



DUDLEY KNOX LIBRARY
NAVAL POSTGRADUATE SCHOOL
MONTEREY CA 93943-5101

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED			1b. RESTRICTIVE MARKINGS			
2a. SECURITY CLASSIFICATION AUTHORITY			3. DISTRIBUTION /AVAILABILITY OF REPORT Approved for public release; distribution is unlimited.			
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE			4. PERFORMING ORGANIZATION REPORT NUMBER(S)			
4. PERFORMING ORGANIZATION REPORT NUMBER(S)			5. MONITORING ORGANIZATION REPORT NUMBER(S)			
6a. NAME OF PERFORMING ORGANIZATION Naval Postgraduate School		6b. OFFICE SYMBOL (If applicable) NS	7a. NAME OF MONITORING ORGANIZATION Naval Postgraduate School			
6c. ADDRESS (City, State, and ZIP Code) Monterey, CA 93943			7b. ADDRESS (City, State, and ZIP Code) Monterey, CA 93943-5006			
8a. NAME OF FUNDING/SPONSORING ORGANIZATION Naval Postgraduate School		8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER			
8c. ADDRESS (City, State, and ZIP Code) Monterey, CA 93943			10. SOURCE OF FUNDING NUMBERS			
			PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO.
11. TITLE (Include Security Classification) <i>The United States and Environmental Security: Deforestation and Conflict in Southeast Asia</i>						
12. PERSONAL AUTHOR(S) Peter T. Greenwald						
13a. TYPE OF REPORT Master's thesis		13b. TIME COVERED FROM _____ TO _____		14. DATE OF REPORT (Year, month day) June, 1992	15. PAGE COUNT 165	
16. SUPPLEMENTARY NOTATION The views expressed in this paper are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.						
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)			
FIELD	GROUP	SUB-GROUP	Rainforest; deforestation; tropical timber; logging; Southeast Asia; Philippines; Malaysia; Indonesia; Thailand; Burma; Laos; Japan Cambodia; Vietnam; human rights; plywood; pulp; paper; World Bank; U.S. Agency for International Development;			
19. ABSTRACT (Continue on reverse if necessary and identify by block number)						
<p>In the post Cold War era, the East-West conflict may be succeeded by a new confrontation which pits an industrialized North against a developing South. In June 1992, world attention was fixed on the Earth Summit in Rio de Janeiro. This event marked a milestone in global environmental awareness; but just as the end of the Cold War has provided new opportunities for the US, the world is now faced with new sources of conflict which have advanced to the forefront of the national security debate. Among the new sources of conflict, environmental problems are rapidly becoming preminent.</p> <p>Within national security debates, those environmental problems which respect no international boundary are of particular concern. Worldwide deforestation, and the related issues of global warming and the loss of biodiversity, represent a clear threat to national security. Two percent of the Earth's rainforests are lost each year; one 'football field' is lost each second. Deforestation has already led to conflict and instability within several regions of the world including Southeast Asia.</p> <p>The United States must recognize the character and dynamics of these new sources of conflict in order to successfully realize its policy aims in national security. The US should preempt conflict through cooperation and develop a shared concern for the environment throughout the world. The US military may play a key role in this effort.</p>						
20. DISTRIBUTION/AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS			21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED			
22a. NAME OF RESPONSIBLE INDIVIDUAL Claude Buss			22b. TELEPHONE (Include Area Code) (408) 646-2935		2c. OFFICE SYMBOL NS/Bx	

Approved for public release; distribution is unlimited

**The United States and Environmental Security: Deforestation and Conflict
in Southeast Asia**

by

Peter T. Greenwald
Lieutenant, United States Navy
BS, University of Illinois, 1984

Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF ARTS IN NATIONAL SECURITY AFFAIRS

From the

NAVAL POSTGRADUATE SCHOOL
June 1992

ABSTRACT

In the post Cold War era, the East–West conflict may be succeeded by a new confrontation which pits an industrialized North against a developing South. In June 1992, world attention was fixed on the Earth Summit in Rio de Janeiro. This event marked a milestone in global environmental awareness; but just as the end of the Cold War has provided new opportunities for the US, the world is now faced with new sources of conflict which have advanced to the forefront of the national security debate. Among the new sources of conflict, environmental problems are rapidly becoming preeminent.

