

⑤ 治山ダム (App. Figure-11 参照)

目的：流水の掃流力により容易に運搬される砂質土砂を抑止し、下流への流出を未然に防止する。

資材：フトン籠（モデルプランテーションエリアでは礫や転石が流下する恐れがないため、簡易構造で十分対応できる。基礎地盤は軟弱な場合が多いため、フレキシブルな構造が必要である。）

上記のうち山腹工としての埋設工、暗渠工および柵工は浸食の程度（ランク A、B、C、D）に応じて適宜用いることが望まれる。工種選択の模式例を示すと次のとおりである。

(App. Figure-12 参照)

浸食の程度		工種
ガリー浸食	ランク A	フトン籠埋設工、丸太埋設工、そだ暗渠工、丸太枠工、編柵工
	ランク B	丸太埋設工、そだ暗渠工、丸太枠工、編柵工
	ランク C	そだ暗渠工、丸太枠工、編柵工
表面浸食	ランク D	丸太枠工、編柵工

8. 今後の森林施業についての提言

8.1. 基本的事項

森林施業を行うに当たっては森林の健全性を維持し、もって森林内容を将来に向けて維持・向上させること、森林およびその周辺の環境を保全すること等が大前提となる。この観点からモデルプランテーションエリアにおける今後の森林施業について以下の提言を行う。

- ① モデルプランテーションの造成のための植栽箇所は、浸食を加速させる大面積の皆伐を避けるため分散させる必要がある。

植栽箇所の分散は植物による緩衝地帯を設置することになる。したがって植栽木が林地を覆いつくすまで隣接地の皆伐はするべきではない。

- ② プランテーションに外来樹種を導入するにあたっては、虫病害発生危険性を最少にし、成林を確実にするため十分な観察や適応性のチェックを行う必要がある。
- ③ 混交フタバガキ科林は調査地域の3分の2をカバーしており、蓄積において70%以上を占めている。

森林造成が可能な箇所はほとんどがこの地域であるが、一部に地形が悪く、貧栄養土壌の箇所があるのでこのことを十分配慮した森林施業が必要である。貧栄養土壌の箇所には養分要求度の少ない樹種を選択すべきである。

有用商業樹種の比率の高い森林については現況の維持を図るため、択伐による天然更新、エンリッチメント植栽のような林分改良の手法を導入すべきである。

- ④ 泥炭湿地林は土壌が強酸性のHistosolsで、地表の状況からも造林が不可能な箇所が多く、Alan林のように天然更新も困難な森林があるのでこの取扱いには細心の注意が必要である。

淡水湿地林は溪岸の保護に有効なほか斜面上部からの流出土砂を林内に留める機能も有するので現状のまま存置したい。

- ⑤ 緩傾斜地の土壌で中・細粒質のAcrisolsは調査地内では最も造林に適した土壌といえるが、土壌養分が貧しいので地表の有機質層をできるだけ失わせないような地ごしらえ方法を採用することが必要である。

- ⑥ 傾斜地の粗粒質の土壌は被浸食性が高いので人工林の造成、道路の作設には十分な注意を払う必要がある。土壌浸食の防止のため編柵工等適切な浸食防止策を講じることを提唱する。

8.2. 調査結果を踏まえた具体的事項

モデルプランテーションエリアはState Land (非National Forest Estate) に属している。

しかし調査地中部から南東部にかけて高蓄積の混交フタバガキ科林が広く分布している。

7.2.1. で述べたように「森林施業の基本は森林の内容を将来に向けて維持・向上させること」から考察すると、この地域をすべて造林の対象とすることについては十分慎重な検討が必要である。

また、かつて伐採が一部で行なわれた森林 (Exploited Forest) においても後継樹としてフタバガキ科を中心とする商業樹種が多く見られる森林があり、今後これらの樹種を育成する森林施業も十分検討に値する。

これらの森林の中にはフタバガキ科の幼・稚樹が多数発生している箇所も見られる。これら稚樹は山引き苗として利用するばかりでなく、当該箇所において積極的に育成することも考慮したい。

Berait川に沿う一帯、Ukong 地区、Rambai地区の西部には湿地帯が多く分布している。湿地林の林分構成は概してAlanやKapur payaの混交割合が高い。湿地林を開発の対象とする場合は更新面のリスクを十分考慮した取扱いが必要となる。

Apak Apak 付近におけるAlan林の択伐跡地 (1967年頃実施) では後継樹はほとんどKapur payaに置き変わっていた。この例からもAlan林の更新は困難なことが窺い知れ、細心な取り扱いが望まれる。

現地調査の結果から地形および森林タイプ、土壌型の組合せと森林の取扱いをまとめたのが Table-26 である。森林の取扱いを主目的とした調査ではなかったので不完全であり、調査箇所も限られている。したがって本表は絶対的な指針ではない。

Table-26 Plan of forest operations

地形	森林タイプ 土壌タイプ	留意点	箇所	伐採方法	更新方法
河川沿い	① 河岸低湿地 ・低地	河岸林として保護が必要 軟弱地盤のため作業性が悪い 細粒質、排水やや不良のため造林注意	全域	禁伐	-
	② 低標高平坦地	泥炭湿地林3.1、3.2 二次林8 Gleysols Histosols	低地	小面積皆伐	造林
	③ 同上	Alan bunga forest 3.3 Histosols	全域	禁伐	-
	④ 同上	Padang alan forest 3.5 Histosols	低地	択伐	天然更新
	⑤ 丘陵地 微波状地形	低地混交7カ研科林 5(2)、5(2).EX Acrisols	緩斜地 急斜地	小面積皆伐 択伐	造林 天然更新 エロチン
	⑥ 丘陵地	混交フタバガキ科林 5(3)、5(4)、5(4).EX Acrisols	全域	択伐	天然更新 エロチン

<備考> 1. 森林タイプ別面積は次のとおりである。

- 層2: 5,069.32ha 層3.1、3.2、8: 5,623.40ha 層3.3: 947.70ha 層3.5: 391.34ha 層5(2)、5(2).EX: 21,894.33ha 層5(3)、5(4)、5(4).EX: 1,124.80ha

- 2. ②のうち小面積皆伐の箇所である低地は点在するため、伐採方法は群状皆伐が望ましい。
- 3. ⑤のうち小面積皆伐は緩斜地を適地とするが、特に層5(2).EXで帯状皆伐として実施されることが望ましい。
- 4. ②での造林樹種は種子の確保や苗木の生産等を考慮すると郷土種であるKapur payaが望ましい。
- 5. ⑤での造林樹種は自然生態系の保全を考慮するとKapur等の郷土樹種が望ましいが、層5(2).EX等で林分不良により立地環境が劣化している箇所は早成樹種Acacia mangiumの導入も考慮する必要がある。

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App. Table-1 List of principal instruments employed

(1) 対空標識設置/埋石		
簡易GPS	(ソニーピクセル)	1台
(2) 航空写真撮影		
撮影機	(ビーチクラフトB60)	1機
カメラ	(ウィルド RC10 1461)	1台
(3) 写真処理		
現像機	(MORSE)	1台
引き伸し機	(ウィルド E4)	1台
プリンター	(BSKOPOT 842)	1台
乾燥機	(TG 24)	1台
(4) 標定点測量		
GPS測量機器	(トリンプル4000SL)	3台
パソコン	(東芝J3100SGT)	1台
プリンター	(キャノン)	1台
測角測距儀	(グッピーGTS-10D)	1台
小型発電機	(ホンダEX300)	3台
(5) 水準測量		
水準儀	(ウィルド NA2000)	2台
水準儀	(ニコン オートレベル)	1台
バーコード標尺		3台
(6) 空中三角測量		
点刻器	(ウィルドPUG4)	1台
ステレオコンパレーター	(ツァイス)	1台
計算機	(富士通ファコムM760-4)	1台
(7) 図化		
座標展開機	(ムトーXT1100)	1台
図化機	(ウィルド ステレオ フォッター A8)	2台
図化機	(ツァイス メトログラフ)	1台

App. Table-2 List of photographs

<u>コース番号</u>	<u>カウンター番号</u>	<u>写真枚数</u>	<u>ロール番号</u>	<u>撮影年月日</u>
C 1	146-160	1 5	J I C A 1	7 / 7 / 92
C 2	161-179	1 9	J I C A 1	7 / 7 / 92
C 3	180-201	2 2	J I C A 1	7 / 7 / 92
C 4	202-225	2 4	J I C A 1	7 / 7 / 92
C 5	490-519	3 0	J I C A 2	2 / 8 / 92
C 6	520-548	2 9	J I C A 2	2 / 8 / 92
C 7	549-577	2 8	J I C A 2	2 / 8 / 92
C 8	578-605	2 8	J I C A 2	2 / 8 / 92
C 9	659-686	2 8	J I C A 3	3 / 8 / 92
C10	687-715	2 9	J I C A 3	3 / 8 / 92
C11	716-743	2 8	J I C A 3	3 / 8 / 92
C12	744-770	2 7	J I C A 3	3 / 8 / 92
C13	771-797	2 7	J I C A 3	3 / 8 / 92
C14	798-818	2 1	J I C A 3	3 / 8 / 92
C15	907-926	2 0	J I C A 2	10 / 8 / 92
C16	399-417	1 9	J I C A 1	25 / 7 / 92
C17	382-398	1 7	J I C A 1	25 / 7 / 92
C18	367-381	1 5	J I C A 1	25 / 7 / 92
C19	355-366	1 2	J I C A 1	25 / 7 / 92
C20	438-445	8	J I C A 1	25 / 7 / 92
C21	963-976	1 4	J I C A 2	10 / 8 / 92
C22	819-840	2 2	J I C A 3	3 / 8 / 92
C22	898-906	9	J I C A 2	10 / 8 / 92
C23	877-888	1 2	J I C A 2	10 / 8 / 92
C24	889-897	9	J I C A 2	10 / 8 / 92

合計 5 1 2 枚

雲に覆われており再撮影を実施したため不要となったもの：

<u>コース番号</u>	<u>カウンター番号</u>	<u>写真枚数</u>	<u>ロール番号</u>	<u>撮影年月日</u>
C15	418-437	2 0	J I C A 1	25 / 7 / 92
C21	446-459	1 4	J I C A 1	25 / 7 / 92

App. Table-3 List of photos and films for delivery

a. ポジフィネム

<u>コース番号</u>	<u>カウンター番号</u>	<u>写真枚数</u>
C 3	186-194	9
C 4	207-219	1 3
C 5	492-508	1 7
C 6	530-545	1 6
C 7	551-567	1 7
C 8	586-603	1 8
C 9	662-678	1 7
C10	700-710	1 1
C11	722-731	1 0
	合計	1 2 8 枚

b. 2倍伸し写真

<u>コース番号</u>	<u>カウンター番号</u>	<u>写真枚数</u>
C 3	186-194	9
C 4	207-218	1 2
C 5	493-508	1 6
C 6	530-545	1 6
C 7	551-567	1 7
C 8	586-603	1 8
C 9	662-678	1 7
C10	700-710	1 1
C11	722-731	1 0
	合計	1 2 6 枚

App . Table-4

Volume table (All species) No.1

(Unit : m³)

Clear Length (m)	Diameter Breast Height (cm)															
	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	
10	0.205	0.254	0.307	0.366	0.430	0.499	0.574	0.653	0.738	0.828	0.924	1.024	1.130	1.241	1.357	
12	0.233	0.288	0.349	0.416	0.489	0.568	0.652	0.743	0.839	0.942	1.050	1.164	1.284	1.410	1.542	
14	0.260	0.321	0.389	0.464	0.545	0.633	0.727	0.828	0.935	1.049	1.170	1.297	1.431	1.572	1.719	
16	0.286	0.353	0.428	0.510	0.599	0.695	0.799	0.909	1.027	1.153	1.285	1.425	1.572	1.727	1.888	
18	0.310	0.383	0.465	0.554	0.650	0.755	0.868	0.988	1.116	1.252	1.396	1.548	1.708	1.876	2.051	
20	0.334	0.413	0.500	0.596	0.700	0.813	0.934	1.064	1.202	1.349	1.504	1.667	1.839	2.020	2.209	
22	0.357	0.442	0.535	0.637	0.749	0.869	0.999	1.138	1.285	1.442	1.608	1.783	1.967	2.160	2.362	
24	0.380	0.469	0.569	0.678	0.796	0.924	1.062	1.209	1.366	1.533	1.709	1.895	2.091	2.296	2.511	
26	0.402	0.497	0.602	0.717	0.842	0.978	1.123	1.279	1.445	1.622	1.808	2.005	2.212	2.429	2.657	
28	0.423	0.523	0.634	0.755	0.887	1.030	1.184	1.348	1.523	1.709	1.905	2.112	2.330	2.559	2.799	
30	0.444	0.549	0.665	0.793	0.931	1.081	1.242	1.415	1.598	1.793	2.000	2.217	2.446	2.686	2.938	
32	0.465	0.575	0.696	0.830	0.975	1.131	1.300	1.481	1.673	1.877	2.093	2.320	2.560	2.811	3.074	
34	0.485	0.600	0.727	0.866	1.017	1.181	1.357	1.545	1.746	1.958	2.184	2.421	2.671	2.933	3.208	
36	0.505	0.624	0.756	0.901	1.059	1.229	1.412	1.608	1.817	2.039	2.273	2.521	2.781	3.054	3.340	
38	0.525	0.649	0.786	0.936	1.100	1.277	1.467	1.671	1.888	2.118	2.361	2.618	2.888	3.172	3.469	
40	0.544	0.672	0.815	0.971	1.140	1.324	1.521	1.732	1.957	2.196	2.448	2.714	2.995	3.289	3.596	
42	0.563	0.696	0.843	1.004	1.180	1.370	1.574	1.792	2.025	2.272	2.533	2.809	3.099	3.403	3.722	
44	0.582	0.719	0.871	1.038	1.219	1.415	1.626	1.852	2.093	2.348	2.618	2.903	3.202	3.517	3.846	
46	0.600	0.742	0.899	1.071	1.258	1.460	1.678	1.911	2.159	2.422	2.701	2.995	3.304	3.628	3.968	
48	0.618	0.764	0.926	1.103	1.296	1.505	1.729	1.969	2.225	2.496	2.783	3.086	3.404	3.738	4.088	
50	0.636	0.787	0.953	1.135	1.334	1.549	1.779	2.026	2.289	2.569	2.864	3.175	3.503	3.847	4.207	

Volume table (All species) No. 2

(Unit : m³)

Clear length (m)	Diameter Breast Height (cm)														
	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76
10	1.478	1.605	1.737	1.874	2.016	2.164	2.317	2.475	2.638	2.807	2.981	3.160	3.344	3.534	3.729
12	1.680	1.824	1.974	2.130	2.292	2.460	2.634	2.813	2.999	3.191	3.388	3.592	3.802	4.017	4.239
14	1.873	2.033	2.200	2.374	2.554	2.741	2.935	3.135	3.342	3.556	3.776	4.003	4.237	4.477	4.724
16	2.057	2.233	2.417	2.608	2.806	3.011	3.224	3.444	3.671	3.906	4.148	4.397	4.654	4.918	5.189
18	2.235	2.426	2.626	2.833	3.048	3.271	3.502	3.741	3.988	4.243	4.506	4.777	5.056	5.342	5.637
20	2.407	2.613	2.828	3.051	3.283	3.523	3.772	4.029	4.295	4.570	4.853	5.144	5.444	5.753	6.071
22	2.574	2.794	3.024	3.262	3.510	3.767	4.033	4.308	4.593	4.886	5.189	5.501	5.822	6.152	6.491
24	2.736	2.970	3.214	3.468	3.732	4.005	4.288	4.580	4.883	5.195	5.516	5.848	6.189	6.540	6.901
26	2.894	3.142	3.400	3.669	3.948	4.237	4.536	4.845	5.165	5.495	5.836	6.186	6.548	6.919	7.300
28	3.049	3.310	3.582	3.865	4.159	4.463	4.778	5.105	5.441	5.789	6.148	6.517	6.898	7.289	7.691
30	3.201	3.475	3.760	4.057	4.365	4.685	5.016	5.358	5.712	6.077	6.454	6.841	7.241	7.651	8.073
32	3.349	3.636	3.935	4.246	4.568	4.903	5.249	5.607	5.977	6.359	6.753	7.159	7.577	8.006	8.448
34	3.495	3.795	4.106	4.430	4.767	5.116	5.477	5.851	6.237	6.636	7.047	7.471	7.907	8.355	8.816
36	3.638	3.950	4.275	4.612	4.963	5.326	5.702	6.091	6.493	6.908	7.336	7.777	8.231	8.698	9.178
38	3.779	4.103	4.440	4.791	5.155	5.532	5.923	6.327	6.745	7.176	7.620	8.078	8.550	9.035	9.533
40	3.918	4.254	4.603	4.967	5.344	5.735	6.141	6.560	6.993	7.439	7.900	8.375	8.864	9.367	9.883
42	4.055	4.402	4.764	5.140	5.531	5.936	6.355	6.789	7.237	7.699	8.176	8.667	9.173	9.694	10.228
44	4.190	4.549	4.922	5.311	5.715	6.133	6.566	7.014	7.477	7.955	8.448	8.956	9.478	10.016	10.568
46	4.323	4.693	5.079	5.480	5.896	6.328	6.775	7.237	7.715	8.208	8.716	9.240	9.779	10.334	10.904
48	4.454	4.836	5.233	5.646	6.075	6.520	6.980	7.457	7.949	8.457	8.981	9.521	10.076	10.648	11.235
50	4.584	4.977	5.385	5.811	6.252	6.710	7.184	7.674	8.180	8.703	9.242	9.798	10.370	10.958	11.562

Volume table (All species) No. 3

(Unit: m³)

Clear Length (m)	Diameter Breast Height (cm)															
	78	80	82	84	86	88	90	92	94	96	98	100	102	104	106	
10	3.929	4.134	4.345	4.561	4.782	5.009	5.241	5.478	5.720	5.968	6.221	6.479	6.743	7.012	7.286	
12	4.466	4.700	4.939	5.185	5.437	5.694	5.958	6.227	6.503	6.784	7.072	7.366	7.665	7.971	8.282	
14	4.978	5.238	5.505	5.779	6.059	6.346	6.640	6.940	7.247	7.561	7.882	8.209	8.543	8.883	9.231	
16	5.468	5.754	6.047	6.348	6.655	6.971	7.293	7.623	7.961	8.305	8.657	9.017	9.384	9.758	10.139	
18	5.940	6.250	6.569	6.896	7.230	7.573	7.923	8.282	8.648	9.023	9.405	9.795	10.194	10.600	11.015	
20	6.397	6.731	7.074	7.426	7.786	8.155	8.532	8.918	9.313	9.716	10.128	10.549	10.978	11.415	11.862	
22	6.840	7.198	7.564	7.941	8.326	8.720	9.124	9.537	9.959	10.390	10.830	11.280	11.739	12.207	12.684	
24	7.271	7.652	8.042	8.442	8.851	9.270	9.699	10.138	10.587	11.045	11.514	11.992	12.479	12.977	13.484	
26	7.692	8.095	8.507	8.930	9.364	9.807	10.261	10.725	11.200	11.685	12.180	12.686	13.202	13.728	14.265	
28	8.104	8.528	8.962	9.408	9.864	10.332	10.810	11.299	11.799	12.310	12.832	13.364	13.908	14.463	15.028	
30	8.507	8.952	9.408	9.876	10.355	10.845	11.347	11.861	12.386	12.922	13.470	14.029	14.599	15.181	15.775	
32	8.902	9.367	9.845	10.334	10.835	11.349	11.874	12.411	12.961	13.522	14.095	14.680	15.277	15.886	16.507	
34	9.289	9.775	10.273	10.784	11.307	11.843	12.391	12.952	13.525	14.111	14.709	15.319	15.942	16.578	17.226	
36	9.670	10.176	10.695	11.226	11.771	12.329	12.899	13.483	14.080	14.689	15.312	15.948	16.596	17.258	17.933	
38	10.045	10.570	11.109	11.661	12.227	12.806	13.399	14.005	14.625	15.258	15.905	16.566	17.239	17.927	18.628	
40	10.414	10.959	11.517	12.090	12.676	13.277	13.891	14.520	15.162	15.819	16.489	17.174	17.872	18.585	19.312	
42	10.777	11.341	11.919	12.512	13.119	13.740	14.376	15.027	15.691	16.371	17.065	17.773	18.496	19.234	19.986	
44	11.136	11.718	12.315	12.928	13.555	14.197	14.854	15.526	16.213	16.915	17.632	18.364	19.111	19.873	20.650	
46	11.489	12.090	12.706	13.338	13.985	14.648	15.326	16.019	16.728	17.452	18.192	18.947	19.718	20.504	21.306	
48	11.838	12.457	13.092	13.743	14.410	15.093	15.791	16.506	17.236	17.983	18.745	19.523	20.317	21.127	21.953	
50	12.183	12.820	13.474	14.144	14.830	15.532	16.251	16.986	17.738	18.506	19.291	20.091	20.909	21.742	22.592	

