



Rainforests -  
recognise your  
connections

Wendy Orams Stuart McQuire



Wendy Orams    Stuart McQuire

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Melbourne Rainforest Action Group.

GPO Box 3217GG.

Melbourne VIC., 3001.

Phone: (03) 417 7450

Fax: (03) 416 2081

Email: peg.burrowes  
peg.pascal

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# RAINFORESTS: RECOGNISE YOUR CONNECTIONS

Written by Wendy Orams and Stuart McQuire

With assistance from:

Margaret Pestorius    Cathy Dempsey  
Zheljana Peric        Chris Cogdon  
Tracy Neilsen         Robert Burrowes  
David Low              Steve Blair  
Anthony Douglass     Anthony Amis

And thanks to:

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"The Yarra River - people prepare to blockade a timber ship. A charter ship of rainforest timber arrives in Melbourne every month. Since April 1989 these ships have been met by protests in the water and on the docks by people from the Melbourne Rainforest Action Group."

(Photo courtesy 'The Age' Melbourne)

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## 1.0 GOING, GOING... GONE?

Disappearing at the rate of a football field a second, the world's tropical rainforests, which have evolved over hundreds of millions of years, are just 30 years from extinction. It is people that are wiping them out, and their fate depends on the actions we all take now.

Rainforest destruction is occurring for many complex reasons. The most visible and direct link between Australians and the destruction of tropical rainforests is the rainforest timber we consume. You can find it in virtually every Australian household, from the window frames to the picture frames, the doors to the decking, the furniture, the broom handles and the picket fences.

The rainforests of South East Asia (the source of virtually all Australia's rainforest timber imports) are being destroyed with such rapidity that it is questionable whether any primary rainforests will remain in ten years time. Although there is increasing awareness about the importance of rainforests and the ways in which we are destroying them, the timber industry still claims that logging does not harm rainforests. Instead it points the finger at agriculture, with the assumption that only total forest clearance is relevant to concerns of rainforest destruction.

A closer examination reveals that industrial logging is inherently destructive to rainforests, and that in South East Asia, it is overwhelmingly the major agent of rainforest destruction. This logging is causing massive species extinction, soil degradation, pollution of streams and rivers, the abuse of local peoples' rights and the disruption of climatic patterns.

Here in Australia, however, we can go to our local hardware store and buy a piece of timber without thinking too much about where it came from, and we are discouraged from doing otherwise. This is an example of how our thoughts and action can ignore the connections we have with the living planet. If instead we recognised the interconnectedness of our world, and saw ourselves as an integral part of it, would we act differently? In this context, is it possible that we could see the daily destruction of rainforests as the destruction of part of ourselves?

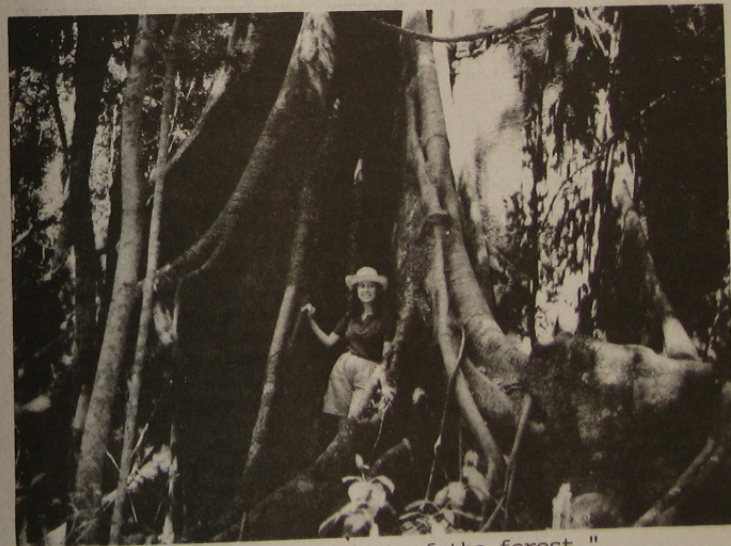
The starting point for this booklet is to challenge the notions that tropical rainforests are merely 'timber resources' available for sale or 'land areas' awaiting 'conversion' for commercial exploitation. We hope to highlight the

importance of rainforests to the planet and its people as a whole.

We will unmask the role industrial logging is playing in the destruction of the world's rainforests and illustrate the inherently destructive nature of logging in rainforests. The myth of so-called sustained yield management will also be exposed.

Apart from our use of rainforest timber we will show some of the other links we have with rainforest destruction. In our discussion about why rainforests are being destroyed for timber, we will describe the institutions, structures and processes that lead to such outcomes. It is here we can see that our role in destroying rainforests extends beyond merely importing and using rainforest timbers. It extends to our role in pursuing and giving active support and legitimacy to exploitative institutions, structures and processes.

It will be argued that ultimately rainforests cannot be 'saved' if our ways of understanding the world and processes of decision making remain geared to their destruction. The first step is to recognise that none of these are fixed or unchangeable, and that everyone can make changes. For us, it is impossible to separate the changes we want from the way in which we make them. The challenge is to recognise our connections, and learn ways of thinking and acting that sustain our earth.



"Dwarfed by a giant of the forest."



## 2.0 DEFINING A RAINFOREST

There are many different ideas of what a rainforest is. In ecological terms, rainforests have been defined as closed, broadleaved forest vegetation with a continuous tree canopy of variable height and with a characteristic diversity of species and life forms (M. Dale, 1980). Rainforests have been called the source of life because they are habitat for most of the species on earth. They have been described as the global heat pump because of the influence they have on the earth's climate. They have also been described as home and livelihood to several hundred million forest dwelling people world-wide, and as an integral part of the belief systems of countless cultures.

To the timber industry, governments and development agencies, however, rainforests are merely a source of timber, a commodity to be extracted for sale on world markets, predominantly for consumption by 'developed' nations such as Australia (Repetto, 1988A:p 5).

This leads us to how timber is perceived. For example the Melbourne Rainforest Action Group has deliberately focussed part of its campaign on the charter ships bringing the rainforest timbers from South East Asia to Melbourne. The strategy aims to highlight the connection between the consumers of rainforest timbers and the institutions engaged in the process of rainforest destruction.

If people define rainforests solely in terms of their value as timber then rainforests will be destroyed by logging. As Erik Eckholm (1976:p37) observes, "Land use patterns are an expression of deep political economic, and cultural structure; they do not change when an ecologist or forester sounds the alarm that a country is losing its resource base".

An end to rainforest timber importation and use redefines rainforests in favour of peace, ecology and human rights.



## 3.0 RAINFORESTS: SUSTAINING OUR EARTH

The continued existence of rainforests is crucial for many reasons. Globally they moderate the life sustaining systems of our planet. In particular they control heat and energy balances, weather and water cycles, and represent a vast 'bank' of plant and animal species. At a local level, they provide the basic needs for people in the region: clean water, food, shelter, medicine, fuel, clothing and spiritual sustenance. The following sections will elaborate on these non-timber values of rainforests.

### 3.1 Climate

"The real point about the tropical forests is that those trees evaporate vast quantities of water and give off gases that assist the formation of clouds above them, and the clouds that form above them bring rain that sustains the forests but at the same time, reflect a vast amount of heat away from the earth. In other words, they're part of the planetary refrigerator and if you take down the trees, the clouds go and the place becomes desert." (James Lovelock, 1989)

Lovelock argues that this is the most important role played by tropical forests. He goes on to stress the extreme urgency of this issue - "at the present rate of clearance, they're taking out an area equal to Britain every year and simple calculation shows that by the year 2000, 70% of all the humid tropical forests will be gone...we know from ecology that if you remove 70% of an ecosystem, of that kind, the rest collapses and goes to desert."

Tropical rainforests are vital to global climate for a number of reasons.

#### a) Hydrology and The Colossal Heat Pump

The presence of tropical rainforest regulates the frequency and intensity of rainfall both locally and in surrounding regions, sometimes thousands of kilometres away.

Of the rainwater that falls on the rainforest about 75% is returned to the atmosphere by the processes of evaporation and transpiration. Approximately 40% of the solar energy going into the rainforest powers this evapo-transpiration. The forest uses this energy to turn rainwater



into vapour which is released back into the atmosphere. When this vapour condenses (forming clouds) heat is produced in the upper atmosphere. The energy involved in this process has been calculated to be equivalent to that of 10,000 atomic bombs per day (Salati 1987). This upper atmospheric heat then moves around the globe regulating climate and weather patterns thousands of kilometres way. Thus, the tropical forests act as a colossal heat pump, driving energy from the sun into life sustaining cycles.

