

THE FOREST, THE ENVIRONMENT AND ME

LET'S LEARN ABOUT FORESTRY & SUSTAINABLE LIVING!

FORESTS ARE NOT JUST TREES,

but part of an ecosystem that underpins

LIFE ECONOMIES AND SOCIETIES

Forests provide a wide range of services which include:

- providing building and medicinal materials,
- helping to prevent soil erosion, floods and landslides,
- helping to maintain our water supply and soil fertility, and
- neutralising carbon from the atmosphere.



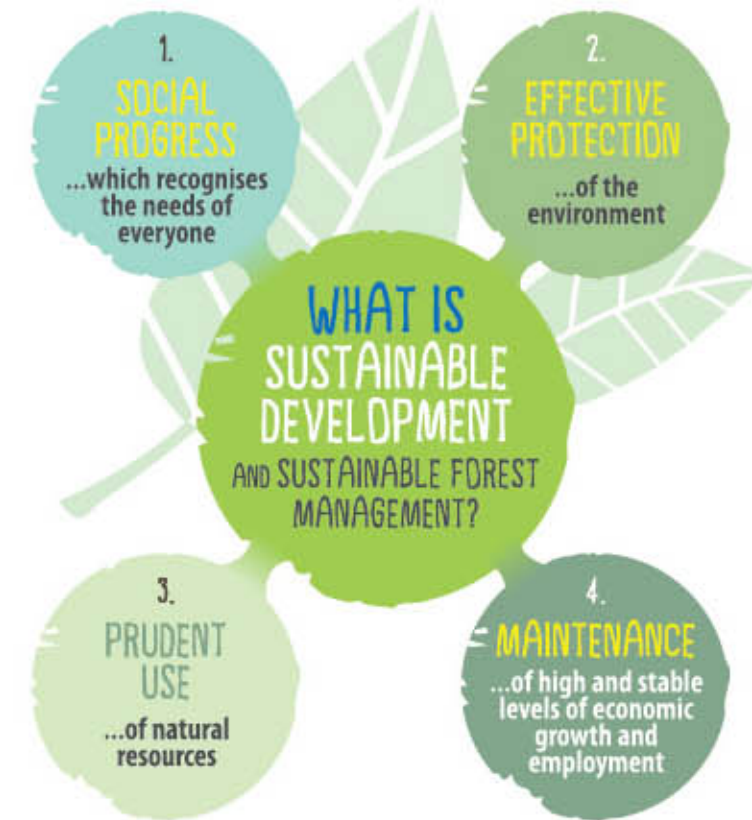
IT IS IMPORTANT TO FIND A BALANCE BETWEEN CONSERVING THE FOREST AND ENVIRONMENT AND UTILISING ITS RESOURCES INTELLIGENTLY FOR MAN'S SOCIO-ECONOMIC NEEDS.

WITH ADVANCES IN FORESTRY RESEARCH AND MATERIAL TECHNOLOGY, FORESTS CAN BE MANAGED SUSTAINABLY TO ENSURE ITS PERPETUITY AND TIMBER COULD BE USED MORE INTELLIGENTLY WITH A LOT LESS WASTAGE.

FUNCTIONS OF THE FOREST

Forests fulfil many functions, several of which are listed below:

- 1. A SOURCE OF LIVELIHOOD**
(through harvesting of timbers, medicinal plants and other forest products as well as through eco-tourism)
- 2. A HOME** to numerous flora and fauna
- 3. RECREATION AND RELAXATION** a place for
- 4. an important factor in CLIMATE, NOISE AND POLLUTION CONTROL**
- 5. an important factor for the PREVENTION OF SOIL EROSION and a NATURAL "FILTER" FOR OUR WATER SUPPLY**



Sustainable Forest Management is wise management and use of forest resources to ensure their health and productivity for many, many years to come.

DID YOU KNOW?

FALLACY

FELLING TREES IS BAD

FACT

Selectively harvesting trees through sustainable practices benefits us economically and environmentally. In a forest designated as Permanent Reserved Forest, the forest is managed in such a way that timber can be produced forever. Harvesting mature/older trees opens up the forest canopy, enabling sunlight to reach the younger trees, helping them to grow.

