An Initiative for the Greening of the World

MINISTRY OF SCIENCE, TECHNOLOGY AND THE ENVIRONMENT, MALAYSIA

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A Time for International Action

IT IS indeed a time for international action. There are serious grounds for concern over the global environment. We cannot continue to desecrate this planet as we have done in the past. Nor are our global environmental problems a concern only of the comfortable and the affluent. It is a concern for all of humanity.

Therefore, all of humanity must act.

Our actions must be guided by idealism. But our idealism must be firmly rooted in pragmatism, realism and reality. It must be correctly focussed. It must be balanced.

We must be moved by truth unperverted by emotion, and by objectivity undiverted by ideology. Protection of the environment is a serious issue demanding concrete, down-to-earth global response, not theological debate. Governments must decide to do the right thing, as dictated by the needs of the global environment, and not pander to the passing tides of political fashion.

The world can ill afford a sterile dialectic between the self-righteous. The theologians on all sides of the environmental issue are wrong and do a great disservice. Commitment can be no substitute for common sense. Passion can be no substitute for fact. Sincerity can be no substitute for truth. Care and truth must prevail, not callousness, not hypocrisy, not lies, not half truths, not self-righteousness. No country will be going to the Earth Summit with an unblemished record.

The UNCED Opportunity

THE United Nations Conference on Environment and Development (UNCED) to be held in June 1992 is an opportunity for mankind to decisively act at the global level, to move productively forward on the issue of the environment —

without forgetting the necessity of development. It is an opportunity for the world community to act decisively to protect the rights of future generations — without forgetting the rights of the present generation.

This opportunity should not be squandered.

It would certainly be squandered if in Rio de Janeiro, those who have destroyed their own environment berate those who have not; if UNCED became the battleground for the most sterile and unproductive confrontation of each other rather than for the confrontation of the issues. The opportunity would be lost if instead of attempting to generate the greatest possible area of consensus — on the basis of mutual respect, against a common threat — all that we do is to widen the areas of counter-productive disagreement.

And it would be a tragedy if UNCED were to degenerate into an occasion for finger-pointing, for bullying, for deciding the important environmental issues that lie before the human race not on the basis of the power of persuasion but on the basis of the persuasion of power.

UNCED must not herald the beginning of an era of eco-imperialism.

It must instead be an occasion for truth, for balance, for good sense, for realism and for effective action.

Key Principles for Global Action on the Environment and Development

THE appropriate response to the threats to the global environment which all mankind shares must be guided by at least seven principles:

First, the principle of global effort on the global environment.

There are serious environmental problems that exist at the local level, that must be tackled at the local level. There are serious problems which must be addressed at the national level. There are serious problems that exist at the sub-regional or regional level. At these levels, effective external or multilateral assistance will, of course, make a great difference. But there are also serious problems that transcend the borders of regions that must necessitate international effort or a global contribution. Most certainly, global environmental problems — such as the depletion of the ozone layer, global warming, deterioration of the oceans, etc — must be taken care of globally. For these problems, the entire global community must bear the responsibility. The resources of the entire global community must be brought to bear. Global mechanisms must be put in place, global resources must be mustered. Responsibility for tackling global environmental problems must be fairly shared and must not lie on the shoulders of only the most responsible states or on the shoulders of those nations that can be intimidated and bullied.

Development and the environment: *The United Nations Conference on Environment and Development (UNCED) must be an occasion for truth, for balance, for good sense, for realism and effective action*

Second, the principle that prevention is better than cure.

With regard to environmental deterioration, the comprehensive costs of remedy are invariably higher than the costs of preventing environmental damage. Some progress has been made on the prevention side of the equation. But the journey already begun in *some* countries must be accelerated and travelled in *all* countries — with greater commitment and vigour. We must adopt the principle that prevention is better than cure.

Third, the principle of sovereign right to development.