The United Nations Environment Programme has predicted that the overall result of tropical deforestation could thus be a weakening of crucial aspects of air circulation and upper atmosphere temperatures, leading to catastrophic consequences for the entire earth (Lutzenberger, 1989:pp 1 - 4).

#### b) Carbon Dioxide (CO<sub>2</sub>)

The build up of CO<sub>2</sub> in the atmosphere is another major change occurring in our global ecosystem. The concentration of carbon dioxide in the atmosphere has increased from about 288 parts per million before the industrial revolution (1800 AD) to 350 parts per million today. Currently, it is rising by 0.4% per year. (Bouma and Holper, 1989.)

CO<sub>2</sub> traps the sun's heat in much the same way as the glass of a greenhouse, and by warming the atmosphere, it has the potential to change global rainfall and weather patterns. This atmospheric warming is known as the Greenhouse effect. It could in turn warm the upper layers of the oceans and, like most substances, water expands when heated and hence the sea level would rise. Frighteningly, this warming has the potential to melt land based ice which would also contribute to a rise in sea level.

Up until now, the increase of CO<sub>2</sub> in the atmosphere has mainly been attributed to the burning of fossil fuels such as oil and coal. Forests, while growing, soak much of this gas up. In other words, forests are a 'sink' for CO<sub>2</sub>. As a stable forest system, forests hold vast amounts of carbon in their wood, like a huge 'carbon bank'. Tropical rainforests contain 41% of all carbon (stored as land vegetation).

If forests are felled and burned, CO<sub>2</sub> is released into the atmosphere. Fires in the Amazon in 1987 produced 500 million tons of CO<sub>2</sub>, estimated to be 10% of total annual atmospheric emissions of CO<sub>2</sub>. The oxidisation of soil humous after the soil has been exposed is also thought

to contribute to rises in CO<sub>2</sub>, and so too the burning or decomposition of pulp and paper made from forests.

Bunyard, (1987) says there is evidence to suggest that "man's [sic] agricultural activities over the past 150 years have contributed an amount of carbon dioxide to the atmosphere that is comparable to the total emission from fossil fuel combustion." He believes that the accelerated deforestation of the tropical rainforests is also having a marked effect on atmospheric CO<sub>2</sub> levels.

Bunyard (1987) goes on to warn us that the climatic changes brought about by deforestation together with the eradication of vegetation at the margins of deserts and increased CO<sub>2</sub> are likely to accelerate the expansion of deserts towards the equator.

#### c) Other Atmospheric Gases

Human activities in the tropics are having significant effects on atmospheric chemistry according to Bunyard (1987). He notes first of all that felling trees and burning increases the level of carbon monoxide and carbon dioxide in the atmosphere. Rice, cattle grazing and termite activity add substantial amounts of methane. Together both these gases are responsible for the depletion of hydroxyl and ozone over the tropics. Hydroxyl is important for cleansing the atmosphere of trace gases, and ozone is the gas which absorbs UV radiation.

By destroying our tropical forests we may be destroying our shield against harmful radiation. Tropical forest destruction and ozone depletion are inextricably linked.

#### d) Flood & Drought

Increasing occurrences of flood and drought have come about as more forests have been exploited and cleared. In the Barum district, the most heavily logged area in Sarawak, Malaysia, Ngau, Apoi and Ling (1987) report that flooding has become frequent. Serious flooding occurred in 1979, 1981, 1984 and again in 1985. \$12 million damage was reported for the 1981 flood (Borneo Bulletin, Jan. 24, 1981), and in 1984 almost all the major towns of Sarawak were affected, four people drowned and hundreds were left homeless (Borneo Bulletin, Jan. 14, 1984). Apart from frequent flooding, prolonged drought has also occurred over the same period in Sarawak, particularly in 1981, 1983 and 1987.

Meher - Nomji of the French Institute in Pandindberg, India, (1987) describes an alternating cycle of flood and drought as a consequence of



deforestation. Rainfall is disturbed not in its volume, but in its frequency. Hence, there are less rainy days but the rain is more intense, irregular and sometimes torrential. In a well forested watershed, 95% of the annual rainfall is trapped then released slowly over the year replenishing groundwaters and keeping streams and rivers flowing during the dry season. When the forest is removed, however, there is no longer any "sponge" to absorb the water and the consequence is massive flooding, soil erosion and siltation of the rivers.

### 3.2 Biodiversity

Rainforests are the oldest and most complex ecosystems on earth and it is estimated they contain 50 - 90% of all species. They are habitat for most of the species of animals on earth, most of the birds and insects, and most of the plants. This biodiversity of rainforests is an integral part of their sustainability and allows the continual evolution of diverse life forms.

Purely in terms of their usefulness to people, the existence of these species is crucial for our own survival. To maintain food production we are dependent on tropical forest species, not just for 'exotic' foods, but for grains (eg rice, maize) that form the basis of the diet of most of the world's people. This is emphasised in an Ecoropa report on tropical forests: "At present only eight plant species provide 85% of the world's food. If any of these is devastated by disease we must be able to turn back to tropical forests for new strains" (Ecoropa, 1989:p2). In addition more than 50% of modern medicines came from tropical plants, yet fewer than 1% of the plants have been screened for medicinal potential.

It is misleading to assume that the scientific community has anything more than a partial understanding of rainforests and the species within them, even on its own terms. The extent of the biodiversity of rainforests is emphasised by recent research which suggests that as many as 90 million separate species may be present in rainforests (May, 1989). However, further illustrating how little is known about rainforests, less than 2% have been identified, and knowledge of their interconnectedness is even more limited (World Watch, 89).

The reality is that human activity is causing a massive reduction of the diversity of life on earth, with the rate of species loss faster now than ever before. There is general agreement (eg NAFL, June 89) that 20% of the world's species will become extinct (from rainforests alone) by the year 2000. It is because of this that some people have equated the destruction of rainforests with burning our libraries before we know what is in them, and others have equated the logging of rainforests with ripping the planks off Noah's Ark (eg Seed, 1988).

Peter Raven, director of the Missouri Botanical Garden, predicts that during the next three decades humans will drive an average of 100 species to extinction every day. Extinction is part of evolution, but the present rate is at least 1,000 times the pace that has prevailed since prehistory. Even this alarming rate maybe an understatement. Professor Charles Birch (1989), has predicted that the rate of species loss may accelerate to one per second by the end of the century.

Even the mass extinctions 65 million years ago that killed off the dinosaurs and countless other species did not significantly effect flowering plants, according to natural biologist E.O. Wilson. But these plant species are disappearing now. Moreover, the earth is suffering the decline of entire ecosystems, the nurseries of new life-forms. For that reason, Wilson deems this crisis the 'death of birth'. British ecologist Norman Myers has called it the 'fastest single setback to life's abundance and diversity since the first flickerings of life almost four billion years ago'. (Time Australia, 16/1/90)

### 3.3 Soil Protection and Water Quality

Soils in the humid tropics are usually low in nutrients. According to Lutzenberger (1989) up to 98% of all nutrients in a rainforest are in the living matter itself - the biomass. The flora and fauna generate litter which immediately starts breaking down when it hits the forest floor. The rainforest survives by almost instantaneous recycling of this forest litter. The nutrients do not remain in the soil for very long - they are rapidly eaten up by fungal roots that come out of the soil. Bunyard (in SAM 1979: p494) states that "in forests with very low nutrient status the roots may form a thick 30cm mat which functions as a filter that prevents nutrient leaching". Animals such as earthworms and termites play an important role in maintaining soil structure and recycling nutrients.

If the integrity of a rainforest is damaged by the intrusion of logging activities it loses vital flora and fauna which are contributing to its sustenance, and the vulnerably thin layer of litter, roots and topsoil is broken and exposed. With commercial logging operations, heavy machinery will also cause soil compaction and displacement and create ruts and gullies that become the pathways for erosion. Typically, heavy rainfall in the tropics then hits exposed ground instead of the thick 'sponge-like' forest and results in massive soil loss and disastrous siltation of the streams and rivers. The muddying of rivers as a result of this is the most common reason given for serious declines in local fish stocks in Sarawak (Ngau, Apoi & Ling in SAM 1987: p40). When water quality is degraded in this way the life forms which depend on it (fish, plants, animals and people) are also threatened. The loss of flora and fauna, forest litter, roots, soil and water quality mean that a multitude of non-timber values



are lost when a rainforest is logged.

