NEWS RELEASE

MINISTER FOR ARTS, HERITAGE AND ENVIRONMENT

20 May,1987.

JOINT STATEMENT BY THE FEDERAL MINISTER FOR ARTS, HERITAGE AND ENVIRONMENT, MR BARRY COHEN, AND THE NORTHERN TERRITORY MINISTER FOR CONSERVATION, MR RAY HANRAHAN

NATIONAL RAINFOREST CONSERVATION PROGRAM FUNDS FOR THE NORTHERN TERRITORY

The Commonwealth Minister for Arts, Heritage and Environment, Mr Barry Cohen, and the Northern Territory Minister for Conservation, Mr Ray Hanrahan, announced today that an initial amount of $225,000 would be spent by their Governments under the National Rainforest Conservation Program.

Mr Hanrahan said that the Northern Territory has rainforest types peculiar to the monsoonal tropics of northern Australia, but few systematic studies of these communities have been carried out to date. Important elements of the work to be undertaken are a distribution study, mapping and vegetation survey of the Territory's monsoon forests. The survey results will be used to classify rainforest communities and determine management needs.

Mr Hanrahan, who welcomed the opportunity for rainforest conservation projects presented by the National Program, said that results from the research component of the Northern Territory program would also greatly assist in the development of management priorities. Studies will assess the impact of fire and feral animals on the monsoon forests, and examine the effectiveness of various techniques to control threats.

Mr Cohen also announced that an elevated rainforest interpretive walk is to be developed in Kakadu National Park. Mr Cohen said that the walk would provide visitors with an exciting opportunity to view the forest at canopy level and gain an improved appreciation and awareness of the monsoon forest environment.

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The Northern Territory joins New South Wales, Victoria and Western Australia in participating in the National Rainforest Conservation Program. Mr Cohen said that the success of these rainforest programs was evidence of the value of the co-operative approach to conservation.

For further information:
Kym MacDonald (Press Secretary to Mr Hanrahan): 089/897034
Gerard Early (Senior Private Secretary to Mr Cohen): 062/731964

Statement No 43 of 1987.

littoral rainforests

State Environmental Planning Policy No. 26

Department of Environment and Planning

Foreword

Littoral rainforest is a very distinctive rainforest adapted to survive the harsh conditions beside the sea. Many of our native birds and animals live in the shelter of its thick canopy and some of the plants in it are very rare.

Over the last two hundred years more than three quarters of the littoral rainforests in New South Wales have been cleared and degraded.

This policy continues the government's record of conserving our important rainforest habitats. Along with the littoral rainforest already conserved in national parks and nature reserves, it ensures that this important part of our heritage is protected from further damage.

These notes explain why the policy was needed, how it works and answer some commonly asked questions about it.

The remnants of littoral rainforest we have left are of great value. If you own an area of littoral rainforest, please consider how few of these forests remain and manage it with care.

Bob Carr
Minister for Planning and Environment
and Minister for Heritage

Introduction

State Environment Planning Policy No. 26 - Littoral Rainforests was introduced by the State Government to preserve our littoral rainforests. It came into effect on Friday, 5 February 1988.

The policy consists of two parts: the written instrument and a set of maps which show the areas of littoral rainforest.

While these notes are as accurate in describing the policy as they can be, they are not a substitute for it. Further advice on the policy or the Environmental Planning and Assessment Act (which sets out how environmental planning instruments are operated) is available from your local council or the Department of Environment and Planning. Contact numbers are listed at the end of the booklet.

What is littoral rainforest ?

Many people are familiar with rainforest but littoral rainforests are not so well known. Littoral rainforest is a type of rainforest found next to the sea and which is affected by the sea.

It is one of five broad types of rainforest found in New South Wales. The others are subtropical rainforest, warm-temperate rainforest, cool-temperate rainforest and dry rainforest.

Littoral rainforest is distinctive because some of its plants and its structure are specially adapted to survive the harsh conditions of exposure to salt-laden winds near the coast. The drying and damaging effects of wind and salt would normally kill exposed sensitive rainforest plants.

The hardier species of trees in littoral rainforest form a thick canopy or barrier of tough leaves which shield seedlings and more sensitive plants from these winds. If this protective canopy is opened up, the vulnerable inner parts of the rainforest are exposed and damaged.

One of the effects of these winds is wind-pruning or wind-shearing of the canopy. This is a typical feature of littoral rainforests and if you look at it from a distance, the canopy often appears to be streamlined.

Wind-pruning also stunts the trees where conditions are very harsh and trees that may usually grow to 10 metres or more may never grow more than 1 metre high. In less exposed sites littoral rainforest can grow up to 10-20 metres.

Littoral rainforest is found on headlands, generally with fertile soils derived from slates or basalt, or behind beaches on nutrient-enriched deep sands. Where littoral rainforests grow on sand they often merge with wetlands.

Types of littoral rainforest

Botanists have divided littoral rainforests in New South Wales into five types, depending on the main tree species present :

1. . riberry (*Syzygium luehmanii*)
   . broad-leaved lilly pilly (*Acmena hemilampra*)

2. . tuckeroo (*Cupaniopsis anacardioides*)

3. . brush box (*Lophostemon confertus*)

4. . yellow tulip (*Drypetes australiasica*)
   . bauerella (*Sarcomelicope simplicifolia*)
   . red olive plum (*Cassine australis*)
   . plum pine (*Podocarpus elatus*)

5. . lilly pilly (*Acmena smithii*)
   . various figs (*Ficus* species)
   . cabbage palm (*Livistona australis*)
   . plum pine (*Podocarpus elatus*)

A mixture of these main types may occur in one patch of littoral rainforest.

Along with these main tree species you can find up to 130 other trees and shrubs and 60 vines as well as ferns, epiphytes (such as orchids and birds nest ferns, which grow on other plants) and herbs.

Some very rare trees are also found in littoral rainforest. These include scented acronychia (*Acronychia littoralis*), stinking cryptocarya (*Cryptocarya foetida*) and *Fontainea oraria.*

Why protect littoral rainforest ?

Development, clearing and sand mining on the coast have greatly reduced the extent of littoral rainforest. Over the last 200 years probably more than three quarters has been cleared or severely degraded. The small remaining pockets are still under considerable threat of destruction.

Botanists estimate that only 20 per cent of all the rainforest in New South Wales present at the time of European settlement now remains and only 1 per cent of this is littoral rainforest.

Without protection, more of this remaining littoral rainforest would inevitably be cleared without regard to its considerable conservation, scientific and scenic values.

Littoral rainforest is an important habitat for a number of native birds and mammals, including bats. Many of the plants produce fruit which provide them with food.

It has considerable scientific interest as it seemingly defies the elements by existing in harsh conditions. It contains a number of rare and interesting plants which are not found anywhere else.

Littoral rainforest is an important part of the landscape and adds variety and interest to the coast. This can be seen in the popularity of several walking tracks through littoral rainforest on the north coast.

For these reasons, what remains of our littoral rainforest should be protected for now, for the future and for the sake of the natural environment itself.

Purpose of SEPP 26

Although the policy protects valuable littoral rainforests it allows developments, as long as they will not significantly reduce the value of the littoral rainforest. It also enables the culmulative effects of existing and proposed developments to be assessed and gives the community an opportunity to comment on proposed developments.

SEPP 26 encourages people proposing developments to avoid disturbing littoral rainforests and to look for alternatives.

It requires anyone wanting to place developments in or near a littoral rainforest to study the characteristics and values of the area, to assess the likely effects of their proposal and to seek approval from the local council.

This ensures that developments in littoral rainforest only occur if there are no feasible alternative locations, they have little impact on the natural environment and are located and designed with care.

What land does the policy cover ?

SEPP 26 applies to about one hundred core areas (some of which consist of a group of small adjacent patches) and surrounding buffer areas.

You can inspect maps of the core areas at your local council or the offices of the Department of Environment and Planning.

There are five maps in the set. Copies are available for $6.00 per map from the Cartographic Branch, Department of Environment and Planning, phone (02) 266 7367.

What does the policy do ?

The policy specifies two types of areas, referred to in the booklet as the core and the buffer, and applies differently to each.

Core Areas: are defined as the littoral rainforest areas shown on the maps.

The policy requires anyone proposing to carry out defined developments in the core to make a development application to the local council. Because these developments are 'designated development' an environmental impact statement (EIS) must accompany the development application.

The defined developments for core areas are: erect a building; carry out a work; use the land for any purpose or subdivide it; disturb, change or alter any landform; disturb, remove, damage or

destroy any native flora or other element of the landscape; or dispose of or dump any liquid, gaseous or solid matter.

Rocks, rock formations and earth are defined in the policy as elements of the landscape.

'Damage', in relation to plants, includes lopping, topping and felling.

Buffer Areas: are defined as the land within 100 metres of the edge of a core area, excluding residential land and land to which SEPP 14 - Coastal Wetlands applies.

Residential land is excluded from the buffer to prevent residents being disrupted. It is defined as land zoned in a local environmental plan (LEP) or other planning instrument as residential, village or township before the policy applied.

As for proposals in core areas, anyone proposing to carry out defined developments in the buffer must make a development application to the local council. Unlike the need for an EIS for developments in core areas, the policy does not require one for developments proposed for buffer areas.

The defined developments for the buffer area are: erect a building; disturb, change or alter any landform or disturb, remove, damage or destroy any native flora or dispose of or dump any liquid, gaseous or solid matter.