It is the inherent human right of all peoples to seek economic advancement. It is a grotesque travesty to require the poor especially to forego this right. Without a doubt poverty is the worst enemy of the environment. It is as much a source of eco-degradation as industrialisation. Indeed, it has been argued by many environmental groups in the West that a comprehensive attack on the problem of poverty will be at least as effective a means for ensuring environmental protection and enrichment as a direct addressing of the issue itself. Certainly, all states have a sovereign right to exploit their natural resources for the prosperity of their citizens. All the developed countries — without a single exception — have done so in the past, often with disastrous consequences to their environment. In one way or another, they continue to do so. The bitter lessons of the past and the present should be learnt by all. The task of statesmanship and enlightened leadership in all countries is to ensure a wise balance, to make the justifiable trade-offs, always with a view to ensuring sustainable growth. The sovereign right of each state to seek this golden mean, free from external interference or coercion is fundamental and cannot be compromised.

Young and innocent: *The world community should act decisively to protect the rights of future generations — without forgetting the rights of the present*

Fourth, the principle of justice.

It would be a mockery of justice if those who do harm to the environment require those who do not to undo the harm that they have done. Justice demands that polluters must pay to remedy the damage that they are responsible for, both directly and indirectly. They must pay for the damage that they are currently responsible for and for the damage that they were responsible for in the past. From each according to his transgression.

Fifth, the principle of proper focus and priorities.

The environmental agenda for the world and for each nation must be determined not by vested interests, pressure groups, the passing fashion and passion of the day, by the search for electoral popularity and by political expediency. It must be determined by the real demands of environmental protection and enrichment. In a world of limited resources and a seemingly unlimited agenda for action, mankind must concentrate on those areas that are most urgent to address, that are most amenable to remedy and that portend the greatest harm. The determination of these areas must be an objective process, not a political process subservient to narrow and short-term political pressures and interests. Decision-making must most certainly take into critical account the need to ensure efficiency and effectiveness of effort. Technological and other constraints dictate what can and cannot be achieved efficiently and effectively at any point in time. It would be a travesty to squander limited resources on a *cause celebre* simply because it is a *cause celebre*.

Sixth, the principle of ability to contribute.

We live in a world of extremes — extremes of impoverishment and affluence. The gap between rich and poor is widening, not narrowing. Many in the developing world might perhaps be forgiven for the conclusion that whilst the need for action on the environment is loudly proclaimed in the developed countries, the brunt of action, it seems, must be borne by those who not only have the least capability to act effectively, but who also have the least culpability

for world environmental degradation. Practical considerations and fairness both demand an assumption of responsibility on the basis of ability to contribute. There must be 'separate and differential responsibilities', from each according to his ability. While some have the most substantial financial resources, knowhow and other means for environmental protection and enrichment, others do not. The more affluent segment of humanity must be prepared to lead in terms of responsibility, in terms of action and in terms of material investment. This is not a contravention of the principle of justice but its logical and humane extension.

Seventh, the principle of mutual gain.

Last but by no means least, our common objective of a sustainable future can only be realised by application of the principle of mutual gain. The global community should take the necessary steps to ensure that the benefits of natural resources are adequately reaped by those who own them, through an international system which properly and fully reflects their true values. The gains from environmental protection and enrichment must be shared by all. The contribution that is made to the global commons must be recognised and rewarded. Incentives should be in place to ensure that environmental protection and enrichment and sustainable development are productive and welfare-enhancing rather than punitive and welfare-reducing.

Key Facts on Global Warming

THE climate of this planet has been changing since time immemorial. Nature is, of course, never static. With regard to the specific problem of global warming, there are still many areas where a consensus has not been reached and where the facts are practically unknown. For example, the role of the world's oceans in absorbing carbon dioxide, the existence of other

yet to be identified carbon 'sinks', and the very way that nature has been responding and will continue to respond to the changes caused by man remain puzzles that are unresolved. Nevertheless, there is complete agreement on the following facts:

First, the state of knowledge on global warming is in many ways still in its infancy. The simulations and modelling so far attempted are by universal recognition crude and preliminary. Whilst many states and most of the scientific community believe that on the basis of what little we know the phenomenon exists, some states and scientists do not. It is not an undisputed issue. And according to the Club of Rome's 'The First Global Revolution', 'absolute certainty regarding it will not be obtained for another 10 years'. Some states (such as Malaysia) are not completely convinced but believe that there are grounds for erring on the safe side and for working on the basis of the 'precautionary' or the 'prudential' principle. Very importantly, such critical nations as the United States remain unconvinced with regard to both the veracity of the general hypothesis and the need to act on the basis of prudence.

