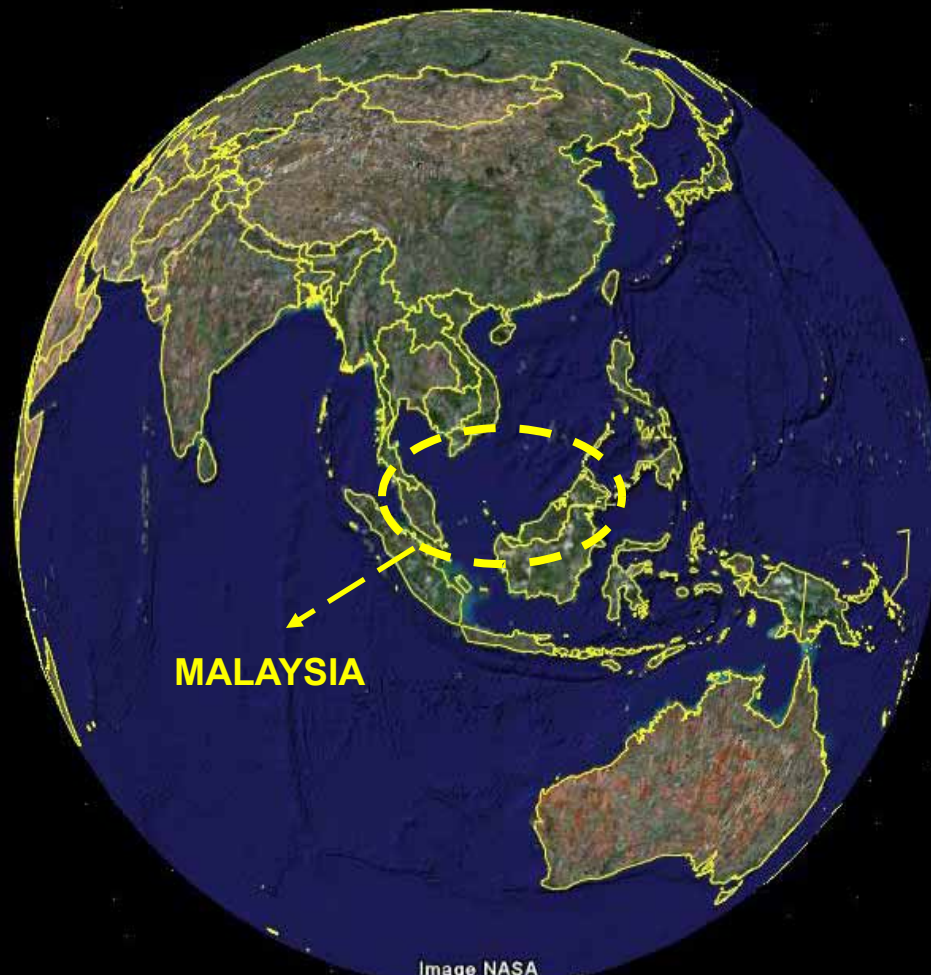


MALAYSIA'S FOREST MANAGEMENT WITH REFERENCE TO RAMIN (GONYSTYLUS)



By
Malaysia Delegation To The CITES COP14
3 – 15 June 2007, The Hague, Netherlands