Concurrence for Developments in Core or Buffer Areas

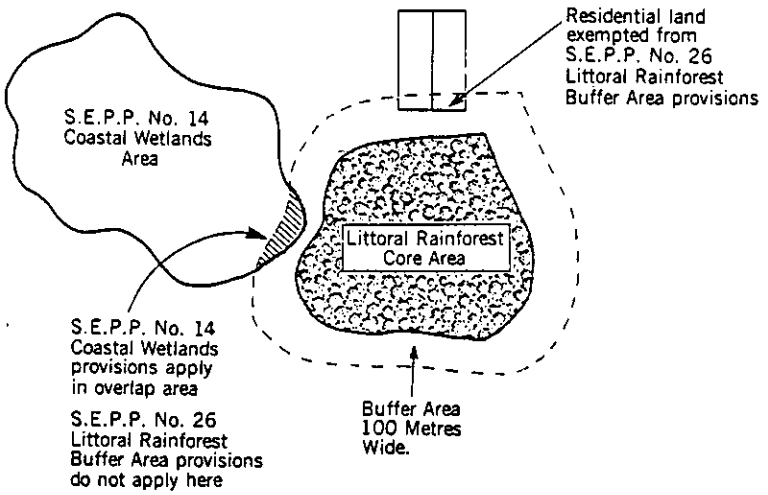
As protection of littoral rainforests is significant for the state, the policy also has a concurrence provision.

This means that a council cannot give consent to a development unless, in the case of a private development, the Department of Environment and Planning has agreed and, in the case of a development by a government authority, the Minister for Planning and Environment has agreed.

Relationship of this policy to SEPP 14 - Coastal Wetlands:

Littoral rainforests often grow beside wetlands because the slightly raised and, therefore, drier areas in or next to a wetland can be very suited to littoral rainforest.

Because of this, there are places where the littoral rainforest buffer overlaps with lands protected by SEPP 14 - Coastal Wetlands. Where this happens, SEPP 14, rather than the SEPP 26 buffer, applies for the extent of the overlap.



Why have a buffer ?

Development near a littoral rainforest can severely harm it. For example a development could remove protective vegetation, a change in drainage could flood or dry a rainforest, pollution could enter the rainforests and damage it or soil from nearby erosion or construction could move into a rainforest and smother the plants.

Because nearby developments could damage the rainforest just as much as development within it, the 100 metre buffer ensures proposed developments can be properly evaluated so they are compatible with the rainforest.

Having the buffer does not mean developments will not be allowed in it. It does mean that the effects on the rainforest can be assessed so the rainforest is protected. Compatible developments will be allowed.

Exemptions from the policy

As well as excluding residential land from buffer areas, the policy also allows people to continue activities related to normal residential occupation in both core and buffer areas without requiring consent.

Native plants which are officially declared noxious (if any) can be eradicated as long as this is done in a way that does not significantly affect the environment.

Leaf litter, fallen bark or cured grasses can be removed where this is necessary to reduce the risk of bushfire.

Current uses can continue

SEPP does not prevent landholders from continuing to use the core or buffer areas in any way they were doing before the policy applied. This is provided that the appropriate planning approvals (if any) needed at the time the use commenced were obtained.

The right to continue current uses does not entitle a person to alter, extend or rebuild a building or work, to enlarge, expand or intensify a use or to increase the area of land used for a particular purpose. While a use that was being carried out intermittently may be continued, this does not entitle a person to recommence an abandoned use.

If council has already granted consent for a development it can be completed unless consent has lapsed. Development consent generally lapses after two years but, as this can vary, local councils can provide advice about specific cases.

What do people who want to develop in or on littoral rainforest or buffer do ?

Developments in the core (the mapped areas) and buffer can only proceed if they are approved by the local council and the Department of Environment and Planning or the Minister.

People who want to develop in or on a littoral rainforest or buffer should:

1. Discuss the proposal with the council's planning staff to check the local planning

controls and see if there is a way to carry out the development without disturbing the littoral rainforest. The policy requires council to make sure the development cannot be done outside the area to which the policy applies.

2. Write to the Department of Environment and Planning, outlining the proposal and its location. The Department will reply saying what aspects of the littoral rainforest and the proposal should be studied and described briefly in an environmental impact statement.

3. If the development is proposed in a rainforest core area, prepare or have someone prepare an environmental impact statement (EIS).

4. Give the impact statement to the council with a development application.

Further information

You can obtain further information about SEPP 26 from the planning section of your local council or from the Department of Environment and Planning offices listed below.

175 Liverpool Street SYDNEY / G.P.O. Box 3927 SYDNEY 2000
phone: (02) 266 7111

49 Victoria Street GRAFTON / P.O. Box 6 GRAFTON 2460
phone: (066) 42 0622

20 Auckland Street NEWCASTLE / P.O. Box 5135B NEWCASTLE WEST 2302
phone: (049) 26 2566

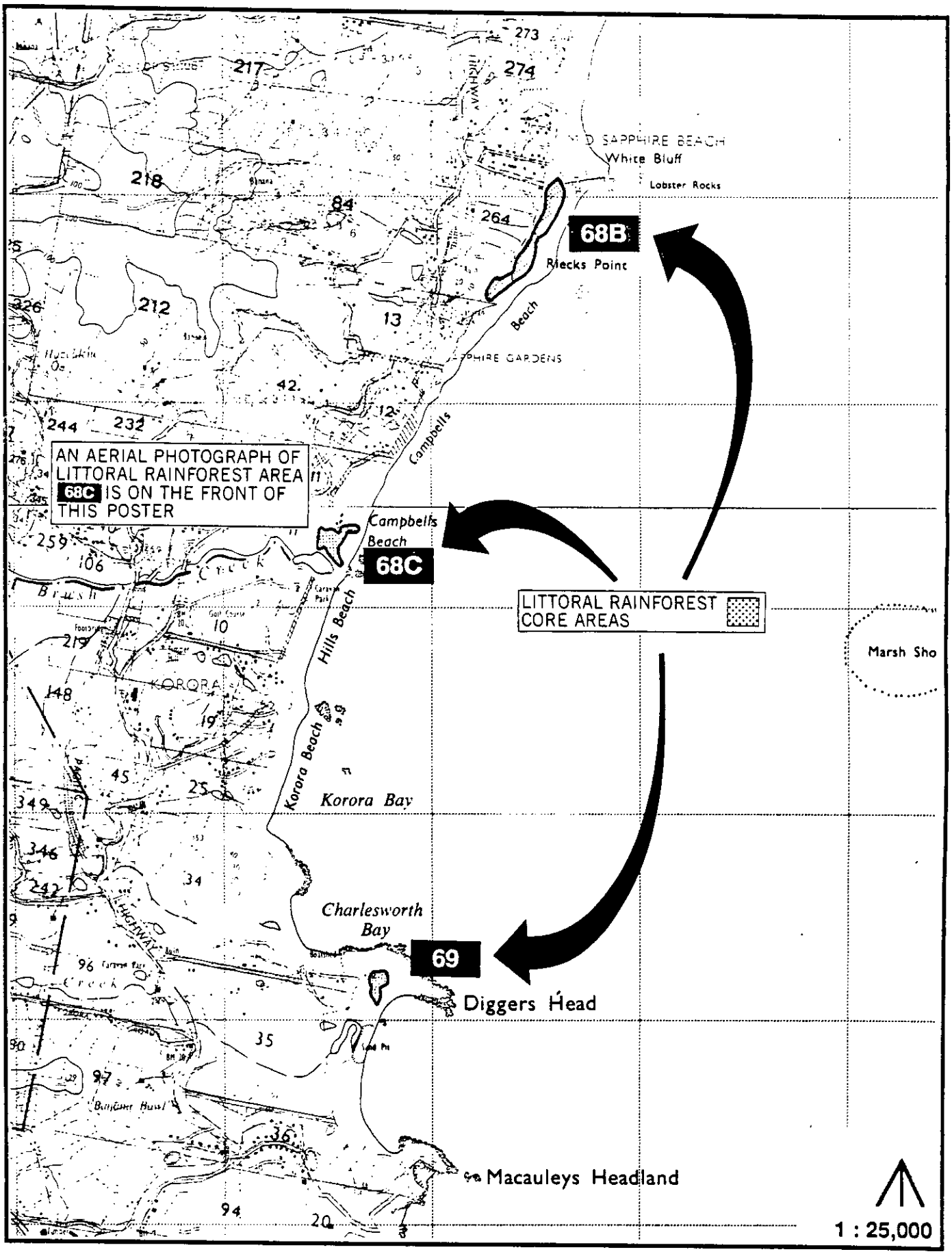
200 Crown Street WOLLONGONG / P.O. Box 61 WOLLONGONG EAST 2500
phone (042) 28 4644

251 Crawford Street, QUEANBEYAN 2620
phone: (062) 97 6911

The N.S.W. National Parks and Wildlife Service is also producing a booklet on managing areas of littoral rainforest. You can contact the Service at its head office:

A.D.C. Building 189-193 Kent Street SYDNEY
/ Box N189 Grosvenor Place Post Office SYDNEY 2000
phone: (02) 237 6500

or at your local National Parks and Wildlife Service office.



This sample map is one from the series covering S.E.P.P. No.26 — Littoral Rainforests.

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

STATE ENVIRONMENTAL PLANNING POLICY NO. 26—LITTORAL RAINFORESTS

HIS Excellency the Governor, with the advice of the Executive Council, and in pursuance of the Environmental Planning and Assessment Act 1979, has been pleased to make the State Environmental Planning Policy set forth hereunder in accordance with a recommendation made by the Minister for Planning and Environment. (85-10219)

BOB CARR,
Minister for Planning and Environment.