Global warming: *It is clear that those countries which have vast tracts of forest are providing a service to mankind as a whole and to those countries that do not. They are supplying a public good for which they receive no recognition or benefit*

Second, there is full consensus that there is today much more carbon dioxide, methane and nitrous oxide in the atmosphere than ever before.Of these 'greenhouse gases', carbon dioxide is by far the most important. It is also universally recognised that by far the greatest contributor of carbon dioxide emissions is industry, through the combustion of fossil fuels. At present, this accounts for 82 per cent of all carbon dioxide emissions. And approximately 80 per cent of all carbon dioxide emissions come from the developed countries.



Bio-wealth: *Flora and fauna have vast potential as bio-resources for future use because of advances in biological knowledge and biotechnologies.* ***Left:*** *The* Rafflesia cantleyi, *the world's biggest flower, found in the jungles of Malaysia.* ***Centre:*** *Marine resources.* ***Above:*** *The* Orang Utan, *endangered and protected*

Third, by far the most effective means of reducing carbon dioxide emissions is to ensure the rational and efficient use of energy. In 1989, the average inhabitant of low and middle income countries consumed 0.58 tonnes of oil equivalent, compared to a world average of 1.22 tonnes. (Some argue that the emissions from poor countries can therefore be considered as 'survival' emissions). In contrast, energy is used to excess in most developed countries, often in a profligate and wanton manner, very much against their national and rational interest. Countries such as Japan (with 3.5 tonnes oil equivalent per capita) have performed remarkably in terms of increasing energy efficiency to the benefit of their economic performance; but the average per capita consumption in OECD countries in 1989 was 5.18 tonnes of oil equivalent.

Fourth, there are only two basic ways to resolve the problem posed by the emission of carbon dioxide. First, to reduce the quantum of these emissions. In other words, to work on the prevention side of the equation. Second, to enhance the capacity of the world to absorb carbon dioxide. In other words, to work on the remedy side of the equation. Since we do not know enough about other carbon 'sinks' but we do know that trees absorb carbon and release oxygen into the atmosphere, the focus has been almost exclusively on the world's forests. (What remains perplexing to most tropical

countries, because all trees photosynthesise, is the preoccupation with tropical forests on the part of a formidable array of global warming activists in the developed countries — where temperate and boreal trees grow. Today although 53.2 per cent of all forested area consists of tropical forests, they account for only one fifth of world timber production).

Three further points should perhaps be stressed with regard to the connection between trees and global warming. First, whilst the direct and opportunity costs of growing and upkeeping a forest vary in different parts of the world, the capacity of a tree or a forest to act as a carbon sink is a function of its physical characteristics and is not a function of its direct or opportunity cost.

Second, beyond a certain level of maturity, a tree ceases to absorb more carbon dioxide than it produces. It ceases to sequester additional carbon. For a forest to be optimally efficient as a carbon sink, therefore, it is necessary for old trees to yield to the young.

Third, if there is a serious problem of global warming — and so many nations are of this opinion — then it is clear that those countries which have vast tracts of forest are providing a service to mankind as a whole and to those countries that do not. They are supplying a public good for which they receive no recognition or benefit. Indeed, in many cases, rather than thanks, through some perverted process they are in the dock.

Key Facts on Biodiversity

THERE is also no disputing the fact that one good argument for the preservation of tropical forests is the argument of biodiversity. Tropical moist forests are generally considered to contain the greatest diversity of plant and animal species. While they occupy only 7 per cent of the world's land area, it is estimated that they are the source of more than half the world's species.