MALAYSIA

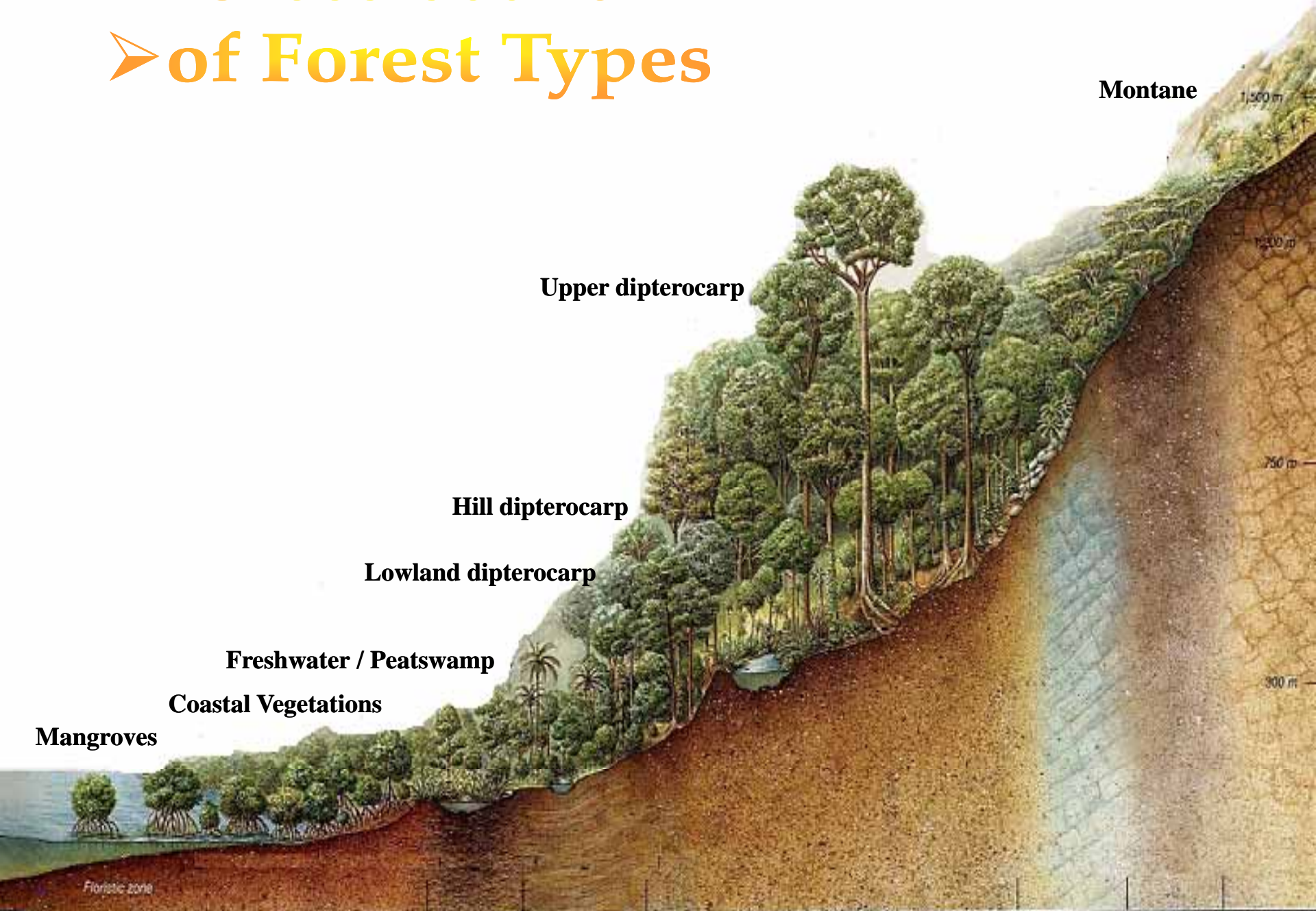
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➤ Malaysia



➤ Cross-section ➤ of Forest Types



Malaysia's Biodiversity

- **One of the 12th mega biodiversity countries in the world**
- **Estimated to comprise over 10% of the world's total number of plant species and 7% of world species**
- **Malaysia's land area is about 0.25 % of the world total land area.**

Species Diversity

- 12000 flowering plants
 - 2650 tree species
 - 890 tree species of timber size (>45 cm)
 - 408 timber species marketed
 - 400 palm
 - 145 ginger
 - 70 bamboo
 - 600 fern
 - 700 fungus
 - 532 moss
 - 200 mammal
 - 600 bird
 - 110 snake
 - 93 frog
 - 80 lizard
 - 1022 butterfly
 - 20-80 thousands insect
- +400 tree species/ha*