Sydney, 29th January, 1988.

Citation

1. This State Environmental Planning Policy may be cited as "State Environmental Planning Policy No. 26—Littoral Rainforests".

Aims, objectives, etc.

2. The aim of this Policy is to provide a mechanism for the consideration of applications for development that is likely to damage or destroy littoral rainforest areas with a view to the preservation of those areas in their natural state.

Interpretation

3. (1) In this Policy—

"damage", in relation to flora, includes lopping, topping and felling;

"flora" includes trees, shrubs and vegetation;

"residential land" means land which is within a zone designated "Residential", "Village" or "Township" on the day on which this Policy takes effect in any environmental planning instrument;

"the Act" means the Environmental Planning and Assessment Act 1979.

(2) Rocks, rock formations and earth are elements of the landscape for the purposes of this Policy.

Application of Policy

4. (1) This Policy applies to—

(a) land enclosed by the outer edge of the heavy black line on the series of maps held in the Department and marked "State Environmental Planning Policy No. 26—Littoral Rainforests"; and

(b) land not so enclosed but within a distance of 100 metres from the outer edge of that heavy black line except residential land and land to which State Environmental Planning Policy No. 14—Coastal Wetlands applies.

(2) This Policy does not apply to land dedicated or reserved under the National Parks and Wildlife Act 1974 as an Aboriginal area, historic site, national park, nature reserve, state game reserve or state recreation area or land dedicated or set apart under section 25A of the Forestry Act 1916 as a flora reserve.

Relationship between instruments

5. In the event of an inconsistency between this Policy and a regional environmental plan or a local environmental plan whether made before, on or after the day on which this Policy takes effect, this Policy shall prevail to the extent of the inconsistency.

Designated development

6. An act which requires the consent of the Council by virtue of clause 7 (1) is designated development for the purposes of the Act.

Development—consent and concurrence

7. (1) A person shall not, without the consent of the Council, on land described in clause 4 (1) (a), erect a building, carry out work, use land for any purpose, or subdivide it, disturb, change or alter any landform or disturb, remove, damage or destroy any native flora or other element of the landscape or dispose of or dump any liquid, gaseous or solid matter.

(2) A person shall not, without the consent of the Council, on land described in clause 4 (1) (b), erect a building, disturb or change or alter any landform or disturb, remove, damage or destroy any native flora, or dispose of or dump any liquid, gaseous or solid matter.

(3) Subject to subclause (4), the Council shall not determine an application under subclause (1) or (2) by granting consent under the Act except with the concurrence of the Director.

(4) The Council shall not determine an application described in section 91A of the Act by granting consent under the Act except with the concurrence of the Minister.

(5) Nothing in subclause (1) or (2) requires the consent of the Council to be obtained for—

(a) any act which is carried out in the ordinary course of residential occupation of the land concerned;

(b) eradication of native flora declared noxious by proclamation under section 467 of the Local Government Act 1919, by means not significantly detrimental to the native ecosystem;

(c) unavoidable destruction or removal during eradication of native flora adjacent to any flora declared noxious by such a proclamation; or

(d) removal of leaf litter, shed bark or cured grasses for the purpose of reducing the risk of bushfire.

(6) The Council shall not consent to an application made under subclause (1) or (2) unless it is satisfied, if the application is to erect a building, carry out a work, use land for any purpose or dispose of or dump any liquid, gaseous or solid matter, that there is no place outside the area to which this Policy applies on which the development might suitably be located or occur.

Matters for consideration—concurrence

8. (1) The Minister and Director shall, for the purpose of deciding whether concurrence should be granted, consider—

(a) any representation made by or on behalf of the Director of National Parks and Wildlife about the likely impact of the proposal on the environment;

(b) the objectives and major goals of A National Conservation Strategy for Australia published by the Australian Government Publishing Service, Canberra, in 1984; and

(c) if the carrying out of the proposal and the use (if any) thereafter of the land concerned for the purpose for which it will be used may cause destruction or disturbance of the natural environment, the public interest (if any) in the carrying out of the proposal in relation the the public interest in the preservation of littoral rainforest in its natural state.

(2) A proposal may be in the public interest for the purposes of subclause (1) notwithstanding that it benefits persons (by means including financial or other advantage) who are not public authorities or benefits those persons exclusively.

Forwarding of copies of applications to Director of National Parks and Wildlife

9. If a Council receives an application under clause 7 (1) or (2) of this Policy the Council shall within 7 days of its receipt of the application forward a copy of it to the Director of National Parks and Wildlife.

Amendment of other State Environmental Planning Policies

10. (1) State Environmental Planning Policy No. 4—Development Without Consent, is amended by inserting in clause 4 (1) after the word "State" the words "but does not apply to land to which State Environmental Planning Policy No. 26—Littoral Rainforests applies".

(2) State Environmental Planning Policy No. 8—Surplus Public Land is amended by inserting at the end of Schedule 1 the following words:

6. Land to which State Environmental Planning Policy No. 26—Littoral Rainforests applies.

(3) State Environmental Planning Policy No. 9—Group Homes is amended by inserting in clause 4 after the word "State" the words "but does not apply to land to which State Environmental Planning Policy No. 26—Littoral Rainforests applies".

(4) State Environmental Planning Policy No. 14—Coastal Wetlands, is amended by inserting after clause 4 (3) the following subclause:

(4) This Policy does not apply to land to which State Environmental Planning Policy No. 26—Littoral Rainforests applies.

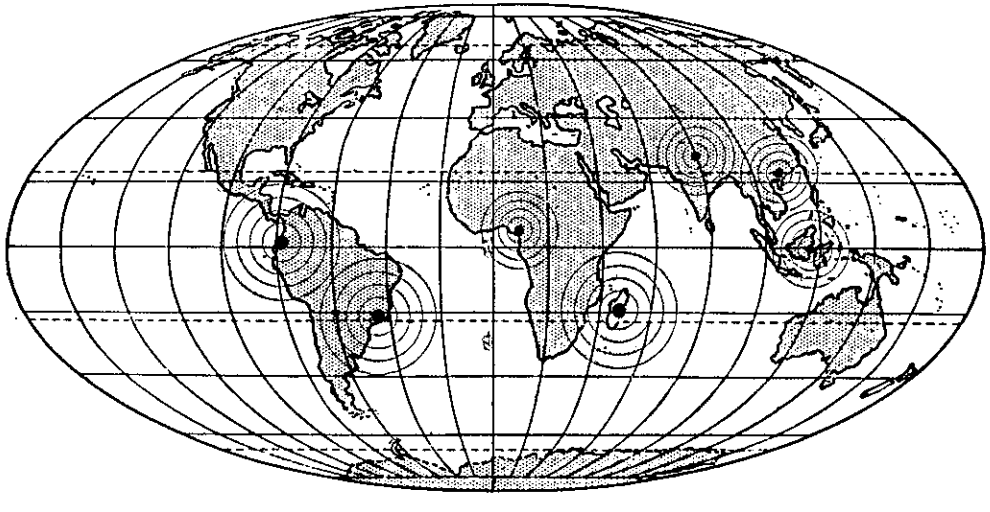
(5) State Environmental Planning Policy No. 21—Movable Dwellings, is amended by inserting after clause 7 (4) the following clause:

(5) Subclause (1) does not apply to land to which State Environmental Planning Policy No. 26—Littoral Rainforests applies.

THE CATASTROPHE ZONES

Professors Jared M. Diamond and Robert M. May wrote in *Nature*, 12 September 1985 that because of:

...''destruction ... caused mainly by small-scale subsistence agriculture, commercial logging and large-scale commercial ranching ..... During the next five years, three isolated rainforests with high human population density, a large number of endemic species and over 100,000 species altogether will probably be destroyed completely: the rainforests of Madagascar, Ecuador's Pacific coast and Brazil's Atlantic coast. Within the next 10–15 years distinctive rainforests in Central America, Southeast Asia, West Africa, the Himalayan foothills and Pacific islands will have largely disappeared, accounting for another 1 million km2 and half a million species lost.''



Forest destruction, Amazonia, Brazil

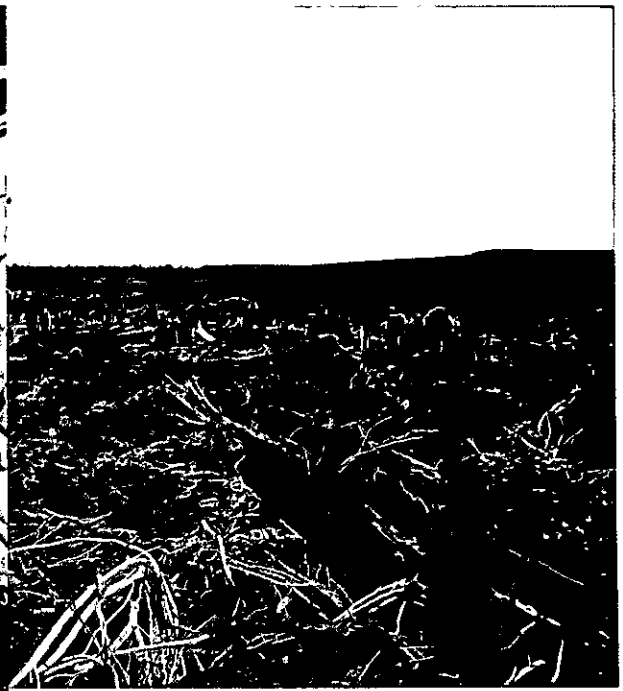


Photo: R. Ian Lloyd/APA Photo Agency

LAND HUNGER

Growing populations are often blamed for deforestation but population density itself is not the cause. Many countries with severe deforestation problems have low population densities. Where income is associated only with land, and land is scarce or held by a very small minority, there are always poor people looking for land. Unfortunately, when tropical forests are hydroelectric dams. Latin America holds the largest remaining areas of uncut forest.