The value of biological resources lies not only in their present uses but also — because of the advances in biological knowledge and biotechnologies — in their genetic materials.

Unfortunately, the international regime for the exploitation of biological resources goes against the principle of mutual gain. It does not provide a fair reward for their owners. Corporations and other interests, predominantly in the developed countries, seek free access to the biological resources of the world as a 'common heritage'. On the other hand, biological knowledge, biotechnology, gene resources and pharmaceuticals are jealously guarded and subject to transfer, if at all, only on the most strictly commercial terms.

In any case, to protect the biodiversity that exists in tropical forests, not every stand of tree, every hectare of tropical forest now standing need be preserved, untouched. The careful protection of more than a hundred million hectares will be sufficient. And recent studies have shown that even within managed forests, designated areas can be protected to serve fully the needs of biodiversity conservation.

Key Facts on Forest Destruction

THERE are some key facts on forest destruction that are also not the subject of dispute.

First, only some 27.6 per cent of the world's land area is still covered by forest today.

Second, since the 'agricultural revolution' and the 'industrial revolution' took place in the developed countries long before they took place or are taking place in the developing world, most of the forest destruction has occurred in the developed countries. Although Europe has an estimated 32 per cent of forest cover, virtually all of its primary forest has been destroyed. In the 'New World', the United States has a coverage of 21 per cent, but only

The tropical moist forest: *Generally considered to contain the greatest diversity of biological species. Occupying only 7 per cent of the world's land area, it is the source of more than half the world's species*

15 per cent of its original primary forest remains. In all, less than 13 per cent of the world's temperate forests and less than half of its boreal forests remain. No one will argue that the Europeans and north Americans were wise with regard to the extent of the destruction of their forests. But if hundreds of years ago, some taboo had descended upon them forcing them not to touch a single tree, it goes without saying that Europe and north America would today be a completely different place. Neither could possibly have reached their level of development had they not exploited their forest resources, and more importantly, opened up land for agriculture and industry, and their burgeoning populations.

Third, pollution, notably acid rain, is today taking its daily toll. Large areas of European and north American forests are under severe stress and as a result are experiencing serious degradation. A recent study by the International Institute for Applied System Analysis (IIASA) estimated that 75 per cent of all European forests are suffering from the effects of sulphur dioxide emissions; and already there have been cases where the forest biomass is so reduced that the crown cover of the trees is less than the minimum required to define the stands as forest. It has been estimated that acid rain has affected a combined total of seven million hectares of forest

in Europe and the United States. If not arrested, the eventual deforestation there will amount to twice the present area of Asia's tropical forest today.

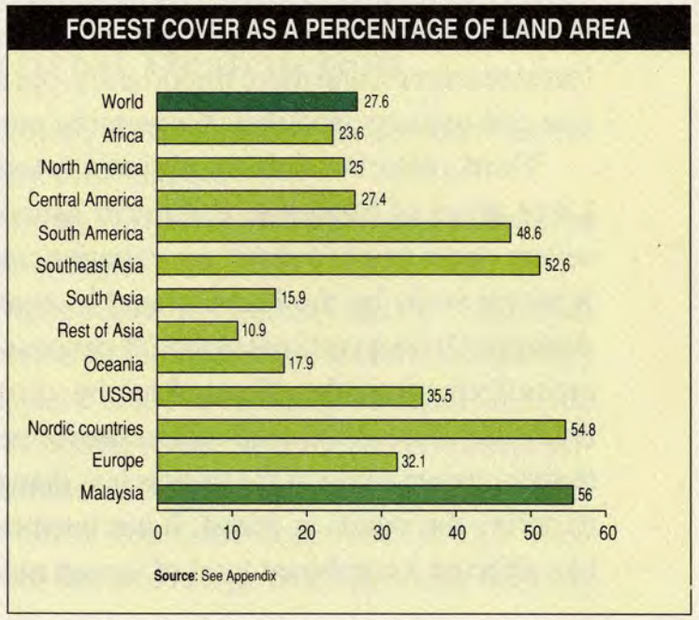
Fourth, another important cause of deforestation in temperate and boreal regions (and elsewhere of course) is the forest fire. Forest fires are estimated to destroy some 500,000 hectares of forests and woodland annually in the Mediterranean Basin alone. In 1989, over seven million hectares of forests were burned in Canada and in average-risk years around two million hectares are burned.