Within national security debates, those environmental problems which respect no international boundary are of particular concern. Worldwide deforestation, and the related issues of global warming and the loss of biodiversity, represent a clear threat to national security. Two percent of the Earth's rainforests are lost each year; one 'football field' is lost each second. Deforestation has already led to conflict and instability within several regions of the world including Southeast Asia.

The United States must recognize the character and dynamics of these new sources of conflict in order to successfully realize its policy aims in national security. The US should preempt conflict through cooperation and develop a shared concern for the environment throughout the world. The US military may play a key role in this effort.

TABLE OF CONTENTS

I. INTRODUCTION	1
A. THE ENVIRONMENTAL SECURITY DEBATE.....	1
B. OVERVIEW OF THESIS	4
II. CHANGING PERCEPTIONS OF ENVIRONMENTAL FACTORS IN NATIONAL SECURITY	6
A. A NEW WORLD ORDER	6
B. A GROWING CONCERN FOR THE GLOBAL ENVIRONMENT	7
C. LESSONS FROM COLD WAR ENEMIES	10
D. THE IMPORTANCE OF THE RAINFORESTS	12
1. Biodiversity.....	12
2. Global Warming	16
3. Deforestation in Southeast Asia.....	21
III. THE RAINFORESTS OF SOUTHEAST ASIA : THE PHILIPPINES	25
A. STATISTICS	26
B. ROLE OF THE GOVERNMENT	27
1. National Forestation Program.....	29
2. The Constitution	30
3. Aquino's Other Priorities.	32
4. Population Growth.....	34
C. AGENTS FOR CHANGE	34
IV. ELSEWHERE IN SOUTHEAST ASIA:	56
A. MALAYSIA.....	56
1. Statistics	56
2. The Role of the Government	57
3. Agents for Change	63
B. INDONESIA.....	75
1. Statistics	75
2. The Role of the Government	77
3. Agents of Change	83

C.	THAILAND–BURMA–INDOCHINA	90
1.	Statistics	90
2.	Role of the Governments	92
3.	Agents of Change	95
V.	JAPAN AND DEFORESTATION IN SOUTHEAST ASIA	103
A.	THE JAPAN CONNECTION	103
1.	The Sogo Shosha (Trading Corporations)	106
2.	Japanese Foreign Aid.....	108
3.	A Code of Conduct	110
B.	BARRIERS TO CHANGE WITHIN JAPAN.....	111
1.	Economic Barriers	111
2.	Bureaucratic and Political Barriers	115
3.	Japanese Sociological Barriers	118
C.	AGENTS FOR CHANGE	122
VI.	THE US AND DEFORESTATION IN SOUTHEAST ASIA	128
A.	THE PHILIPPINES	128
B.	INDONESIA.....	130
C.	THE US ROLE TODAY	130
D.	THE GREENING OF THE US	133
1.	Interagency Task Force on Tropical Forests	133
2.	US Agency for International Development	134
3.	Congress	135
4.	Local Movements	136
VII.	CONCLUSIONS AND RECOMMENDATIONS FOR US POLICY.....	138
	APPENDIX	144
	BIBLIOGRAPHY	145
	INITIAL DISTRIBUTION LIST	158

"... for the land belongs to me and to me you are only strangers and guests."

Leviticus 25:23 (Jerusalem Bible)

I. INTRODUCTION

A. THE ENVIRONMENTAL SECURITY DEBATE

This thesis explores the future role of the environment in national security by focusing on conflict surrounding the tropical rainforests of Southeast Asia. The process of defining the relationship between the environment and national security is just beginning. Even considering the environment as a national security issue remains a subject of debate. Daniel Deudney in his article entitled "Environment and Security: Muddled Thinking," states that "Ecological degradation is not a threat to national security; rather, environmentalism is a threat to national security attitudes and institutions."¹ Robert McNamara, former Defense Secretary and World Bank President, thinks the environment-security coupling is "illogical," not because the environment is unimportant, but because it is too important to include under the national-defense umbrella. Doing so, he argues could lessen the sense of urgency around environmental problems.²

¹Daniel Deudney, "Environment and Security: Muddled Thinking," *The Bulletin of the Atomic Scientists* (April 1991): 28. (Deudney is the Hewlett Fellow in Science, Technology, and Society at the Center for Energy and Environmental Studies, Princeton University.)

²Michael Satchell, "The Whole Earth Agenda," *U.S. News and World Report*, 25 December 1989, 51-52.