ASIA

South East Asia is the second great tropical rainforest region. Here the main agents of loss are logging and agricultural expansion. Logging has eliminated more than half of Peninsula Malaysia's forests since 1960, and reserves are expected to be exhausted by 1990. In Indonesia, logging destroys more than four times as much forest as do encroaching farmers or organised transmigration. Asia has dominated world timber exports in recent years although it's role is declining as stocks are depleted. Thailand, once a major exporter, has now become a net importer.

AFRICA

In Africa, the picture is similar but more countries have already lost their forests. Several West African countries have logged out their forests or are about to do so (eg Ivory Coast, Nigeria and large parts of the Congo). Nigeria has shifted from timber exporting to importing, as a result of deforestation. Dry and seasonally wet tropical forests still cover large parts of Africa but cutting for fuelwood and overgrazing are now serious threats to them.

Photo: Elaine Dubois

THE CAUSES OF DESTRUCTION

Many factors influence the destruction of tropical forests but the most important is money. In the short term, it is more lucrative to cut down the forests than to conserve them. Marketing sustainable rainforest products such as fruits, genetic material and rubber gives a lower immediate return than destroying the forest for its timber. The fact that virgin forest may be unoccupied "except" by native people also encourages conversion to ranches, farms, industry or even plantations. Once developed, tropical forests never recover their natural diversity.

Acute economic problems beset some of the countries destroying rainforests. Some 'mine' their forests for pulp or timber to repay foreign debt, knowing that they are writing off a capital asset which cannot be replaced. Others colonize forests for military and political reasons. Many governments feel pressured by expanding land-hungry populations. The balance of reasons for forest destruction varies from one part of the world to another.

LATIN AMERICA

The main cause of destruction is clearance by felling and burning to create cattle ranches and farms. New roads are opened into remote areas to allow colonization, and there is also increasing emphasis on development schemes such as cleared, the poverty of the farmers is often soon matched by that of their soils and crops. Farmers then try to move on to new areas. Many governments have enforced or encouraged migration to tropical forest areas, for example in Brazil and Indonesia. Colonization schemes have often failed because tropical forest soils are usually too poor to support permanent agricultural settlement.

LOGGING

Logging is done selectively – where only certain trees or species are removed – or by clear felling. But even with so-called selective practices, the heavy mechanical equipment and methods of modern logging systems cause enormous damage unless helicopters are used to lift trees out, or elephants or buffaloes employed to pull them out. In Asia, studies have shown that for every ten trees taken deliberately, thirteen are seriously damaged. Sometimes 'selective' felling damages two thirds of all trees in the area. In extreme cases 43 % of all trees were damaged and as little as 3 % of the cut or damaged timber was actually used.

Although felling itself only may account for under 10 % of all direct forest clearance, the Food and Agriculture Organization of the United Nations has estimated that 70 % of all clearance – whether by squatters, farmers, dam builders or others – is only possible as a result of the roads and infrastructure built for logging. Once the loggers are finished, settlers often burn an area to clear it prior to establishing a farm. Sales of timber may also help establish farms or other development.

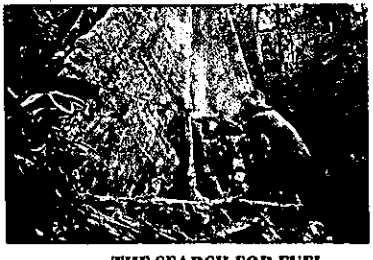


Photo: Alain Compost

THE SEARCH FOR FUEL

While 80 % of the wood used in developed countries is for industry and only about 20 % for fuel, in developing countries the ratio is reversed. Poor people are destroying forests to cook their food. Cutting for fuelwood is an especially important factor of destruction in the drier tropical forests. The UN Food and Agriculture Organisation estimates that 1.5 billion people of the 2 billion worldwide who rely on fuelwood for cooking and heating, are overcutting forests. Some 125 million people in 23 countries still cannot obtain enough fuelwood even by over-cutting forests. Poverty, tradition, inadequate information and unavailable technology all interact to inhibit the adoption of alternative sources of energy, or of closed stoves which are more efficient wood-burners than open fires. For every ten hectares of tropical forest cleared, less than one hectare is planted. This makes it likely that the fuelwood problem will worsen.

AID

By supporting types of economic development copied from the North, many aid agencies such as the World Bank, USAID, and the European Development Fund, have encouraged projects

INDUSTRIAL POTENTIAL

Although most tropical forest products are used to meet the needs of local people and so never enter the cash economy, the industrial products yielded by tropical forests themselves ammount to billions of dollars each year. For example, the Indonesian rattan industry produces an annual global trade worth some US$4 billion a year. (Rattan is a fibrous, spiky climbing plant). Furthermore, obtaining such products does not destroy the forest. In 1985, the World Bank and other agencies listed the following important industrial products originating in tropical forests: essential oils, gum, latexes, resins, tannins, steroids, waxes, edible oils, rattans, bamboo, flavourings, spices, pesticides and dyestuffs. Such forest materials produce consumer goods from wickerwork chairs, coffee, lubricants, and glue for postage stamps, to golf balls, chewing gum, nail varnish, deodorant, sound-proofing, toothpaste, shampoo, mascara and lipstick. Nevertheless, very few tropical forest species have been investigated for their possible industrial use.

Photo: WWF/Tom Moss

Ferntree Cibodas, Indonesia

LOST SOILS AND FLOOD PROTECTION

As functioning ecosystems, forests serve man in many ways. They help regulate climate, control floods and conserve soils. Like so many benefits of nature, their essential role is easily overlooked until a disaster occurs.

In India, it is reported that the area of land susceptible to floods has doubled to 800,000 km2 as a result of a 20 % forest loss in recent years.

Deforestation is also affecting the Panama Canal which links the Atlantic and Pacific Oceans. The Canal relies on reservoirs such as Lake Madden to supply the two billion gallons of water it needs to allow the daily passage of thirty large ships through its lock system. Because 75 % of the forest cover has been cleared from the catchment of Lake Madden, erosion and sedimentation have dramatically increased. The reservoir has already lost five percent of its capacity and is forecast to lose another 15 % in as many years: enough to make the canal impassable to large ships. Deforestation is caused out by small farmers who have moved onto the hillsides as richer farmers have taken the better land.

CHANGING CLIMATES

Forests affect regional climates because they absorb more of the sun's energy than open land. Hence deforestation can disrupt local weather patterns by warming air which was previously kept cool. In addition, tropical forests recycle a large part of their rainwater by drawing it up from the soil and then releasing it as water vapour through the foliage. In the Amazon Basin, which contains two-thirds of all the fresh water on earth, at least half of the falling rain has already evaporated from the forest once or more than once. Amazonian rain can be recycled over three times this way, and the forest-generated portion of rainforest downpours can be as high as 90 % . In Brazil, there is concern that crops planted on cleared forest land will fail as rainfall is reduced. "We are still wondering if the forest causes the weather or the weather causes the forest" says one Brazilian scientist.

However the widely held idea that tropical forests are the oxygen producing "green lungs" of the earth is just a myth. Other parts of the global system are more significant. Similarly although carbon dioxide (CO2) is produced when tropical forests are felled and burned, the amounts are small when compared with the yearly release from burning fossil fuels. However, both temperate and tropical forests may play an important role in absorbing CO2, and could significantly influence the production of other "greenhouse gases." Their role in maintaining the global climate is poorly understood, but removing the forests must be the worst possible way of finding out exactly how crucial they are.

such as cattle ranching which have destroyed forests, and then often failed.

FURNITURE, COFFINS AND CONSTRUCTION

An important cause of tropical forest loss is the use of tropical hardwoods to supply consumer products to the richer countries.

Tropical hardwood veneers on television sets, doors, window frames and furniture are all well-known fates for giant tropical forest trees. Others include crates for Japanese motorcycles, coffins and even chopsticks. Many are luxury uses and there are few if any which could not be substituted by other woods or materials.

Japan and Europe dominate the world consumption of tropical hardwoods, importing around 15 and 12 million cubic tonnes a year respectively. In terms of processed products Japan's role is even more pronounced with around 70 % of the trade, while almost all the remaining 30 % goes to the EEC states. Eighty percent of tropical hardwoods is used in furniture and construction.

Photo: WWF/J. H. Blower

Photo: WWF/Phillippe Oberlé

Photo: WWF/J. H. Blower

EXHAUSTION IN SIGHT

The tropical timber trade has traditionally exhausted one supply after another and then moved on. The mahoganies are a classic example. In the 18th century, accessible stands of Caribbean mahogany species were rapidly logged out. In the 19th century, timber traders moved on to exploit mahoganies in West Africa. Now these forests are gone and the trade has moved back across the Atlantic to Brazil. Some mahogany species are now sufficiently rare to be listed as endangered by trade under the Washington Convention (CITES: Convention on International Trade in Endangered Species). Today this rake's progress is drawing to an end because the forests are simply vanishing.

Timber exports from tropical countries are in decline as supplies begin to be exhausted. In 1980 exports from the main tropical hardwood producers peaked at a value of around $US6.8bn but by 1984 they had fallen to $US5.8bn. Within 14 years they will probably fall to under $US3bn as 23 of the 33 main exporters are forecast to exhaust their capacity to supply trees.