Many people in the forest industries blame the destruction of rainforests on the impact of shifting cultivators in rainforest areas. It is worth noting that studies show traditional methods of shifting agriculture in Sarawak, Malaysia to have insignificant effects on soil erosion and runoff (Hatch 1980, in Hong 1987). Hong (1987) states that many researchers have found shifting cultivators to have a profound knowledge of soil types, because the long-term success of their system depends on the maintenance of soil fertility. The soil is not disturbed beyond a few centimetres and regeneration begins almost immediately in conjunction with the planted crops.

Thus, in terms of soil protection and water quality, shifting agriculture in Sarawak is by its very nature an ecologically viable system (in ways Western researchers are only just starting to understand.) Chin (1987) describes the contrast of aerial views of Sarawak's interior, "... in shifting cultivation areas, the rivers run untainted by the red earth. Yet a little distance away, in areas being logged, one sees from the air, twisted bands of red roads and patches of red subsoil... the rivers from these areas flow turbid and red, a sure sign of serious erosion".

### 3.4 People

Rainforests are important to everybody. It is clear that by their diversity of species and impact on climate, that they are part of the planet's ecosystem on which we all depend. To the people who live in or alongside rainforests or rainforest water catchments, rainforests are of more obvious importance.

Although humans came late to the rainforest, (in Kakadu, aboriginal activity dates back 40,000 years, a mere drop in the ocean by geological and evolutionary scales) - rainforest people represent the longest, uninterrupted cultures on earth.

Some hundreds of millions of people live in the tropical forests. One billion people rely directly on the forests for their water. Ngau, Apoi and Ling, (1987) describe 70% of Malaysia's population as rural based, "living in longhouses or kampongs often situated along rivers and streams within or near forest land areas." Accordingly, their main economic activities include farming, hunting, fishing and collecting jungle produce. As such they depend greatly on the forest and its resources.

There are also people who depend entirely on the forest for their livelihood. The Penan of Sarawak are nomadic hunter-gatherers, probably the last viable culture of their kind, and the forest is the only home they know. They derive

from it the building materials for their houses, the wood for their implements, the herbs for their medicines, the fibres and dyes for their clothes, their food and water, and the materials for their religious and cultural artifacts. Furthermore, it provides the foundation on which their very culture is built, the resting place of ancestors and home of their deities. For them, destruction of rainforests amounts to no less than cultural genocide.

For the most part (the rubber tappers are the obvious exception) these people belong to cultures which are thousands of years old, proof indeed of the sustainability of their lifestyles. The shifting agriculture as practiced by most of the Dayak (people of the interior in Sarawak) is a highly adaptive form of agriculture according to Hong (1987) and admirably protects the soil from erosion in spite of steep slopes and heavy rainfall. Hunting, fishing and gathering also play a significant role in the economy and life of shifting cultivators. Some products such as rattan, vines, resin and illipenut are collected and sold for cash (Chin 1984, cited in Hong, 1987, p.30). These resources however, are becoming scarce as a result of rapid deforestation in the Barum.

Destruction of forest caused by logging in Malaysia has caused extinction of wildlife, scarcity of animals to hunt, damage to non-timber plant life, erosion, pollution of rivers and depletion of fish resources (Ngu, Apoi & Ling 1987). Not surprisingly, malnutrition is becoming a real problem for forest dwellers. Another is the increasing incidence of malaria. According to a UNESCO report, clearance of forests encourages malaria-carrying mosquitoes which normally live in the forest canopy to come down and feed on human beings (UNESCO, UNEP, FAO, 1978, cited in Hong 1987) In 1982 it was reported that the number of malaria cases in Sarawak had increased over the year and that most victims were loggers (New Straits Times, Oct. 27, 1982)

Tragically, forest dwellers world-wide continue to be deprived of their land and resettled, often forcibly, under government sponsored schemes aimed at incorporating tribal people into 'mainstream society'.

Indigenous peoples, such as the Penan in the Malaysian state of Sarawak are struggling to save their forests and culture from logging. From 1963-1985 2.8 million hectares, or 30% of Sarawak's total forest area were logged by timber companies. At the end of 1984, another three-fifths of the remaining forests were licensed out for logging.

Local people were tricked and cheated out of their rights to land or, totally ignored by the invading timber companies. Their attempts to negotiate with the companies or gain assistance from government officials were unsuccessful. In March 1987, they began to barricade the logging roads into their lands and managed to stop logging for several months.



In June, representatives of various indigenous communities travelled to Kuala Lumpur to make appeals to federal government ministers to halt the logging of their forests. They met with many other people and received good press coverage, but no government intervention on their behalf occurred.

Despite this the people continued to set up blockades and then, in August, arrests began. People, including a seven year old boy, were imprisoned for allegedly burning a logging company's bridge. The state government passed laws making the blocking logging roads illegal. More arrests followed. Extremely harsh prison conditions and beatings were reported whilst these people suffered long waits for trials set months from their arrests.

A growing international network of environment groups meant that these events received world-wide attention and protests in timber consuming countries resulted.

"A call for immediate action" came from non-government groups: Sahabat Alam Malaysia; The Haribon Foundation of the Philippines; SKEPHI from Indonesia; and The Project for Ecological Recovery of Thailand. It was circulated by the World Rainforest Movement and called for:

- \* Immediate bans on commercial logging in their countries.
- \* Import bans on timber from the natural forests of their neighbouring countries: Burma, Laos, Cambodia and Vietnam.
- \* The granting of land rights to indigenous people.
- \* An end to wasteful use of timber and wood products by the heavily consuming countries of the West.

However, protests and consumer boycotts around the world are mounting. More and more people are realising their connections to the catastrophic rainforest destruction in South-East Asia.



"Indigenous peoples delegation to Kuala Lumpur."

## 4.0 RAINFORESTS LOGGED

### 4.1 Extent of Impact

Industrial logging is the major cause of rainforest destruction in South East Asia, destroying more rainforest than all other causes combined. This reality has been played down or ignored in the past due to the bias of the timber industry, government agencies and development agencies towards continued logging. Globally, commercial logging is directly responsible for the destruction of 5 million hectares of primary forest annually, and this does not include estimates of illegal logging. (World Resources Institute, 1985: p.34).

When the timber industry discusses rainforest destruction it usually plays down its role, and has even portrayed itself as important to the conservation of rainforests. Figures such as those of the United Nations Food and Agriculture Organisation (FAO), showing that forestry (a synonym for logging, from the timber industry viewpoint) accounts for less than 10 per cent of tropical rainforest destruction, are commonly quoted. However, the FAO figures explicitly ignore areas of forest destroyed by logging where the area is not completely cleared in the process. Logging operations do not usually result in the complete clearance of forest and as such are not considered in data referring to complete deforestation (FAO, Lanly, 1982; p.74). This artificial distinction masks the extent of rainforest destruction caused by logging.

In South East Asia, the source of virtually all rainforest timbers imported into Australia, logging is the major cause of rainforest destruction. (This is also the case in tropical Africa) (Anderson, 1989). Blame is often assigned to shifting agriculture by those considering only total forest clearance. However, examination of the various countries in South East Asia highlights the extent of destruction directly attributable to logging.

In Indonesia logging is proceeding at the rate of 800,000 hectares per annum (WRI, 1988: p.46). This is greater than the total area deforested (completely cleared) annually by all causes combined, reported to be 700,000 hectares (WRI, 1988: p.43). Even the Indonesian Forestry Minister was recently quoted as saying "Timber tycoons are mostly to blame ..." for the destruction of Indonesian rainforests (Wilderness Society NSW, 1989).

In Malaysia logging is destroying over 700,000 hectares of rainforest annually



(eg Chin, 1989: p.14). Yet, if we considered only total forest clearance, we would mistakenly conclude that logging destroys as little as 10 per cent of the 255,000 hectares reportedly deforested annually (Repetto, 1988:p.6). The extent of the impact of logging becomes even more apparent when we realise that virtually all remaining primary forests in Malaysia are under logging concessions, which at current rates will be completely logged within 7 years (Chin, 1989; p.15).