The linkage between the environment or other nations' environmental policies and America's national security is not readily apparent. Over the last 40 years, under a policy of containment, two characteristics defined a nation's vital interests. First, a vital interest was one on which a nation would be unwilling to compromise. Second and related to the first, a vital interest was one over which a nation would go to war.³ In the "New World Order," this traditional construct of a nation's vital interests is too limited. America's vital interests must be redefined as we enter an era filled with new opportunities as well as new threats to America's national security. In the "New World Order," America may seek compromise while protecting its vital interests and its national security.

Today, an environmental policy of another nation, inconsistent with that of the US, may not be sufficient cause for the deployment of US forces; yet, ecological degradation on a large scale, including deforestation through its contribution to global warming and the loss of biodiversity, may have an impact on the national security of the US. On another level, ecological degradation may lead to instability in regions of the world where the US has growing military, economic and political interests. What seems to be necessary is not a new paradigm or new definition of national security with the environment at the center, but rather a broadening of our traditional view of national security to include the environment and to address the long and short term consequences of ecological degradation.

Not all environmental problems are a threat to national security. Some criteria must be established to prioritize environmental threats. This thesis proposes four orders of criteria that are readily suggested from environmental threats present today. Within these criteria, a fourth order environmental threat is one which effects only one nation.

³Dennis M. Drew and Donald M. Snow, *Making Strategy: An Introduction to National Security Processes and Problems* (Maxwell Air Force Base, Alabama: Air University Press, 1988), 28.

For example, local deforestation led to mudslides that swept an entire Filipino village into shark infested waters. A third order threat is defined as one that effects two countries, such as the deforestation in Thailand which has led to illegal logging in Laos . A second order threat is defined as one that effects an entire region, such as deforestation which decreases the average flow of the Mekong River through the countries of Burma, Laos, Thailand, Cambodia and Vietnam. A first order threat is defined as one that has global implications, such as worldwide deforestation which may fuel global warming.

The destruction of the Earth's rainforests meets all the criteria for first, second, third and fourth order environmental threats. The Earth's tropical rainforests are concentrated in three regions: Africa, Latin America and Southeast Asia. The destruction of the rainforests of Southeast Asia is of particular concern to the US, given America's growing interests in the region and the different levels of conflict that surround the destruction of Southeast Asia's rainforests.

The expansion and strengthening of military, economic, and political ties confirm America's growing interests in Southeast Asia. Malaysia, Indonesia as well as Singapore have already agreed to expand military cooperation.⁴ US trans-Pacific two-way trade now exceeds \$300 billion annually—about one-third larger than US trans-Atlantic trade. US firms now have more than \$61 billion invested in the region.⁵ Politically, ties have

⁴Nayan Chanda, "U.S. Maintains Broad Asian Military Pacts," *Asian Wall Street Journal*, 8 April 1992, 1 and 8. Malaysia recently agreed to expand its military cooperation with the US and allow the stationing of US military personnel in the country as "administrative and technical personnel" of the US Embassy. Those personnel are associated with the inspection of maintenance of USAF C-130 aircraft. The same privilege could be accorded to personnel supervising repair of USN ships in Lumut, which is north of Kuala Lumpur. Indonesia has also offered the repair facilities of Surabaya to the Seventh Fleet.

⁵Richard H. Solomon, Assistant Secretary for East Asian and Pacific Affairs, "The Evolving Security Environment in the Asia-Pacific Region." *US Department of State Dispatch*, 4 November 1991, 818. (In his statement before the Subcommittee on East Asian And Pacific Affairs of the Senate Foreign Relations Committee, 30 October 1991, Solomon stated that "Clearly, our future prosperity is inextricably linked to that of the Asia-Pacific region.")

been strengthened with the cessation of hostilities in Cambodia and as Vietnam continues to open up to the West.

As American interests in Southeast Asia continue to grow, deforestation in the region continually leads to conflict. Within the countries of the Philippines, Malaysia, Indonesia, Thailand, and Burma, conflict surrounding the rainforests has existed for years. These conflicts have intensified as governments fail to stop corruption or enforce logging regulations or export bans. Discord has heightened as groups, particularly indigenous tribal peoples, and environmental NGOs have sought to change government policies and practices. Domestic NGOs in turn have formed loose alliances with international environmental groups, many based in western countries.