FALLACY

THE FOREST PRODUCES MOST OF OUR OXYGEN

FACT

Trees and plants generate about 20% of the Earth's oxygen. 75% of Planet Earth is covered by water. Our oceans are occupied by zillions of microscopic phytoplankton. Much of the photosynthesis on Earth is carried out by not only trees but also by planktonic organisms. In fact, more than 50% of the world's oxygen is generated by phytoplankton!

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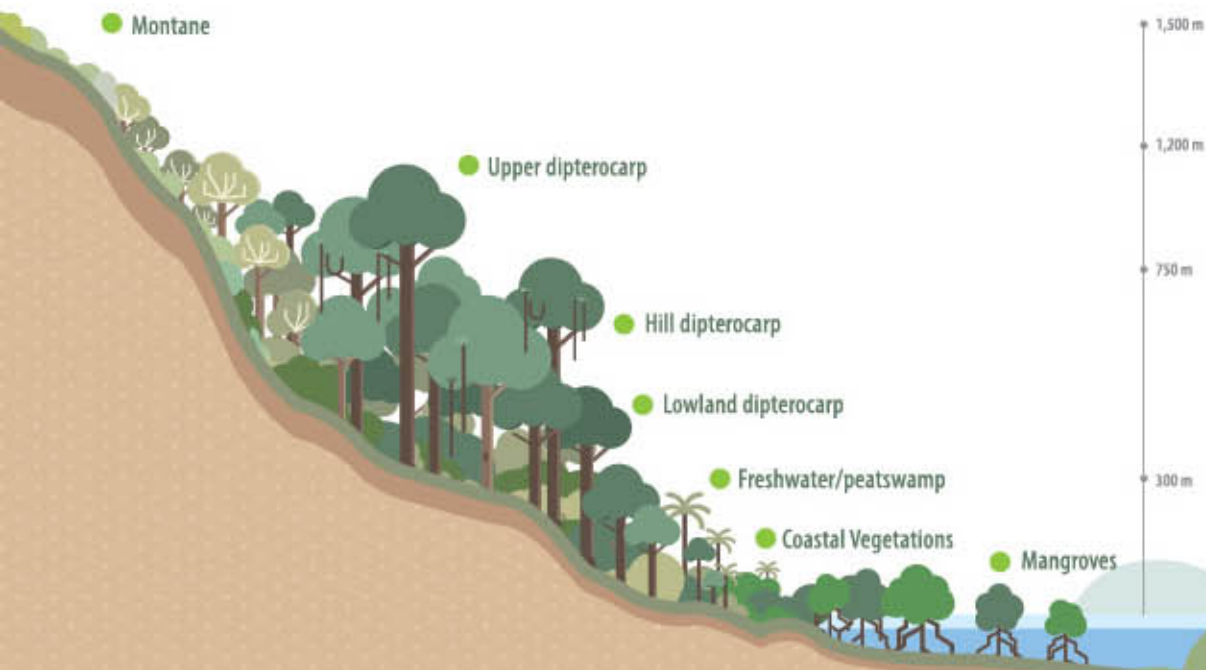
FOREST TYPES IN MALAYSIA

Malaysian forest is dominated by three major (main) forest types, namely:

DRY INLAND FOREST
93%

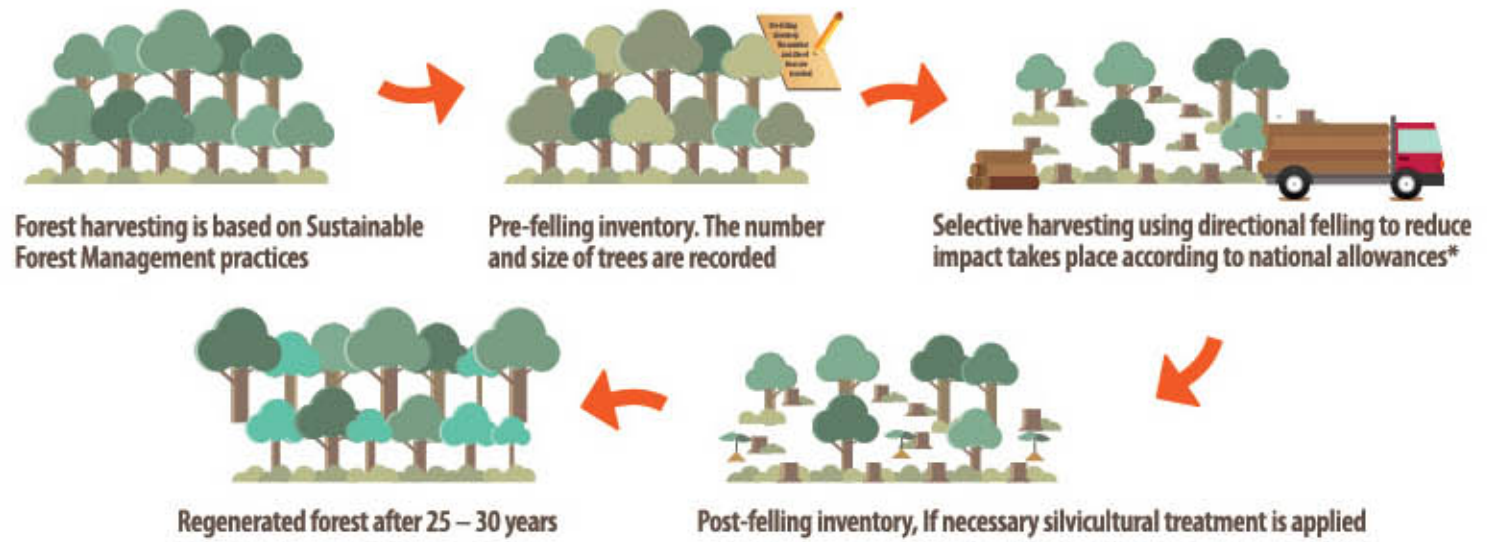
PEAT SWAMP FOREST
5%

MANGROVE FOREST
2%



SELECTIVE MANAGEMENT SYSTEM (SMS)

UNDER THE SUSTAINABLE FOREST MANAGEMENT PRACTICE



* National allowances: 32 residual trees of above 30cm diameter at breast height (dbh) to form the next crop.
* Minimum cutting limit: dipterocarps - 55cm dbh, non-dipterocarps - 45cm dbh.
* For further information, please go to www.forestry.gov.my.

DID YOU KNOW?

FALLACY

IF I STOP BUYING
TIMBER-BASED
PRODUCTS,
THE FORESTS WILL
REMAIN INTACT

FACT

Not supporting timber-based products will take the economic value away from the forest. The more we buy timber-based products, the more incentive there is for the forests to be managed on a sustainable basis for perpetuity.

FALLACY

FORESTS AREN'T PROTECTED BECAUSE I SEE CLEARED FOREST EVERYWHERE, ESPECIALLY NEAR CITIES AND BIG TOWNS

FACT

In every developing country, forests may have to be cleared for housing, schools and hospitals. In Malaysia, however, there are forest areas that can only be logged based on strict rules (like Permanent Reserved Forests), or which cannot be touched at all (like national parks and forests near water catchment areas). Malaysia has very tight laws on forestry and the environment.

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IS THERE A FOREST AND TIMBER CERTIFICATION SCHEME IN MALAYSIA?

- Yes, Malaysia has its own certification scheme called the Malaysian Timber Certification Scheme (MTCS), which is operated by the Malaysian Timber Certification Council (MTCC). The MTCS provides independent assessments of forest management of Malaysia's forests and meets the demand for certified timber products.
- The MTCS gained international recognition after having been endorsed by the Programme for the Endorsement of Forest Certification (PEFC), the world's largest forest certification programme. The MTCS is the first tropical timber certification scheme in the Asia Pacific region to be endorsed by the PEFC.

WHY IS IT IMPORTANT FOR ME TO ASK WHETHER THE TIMBER IS CERTIFIED OR LEGALLY HARVESTED WHEN I BUY TIMBER-BASED PRODUCTS?