Fifth, in absolute terms, the decline in the forest and tree cover in the developed countries as a whole has not been arrested, still less, reversed. Despite various statements of resolve, and advances in a few countries, there does not appear to be any real commitment to regreen the industrialised world.

Forest cover: *Despite various statements of resolve, and advances in a few countries, there does not appear to be any real commitment to regreen the industrialised world*

All these realities suggest most emphatically that the environmental groups of Europe and north America would do well to work on the governments of Europe and north America and the developed world as much as, if not more than, on governments elsewhere.

In contrast to the near complete destruction of primary forest in most parts of Europe and north America, some 80 per cent of tropical forest remains intact. The figure on the right graphically sets



out the position with regard to forest cover as a percentage of land area. It makes clear that some 27.6 per cent of the world is under forest cover, 23.6 per cent of Africa, 25 per cent of North America, 27.4 per cent of Central America, 48.6 per cent of South America, 52.6 per cent of Southeast Asia, 15.9 per cent of South Asia, 10.9 per cent of the rest of Asia, 17.9 per cent of Oceania, 35.5 per cent of what used to be the USSR and 32.1 per cent of Europe. (56 per cent of Malaysia is under *original* forest cover, 70 per cent if the cultivated tree crops, which do technically qualify as 'forest', are included). The detailed country by country statistics are set out in the Appendix.

With regard to the actual cause of deforestation in developing countries, logging plays a small role. According to Le Tacon and Harley (1990) and contrary to popular belief, deforestation is due '...only partly to the exploitation and export of timber to gain foreign currency. It is due in great measure to the use of firewood (about 80 per cent is burnt as fuel), for clearance to meet the demands of agriculture, and it is exacerbated by the rise of population'. These are pressures for deforestation similar to those that prevailed several centuries ago in what are now the industrialised countries.

The Greening of the World: Malaysia challenges

THE draft plan of action for the Earth Summit that has emanated from the preparatory work now runs to hundreds of pages. The widest range of issues has been put on the table. It has been estimated that implementing Agenda 21 will require annual concessional funding of around US$125 billion, and that total costs will be four or five times this level. This is clearly unrealistic.

The principle of focus and priorities demands that UNCED

concentrate on a smaller, more viable agenda. Most assuredly, for reasons that have been stated, the importance of the development-environment nexus cannot but be a central question. But amongst the subjects that have to be fully addressed must be the issue of global warming.

On this issue, Malaysia puts forward two central challenges.

First, and on the basis of the principle of prevention, Malaysia challenges all nations, but especially the developed world, to set clear and determined targets for the reduction of excessive carbon dioxide emissions through more efficient and productive use of fossil fuels. The decisions in this direction that have been taken in Western Europe are steps in the right direction. But they must be strengthened in content and ambition, there must be no back-pedalling, and other advanced nations must join the ranks of the most responsible and enlightened.

There is a second challenge that Malaysia poses to all nations, and especially the developed world. We must engage in positive, concrete and determined action to save all forests from degradation and excessive exploitation, and mount an active programme of regreening throughout the world. This must mean, the recovery of degraded forests and the expansion of the green hectares of the global land mass.

We must embark on the Greening of the World.

Towards this end, a Global Green Fund must be established.

In specific terms and as an initial step, Malaysia calls for a comprehensive, holistic effort to ensure that by the end of this century at least 30 per cent of the land area of this planet shall be green.

The present figure for the world is some 27.6 per cent. A 2.4 per cent increase over the next eight years to the year 2000 AD will require an average hectarage increase of 0.3 per cent per year. This is achievable. It can be done.