Interstate conflicts have also occurred between countries within the region as each state, seeking its own interests, has set different environmental standards and has vied to compete in the world market place. Various organizations and foreign aid programs including the World Bank and the US Agency for International Development (USAID) have also been critical of state environmental policies within Southeast Asia. The World Bank and USAID have made sustainable use of natural resources central to future economic assistance. Hence, the environment has become more important on the international agenda. It has sparked the North-South debate where western greens are often viewed as the new colonialists and where non-alignment in Southeast Asia is evolving into anti-western sentiments.

B. OVERVIEW OF THESIS

In examining the various levels of conflict surrounding deforestation in Southeast Asia, an overview of the growing recognition of the environment within the sphere of national security and the importance of the rainforests is first provided. Secondly, for

each country, a survey of the extent and consequences of deforestation is provided as background and then the role of the government and the agents for change are examined. The inherent conflict surrounding deforestation flows naturally out of this presentation providing both the scope and the scale of the conflict.

Yet, the picture remains incomplete without examining the role of Japan and the US. Japan, the greatest importer of tropical hardwoods in the world, imports about one-third of all Southeast Asia's log exports by volume. Moreover, Japanese timber importers have concentrated on buying only the cheapest and least processed form of timber: raw logs, clear-cut in virgin forests that are not replanted.⁶ US corporations have also been active in Southeast Asia. Any resolution to the conflict surrounding the destruction of the tropical rainforests and the threats posed by deforestation must include Japan and the US as well as the countries of Southeast Asia. These are the primary environmental elements which capture the attention of any researcher into the problems of the national security of the United States as viewed in the perspective of Southeast Asia.

⁶"Hard Luck for Hardwoods," *The Economist*, 22 April 1989, 35.

II. CHANGING PERCEPTIONS OF ENVIRONMENTAL FACTORS IN NATIONAL SECURITY

A. A NEW WORLD ORDER

That defense analysts can seriously consider the environment within the context of national security is a new phenomenon, a result, in part, of the events of 1989 and after, including the fall of the Berlin Wall, the end of the Cold War, the advent of a "New World Order" and the use of environmental terrorism during the Gulf War. Yet, a redefinition of national security based upon the environment is not a new idea. In the summer of 1988, Senator Albert Gore Jr. (D-Tennessee) introduced a legislative package which he called the Strategic Environment Initiative, an ecological version of President Reagan's Strategic Defense Initiative. The following year, Senator Sam Nunn proposed the Strategic Environment Research and Development Program. In 1989, US elder statesman George Kennan, in reference to the limited possibilities of useful cooperation between the USSR and America, stated that, "The greatest and most important of these, without question, is that of environmental protection and improvement on a planetary scale."⁷

President George Bush, in a letter printed in the *EPA Journal*, wrote

... Teddy Roosevelt declared 80 years ago that nothing short of defending this country in wartime "compares in importance with the great central task of leaving this land even a better land for our descendants than it is for us." He was the first to perceive that nature is not an infinite resource. *Environmental destruction in one place on Earth can have serious consequences for other, sometimes remote, parts of*

⁷Satchell, "The Whole Earth Agenda," 52.

our planet. In fact, some scientists compare the Earth to a single organism, a living system whose ability to survive depends on its overall well-being.⁸

Notably, 1991 was the first year that the *National Security Strategy of the United States* recognized the role of the environment. Two paragraphs of the 34 page document specifically relate the environment to economic development and political conflict,

... even as we experience political and economic success, we cannot ignore the costs that growth, unguided by wisdom, can impose on our natural environment. *A healthy economy and a healthy environment go hand-in-hand.* Solutions must be found that protect our environment while allowing for the economic development needed to improve the living standards of a growing world population.

Global environmental concerns include such diverse but interrelated issues as stratospheric ozone depletion, climate change, food security, water supply, deforestation, biodiversity and treatment of wastes. *A common ingredient is that they respect no international boundaries. The stress from these environmental challenges is already contributing to political conflict.* Recognizing a shared responsibility for global stewardship is a necessary step for global progress. Our partners will find the United States a ready and active participant in this effort.⁹

B. A GROWING CONCERN FOR THE GLOBAL ENVIRONMENT

Curtis Bohlen, Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs, recognizes that the rise of the global environment on the foreign policy agenda is independent of the end of the Cold War. In a State Department report to the EPA, Bohlen asserted,

While the main focus of international relations has traditionally been on political and military issues, the environment is now a major aspect of the international scene This unprecedented interest in environmental issues stems from the realization that these issues are truly global in nature.¹⁰

⁸President George Bush, "What I Believe about the Environment," *EPA Journal* 16 (January/February 1990): 2. Emphasis added.