Volume table (All species) No. 4

	108	110	112	114	116	118	120	122	124	126	128	130	132	134	136
10	7.565	8.140	8.435	8.736	9.042	9.353	9.670	9.991	10.318	10.651	10.989	11.332	11.680	12.034	
12	8.600	9.253	9.589	9.931	10.279	10.632	10.992	11.358	11.730	12.108	12.492	12.881	13.277	13.679	
14	9.585	10.313	10.687	11.068	11.455	11.850	12.251	12.658	13.073	13.494	13.922	14.356	14.798	15.246	
16	10.528	11.328	11.739	12.157	12.583	13.016	13.456	13.904	14.360	14.822	15.292	15.769	16.254	16.746	
18	11.437	12.306	12.753	13.207	13.669	14.140	14.618	15.105	15.599	16.102	16.612	17.131	17.658	18.192	
20	12.317	13.252	13.733	14.223	14.721	15.227	15.742	16.266	16.799	17.340	17.890	18.448	19.016	19.591	
22	13.170	14.171	14.685	15.208	15.741	16.283	16.834	17.394	17.963	18.542	19.130	19.727	20.334	20.949	
24	14.001	15.065	15.612	16.168	16.734	17.310	17.896	18.491	19.097	19.712	20.337	20.972	21.616	22.271	
26	14.812	15.937	16.515	17.104	17.703	18.312	18.932	19.562	20.202	20.853	21.514	22.186	22.868	23.560	
28	15.604	16.790	17.399	18.019	18.650	19.292	19.945	20.608	21.283	21.969	22.665	23.373	24.091	24.821	
30	16.380	17.624	18.264	18.915	19.577	20.251	20.936	21.633	22.341	23.061	23.792	24.535	25.289	26.054	
32	17.140	18.443	19.112	19.793	20.486	21.191	21.908	22.637	23.378	24.131	24.896	25.674	26.463	27.264	
34	17.887	19.246	19.944	20.655	21.378	22.114	22.862	23.623	24.396	25.182	25.981	26.792	27.615	28.451	
36	18.620	20.035	20.762	21.502	22.255	23.021	23.800	24.592	25.397	26.215	27.045	27.890	28.748	29.618	
38	19.342	20.811	21.566	22.335	23.117	23.913	24.722	25.544	26.381	27.231	28.094	28.971	29.862	30.766	
40	20.052	21.576	22.358	23.155	23.966	24.791	25.630	26.483	27.350	28.231	29.126	30.035	30.958	31.896	
42	20.752	22.329	23.139	23.963	24.802	25.656	26.524	27.407	28.304	29.216	30.142	31.083	32.039	33.009	
44	21.442	23.071	23.908	24.760	25.627	26.509	27.406	28.318	29.245	30.187	31.145	32.117	33.104	34.106	
46	22.123	23.804	24.667	25.546	26.441	27.351	28.276	29.217	30.174	31.146	32.134	33.137	34.155	35.189	
48	22.795	24.527	25.416	26.322	27.244	28.182	29.135	30.105	31.091	32.092	33.110	34.143	35.193	36.258	
50	23.459	25.342	26.257	27.189	28.137	29.102	30.084	31.082	32.094	33.119	34.156	35.197	36.254	37.328	

(m) Clear length

Volume table (All species) No. 5

	138	140	142	144	146	148	150
10	12.392	12.757	13.126	13.501	13.881	14.267	14.658
12	14.088	14.502	14.922	15.348	15.780	16.218	16.663
14	15.700	16.162	16.630	17.105	17.587	18.075	18.570
16	17.246	17.753	18.267	18.789	19.318	19.854	20.398
18	18.735	19.286	19.844	20.411	20.986	21.569	22.160
20	20.176	20.769	21.370	21.981	22.600	23.227	23.864
22	21.574	22.208	22.852	23.504	24.166	24.837	25.518
24	22.935	23.609	24.293	24.987	25.691	26.404	27.128
26	24.263	24.976	25.700	26.434	27.178	27.933	28.698
28	25.561	26.312	27.075	27.848	28.632	29.427	30.233
30	26.832	27.620	28.420	29.232	30.055	30.890	31.736
32	28.077	28.903	29.740	30.589	31.451	32.324	33.210
34	29.300	30.161	31.035	31.921	32.820	33.732	34.656
36	30.502	31.398	32.308	33.230	34.166	35.115	36.077
38	31.684	32.615	33.560	34.518	35.490	36.476	37.475
40	32.847	33.813	34.792	35.786	36.794	37.815	38.851
42	33.994	34.993	36.006	37.035	38.078	39.135	40.207
44	35.124	36.156	37.204	38.266	39.344	40.437	41.544
46	36.239	37.304	38.385	39.481	40.593	41.720	42.863
48	37.340	38.437	39.551	40.681	41.826	42.988	44.165
50	38.427	39.557	40.703	41.865	43.044	44.240	45.451

(m) Clear Length

Volume table (Kapur bukit) No.1

(Unit : m³)

Clear Length (m)	Diameter Breast Height (cm)															
	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	
10	0.298	0.351	0.406	0.463	0.524	0.586	0.652	0.719	0.789	0.861	0.936	1.012	1.090	1.171	1.253	
12	0.352	0.414	0.479	0.547	0.618	0.693	0.770	0.850	0.932	1.017	1.105	1.195	1.288	1.383	1.480	
14	0.406	0.476	0.551	0.630	0.712	0.797	0.886	0.978	1.073	1.171	1.272	1.376	1.482	1.592	1.704	
16	0.458	0.538	0.623	0.711	0.804	0.901	1.001	1.105	1.212	1.323	1.437	1.554	1.674	1.798	1.924	
18	0.510	0.599	0.693	0.792	0.895	1.003	1.114	1.230	1.349	1.473	1.600	1.730	1.864	2.002	2.143	
20	0.562	0.660	0.763	0.872	0.986	1.104	1.227	1.354	1.486	1.621	1.761	1.905	2.053	2.204	2.359	
22	0.613	0.720	0.833	0.951	1.075	1.204	1.338	1.477	1.621	1.769	1.921	2.078	2.239	2.404	2.573	
24	0.663	0.779	0.901	1.030	1.164	1.304	1.449	1.599	1.755	1.915	2.080	2.250	2.424	2.603	2.786	
26	0.713	0.838	0.970	1.108	1.252	1.402	1.559	1.720	1.887	2.060	2.238	2.420	2.608	2.800	2.997	
28	0.763	0.897	1.038	1.185	1.340	1.501	1.668	1.841	2.020	2.204	2.394	2.590	2.790	2.996	3.207	
30	0.813	0.955	1.105	1.262	1.427	1.598	1.776	1.960	2.151	2.347	2.550	2.758	2.971	3.191	3.415	
32	0.862	1.013	1.172	1.339	1.513	1.695	1.884	2.079	2.281	2.490	2.704	2.925	3.152	3.384	3.622	
34	0.911	1.071	1.239	1.415	1.599	1.791	1.991	2.197	2.411	2.631	2.858	3.091	3.331	3.577	3.828	
36	0.960	1.128	1.305	1.491	1.685	1.887	2.097	2.315	2.540	2.772	3.011	3.257	3.509	3.768	4.033	
38	1.009	1.185	1.371	1.566	1.770	1.983	2.203	2.432	2.668	2.912	3.163	3.422	3.687	3.959	4.237	
40	1.057	1.242	1.437	1.641	1.855	2.078	2.309	2.549	2.796	3.052	3.315	3.586	3.863	4.148	4.440	
42	1.105	1.298	1.502	1.716	1.940	2.172	2.414	2.665	2.924	3.191	3.466	3.749	4.039	4.337	4.642	
44	1.153	1.355	1.567	1.790	2.024	2.267	2.519	2.780	3.050	3.329	3.616	3.911	4.214	4.525	4.844	
46	1.201	1.411	1.632	1.865	2.107	2.360	2.623	2.895	3.177	3.467	3.766	4.073	4.389	4.713	5.044	
48	1.248	1.467	1.697	1.938	2.191	2.454	2.727	3.010	3.302	3.604	3.915	4.235	4.563	4.899	5.244	
50	1.296	1.522	1.761	2.012	2.274	2.547	2.830	3.124	3.428	3.741	4.064	4.395	4.736	5.085	5.443	

Volume table (Kapur bukit) No. 2

(Unit : m³)

	Diameter Breast Height (cm)														
	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76
10	1.338	1.424	1.512	1.602	1.693	1.787	1.882	1.979	2.077	2.177	2.279	2.382	2.487	2.594	2.702
12	1.580	1.682	1.786	1.892	2.000	2.110	2.222	2.337	2.453	2.571	2.691	2.814	2.937	3.063	3.191
14	1.818	1.936	2.055	2.177	2.302	2.429	2.558	2.690	2.824	2.960	3.098	3.238	3.381	3.526	3.673
16	2.054	2.186	2.321	2.459	2.600	2.744	2.890	3.038	3.189	3.343	3.499	3.658	3.819	3.983	4.149
18	2.287	2.434	2.585	2.739	2.895	3.055	3.217	3.383	3.551	3.723	3.896	4.073	4.253	4.435	4.619
20	2.518	2.680	2.846	3.015	3.187	3.363	3.542	3.724	3.910	4.098	4.290	4.484	4.682	4.882	5.085
22	2.747	2.924	3.104	3.289	3.477	3.669	3.864	4.063	4.265	4.471	4.679	4.892	5.107	5.326	5.547
24	2.973	3.165	3.361	3.561	3.764	3.972	4.183	4.398	4.617	4.840	5.066	5.296	5.529	5.766	6.006
26	3.199	3.405	3.615	3.830	4.049	4.273	4.500	4.732	4.967	5.207	5.450	5.697	5.948	6.203	6.461
28	3.423	3.643	3.868	4.098	4.333	4.572	4.815	5.063	5.315	5.571	5.831	6.096	6.364	6.636	6.913
30	3.645	3.880	4.120	4.365	4.614	4.869	5.128	5.392	5.660	5.933	6.210	6.492	6.778	7.068	7.362
32	3.866	4.115	4.370	4.629	4.894	5.164	5.439	5.719	6.003	6.293	6.587	6.885	7.189	7.496	7.809
34	4.086	4.349	4.618	4.893	5.173	5.458	5.748	6.044	6.345	6.651	6.961	7.277	7.598	7.923	8.253
36	4.305	4.582	4.865	5.155	5.449	5.750	6.056	6.368	6.685	7.007	7.334	7.667	8.004	8.347	8.694
38	4.522	4.814	5.111	5.415	5.725	6.041	6.362	6.690	7.023	7.361	7.705	8.054	8.409	8.769	9.134
40	4.739	5.044	5.356	5.675	5.999	6.330	6.667	7.010	7.359	7.714	8.074	8.440	8.812	9.189	9.572
42	4.955	5.274	5.600	5.933	6.272	6.618	6.971	7.329	7.694	8.065	8.442	8.825	9.213	9.608	10.008
44	5.170	5.503	5.843	6.190	6.544	6.905	7.273	7.647	8.028	8.415	8.808	9.207	9.613	10.024	10.442
46	5.384	5.731	6.085	6.447	6.815	7.191	7.574	7.964	8.360	8.763	9.172	9.588	10.011	10.439	10.874
48	5.597	5.957	6.326	6.702	7.085	7.476	7.874	8.279	8.691	9.110	9.536	9.968	10.407	10.852	11.304
50	5.809	6.184	6.566	6.956	7.354	7.760	8.173	8.593	9.021	9.456	9.898	10.346	10.802	11.264	11.733

Volume table (Kapur bukit) No. 3

(Unit: m³)

	Diameter Breast Height (cm)															
	78	80	82	84	86	88	90	92	94	96	98	100	102	104	106	
10	2.811	2.922	3.035	3.149	3.264	3.381	3.499	3.619	3.740	3.862	3.986	4.111	4.238	4.365	4.495	
12	3.320	3.451	3.584	3.719	3.855	3.993	4.133	4.274	4.417	4.561	4.708	4.855	5.005	5.156	5.308	
14	3.821	3.972	4.125	4.280	4.437	4.596	4.757	4.919	5.084	5.250	5.419	5.589	5.761	5.934	6.110	
16	4.317	4.487	4.660	4.835	5.012	5.191	5.373	5.557	5.743	5.931	6.121	6.313	6.507	6.703	6.901	
18	4.806	4.996	5.189	5.383	5.581	5.781	5.983	6.187	6.394	6.604	6.815	7.029	7.245	7.464	7.684	
20	5.291	5.500	5.712	5.927	6.144	6.364	6.586	6.812	7.039	7.270	7.503	7.738	7.976	8.217	8.460	
22	5.772	6.000	6.231	6.465	6.702	6.942	7.185	7.431	7.679	7.930	8.185	8.441	8.701	8.963	9.228	
24	6.249	6.496	6.746	6.999	7.256	7.516	7.779	8.045	8.314	8.586	8.861	9.139	9.420	9.704	9.991	
26	6.723	6.988	7.257	7.530	7.806	8.085	8.368	8.654	8.944	9.236	9.532	9.831	10.134	10.439	10.748	
28	7.193	7.477	7.765	8.057	8.352	8.651	8.953	9.259	9.569	9.882	10.199	10.519	10.843	11.170	11.500	
30	7.660	7.963	8.269	8.580	8.894	9.213	9.535	9.861	10.191	10.525	10.862	11.203	11.547	11.895	12.247	
32	8.125	8.446	8.771	9.100	9.434	9.772	10.113	10.459	10.809	11.163	11.521	11.882	12.248	12.617	12.990	
34	8.587	8.926	9.270	9.618	9.971	10.327	10.689	11.054	11.424	11.798	12.176	12.558	12.944	13.335	13.729	
36	9.047	9.404	9.766	10.133	10.504	10.880	11.261	11.646	12.036	12.429	12.828	13.230	13.637	14.049	14.464	
38	9.504	9.880	10.260	10.645	11.036	11.431	11.830	12.235	12.644	13.058	13.476	13.900	14.327	14.759	15.195	
40	9.960	10.353	10.752	11.155	11.564	11.978	12.397	12.821	13.250	13.684	14.122	14.566	15.014	15.466	15.923	
42	10.413	10.825	11.241	11.663	12.091	12.524	12.962	13.405	13.853	14.307	14.765	15.229	15.697	16.170	16.648	
44	10.865	11.294	11.729	12.169	12.615	13.067	13.524	13.986	14.454	14.927	15.405	15.889	16.378	16.871	17.370	
46	11.315	11.761	12.214	12.673	13.137	13.608	14.084	14.565	15.052	15.545	16.043	16.547	17.056	17.570	18.089	
48	11.763	12.227	12.698	13.175	13.658	14.146	14.641	15.142	15.648	16.160	16.678	17.202	17.731	18.266	18.806	
50	12.209	12.691	13.180	13.675	14.176	14.683	15.197	15.716	16.242	16.774	17.311	17.855	18.404	18.959	19.519	

Volume table. (Kapur bukit) No. 4

(Unit : m³)

	Diameter Breast Height (cm)															
	108	110	112	114	116	118	120	122	124	126	128	130	132	134	136	
10	4.625	4.757	4.889	5.024	5.159	5.296	5.434	5.573	5.713	5.855	5.998	6.142	6.287	6.433	6.580	
12	5.462	5.617	5.774	5.933	6.093	6.254	6.417	6.582	6.747	6.915	7.083	7.253	7.425	7.597	7.772	
14	6.287	6.466	6.647	6.829	7.013	7.199	7.386	7.576	7.766	7.959	8.153	8.349	8.546	8.745	8.945	
16	7.102	7.304	7.508	7.714	7.922	8.132	8.344	8.557	8.773	8.990	9.209	9.430	9.653	9.878	10.104	
18	7.907	8.132	8.360	8.589	8.821	9.054	9.290	9.528	9.768	10.010	10.254	10.500	10.749	10.999	11.251	
20	8.705	8.953	9.203	9.456	9.711	9.968	10.228	10.490	10.754	11.020	11.289	11.560	11.833	12.109	12.386	
22	9.496	9.767	10.039	10.315	10.593	10.874	11.157	11.443	11.731	12.022	12.315	12.610	12.908	13.209	13.511	
24	10.281	10.574	10.869	11.167	11.468	11.772	12.079	12.388	12.700	13.015	13.332	13.652	13.975	14.300	14.628	
26	11.060	11.375	11.693	12.013	12.337	12.664	12.994	13.327	13.663	14.001	14.343	14.687	15.034	15.384	15.736	
28	11.834	12.170	12.511	12.854	13.201	13.550	13.903	14.259	14.618	14.981	15.346	15.714	16.086	16.460	16.837	
30	12.602	12.961	13.323	13.689	14.058	14.431	14.807	15.186	15.568	15.954	16.343	16.735	17.131	17.529	17.931	
32	13.367	13.747	14.132	14.519	14.911	15.306	15.705	16.107	16.513	16.922	17.334	17.750	18.170	18.593	19.019	
34	14.127	14.529	14.935	15.345	15.759	16.177	16.598	17.023	17.452	17.884	18.320	18.760	19.203	19.650	20.101	
36	14.884	15.307	15.735	16.167	16.603	17.043	17.487	17.934	18.386	18.842	19.301	19.764	20.231	20.702	21.177	
38	15.636	16.081	16.531	16.984	17.442	17.905	18.371	18.841	19.316	19.795	20.277	20.764	21.255	21.749	22.248	
40	16.385	16.852	17.323	17.798	18.278	18.762	19.251	19.744	20.241	20.743	21.249	21.759	22.273	22.791	23.314	
42	17.131	17.619	18.111	18.609	19.110	19.617	20.128	20.643	21.163	21.687	22.216	22.749	23.287	23.829	24.375	
44	17.874	18.383	18.897	19.415	19.939	20.467	21.000	21.538	22.081	22.628	23.179	23.736	24.297	24.862	25.432	
46	18.614	19.144	19.679	20.219	20.764	21.314	21.870	22.430	22.995	23.564	24.139	24.718	25.302	25.891	26.485	
48	19.351	19.902	20.458	21.020	21.587	22.158	22.736	23.318	23.905	24.497	25.095	25.697	26.304	26.917	27.534	
50	20.086	20.657	21.235	21.817	22.406	22.999	23.598	24.203	24.812	25.427	26.047	26.672	27.303	27.938	28.578	

Volume table (Kapur bukit) No. 5

(Unit : m³)

	Diameter Breast Height (cm)									
	138	140	142	144	146	148	150			
10	6.729	6.879	7.030	7.182	7.335	7.489	7.645			
12	7.947	8.124	8.302	8.482	8.663	8.845	9.028			
14	9.147	9.351	9.556	9.763	9.971	10.181	10.392			
16	10.333	10.562	10.794	11.028	11.263	11.500	11.738			
18	11.505	11.761	12.019	12.279	12.541	12.804	13.070			
20	12.666	12.948	13.232	13.518	13.806	14.097	14.389			
22	13.817	14.124	14.434	14.746	15.061	15.377	15.696			
24	14.958	15.291	15.627	15.965	16.305	16.648	16.993			
26	16.092	16.450	16.811	17.174	17.540	17.909	18.281			
28	17.217	17.601	17.987	18.376	18.768	19.162	19.560			
30	18.336	18.744	19.155	19.570	19.987	20.407	20.831			
32	19.448	19.881	20.317	20.757	21.199	21.645	22.094			
34	20.555	21.012	21.473	21.937	22.405	22.876	23.351			
36	21.655	22.137	22.623	23.112	23.605	24.101	24.601			
38	22.750	23.257	23.767	24.281	24.798	25.320	25.845			
40	23.840	24.371	24.905	25.444	25.987	26.533	27.084			
42	24.926	25.480	26.039	26.602	27.170	27.741	28.317			
44	26.006	26.585	27.168	27.756	28.348	28.944	29.545			
46	27.083	27.686	28.293	28.905	29.521	30.142	30.768			
48	28.155	28.782	29.413	30.049	30.690	31.336	31.986			
50	29.224	29.874	30.530	31.190	31.855	32.525	33.200			

Volume table (Keruing) No.1

(Unit : m³)

Clear Length (m)	Diameter Breast Height (cm)															
	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	
10	0.227	0.289	0.361	0.442	0.532	0.632	0.742	0.862	0.992	1.133	1.285	1.447	1.621	1.806	2.002	
12	0.234	0.298	0.372	0.456	0.549	0.652	0.765	0.888	1.023	1.168	1.324	1.492	1.671	1.861	2.063	
14	0.240	0.306	0.382	0.467	0.563	0.668	0.784	0.911	1.049	1.198	1.358	1.530	1.714	1.909	2.117	
16	0.245	0.313	0.390	0.478	0.575	0.683	0.802	0.932	1.072	1.225	1.388	1.564	1.752	1.952	2.164	
18	0.250	0.319	0.398	0.487	0.586	0.697	0.818	0.950	1.093	1.249	1.416	1.595	1.786	1.990	2.206	
20	0.254	0.325	0.405	0.496	0.597	0.709	0.832	0.966	1.113	1.271	1.440	1.623	1.817	2.025	2.245	
22	0.258	0.330	0.411	0.503	0.606	0.720	0.845	0.982	1.130	1.291	1.463	1.648	1.846	2.057	2.280	
24	0.262	0.334	0.417	0.511	0.615	0.730	0.857	0.996	1.147	1.309	1.484	1.672	1.873	2.086	2.313	
26	0.265	0.339	0.423	0.517	0.623	0.740	0.869	1.009	1.162	1.327	1.504	1.694	1.898	2.114	2.344	
28	0.269	0.343	0.428	0.524	0.631	0.749	0.879	1.022	1.176	1.343	1.523	1.715	1.921	2.140	2.373	
30	0.272	0.347	0.433	0.530	0.638	0.758	0.890	1.033	1.190	1.358	1.540	1.735	1.943	2.165	2.400	
32	0.275	0.351	0.438	0.535	0.645	0.766	0.899	1.044	1.202	1.373	1.557	1.753	1.964	2.188	2.426	
34	0.277	0.354	0.442	0.541	0.651	0.774	0.908	1.055	1.214	1.387	1.572	1.771	1.983	2.210	2.450	
36	0.280	0.358	0.446	0.546	0.657	0.781	0.917	1.065	1.226	1.400	1.587	1.788	2.002	2.231	2.473	
38	0.282	0.361	0.450	0.551	0.663	0.788	0.925	1.074	1.237	1.412	1.601	1.804	2.020	2.251	2.495	
40	0.285	0.364	0.454	0.556	0.669	0.795	0.933	1.084	1.247	1.424	1.615	1.819	2.037	2.270	2.517	
42	0.287	0.367	0.458	0.560	0.674	0.801	0.940	1.092	1.257	1.436	1.628	1.834	2.054	2.288	2.537	
44	0.289	0.370	0.461	0.564	0.680	0.807	0.947	1.101	1.267	1.447	1.640	1.848	2.070	2.306	2.556	
46	0.291	0.372	0.464	0.568	0.685	0.813	0.954	1.109	1.276	1.458	1.653	1.862	2.085	2.323	2.575	
48	0.294	0.375	0.468	0.572	0.689	0.819	0.961	1.117	1.285	1.468	1.664	1.875	2.100	2.339	2.593	
50	0.296	0.377	0.471	0.575	0.694	0.824	0.968	1.124	1.294	1.478	1.675	1.887	2.114	2.355	2.611	