SAVING THE TROPICAL FOREST

It was once thought that plants and animals could be saved in zoos and botanic gardens and there have been some well known and successful instances of rescue and reintroduction. But this is not a practical option. Even working flat out, all the zoos in the world could only maintain viable populations of around 900 animal species.

We now also know that many species can only be conserved in their native habitat. Many have evolved to rely upon each other. When the dodo became extinct, one tree species stopped producing seedlings because its seeds would only germinate if the bird had first eaten them. Fortunately the tree is long-lived and over one hundred years later, scientists have been able to germinate seeds after feeding them to turkeys. Other species are not so lucky. Because such 'coevolution' is most developed in the tropical forests, conserving intact forest ecosystems is essential.

CRITICAL MINIMAL FOREST AREAS

How much forest must we save? There are now some 560 tropical forest parks and reserves covering 78m ha. There is hard-won government backing for each of these protected areas. They total only about four percent of all tropical forests and some distinct forest types are not covered at all. But will even this protection be effective? Unfortunately the answer may be no. It now appears that many reserves and designated areas

Atlas moth, Java

VANISHING RICHES

Malaria – effectively treated with quinine, from the cinchona tree of Peru

Surgery – much relies on d-turbocurarine, a muscle relaxant made from curare which comes from an Amazonian liana

Amoebic dysentry – since the time of Louis XIV it has been treated with ipecac, a South American plant

Birth control – diosgenin from Mexican and Guatemalan wild yams is a major component of the contraceptive pill

Hypertension – often treated with resperine, from the SE Asian shrub *Rauwolfia serpentina*

Schizophrenia – schizophrenic convulsions are relieved by picrotoxin from the Levan berry of S. and S.E. Asia. It is also used to restore breathing following a barbiturate overdose

Dental cement – comes from balsams of Latin American

Glaucoma – treated with diosgenin from the West African calabar bean

Antiseptic – the benzoin tree of Malaysia yields a substance used both as an antiseptic and against bronchitis

LOST MEDICINES

The flora and fauna of the tropical forests hold an astonishing cornucopia of medicines, both for native peoples who can turn herbs and venoms into traditional remedies, and for industrial pharmacists who convert them into commerial drugs using extracts as raw materials or chemical blueprints. Illinois University pharmacologist Norman Farnsworth calculates that 25 percent of all US prescriptions owe their active ingredients to higher plants. By the late 1960s, four out of five hypotensive drugs prescribed in the US came from plants, and in 1973 a survey of US prescriptions showed that the plant kingdom was already supplying 76 major drug compounds – of which only seven could be commercially synthesised.

Fewer than one percent of tropical forest species have been screened for their use in life-saving drugs. Writer and researcher Norman Myers estimates in *The Primary Source* that at least five percent of all plant species are in some way useful for medicine, and at least half of these occur in tropical forest. On this basis he suggests that the Malaysian Peninsula, Borneo and New Guinea each support 200 important medicinal species. Overall at least 1,400 plants of tropical forests are believed to offer potential against cancer. James Duke of the US Department of Agriculture has suggested that ten potential anti-cancer drugs will be lost to mankind as a result of the destruction of remaining tropical forests.

NATIVE KNOWLEDGE

Prof. R.E. Schultes, Director of the Botanical Museum at Harvard University, has found that forest Indians in northwest Amazonia employ at least 1,300 plant species for medicines and related purposes. In SE Asia traditional healers use 6,500 plants against malaria, stomach ulcers, syphilis and other disorders. Forest people have a unique understanding of tropical forest ecology and resources because their cultures have evolved with the forest. The Hanunoo people of the Philipines can separate 1,600 plant species but professional botanists operating in the same forest can only distinguish 1,200. Worldwide, over 3,000 different species are used by native peoples to control fertility alone.

As tropical forests disappear, and as long-isolated native communities fall victim to accidentally-introduced diseases, this invaluable cultural knowledge is lost in the most tragic way.

Found in the drier tropical forests of Madagascar, the Rosy Periwinkle yields alkaloidal substances which now give a 58% chance of remission from Hodgkins disease and increase the remission rate for childhood leukaemia from 20% in 1960 to over 99% in 1985. Worldwide sales of these drugs now exceed $90m a year.

are too small to be effective. If these are the only areas of forest left, conservation will fail.

Ecologists have calculated that when a large forest is reduced to fragments, then in a remnant of one to 25 square kilometres (the typical size range of many protected areas) one tenth to one half of all the original bird species will become extinct with in the first 100 years.

One reason for this is that many forest species travel over wide areas in search of a particular food or habitat. A bird or insect may depend on the fruit or flowers of an individual forest tree, and unlike those in temperate forests, the trees themselves are usually very widely scattered, a mechanism which probably evolved to avoid pests and predators. Other species such as eagles or apes need large home ranges. Many tropical species show other specialisms, for example the various birds which consume the insects displaced by army ant columns. Moreover, despite their high mobility within the forest, most forest species are reluctant to cross even narrow areas of open land. Their conservation therefore depends on the protection of very large areas. To find out exactly how large, WWF is funding the 'Minimal Critical Size Project,' a twenty year experiment to observe the final results of destroying and fragmenting Brazilian forests.

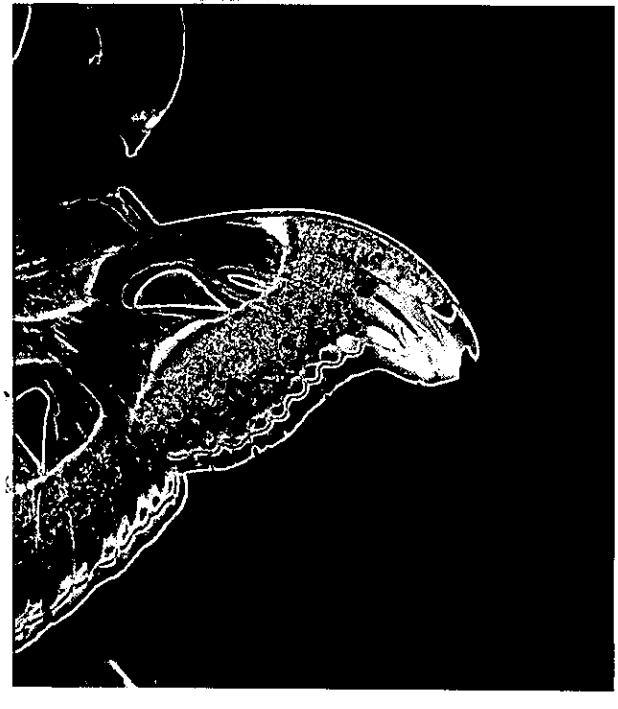


Photo: Alan Compost

WAYS TO SAFEGUARD THE FOREST

Conservation groups can never hope to buy all the threatened tropical forests. Nor will governments simply turn them into protected areas with no economic function. Any solution must therefore tackle the economic causes of forest loss. While the situation is very serious, it is far from hopeless. Here are some of the many constructive strategies put forward for safeguarding the forest.

FOREST INDUSTRIAL COMPLEXES

"I have a dream" says environmentalist Norman Myers, "It is to industrialise tropical forests." By developing industry which does not harm the forest, argues Myers, countries could earn as much money as by logging or clearance. Rubber tapping, screening plants and animals for use in drugs and crops, and collecting vines and rattan for fibre are all examples of the potential.

CONSERVATION CREDITS

Thomas E. Lovejoy, President of WWF US, has proposed tackling the "forces emanating from Wall Street and Washington" through "conservation credits" which would be issued to debtor countries with tropical forests. The money would be used for ecologically sustainable developments, for research, or for National Parks.

FUELWOOD, PLANTATIONS AND MANAGEMENT

In 1985 an authoritative International Task Force comprising the World Resources Institute, The World Bank, the International Union for the Conservation of Nature and the United Nations Development Programme launched *"Tropical Forests: A Call For Action."* It proposed a global action plan to prevent deforestation, save tropical forests, and avert the fuelwood crisis by a massive increase the number of plantations and better management of exploited forests. It calls for a five-year 56–country programme of US$8bn. Essentially, the strategy aims to provide alternative supplies of wood, both for industry and at village level.

AID FOR FORESTS

By switching aid support to schemes such as agroforestry (growing trees and crops together) instead of large scale capital intensive projects, local income can be raised, tree cover conserved, pressure on virgin forests reduced, and soils protected. Control by local people is a key element for success. Organising such expenditure is difficult. It also offers few opportunities for sales of high-technology equipment, and lacks the glamour of large development projects.

Photo: WWF/Phillippe Oberlé

Young chimpanzee, Ivory Coast

tea, pineapples, peanuts, cashews, aubergines, bananas, oranges and lemons. To maintain and improve resistance to pests and disease, crop breeders need access to the genetic material of wild relatives. The variety of the wild 'gene pool' reflects the range of environmental conditions experienced by different populations. The loss of any one local population can mean the irreplaceable loss of a biological solution to problems such as drought, insect attack or fungal invasion.

So long as the forests survive, new discoveries are constantly being made.

The Chinese gooseberry, or Kiwi fruit, discovered in the rainforests of Southeast Asia, is 15 – 18 times richer in Vitamin C than oranges. A plant used by Paraguayan Indians contains a chemical which is calorie-free and tastes 300 times sweeter than sugar. The Tawa people of Thailand routinely grow over 80 'wild' crops for food plus another 50 for medicines and household purposes. An advantage of their highly diverse gardens is that the crops do not need artifical pesticides, both because they include plants with natural insecticidal properties and because their very diversity encourages predators and prevents pests building up.