In the Philippines logging is reported to destroy 75% of the rainforest which is destroyed annually (Porter, 1988). The primary forests have virtually all been destroyed (Revillin et al, 1987), and to prevent further destruction, logging has been banned in 64 out of 72 provinces (Timber Trades Journal, 7/10/89; p.9).

Thailand was forced to ban logging when recognition was finally given to the destruction it was causing. Ignoring the destruction logging has caused in these countries, proposals to log Papua New Guinea's entire forest area have emerged (Asian Timber, June 1989;p.5).

A further reason why logging should not be considered only a minor cause of destruction is that logging overwhelmingly takes place in primary rainforests. Nectoux (1985;p.3) stresses this and the role logging plays in providing access to previously inaccessible areas: "The timber trade is primarily dealing with mature trees of a limited number of tropical broadleaved species, which are slow growing, but best found in previously undisturbed closed moist rainforests rather than areas that have already been logged out once or more. This being the case, loggers are often the first outsiders to penetrate into a particular forest, previously the sole preserve of indigenous forest societies. Therefore commercial logging is a primary cause of opening closed forests, previously inaccessible to slash and burn cultivation."

By comparison, traditional shifting cultivators, often used as the scapegoats by the timber industry, destroy far less rainforest overall, and of this typically only 5 per cent is primary rainforest, while the rest consists of agricultural land that has been fallowed (Chin,1987). And in terms of damage, King (1988; p.272) emphasises that "... it is obvious to anyone who has travelled through the regions subject to large-scale timber exploitation, that it is this activity more than cultivation which has resulted in serious soil damage and erosion, long-term forest destruction, siltation and water pollution, dramatic fluctuations in river levels and increased flooding in down-river settlements".

#### 4.2 Damage Caused by Logging

Industrial logging operations cause extreme damage to tropical rainforests. Logging leads to ecological breakdown that is much greater than simply the loss

of logged trees: "Often 30 to 60 per cent of residual trees are injured beyond recovery. Large areas are often left bare, leading to soil loss. Logging machinery compacts the soil, reducing water infiltration rates and increasing soil erosion" (World Resources Institute, 1985;p.20). Such statements are typical of the many reports that illustrate the inherently destructive nature of industrial logging in rainforests.

A report on Europe's Involvement In The Tropical Timber Trade, for example, describes the capital intensive logging methods used in the Dipterocarp forests of South East Asia as extremely wasteful and the cause of aggravated damage, and emphasises that: "Selective logging amounts to little more than taking the best tree species, and leaving a ravaged logged-over residual forest with skid tracks and exposed clearings (Friends of the Earth, 1987)."

Ken Rubeli, a forester with considerable experience in Malaysia, describes the logging of a typical area of virgin lowland rainforest in the region of Peninsular Malaysia and Borneo: "The number of trees harvested may be small but the damage to the rest of the forest is extensive. Felled trees tear down climbers that link them to their neighbours. Logging roads and tracks where loggers drag out trees damage a disproportionate amount of forest and expose the soil to erosion" (Rubeli, 1989).

Industrial logging methods involve constructing roads and storage areas, and clearing away unwanted trees with chainsaws and bulldozers (Nectoux, 1985: p.5). Logging in the Dipterocarp forests in South East Asia is much more intensive than in the mixed forests of tropical Africa and America. FAO studies indicate that up to 40 per cent of a logged forest consists of open spaces and that the clearing required for access roads is estimated at 14 per cent of the area being exploited (Lanly, 1982: p.88). Dr. Chin, the Malaysian botanist, describes the damage: "Most of these spaces, including roads, log yards and camp areas, are of bare, compacted sub-soil. On such ecologically devastated soil conditions, forest species find it very difficult or impossible to regenerate" (Chin, 1987).

Similarly, a U.S. Inter Agency Task Force on Tropical Forests reported that in a typical South East Asian Dipterocarp forest concession 55% of the residual forest was destroyed or seriously damaged, although only 10% of the trees were actually harvested. It found that: "Up to a third of the logged area will eventually be left completely bare of vegetation, with soil compacted by heavy machinery and thus vulnerable to erosion. In these conditions regrowth is virtually impossible" (Secrett, 1985 in FOE+WWF, 1987;p.5).

The extent of destruction due to logging goes beyond the direct damage caused to the forest during logging operations. The link between logging roads and access for further clearance (mentioned previously) is stressed in all reports. In



addition, logged-over forests are vulnerable to further destruction by fire. This became evident in 1983, when the worst fires ever recorded in East Kalimantan destroyed an area as large as Belgium, and also caused extensive losses of forest in Sabah. It was found that: "Destruction in both countries was especially severe in logged over areas, because dead trees and litter provided enough fuel to ignite remaining stems. Damage to unlogged areas was slight." (Repetto, 1988,p.27).

The broader ecological and human significance of damage caused by logging extends to river siltation and flooding, the destruction of homes and the livelihoods of indigenous peoples, the destruction of the habitats of millions of species, and the disruption of regional and global climatic patterns.

### 4.3 The Ecological Sustainability of Logging

Primary (unlogged) rainforests are the most complex terrestrial ecosystems and the primary forests of South East Asia are as rich in diversity of life as any in the world. The reports mentioned above (and the section on soil) outline the destruction logging causes to these forests and the surrounding environment. Rainforests clearly can't be logged in an ecologically sustainable manner. The removal of the canopy trees, and the associated destruction of the remaining vegetation, causes irreversible damage to the forest. Logging completely changes the nature of the forest, upsetting the hydrological cycle and removing or altering the habitat of the majority of forest species.

Given the current limits of scientific knowledge and the nature of forest 'management', ecological sustainability and the maintenance of biological diversity are impossible. It will never be known how many species have become extinct to provide cheap rainforest timbers to consumers in the developed world. Where studies have been done it is evident that even tree species are threatened. An article in the New Scientist (Oldfield, 1989:p38) includes merbau and ramin (both imported into Australia in large quantities) in discussion of tree species classed as 'vulnerable' and facing intensive pressures from logging.

By their very nature, industrial logging operations set out to fundamentally change rainforest ecosystems. Logging removes the largest components of the forest ecosystem, completely disrupting the ecological balance of the forest. Silviculture, where practised, is also a direct contradiction to ecological sustainability. It deliberately sets out to favour certain species over others, to the extent of removing or poisoning 'unfavourable' species (Nectoux and Kuroda, 1989:p17).

Due to the restricted range of a large proportion of rainforest species, a single

valley may provide the total habitat for an organism. Thus rainforest logging is inevitably leading to species extinctions (Anderson, 1989). Species not directly affected by rainforest logging may, in turn, become extinct if other species on which they are dependent are lost.

The roles the timber industry and Australian consumers are playing in reducing the diversity of life on earth becomes apparent when we acknowledge the reports cited in Section 4.2 describing typical logging practices.

The ecological significance of the specific areas under threat by continued logging (and continued Australian imports) warrant some discussion. Species distribution and depletion in rainforests are not uniform throughout the world. A consultant on the environment and development, Professor Norman Myers, identifies ten areas that he terms 'hot spots' which are characterized by: a) exceptional concentrations of species with many unique to localized areas; and b) experiencing unusually rapid rates of depletion (Myers, 1988: p.87). Three of these 'hot spots' include the Philippines, Peninsular Malaysia and Northern Borneo - Australia's major sources of tropical timber imports.

The Philippines represent perhaps the most extreme case of deforestation in the Asia-Pacific region. Various estimates project that the remaining rainforests will disappear within 5-10 years (Derasido, 1988). Species richness and diversity have been enhanced by the isolation of approximately 7000 islands, some oceanic and other fragments of once larger islands. As a result, islands separated by quite short distances may contain quite distinct flora and fauna (Heaney, 1986). This extreme localisation of flora and fauna markedly increases their vulnerability in terms of extinction.

Peninsular Malaysia was once covered almost entirely with tropical forest and featured at least 8500 plant species (Aiken and Leigh, 1986, cited in Myers, 1988). Today, hardly any lowland forest (ie the richest in diversity) remains except in degraded form. Peninsular Malaysia is now a net importer of hardwood timber and pressure has increased on remaining upland forests. (Myers, 1988:p197).

The third 'hot spot' identified by Myers is Northern Borneo, comprising most of Sarawak, the mini-state of Brunei, and Sabah - an area of the total island which has by far the greatest species diversity. Ten hectares of forest can support 700 tree species or as many as in the whole of North America. (Myers, 1988:p197).