Volume table (Keruing) No. 2

(Unit : m³)

Clear Length (m)	Diameter Breast Height (cm)															
	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	
10	2.210	2.430	2.662	2.906	3.162	3.430	3.711	4.005	4.311	4.630	4.963	5.308	5.667	6.039	6.425	
12	2.278	2.504	2.743	2.994	3.258	3.535	3.824	4.127	4.443	4.772	5.114	5.470	5.840	6.224	6.621	
14	2.336	2.569	2.814	3.071	3.342	3.626	3.923	4.233	4.557	4.895	5.246	5.611	5.990	6.384	6.792	
16	2.388	2.626	2.876	3.140	3.416	3.707	4.010	4.327	4.658	5.003	5.363	5.736	6.124	6.526	6.943	
18	2.435	2.677	2.933	3.201	3.483	3.779	4.089	4.412	4.750	5.102	5.468	5.848	6.244	6.654	7.079	
20	2.478	2.724	2.984	3.257	3.544	3.845	4.160	4.489	4.833	5.191	5.564	5.951	6.353	6.771	7.203	
22	2.517	2.768	3.031	3.309	3.601	3.906	4.226	4.561	4.910	5.273	5.652	6.045	6.454	6.878	7.317	
24	2.554	2.807	3.075	3.357	3.653	3.963	4.287	4.626	4.980	5.349	5.733	6.133	6.547	6.977	7.423	
26	2.588	2.845	3.116	3.401	3.701	4.015	4.344	4.688	5.047	5.420	5.810	6.214	6.634	7.070	7.522	
28	2.619	2.880	3.154	3.443	3.747	4.065	4.398	4.746	5.109	5.487	5.881	6.290	6.716	7.157	7.614	
30	2.649	2.913	3.190	3.483	3.790	4.111	4.448	4.800	5.167	5.550	5.948	6.362	6.792	7.239	7.701	
32	2.678	2.944	3.225	3.520	3.830	4.155	4.496	4.851	5.222	5.609	6.012	6.430	6.865	7.316	7.783	
34	2.705	2.973	3.257	3.555	3.869	4.197	4.541	4.900	5.275	5.666	6.072	6.495	6.934	7.390	7.862	
36	2.730	3.002	3.288	3.589	3.905	4.237	4.584	4.946	5.325	5.719	6.130	6.557	7.000	7.460	7.936	
38	2.755	3.028	3.317	3.621	3.940	4.275	4.625	4.991	5.372	5.770	6.185	6.615	7.062	7.526	8.007	
40	2.778	3.054	3.345	3.652	3.974	4.311	4.664	5.033	5.418	5.819	6.237	6.671	7.122	7.590	8.075	
42	2.800	3.079	3.372	3.681	4.006	4.346	4.702	5.074	5.462	5.866	6.287	6.725	7.180	7.652	8.140	
44	2.822	3.103	3.398	3.710	4.037	4.379	4.738	5.113	5.504	5.912	6.336	6.777	7.235	7.710	8.203	
46	2.843	3.125	3.423	3.737	4.066	4.411	4.773	5.150	5.544	5.955	6.383	6.827	7.288	7.767	8.263	
48	2.863	3.147	3.447	3.763	4.095	4.442	4.806	5.187	5.583	5.997	6.427	6.875	7.340	7.822	8.322	
50	2.882	3.169	3.471	3.789	4.123	4.472	4.839	5.222	5.621	6.037	6.471	6.921	7.389	7.875	8.378	

Volume table (Keruing) No.3

(Unit : m³)

	Diameter Breast Height (cm)															
	78	80	82	84	86	88	90	92	94	96	98	100	102	104	106	
10	6.825	7.238	7.665	8.106	8.562	9.031	9.515	10.013	10.526	11.053	11.595	12.152	12.724	13.311	13.913	
12	7.033	7.459	7.899	8.354	8.823	9.307	9.805	10.319	10.847	11.390	11.949	12.523	13.112	13.717	14.337	
14	7.214	7.651	8.102	8.569	9.050	9.546	10.057	10.584	11.126	11.684	12.257	12.845	13.450	14.070	14.706	
16	7.375	7.821	8.283	8.759	9.251	9.759	10.281	10.820	11.374	11.944	12.529	13.131	13.749	14.383	15.034	
18	7.519	7.975	8.445	8.931	9.433	9.950	10.483	11.032	11.597	12.178	12.775	13.389	14.019	14.665	15.328	
20	7.651	8.114	8.593	9.088	9.598	10.124	10.667	11.225	11.800	12.391	12.999	13.623	14.264	14.922	15.597	
22	7.772	8.243	8.729	9.232	9.750	10.285	10.836	11.403	11.987	12.587	13.205	13.839	14.490	15.159	15.844	
24	7.884	8.362	8.855	9.365	9.891	10.433	10.992	11.568	12.160	12.769	13.396	14.039	14.700	15.378	16.073	
26	7.989	8.473	8.973	9.489	10.022	10.572	11.138	11.721	12.322	12.939	13.574	14.225	14.895	15.582	16.287	
28	8.087	8.577	9.083	9.606	10.145	10.702	11.275	11.865	12.473	13.098	13.740	14.400	15.078	15.773	16.487	
30	8.180	8.675	9.187	9.716	10.262	10.824	11.404	12.001	12.616	13.248	13.898	14.565	15.250	15.954	16.675	
32	8.267	8.768	9.285	9.820	10.371	10.940	11.526	12.130	12.751	13.390	14.046	14.721	15.414	16.125	16.854	
34	8.350	8.856	9.379	9.918	10.476	11.050	11.642	12.251	12.879	13.524	14.187	14.869	15.568	16.286	17.023	
36	8.430	8.940	9.468	10.012	10.575	11.155	11.752	12.367	13.001	13.652	14.322	15.010	15.716	16.441	17.184	
38	8.505	9.020	9.552	10.102	10.669	11.254	11.857	12.478	13.117	13.774	14.450	15.144	15.857	16.588	17.338	
40	8.577	9.097	9.633	10.188	10.760	11.350	11.958	12.584	13.229	13.891	14.573	15.273	15.991	16.729	17.485	
42	8.646	9.170	9.711	10.270	10.847	11.442	12.055	12.686	13.335	14.004	14.690	15.396	16.120	16.864	17.627	
44	8.713	9.241	9.786	10.349	10.930	11.530	12.147	12.783	13.438	14.111	14.803	15.514	16.244	16.994	17.762	
46	8.777	9.309	9.858	10.425	11.011	11.615	12.237	12.877	13.537	14.215	14.912	15.629	16.364	17.119	17.893	
48	8.839	9.374	9.927	10.499	11.088	11.696	12.323	12.968	13.632	14.315	15.017	15.739	16.479	17.239	18.019	
50	8.899	9.437	9.994	10.570	11.163	11.775	12.406	13.056	13.724	14.412	15.119	15.845	16.590	17.356	18.141	

Volume table (Keruing) No. 4

(Unit : m³)

	Diameter Breast Height (cm)															
	108	110	112	114	116	118	120	122	124	126	128	130	132	134	136	
10	14.590	15.162	15.810	16.474	17.152	17.847	18.557	19.283	20.025	20.783	21.558	22.348	23.154	23.977	24.816	
12	14.973	15.625	16.293	16.976	17.676	18.392	19.124	19.872	20.637	21.418	22.215	23.030	23.861	24.709	25.574	
14	15.359	16.027	16.712	17.413	18.131	18.865	19.616	20.383	21.168	21.969	22.787	23.623	24.475	25.345	26.232	
16	15.701	16.384	17.084	17.801	18.534	19.285	20.052	20.837	21.639	22.458	23.294	24.148	25.020	25.909	26.816	
18	16.008	16.705	17.419	18.150	18.898	19.663	20.446	21.246	22.063	22.898	23.751	24.622	25.511	26.417	27.342	
20	16.289	16.998	17.724	18.468	19.229	20.008	20.804	21.618	22.450	23.300	24.167	25.053	25.958	26.880	27.821	
22	16.547	17.267	18.005	18.760	19.534	20.325	21.133	21.960	22.805	23.669	24.550	25.450	26.369	27.306	28.261	
24	16.786	17.517	18.265	19.032	19.816	20.618	21.439	22.278	23.135	24.011	24.905	25.818	26.750	27.700	28.670	
26	17.009	17.749	18.508	19.284	20.079	20.892	21.724	22.574	23.442	24.330	25.236	26.161	27.105	28.068	29.051	
28	17.218	17.968	18.735	19.521	20.326	21.149	21.991	22.851	23.730	24.629	25.546	26.482	27.438	28.413	29.408	
30	17.415	18.173	18.950	19.745	20.558	21.391	22.242	23.113	24.002	24.910	25.838	26.785	27.752	28.738	29.744	
32	17.601	18.368	19.152	19.956	20.778	21.620	22.480	23.360	24.259	25.177	26.115	27.072	28.049	29.046	30.062	
34	17.778	18.552	19.345	20.156	20.987	21.837	22.706	23.594	24.502	25.430	26.377	27.344	28.331	29.337	30.364	
36	17.947	18.728	19.528	20.347	21.186	22.044	22.921	23.818	24.734	25.671	26.627	27.603	28.599	29.615	30.652	
38	18.107	18.895	19.703	20.529	21.375	22.241	23.126	24.031	24.956	25.900	26.865	27.850	28.855	29.880	30.926	
40	18.261	19.056	19.870	20.704	21.557	22.430	23.323	24.235	25.168	26.120	27.093	28.086	29.100	30.134	31.189	
42	18.408	19.210	20.031	20.871	21.731	22.611	23.511	24.431	25.371	26.331	27.312	28.313	29.335	30.378	31.441	
44	18.550	19.358	20.185	21.032	21.898	22.785	23.692	24.619	25.566	26.534	27.522	28.531	29.561	30.611	31.683	
46	18.687	19.500	20.333	21.186	22.059	22.953	23.866	24.800	25.754	26.729	27.725	28.741	29.778	30.837	31.916	
48	18.818	19.637	20.476	21.336	22.215	23.114	24.034	24.975	25.936	26.917	27.920	28.944	29.988	31.054	32.141	
50	18.945	19.770	20.615	21.480	22.365	23.270	24.197	25.143	26.111	27.099	28.109	29.139	30.191	31.263	32.358	

Clear Length (m)

Volume table (Keruing) No. 5

(Unit : m³)

	Diameter Breast Height (cm)									
	138	140	142	144	146	148	150			
10	25.672	26.544	27.433	28.339	29.261	30.200	31.156			
12	26.455	27.354	28.270	29.204	30.154	31.122	32.107			
14	27.136	28.058	28.998	29.955	30.930	31.923	32.934			
16	27.740	28.683	29.643	30.622	31.619	32.634	33.667			
18	28.284	29.245	30.225	31.222	32.239	33.273	34.327			
20	28.760	29.758	30.754	31.770	32.804	33.857	34.928			
22	29.236	30.229	31.241	32.273	33.323	34.393	35.482			
24	29.658	30.666	31.693	32.739	33.805	34.890	35.994			
26	30.052	31.073	32.114	33.174	34.254	35.353	36.472			
28	30.422	31.455	32.509	33.582	34.675	35.788	36.921			
30	30.770	31.815	32.881	33.966	35.071	36.197	37.343			
32	31.099	32.155	33.232	34.329	35.447	36.584	37.743			
34	31.411	32.478	33.566	34.674	35.803	36.952	38.122			
36	31.709	32.786	33.884	35.002	36.142	37.302	38.483			
38	31.993	33.080	34.187	35.315	36.465	37.636	38.827			
40	32.264	33.361	34.478	35.616	36.775	37.955	39.157			
42	32.525	33.630	34.756	35.903	37.072	38.262	39.473			
44	32.775	33.889	35.024	36.180	37.357	38.556	39.777			
46	33.016	34.138	35.281	36.446	37.632	38.840	40.070			
48	33.249	34.379	35.530	36.703	37.897	39.114	40.352			
50	33.473	34.611	35.770	36.950	38.153	39.378	40.624			

Volume table (Seraya) No. 1

(Unit : m³)

	Diameter Breast Height (cm)															
	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	
10	0.126	0.157	0.190	0.228	0.268	0.312	0.360	0.411	0.465	0.523	0.584	0.649	0.717	0.789	0.864	
12	0.160	0.199	0.242	0.289	0.341	0.397	0.457	0.522	0.591	0.664	0.742	0.824	0.911	1.002	1.098	
14	0.196	0.244	0.296	0.354	0.417	0.486	0.560	0.639	0.723	0.813	0.909	1.009	1.116	1.227	1.344	
16	0.234	0.290	0.353	0.422	0.497	0.579	0.667	0.761	0.862	0.969	1.083	1.203	1.329	1.462	1.602	
18	0.273	0.339	0.412	0.493	0.580	0.676	0.778	0.888	1.006	1.131	1.264	1.404	1.552	1.707	1.870	
20	0.314	0.389	0.473	0.566	0.666	0.776	0.894	1.020	1.155	1.299	1.451	1.612	1.782	1.960	2.147	
22	0.355	0.441	0.536	0.641	0.755	0.879	1.013	1.156	1.309	1.472	1.645	1.827	2.019	2.222	2.434	
24	0.398	0.494	0.601	0.719	0.847	0.986	1.136	1.296	1.468	1.650	1.844	2.048	2.264	2.490	2.728	
26	0.442	0.549	0.668	0.798	0.941	1.095	1.261	1.440	1.630	1.833	2.048	2.275	2.515	2.766	3.031	
28	0.488	0.605	0.736	0.880	1.037	1.207	1.390	1.587	1.797	2.021	2.257	2.508	2.772	3.049	3.340	
30	0.534	0.663	0.806	0.963	1.135	1.321	1.522	1.737	1.968	2.212	2.472	2.746	3.035	3.338	3.657	
32	0.581	0.721	0.877	1.048	1.235	1.438	1.657	1.891	2.142	2.408	2.690	2.989	3.303	3.634	3.980	
34	0.629	0.781	0.950	1.135	1.338	1.557	1.794	2.048	2.319	2.607	2.913	3.235	3.577	3.935	4.310	
36	0.678	0.842	1.024	1.224	1.442	1.679	1.934	2.207	2.500	2.811	3.140	3.488	3.855	4.241	4.646	
38	0.728	0.904	1.099	1.314	1.548	1.802	2.076	2.370	2.684	3.017	3.371	3.745	4.139	4.553	4.988	
40	0.779	0.967	1.176	1.405	1.656	1.928	2.221	2.535	2.871	3.228	3.606	4.006	4.428	4.871	5.336	
42	0.831	1.031	1.253	1.498	1.766	2.055	2.368	2.703	3.061	3.441	3.845	4.271	4.720	5.193	5.689	
44	0.883	1.096	1.332	1.593	1.877	2.185	2.517	2.873	3.253	3.658	4.087	4.540	5.018	5.520	6.047	
46	0.936	1.162	1.412	1.688	1.990	2.316	2.668	3.046	3.449	3.878	4.332	4.813	5.319	5.852	6.410	
48	0.990	1.229	1.494	1.785	2.104	2.449	2.821	3.221	3.647	4.101	4.581	5.090	5.625	6.188	6.779	
50	1.044	1.296	1.576	1.884	2.220	2.584	2.977	3.398	3.848	4.326	4.834	5.370	5.935	6.529	7.152	

Clear Length (m)

Volume table (Seraya) No.2

(Unit : m³)

Clear length (m)	Diameter Breast Height (cm)															
	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	
10	0.943	1.025	1.111	1.201	1.294	1.390	1.490	1.594	1.701	1.812	1.926	2.044	2.166	2.291	2.420	
12	1.198	1.303	1.412	1.525	1.644	1.766	1.893	2.025	2.161	2.302	2.447	2.597	2.752	2.911	3.074	
14	1.467	1.595	1.729	1.868	2.012	2.162	2.318	2.479	2.646	2.818	2.996	3.180	3.369	3.564	3.764	
16	1.748	1.901	2.060	2.226	2.398	2.577	2.762	2.954	3.153	3.359	3.571	3.789	4.015	4.247	4.485	
18	2.040	2.219	2.404	2.598	2.799	3.008	3.224	3.449	3.681	3.920	4.168	4.423	4.686	4.957	5.236	
20	2.343	2.548	2.761	2.983	3.214	3.454	3.703	3.960	4.227	4.502	4.786	5.079	5.381	5.692	6.012	
22	2.656	2.887	3.129	3.381	3.643	3.915	4.196	4.488	4.790	5.102	5.424	5.757	6.099	6.451	6.814	
24	2.977	3.237	3.508	3.790	4.084	4.388	4.704	5.032	5.370	5.720	6.081	6.453	6.837	7.232	7.639	
26	3.307	3.596	3.897	4.210	4.536	4.875	5.226	5.589	5.965	6.354	6.755	7.169	7.595	8.034	8.485	
28	3.645	3.963	4.295	4.641	5.000	5.373	5.760	6.160	6.575	7.003	7.445	7.901	8.371	8.855	9.353	
30	3.990	4.339	4.702	5.081	5.474	5.882	6.306	6.745	7.198	7.667	8.151	8.650	9.165	9.694	10.239	
32	4.343	4.723	5.118	5.530	5.958	6.403	6.864	7.341	7.835	8.345	8.872	9.415	9.975	10.552	11.145	
34	4.703	5.114	5.542	5.988	6.452	6.933	7.432	7.949	8.484	9.037	9.607	10.196	10.802	11.425	12.068	
36	5.070	5.513	5.974	6.455	6.955	7.474	8.012	8.569	9.145	9.741	10.356	10.990	11.644	12.317	13.009	
38	5.443	5.918	6.414	6.930	7.466	8.024	8.601	9.199	9.818	10.458	11.118	11.799	12.501	13.223	13.966	
40	5.822	6.330	6.861	7.413	7.987	8.583	9.200	9.840	10.502	11.186	11.893	12.621	13.371	14.144	14.939	
42	6.207	6.749	7.315	7.903	8.515	9.150	9.809	10.491	11.197	11.926	12.679	13.456	14.256	15.080	15.928	
44	6.598	7.174	7.775	8.401	9.051	9.727	10.427	11.152	11.902	12.678	13.478	14.304	15.154	16.030	16.931	
46	6.995	7.606	8.243	8.906	9.595	10.311	11.054	11.823	12.618	13.440	14.288	15.163	16.065	16.993	17.949	
48	7.397	8.043	8.716	9.418	10.147	10.904	11.689	12.502	13.343	14.212	15.109	16.035	16.988	17.970	18.980	
50	7.804	8.486	9.196	9.936	10.706	11.504	12.333	13.190	14.078	14.995	15.941	16.918	17.924	18.960	20.025	

Volume table (Seraya) No. 3

(Unit : m³)

	Diameter Breast Height (cm)															
	78	80	82	84	86	88	90	92	94	96	98	100	102	104	106	
10	2.552	2.688	2.828	2.971	3.118	3.268	3.423	3.580	3.742	3.907	4.076	4.248	4.424	4.604	4.787	
12	3.242	3.415	3.593	3.775	3.961	4.152	4.348	4.549	4.754	4.964	5.178	5.397	5.621	5.849	6.082	
14	3.970	4.181	4.399	4.622	4.850	5.084	5.324	5.569	5.820	6.077	6.340	6.608	6.882	7.161	7.447	
16	4.731	4.983	5.242	5.507	5.779	6.058	6.344	6.637	6.936	7.242	7.555	7.874	8.201	8.534	8.874	
18	5.522	5.816	6.118	6.428	6.746	7.072	7.405	7.747	8.096	8.453	8.818	9.191	9.572	9.961	10.358	
20	6.341	6.679	7.026	7.382	7.747	8.121	8.504	8.896	9.297	9.707	10.127	10.555	10.992	11.439	11.895	
22	7.187	7.570	7.963	8.366	8.780	9.204	9.638	10.082	10.537	11.002	11.477	11.962	12.458	12.964	13.480	
24	8.057	8.486	8.927	9.379	9.843	10.318	10.804	11.302	11.812	12.333	12.866	13.410	13.966	14.533	15.112	
26	8.950	9.426	9.916	10.418	10.933	11.461	12.002	12.555	13.121	13.700	14.292	14.896	15.514	16.144	16.787	
28	9.864	10.390	10.930	11.483	12.051	12.633	13.228	13.838	14.462	15.100	15.752	16.419	17.099	17.794	18.503	
30	10.800	11.375	11.966	12.572	13.194	13.830	14.483	15.150	15.834	16.532	17.246	17.976	18.721	19.481	20.257	
32	11.755	12.381	13.024	13.684	14.360	15.054	15.764	16.490	17.234	17.994	18.771	19.565	20.376	21.204	22.049	
34	12.729	13.407	14.103	14.818	15.550	16.301	17.070	17.857	18.662	19.485	20.327	21.187	22.065	22.961	23.876	
36	13.721	14.452	15.203	15.973	16.762	17.572	18.400	19.249	20.116	21.004	21.911	22.838	23.784	24.751	25.736	
38	14.730	15.515	16.321	17.148	17.996	18.864	19.754	20.665	21.596	22.549	23.523	24.518	25.534	26.572	27.630	
40	15.757	16.596	17.458	18.343	19.249	20.179	21.130	22.105	23.101	24.120	25.162	26.226	27.313	28.423	29.555	
42	16.799	17.694	18.613	19.556	20.523	21.514	22.528	23.567	24.630	25.716	26.827	27.962	29.120	30.303	31.511	
44	17.857	18.809	19.786	20.788	21.816	22.869	23.947	25.051	26.181	27.336	28.517	29.723	30.955	32.212	33.495	
46	18.931	19.939	20.975	22.038	23.127	24.243	25.387	26.557	27.755	28.979	30.231	31.509	32.815	34.148	35.509	
48	20.019	21.085	22.181	23.304	24.456	25.637	26.846	28.084	29.350	30.645	31.968	33.320	34.701	36.111	37.550	
50	21.121	22.247	23.402	24.588	25.803	27.049	28.324	29.630	30.966	32.332	33.729	35.155	36.612	38.100	39.617	