⁹*National Security Strategy of the United States (August 1991)*, (Washington D.C.: Government Printing Office, 1991), 22. Emphasis added.

¹⁰Curtis Bohlen, "Report from the State Department," *EPA Journal* 16 (July/August 1990): 15.

In support of his statement, Bohlen cites US support for the Montreal Protocol signed in 1987, the International Panel on Climate Change established in 1988, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, and the International Whaling Commission. Bohlen concludes:

Some have stated that international environmental issues will dominate the foreign-policy agenda of the 21st century. Certainly it is evident that international environmental concerns will be increasingly important in our diplomatic efforts.¹¹

Indeed, concern for the global environment has grown over the last twenty years beginning with the Stockholm Conference in 1972. In June 1992, the United Nations sponsored the first Earth Summit, officially called the United Nations Conference on Environment and Development, in Rio de Janeiro. The heads of over 160 nations hoped that the Rio meeting would put the world on a path of "sustainable development" in a type of ecological Bretton Woods.¹²

Jessica Tuchman Mathews, Ph.D., Vice President of the World Resource Institute believes that today the world is experiencing an historic moment separate or distinct from the end of the Cold War.

The historic moment I am talking about is not the end of the Cold War. It is that the latter half of the 1980s saw a fundamentally new appreciation of the importance of the environment to the human condition. Before this watershed, environmental issues were seen as local or regional concerns, extraneous to economic growth, matters of health, aesthetics, and perhaps ethics. After it, they assumed a global dimension, were beginning to be seen as intrinsic to economic growth or decline, and to be recognized as significant determinants of nations' prosperity, their governability and their security. The end of the Cold War released time and

¹¹Ibid., 16.

¹²Rose Gutfield, "Bush Caught in Earth Summit Crossfire," *Wall Street Journal*, 7 April 1992, A2. (Sustainable development has been defined as a process of social and economic change in which resource use, technology, and custom are all in harmony, enabling the current generation to meet its needs and hopes without compromising those of future generations.)

attention. As it did, the environment catapulted from the quiet nether world of what the diplomats call 'other' concerns to a place among international priorities.¹³

Both acts of war and calls for peace have increased concern for the environment. Horrifically, the first major military conflict of the "New World Order" raised environmental awareness to another level. During the Gulf War, millions of television viewers world wide witnessed the devastating effects of the environmental terrorism unleashed by Saddam Hussein. In calling for peace, church leaders have added their voices as well as a moral dimension to the environmental movement. Pope John Paul II as early as 1987 called for a renewed sense of stewardship in caring for the Earth stating that Christians have a moral obligation to protect the environment.¹⁴ John Paul II later consecrated the 1990s to nonviolence and respect for the environment,

Do not kill, because every human life is the common heritage of all man Do not kill, destroying your natural environment in various ways. This environment is also the common heritage of all man.¹⁵

American Jewish leaders from all four wings of Judaism—Orthodox, Conservative, Reform, and Reconstructionist- together expressed their concern for the global environment at a meeting held in Washington D.C. in March 1992:

We, American Jews of every denomination, from diverse organizations and differing political perspectives, are united in deep concern that the quality of human life and the earth we inhabit are in danger... As heirs to a tradition of stewardship that goes back to Genesis and that teaches us to be partners in the ongoing working

¹³Jessica Tuchman Mathews, Ph.D., "Nations and Nature: A New Look at Global Security," Twenty-First J. Robert Oppenheimer Memorial Lecture, 12 August 1991, Los Alamos, New Mexico. Copy obtained from the World Resource Institute, Washington D.C.

¹⁴"John Paul Urges Christians to Protect the Environment," *New York Times*, 13 July 1987, A2.

¹⁵Jennifer Parmelee, "Pope Urges Decade of Nonviolence," *Washington Post*, 2 January 1990, A10.

of Creation , we cannot accept the escalating destruction of our environment and its effect on human health and the environment.¹⁶

C. LESSONS FROM COLD WAR ENEMIES

In the "New World Order" the US has been presented with an opportunity to promote its value system throughout the world unencumbered by the realpolitik of the Cold War. However, the improvement of the human condition is dependent upon both socio-political stability and sustainable economic development. The environment of the Earth, through the provision of natural resources, is, in turn, the foundation for both stability and development.