The crisis confronting us is that in Sarawak almost all remaining primary forest tracts have been given out to timber concessions and the entire expanse could well be destroyed by logging within 7-8 years (Chin, 1989:p14).

Timber exploitation has also taken its toll in Sabah where the area of



undisturbed forest decreased from 55 per cent of the state's total land area in 1973 to only 25 per cent by 1983. The recent rapid felling of forests has greatly diminished the remaining primary rainforests, and will inevitably force a dramatic decline in timber production due to exhaustion of harvestable forests (Repetto, 1988: p.56).

Continued Australian imports and use of rainforest timbers from these areas can only add to the further desecration of the forests. Industrial logging operations directly contradict attempts at ecologically sustainable forest management. This is emphasized by Patrick Anderson:

"Current knowledge about soils, microclimates and ecological conditions of rainforest show that the options for the sustainable exploitation of rainforests are severely limited. On the whole, industrial agriculture and silviculture are incompatible with the ecological constraints of these systems. Sustainable subsistence economies are the only viable ways that these forests can be used without destroying them...Any plan that seriously seeks to conserve biological diversity must exclude industrial logging from primary rainforests" (Anderson, 1989).

All the above evidence leads us to some sorry conclusions. Not only is industrial logging not ecologically sustainable but it threatens to destroy the ecology we depend upon to survive.



## 5.0 SUSTAINABILITY MYTHS IN TROPICAL FORESTRY

### 5.1 WHAT IS SUSTAINABLE YIELD?

Despite its limits as a concept, the notion of so called "sustained yield management" is now widely used by development agencies and forestry services around the world. Similarly, proponents of the continued use of rainforest timber in Australia argue that we should continue to use the timber in order to encourage the 'sustainable management' of rainforests.

The idea is based on the concept of sustainable timber yield management. Included in this simplified representation of a rainforest are three key variables: the growth rate of certain species of trees (in terms of volume), the area of forest available for logging, and the length of time between successive logging operations. In other words the rainforest is viewed purely in terms of the amount of timber that can be taken from it.

Excluded are all other interactions of the rainforest, such as the survival of indigenous peoples, the sustainability of non-timber species, or the sustainability of the ecosystem as a whole. Also excluded is any consideration of the context of the usage of the timber, in terms of whether or not it is sustainable.

A report for the International Tropical Timber Organisation (ITTO) found that at the very most, less than one-eighth of 1% of tropical forests under logging concessions are being managed according to the theory of sustainable timber yield (Poore, 1988). Dr Chin, formerly the associate Professor of Botany at the University of Malaysia, reports that the "...inescapable conclusion is that there is no sustained yield management of Malaysia's forest resources", (the source of approximately 80% of Australia's rainforest timber imports) (Chin, 1989:p16).

Given the required level (and success) of management or institutional intervention (silviculture, policing, etc), it is theoretically possible that the rainforest could be forced to function according to the simplified view. But if this was achieved, instead of the current 'mining' operation, the logging would become a 'farming' operation in which the world's most complex terrestrial ecosystems were turned into timber farms. In this sense, the concept of sustainable timber yield could be more appropriately termed sustainable



rainforest destruction.

Yet even on its own terms sustainable yield management remains either an elusive goal or a myth, created to legitimise the continued logging of rainforests. Put simply, there's nothing sustainable about logging a rainforest.

## 5.2 THE UNSUSTAINABLE TRADE

The desire to continue the importation of rainforest timbers into Australia, illustrates that concerns of sustainability are defined in even narrower terms from the point of view of importing timber merchants. Here, the dominant concern is one of maintaining the desired volume of timber imports. In this sense, even sustainable timber 'production' at the source can be seen to be irrelevant because new sources of supply can be found, ie, other concessions, countries or continents. The National Association of Forest Industries (NAFI) emphasises in one of its three main strategy aims the need to "avoid unnecessary restriction of supply". (NAFI, June, 1989:p.12)

The typical situation in 'producer' countries is for a "boom" mentality to develop, spurred on by the pursuit of short term profits. Tropical rainforests on the whole are simply being mined with concession holders viewing timber extraction as the removal of the most commercially valuable species on a one-off basis. A report by the World Resources Institute (WRI) describes the manner in which governments have encouraged "timber booms", profiteering and rapid logging exploitation" (Repetto, 1988:p.2)

The unsustainable nature of the tropical timber trade is further emphasised by a report by the WRI, the World Bank, and the United Nations Development Programme: "By the end of the century, the 33 developing countries that are now exporters of forest products will be reduced to fewer than ten and total developing country exports of industrial forest products are predicted to drop from their current level of US\$7 billion to less than US\$2 billion." (WRI, 1985:p.10)

Future timber harvests and exports are predicted to decline dramatically due to depletion of 'commercial stands' (Repetto, 1988:p.5). However, it is likely that countries which still have rainforest remaining will continue industrial logging for domestic use. The desired volumes of timber are predicted to rise dramatically by the end of the century and beyond (eg, WRI, 1985:p.10) However, in contrast, the volume of harvestable timber is predicted to dramatically decline. A WRI report states that "... the most critical problem for the future is the growing inability of many countries to meet their domestic needs for industrial forest products." (WRI, 1985:p.10)

The increasing timber consumption by South East Asian nations (towards the high per capita consumption levels of the West) makes it questionable whether even the domestic demand for timber can be satisfied by the rainforests in the region. The ludicrous situation may arise where South East Asia ends up importing timbers from other regions, eg Australia, New Zealand, USA, Canada or Latin America, leading to further trade imbalances and exacerbating the pressures on any rainforests that remain.

By continuing to import and use rainforest timber and, more generally, by consuming as much timber as we do, we can only add to these pressures.



"Sending it back - people from the Melbourne Rainforest Action Group reload rainforest timber at Victoria Dock."

(Photo by Linda Tanner and courtesy of 'The Sunday Sun')



## 6.0 EXPLOITATION FOR WHOM?

The crisis in forest and resource depletion is often blamed on population growth, peasants using more fuel wood, clearing more land, etc. However, it is increasingly realized that it is much more realistically linked to growth in the demand of the world market, principally, the markets of rich countries. "Growth" is built into the economic system of capitalist, industrialized nations with the drive to sell more for larger profits. The result is the production and consumption of too many products, many of which are luxurious, briefly fashionable, under-utilized or disposable.

The 'Third World' has been given the least profitable role in the global economy - provider of raw materials for the consumption of wealthy nations. David Suzuki (sited in Jones 1989) asks "When do you ever get to have enough?" He goes on to explain that 20% of the world's population is using 80% of the world's resources. Hunt (Wilderness News June, 1989) says that "we in Australia each consume about 80 times as much energy as a person in sub-Saharan Africa. Having almost destroyed our own rainforests we are now exploiting Malaysia's at great cost especially to the Penan people."

With the current economic and political structures worldwide, and the attitudes regarding development, growth and increased consumption, important environmental concerns such as rainforest protection are losing out to greed for wealth and power.

Although the human population is increasing globally at an alarming rate it is essential to recognise that we in the 'First World' countries are responsible for an overwhelming proportion of the environmental damage due to excessive consumption of 'natural resources' and thoughtless use of environmentally damaging technology. If current rates of tropical forest destruction continue, Lovelock (1989) predicts a major human population crash due to climatic disruption and large scale desertification.

According to Peng (1987) the majority of Third World people do not benefit from the profits of rainforest exploitation and other resources mainly tapped for export to the rich countries. The Asia-Pacific region exports 70% of its industrial wood, half to Japan and most of the rest to countries (mainly Korea, Singapore and Taiwan) that process the logs and re-export them to North American, Africa and the Middle East (Peng, 1987). Some timber companies are at least partly foreign owned, with profits repatriated abroad. Most of the

timber is carried by foreign ships and insured through foreign insurance companies, thus siphoning off even more revenue.

Commodity prices are also declining for Third World countries and are already low compared with manufactured goods imported from rich countries. Peng (1987) estimates that between US\$60 billion and US\$100 billion was lost to the Third World as a whole in 1985 due to the deterioration in the prices of their commodities vis-a-vis manufactured goods imported from industrialized countries. He cites Malaysia as an example, with the unit value price for saw log exports falling from \$165 per metre in 1984 to \$140 in 1985. Falls in trade of this nature represent a substantial transfer of income from the Third World to the rich countries, much more than the "aid" passed on to the third world by the rich countries and the multilateral institutions.