VANISHING RICHES

BIOLOGICAL DIVERSITY

Far away from the effects of ice ages and climatic fluctuations, tropical forests have evolved an incomparable diversity of life-forms. About 155,000 of the 250,000 known species of plants are found in such forests. As many as 80 % of all insects live only in tropical forests. Nine-tenths of the world's primates such as monkeys are also found only in tropical forests. Undisturbed for millenia, the forest ecosystem has become immensely intricate. A recent study of Peruvian rainforests found 41,000 different insect species living in the tree canopy, including 12,000 types of beetle. All these species were living in just one hectare, an area no bigger than a large garden . Tropical forests have 5 to 20 times more tree species than temperate forests. Together, Canada and the continental USA boast a total of 700 tree species yet this number has been found in the forests of Borneo in just 10 one-hectare plots. The tropical island of Madagascar alone supports 2,000 tree species. In the Pacific, New Caledonia holds 3,000 species of plant, while Great Britain – with over twenty times the land area – has only 1,430 species .

SCIENTIFIC FAILURE

Growing concern about the loss of tropical forests is not well reflected in the funding of the scientific research needed to save their genetic wealth. There is a desperate shortage of trained staff with crucial skills in the vital sciences of systematics, population biology and tropical ecology. The USA spends US$3m on such studies, while it spends US$4,000m on human health research. Yet paradoxically the loss of tropical forest species is itself a massive loss to medical science.

According to E.O. Wilson of Harvard University, merely cataloguing the total flora and fauna of tropical forests would require the working lives of 25,000 scientists (there are only 1,500 trained specialists available today), and occupy 60 metres of library shelving per million species.

Irreplaceable Amazonian ecosystems are being lost for want of as little as US$30,000, says Paulo Nogueira-Neto, head of the Brazilian Environmental Agency. He believes that a significant range of unique forest types could be conserved for US $10m: the price of a single jet fighter which is obsolete in 5–10 years.

VITAL CROPS

All of the world's main crops have been derived from wild relatives. Of the dozen or so which provide 90 % of the world's food, half are descended from tropical forest plants. Rice and maize are two of them, which together with wheat provide over half the world's calories and protein. Others are coffee,

SAVING THE TROPICAL FOREST

INTERNATIONAL GOVERNMENT ACTION

National Conservation Strategies drawn up under the World Conservation Strategy offer a planning framework which some countries are using to map out forest conservation measures, for example in Zambia and Madagascar.

The World Heritage Convention provides a small fund to establish protected areas of global importance, but so far very few tropical forests have been included.

The most significant international instrument is probably the International Tropical Timber Agreement (ITTA), an economic treaty between 41 nations which together control over 90 % of tropical timber trade and tropical forests. The ITTA is run by the International Tropical Timber Organization (ITTO) under the aegis of UNCTAD (the United Nations Convention on Trade and Development). It allows for reforestation projects and cooperation in organising the tropical timber trade. The ITTO could be used to fund reforestation work and help fix a better price for timber, so perhaps slowing felling. Unique among trade agreements, one of the stated aims of the ITTA is conservation. As a declaration of intent, it is highly significant and has been supported by WWF, the International Union for the Conservation of Nature (IUCN) and other conservation organizations. After almost ten years of planning, the ITTO headquarters was established in Yokohama, Japan in 1986. Although it is too early to judge its success, conservation groups have already put forward a number of points for action including a fund for protected areas, appointment of forest ecologists, finance for reforestation and a phasing out of primary forest logging in favour of sustainable management.

Photo: WWF/Freeland/R. S. Kennedy

The Philippines Eagle

PROGRESS IN SAVING FORESTS

Many projects to conserve tropical forests are underway around the world. The examples given below show that conservation can indeed work, given good planning, local involvement and government commitment.

ECOSYSTEM CONSERVATION

In 1940, the total area of nature reserves and National Parks worldwide was equivalent to the surface of Madagascar, and only 2 % consisted of tropical humid forest. Today the total area would cover more land than India, Bangladesh, Pakistan and Sri Lanka, and tropical forests account for 8 % .

The endangered mountain gorilla and its habitat have been so far successfully saved from extinction by the establishment of

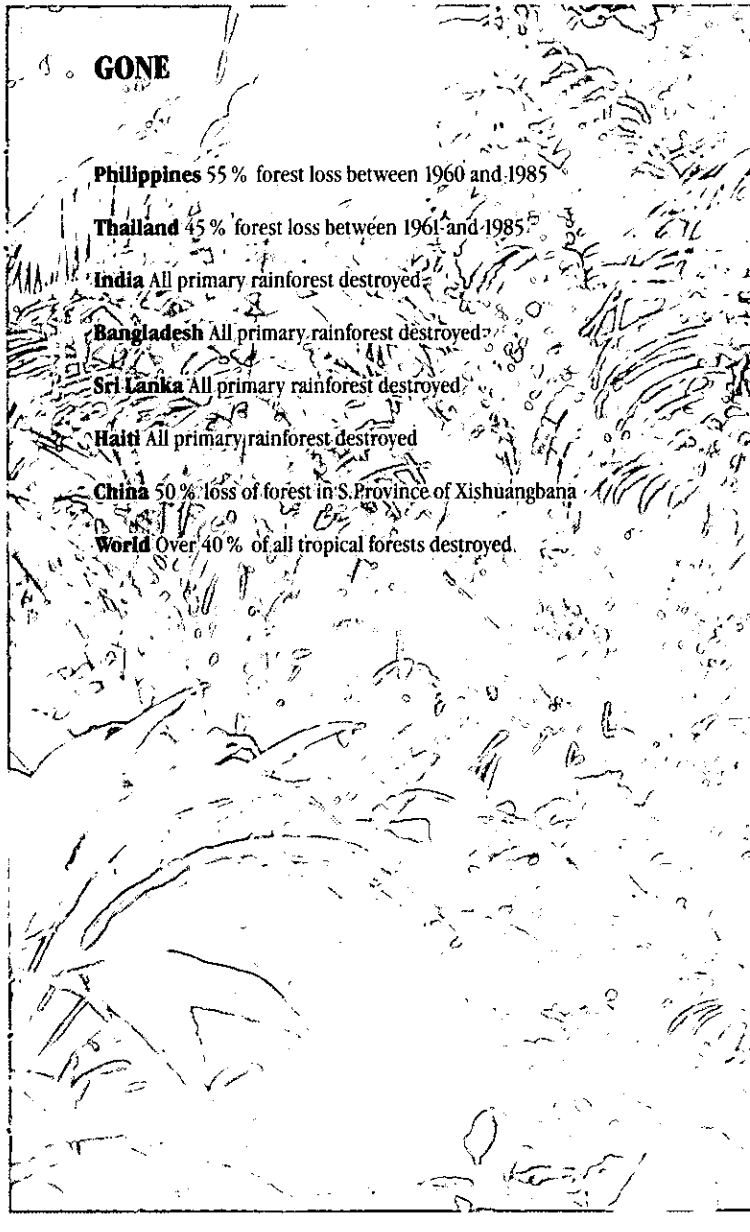
Photo: WWF/M. Kavanagh

Slow Loris, Malaysia

the Parc National des Volcans in Rwanda, despite this being one of the poorest and most densely populated countries in Africa.

The Kuna Indians of Panama have established an environmental education programme and are cooperating with researchers to set up agroforestry projects, they are also working with government and development agencies to encourage tourism, all in a 60,000 ha Central American rainforest. The key to their success probably lies in the fact that they have been able to control the development themselves.

On Sulawesi (Indonesia), the 300,000 ha Dumoga-Bone National Park protects many mammals and some of the 80 endemic Sulawesian birds restricted to primary rainforest. WWF and IUCN have cooperated with the government in



GOING

Ivory Coast Forest almost logged out

Malaysia Peninsula Malaysian forest resources will be exhausted by 1990

Congo 68 % of rainforest scheduled to be logged

Indonesia 200,000 Ha logged a year. 10 % of the 1981 forest will be destroyed by the year 2000

Thailand Will lose 60 % of the 1981 forest by 2000

Nigeria Complete deforestation expected by 2000

Guinea Will lose one third of forest by 2000

Madagascar Will lose 30 % of forest by 2000

Ghana Will lose 26 % of remaining forest by 2000

Honduras Will lose over 50 % of remaining forest by 2000

Nicaragua Will lose over 50 % of remaining forest by 2000

Ecuador Will lose over 50 % of remaining forest by 2000

Guatemala Will lose one third of remaining forest by 2000

Colombia Will lose one third of remaining forest by 2000

Brazil Will lose 8 % of remaining forest by 2000 – area of 63m. Ha – two and a half times bigger than Portugal.

planning an irrigation scheme for rice cropping which uses the forest as a catchment.

Illegal trade in primates taken for biomedical research has now been curbed in Peru, Brazil and Colombia with the establishment of a captive breeding centre near Inquitos, Brazil, by the Pan American Health Organization acting in conjunction with the national governments.

One million ha of the remaining five percent of the Atlantic Forest of Brazil has now been declared an environmental protection zone by the Sao Paulo State Government. 80 % of the primates, 39 % of the mammals and 54 % of the birds of the Atlantic Forest occur nowhere else in the world.

In 1982 120,000 ha of rainforest on the north coast of Australia were transferred from the control of the Forestry Commission to the National Parks and Wildlife Service, after a campaign of public rallies and scientific research. New South Wales Premier Neville Wran said: "When we're all dead and buried and our children's children are reflecting on what was the best thing the Labour Government did in the 20th Century, they'll all come up with the answer that we saved the rainforest."