Some parts of the world already exceed the 30 per cent level:

Oceania as a whole, Central America, South America, Africa, what used to be the USSR, Southeast Asia. But there is a list of countries, which are not only below the 30 per cent line (for reasons that are justifiable or otherwise), but which are also in a position to play a bigger greening role beyond the greening within their own boundaries. Let them be mentioned by name. In Europe, Denmark (11 per cent of whose land area is under forest cover), France (25 per cent), Ireland (5 per cent), Italy (22 per cent), Netherlands (9 per cent), Norway (26 per cent), Switzerland (24 per cent), the United Kingdom (8 per cent). In the Americas, Canada (29 per cent) and the United States (21 per cent). In Asia, Israel (5 per cent), Turkey (26 per cent). In Oceania, Australia (14 per cent), New Zealand (26 per cent). (Although no less than 67 per cent of Japan is under forest, Japan is certain to be a willing contributor to greening elsewhere).

All nations should be allocated a *national greening target* and an international greening target. With regard to the former, those nations which are just above the minimum 'tree line' of 30 per cent must commit themselves to never going below this minimal line. (This does not mean that those who are hovering around this minimum line should leave their forests untouched. But it does mean that if they do exploit their forest resources, they should also reforest).

Those nations that are below the 30 per cent line should commit themselves to moving towards that line by 2000 AD or, where this is not possible, to assisting other nations to make up for their shortfall.

To ensure adherence to the principle of global effort with regard to the global target of increasing the total land area under forest by an annual average of 0.3 per cent, all states should be allocated an annual *international greening contribution target.*

The allocation process to each state of its national greening target and its international greening contribution target should of course take into full and sophisticated account income levels,

population size and other necessary considerations.

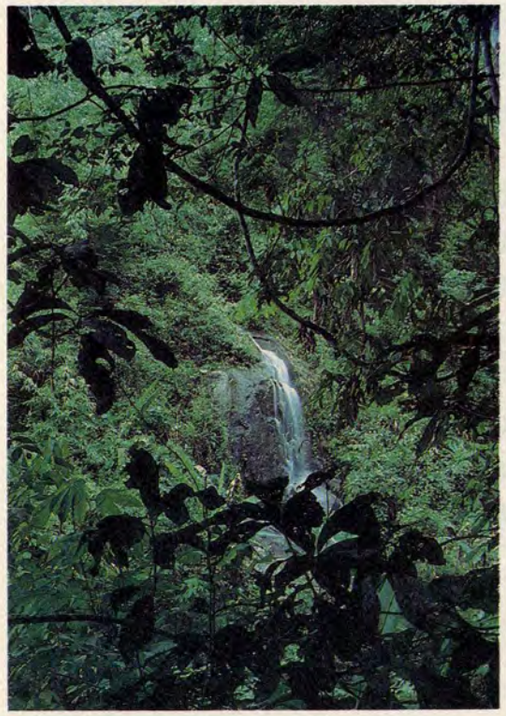
The establishment of a Global Green Fund, which could come under the United Nations Environment Program or some other mechanism, would be an example of a world acting globally to confront the global problem of global warming.

A regime could be put in place to ensure that a meaningful and effective Fund is established and sustained.

The first source of funding would be the contributions of those countries which are unable to meet their allocated national greening target. If a particular country (that is below the 30 per cent national target line and above a certain income level) is unable in any year to meet its national greening target, it should contribute a sum sufficient to give an incentive to another country to grow and maintain the equivalent area. The Global Green Fund administration authority could determine the sum on a free market, competitive bid basis. The sum to be contributed to the Fund will be equivalent to the lowest credible bid by a volunteering country. (As stated above, for carbon sink purposes it does not matter substantially whether a forest is on the most expensive or the cheapest land in the world. This system would help ensure that the process of global greening advances on the basis of lowest financial cost whilst providing financial assistance to countries that wish to earn foreign exchange or to increase their forest hectarage or both. Funds received by the 'volunteer' country will go directly and exclusively to forestation, which of course has a direct economic and social value to the country as well as in the context of global warming, or even desertification).