Degradation of the environment can lead to conflict and the loss of economic viability. For the states which composed the Soviet Union and Eastern Europe the consequences of environmental degradation are a harsh reality which threaten to undermine their struggle for democracy. The full extent of environmental degradation has become known largely because of the end of the Cold War and the opening of the former USSR to the West. A recent *U.S. News and World Report* provided the following assessment.

... Soviet communism's unchecked power and its obsession with heavy industry, economic growth, national security and secrecy all combined to produce an environmental catastrophe of unrivaled proportions.¹⁷

A. V. Yablokov, distinguished biologist and science adviser to Russian President Boris Yeltsin, has classified 15 to 20 regions within the former Soviet Union, in which half the

¹⁶George W. Cornell, "Jews Taught to Care for the Earth," *The Herald*, Monterey, CA, 25 April 1992, 11A.

¹⁷Douglas Stanglin, "Toxic Wasteland." *U.S. News and World Report*, 13 April 1992, 42.

population lives, as environmental crisis areas.¹⁸ The list of environmental evils seems endless:

- some 70 million out of 190 million Russians and others living in 103 cities breathe air that is polluted with at least five times the allowed limit of dangerous chemicals
- the damage caused by more than 130 nuclear explosions conducted for geophysical investigations, to create underground pressure in oil and gas fields and to move earth for building dams may be enormous
- ten Chernobyl-type reactors threaten to leak radiation.
- the Baltic Sea is dying as radioactive waste, fertilizers, waste water from pulp and paper mills, toxic chemicals and heavy metals pour into the sea
- 920,000 barrels of oil—roughly one out of every ten barrels of oil produced—are spilled every day, the equivalent of one Exxon Valdez spill every six hours
- the Volga River is inundated by 2.5 cubic miles of sewage and industrial waste each year as it runs a gauntlet of dams, hydroelectric plants, mills, foundries, refineries, and chemical plants from its source 150 miles northwest of Moscow to the Caspian Sea 2,300 miles away
- severe erosion and indiscriminate use of pesticides have depleted or poisoned millions of acres of farmland
- the Aral Sea is evaporating after the diversion of the rivers that feed it
- Siberian forests which absorb much of the world's CO₂ disappear at the rate of 5 million acres per year.¹⁹

Murray Freshbach, a Soviet expert at Georgetown University and Alfred Friendly, Jr., a former Moscow bureau chief for *Newsweek*, write in their recent book, *Ecocide in*

¹⁸Jessica Mathews, "The Union of Soviet Socialist Pollution," *Washington Post*, 22 March 1991.

¹⁹Stanglin, 40-46 and Virginia Pope, "Poisoning Russia's River of Plenty," *U.S. News and World Report*, 13 April 1992, 49-51. (Global Legislators Organization for a Balanced Environment (GLOBE), in a letter dated 5 February 1992 and addressed to President Boris Yeltsin of the Republic of Russia, expressed its concern about the exploitation of Siberia which "contains many of the last strongholds of untouched forests in temperate and boreal zones." GLOBE also referred to the International Tropical Timber Organization (ITTO) which negotiated an agreed definition of and general criteria for sustainable forest management in its latest General Assembly in Yokohama in December 1991. GLOBE requested the Government of Russia as well as other governments to test its forestry policies to these criteria. The letter was signed by Senator Al Gore Jr., President, GLOBE International, Representative Gerry Sikorsky, President, GLOBE U.S., MP Takashi Kusugi, President, GLOBE Japan, Hemmo Muntingh, President, GLOBE E.C. and Alexy Yablokov, President, GLOBE C.I.S.)

the USSR, "When historians finally conduct an autopsy on the Soviet Union and Soviet Communism, they may reach the verdict of death by ecocide."²⁰

Boris Porfiriev of the Soviet Academy of Sciences calculates that the cost of pollution and natural resource degradation, including health costs but not victim compensation, amounts to 15 to 17 percent of GNP, exceeding estimates of Soviet military expenditures during the Cold War.²¹ Given the extent of environmental degradation, Russians have little difficulty making the connection between the environment and security, as demonstrated during an annual discussion of security concerns held at the National War College in March 1991. During a session devoted to "The Environmental Dimension of Security," the Americans seemed to find the topic ". . . far removed from their concerns. They had little to contribute. The Russians, on the other hand, leapt to the discussion with enthusiasm."²²

D. THE IMPORTANCE OF THE RAINFORESTS

1. Biodiversity

As alluded to in the *National Security Strategy*, the destruction of the rainforests and the loss of biodiversity are interrelated. Although the true number of species on Earth is not known even to the nearest order of magnitude, E.O. Wilson estimates that the

²⁰Murray Feshbach and Alfred Friendly, Jr., *Ecocide in the USSR*, (New York: Basic Books, 1992), 1.