Volume table (Seraya) No. 4

U M

(Unit : m³)

Clear Length (m)	Diameter Breast Height (cm)															
	108	110	112	114	116	118	120	122	124	126	128	130	132	134	136	
10	4.974	5.165	5.359	5.557	5.759	5.965	6.174	6.387	6.603	6.823	7.047	7.275	7.506	7.742	7.980	
12	6.320	6.562	6.809	7.061	7.317	7.578	7.844	8.114	8.389	8.669	8.954	9.243	9.537	9.836	10.139	
14	7.737	8.034	8.337	8.645	8.959	9.278	9.604	9.935	10.271	10.614	10.962	11.317	11.677	12.042	12.414	
16	9.220	9.574	9.934	10.301	10.675	11.056	11.444	11.839	12.240	12.648	13.063	13.485	13.914	14.350	14.793	
18	10.763	11.175	11.596	12.025	12.461	12.906	13.358	13.819	14.287	14.764	15.248	15.741	16.242	16.750	17.267	
20	12.359	12.833	13.316	13.809	14.310	14.821	15.340	15.869	16.407	16.954	17.511	18.077	18.651	19.236	19.829	
22	14.007	14.544	15.092	15.650	16.218	16.796	17.385	17.985	18.595	19.215	19.845	20.487	21.138	21.800	22.473	
24	15.703	16.305	16.918	17.544	18.181	18.829	19.490	20.162	20.845	21.540	22.247	22.966	23.697	24.439	25.193	
26	17.443	18.112	18.793	19.488	20.196	20.916	21.650	22.396	23.155	23.928	24.713	25.511	26.323	27.147	27.985	
28	19.226	19.963	20.714	21.480	22.260	23.054	23.862	24.685	25.522	26.373	27.239	28.119	29.013	29.922	30.845	
30	21.049	21.856	22.678	23.517	24.370	25.240	26.125	27.026	27.942	28.874	29.822	30.785	31.764	32.759	33.769	
32	22.910	23.789	24.684	25.596	26.526	27.472	28.435	29.416	30.413	31.428	32.459	33.508	34.573	35.656	36.756	
34	24.808	25.760	26.729	27.717	28.724	29.748	30.792	31.853	32.933	34.032	35.149	36.284	37.438	38.611	39.802	
36	26.742	27.767	28.813	29.878	30.962	32.067	33.192	34.336	35.500	36.684	37.888	39.112	40.356	41.620	42.904	
38	28.710	29.811	30.933	32.076	33.241	34.426	35.634	36.862	38.112	39.383	40.676	41.990	43.325	44.682	46.060	
40	30.710	31.887	33.088	34.311	35.557	36.825	38.116	39.430	40.767	42.127	43.510	44.915	46.344	47.795	49.270	
42	32.742	33.997	35.277	36.581	37.909	39.261	40.638	42.039	43.465	44.914	46.389	47.887	49.410	50.958	52.529	
44	34.804	36.139	37.499	38.885	40.297	41.735	43.198	44.687	46.203	47.744	49.311	50.904	52.522	54.167	55.838	
46	36.896	38.311	39.753	41.222	42.719	44.243	45.794	47.373	48.980	50.613	52.274	53.963	55.679	57.423	59.194	
48	39.017	40.513	42.038	43.592	45.174	46.786	48.427	50.096	51.795	53.522	55.279	57.065	58.880	60.724	62.597	
50	41.165	42.744	44.353	45.992	47.662	49.362	51.093	52.855	54.647	56.470	58.323	60.207	62.122	64.067	66.044	

Volume table (Seraya) No. 5

(Unit : m³)

	Diameter Breast Height (cm)									
	138	140	142	144	146	148	150			
10	8.223	8.469	8.719	8.973	9.230	9.491	9.756			
12	10.447	10.760	11.077	11.400	11.727	12.059	12.395			
14	12.791	13.174	13.563	13.957	14.358	14.764	15.176			
16	15.242	15.699	16.162	16.632	17.109	17.594	18.085			
18	17.792	18.324	18.865	19.414	19.971	20.536	21.109			
20	20.432	21.043	21.664	22.295	22.934	23.583	24.241			
22	23.155	23.849	24.553	25.267	25.992	26.727	27.473			
24	25.958	26.735	27.525	28.325	29.138	29.962	30.799			
26	28.835	29.698	30.575	31.465	32.367	33.283	34.212			
28	31.782	32.734	33.700	34.680	35.675	36.685	37.708			
30	34.796	35.838	36.895	37.969	39.058	40.163	41.284			
32	37.873	39.007	40.158	41.327	42.512	43.715	44.935			
34	41.011	42.239	43.486	44.751	46.035	47.337	48.659			
36	44.208	45.581	46.875	48.239	49.623	51.027	52.451			
38	47.460	48.881	50.324	51.788	53.274	54.781	56.310			
40	50.767	52.287	53.830	55.397	56.986	58.598	60.234			
42	54.126	55.747	57.392	59.062	60.756	62.475	64.219			
44	57.535	59.258	61.007	62.782	64.583	66.411	68.264			
46	60.993	62.820	64.674	66.556	68.465	70.402	72.367			
48	64.499	66.430	68.391	70.381	72.400	74.449	76.526			
50	68.051	70.088	72.157	74.257	76.387	78.548	80.740			

VOLUME Volume table (Others) No. 1

(Unit : m³)

Clear Length (m)	Diameter Breast Height (cm)															
	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	
10	0.191	0.236	0.285	0.338	0.396	0.459	0.526	0.597	0.674	0.754	0.839	0.929	1.023	1.122	1.225	
12	0.225	0.277	0.334	0.397	0.465	0.539	0.617	0.702	0.791	0.886	0.986	1.091	1.202	1.318	1.439	
14	0.257	0.317	0.383	0.455	0.533	0.617	0.707	0.804	0.906	1.015	1.129	1.250	1.377	1.509	1.648	
16	0.289	0.357	0.431	0.512	0.599	0.694	0.796	0.904	1.019	1.141	1.270	1.406	1.548	1.698	1.854	
18	0.321	0.396	0.478	0.567	0.665	0.770	0.883	1.003	1.131	1.266	1.409	1.560	1.718	1.883	2.057	
20	0.352	0.434	0.524	0.623	0.730	0.845	0.968	1.100	1.241	1.389	1.546	1.711	1.885	2.067	2.257	
22	0.383	0.472	0.570	0.677	0.793	0.919	1.053	1.197	1.349	1.511	1.682	1.861	2.050	2.248	2.454	
24	0.414	0.510	0.615	0.731	0.857	0.992	1.137	1.292	1.457	1.631	1.816	2.010	2.213	2.427	2.650	
26	0.444	0.547	0.660	0.785	0.919	1.065	1.220	1.387	1.563	1.751	1.948	2.156	2.375	2.604	2.844	
28	0.474	0.584	0.705	0.838	0.981	1.136	1.303	1.480	1.669	1.869	2.080	2.302	2.535	2.780	3.036	
30	0.504	0.620	0.749	0.890	1.043	1.208	1.384	1.573	1.773	1.986	2.210	2.446	2.694	2.954	3.226	
32	0.533	0.657	0.793	0.942	1.104	1.278	1.465	1.665	1.877	2.102	2.339	2.589	2.852	3.127	3.415	
34	0.562	0.693	0.837	0.994	1.164	1.348	1.546	1.756	1.980	2.217	2.468	2.732	3.008	3.299	3.602	
36	0.591	0.729	0.880	1.045	1.225	1.418	1.625	1.847	2.082	2.332	2.595	2.873	3.164	3.469	3.788	
38	0.620	0.764	0.923	1.096	1.284	1.487	1.705	1.937	2.184	2.446	2.722	3.013	3.318	3.638	3.973	
40	0.649	0.799	0.965	1.147	1.344	1.556	1.784	2.027	2.285	2.559	2.848	3.152	3.472	3.806	4.157	
42	0.677	0.835	1.008	1.197	1.403	1.624	1.862	2.116	2.385	2.671	2.973	3.291	3.624	3.974	4.339	
44	0.706	0.869	1.050	1.247	1.461	1.692	1.940	2.204	2.485	2.783	3.097	3.428	3.776	4.140	4.521	
46	0.734	0.904	1.092	1.297	1.520	1.760	2.017	2.292	2.584	2.894	3.221	3.565	3.927	4.305	4.701	
48	0.762	0.939	1.134	1.347	1.578	1.827	2.094	2.380	2.683	3.005	3.344	3.701	4.077	4.470	4.881	
50	0.790	0.973	1.175	1.396	1.636	1.894	2.171	2.467	2.782	3.115	3.467	3.837	4.226	4.634	5.060	

Volume table (Others) No. 2

(Unit: m³)

	Diameter Breast Height (cm)															
	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	
10	1.333	1.445	1.562	1.683	1.809	1.939	2.073	2.212	2.356	2.504	2.656	2.813	2.974	3.140	3.310	
12	1.565	1.697	1.834	1.976	2.124	2.277	2.435	2.598	2.766	2.940	3.119	3.303	3.492	3.687	3.887	
14	1.793	1.944	2.101	2.264	2.433	2.608	2.789	2.976	3.169	3.368	3.573	3.784	4.001	4.224	4.452	
16	2.017	2.187	2.363	2.546	2.736	2.933	3.137	3.347	3.564	3.788	4.019	4.256	4.500	4.751	5.008	
18	2.237	2.426	2.622	2.825	3.036	3.254	3.480	3.713	3.954	4.202	4.458	4.721	4.992	5.270	5.556	
20	2.455	2.662	2.877	3.100	3.331	3.571	3.818	4.075	4.339	4.611	4.892	5.181	5.478	5.783	6.097	
22	2.670	2.895	3.129	3.371	3.623	3.883	4.153	4.431	4.719	5.015	5.320	5.635	5.958	6.290	6.631	
24	2.883	3.126	3.378	3.640	3.912	4.193	4.484	4.785	5.095	5.415	5.744	6.084	6.433	6.791	7.159	
26	3.094	3.354	3.625	3.906	4.197	4.499	4.812	5.134	5.467	5.811	6.164	6.528	6.903	7.287	7.682	
28	3.302	3.580	3.869	4.169	4.481	4.803	5.136	5.481	5.836	6.203	6.580	6.969	7.368	7.779	8.201	
30	3.509	3.805	4.112	4.431	4.761	5.104	5.458	5.824	6.202	6.591	6.993	7.405	7.830	8.266	8.715	
32	3.715	4.027	4.352	4.690	5.040	5.403	5.778	6.165	6.565	6.977	7.402	7.839	8.288	8.750	9.224	
34	3.919	4.248	4.591	4.947	5.317	5.699	6.095	6.503	6.925	7.360	7.808	8.269	8.743	9.230	9.731	
36	4.121	4.468	4.828	5.203	5.591	5.993	6.409	6.839	7.283	7.740	8.211	8.696	9.195	9.707	10.233	
38	4.322	4.686	5.064	5.457	5.864	6.286	6.722	7.173	7.638	8.118	8.612	9.120	9.643	10.181	10.733	
40	4.522	4.902	5.298	5.709	6.135	6.576	7.033	7.504	7.991	8.493	9.010	9.542	10.089	10.651	11.229	
42	4.721	5.118	5.531	5.960	6.405	6.865	7.342	7.834	8.342	8.866	9.406	9.961	10.532	11.119	11.722	
44	4.918	5.332	5.762	6.209	6.673	7.153	7.649	8.162	8.691	9.237	9.799	10.378	10.973	11.585	12.212	
46	5.114	5.545	5.992	6.457	6.939	7.436	7.955	8.488	9.038	9.606	10.191	10.792	11.411	12.047	12.700	
48	5.310	5.757	6.221	6.704	7.204	7.723	8.258	8.812	9.384	9.973	10.580	11.205	11.847	12.508	13.186	
50	5.504	5.968	6.449	6.949	7.468	8.005	8.561	9.135	9.727	10.338	10.968	11.615	12.281	12.966	13.668	

Volume table (Others) No. 3

(Unit : m³)

	Diameter Breast Height (cm)																
	78	80	82	84	86	88	90	92	94	96	98	100	102	104	106		
10	3.485	3.664	3.847	4.035	4.228	4.425	4.626	4.831	5.042	5.256	5.475	5.698	5.926	6.158	6.395		
12	4.092	4.302	4.518	4.739	4.964	5.196	5.432	5.673	5.920	6.172	6.429	6.691	6.959	7.232	7.509		
14	4.687	4.928	5.175	5.428	5.687	5.951	6.222	6.499	6.781	7.070	7.364	7.665	7.971	8.284	8.602		
16	5.273	5.544	5.821	6.106	6.397	6.695	6.999	7.310	7.628	7.953	8.284	8.622	8.967	9.318	9.676		
18	5.849	6.150	6.458	6.773	7.096	7.427	7.764	8.110	8.462	8.822	9.190	9.565	9.947	10.337	10.734		
20	6.418	6.748	7.086	7.432	7.787	8.149	8.520	8.899	9.286	9.681	10.084	10.495	10.915	11.342	11.778		
22	6.981	7.339	7.707	8.083	8.469	8.863	9.266	9.678	10.099	10.529	10.967	11.415	11.871	12.336	12.810		
24	7.537	7.924	8.321	8.727	9.144	9.569	10.004	10.449	10.904	11.368	11.841	12.324	12.817	13.319	13.831		
26	8.087	8.503	8.929	9.365	9.812	10.268	10.736	11.213	11.700	12.198	12.706	13.225	13.754	14.292	14.842		
28	8.633	9.077	9.532	9.997	10.474	10.961	11.460	11.969	12.490	13.021	13.564	14.117	14.682	15.257	15.843		
30	9.174	9.646	10.129	10.624	11.130	11.648	12.178	12.720	13.273	13.838	14.414	15.002	15.602	16.213	16.836		
32	9.711	10.210	10.722	11.245	11.781	12.330	12.891	13.464	14.049	14.647	15.257	15.880	16.515	17.162	17.821		
34	10.244	10.770	11.310	11.862	12.428	13.007	13.598	14.203	14.820	15.451	16.095	16.751	17.421	18.103	18.799		
36	10.773	11.327	11.894	12.475	13.070	13.678	14.301	14.936	15.586	16.249	16.926	17.616	18.321	19.039	19.770		
38	11.299	11.879	12.474	13.084	13.708	14.346	14.998	15.665	16.346	17.042	17.752	18.476	19.215	19.967	20.735		
40	11.821	12.429	13.051	13.689	14.341	15.009	15.692	16.389	17.102	17.830	18.573	19.330	20.103	20.891	21.693		
42	12.340	12.975	13.624	14.290	14.971	15.668	16.381	17.109	17.853	18.613	19.388	20.179	20.986	21.808	22.646		
44	12.857	13.517	14.195	14.888	15.598	16.324	17.066	17.825	18.600	19.392	20.200	21.024	21.864	22.721	23.594		
46	13.370	14.057	14.762	15.483	16.221	16.976	17.748	18.537	19.343	20.166	21.006	21.863	22.737	23.628	24.536		
48	13.881	14.595	15.326	16.074	16.841	17.625	18.426	19.246	20.082	20.937	21.809	22.699	23.606	24.531	25.474		
50	14.390	15.129	15.887	16.663	17.457	18.270	19.101	19.950	20.818	21.704	22.608	23.530	24.471	25.430	26.407		

Volume table (Others) No.4

(Unit : m³)

Clear Length (m)	Diameter Breast Height (cm)															
	108	110	112	114	116	118	120	122	124	126	128	130	132	134	136	
10	6.636	6.881	7.131	7.386	7.644	7.907	8.175	8.447	8.723	9.004	9.289	9.578	9.872	10.170	10.473	
12	7.792	8.081	8.374	8.673	8.976	9.285	9.599	9.919	10.243	10.573	10.907	11.247	11.592	11.943	12.298	
14	8.926	9.256	9.592	9.934	10.282	10.636	10.996	11.362	11.733	12.111	12.494	12.884	13.279	13.680	14.087	
16	10.041	10.412	10.790	11.175	11.566	11.964	12.369	12.780	13.198	13.623	14.054	14.492	14.937	15.388	15.846	
18	11.139	11.551	11.970	12.397	12.831	13.272	13.721	14.178	14.641	15.113	15.591	16.077	16.570	17.071	17.579	
20	12.222	12.674	13.134	13.603	14.079	14.564	15.056	15.557	16.066	16.583	17.108	17.641	18.182	18.731	19.289	
22	13.293	13.785	14.285	14.794	15.313	15.840	16.375	16.920	17.473	18.036	18.607	19.186	19.775	20.372	20.979	
24	14.352	14.883	15.423	15.973	16.533	17.102	17.680	18.268	18.866	19.473	20.089	20.715	21.351	21.986	22.650	
26	15.401	15.971	16.550	17.140	17.741	18.351	18.972	19.603	20.244	20.896	21.557	22.229	22.911	23.603	24.306	
28	16.440	17.048	17.667	18.297	18.938	19.590	20.252	20.926	21.610	22.306	23.012	23.729	24.457	25.196	25.946	
30	17.471	18.117	18.774	19.444	20.125	20.817	21.522	22.237	22.965	23.704	24.454	25.216	25.990	26.775	27.572	
32	18.493	19.177	19.873	20.582	21.302	22.036	22.781	23.539	24.308	25.091	25.885	26.692	27.511	28.342	29.185	
34	19.508	20.229	20.964	21.711	22.471	23.245	24.031	24.830	25.642	26.467	27.305	28.156	29.020	29.897	30.786	
36	20.515	21.274	22.046	22.832	23.632	24.445	25.272	26.113	26.967	27.834	28.716	29.611	30.519	31.441	32.377	
38	21.516	22.312	23.122	23.946	24.785	25.638	26.505	27.387	28.283	29.193	30.117	31.055	32.008	32.975	33.956	
40	22.511	23.343	24.191	25.054	25.931	26.823	27.731	28.653	29.590	30.542	31.509	32.491	33.488	34.500	35.526	
42	23.500	24.369	25.254	26.154	27.070	28.002	28.949	29.912	30.890	31.884	32.893	33.918	34.959	36.015	37.087	
44	24.483	25.389	26.310	27.248	28.203	29.173	30.160	31.163	32.182	33.218	34.270	35.338	36.422	37.522	38.639	
46	25.461	26.403	27.361	28.337	29.329	30.339	31.365	32.408	33.468	34.545	35.639	36.749	37.877	39.021	40.182	
48	26.434	27.412	28.407	29.420	30.450	31.498	32.563	33.646	34.747	35.865	37.000	38.153	39.324	40.512	41.718	
50	27.402	28.415	29.447	30.497	31.565	32.651	33.756	34.879	36.019	37.178	38.355	39.551	40.764	41.996	43.245	

Volume table (Others) No.5

(Unit : m³)

	Diameter Breast Height (cm)										
	138	140	142	144	146	148	150				
10	10.780	11.091	11.407	11.727	12.052	12.381	12.714				
12	12.658	13.024	13.395	13.771	14.152	14.538	14.930				
14	14.500	14.919	15.344	15.774	16.211	16.653	17.102				
16	16.310	16.782	17.260	17.744	18.235	18.733	19.237				
18	18.094	18.617	19.147	19.684	20.229	20.781	21.341				
20	19.854	20.428	21.010	21.599	22.197	22.803	23.417				
22	21.594	22.218	22.850	23.492	24.142	24.801	25.468				
24	23.314	23.988	24.671	25.363	26.065	26.777	27.498				
26	25.018	25.741	26.474	27.217	27.970	28.734	29.507				
28	26.706	27.478	28.260	29.053	29.858	30.672	31.498				
30	28.380	29.200	30.031	30.874	31.729	32.595	33.473				
32	30.041	30.909	31.789	32.681	33.585	34.502	35.431				
34	31.689	32.605	33.533	34.474	35.428	36.395	37.375				
36	33.326	34.289	35.265	36.255	37.258	38.275	39.306				
38	34.952	35.962	36.986	38.024	39.076	40.143	41.224				
40	36.568	37.624	38.696	39.782	40.883	41.999	43.130				
42	38.174	39.277	40.395	41.529	42.679	43.844	45.024				
44	39.771	40.920	42.086	43.267	44.464	45.678	46.908				
46	41.360	42.555	43.767	44.995	46.241	47.503	48.782				
48	42.941	44.181	45.439	46.715	48.007	49.318	50.646				
50	44.513	45.799	47.103	48.425	49.766	51.124	52.501				