FAO REPORT

MALAYSIA'S TOTAL FOREST AREA

| Year | Forest Area (1000 ha) | % of land area |
|------|----------------------------|----------------|
| 1990 | 21661 | 65.9 |
| 2000 | 19292 | 58.7 |
| 2005 | 20890 | 63.6 |

Distribution And Extent Of Major Forest Types In Malaysia, 2005 (million hectares)

| Region | Land Area | Dry Inland Forest | Swamp Forest | Mangrove Forest | Plantation Forest | Total Forested Land | % Total of Forested Land |
|---------------------|-----------|-------------------|--------------|-----------------|-------------------|---------------------|--------------------------|
| Peninsular Malaysia | 13.16 | 5.40 | 0.30 | 0.10 | 0.08 | 5.88 | 44.7 |
| Sabah | 7.37 | 3.83 | 0.12 | 0.34 | 0.11 | 4.40 | 56.7 |
| Sarawak | 12.30 | 7.92 | 1.12 | 0.14 | 0.06 | 9.24 | 75.1 |
| Malaysia | 32.83 | 17.15 | 1.54 | 0.58 | 0.25 | 19.52 | 59.5 |

RESERVED FOREST IN MALAYSIA, 2005 (million hectares)

| Region | Protection Forest | Production Forest | Total Land Area Under PRF | Percentage of Total Land Area |
|---------------------|-------------------|-------------------|---------------------------|-------------------------------|
| Peninsular Malaysia | 1.52 | 3.18 | 4.70 | 35.7 |
| Sabah | 0.59 | 3.00 | 3.59 | 48.7 |
| Sarawak | 1.10 | 5.00 | 6.10 | 49.6 |
| Malaysia | 3.21 | 11.18 | 14.39 | 43.8 |

FOREST MANAGEMENT PRACTICE

Section 10 of National Forestry Act 1984 required Forest Reserve classified into 11 functional classes

- **Production forest**
- **Soil protection forest**
- **Soil reclamation forest**
- **Flood control forest**
- **Water catchment forest**
- **Forest sanctuary for wildlife**
- **Virgin Jungle Reserved forest**
- **Amenity forest**
- **Education forest**
- **Research forest**
- **Forest for federal purposes**

AREA UNDER NATIONAL PARKS, WILDLIFE AND BIRD SANCTUARIES IN MALAYSIA, 2005 (million hectares)

| Region | National Park/State Park | Wildlife and Bird Sanctuary | Total |
|---------------------|--------------------------|-----------------------------|-------|
| Peninsular Malaysia | 0.43 | 0.31+ | 0.74 |
| Sabah | 0.25 | 0.16++ | 0.41 |
| Sarawak | 0.70* | 0.30** | 1.00 |
| Malaysia | 1.38 | 0.77 | 2.15 |

* Includes 0.57 million ha of proposed national parks.

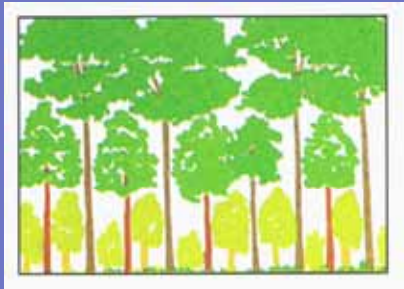
** Includes 0.14 million ha of proposed wildlife sanctuaries.

+ A total of 0.19 million ha is located within the RFs of Peninsular Malaysia.

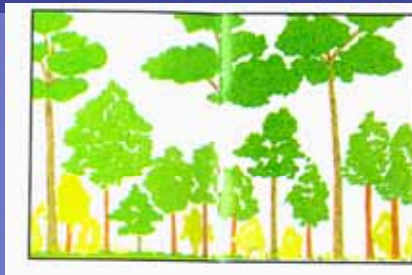
++ A total of 0.13 million ha is located within the RFs of Sabah.