²¹"The Union of Soviet Socialist Pollution." (A fellow analyst at Naval Postgraduate School writing on the pollution problems of Eastern Europe stated that "The government of Poland is now involved in an enormous Catch-22. The country must be cleaned up, but this would require factories to be closed. The country can not afford to close the factories, because Poland needs the output of these same factories to raise money to fix the pollution." Vogt, Major Bill, US Army. Untitled. A paper discussing Poland's environmental problems presented at the Naval Postgraduate School, Monterey, Ca., 1991.)

²²*ibid.*

absolute number falls somewhere between 5 and 30 million.²³ In contrast, only 1,400,000 plant and animal species have been identified and given scientific names.²⁴ Of all the major land habitats, the tropical rainforests are the richest in species. In Borneo for example, 700 species of trees were found in 10 selected 1-hectare plots, the same as in all of North America.²⁵ Rainforests cover only 7 percent of the Earth's surface, yet they contain more than half the species in the world biota.²⁶ The Food and Agriculture Organization (FAO) and United Nations Environmental Program (UNEP) studies estimate that between 76,000 and 92,000 square kilometers of rainforest are eliminated outright each year.²⁷ This equates to 2 percent of the Earth's rainforest destroyed every year, 100 acres lost every minute or one 'football field' lost every second. "USAID has recognized that 'the destruction of humid tropical forests is one of the most important environmental issues for the remainder of this century and, perhaps, well into the next,' in part because they are 'essential to the survival of vast numbers of species of plants and animals.'"²⁸

²³E. O. Wilson, ed., *Biodiversity*. (Washington D. C. : National Academy Press, 1988), 5. Wilson is the Frank B. Baird, Jr. Professor of Science, Harvard University, Museum of Comparative Zoology, Cambridge, Massachusetts.

²⁴Kenton Miller and Laura Tangley, *Trees of Life: Saving Tropical Forests and their Biological Wealth*, (Boston: Beacon Press, 1991), xvii.

²⁵*Biodiversity*, 9. A hectare is equal to 10,000 square meters or 2.471 acres. To convert square kilometers (sq km) to hectares, multiply the number of sq km by 100.

²⁶*Ibid.*, 8. Wilson defines tropical rain forests as "habitats with a relatively tight canopy of mostly broad-leaved evergreen trees sustained by 100 centimeters or more of annual rainfall. Typically two or more other layers of trees occur beneath the upper canopy. . . . Tropical rainforests are among the most fragile of all habitats. They grow on so called wet-deserts - an unpromising soil base washed by heavy rains. Two-thirds of the area of the forest surface consists of tropical red and yellow earths, which are typically acidic and poor in nutrients."

²⁷*Ibid.*, 28.

²⁸*Ibid.*, 15.

Present rates of extinction are unprecedented. Conservative estimates place the rates of extinction in the tropics at 50 to 150 species per day which means that a quarter or more of all species could be exterminated within 50 years.²⁹ However, what may be of greater concern are the categories of species faced with extinction or the scope of extinction rather than the scale. Norman Myers, Consultant in Environment and Development, Oxford, United Kingdom points to the importance of plants.

... the present extinction spasm looks likely to eliminate a sizable share of terrestrial plant species, at least one-fifth within the next half century and a good many more within the following half century. By contrast, during most mass-extinction episodes of the prehistoric past, terrestrial plants have survived with relatively few losses. They have thus supplied a resource base on which evolutionary processes could start to generate replacement animal species forthwith. If this biota substrate is markedly depleted within the foreseeable future, the restorative capacities of evolution will be all the more reduced.

In sum, the evolutionary impoverishment of the impending extinction spasm, plus the numbers of species involved and the telescoped time scale of the phenomenon, may result in the greatest single setback to life's abundance and diversity since the first flickerings of life almost 4 billion years ago.³⁰

One of the most immediate threats posed by the loss of biodiversity is the shrinkage of plant gene pools available to farmers and agricultural scientists. We obtain 85 percent of our food directly or indirectly from just 20 kinds of plants, and about two-thirds from just three: maize, wheat, and rice.³¹ Of the several thousand species known to be edible, only about 150 have ever become important enough to enter into world commerce.³² Approximately 98 percent of US crop production is based on species that originated

²⁹Miller, xvii.

