.56	216.03	763,352,090	183,673,090.38
Dry Evergreen Forest	105	655	21.61	135.03	1,715,084,490	353,401,651.60
Hill Evergreen Forest	117	734	19.95	124.66	428,970,397	72,868,117.77
Pine Forest	87	542	24.43	152.70	36,002,161	10,143,020.43
Fresh Water Swamp Forest	84	523	4.22	26.38	27,765,504	1,401,565.24
Mangrove Forest	194	1,210	4.31	26.95	16,074,766	358,042.17
Swamp Forest	55	345	4.97	31.05	9,166,602	824,896.66
Beach Forest	22	140	4.50	28.12	1,859,890	373,517.25
Mixed Deciduous Forest	62	390	13.24	82.75	2,856,392,845	606,798,845.16
Dry Dipterocarp Forest	129	808	15.04	93.98	2,522,144,001	293,387,576.27
Forest Plantation	82	512	9.56	59.73	272,208,220	31,738,275.64
Disturbed Forest	39	245	3.85	24.09	97,644,237	9,599,153.58
Total					8,746,665,203	1,564,567,752.15
Average	90	560	16.04	100.23		

All Plots (Plot C,N,E,S,W)

Forest Type	Density		Volume		Total	
	Trees/rai	Trees/ha	cu.m./rai	cu.m./ha	Trees	Volume
Tropical Evergreen Forest	111	691	30.33	189.55	609,436,558	167,173,486.64
Dry Evergreen Forest	88	547	18.61	116.30	1,412,495,903	300,071,679.68
Hill Evergreen Forest	93	581	19.24	120.25	323,179,413	66,859,694.68
Pine Forest	89	555	20.50	128.11	36,484,022	8,421,845.24
Fresh Water Swamp Forest	86	538	3.98	24.87	22,104,059	1,021,596.91
Mangrove Forest	145	907	3.31	20.67	7,450,191	169,808.50
Swamp Forest	44	277	6.61	41.32	5,313,739	792,324.63
Beach Forest	101	630	6.91	43.16	1,725,596	118,214.01
Mixed Deciduous Forest	55	343	11.73	73.33	2,465,903,569	527,418,721.91
Dry Dipterocarp Forest	116	726	13.84	86.48	2,355,355,886	280,441,578.14
Forest Plantation	70	438	6.64	41.50	267,713,839	25,351,304.66
Disturbed Forest	33	208	3.48	21.77	84,937,652	8,885,365.92
Total					7,592,100,427	1,386,725,620.92
Average	78	486	14.21	88.84		

Permanent Plots (Plot C) vs All Plots (Plot C,N,E,S,W)

Forest Type	Density				Volume			
	Trees/rai		Trees/ha		cu.m./rai		cu.m./ha	
	plot C	All plots	plot C	All plots	plot C	All plots	plot C	All plots
Tropical Evergreen Forest	144	111	898	691	34.56	30.33	216.03	189.55
Dry Evergreen Forest	105	88	655	547	21.61	18.61	135.03	116.30
Hill Evergreen Forest	117	93	734	581	19.95	19.24	124.66	120.25
Pine Forest	87	89	542	555	24.43	20.50	152.70	128.11
Fresh Water Swamp Forest	84	86	523	538	4.22	3.98	26.38	24.87
Mangrove Forest	194	145	1,210	907	4.31	3.31	26.95	20.67
Swamp Forest	55	44	345	277	4.97	6.61	31.05	41.32
Beach Forest	22	101	140	630	4.50	6.91	28.12	43.16
Mixed Deciduous Forest	62	55	390	343	13.24	11.73	82.75	73.33
Dry Dipterocarp Forest	129	116	808	726	15.04	13.84	93.98	86.48
Forest Plantation	82	70	512	438	9.56	6.64	59.73	41.50
Disturbed Forest	39	33	245	208	3.85	3.48	24.09	21.77
Average	90	78	560	486	16.04	14.21	100.23	88.84

Tree Stem (per-ha), Tree Volume (per-ha) of Non-Protected Area

Forest Type	North		North - East		Central		South		East		Total (Country)	
	Density	Volume	Density	Volume	Density	Volume	Density	Volume	Density	Volume	Density	Volume
	(trees/ha)	(cu.m./ha)	(trees/ha)	(cu.m./ha)	(trees/ha)	(cu.m./ha)	(trees/ha)	(cu.m./ha)	(trees/ha)	(cu.m./ha)	(trees/ha)	(cu.m./ha)
Tropical Evergreen Forest	-	-	-	-	-	-	572	145.06	-	-	572	145.06
Dry Evergreen Forest	482	71.10	806	102.53	856	98.52	-	-	671	49.71	629	83.21
Hill Evergreen Forest	572	103.85	850	133.44	-	-	-	-	-	-	576	104.34
Pine Forest	570	155.42	-	-	-	-	-	-	-	-	570	155.42
Fresh Water Swamp Forest	-	-	-	-	-	-	456	15.43	-	-	456	15.43
Mangrove Forest	-	-	-	-	907	20.67	-	-	-	-	907	20.67
Swamp Forest	-	-	273	27.61	-	-	-	-	-	-	273	27.61
Mixed Deciduous Forest	371	64.04	487	56.30	341	47.74	188	4.66	339	66.48	385	60.04
Dry Dipterocarp Forest	796	84.80	723	59.70	894	70.55	-	-	752	56.33	778	76.18
Forest Plantation	429	45.22	371	15.50	213	35.45	228	68.79	831	25.14	431	35.52
Disturbed Forest	230	21.38	245	26.90	136	7.47	151	24.25	87	11.07	219	22.36
Average	510	71.51	574	56.83	454	53.17	467	111.23	577	42.88	519	67.08

THE END