Many of the projects which lead to deforestation in the tropical Third World countries have been financed by foreign loans - eg. land development schemes, transmigration projects, the building of roads, bridges and highways, and especially the construction of big dams. It is rare for these projects to generate sufficient returns to enable the repayment of the debts by themselves. For the proposed Bakum Dam in Sarawak, Malaysia, Hong (1987) reports possible foreign loans of M\$10 - 15 billion and in M\$37 million spent already on a feasibility study conducted by German and Swiss consortiums. The feasibility was much disputed. Such projects can render the country ever more dependent on first world technology for machinery, parts, etc. that further drain their resources.

Looking at the Third World itself - the elites and governments have often adopted the same growth syndrome with the emphasis on maximizing exports, revenues and exploitation of resources for the immediate present. Corruption in government, the military and economic powers is well known.

A World Resources Institute report on the misuse of forest resources, states that "...the gross value of timber exports is the usual focus of attention. Overlooked are the large acknowledged and hidden outflows of profits gained by domestic and foreign timber concessionaires and the politicians and military officers who are often their silent partners. The net domestic benefits gained by the economies of tropical countries from the depletion of their forest resources have been surprisingly small.... In some countries, including the Philippines, annual revenues accruing to national treasuries from forest exploitation have not covered even the administrative and infrastructure costs incurred for timber harvesting" (Repetto, 1988:p12).

In the Utusan Konsumer (May, 1989) it is reported that in Indonesia 500 companies own all logging concessions - most of them controlled by the military. In the Philippines, only 94 concessionaires own logging rights to all



remaining forests. In Sarawak, press reports in 1986 showed that nearly three million hectares of forest concessions were owned by the members and friends of only two families - those of the current chief minister, Datuk Taii Mahmud and of the previous chief minister, Tun Rahman. Furthermore, Sarawak's environment minister, Datuk Amar James Wong, is said to own one of the state's biggest timber companies (Limbang Trading).

In addition to all this, there is a illegal logging. According to the World Resources Institute (1985) trade records from Thailand and the Philippines indicate that more trees are logged illegally than legally.

Typically, studies of the economic value of rainforests have been limited to two alternatives- timber extraction, or converting the land to plantations and agricultural uses. The lack of attention paid to non-timber resources in the mainstream economy, and the absence of consideration of local or community economics, highlight the serious deficiencies in much of the current economic analysis. Repetto notes that: "Most tropical countries do not even collect information on the annual value of production or export of dozens of valuable non-wood products that are harvested without damaging the forest ecosystem" (1988:p37).

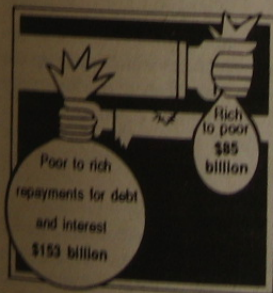
Where studies have included consideration of economically valuable resources besides timber, the value of these resources has far exceeded the value of timber. For example a recent study of a small patch of Amazon rainforest found that fruits and latex represented 90% of the potential commercial value of the forest and timber just 10% (Peters,1989).

In Malaysia you have a situation where key government officials own logging concessions and indigenous people are being rapidly dispossessed of their forest homelands, their livelihood and their cultural identity. Foreign companies and foreign aid play their part and falsely legitimise it by only acknowledging the authority of the corrupt government and business personnel that they deal with.

The indigenous cultures, and particularly nomads such as the Penan in Sarawak, have little or no land rights and are forced out of the forest as the chainsaws and bulldozers cut in. Over the last three years these people and many others who support them have taken action themselves due to the failure of negotiations and pleas to government and timber companies. In Sarawak, indigenous people began barricading logging roads in March 1987 (WRI and SAM, 1989) and, despite many arrests, imprisonment, physical and psychological abuse and the threat of heavy fines, they have set up again and again, peaceful but firm in their resistance. Around the world they have gained support from a growing network of rainforest action groups and other environmental and human rights organisations.

The issues of environment and peace have become large on many political agendas and local actions by ordinary people are also becoming common and powerful. The image of a peace activist clinging to the bow of an American nuclear warship in Sydney last year was sent around the world. News of protests here in Australia decrying the importation of rainforest timbers has been relayed back to the interior of Sarawak encouraging renewed activity and more blockading. Attitudes and actions are changing and an effective consumer boycott of tropical timber may soon occur in Australia due to local protest and concern.

Dr Suzuki sums up the economics and politics of rainforest destruction clearly - "A forest performs tremendous services that have no value in our current economic accounting. It's loony-tunes to think that a forest is only valuable when it's cut down and it's that sort of attitude that needs to change... I really don't think you have to persuade governments. I think you persuade the people that this is important..." (Suzuki, in Jones, 1989).



**Australia's population of 16 million has the same impact on world resources and energy as 1280 million Africans.**



## 7.0 WHY WE DESTROY RAINFORESTS FOR TIMBER

Rainforest destruction is not just happening by itself! Maintaining a system geared to wiping out the world's rainforests in the space of a couple of human generations is a massive task. Yet, it is being done so successfully that, after hundreds of millions of years of evolution, rainforests are disappearing at the rate of a hectare a second. People at all levels facilitate this destruction, and people working together have the power to stop it.

In this chapter we will shift the focus initially to the structural and institutional context in which Australians participate as traders and users of rainforest timbers, and to the context in which logging takes place. The chapter will then discuss the social context in which rainforests come to be regarded as a resource for commodities, and examine the disconnected manner in which we use the rainforest timbers.

By considering the wider context of rainforest destruction we can see that it does not occur in isolation or independent of outside influences. For example, a logger cutting down trees and a person using timber products do not act independently of one another. Nor are they acting independently of the societies in which they live. Rather their actions reflect their wider social influences or institutional contexts. It is these social forces that largely determine our understandings of the world and the ways we act within it.

So, what are the social forces that underlie the destruction of rainforests?

It is difficult to isolate these forces, because they are so embedded in each other and our culture. It is social perceptions that individually and collectively underlie our behaviour. These perceptions are not predetermined but are constructed and maintained by the institutions and structures which make up our society. There are a wide range of social institutions which give rise to our cultural setting. These include government bodies, business organisations, the education system, media, religions, etc, as well as things like customs or traditions. All these exist in an interactive relationship, and it is through them that we filter our understandings of the world.

As such, the institutions that are involved in the exploitation and destruction of rainforests do not exist in isolation either. At one level the interactions between these institutions occur within a context of the dominant political and economic

structures. At a different level the interactions also include the social institutions, or the ways we use to understand things, that allow a rainforest to be seen predominantly as a source of timber or money, and the social forces that create the desire for the timber products.

### 7.1 The Forces Of Destruction

The forces that are driving rainforests to extinction are the same forces that see Australians exporting uranium, despite the concerns surrounding its use in weapons and in power generation, and the same forces that see Australians exporting coal, despite concerns surrounding CO<sub>2</sub> emissions and the greenhouse effect. An example that has a closer parallel to the logging of rainforests is that of woodchips. Much of the current 'management' of Australian forests is oriented to the 'efficient' large scale resource extraction for low value exports (ie woodchips). Australians are the world's largest exporters of woodchips, contributing almost half the volume entering the international trade (FAO, 1989:p271). The destruction of rainforests is being driven by the same forces that dominate current 'land use' decisions within Australia.

As with the decisions about logging rainforests in S.E. Asia, decisions concerning land use within Australia are not taken in isolation. Crossing international boundaries, are the Western values and 'ways of seeing the world'. The worldwide dominance of Western economic and political structures has meant that global structures and institutions play a large role within Australia in determining the interactions between people and their environment.

This can be seen from our trade policies and practices. Despite being classified as a 'First World' nation, Australia's economy retains a heavy reliance on the export of 'primary products', so much so that their production dominates much of the land use of the continent (eg wool, beef, wheat, woodchips and minerals).

Production and trade policies and practices are largely influenced by international market forces, commodity pricing (including interest rates), foreign debt and the balance of trade payments. These external forces help to create the incentives for the large scale exports of primary products from Australia, and also for the importation of rainforest timbers.

South East Asian rainforests fit into this view as a source of commodities for trade and use in Australia and other consuming nations. They are a source of products for Australian manufacturing industries (eg formply, joinery or furniture), and the construction and housing industries. It can be seen however, that the nature of the existing Western political economy is such that the actual products are not the primary concern. Logging, exporting or selling rainforest timber are ways for some people to convert the rainforest into money. Using



the rainforest timber is a way for consumers to satisfy a desire or perceived need.