➤ **FOREST HARVESTING**

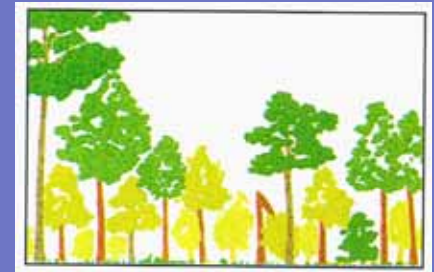
- **Sustainable forest harvesting with a cutting cycle of 25 – 55 year**
- **Selective felling, lowest cutting limit is 40 cm dbh and maximum volume output is 85 m³/ha**
- **According to “annual coupe” 2006 – 2010
Forest Reserve = 266940 ha / year
(2.4% of the Production Forest / year)**



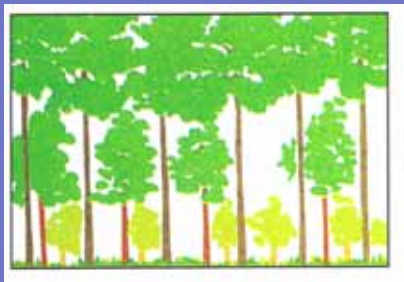
REGENERATED FOREST
(25-30 Years After Harvesting)



VIRGIN FOREST
Activities Carried Out Before
Harvesting-
Pre Felling Inventory (Pre-F)



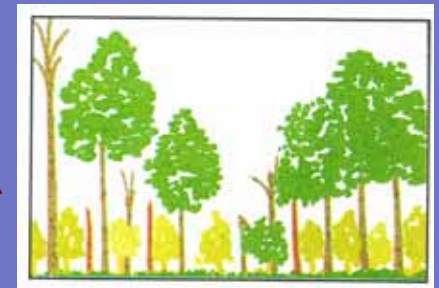
AFTER LOGGING
Activities Carried Out After
Harvesting-
Post Felling Inventory (Post-F)
to Prescribe a Suitable Treatment
(GCL/CL/Enrichment Planting)



AFTER TREATMENT
(15-20 Years After Harvesting)



AFTER TREATMENT
(10-15 Years After Harvesting)



BEFORE TREATMENT
(0-5 Years After Harvesting)

➤ **PROFILE DIAGRAM OF
SUSTAINABLE FOREST
MANAGEMENT**



➤ **Dry Inland Production Forest**
➤ (After Harvesting)



➤ **Peatswamp Production Forest**
➤ (After Harvesting)



➤ **Peatswamp Production Forest**
➤ (After Harvesting)

➤ SEQUENCE OF OPERATIONS

➤ SELECTIVE MANAGEMENT SYSTEM (SMS)

| Year | Operation |
|--------------------------------------|--|
| n-2 to n-1 | Pre-felling forest inventory of 10% sampling intensity using systematic-line-plots to determine appropriate cutting regimes (limits) |
| n-1 to n | Tree marking incorporating directional felling <ul style="list-style-type: none"> ▪ Marking of trees to be felled ▪ Marking of mother trees ▪ Marking of protection and protected trees ▪ Demarcating boundaries of buffer zone for watercourses |
| n | Felling of trees |
| n ^{1/4} to n ^{1/2} | Forest survey to determine damage to residuals and royalty on short logs and tops |
| n+2 to n+5 | Post-felling forest inventory of 10% sampling intensity using systematic-line-plots to determine residual stocking and appropriate silvicultural treatments |
| n+10 | Forest inventory to determine regeneration status of the forest |

➤ FOREST HARVESTING

Forest Checking Station maintains an updated record of trees felled, logs production and calculates the taxes to be paid



1500
96 x 71 E
0051

1382

Log Tag



Post-Harvesting Activities

- **Post Felling Forest Inventory**
 - carried out 2 - 5 years after harvesting
 - to assess the status of the residual stand
 - to determine the appropriate silvicultural treatments
- **Silvicultural Treatments**
 - Climber cutting
 - Enrichment Planting
 - Regeneration survey