App. Table-5

Species list (Group A)

Vernacular Name	Family Name		Genus Name
	Latin Name	Japanese Name	
Alan	Dipterocarpaceae	フタハカキ	Shorea
Amat	Theaceae	ツバキ	Tetramerista
Belian	Lauraceae	クスノキ	Eusideroxylon
Belian landak	Olacaceae	ホトホノキ	Anacolosa
Benchaloi	Dipterocarpaceae	フタハカキ	Anisoptera
Damar hitam	Dipterocarpaceae	フタハカキ	Shorea
Kapur	Dipterocarpaceae	フタハカキ	Dryobalanops
Kapur bukit	Dipterocarpaceae	フタハカキ	Dryobalanops
Kapur paji	Dipterocarpaceae	フタハカキ	Dryobalanops
Kapur paya	Dipterocarpaceae	フタハカキ	Dryobalanops
Kayu karas	Thymelaeaceae	ソノチョウケ	Aquilaria
Keruing	Dipterocarpaceae	フタハカキ	Dipterocarpus
Mang	Dipterocarpaceae	フタハカキ	Hopea
Meranti	Dipterocarpaceae	フタハカキ	Shorea
Meranti bukit	Dipterocarpaceae	フタハカキ	Shorea
Meranti kerukup	Dipterocarpaceae	フタハカキ	Shorea
Meranti langgai	Dipterocarpaceae	フタハカキ	Shorea
Meranti laut putih	Dipterocarpaceae	フタハカキ	Shorea
Meranti lop	Dipterocarpaceae	フタハカキ	Shorea
Meranti melantai	Dipterocarpaceae	フタハカキ	Shorea
Meranti merah	Dipterocarpaceae	フタハカキ	Shorea
Meranti paya	Dipterocarpaceae	フタハカキ	Shorea
Meranti putih timbul	Dipterocarpaceae	フタハカキ	Shorea
Meranti sarang punai	Dipterocarpaceae	フタハカキ	Shorea
Meranti sudu	Dipterocarpaceae	フタハカキ	Shorea
Merawan	Dipterocarpaceae	フタハカキ	Hopea
Merawan daun tebal	Dipterocarpaceae	フタハカキ	Hopea
Merbau	Leguminosae	マメ	Intsia
Nyatoh	Sapotaceae	アカテツ	Palaquium
Nyatoh temiang	Sapotaceae	アカテツ	Palaquium
Ramin	Thymelaeaceae	ソノチョウケ	Gonystylus
Raru	Dipterocarpaceae	フタハカキ	Shorea
Resak	Dipterocarpaceae	フタハカキ	Vatica
Resak ayer	Dipterocarpaceae	フタハカキ	Vatica
Resak hitam	Dipterocarpaceae	フタハカキ	Cotylelobium
Selangan	Dipterocarpaceae	フタハカキ	Shorea
Tembusu	Loganiaceae	フツウツキ	Pagraea
Tismantok	Dipterocarpaceae	フタハカキ	Shorea
Upun batu	Dipterocarpaceae	フタハカキ	Upuna

App. Table-6

Species list (Group B)

Vernacular Name	Family Name		Genus Name
	Latin Name	Japanese Name	
Bayor	Sterculiaceae	アキリ	Pterospermum
Berangan	Fagaceae	アナ	Castanopsis
Bintangor	Guttiferae	オトギリソウ	Calophyllum
Bintawak	Moraceae	クワ	Artocarpus
Jelutung	Apocynaceae	キョウチクトウ	Dyera
Kayu malam	Ebenaceae	カキノキ	Diospyros
Kedondong	Burseraceae	カンラン	Canarium
Kelidang	Moraceae	クワ	Parartocarpus
Kelidang babi	Moraceae	クワ	Artocarpus

(Continued on the next page)

(Continued from the previous page)

Kempas	Leguminosae	マメ	Koompassia
KerANJI	Leguminosae	マメ	Dialium
Manggis	Guttiferae	オトキ リソウ	Garcinia
Mata ulat	Celastraceae	ニソキキ	Kokoona
Medang	Lauraceae	クスノキ	Nothaphoebe
Medang tabak	Melastomataceae	ノボ タン	Dactylocladus
Mengilas	Rosaceae	ハラ	Parastemon
Merpauh	Anacardiaceae	ウルク	Swintonia
Petaling	Olacaceae	ホ 口ホ ノノキ	Ochanostachys
Rengas	Anacardiaceae	ウルク	Melanorrhoea
Sabal	Burseraceae	カンラン	Dacryodes
Senumpul	Flacourtiaceae	イイキ リ	Homalium
Sepetir	Leguminosae	マメ	Sindora
Simpur	Dilleniaceae	ヒノモト キ	Dillenia
Somah	Theaceae	ツバ キ	Ploiarium
Teruntum	Rhizophoraceae	ヒルク	Combretocarpus
Tualang	Leguminosae	マメ	Koompassia
Ubah	Myrtaceae	フトモモ	Eugenia
Ubah ribu	Myrtaceae	フトモモ	Eugenia

App. Table-7 Species list (Group C)

Vernacular Name	Family Name		Genus Name
	Latin Name	Japanese Name	
Adau	Linaceae	アマ	Ctenolophon
Ara	Moraceae	クワ	Ficus
Bangkoh	Annonaceae	ハ ノレイ	Xylopi
Benggang	Bombacaceae	ハ ノキ	Neesia
Chempadak	Moraceae	クワ	Artocarpus
Durian	Bombacaceae	ハ ノキ	Durio
Geronggang	Guttiferae	オトキ リソウ	Cratoxylon
Jukit	Meliaceae	センダ ン	Heynia
Kandis	Guttiferae	オトキ リソウ	Garcinia
Kedang	Tiliaceae	ソナノキ	Pentace
Kembang semangkok	Sterculiaceae	アオキ リ	Scaphium
Keruntum	Rhizophoraceae	ヒルク	Combretocarpus
Limau sebayan	Olacaceae	ホ 口ホ ノノキ	Gonocaryum
Melunak	Tiliaceae	ソナノキ	Pentace
Mempening	Pagaceae	フナ	Lithocarpus
Menengang	Rhizophoraceae	ヒルク	Anisophyllea
Merakit	Euphorbiaceae	トウダ イグサ	Macaranga
Merpisang	Annonaceae	ハ ノレイ	Mezettia
Nipis kulit	Melastomataceae	ノボ タン	Memecylon
Pendarahan	Myristicaceae	ニクス ク	Gymnacranthera
Perah	Euphorbiaceae	トウダ イグサ	Elaterospermu
Pudu	Moraceae	クワ	Artocarpus
Pulai	Apocynaceae	キョウチクトウ	Alstonia
Putat	Lecythidaceae	サガ リハ ナ	Barringtonia
Sedaman	Euphorbiaceae	トウダ イグサ	Macaranga
Sentul	Meliaceae	センダ ン	Sandoricum
Sial menaun	Melastomataceae	ノボ タン	Kibessia
Sindok sindok	Euphorbiaceae	トウダ イグサ	Endospermum
Tampoi	Euphorbiaceae	トウダ イグサ	Baccaurea
Tempagas	Melastomataceae	ノボ タン	Memecylon
Terantang	Anacardiaceae	ウルク	Camnosperma
Terap	Moraceae	クワ	Artocarpus
Terap hutan	Moraceae	クワ	Artocarpus
Tulang	Simaroubaceae	ニガキ	Irvingia

App. Table-8

List of complete enumeration results by plot

Plot No.	Stratum	Number/ha		D. B. H. (cm)			Clear Length (m)			Crown Diameter (m)			Volume (m ³ /ha)		
		N1	N2	D1	D2	Total	L1	L2	Total	CD1	CD2	Total	V1	V2	Total
1	3.1(1)	408	65	26.4	48.0	30.3	17.0	21.3	17.6	7.6	10.0	8.1	279.84	158.54	448.38
2	3.1(2)	160	80	27.0	49.8	36.2	13.7	22.1	17.9	8.3	11.0	9.7	105.06	228.15	333.21
3	3.1(2)	163	53	26.1	57.3	35.3	13.6	19.3	15.0	8.5	14.9	11.6	90.95	192.11	283.06
4	2.1(1)	243	68	26.0	50.9	33.0	12.8	16.0	13.5	7.5	9.6	8.3	121.97	151.77	273.74
5	2.1(1)	270	40	26.3	52.4	30.9	9.3	12.9	9.8	6.0	8.3	6.6	106.42	79.79	186.21
6	3.3(3)	158	58	25.5	74.6	44.4	12.3	25.3	15.8	7.3	12.2	11.6	75.13	430.17	505.30
7	3.1(2)	175	103	29.1	55.3	41.0	17.0	23.2	19.3	7.7	9.5	8.8	146.71	408.64	555.35
8	5(2)	153	211	26.1	52.6	35.4	15.1	22.7	17.2	7.6	9.2	8.5	88.93	186.25	275.18
9	5(2)	143	55	28.3	64.9	41.8	14.9	23.3	17.3	7.3	10.1	8.9	100.23	292.08	392.31
10	5(2)	203	45	27.7	61.5	36.3	21.8	26.6	22.6	8.0	11.7	9.1	187.00	254.44	441.44
11	5(4)	138	58	28.1	61.7	41.0	18.7	27.3	21.2	9.9	13.2	11.9	114.24	339.63	453.87
12	5(2)	195	68	26.0	60.6	38.0	17.9	24.8	19.7	7.9	9.7	8.8	133.38	320.72	454.10
13	5(2,EX)	143	15	25.8	44.5	28.1	17.5	22.2	18.0	9.0	11.5	9.3	94.84	34.77	129.61
14	5(2,EX)	215	28	27.4	52.7	31.3	18.5	23.4	19.1	9.6	12.1	10.0	168.13	95.91	264.04
15	3.2(2)	160	38	26.5	49.3	32.1	14.2	17.0	14.7	8.1	11.1	9.0	95.49	85.47	180.96
16	3.5(1)	240	120	27.7	51.2	37.0	13.9	19.3	15.7	6.0	7.7	7.0	155.45	333.59	489.04
17	3.2(2)	238	173	25.8	58.4	40.0	13.5	19.5	15.5	7.0	8.6	8.0	129.25	441.32	570.57
18	3.1(1,EX)	308	48	25.0	52.4	30.1	10.9	18.5	11.9	7.9	9.6	8.4	131.17	129.29	260.46
19	5(2,EX)	100	63	26.2	56.3	40.8	10.1	16.5	12.6	7.6	9.5	8.9	42.39	184.64	227.03
20	5(2)	133	70	27.6	57.6	40.6	12.8	19.4	15.0	7.6	10.2	9.5	77.45	248.53	325.98
21	2.2(1)	380	35	25.7	43.5	28.5	15.0	18.1	15.4	7.0	7.8	7.2	217.59	101.44	319.03
22	3.3(3)	105	115	26.1	62.1	48.4	13.3	21.8	17.7	7.0	9.1	9.0	56.38	521.21	577.59
23	3.3(3)	123	113	26.7	70.8	52.7	11.2	19.4	15.2	10.5	10.5	10.5	58.11	638.15	691.26
24	3.2(2)	193	73	26.6	55.3	36.0	13.2	21.6	15.5	7.2	9.7	8.8	96.09	254.77	350.86
25	3.2(2)	283	48	25.8	54.1	31.5	12.4	15.9	12.9	7.6	9.0	8.0	134.55	123.12	257.67
26	3.3(3)	165	89	25.1	69.4	45.0	13.9	22.3	16.7	7.3	9.3	9.6	83.42	481.11	564.53
27	5(2)	90	88	27.1	67.3	51.0	12.6	19.4	16.0	7.3	10.0	9.7	48.35	440.02	488.38
28	5(2)	185	53	26.3	49.4	32.9	14.9	19.0	15.8	7.8	8.7	8.2	112.98	131.46	244.44
29	5(4)	195	68	25.3	55.0	35.4	14.1	22.1	16.2	7.7	9.6	9.0	103.64	247.50	351.14
30	5(4)	198	78	26.3	73.0	44.7	15.3	22.8	17.4	8.8	11.8	10.8	121.74	444.18	565.92
31	5(4)	155	85	24.0	63.8	43.2	13.4	17.0	14.7	8.0	11.2	10.8	79.91	307.76	387.67
32	3.1(2)	219	88	27.2	50.7	35.5	14.1	22.9	16.6	6.1	7.9	7.0	141.46	270.71	412.17
33	8	488	13	19.5	49.3	20.8	10.0	15.0	10.1	6.1	8.3	5.2	125.93	25.16	151.09
34	5(2,EX)	125	75	26.9	54.8	39.7	13.0	21.2	16.1	7.4	9.9	9.2	70.83	256.40	327.23
35	2.2(1)	336	28	23.5	47.4	36.0	14.4	17.7	14.6	5.1	8.3	3.5	164.04	62.47	226.51
36	3.2(2)	140	48	25.6	61.6	38.1	12.4	24.2	15.4	8.1	9.9	9.2	58.51	226.47	294.98
37	8	804	21	18.8	49.8	20.2	10.7	19.4	10.9	5.3	7.8	5.6	205.09	53.84	258.93
38	3.5(1)	263	143	25.4	52.1	37.1	13.2	20.8	15.9	4.9	6.3	5.0	136.81	430.71	567.52
Total		221	67	288	25.5	58.2	15.4	22.2	15.6	7.6	10.6	8.4	117.60	253.09	370.69

(Note) 1: D. B. H < 40 cm 2: 40 cm ≤ D. B. H

App. Table-9 List of complete enumeration results by stratum

App. Table-10 Number of species by stratum

Stratum	Number/ha		D. B. H (cm)		Clear Length (m)		Crown Diameter(m)		Volume (m ³ /ha)		
	N1	N2	D1	D2	L1	L2	CD1	CD2	V1	V2	Total
2.1(1)	256	54	26.1	51.5	11.0	14.8	6.8	9.2	114.19	115.78	229.97
2.2(1)	369	43	24.8	44.7	14.7	18.0	6.1	8.1	193.79	84.12	277.91
3.1(1)	408	65	26.4	48.0	17.0	21.3	7.6	10.0	279.84	168.54	448.38
3.1(1. EX)	308	47	25.0	52.4	10.9	18.5	7.9	9.6	131.17	129.29	260.46
3.1(2)	172	80	27.4	53.6	15.3	22.1	7.8	10.7	117.44	275.64	393.08
3.2(2)	203	65	25.8	56.6	13.1	19.9	7.6	9.4	104.78	226.22	331.00
3.3(3)	137	92	25.8	68.5	12.7	21.7	7.3	10.1	68.26	516.41	584.67
3.5(1)	251	131	26.5	51.7	13.5	20.1	5.7	7.0	145.13	332.15	528.28
5 (2)	157	62	27.0	60.0	16.3	21.9	7.7	9.9	106.90	267.64	374.54
5(2. EX)	146	45	26.7	54.4	15.7	20.0	9.0	10.2	93.92	142.93	236.85
5 (4)	171	72	26.3	64.1	15.2	21.8	8.7	11.3	104.88	334.77	439.65
8	646	17	19.1	49.6	10.4	17.8	5.7	8.0	165.51	39.50	205.01
Total	211	67	25.6	58.2	14.0	20.7	7.3	9.7	115.90	258.54	374.44

(Note) 1: D. B. H < 40 cm 2: 40 cm ≤ D. B. H

App. Table-10 Number of species by stratum

Strata	Number of Plots	Total	Dipterocarpaceae			Group			D. B. H	
			D	N	A	B	C	D<40	40≤D	
2	4	31	6	25	10	12	9	27	19	
3	17	60	12	48	19	20	21	56	39	
5	15	82	29	53	32	24	26	74	61	
8	2	21	3	18	5	7	9	21	5	
Total	38	103	32	71	41	28	34	94	74	

(Note) Dipterocarpaceae : D / Dipterocarpaceae, N / Non-dipterocarpaceae

Group : A / Commercial Tree

B / Available Tree C / Others

App. Table-11

Number of dominant species by stratum

NO	Vernacular Name	Total	(1, EX)					(2, EX)			Unit : Number/ha			
			2.1(1)	2.2(1)	3.1(1)	3.1	3.1(2)	3.2(2)	3.3(3)	3.5(1)	5(2)	5	5(4)	8
1	Ubah Group	52	158	57	80	158	29	57	25	19	44	21	26	200
2	Kedondong	24	7	7	5	5	29	29	1	1	35	27	48	65
3	Kapur Group	21	79	110	63	63	21	16	3	3	3	1	22	150
4	Nyatoh Group	16	106	28	15	15	26	19	11	33	6	6	6	4
5	Alan	15					62	153						
6	Resak Group	12	58	6	43	43	1	10	3	4	4	8	17	75
7	Medang	12	18	17	25	5	8	17	7	15	8	8	11	25
8	Ramin	11	1	68	25	25	19	12	33	24				8
9	Meranti Group	9	8	8	6	6	7	7		17	5	5	29	
10	Bintangor	9	13	3	3	3	4	5	6	29	11	6	14	8
11	Keruntum	8	54	8	8	8	1	9	13	48				
12	Tampoi	8	11	5	3	3	21	14	7	8	6	6	2	2
13	Sepetir	7	1	20	23	23	9	9	18	1	1	3		
14	Kayu malam	6	29	45	10	10	4	2	3	4	5	1	3	27
15	Medang tabak	6	25	43	43	43	5	6	13	18	1			
16	Keruing Group	5	1	1	1	1	5	6	9	8	8	18		
17	Jelutong	4	6	5	5	5	10	14	4	4		3		
18	Bangkoh	4	3	33	33	1	1	1	5	5	9	9	25	
19	Pendarahan	4	1	1	12	12	5	5	4	4	4	6	6	4
20	Perah	4								8	17	2		
21	Rengas	4	1		8	8	1	10	16	2	3	1	2	
22	Keranji	3			15	15	2	2	1	5	1	10		
23	Mengilas	2					3	3	35				4	
24	Merpisang	2					18	1	2	2	3	2		
25	Sial menaun	2					3	3	5	2	2	19		
	Others	27	50	14	8	5	21	29	10	1	28	58	24	44
	Total	278	310	413	473	355	252	268	229	383	219	191	243	663

App. Table-12

Number by group and D. B. H class

					Unit: Number/ha				
Stratum	Group	D<40	40 ≤ D	Total	Stratum	Group	D<40	40 ≤ D	Total
2.1(1)	A	60	5	65	3.3(3)	A	37	74	111
	B	173	45	218		B	81	9	90
	C	24	4	28		C	20	8	28
	Total	256	54	310		Total	138	92	229
2.2(1)	A	190	21	211	3.5(1)	A	99	110	209
	B	139	4	143		B	118	8	125
	C	40	18	58		C	35	14	49
	Total	369	43	413		Total	251	131	383
3.1(1)	A	178	28	205	5(2)	A	32	17	49
	B	198	23	220		B	91	37	128
	C	33	15	48		C	34	8	42
	Total	408	65	473		Total	157	62	219
3.1 (1. EX)	A	113	33	145	5(2. EX)	A	24	13	38
	B	193	15	208		B	69	21	91
	C	3	0	3		C	52	11	63
	Total	308	48	355		Total	146	45	191
3.1(2)	A	41	39	80	5(4)	A	51	51	103
	B	81	32	113		B	108	14	121
	C	50	9	59		C	13	7	19
	Total	172	80	252		Total	171	72	243
3.2(2)	A	49	25	74	8	A	229	8	238
	B	122	32	154		B	327	4	331
	C	32	9	40		C	90	4	94
	Total	203	66	268		Total	646	17	663
					Total	A	63	35	98
						B	114	24	138
						C	34	9	43
						Total	211	67	278