When you shop for timber-based products, ask the seller whether the timber was derived from legally harvested and/or sustainably managed forest. Or you can request for MTCS-certified products. This might seem a small gesture but it will raise awareness on the importance of our forest and why we must manage our forest properly so that it remains healthy and productive for generations to come.

For further information, please go to www.mtcc.com.my or www.pefc.org.

WHAT CAN I DO TO SUPPORT SUSTAINABLE FOREST MANAGEMENT?

Choose to buy more wood-based products because

WOOD IS NATURALLY BETTER.

Wood is also the most eco-friendly building material. It is one of the world's most inspiring, versatile building material available to mankind. Here are its inherent values:

CARBON SEQUESTRATION

Wood and CO₂ are natural partners. Trees absorb CO₂ as they grow, so the more forests we plant, the more CO₂ they can absorb. Timber production significantly contributes to reducing carbon emissions by being part of the carbon cycle that involves trees absorbing CO₂ from the air, releasing oxygen and storing the carbon in the wood. Harvesting mature trees open up the forest canopy, enabling younger trees to grow and absorb more carbon from the atmosphere.

CARBON LOCKING

The CO₂ that is absorbed by trees as they grow remains "imprisoned" in the wood. Using wood-based materials contributes to the continued imprisonment of the CO₂. Building with wood causes much lower CO₂ emissions than building with other construction materials.

ENERGY EFFICIENT

Timber is an excellent insulator. Through insulation, heat exchange can be slowed down. Therefore, a timber building will require less energy to heat or cool. In the tropics, this can be translated into using less energy for cooling down spaces.

RECYCLABLE

When a building is demolished or renovated, the recovered timber can be reused in another project. The recovered timber can be resized and reshaped to cater to other uses. Recycling is a wise option because it is more eco-friendly.

SUSTAINABLE

Timber is the only truly renewable building material. New trees can be planted to replace those that were harvested, thus ensuring a perpetual supply of timber. Moreover, the planting and harvesting of trees contribute positively to the health of the environment through the cycle of "absorb and lock" of CO₂ in the atmosphere.



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DID YOU KNOW?

FALLACY

TIMBERS DO NOT LAST!

FACT

There are many timbers with a wide range of properties. Generally, many timbers can last for a long time. Through research in treatment technology, timbers can be made harder, termite-resistant or weather resistant, by impregnating the wood with certain chemicals which are effective yet safe for human use. Treated timber will often out-last naturally durable timbers.

FALLACY

USING TIMBER CONTRIBUTES TO ENVIRONMENTAL DESTRUCTION

FACT

Using timber from sustainably managed forests helps address climate change by reducing the amount of greenhouse gases in the atmosphere because trees absorb CO₂ as they grow. The absorbed carbon is converted into wood. Big trees that are not harvested will age and die, releasing stored carbon in the form of CO₂. Trees can also die due to fire, wind damage and lightning strikes. Harvesting bigger trees keeps the carbon imprisoned in the wood, and a sustainable forest management system ensures that young trees are planted to replace the old.

FALLACY

TIMBER IS A FIRE HAZARD

FACT

Steel will buckle and concrete will crumble under high temperatures. Thick timber columns, on the other hand, will initially ignite but the charring of the wood's outer layers will cut off oxygen supply and slows down the burning of the deeper layers of the timber. This slow burn rate gives occupants enough time to evacuate and timber columns have been found to be still standing after intense fires have been put out.

FALLACY

TIMBER IS NOT VERSATILE AS A BUILDING MATERIAL

FACT

Timber is the most versatile building material compared to other building materials. It can be used for both structural or decorative purposes. Timber exudes warmth and adds character to a place. Understanding timbers and their properties is important to help us select the right species for the right application.

DO YOU KNOW WHAT IS A MATERIAL'S 'EMBODIED ENERGY' FACTOR?

A material's 'embodied energy' factor is an analysis of the energy required for extracting the raw material from nature and processing it into a building material.