➤ RAMIN SPECIES

Silvicultural Characteristics and Distribution of Ramin in Malaysia

| Species | Silvicultural Characteristics (Average max. tree height and diameter size) | Distribution |
|---------------------------|---|--|
| <i>Gonystylus affinis</i> | Small to medium size tree up to 33m tall and bole up to 90cm diameter. | Plains, hillsides and ridges up to 330 m altitude. |
| <i>G. brunnescens</i> | Medium to big size tree up to 36 (-45) m tall and bole up to 95cm diameter. | Low-lying land and hill, up to 350 (-1500) m altitude. |
| <i>G. consanguineus</i> | Medium to big size tree up to 40m tall and bole up to 80cm diameter. | Lowland on loamy or clayey soil or even limestone rock, up to 400 m altitude. |
| <i>G. maingayi</i> | Medium to big size tree up to 40m tall and bole up to 76cm diameter. | Peat swamp forest and lowland, up to 150 (-200) m altitude. |
| <i>G. bancanus</i> | Medium to big size tree up to 40 (-45) m tall and bole up to 120cm diameter. | Lowland freshwater swamp or peat swamp forest. It occurs up to 100 m altitude. |
| <i>G. forbesii</i> | Medium to big size tree up to 40 m tall, up to 85 cm diameter. | Swamp and dryland, up to 400 m altitude. |
| <i>G. keithii</i> | Shrub or small to medium size tree up 26 m tall and bole up to 90cm diameter. | Mostly on sandy soils, up to 400 m altitude. |

➤ RAMIN SPECIES

| | | |
|------------------------|--|--|
| G. lucidulus | Medium to fairly big size tree up to 36m tall and bole up to 40cm diameter. | Low undulating hill, on yellow sandy soil, up to 300m altitude. |
| G. macrophyllus | Medium to big size tree up to 45m tall and bole up to 100cm diameter. | Low and medium altitude, ascending 1500 m. |
| G. velutinus | Medium to large size tree up to 35m tall and bole up to 70cm diameter. | Sandy soil and clayey swampy soil, very low altitude. |
| G. xytocarpus | Medium to big size tree up to 36 m tall and bole up to 75cm diameter. | Heath and lowland forest, up to 100 m altitude. |
| G. stenosepalus | Small size tree up to 15m tall. | Lowland and hill, up to 1350m altitude. |
| G. bornensis | Small to medium size tree. | Lowland and hill, up to 1350m altitude. |
| G. confuses | Medium to big size tree up to 30m tall and 70cm diameter. | Dryland forests and lowland area. |

➤ **RAMIN HARVESTING**

Gonystylus Harvest Quota Determination

- **Sustainable forest harvesting with a cutting cycle of ≥ 45 years**
- **Cutting regimes (diameter breasts height) ≥ 40 cm**
- **Growth Rates**
 - **0.3 – 0.6 cm/year**
 - **0.33 m³ /ha/year**
- **Forest Area Accounted**
 - **Peninsular Malaysia – 70% of the total forest area**
 - **Sarawak – Only production Peat swamp forest**
 - **Sabah – Not accounted**
- **National Forest Inventory 4**
- **Recovery rate (log to sawn timber) – 70%**

RAMIN HARVESTING

Summary of Ramin Distribution in Peninsular Malaysia (National Forest Inventory 4)