App. Table-13

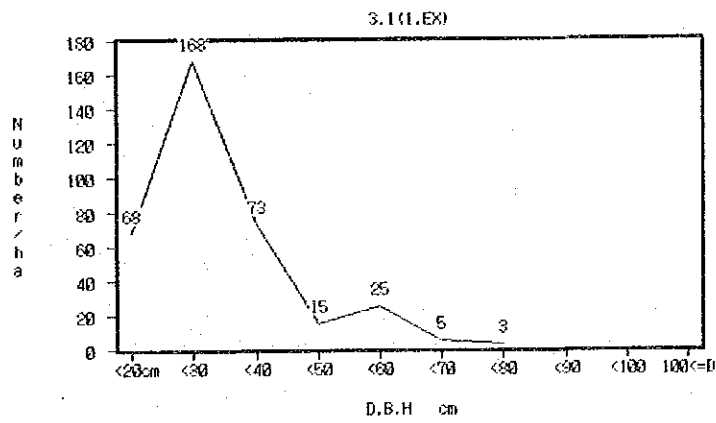
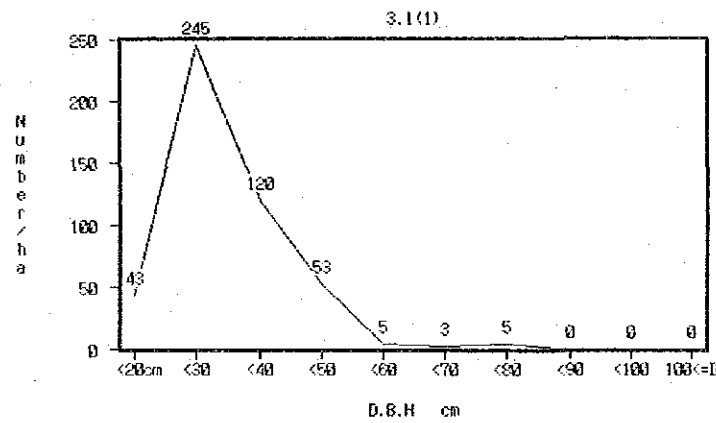
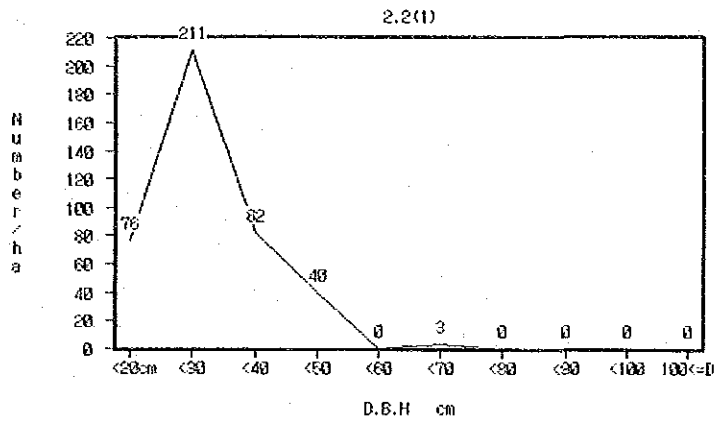
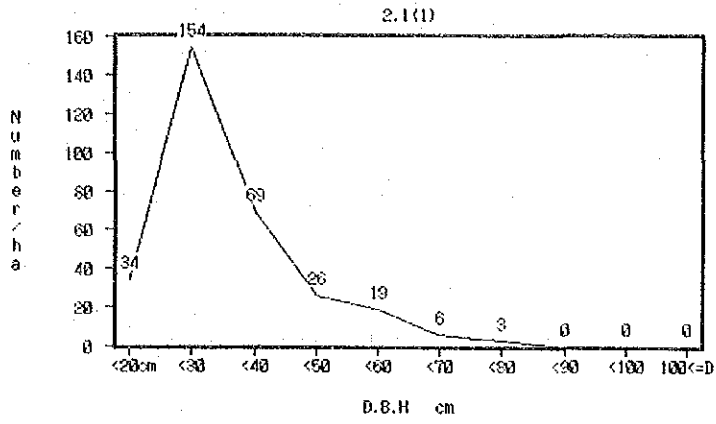
Number by D. B. H class and stratum

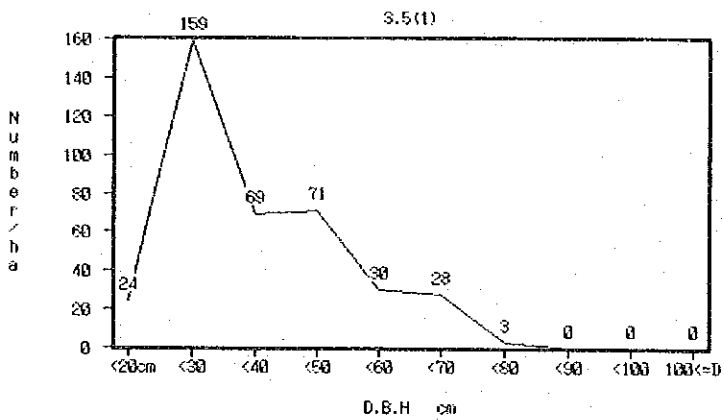
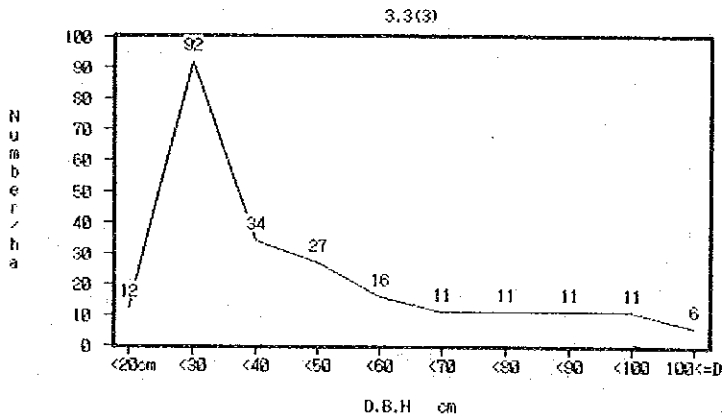
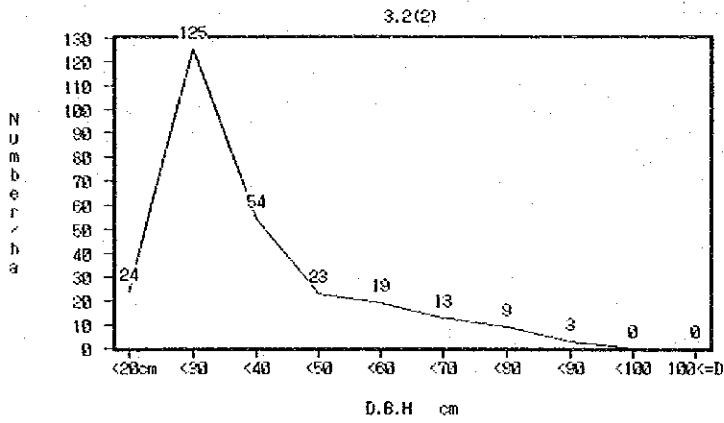
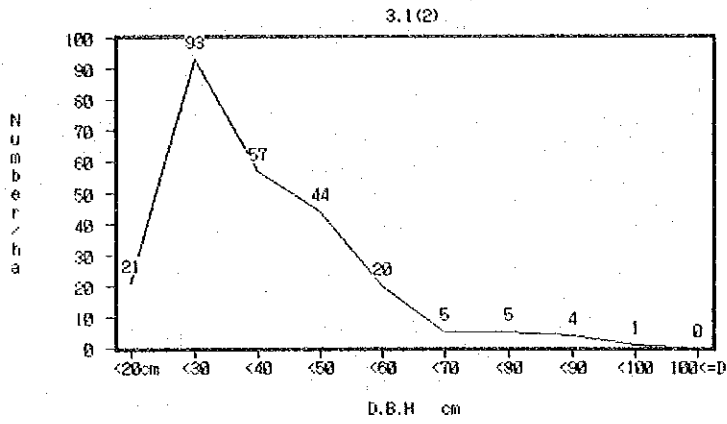
												Unit: Number/ha
Stratum	D. B. H	18 ≤ D	20 ≤ D	30 ≤ D	40 ≤ D	50 ≤ D	60 ≤ D	70 ≤ D	80 ≤ D	90 ≤ D	100 ≤ D	Total
		<20cm	<30	<40	<50	<60	<70	<80	<90	<100		
2.1(1)		34	154	69	26	19	6	3				310
2.2(1)		76	211	82	40		3					413
3.1(1)		43	245	120	53	5	3	5				473
3.1(1. EX)		68	168	73	15	25	5	3				355
3.1(2)		21	93	57	44	20	5	5	4	1		252
3.2(2)		24	125	54	23	19	13	9	3			268
3.3(3)		12	92	34	27	16	11	11	11	11	6	229
3.5(1)		24	159	69	71	30	28	3				383
5(2)		20	86	51	27	16	4	6	3	3	2	219
5(2. EX)		17	83	46	20	14	6	4	1	1		191
5(4)		24	98	49	21	19	13	8	4	3	4	243
8		413	171	63	8	6	2					663
Total		38	117	56	29	17	9	6	3	2	1	278

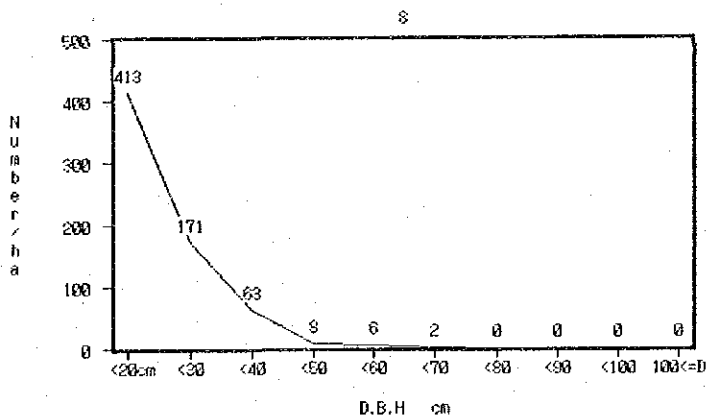
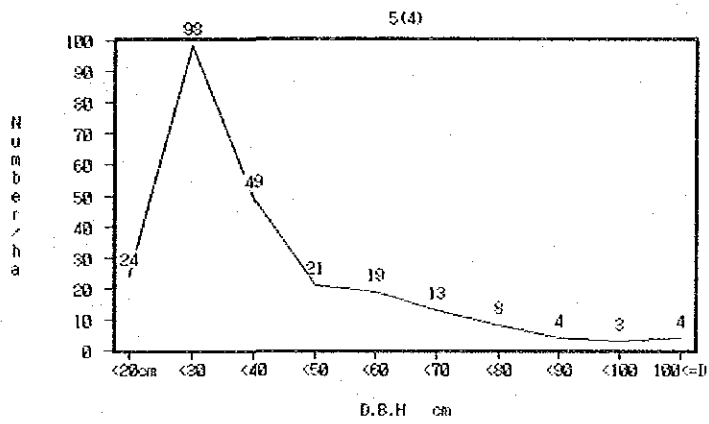
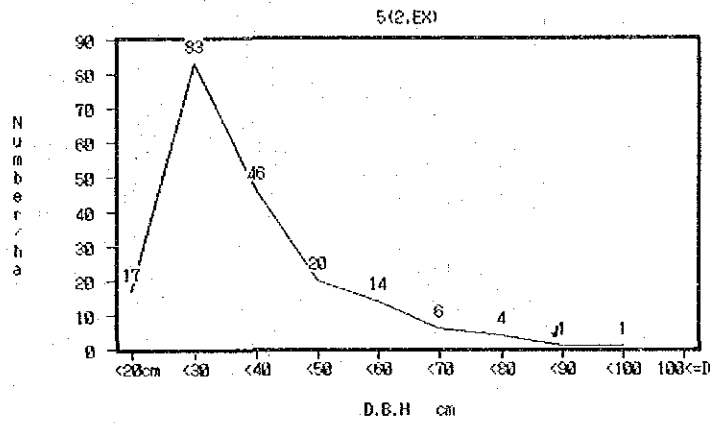
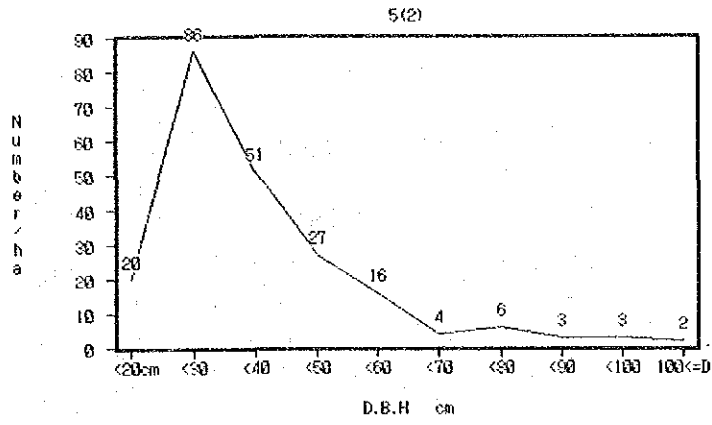
Note : 8stratum / 10 ≤ D. B. H

App. Figure-1

Number by D. B. H class and stratum







App. Table-14

Number by stratum and storey

Unit : Number/ha

Stratum	Storey	D	N	Total	Stratum	Storey	D	N	Total
2. 1(1)	Up	36	134	170	3. 3(3)	Up	62	16	78
	Low	25	115	140		Low	6	146	152
	Total	61	249	310		Total	68	161	229
2. 2(1)	Up	76	188	264	3. 5(1)	Up	134	44	178
	Low	21	128	149		Low	19	186	205
	Total	97	315	413		Total	153	230	383
3. 1(1)	Up	80	203	283	5 (2)	Up	25	79	103
	Low	35	155	190		Low	15	101	116
	Total	115	358	473		Total	40	179	219
3. 1 (1. EX)	Up	55	95	150	5(2, EX)	Up	22	97	119
	Low	50	155	205		Low	10	62	72
	Total	105	250	355		Total	32	159	191
3. 1(2)	Up	26	111	137	5 (4)	Up	56	38	94
	Low	8	107	115		Low	41	108	149
	Total	34	218	252		Total	97	146	243
3. 2(2)	Up	24	92	116	8	Up	83	142	225
	Low	15	138	153		Low	142	296	438
	Total	39	229	268		Total	225	438	663
					Total	Up	45	86	132
						Low	22	124	147
						Total	68	211	278

Note) D:Dipterocarp Tree N:Non-dipterocarp Tree

App. Table-15

Species by stratum -2.1(1)-

Vernacular Name	Volume (m ³ /ha)				Number/ha			
	Total	D<40	40≤D	%	Total	D<40	40≤D	%
1 Ubah	115.006	52.330	62.676	54.14	158	126	31	57.41
2 Bintangor	16.070	3.964	12.106	10.46	13	8	5	9.26
3 Medang	14.349	5.325	9.024	7.79	18	14	4	7.41
4 Resak	32.560	25.729	6.831	5.90	58	55	3	5.56
5 Rengas	6.369		6.369	5.50	1		1	1.85
6 Pudu	5.843		5.843	5.05	3		3	5.56
7 Mata ulat	16.068	10.890	5.178	4.47	20	18	3	5.56
8 Merbau	5.476	0.715	4.761	4.11	4	1	3	5.56
9 Adau	5.799	3.660	2.139	1.85	10	9	1	1.85
10 Berangan	4.485	3.636	0.849	0.73	9	8	1	1.85
Others	7.946	7.946			19	19		
Total	229.969	114.194	115.775	100.00	310	256	54	100.00

App. Table-16

Species by stratum -2.2(1)-

Vernacular Name	Volume (m ³ /ha)				Number/ha			
	Total	D<40	40≤D	%	Total	D<40	40≤D	%
1 Keruntum	59.799	26.861	32.938	39.16	54	36	18	41.86
2 Kapur paya	69.644	51.264	18.381	21.85	79	69	10	23.26
3 Nyatoh	53.581	40.871	12.710	15.11	106	100	6	13.95
4 Meranti paya	10.954	4.721	6.233	7.41	8	7	1	2.33
5 Medang tabak	13.699	8.875	4.824	5.73	25	22	3	6.98
6 Ramin	2.871		2.871	3.41	1		1	2.33
7 Keruing	2.481		2.481	2.95	1		1	2.33
8 Kayu malam	18.086	15.919	2.167	2.58	29	28	1	2.33
9 Amat	5.208	3.693	1.515	1.80	7	6	1	2.33
10 Ubah	22.719	22.719			57	57		
Others	18.865	18.865			44	44		
Total	277.907	193.789	84.118	100.00	413	369	43	100.00

App. Table-17

Species by stratum -3.1(1)-

Vernacular Name	Volume (m ³ /ha)				Number/ha			
	Total	D<40	40≤D	%	Total	D<40	40≤D	%
1 Keruntum	43.928		43.928	26.06	8		8	12.31
2 Ramin	66.933	36.648	30.285	17.97	63	50	13	20.00
3 Kapur paya	107.175	82.815	24.360	14.45	110	100	10	15.38
4 Bangkoh	40.633	19.768	20.865	12.38	33	25	8	12.31
5 Medang	24.845	13.388	11.458	6.80	25	20	5	7.69
6 Medang tabak	33.710	23.478	10.233	6.07	43	38	5	7.69
7 Nyatoh	23.218	14.840	8.378	4.97	28	23	5	7.69
8 Sepetir	18.140	10.188	7.953	4.72	20	15	5	7.69
9 Kayu malam	39.000	32.165	6.835	4.06	45	40	5	7.69
10 Bintangor	4.245		4.245	2.52	3		3	4.62
Others	46.556	46.556			98	98		
Total	448.380	279.843	168.538	100.00	473	408	65	100.00

App. Table-18

Species by stratum -3.1(1. BX)-

Vernacular Name	Volume (m ³ /ha)				Number/ha			
	Total	D<40	40 ≤ D	%	Total	D<40	40 ≤ D	%
1 Ramin	72.055	2.630	69.425	53.70	25	3	23	47.92
2 Kapur paya	53.975	33.768	20.208	15.63	63	53	10	20.83
3 Ubah	68.633	50.715	17.918	13.86	158	150	8	16.67
4 Medang	14.415	2.548	11.868	9.18	5	3	3	6.25
5 Kayu malam	7.943	1.583	6.360	4.92	10	8	3	6.25
6 Rengas	7.748	4.233	3.515	2.72	8	5	3	6.25
7 Resak	15.798	15.798			43	43		
8 Keranji	8.020	8.020			15	15		
9 Nyatoh	5.945	5.945			15	15		
10 Kedondong	2.050	2.050			5	5		
Others	3.886	3.886			11	11		
Total	260.465	131.173	129.293	100.00	355	308	48	100.00

App. Table-19

Species by stratum -3.1(2)-

Vernacular Name	Volume (m ³ /ha)				Number/ha			
	Total	D<40	40 ≤ D	%	Total	D<40	40 ≤ D	%
1 Kapur paya	88.360	5.751	82.609	29.97	21	6	15	18.75
2 Ramin	47.088	9.493	37.594	13.64	19	8	11	13.75
3 Sepetir	40.483	14.029	26.454	9.60	23	13	10	12.50
4 Ubah	36.579	12.296	24.284	8.81	29	22	7	8.75
5 Nyatoh	36.253	16.721	19.532	7.09	26	19	7	8.75
6 Kedondong	35.209	15.982	19.227	6.98	29	23	6	7.50
7 Medang	12.388	2.976	9.411	3.41	8	6	2	2.50
8 Meranti Group	10.434	3.15	7.283	2.64	6	4	3	3.75
9 Kembang semangkok	5.804	0.000	5.804	2.11	1	0	1	1.25
10 Pendarahan	10.703	5.499	5.204	1.89	12	9	3	3.75
Others	69.781	31.543	38.236	13.86	77	66	15	18.75
Total	393.082	117.443	275.640	100.00	252	172	80	100.00

App. Table-20

Species by stratum -3.2(2)-

Vernacular Name	Volume (m ³ /ha)				Number/ha			
	Total	D<40	40 ≤ D	%	Total	D<40	40 ≤ D	%
1 Kapur paya	62.711	3.003	59.708	26.39	16	3	13	19.70
2 Kedondong	43.352	8.317	35.035	15.49	29	18	12	18.18
3 Rengas	34.158	1.214	32.944	14.56	10	2	8	12.12
4 Keruntum	24.928	2.051	22.877	10.11	9	3	7	10.61
5 Ubah	37.457	23.184	14.274	6.31	57	52	5	7.58
6 Nyatoh Group	19.799	7.860	11.940	5.28	19	15	4	6.06
7 Ramin	15.716	5.873	9.844	4.35	12	8	4	6.06
8 Meranti Group	11.087	2.466	8.621	3.81	8	5	4	6.07
9 Semayar	6.161	0.000	6.161	2.72	1	0	1	1.52
10 Medang	12.760	6.953	5.808	2.57	17	14	3	4.55
Others	62.887	43.866	19.023	8.4	101	95	12	18.22
Total	331.004	104.775	226.229	100.00	268	203	66	100.00

App. Table-21

Species by stratum -3.3(3)-

Vernacular Name	Volume (m ³ /ha)				Number/ha			
	Total	D<40	40≤D	%	Total	D<40	40≤D	%
1 Alan	444.558	1.186	443.373	85.86	62	1	61	66.30
2 Keruntum	25.930	3.955	21.975	4.26	13	6	7	7.61
3 Ramin	35.894	15.046	20.848	4.04	33	21	11	11.96
4 Ubah	15.700	9.249	6.451	1.25	25	21	4	4.35
5 Jelutong	11.071	4.891	6.180	1.20	14	11	3	3.26
6 Sepetir	13.922	8.384	5.538	1.07	18	16	3	3.26
7 Nyatoh	7.879	4.423	3.456	0.67	11	9	1	1.09
8 Kapur paya	3.448	0.645	2.803	0.54	3	2	1	1.09
9 Geronggang	1.838		1.838	0.36	1		1	1.09
10 Resak	2.483	0.748	1.736	0.34	3	2	1	1.09
Others	21.950	19.738	2.214	0.43	49	48	2	2.18
Total	584.673	68.264	516.409	100.00	229	138	92	100.00

App. Table-22

Species by stratum -3.5(1)-

Vernacular Name	Volume (m ³ /ha)				Number/ha			
	Total	D<40	40≤D	%	Total	D<40	40≤D	%
1 Alan	379.451	45.535	333.916	87.38	153	45	108	82.44
2 Keruntum	52.208	21.364	30.844	8.07	48	34	14	10.69
3 Rengas	15.328	7.794	7.534	1.97	16	13	4	3.05
4 Bintangor	26.270	21.393	4.878	1.28	29	26	3	2.29
5 Nyatoh	18.023	15.398	2.625	0.69	33	30	3	2.29
6 Mengilas	16.991	14.638	2.354	0.62	35	34	1	0.76
7 Ramin	8.170	8.170			24	24		
8 Ubah	5.105	5.105			19	19		
9 Medang tabak	3.623	3.623			18	18		
10 Kayu malam	1.324	1.324			4	4		
Others	1.786	1.786			6	6		
Total	528.278	146.128	382.150	100.00	383	251	131	100.00