MATERIAL

Bauxite	→	Aluminum
Iron ore	→	Steel
Trees	→	Timber Building Materials

ENERGY REQUIRED FOR CONVERSION OF RAW MATERIAL INTO USABLE BUILDING FORM (MJ/KG)

Aluminum	435.0
Steel	35.0
Timber Building Materials	1.5

In short, the more timber is used for construction, the more carbon is trapped forever and the smaller our carbon footprint will be. However, this is not a case for the exclusive use of timber. There is a place for all materials in enriching our built environment. This is simply a case for using more timber, but it must be from legal and sustainable sources.

SIMPLE CHOICES WE MAKE EVERYDAY HAVE A DIRECT POSITIVE EFFECT ON THE CONSERVATION OF OUR ENVIRONMENT

Recycling is a wonderful, easy way to re-use resources we already have rather than gathering more from the source.



RE-USE
whenever practicable



REDUCE
whenever possible



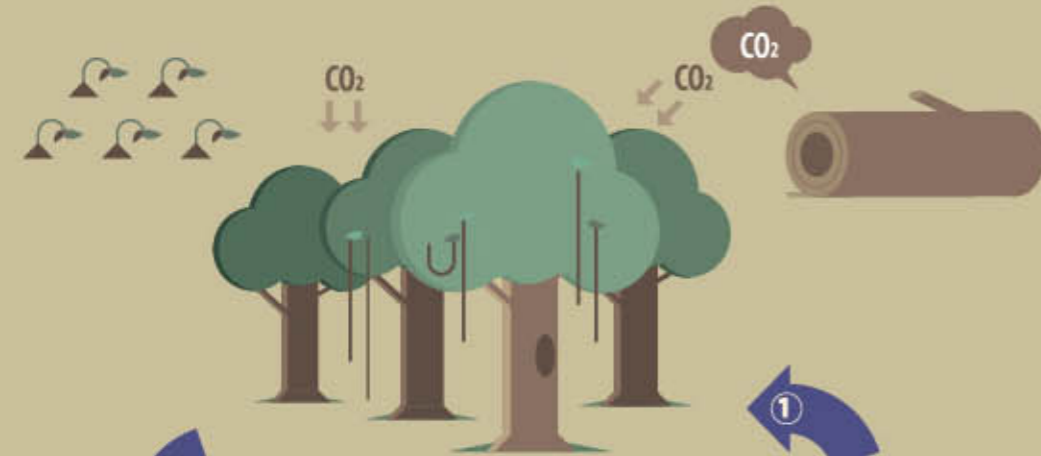
RECYCLE
whatever is recyclable

Intelligent recycling is important to ensure that the people (and all their lovely pets!) living in your community are not exposed to hazardous materials that could cause long-term damage to their health. If you are unsure, contact your local, city or town council to check with their representatives in charge of recycling.

REDUCING CO₂ THROUGH SUSTAINABLE TIMBER HARVESTING

NON HARVESTED FOREST

HARVESTED FOREST



Old trees absorb CO₂ at a much slower rate, which gets even slower as they grow older.



When a tree dies, the carbon locked away in its cells is released back into the environment.

TREES DIE BECAUSE OF...

- LIGHTNING STRIKES
- FOREST FIRES
- DAMAGE CAUSED BY WIND
- OLD AGE/DISEASES

FASCINATING FACT!

The death of a 70-year old tree would return about three tonnes of carbon to the atmosphere.

YOUR JOURNEY STARTS HERE

As trees live and grow, they absorb CO₂, then store the carbon in their roots, trunks, branches and leaves.



FASCINATING FACT!

50% of a tree's dry weight is carbon!



The mature trees create a canopy which blocks out the sunlight, restricting growth of the under layer.

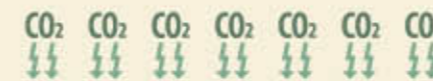


Trees are selectively cut based on Sustainable Forest Management practices.



The more timber is used for construction and other wood products, the more carbon is kept imprisoned throughout their lifetime, and the smaller our carbon footprint will be.

Selective harvesting opens up the forest canopy, allowing more sunlight to reach the forest floor. This would serve as a catalyst to stimulate the forest growth. Young trees absorb CO₂ quickly while they are growing.



FASCINATING FACT!

A hectare of trees absorbs enough CO₂ over one year to equal the amount produced by driving a car 101,000 km!