Land use in 'Third World' nations (S.E. Asia is the source of Australia's rainforest timber imports) is influenced largely by the dominance of Western economic, political and technological power. During the era of 'development' (post world war 2) Western ideology penetrated deeply into most of the Third World. Non-Western world views have gradually been subordinated, and the state structures of many Third World nations are now permeated with Western values.

As Holmes (1990:p31) writes: "In many S.E. Asian countries, and most of the Third World for that matter, the dominant structures and formal institutions in place today are, to a large extent, 'imported'". He emphasises that: "Through the direct indoctrination of elites, the export of Western political, economic, and religious institutions, and the diffusion of Western culture in general, the Western world view is now deeply entrenched in non- Western societies"(p32).

Third World economies have gradually been absorbed into the global economic system, with international market forces increasingly determining economic activities and specific land uses within Third World societies. Foreign debt and commodity pricing have influenced internal policies and led to more rapid exploitation of rainforests.

This is emphasised by Holmes (1990:p37) who points out that the current overriding goals of the state in Malaysia reflect "...the dominance of Western values and institutions within Malaysian society, as well as the pressure imposed by the world economic system". He continues: "That translated into practice, this entails the conversion of all land and natural resources to 'economic use' (ie commercial extraction of timber resources, conversion of forested land to cash crop plantations, development of mineral resources, etc), and the gradual elimination of 'inefficient' and 'unproductive' traditional land-use practices in favour of 'modern' practices (p38). In other words, rainforest is viewed as 'unproductive' jungle inhabited by 'backward' people, and the exploitation or destruction of rainforest, far from being seen as a problem, is seen as a desirable outcome.

As outlined earlier this process of exploitation of our environment and people is not unique to the Third World. As such Malaysian (and other S.E. Asian) politicians quite rightly point to the hypocrisy of critics in First World countries who point the finger at them, without first questioning the processes within their own societies that have led, and continue to lead, to outcomes such as rainforest destruction and human rights abuses. The rights of the Koori people in Australia have been systematically delegitimised and ignored. How many times have they been compromised or totally disregarded when their land has become

'economically valuable' to others? Rainforest destruction is not merely the outcome of 'corrupt' or 'greedy' politicians or business people! It is Western models and processes that the S.E. Asian countries are pursuing, models and processes that we are involved in and supporting.

## 7.2 How We Support The Destruction

In pursuing the goals of economic 'development' and 'growth' Australians have a background of converting forests to cleared land and altering ecosystems generally. When Europeans occupied Australia in 1788, they brought with them a belief that they had a right and a duty to transform the environment (including people) into greater 'productivity'. Underlying this belief is the view that certain people are more important than others and that people are more important than other organisms. This belief has become formally enshrined in the dominant decision making structures and institutions in our society.

These world views and their outcomes take their form through decision making processes that give disproportionate power and legitimacy to the viewpoints of certain people. As such, at one level, decisions are largely made by and according to the interests of a hierarchy of power concentrated within government and corporate bureaucracies. However, the legitimacy given to such 'top down' or patriarchal decision making structures and processes has permeated our society.

It is these structures of domination which give greater value to certain people or things, and which underlie violence and oppression, whether it takes its form as poverty, sexism, racism or environmental destruction. It is here that we can see a profound relationship between all forms of social, economic, political and environmental oppression and exploitation. And it is these patriarchal structures of domination such as 'First World' over 'Third World', nation over nation, economic class over class, race over race, men over women, and 'man' over 'nature' that are now destroying the life support systems of the planet.

It is misleading to assume that the institutions and processes which are destroying rainforests are static, and doing so significantly reduces our options for change. The unquestioned acceptance of the dominant structures and decision making processes has typically led to environment and other groups emulating the hierarchical power models and decision making processes within their own internal structures. It has also led to them pursuing 'traditional' avenues for change (eg negotiating with or lobbying politicians and bureaucrats, campaigning in marginal electorates, standing or voting for preferred candidates - ie it is still assumed that the 'most important' people should make decisions for us).



This has meant that strategies for change have been based on the reform of the existing dominant institutions and procedures, while maintaining the existing power structures. By accepting such limits we fail to recognise that the dominant institutions and perspectives are not only socially constructed, they are socially maintained.

One aspect of our current system of government is the effect it has on individuals or communities who may otherwise be inclined to take action compatible with a path towards a more sustainable, less exploitative mode of living. Generally people are disempowered from taking such action themselves because of an overwhelming perception that it is governments that are, and should be, responsible for overseeing our environment. However, if we rely on governments or industry, or even 'mainstream' environment groups, to introduce measures to 'save' rainforests it would almost certainly be done in those ways most compatible with the dominant institutions.

Individuals and communities can withdraw their support from oppressive, exploitative and destructive institutions and processes. A recognition of the interconnected nature of our society leads to a recognition of the personal responsibility each of us has for seeking these changes.

In order to change we have to start to change ourselves. We cannot struggle to save rainforests and ignore our own part in their destruction, and we cannot successfully confront the context of our everyday lives without struggling for new ways of understanding and behaving.

### 7.3 World Views That Separate Us

In our society not only do we give greater legitimacy to people in positions of perceived power, but we also give greater legitimacy or weighting to viewpoints couched in terms consistent with the dominant 'ways of knowing'. Underlying the perceptions or values embodied in the dominant institutions and processes are certain ways of understanding the world. Consideration will be given here to the dominant frameworks of knowledge that allow us to see a rainforest thousands of kilometres away as a source of timber for our use. These ways of thinking are just as much part of what is destroying rainforests as the person holding the chainsaw. Some fundamental notions underpin the whole system.

Our dominant ways of understanding the world are based on a 'dualistic' frame of reference. The world is seen as separate fixed categories. Sickert (1990:p14) writes that; "At their most simple these can be seen as opposing poles - 'us and them', 'reason and emotion', 'living and non-living', 'man (culture) and nature', etc". She continues that by "...accepting the validity of such split realities, we give one of them priority. In each of these pairs, the first half is always more

valued than the second". This has given rise to among other things the ruthless exploitation of 'nature'.

The separation of people from 'the environment' allows exploitation without thought to consequences. It means we are willing to take (or don't recognise) risks with our world. We either consider 'the environment' as malleable and capable of withstanding or adjusting to extensive human impact, or we don't consider 'the environment' at all. This can be seen from the way our society still logs and uses rainforest timbers, despite predictions that 20% of all species on earth will be extinct from rainforests alone within 10 years, and despite predictions of climatic changes resulting from further rainforest destruction.

The notion of separateness is further reinforced within our culture by the economic perspective and the ideas of 'objective' science. Both these frameworks play dominant roles in determining how we perceive and relate to our world.

The economic framework deals with phenomena only in terms of their use value for certain people, reflecting an anthropocentric and exploitative worldview. Economics gives us an international market for rainforest timber, but gives no value to rainforest in terms of habitat, or as part of the planet's climatic system, or as home to indigenous people. Economics cannot give rainforest any value other than in terms of utility for people and especially people who can pay. A rainforest becomes a 'resource' then, if it can be used by people, and particularly if some people are given exclusive 'rights' to the resource. Resources are given economic value based on consumer demand and profit potential.

So, with utility having defined trees as useful (a source of timber), the timber becomes valuable as a commodity. Consumers willing to buy timber and traders willing to trade it then structure its market value beyond the costs of its basic 'production' and marketing. Exchange is facilitated through the medium of money which, by its generalising nature, further acts to remove consideration of the wider context of our use of trees for timber.

The dominant approach of science also reinforces the perception that we are separate from our environment. Science tends to view the world by reducing it to isolated parts, with the assumption that we can understand the whole picture by looking at smaller and smaller bits of it. This reductionist approach pays little, if any, attention to the connections or relationships between the isolated parts that are assumed to tell the story.

The idea of scientific 'objectivity' further adds to the notion that we are somehow detached from what is going on around us. Questions of why a particular discipline or approach was chosen as a method of understanding do



not arise because the scientist is generally perceived to be engaged in a value-free pursuit of knowledge. But the 'objective' scientist cannot operate independent of society. If scientists are operating in a system geared to exploitation, how can even the topic or focus of their study be considered 'independent'? It follows that certain areas of study will receive greater energy or attention than others, and that greater weighting will be attached to certain outcomes. This highlights the dangers of relying on 'experts' (scientific or otherwise) for defining 'problems' or 'solutions.'