App. Table-23

Species by stratum -5(2)-

Vernacular Name	Volume (m ³ /ha)				Number/ha			
	Total	D<40	40≤D	%	Total	D<40	40≤D	%
1 Meranti Group	53.895	8.271	45.625	17.05	15	9	8	12.9
2 Kedondong	50.613	15.800	34.813	13.01	35	25	10	16.13
3 Ubah	52.429	21.325	31.104	11.62	44	33	11	17.74
4 Medang	26.824	6.593	20.231	7.56	15	9	6	9.68
5 Keranji	18.240	1.579	16.660	6.22	5	1	4	6.45
6 Keruing	18.341	4.313	14.028	5.24	9	6	3	4.84
7 Kempas	10.976		10.976	4.10	1		1	1.61
8 Kapur Group	11.277	0.834	10.443	3.9	2	1	1	1.61
9 Nyatoh	11.947	3.434	8.513	3.18	6	5	2	3.23
10 Raru	7.669		7.669	2.87	0		0	0.00
Others	112.339	44.756	67.581	25.27	77	63	13	20.94
Total	374.546	106.904	267.643	100.00	219	157	62	100.00

App. Table-24

Species by stratum -5(2, BX)-

Vernacular Name	Volume (m ³ /ha)				Number/ha			
	Total	D<40	40≤D	%	Total	D<40	40≤D	%
1 Kedondong	41.906	14.921	26.985	18.88	27	19	8	17.78
2 Keruing	24.479	1.481	22.999	16.09	8	2	6	13.33
3 Belian Group	13.336	0.739	12.596	8.81	5	1	4	8.89
4 Ubah	18.041	8.851	9.190	6.43	21	17	4	8.89
5 Perah	15.368	6.363	9.005	6.30	17	12	5	11.11
6 Resak	10.964	3.801	7.163	5.01	8	7	1	2.22
7 Kempas	8.230	1.146	7.084	4.96	3	2	1	2.22
8 Tualang	7.680	1.484	6.196	4.33	3	1	2	4.44
9 Meranti Group	7.234	1.363	5.871	4.11	6	5	1	2.22
10 Sepetir	6.332	0.509	5.823	4.07	3	1	2	4.44
Others	83.289	53.268	30.020	21.00	96	83	15	33.30
Total	236.853	93.923	142.930	100.00	191	146	45	100.00

App. Table-25

Species by stratum -5(4)-

Vernacular Name	Volume (m ³ /ha)				Number/ha			
	Total	D<40	40≤D	%	Total	D<40	40≤D	%
1 Kapur bukit	97.422	3.713	93.709	27.99	22	5	17	23.61
2 Meranti Group	102.255	8.583	93.674	27.98	31	13	18	25.02
3 Keruing Group	57.472	5.654	51.818	15.48	18	9	9	12.5
4 Resak Group	18.178	7.207	10.971	3.28	17	14	3	4.17
5 Ubah Group	23.453	13.97	9.483	2.83	27	25	2	2.78
6 Merawan Group	8.089	0.432	7.658	2.29	4	2	4	5.56
7 Kempas	7.489		7.489	2.24	1		1	1.39
8 Kembang semangkok	7.299	0.434	6.865	2.05	3	1	3	4.17
9 Kedondong	30.484	24.799	5.684	1.70	48	45	3	4.17
10 Merpauh	5.581		5.581	1.67	1		1	1.39
Others	81.930	40.092	41.839	12.50	76	63	15	20.85
Total	439.650	104.883	334.768	100.00	243	171	72	100.00

App. Table-26

Species by stratum -8-

Vernacular Name	Volume (m ³ /ha)				Number/ha			
	Total	D<40	40≤D	%	Total	D<40	40≤D	%
1 Ramin	18.760	5.975	12.785	32.37	8	4	4	23.53
2 Kapur paya	65.788	55.446	10.342	26.18	150	146	4	23.53
3 Ubah	41.892	35.229	6.663	15.87	200	196	4	23.53
4 Pulai	6.252	0.079	6.173	15.63	4	2	2	11.76
5 Sindok sindok	7.467	3.929	3.538	8.96	15	13	2	11.76
6 Resak Group	12.179	12.179			75	75		
7 Nyatoh	0.229	0.229			4	4		
8 Kayu malam	8.125	8.125			27	27		
9 Rengas	0.079	0.079			2	2		
10 Melunak	2.015	2.015			4	4		
Others	42.226	42.226			173	173		
Total	205.010	165.510	39.500	100.00	663	646	17	100.00

App. Table-27

Volume by group and D. B. H class

Unit : m³

Stratum	Group	D<40	40≤D	Total	Stratum	Group	D<40	40≤D	Total
2.1(1)	A	27.849	11.592	39.441	3.3(3)	A	22.571	472.215	494.786
	B	76.145	96.201	172.346		B	35.648	19.359	55.007
	C	10.200	7.981	18.181		C	10.044	24.835	34.879
	Total	114.194	115.775	229.969		Total	68.264	516.409	584.673
2.2(1)	A	103.135	44.190	147.325	3.5(1)	A	69.102	336.541	405.644
	B	60.774	6.990	67.764		B	55.338	14.765	70.103
	C	29.881	32.938	62.818		C	21.688	30.844	52.531
	Total	193.789	84.118	277.907		Total	146.128	382.150	528.278
3.1(1)	A	136.073	63.022	199.095	5(2)	A	24.118	99.056	123.174
	B	120.868	40.723	161.590		B	60.128	128.950	189.077
	C	22.902	64.793	87.695		C	22.659	39.637	62.295
	Total	279.843	168.538	448.380		Total	106.904	267.643	374.546
3.1 (1. EX)	A	58.140	89.633	147.773	5(2. EX)	A	17.439	52.966	70.405
	B	72.290	39.660	111.950		B	47.392	64.094	111.486
	C	0.742	0.000	0.742		C	29.092	25.871	54.962
	Total	131.173	129.293	260.465		Total	93.923	142.930	236.853
3.1(2)	A	38.761	151.463	190.224	5(4)	A	32.396	261.594	293.991
	B	54.574	103.632	158.206		B	63.476	48.931	112.407
	C	24.107	20.545	44.652		C	9.011	24.242	33.253
	Total	117.443	275.640	393.082		Total	104.883	334.768	439.650
3.2(2)	A	30.965	98.181	129.146	8	A	73.829	23.127	96.956
	B	59.528	102.142	161.670		B	66.671	6.663	73.333
	C	14.282	25.906	40.188		C	25.010	9.710	34.721
	Total	104.775	226.229	331.004		Total	165.510	39.500	205.010
					Total	A	38.665	159.412	198.077
						B	58.672	71.927	130.599
						C	18.566	27.198	45.764
						Total	115.903	258.537	374.440

App. Table-28

Volume by stratum and storey

Unit : m³

Stratum	Storey	D	N	Total	Stratum	Storey	D	N	Total
2.1(1)	Up	27.309	159.876	187.185	3.3(3)	Up	447.911	37.418	485.329
	Low	6.656	36.128	42.784		Low	3.102	96.242	99.344
	Total	33.965	196.004	229.969		Total	451.013	133.660	584.673
2.2(1)	Up	78.394	148.981	227.375	3.5(1)	Up	366.168	60.362	426.530
	Low	7.271	43.261	50.532		Low	13.284	88.464	101.747
	Total	85.665	192.242	277.907		Total	379.451	148.826	528.278
3.1(1)	Up	95.753	276.797	372.550	5(2)	Up	100.000	206.934	306.934
	Low	13.193	62.637	75.830		Low	7.823	59.789	67.612
	Total	108.945	339.435	448.380		Total	107.823	266.723	374.546
3.1 (1. EX)	Up	54.817	146.802	201.620	5(2. EX)	Up	50.566	153.207	203.773
	Low	14.955	43.890	58.845		Low	3.701	29.379	33.080
	Total	69.773	190.693	260.465		Total	54.267	182.586	236.853
3.1(2)	Up	99.079	229.384	328.463	5(4)	Up	263.283	92.330	355.613
	Low	7.294	57.325	64.619		Low	24.574	59.463	84.037
	Total	106.374	286.709	393.082		Total	287.857	151.793	439.650
3.2(2)	Up	81.294	183.910	265.204	8	Up	53.525	91.573	145.098
	Low	6.401	59.400	65.800		Low	24.442	35.471	59.913
	Total	87.694	243.309	331.004		Total	77.967	127.044	205.010
					Total	Up	147.697	130.833	278.529
						Low	8.730	53.997	62.727
						Total	156.426	184.830	341.256

Note) D:Dipterocarp Tree N:Non-dipterocarp Tree

App. Table-29

D. B. H by stratum

Unit:cm

Stratum	D. B. H								
	D<40			40≤D			Total		
	AVG.	MAX.	MIN.	AVG.	MAX.	MIN.	AVG.	MAX.	MIN.
2.1(1)	26.1	38	18	51.5	74	40	32.0	74	18
2.2(1)	24.8	38	18	44.7	62	40	27.5	62	18
3.1(1)	26.4	38	18	48.0	78	40	30.3	78	18
3.1(1. EX)	25.0	38	18	52.4	72	40	30.1	72	18
3.1(2)	27.4	38	18	53.6	94	40	37.8	94	18
3.2(2)	25.8	38	18	56.6	88	40	35.8	88	18
3.3(3)	25.8	38	18	68.5	130	40	47.7	130	18
3.5(1)	26.5	38	18	51.7	72	40	37.1	72	18
5 (2)	27.0	38	18	60.0	130	40	39.3	130	18
5(2. EX)	26.7	38	18	54.4	90	40	35.3	90	18
5 (4)	26.3	38	18	64.1	130	40	41.2	130	18
8	19.1	38	10	49.6	60	42	20.4	60	10
Total	25.6	38	10	58.2	130	40	36.3	130	10

App. Table-30

Clear length by stratum

Unit:m

Stratum	D. B. H								
	D<40			40≤D			Total		
	AVG.	MAX.	MIN.	AVG.	MAX.	MIN.	AVG.	MAX.	MIN.
2.1(1)	11.0	24	2	14.8	24	7	11.7	24	2
2.2(1)	14.7	20	8	18.0	22	12	15.1	22	8
3.1(1)	17.0	28	10	21.3	28	15	17.6	28	10
3.1(1. EX)	10.9	19	5	18.5	22	8	11.9	22	5
3.1(2)	15.3	28	6	22.1	32	9	17.4	32	6
3.2(2)	13.1	24	6	19.9	28	10	14.7	28	6
3.3(3)	12.7	24	5	21.7	35	12	16.3	35	5
3.5(1)	13.5	24	6	20.1	25	10	15.8	25	6
5 (2)	16.3	32	3	21.9	33	10	17.9	33	3
5(2. EX)	15.7	26	6	20.0	28	7	16.7	28	6
5 (4)	15.2	30	7	21.8	35	14	17.2	35	7
8	10.4	22	5	17.8	24	13	10.6	24	5
Total	14.0	32	2	20.7	35	7	15.6	35	2

App. Table-31

Crown diameter by stratum

Unit:m

Stratum	D. B. H								
	D<40			40≤D			Total		
	AVG.	MAX.	MIN.	AVG.	MAX.	MIN.	AVG.	MAX.	MIN.
2.1(1)	6.8	12	4	9.2	12	6	7.5	12	4
2.2(1)	6.1	9	2	8.1	10	6	6.4	10	2
3.1(1)	7.6	14	5	10.0	14	6	8.1	14	5
3.1(1. EX)	7.9	12	6	9.6	14	7	8.4	14	6
3.1(2)	7.8	16	4	10.7	22	6	9.3	22	4
3.2(2)	7.6	16	5	9.4	15	6	8.5	16	5
3.3(3)	7.3	9	6	10.1	16	6	9.9	16	6
3.5(1)	5.7	8	4	7.0	10	4	6.6	10	4
5 (2)	7.7	14	4	9.9	16	6	8.9	16	4
5(2. EX)	9.0	18	6	10.2	16	6	9.4	18	6
5 (4)	8.7	17	6	11.3	20	6	10.6	20	6
8	5.7	9	4	8.0	9	6	5.9	9	4
Total	7.3	18	2	9.7	22	4	8.4	22	2

App. Table-32 Measurement value of average crown diameter and crown density
(Independent variables and Dependent variables in the regression estimate)

Plot No.	Forest types (Stratum)	Volume Y	Average of crown diameter	Grade of crown diameter (X_1)	Grade of crown density (X_2)	$X_1 \times X_2$
1	3.1(1)	448.38	6.44	1	5	5
2	3.1(2)	333.21	9.58	2	4	8
3	3.1(2)	283.06	8.35	2	3	6
4	2.1(1)	273.74	7.59	2	4	8
5	2.1(1)	186.21	6.73	1	2	2
6	3.3(3)	505.31	11.30	3	4	12
7	3.1(2)	555.35	9.60	2	5	10
8	5(2)	275.18	10.14	3	3	9
9	5(2)	392.31	9.34	2	4	8
10	5(2)	441.44	9.94	3	3	9
11	5(4)	453.87	11.50	3	3	9
12	5(2)	454.10	8.26	2	4	8
13	5(2.EX)	129.11	6.72	1	3	3
14	5(2.EX)	264.04	8.74	2	3	6
15	3.2(2)	180.96	8.06	2	2	4
16	3.5(1)	489.04	7.26	2	5	10
17	3.2(2)	570.57	8.87	2	5	10
18	3.1(1.EX)	260.46	7.39	2	3	6
19	5(2.EX)	227.03	9.85	2	3	6
20	5(2)	325.98	8.06	2	4	8
21	2.2(1)	319.03	5.78	1	5	5
22	3.3(3)	577.59	11.42	3	5	15
23	3.3(3)	691.26	12.77	3	5	15
24	3.2(2)	350.86	7.52	2	4	8
25	3.2(2)	257.67	9.40	2	3	6
26	3.3(3)	564.54	11.42	3	5	15
27	5(2)	488.39	8.60	2	4	8
28	5(2)	244.44	8.06	2	3	6
29	5(4)	351.14	11.42	3	3	9
30	5(4)	565.92	12.36	3	4	12
31	5(4)	387.67	12.09	3	3	9
32	3.1(2)	412.17	7.39	2	4	8
33	8	129.81	5.24	1	2	2
34	5(2.EX)	327.23	9.41	2	3	6
35	2.2(1)	226.51	5.38	1	4	4
36	3.2(2)	294.98	7.48	2	3	6
37	8	220.49	5.28	1	3	3
38	3.5(1)	567.52	7.22	2	5	10

App. Table-33 Sampling number of large sample plots by stratum

Stratum	Sampling number of large sample plots n'	Average of interpreted value \bar{x}'_n
2.1(1)	10	3.9
2.2(1)	10	4.3
2.2(1.EX)	5	2.0
3.1(1)	5	6.0
3.1(1.EX)	5	2.8
3.1(2)	10	8.0
3.1(2.EX)	5	3.4
3.2(2)	10	6.4
3.2(2.EX)	5	3.6
3.3(3)	10	13.3
3.3(3.EX)	10	3.9
3.5(1)	10	9.0
5(2)	20	7.9
5(2.EX)	20	4.7
5(3)	10	9.0
5(4)	10	10.4
5(4.EX)	2	4.0
8	10	2.4
Total	167	

Notes : Average of interpreted value(\bar{x}'_n) is average within strata of the product of average crown diameter grade (X_1) and crown density grade (X_2).

PROFILE DESCRIPTION SHEET (Sample)

Front

Soil Profile

SKN

ACf (Ferric Acrisols)
1bc

Profile No. 19	Location Bukit Sawat Plantation Area		Date 10. Sept. '92	Weather ① ②	Surveyor H. TAKATOH
Land form Steep Terrain	Elevation 44 m	Slope 25°	Land use or Vegetation clear cut after planting (A. mangium)		
Parent Material Sand Stone Shale	Drainage good	Moisture Condition dry		Groundwater table (m)	
1. Horizon symbol	0F(AE)	II AB(E)	III B	IV Bs	V Bs
2. Depth of top and bottom of horizon	0 - 2	2 - 6	6 - 16	16 - 80	80 - >
3. Boundary of horizon	a c d	a c d	a c d	a c d	a c d
4. Form of boundary	s	s	s	s	s
5. Colour	2.5YR 5/6	2.5YR 5/4	10YR 7/6	10YR 7/8	7.5YR 7/8
6. Mottling	f c m	f c m	f c m	f c m	f c m
7. Texture	S L Si C	S L Si C	S L Si C	S L Si C	S L Si C
8. Structure	1 w m s	1 w m s	1 w m s	1 w m s	1 w m s
9. Consistence	nS sS s vS	nS sS s vS	nS sS s vS	nS sS s vS	nS sS s vS
10. Others (Cutans, Cementation, pores pans, Efflorescence, pH, Roots, Humus Dip, Ben, Hardness (mm), etc)	H= 4mm Leaf (F) Roots (f) white (bleach) pH 4.61	H= 8-11mm Roots (f) pH 4.40	H= 24-26mm Roots (f) pH 4.49	H= 20-22mm Roots (rod) Weathering stone pH 4.73	H= 20-22mm Roots (rod) pH 4.71

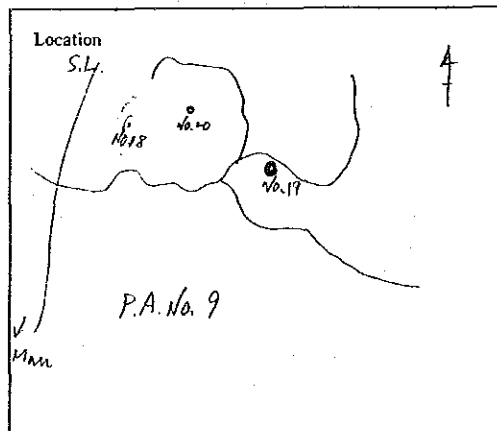
Back

Profile sketch



Clear Cut
After Planting
Acacia mangium (1992)

Profile pit
Under 2m (Shale)
(Fe pans)
color 2.5YR 5/8
10YR 4/8



App. Figure-2 Soil profile chart (sample)

I. General Information

Profile No., Location, Date, Weather, Surveyor, Land form, Elevation, Slope, Land use or Vegetation, Parent Material, Drainage, Moisture Condition, Groundwater table(m)

II. Description of Individual Soil Horizons

1. Horizon symbol

Master horizons

H : An organic horizon formed or forming from accumulations of organic material deposited on the surface, that is saturated with water for prolonged periods.

H(P) : Peat layer • **H(M)** : Muck layer.

O : An organic horizon formed ..., that is not saturated with water for more than a few days a year.

A : A mineral horizon formed or forming at or adjacent to the surface.

E : Eluviation layer.

B : A mineral horizon in which rock structure is obliterated or is but faintly evident, characterized by one or more of the following features:

(a) an illuvial concentration of silicate clay, iron, aluminium, or humus, alone or in combinations:

(b) a residual concentration of sesquioxides relative to source materials:

(c) an alteration of material from its original condition to the extent that silicate clays are formed, oxides are liberated, or both, or granular, blocky or prismatic structure is formed.

C : A mineral horizon (or layer) of unconsolidated material from which the solum is presumed to have formed which does not show properties diagnostic of any other master horizons.

R : A layer of continuous indurated rock.

Letter suffixes

The suffix letters used to qualify the master horizons are follows:

b : Buried or bisequal soil horizon.

c : Accumulation in concretionary form.

g : Mottling reflecting variations in oxidation and reduction.

h : Accumulation of organic matter in mineral horizons.

k : Accumulation of calcium carbonate.

m : Strongly cemented, consolidated, indurated.

n : Accumulation of sodium.

p : Disturbed by ploughing or other tillage practices.

q : Accumulation of silica.

r : Strong reduction as a result of groundwater influence.

s : Accumulation of sesquioxides.

t : Illuvial accumulation of clay.

u : Unspecified.

w : Alteration in situ as reflected by clay content, colour, structure.

x : Occurrence of fragipan.

y : Accumulation of gypsum.

z : Accumulation of salts more soluble than gypsum.