REFORESTATION

In Jamaica, Andreas Oberli has pioneered a reforestation technique known as 'automatic terracing' which has healed eroded and deforested slopes in just 12 years. It uses rows of fast growing, nitrogen-fixing trees that reach 4 metres in 18 months. Coppicing produces firewood and lets light reach the fields. Local school education programmes have had the unexpected benefit of children now caring for the trees voluntarily.

Reforestation in the Damodar Valley in India has reduced floods in catchments above dams and decreased sedimentation. As a result the water supply for agriculture and drinking has increased.

In tropical southern China one commune planted 3.4 million trees in one year, with 10,000 people. The commune's income is now twice the provincial average, and contour ditching and planting has prevented erosion and allowed the development of fish farming and small scale hydro-electricity.

APPROPRIATE TECHNOLOGY

The World Resources Institute reports that in Sengal, 3,500 energy-efficient clay and sand cookstoves have been built, mostly by the women who use them, in a programme launched by the Centre for Study and Research on Renewable Energy. 77 % were still in use two years later.

SAVING THE TROPICAL FOREST

CONSUMER POWER
In 1982/3 when WWF and IUCN launched their Tropical Forest Campaign, Switzerland was importing tropical hardwoods for coffins. A vigorous consumer pressure campaign mounted by WWF Switzerland led the industry to abandon tropical hardwoods in favour of softwoods or temperate hardwoods.

In the United Kingdom, Friends of the Earth has now asked the timber and retail industry to adopt a Code of Practice which would outlaw sales of tropical hardwood from non-sustainable sources. The idea is winning support from architects and the public, and involves over 50 groups.

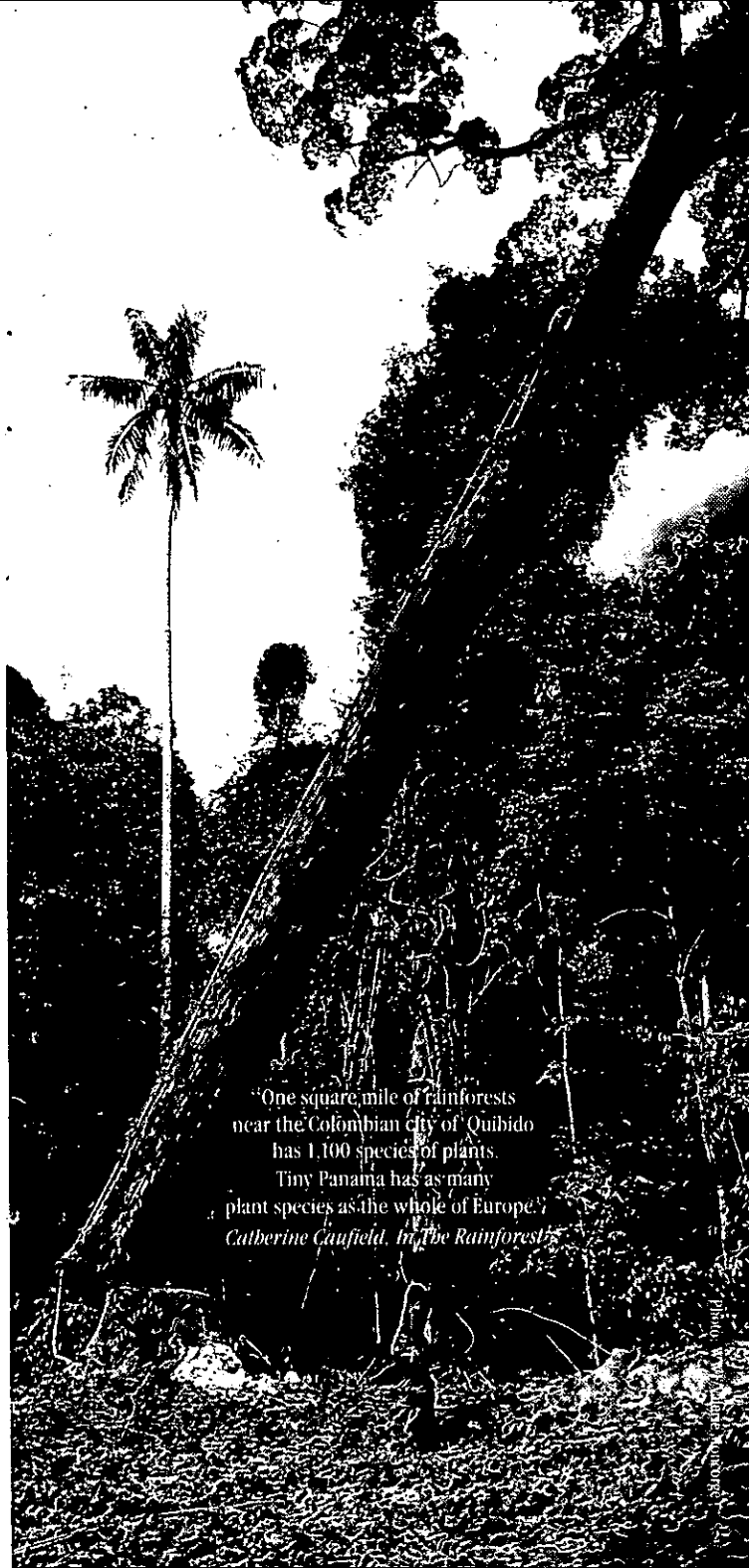
TRAINING
Training in conservation and forestry has been expanding. There are now 190 training centres in Asia, 104 in latin America and 87 in Africa. Wildlife Management Colleges such as the WWF-supported Mweka in Tanzania, provide training for wardens and reserve managers. Mweka has trained over 1,000 people since 1963, providing the backbone for conservation management throughout Africa.

AID POLICY
USAID has now been instructed by the US Congress to consider the effects of dams, roads and other developments it funds on natural diversity. USAID is also to allocating US$10m to foster species diversity and should no longer pursue projects which do not assist the rural poor. Due to the influence of conservation groups, the World Bank is now supporting 50 % of Amerindian Reserves in Brazil and has released a wildlands policy committing itself to protect 'in perpetuity' an amount of natural habitat in proportion to that lost through development projects.

INCREASING TIMBER PRODUCTION
In Malaysia, the unused proportion of hardwood trees had been reduced to 12 % by 1981 (over 90 % of the timber may be regarded as unusable and burnt). Previously noncommercial species are now also used for pulpwood in Cameroon, Indonesia, Colombia and the Philippines. Several countries have established large and successful plantations of fast growing species. In Zambia such crops will meet all needs by 2000, while in Brazil, industrial wood production doubled between 1973 to 1983 to 58m cubic metres a year.

INDUSTRIALISING THE FOREST
In Brazil rubber-tappers have recently established a collective to try and defend 'extractive reserves' and to organise the market.

In Indonesia, WWF is funding a butterfly farm project which will channel finance to local people by selling insects on the European Butterfly House Market. The insects are bred or collected in clearings on the edge of the forest, stabilising land use and providing a sustainable income from the forest.



"One square mile of rainforests near the Colombian city of Quibido has 1,100 species of plants. Tiny Panama has as many plant species as the whole of Europe."
Catherine Caufield, In the Rainforest

VANISHING RICHES

Tropical Forests cover only seven percent of the world's surface. Yet they probably contain over half the species on earth. Their destruction will be the greatest biological disaster ever perpetrated by man, creating a spasm of extinction unequalled since the disappearance of the dinosaurs, over 60 million years ago.

Until recently man's impact on tropical forests was minimal. Native peoples have occupied them for millenia without destroying them.

Between 11 and 15 million hectares (ha) of tropical forest are damaged or destroyed each year, an area larger than Austria, and equivalent to over twenty football pitches every minute. About 6mha of the forest lost (an area larger than Costa Rica) are rainforest, the rest being seasonally wet and dry forms of tropical forest. About half the world's wetter tropical forests have disappeared since the 1940s alone.

At these rates, all tropical rainforests outside protected areas will be seriously damaged within 30 years and there will be no undamaged tropical forests of any sort within 80 years. What took millions of years to evolve will be lost during the lifetimes of children born today.

Tropical forests total 2,000mha of which about 1,200mha are seasonal or all year rainforests (known collectively as moist forests), and 800mha are drier open woodlands.

Most researchers agree that the world's species must total at least five million. Based on these figures, present trends of forest destruction are estimated to spell extinction for three quarters of a million species by the year 2000, and one species in three (1.6 million) during the next century. The vast majority will vanish unseen and unrecorded. Just 1.75 million are properly recorded by science today. Spend a day in a rainforest, collect some small creatures and you are likely to find a new species. But conserving their habitat is not so easy.

SAVING THE TROPICAL FOREST

What can an individual do?

The loss of tropical forests is a conservation problem which you can do something about yourself.

- Find out what your government is doing about tropical forest conservation: is it financing conservation of tropical forests? Is it restricting tropical hardwood imports to those from sustainably managed forest areas?

- Check your local shops. Ask if veneers, furniture and plywood containing tropical timber comes from sustainable forests or plantations.

- Join a local or national group interested in tropical forests, and take part in their activities.

- Visit tropical forest areas in your spare time or vacation, and find out how you can help support the work of National Parks and conservation agencies on the ground.

- Do you have friends in the travel business, in furniture, building, architecture, pharmaceuticals, medicine or agriculture? All these industries have an interest in the continued existence of tropical forests, as described in this leaflet. Contact their professional associations to find out what action they are taking to promote conservation.