| State | Diameter 15-30 cm | | Diameter 30-45cm | | Diameter >45 cm | | Total | |
|--------------|----------------------|-----------------------------|---------------------|-----------------------------|--------------------|-----------------------------|----------------|-----------------------------|
| | Stem | Volume (m ³) | Stem | Volume (m ³) | Stem | Volume (m ³) | Stem | Volume (m ³) |
| Johor | 258860 | 115553 | 43488 | 40921 | 23696 | 73108 | 326044 | 229582 |
| Kedah | 209402 | 79927 | 43371 | 44018 | 24071 | 67477 | 276844 | 191423 |
| Kelantan | - | - | 17952 | 26330 | - | - | 17952 | 26330 |
| N. Sembilan | 12709 | 9024 | 25752 | 49787 | 13006 | 81325 | 51467 | 140136 |
| Pahang | 1222013 | 595662 | 344639 | 401102 | 669979 | 2416743 | 2236631 | 3413507 |
| Perak | 1245605 | 460414 | 321705 | 278283 | 6928 | 15241 | 1574238 | 753938 |
| Selangor | 438940 | 150453 | 164739 | 136687 | 35785 | 97483 | 639464 | 384623 |
| Terengganu | 142558 | 41160 | 6087 | 9334 | 71379 | 363491 | 220024 | 413985 |
| Total | 3530087 | 1452193 | 967733 | 986463 | 844844 | 3114868 | 5342664 | 5553524 |

➤ RAMIN HARVESTING

- **Precautionary principles applied to calculate the harvest quota**
 - lower growth rate
 - longer rotation period
 - <30% of the forested area accounted in calculating the quota
- **Harvest quota (2007) – 50,000 m³**
- **Export quota (2007) – 32,875 m³**

- ❖ **12 January 2004, implementation of export, import, re-export of Ramin (parts and derivatives) in Appendix II, CITES**

SCIENTIFIC AUTHORITY

- Ministry of Natural Resources and Environment (MNRE)**



❖ **Management Authorities (7)**

- 1. Malaysian Timber Industry Board (Peninsular and Sabah)**
- 2. Sarawak Forestry Corporation (inclusive Wildlife)**
- 3. Forest Department Sarawak**
- 4. Department of Wildlife and National Parks**
- 5. Wildlife Department of Sabah**
- 6. Department of Agriculture**
- 7. Department of Fisheries**

➤ **TRI-NATIONAL TASK FORCE ON RAMIN**

- ❖ **Members are Indonesia, Malaysia and Singapore**
- ❖ **Aim: Better information sharing in monitoring and controlling illegal trade in Ramin**
- ❖ **1st meeting was held in Malaysia – 7-8 September 2004**
2nd meeting was held in Indonesia – 12-13 April 2006
3rd meeting was held in Singapore – 7-8 May 2007

➤ **Enforcement / Surveillance Operation**

- ❖ **Close monitoring and supervision by Customs, Maritime Agency, MTIB, Marine police, SFC & STIDC**
- ❖ **Active collaboration with Port Authorities and Customs in Free Zone areas and Barter Trade areas**
- ❖ **Monitor and control importation of Ramin through Customs Import Prohibition Order 2006 (Schedule 4)**
- ❖ **Monitoring and inspection at ports, jetties and river mouth**

➤ Handling Of Ramin Consignment That Violated CITES Regulations

- ❖ **Seizure and confiscation by Customs, Maritime Enforcement Agency and Marine Police**
- ❖ **Hand over to MTIB/SFC/STIDC for legal action**
- ❖ **Conform to Article VIII CITES**
 - **penalize the trade in possession of such specimen and provide for the confiscation or return to the state of export**
 - **MTIB communicates with the M.A. of country of export**
 - **Dispose as deemed appropriate in the event of no claim from the country of export**

➤ Confiscated Ramin Large Scantling Squares



➤ Confiscated Ramin Log



➤ Cases Of Confiscated Ramin

| Items | Year 2005 (m ³) | Year 2006 (m ³) | Year 2007 (Jan-May) (m ³) |
|---|--------------------------------|--------------------------------|---|
| Number of cases | 2 | 1 | 1 |
| Logs (m ³) | 26.26 | 0 | 17.73 |
| Large Scantling Squares (m ³) | 0 | 9.11 | 0 |
| Sawntimber (m ³) | 0 | 0 | 0 |



➤ ***We Thank You***