The second source of funding would be the financial contributions from each state arising from its international greening contribution target. The actual annual sum could be determined in a way similar to the process outlined above.

A third source of funding could be generated on the basis of *'carbon balance accounting'*. Consonant with the principle of justice, countries whose energy-related carbon dioxide emissions exceed a certain defined threshold should pay according to an internationlly agreed scale in order to 'balance' their 'carbon account'. The internationally agreed scale per tonne of excess energy-related carbon dioxide should as far as possible approximate the cost of maintaining the hectarage of forest needed to absorb a tonne of carbon emission from the atmosphere. (A global system of financial incentive to reduce carbon emissions will therefore be put in place. And the point will be made that forests perform a useful and financially valuable service to the global commons).



Towards the Greening of the World: *As a contribution to the global commons, Malaysia is ready to pledge itself to a minimum 50 per cent level of forest and tree cover in perpetuity*

Additional sources will obviously be voluntary contributions from governments and NGOs.

Obviously, the Global Green Fund must be managed and operated efficiently, transparently and democratically. It should be responsible for maintaining information on energy use and forest and tree cover worldwide. It must be the clearing house for transactions for balancing carbon accounts. It will also be expected to disburse funds for forest rehabilitation and maintenance and reforestation and afforestation. The Fund will also be a conduit for the exchange of information on forest management and facilitate the transfer of knowledge, technology and techniques on forestry throughout the world.

The proposal for the greening of the world does not and should not violate the principle of sovereign right to development. The

mechanisms provided allow for the exploitation of forest resources and the clearing of land for agriculture and other purposes, whilst ensuring that the global acreage under forest and tree cover will advance annually.

Whilst the minimal national target and the minimal global target that is being suggested by Malaysia is 30 per cent, Malaysia is prepared to set a higher standard for itself. As a contribution to the global commons, Malaysia is ready to pledge itself to a minimum 50 per cent level of forest and tree cover in perpetuity.

This 50 per cent national target is the final challenge which Malaysia tables before those countries that are willing to back their strong words with real deeds. We urge these nations to be ready to join us in leading by example.

Kuala Lumpur
April 27, 1992

Appendix: Forest Cover in Countries of the World

Continent/ country	Total land area ('000km²)	Total forested area ('000km²)	Percentage forest cover (%)
AFRICA			
Algeria	2,382	18	0.8
Angola	1,247	536	43.0
Benin	111	39	35.1
Botswana	567	326	57.5
Burkina Faso	274	47	17.2
Burundi	26	0	0.0
Cameroon	469	233	49.7
Central Africa Republic	623	359	57.6
Chad	1,259	135	10.7
Congo	342	213	62.3
Cote d'Ivoire	318	98	30.8
Egypt	995	0	0.0
Ethiopia	1,101	272	24.7
Gabon	258	206	79.8
Gambia	10	2	20.0
Ghana	230	87	37.8
Guinea	246	107	43.5
Kenya	569	24	4.2
Lesotho	30	0	0.0
Liberia	96	20	20.8
Libya	1,760	2	0.1
Madagascar	582	132	22.7
Malawi	94	43	45.7
Mali	1,220	73	6.0
Mauritania	1,030	6	0.6
Morocco	446	36	8.0
Mozambique	784	154	19.6
Namibia	823	184	22.4
Niger	1,267	26	2.1
Nigeria	911	148	16.2
Rwanda	25	10	40.0
Senegal	192	11	5.7