2. Depth of top and bottom horizon (cm)

3. Boundary of horizon

a : abrupt, less than 2.5 cm • **c** : clear, 2.6 to 6.3 cm • **g** : gradual, 6.4 to 12.5 cm •

d : diffuse, more than 12.6 cm

App. Table-34 (continued)

4. Form of boundary

s : smooth • w : wavy • i : irregular • b : broken

5. Colour

- wet, - dry (Munsell Soil colour charts-Hue Value/Chroma)

6. Mottling

- abundance- f : few, less than 2 % of profile • c : common, 2 to 20 % • m : many, more than 20 %

- size- f : fine, less than 5 mm wide • m : medium, 5 to 15 mm • c : coarse, more than 15 mm

- contrast- f : faint • d : distinct • p : prominent

- colour

7. Texture(Sandy, Loamy, Silty, Clay)

8. Structure

- grade- l : structureless • w : weak • m : moderate • s : strong

- type- p : prismatic • c : columnar • b : (angular) blocky • s : sub-angular blocky • p : platy
g : granular • v : non-structure

- size- f : fine • m : medium • c : coarse

9. Consistence

- wet

= stickness- nS : non-sticky • sS : slightly sticky • S : sticky • vS : very sticky

= plasticity- nP : non-plastic • sP : slightly plastic • P : plastic • vP : very plastic

- moist - lo : loose • vf : very friable • fr : friable • Fi : firm • vF : very firm •
eF : extremely firm

- dry - lo : loose • S : soft • sH : slightly hard • H : hard • vH : very hard •

eH : extremely hard

10. Roots

- abundance - abundant, very frequent, frequent, common, few, very few

- size - coarse, medium, fine

App. Table-35 Soil classification from profile surveys

Point No.	Land form	Land use or Vegetation	Brunei Soil Symbol	FAO/UNESCO Soil classification
1	Undulating to terrain	Secondary forest (Non Dipterocarp)	AND/BKT	CMd(Dystric Cambisols)
2	Upland site	Mixed Dipterocarp forest	BKT	ACh(Haplic Acrisols)
3	Riverine bottomland	Secondary forest	AND/TTN	CMx(Chromic Cambisols)
4	Upland site	Secondary forest (After rubber tree)	BKT	ACf(Ferric Acrisols)
5	Undulating upland site	Secondary forest	BKT	ACf(Ferric Acrisols) /ACg(Gleyic Acrisols)
6	Riverside	Open area (Grass)	BDG/BUU	GLm(Mollic Gleysols)
7	Undulating upland site	Secondary forest	BKT	ACh(Haplic Acrisols) /ACf(Ferric Acrisols)
8	Riverine bottomland (Swamp plain)	Peat swamp forest	AND	HSf(Fibric Histosols) /HSs(Terric Histosols)
9	Steeper slope >20°	Secondary forest	BKT/BTN	ACf(Ferric Acrisols)
10	Undulating to hilly terrain	Secondary forest	BKT	ACh(Haplic Acrisols)
11	Riverine bottomland	Secondary forest	BDG/BUU	GLe(Eutric Gleysols) /CMg(Gleyic Cambisols)
12	Undulating to terrain	Secondary forest	BKT/BTN	ACg(Gleyic Acrisols)
13	Upland site	After logging (Mixed Dipterocarp)	SKN	ACf(Ferric Acrisols)
14	Upland site	After logging (Mixed Dipterocarp)	BKT	ACf(Ferric Acrisols)
15	Undulating upland	Mixed Dipterocarp forest	Kerangas (sandy)	ARa(Albic Arenosols)
16	Undulating to steep terrain	Mixed Dipterocarp forest	BKT	ACp(Plinthic Acrisols)
17	Riverine bottomland	Mixed Dipterocarp forest	AND/ALL	HSs(Terric Histosols) /HSf(Fibric Histosols)
18	Upland site	Acacia mangium planted	Kerangas (sandy)	ARa(Albic Arenosols)
19	Steep terrain	Acacia mangium planted	SKN	ACf(Ferric Acrisols)
20	Undulating to terrain bottomland (Swamp)	After logging (Peat swamp forest)	AND/ALL	HSs(Terric Histosols) /HSf(Fibric Histosols)
21	Undulating to hilly terrain (slope 30°)	Mixed Dipterocarp forest	BKT/SKN	ACh(Haplic Acrisols)
22	Undulating to hilly terrain (slope 15°)	Mixed Dipterocarp forest	BKT	ACf(Ferric Acrisols) ARa(Albic Arenosols)

App. Table-35 (continued)

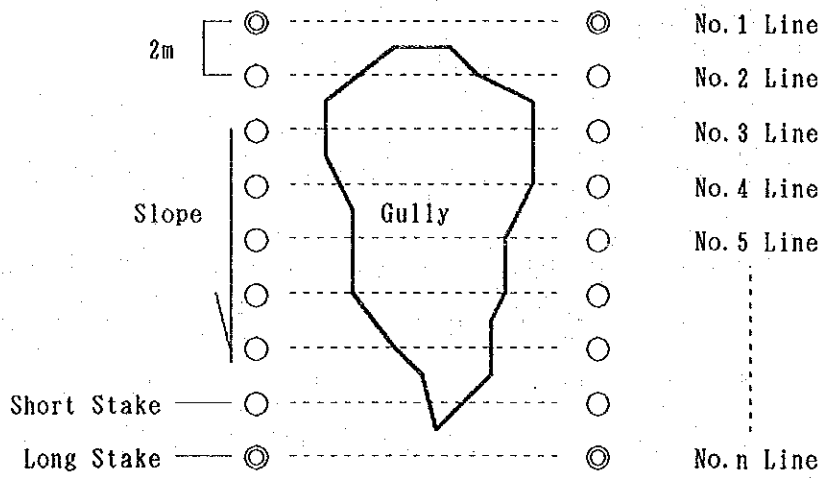
Point No.	Land form	Land use or Vegetation	Brunei Soil Symbol	FAO/UNESCO Soil classification
23	Upland site	After logging (Mixed Dipterocarp)	BKT/SKN	ACh(Haplic Acrisols)
24	Riverine bottomland	Mixed Dipterocarp forest	AND/ALL	CNd(Dystric Cambisols) /CWg(Gleyic Cambisols)
25	Undulating to hilly terrain	After logging (Mixed Dipterocarp)	BKT/SKN	ACf(Ferric Acrisols)
26	Upland site	After logging (Mixed Dipterocarp)	BKT/SKN	ACf(Ferric Acrisols)
27	Upland site	Mixed Dipterocarp forest	BTN	ACh(Haplic Acrisols)
28	Undulating to hilly terrain (slope 10°)	Mixed Dipterocarp forest	BTN	ACh(Haplic Acrisols)
29	Undulating to terrain	Agricultural field (Fruits)	BTN	ACh(Haplic Acrisols) /CNd(Dystric Cambisols)
30	Undulating to hilly terrain	Secondary forest	BKT/BTN	ACf(Ferric Acrisols)
31	Riverside bottomland	Secondary forest	BDG/TTN	GLd(Dystric Gleysols) /HSf(Fibric Histosols)
32	Riverine bottomland	Secondary forest	AND	HSf(Fibric Histosols)
33	Riverside	Secondary forest	AND/ALL	GLd(Dystric Gleysols) HSf(Fibric Histosols)
34	Undulating to hilly terrain	Mixed Dipterocarp (After Rubber tree)	BKT/BTN	CNd(Dystric Cambisols) /ACh(Haplic Acrisols)
35	Undulating to hilly terrain (slope 10°)	Mixed Dipterocarp forest	BKT/BTN	ACf(Ferric Acrisols)
36	Undulating to hilly terrain	Secondary forest	BKT/BTN	ACf(Ferric Acrisols)
37	Riverside bottomland	Secondary forest (Rotan plantation)	BKT/BTN	FLd(Dystric Fluvisols)
38	Undulating to hilly terrain	Before paddy field	BKT/BTN	ACh(Haplic Acrisols)
39	Riverine bottomland	Before paddy field	BDG/TTN	GLd(Dystric Gleysols) ACg(Gleyic Acrisols)
40	Undulating to hilly terrain	Rubber plantation	BKT/BTN	ACf(Ferric Acrisols)
41	Undulating to hilly terrain	Secondary forest	BKT/BTN	CNd(Dystric Cambisols)
42	Undulating to hilly terrain	Secondary forest	BTN/SKN	ACh(Haplic Acrisols)
43	Riverside bottomland	Secondary forest	ALL	CNd(Dystric Cambisols) /FLd(Dystric Fluvisols)
44	Undulating upland site	Secondary forest	BTN	ACf(Ferric Acrisols)

App. Table-35 (continued)

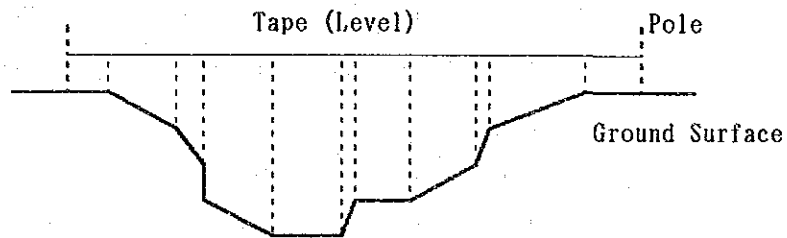
Point No.	Land form	Land use or Vegetation	Brunei Soil Symbol	FAO/UNESCO Soil classification
45	Undulating to terrain (Low land)	Secondary forest	BTN/ALL	FLd(Dystric Fluvisols) /CMd(Dystric Cambisols)
46	Swamp plain	Peat swamp forest	AND	HSf(Fibric Histosols) /HSs(Terric Histosols)
47	Riverside	Secondary forest	ALL	GLd(Dystric Gleysols)
48	Riverside bottomland	Secondary forest	ALL	GLd(Dystric Gleysols)
49	Undulating to hilly terrain (slope 15°)	Secondary forest	BKT/BTN	CMd(Dystric Cambisols)
50	Riverside	Secondary forest	BKT/BTN	ACH(Haplic Acrisols)
51	Undulating to hilly terrain (slope 10°)	Secondary forest	BKT/BTN	ACf(Ferric Acrisols)
52	Riverside	Secondary forest	BDG/TTN	GLd(Dystric Gleysols)
53	Riverside	Secondary forest	AND/TTN	ACg(Gleyic Acrisols) HSf(Fibric Histosols)
54	Swamp plain	Secondary forest (Freshwater swamp)	AND/TTN	GLd(Dystric Gleysols)
55	Undulating to hilly terrain (slope 20°)	Secondary forest	BKT/BTN	ACH(Haplic Acrisols)
56	Undulating to hilly terrain	Secondary forest	BKT/BTN	ACH(Haplic Acrisols)
57	Undulating to hilly terrain	Secondary forest	BKT/BTN	ACH(Haplic Acrisols) CMd(Dystric Cambisols)
58	Swamp plain	Secondary forest	ALL	GLd(Dystric Gleysols)
59	Undulating to hilly terrain	Secondary forest	BKT	ACf(Ferric Acrisols)
60	Undulating to terrain (Upland site)	Mixed Dipterocarp forest	BKT	ACf(Ferric Acrisols)
61	Undulating to terrain	Mixed Dipterocarp forest	BKT	ACf(Ferric Acrisols)
62	Undulating to terrain bottomland	Mixed Dipterocarp forest	BKT	ACf(Ferric Acrisols)
63	Undulating to terrain	Mixed Dipterocarp	BKT	CMx(Chromic Cambisols)
64	Riverside	Secondary forest	BDG	CMx(Chromic Cambisols) ACf(Ferric Acrisols)
65	Riverine bottomland (Freshwater swamp)	Secondary forest (Rubber plantation)	BDG/AND	GLE(Eutric Gleysols) CMg(Gleyic Cambisols)

App. Tabel-36 Simplified key diagnostic horizons

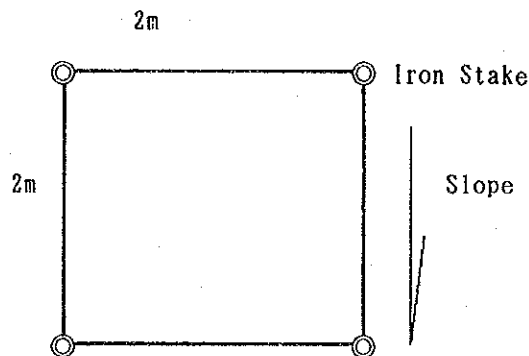
Diagnostic horizon	symbol	Characteristics
Albic E	E	Bleached, usually sandy material, lacking clay and free iron oxides
Argic B	Bt	Horizon with higher clay content than overlying horizon
Calcic	Ak, Bk, Ck	Secondary carbonate accumulation, with CaCO ₃ equivalent > 15% and 5% more than underlying horizons
Cambic B	Bw	In situ altered B - most B horizons not meeting criteria for argic, natric, spodic or oxic
Ferralic B	Bws	Highly weathered SL or finer texture. Low CEC, illuvial clay and weatherable minerals
Gypsic	Ay, By, Cy	Secondary CaSO ₄ accumulation > 5% more than underlying horizon
Histic H	H	High organic material and peaty
Mollic A	—	'Fertile earth' topsoil, well structured and dark moderately high organic material and base saturation > 50%
Ochric A	—	A horizon of dry area. Pale, low organic material and /or thin or hard and massive. Excluding finely stratified material, e.g. alluvium
Sulfuric	—	Oxidised sulfide-rich materials; pH < 3.5 and jarosite mottles
Umbric A	—	'Infertile earth' topsoil, with moderately high organic material and base saturation < 50% but excluding fimic horizons



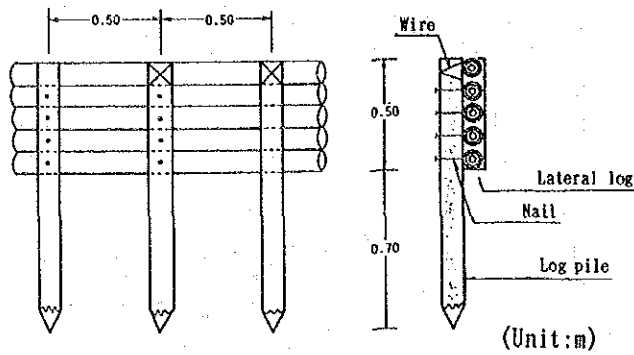
App. Figure-3 Plan of gully erosion experimental plot



App. Figure-4 Lateral profile of gully erosion experimental plot

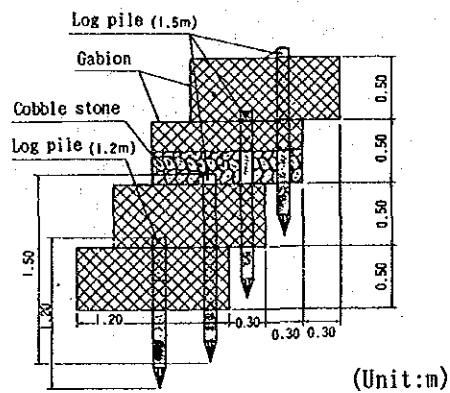


App. Figure-5 Plan of sheet erosion experimental plot



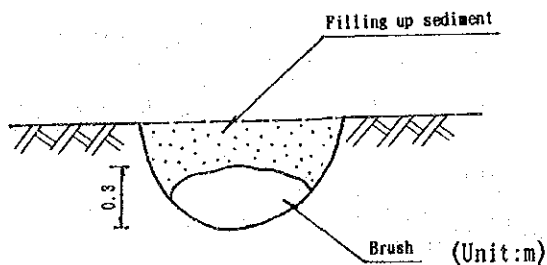
Standard table of log buried work	
Log pile	small diameter above 8cm length 1.2m
Lateral log	small diameter above 9cm length 1.8m
Wire	length 1.2m per point
Nail	length 15cm per point

App. Figure-6 Standard diagram of log buried work



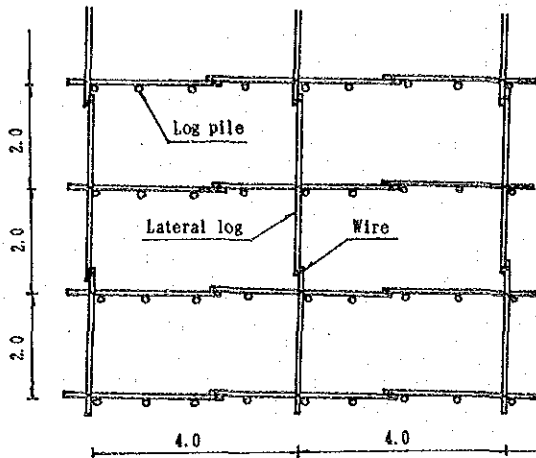
Standard table of gabion buried work	
Gabion	diameter 4.0mm meshes 13cm height 0.5m width 1.2m
Log pile	small diameter above 8cm length 1.5m
Log pile	small diameter above 8cm length 1.2m
Cobble stone	diameter 15-30cm

App. Figure-7 Standard diagram of gabion buried work



Standard table of brush culvert work	
Brush	length above 2.0m

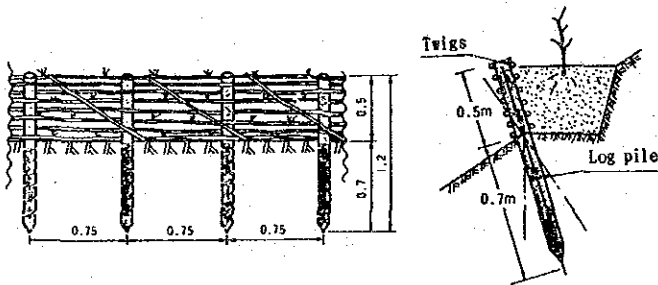
App. Figure-8 Standard diagram of brush culvert work



(Unit:m)

Standard table of log crib work	
Log pile	small diameter above 6cm length 0.6m
Lateral log	small diameter above 6cm length 3.6m
Wire	length 1.2m per point

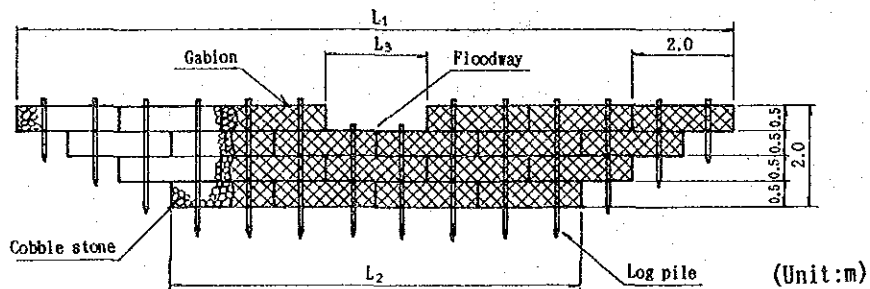
App. Figure-9 Standard diagram of log crib work



(Unit:m)

Standard table of fence work	
Log pile	small diameter above 8cm length 1.2m
Twigs	butt-end diameter above 3cm length 3.5m

App. Figure-10 Standard diagram of fence work

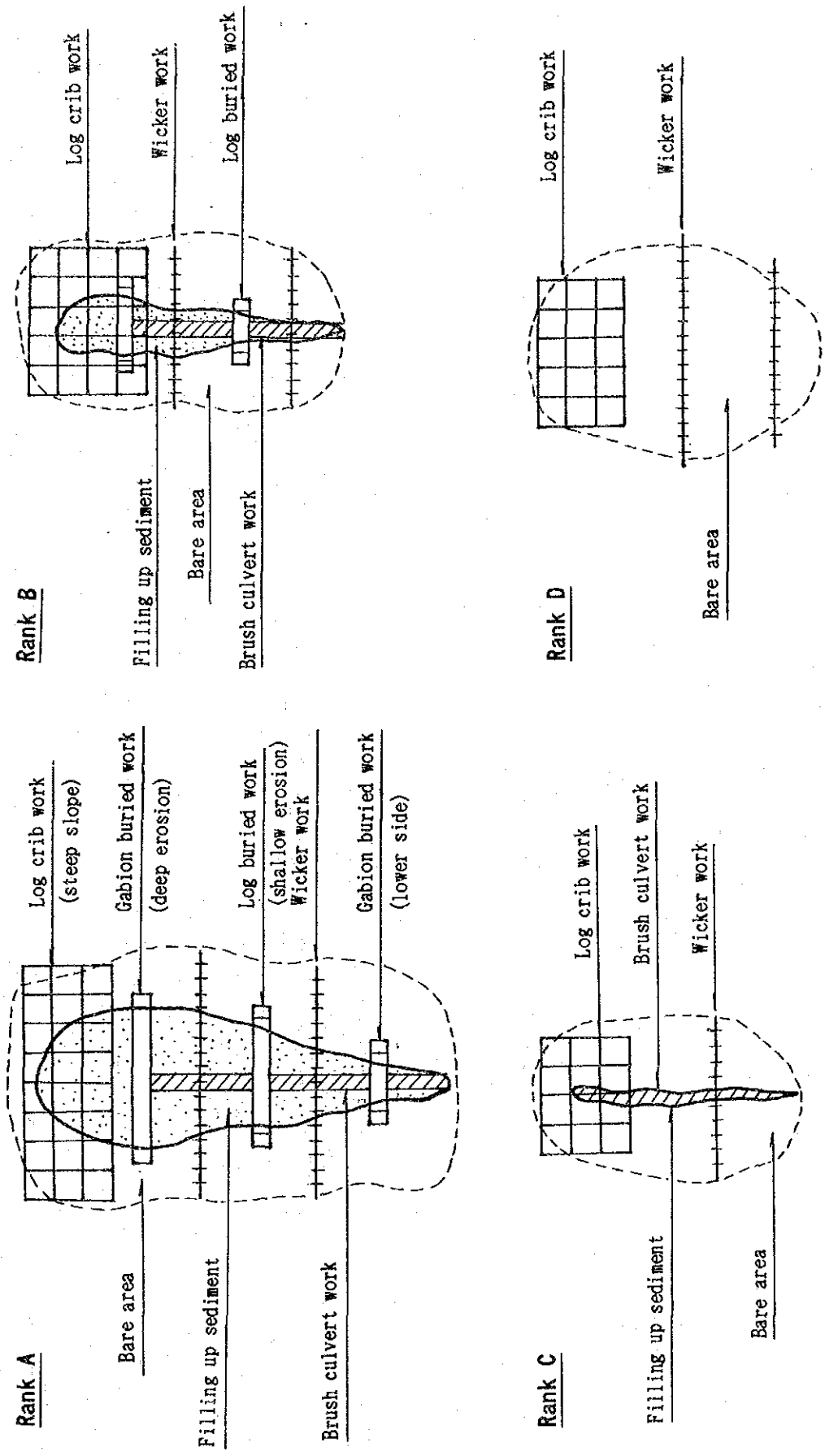


(Unit:m)

Standard table of gabion check dam	
Gabion	diameter 4.0mm meshes 13cm hight 0.5m width 1.2m
Log pile	small diameter above 8cm length 1.2m
Log pile	small diameter above 8cm length 1.7m
Log pile	small diameter above 8cm length 2.2m
Log pile	small diameter above 8cm length 2.7m
Cobble stone	diameter 15-30cm

L₁₋₃ : Appropriate lengths
in accordance with catchment area

App. Figure-11 Standard diagram of gabion check dam



App. Figure-12 Standard position of works