- If you belong to a religious group in your area, ask what can be done to help conservation initiatives through your religion. With a magazine *The New Road*, WWF maintains an active cooperative network with the world's religions, seeking to promote conservation.

- Make your views known to legislators. You have a right to see your taxes going to conservation with development: ask for guarantees that aid schemes and trade terms are not leading to forest destruction.

For further information on tropical forest conservation and WWF projects write to: Chris Rose, Campaigns Officer, WWF International, Gland, 1196, Switzerland.

WWF

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WWF, founded in 1961, is the largest world-wide private nature conservation organization. Based in Switzerland, WWF has national affiliates and associate organizations on five continents. WWF aims to conserve the natural environmental and ecological processes essential to life on earth. It pays particular attention to endangered species of plants and animals and to natural habitats which are of benefit to man.

WWF aims to create awareness of threats to the natural environment, to generate and attract on a world-wide basis the strongest possible moral and financial support for safeguarding the living world and to convert such support into action based on scientific priorities.

Since its founding in 1961, WWF has channelled over US$110 million into more than 4,000 projects in some 130 countries.

Tropical forest conservation projects occupy a significant place in WWF's conservation expenditure. In 1986 40% of WWF's international project expenditure involved tropical forest conservation.

WWF ran its first international tropical forest campaign in 1975 and its second in 1985. Tropical forest conservation is now WWF's top conservation priority and the subject of WWF's Conservation Awareness Campaign.

WWF invites you to care for tropical forests – your future depends on them. Please send your donation to your local WWF office or join Friends of WWF International. Write to:
Membership Secretary
Friends of WWF International
WWF
CH-1196, GLAND, Switzerland.

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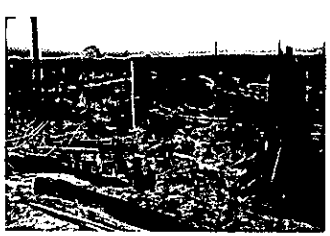
THE TROPICAL RAINFOREST SUPPORTS THE SKY CUT DOWN THE TREES AND DISASTER FOLLOWS

SOUTH AMERICAN TRIBAL LEGEND

FORESTS ARE OUTWARDLY GRAND BUT FRAGILE ECOSYSTEMS

WORLD BANK



WWF

Part of WWF's 25th Anniversary Conservation Awareness Campaign

Monday, 6 April, 1987

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1960

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REDISCOVERY OF WHITE POSSUM SIGNALS URGENT NEED TO PROTECT RAINFORESTS

THE RECENT REDISCOVERY OF WHITE LEMUROID POSSUMS IN A NORTH QUEENSLAND RAINFOREST HAS HIGHLIGHTED IN A SPECTACULAR WAY THE URGENT NEED FOR PROTECTION OF THE FORESTS, THE DIRECTOR OF THE AUSTRALIAN CONSERVATIONF FOUNDATION, PHILLIP TOYNE SAID TODAY.

UNVEILING THE FIRST PHOTOGRAPHS EVER PUBLISHED OF THE RARE WHITE LEMUROID, MR. TOYNE SAID THE QUEENSLAND GOVERNMENT SHOULD IMMEDIATELY CO-OPERATE WITH THE FEDERAL GOVERNMENT TO NOMINATE THE RAINFORESTS FOR WORLD HERITAGE LISTING.

MR. TOYNE SAID, 'ACTION TO PROTECT THESE RAINFORESTS IS CRITICAL IN THE LIGHT OF THE RECENT AGREEMENT BY THE AUSTRALIAN HERITAGE COMMISSION TO INCLUDE 3/4 MILLION HECTARES OF THE WET TROPICAL RAINFOREST ON THE INTERIM LIST OF THE REGISTER OF NATIONAL ESTATE. THE COMMONWEALTH GOVERNMENT MUST NOW TAKE ACCOUNT OF THE NATIONAL ESTATE VALUES OF THESE RAINFORESTS WHEN MAKING DECISIONS ABOUT THE AREA'.

'THE COMMONWEALTH NOW HAS A SIMILAR PROBLEM IN QUEENSLAND AS IT HAS IN TASMANIA. IT WANTS THE STATES TO PROTECT AUSTRALIA'S IMPORTANT NATIONAL ESTATE AREAS FROM LOGGING PRACTICES WHICH DESTROY OR SEVERELY COMPROMISE THEIR VALUES.'

'THE QUEENSLAND PREMIER STANDS CONDEMNED FOR REFUSING TO STOP LOGGING AND SO FAR REFUSING TO ACCEPT $7 MILLION FROM THE FEDERAL GOVERNMENT FOR RAINFOREST CONSERVATION', HE SAID.

'THE FEDERAL GOVERNMENT IS STILL TRYING TO NEGOTIATE WITH QUEENSLAND, BUT MAY BE FORCED TO UNILATERALLY NOMINATE THE WET TROPICAL RAINFORESTS FOR WORLD HERITAGE LISTING TO ENSURE THEIR PROTECTION'.

'LOGGING AND THE ASSOCIATED DESTRUCTION FROM ROAD BUILDING ARE DESTROYING THESE RAINFORESTS, AND ENDANGER ANIMALS SUCH AS THE WHITE LEMUROID.'

'A TINY POPULATION OF THE WHITE POSSUM LIVES IN THE TREETOPS ON THE CARBINE TABLELANDS NORTH OF CAIRNS. THE PRESENCE OF THIS WHITE LEMUROID POSSUM WHICH LIVES WITH THE MORE COMMON BROWN SPECIES IS OF GREAT SCIENTIFIC SIGNIFICANCE.'

'QUEENSLAND HAS SCHEDULED LOGGING RIGHT THROUGH THE MIDDLE OF ITS HABITAT. IF THE QUEENSLAND GOVERNMENT FAIL TO STOP LOGGING THEFOREST, THE FEDERAL GOVERNMENT WILL HAVE TO ACT.'

MR. TOYNE WAS LAUNCHING THE APRIL EDITION OF HABITAT, THE ACF'S MAGAZINE, FEATURING THE FIRST PUBLISHED PHOTOS OF THE WHITE LEMUROID. THE ACRF ALSO LAUNCHED A SUPERB COLOUR POSTER OF TWO LEMUROIDS.

FOR FURTHER INFORMATION CONTACT FELICITY WISHART:
ACF 03 8192888

15 DEC 1986

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COMMONWEALTH GOVERNMENT CENTRE
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NEWS RELEASE

MINISTER FOR ARTS, HERITAGE AND ENVIRONMENT

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FUNDS TO PROTECT VICTORIAN RAINFOREST

Federal Minister for Arts, Heritage and Environment, Mr Barry Cohen, and the Premier, Mr John Cain, today announced a plan to protect Victorian rainforests, expected to cost $1.5 million over three years, under the National Rainforest Conservation Program.

Mr Cohen and Mr Cain said $257,000 would be made available in 1986/87 for the Victorian program when they made the announcement in rainforest at Bemm River Scenic Reserve near Orbost.

Mr Cohen and Mr Cain said Victorian rainforest projects would include tourism and interpretive facilities, research, mapping and survey, planning and management for parks and reserves, contribution to a tourism study for East Gippsland and acquisition of some private land.

Mr Cohen said the Federal Government had allocated $7 million this financial year for the National Program from a total planned expenditure of $22.25 million.

The agreement with Victoria was evidence of the effectiveness of a co-operative approach to rainforest conservation.

"The New South Wales program was launched on October 3 and details of programs for other States are currently being developed", Mr Cohen said.

Mr Cain said the Victorian Government has already taken steps to protect rainforests through wide-ranging initiatives.

"The Government has included important rainforest areas in conservation reserves and excluded logging from all rainforest areas.

"A State Rainforest Conservation Strategy is being developed and the Government has established a Rainforest Technical Committee to report on a definition of rainforest and it has recognised the importance of rainforests in the Timber Industry Strategy and, soon to be released, State Conservation Strategy", he said.

Mr Cain said the Victorian program will include major education and interpretive centres to be constructed at Orbost and Tarra-Bulga National Park.

"A Visitors' Centre in Orbost will be a major facility for education and tourist promotion of rainforest and other natural features of East Gippsland, while walking tracks will allow people to experience rainforests with a minimum disturbance to the area", he said.

Victoria's rainforest occurs in small scattered stands bordering gullies, streams and rivers. It includes two types: cool temperate in the Otway Ranges, Central Highlands, Strzelecki Ranges, at Wilson's Promontory and on the Errinundra Plateau; and warm temperate in East Gippsland and at Wilson's Promontory.

NB: A schedule of projects to be undertaken in 1986/87 is attached.

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NATIONAL RAINFOREST CONSERVATION PROGRAM
VICTORIA 1986/87

Schedule of Projects 1986/87

	Estimated Expenditure ($)	
Survey and Mapping		
*1. Survey and mapping of rainforest throughout Victoria	30,000	
	30,000	
Research		
*2. Effects of timber harvesting	20,000	
*3. Recovery from fire	9,000	
	29,000	
Planning and Management		
4. Production of state-wide policy	6,000	
*5. Management plan, Tarra-Bulga National Park	10,000	
	16,000	
Tourism		
*6. Tourism strategy for East Gippsland	55,000	
	55,000	
Information and Interpretive Facilities		
*7. Orbost Visitors Centre	40,000	
*8. Tarra-Bulga National Park Interpretive Centre	15,000	
9. Poster and pamphlet concerning Victorian rainforest	12,000	
	67,000	
Visitor Facilities		
10. Visitor facilities, Bemm River Scenic Reserve	60,000	
	60,000	
Total		257,000

* Indicates project continuing beyond 1986/87