Continent/ country	Total land area ('000km²)	Total forested area ('000km²)	Percentage forest cover (%)
Sierra Leone	72	21	29.2
Somalia	627	91	14.5
South Africa	1,221	14	1.1
Sudan	2,376	477	20.1
Tanzania	886	420	47.4
Togo	54	17	31.5
Tunisia	155	3	1.9
Uganda	200	60	30.0
Zaire	2,268	1,776	78.3
Zambia	741	295	39.8
Zimbabwe	387	198	51.2
AMERICA			
Argentina	2,737	451	16.5
Bolivia	1,084	564	52.0
Brazil	8,457	5,145	60.8
Canada	9,221	2,641	28.6
Chile	749	84	11.2
Colombia	1,039	517	49.8
Costa Rica	51	18	35.3
Dominican Republic	48	6	12.5
Ecuador	277	147	53.1
El Salvador	21	1	4.8
Falkland Islands	12	0	0.0
Guatemala	108	45	41.7
Guyana	215	178	83.0
Haiti	28	0	0.0
Honduras	112	40	35.7
Mexico	1,923	484	25.2
Nicaragua	119	45	37.8
Panama	76	42	55.3
Paraguay	397	197	49.6
Peru	1,280	706	55.2
Suriname	162	157	97.0

Continent/ country	Total land area ('000km²)	Total forested area ('000km²)	Percentage forest cover (%)
Uruguay	174	6	3.6
USA	9,167	1,953	21.3
Venezuela	882	339	38.4
ASIA			
Afghanistan	648	12	1.9
Bangladesh	134	25	18.7
Bhutan	47	21	44.7
Burma	658	314	47.7
China	9,326	1,150	12.3
Democratic Korea	121	91	75.0
Democratic Yemen	290	15	5.0
India	2,978	640	21.5
Indonesia	1,812	1,170	64.6
Iran	1,636	38	2.3
Iraq	434	12	2.8
Israel	20	1	5.0
Japan	376	253	67.3
Jordan	97	1	0.7
Kampuchea	177	126	71.2
Korea	98	49	50.0
Kuwait	18	0	0.0
Laos	231	136	58.9
Lebanon	10	0	4.0
Malaysia	329	185	56.2
Mongolia	1,565	95	6.1
Nepal	137	21	15.3
Oman	212	0	0.0
Pakistan	771	25	3.2
Philippines	298	95	31.9
Qatar	11	0	0.0
Saudi Arabia	2,150	2	0.1
Sri Lanka	65	17	26.2
Syria	184	2	1.0

Continent/ country	Total land area ('000km²)	Total forested area ('000km²)	Percentage forest cover (%)
Thailand	512	157	30.7
Turkey	771	202	26.2
UAE	84	0	0.0
Vietnam	325	101	31.1
Yemen	195	0	0.0
EUROPE			
Albania	27	9	34.4
Austria	83	38	45.2
Belgium	33	6	18.2
Bulgaria	111	34	30.6
Czechoslovakia	125	44	35.4
Denmark	42	5	11.2
Finland	305	230	75.4
France	546	139	25.4
Germany	350	97	27.7
Greece	131	25	19.2
Hungary	92	16	17.5
Iceland	100	0	0.0
Ireland	69	4	5.1
Italy	294	64	21.6
Netherlands	34	3	8.5
Norway	308	80	26.0
Poland	305	86	28.2
Portugal	92	26	28.6
Romania	230	62	26.9
Spain	499	160	32.1
Sweden	412	270	65.5
Switzerland	40	9	23.5
United Kingdom	242	20	8.3
USSR	22,272	7,916	35.5
Yugoslavia	255	91	35.7

Continent/ country	Total land area ('000km²)	Total forested area ('000km²)	Percentage forest cover (%)
OCEANIA			
Australia	7,618	1,070	14.0
New Zealand	269	71	26.2
Papua New Guinea	452	356	78.8

DATA SOURCES:

Land areas for all countries are taken from UNEP, 1989: *Environmental Data Report 1989/90,* Blackwell Ltd, UK. The list is not comprehensive. Small countries are excluded. Forest areas in temperate and boreal countries, except for the Nordic countries, are from Allan, T and J P Lanly, 1990: 'Global Overview Status and Trends of World's Forests', FAO, Rome; these do not include wooded lands. Greenland is excluded. Forest areas in remaining countries are from World Bank, 1991: *World Development Report,* Oxford University Press, and refer to total forest cover.

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