An example is that of foresters, who define their role as the science of managing forested lands and natural resources for human benefit. If human benefit is defined in terms of the use or sale of timber, then the forest will be logged. It is significant that the accepted view of forestry is synonymous with logging.

So, by the time the timber reaches the consumer, the links between the product and the rainforest it was derived from, have been broken and actively discouraged by the dominant Western ways of perceiving and explaining the world, including economic rationality and reductionist science. Questions or concerns that are defined outside the specific problems relevant to the dominant ways of knowing either disappear or are relegated to the realm of 'more abstract' considerations. This allows politicians, economists or industrialists to describe things such as logging or deforestation as inevitable or a consequence of progress to which we simply have to adapt.

From this discussion it becomes apparent that it is not only the dominant structures and institutions that are destroying rainforests, it is also our dominant world views which act to separate us from ourselves and our environment.

#### 7.4 Our Use of Rainforest Timbers

Rainforest timbers can be found in virtually every Australian household. The extent of our use of rainforest timber indicates that our 'need' to use it is embedded in the institutions within our society.

It is possible to see that our need to use rainforest timber is socially constructed in the same way that the notion of regarding timber as a commodity is socially constructed. People do not just have needs, they arise in the context of other, more general, frameworks of understanding. If rainforest timbers were difficult to obtain, instead of being available in every hardware store, or if they were twice the price, would our use of them be so prolific? Unlikely! More than likely we would find something else to use (eg an alternative timber or material), or we could even decide that we did not need the particular item after all.

As outlined earlier, legitimacy is given to the notion of utility within our Western world view. Consequently, our uncritical or contextually disconnected use of things such as rainforest timber is largely taken for granted and accepted as normal. Formal institutions and structures have been put in place, to reinforce our acceptance of timber utilisation or consumption.

For example, institutions exist (eg the National Association of Forest Industries and the Australian Timber Importers Federation) specifically to encourage our use of timber, including rainforest timber. The institutional perspectives of these organisations are geared towards timber existing as a commodity to be sold for consumption. If rainforests are considered at all, they are viewed primarily as a source of timber (as are other forests).

People outside these formal institutions give legitimacy to the institutional realities by their acceptance of them, either consciously or unconsciously. For example the consumer purchasing meranti or merbau is giving active support to the continued existence of the institutions engaged in the logging of rainforests and the institutions engaged in the trade and sale of rainforest timbers.

In addition to the formal institutions promoting the use of timber, its use is embedded in the structures that various institutions have created. These structures surrounding the use of timber also exclude its wider context. For instance tariffs placed on timber as it enters the country relate to the degree of processing of the product rather than to the species or source of the tree it was derived from. Similarly building codes or regulations relate to performance specifications rather than particular species or sources. Australian standards refer to things such as strength or density ratings of timber rather than the type of forest and the impact caused by removing the tree. Architects, builders and carpenters are taught to relate to the timber in terms of its strength, durability and appearance rather than to other aspects.

Further influencing our use of rainforest timbers are the 'informal' social institutions. These relate to how we perceive timber and the unwritten traditions surrounding its use. In common with formal institutions and structures, these too can take on the appearance of unquestionable reality. Convention or habit can be mistaken for need. Carpenters or labourers may continually choose certain timbers on the basis of familiarity. Our ideas of housing (size, shape, materials used, etc), or the need to renovate are embedded in tradition and custom. None of these things is unchangeable, rather they are constructed and perpetuated through our social institutions.

It is the exclusion of the consideration of the wider context of our use of timber that allows us to use rainforest timbers without any consideration of consequences. We may value and use timber for its perceived 'warmth and naturalness', or its strength and durability, or its ease of use or price. But if we



ask where it is from, or unravel why we think we need to use it, then our perception of it may change.

If our concern is a path towards a more sustainable mode of living, this involves us in considering the context of the products we use in terms of why we use them, the amounts we use and the impacts of their use on our environment. Most importantly it involves us in a consideration of how our actions fit in with our understandings of the world.



"People blockading the arrival of another rainforest timber ship meet the forces of destruction head on, whilst their police escorts stand by.

(Photo courtesy 'The Age' Melbourne)

## 8.0 FINDING OUR LINKS

One of the things we have hoped to do in this booklet is to show that so-called 'environmental problems' cannot be disconnected from the societies or social contexts in which they arise. We have tried to highlight the connections between rainforest destruction and wider social forces, in an attempt to uncover the underlying nature of these forces and the values and ways of thinking that underpin them.

In summary, after considering this wider social context we have concluded that Australians are linked to tropical rainforest destruction in the following ways:

- \* by our use of rainforest timbers, and by our consumption of timber generally ( and more generally, by our materialistic lifestyles based on conspicuous consumption)
- \* by our support of political economic systems that value our world purely in terms of its use value to people (who can pay)
- \* by support of decision making structures and processes that empower elites (to make decisions about what happens to rainforests), but that disempower, and remove responsibility from, people in the community
- \* by giving legitimacy to structures and processes that give greater value to some people and delegitimise other people and other organisms
- \* by the weighting we give to ways of thinking that separate us from our world

For us an important and empowering insight is that all of the above are open to change. Our society (and culture) is not static, it is both socially created and socially maintained. Perhaps more empowering is the realisation that nothing occurs in isolation. We are all linked to what is happening.

This interconnectedness of our society (and our world) means that any action we take, however 'small', has consequences or implications in wider areas. This also means that we can make changes at many different levels. In this sense, it is possible to see that all our actions are 'political', or are connected to what is happening in our world. From this perspective even shopping, travelling across town, or eating a meal, can involve political decisions. More importantly, an awareness of the context of these decisions can lead to a greater



recognition of our links to ourselves and to our earth.

This interconnectedness of our society also means that so called 'single issue' struggles ( eg saving rainforests, disarmament or land rights) are all part of a generalist movement for social change. By building alliances and recognising the links between 'different' struggles we can discover the underlying unity of all our concerns and work together for change. In this sense, it is not the symptoms or focus of concern of various campaigns (eg forest destruction, militarism or human rights abuses) that make them different, but their process.

For the Melbourne Rainforest Action Group (MRAG) this interconnectedness has meant attempting to work towards ways that do not contradict long term goals, and do not reinforce or legitimate oppression or exploitation. For us this has meant engaging ourselves in a strategic nonviolent struggle with an initial goal of halting the importation of rainforest timbers through 'grassroots' action rather than elite reform.

At one level this has meant that MRAG does not spend much time lobbying elites to get them to 'save' rainforests. Apart from the short term or superficial nature of 'successes' achieved through government or policy reform, lobbying acts to reinforce the notion that it is elites who should 'control' what happens to rainforests. Instead, ways have been sought to include as many people as possible in our community in a search for fundamental change.

Through regular creative and disciplined nonviolent actions that receive mainstream media coverage MRAG has helped to raise concern and awareness across the community about Australia's role in rainforest destruction. There is increasing evidence of consumer boycotts of rainforest timbers. The role of the union movement has been crucial to the MRAG campaign so far. The Building Workers' Industrial Union has placed a ban on the use of imported rainforest timbers on construction sites in Victoria, and maritime unions have placed bans on the ships carrying rainforest timber.

At a different level, within MRAG meetings a lot of time is spent seeking inclusive decision making processes. There is no internal hierarchy in MRAG. Consensus decision making is used. Statistics are taken on the number of times individuals speak, not to stop people speaking but to raise awareness of 'male' or individual domination usual in group meetings. There is a commitment to skill sharing so that we can all become our own 'experts'. Above all there is a commitment to developing ways of thinking and acting that reflect our interdependence with our world.

All people can work towards ways of ending oppression and exploitation, and towards ways of sustaining our earth. There are now around 5 billion of us, which is a fantastic amount of human potential waiting to be unleashed!

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(Photo courtesy of 'The Age' Melbourne)



Waterside workers haul a Rainforest Action Group banner aboard a timber ship in the Port of Melbourne.

(Photo courtesy 'The Age' Melbourne.)









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**Melbourne Rainforest Action Group:**

GPO Box 321766  
Melbourne VIC, 3001

Phone: (03) 417 7450

Fax: (03) 416 2081

Email: peg-burrows  
peg-pascate