³⁰*Biodiversity*, 33-34.

³¹*Ibid.*, 121.

³²*Ibid.*, 107.

outside our borders. Corn, rice, potatoes, sweet potatoes, sugar, citrus fruit, bananas, tomatoes, coconuts, peanuts, red pepper, black pepper, nutmeg, mace, pineapples, chocolate, coffee, and vanilla all originated in tropical countries. Tropical forest plants can be of use to modern agriculture in three different ways: as sources of new crops, as source material for cross-breeding to improve crop species, and as a source of biodegradable pesticides.

The second major threat posed by the loss of biodiversity is the loss of plants that may be used in the production of pharmaceuticals. The potential medical benefits of tropical forests have barely been tapped. Less than 1 percent of tropical plant species have been screened for medical purposes, but even that tiny sample has yielded enormous benefits.³³ Drugs derived from tropical plants have aided victims of childhood leukemia and Hodgkin's disease. Tropical plants have also provided the antimalarial drug quinine as well as a muscle relaxant used during surgery. Future pharmaceuticals including the cure for AIDS, another non-traditional threat to national security absent a change in American lifestyles, may also come from the tropical forests. Norman Farnsworth, from the University of Illinois at Chicago attests to the importance of plants.

Higher plants have been described as chemical factories that are capable of synthesizing unlimited numbers of highly complex and unusual chemical substances whose structures could escape the imagination of synthetic chemists forever.³⁴

Within the debate of the relative importance of the Earth's rainforests, some scientists question where the burden of proof lies. Hugh H. Iltis, Director, University of Wisconsin Herbarium, Madison, Wisconsin states,

³³Miller, 23.

³⁴*Biodiversity*, 97.

I have no patience with the phony requests of developers, economists, and humanitarians who want us biologists to 'prove' with hard evidence, right here and now, the 'value' of biodiversity and the 'harm' of tropical deforestation. Rather, it should be for them, the sponsors of reckless destruction, to prove to the world that a plant or animal species, or an exotic ecosystem, is *not* useful and *not* ecologically significant before being permitted by society to destroy it. And such proof, of course, neither they nor anybody else can offer.³⁵

2. Global Warming

Rainforests are the greatest photosynthesizing system on land, drawing carbon from the atmosphere and emitting oxygen. Hence, large scale deforestation has a two-fold effect on global warming. First, deforestation reduces the forests' ability to remove carbon from the air. Second, the burning of forests releases gases including carbon dioxide (CO₂), nitrous oxide (N₂O), and methane (CH₄) into the atmosphere, where they intensify the natural greenhouse effect and contribute to natural global warming. Today, deforestation adds 3.1 billion tons of carbon to the atmosphere annually. Global commercial energy production now emits almost 7.3 billion tons.³⁶

However, the reality of global warming continues to be challenged, just as new evidence continues to be found that supports or refutes the theory or adds more uncertainty to the debate. Recently, Danish geophysicists reported that they have established a close statistical correlation between variations in the length of sunspot cycles and fluctuations in the world's surface temperature over the last 130 years. Such findings may weaken the case that anthropogenic CO₂ is the major cause of current and future global warming.³⁷ However, some scientists say sunspot cycles only exacerbate

³⁵Ibid., 102-103. Emphasis as found in original text.

³⁶Miller, 11.

³⁷William K. Stevens, "Danes Link Sunspot Intensity to Global Temperature Rise," *New York Times*, 5 November 1991, C4.

the effect of greenhouse gases.³⁸ Other scientists report that the warming trend which began in the 1980s will be offset by the eruption of Mount Pinatubo in the Philippines.³⁹ Some ice research has yielded worrisome data on global warming.⁴⁰

The theory that certain gases warm the Earth's atmosphere was first proposed by French mathematician James Fourier more than 150 years ago. After sunlight strikes the Earth's surface, some of it is re-emitted back up into space as infrared energy. Certain trace gases in the atmosphere absorb some of this infrared energy and thus warm the atmosphere. In 1896, a Swedish chemist and Nobel laureate Svante Arrhenius, resolved the long-standing question of how the Earth's atmosphere could maintain the planet's relatively warm temperature when the oxygen and nitrogen which make up 99 percent of the atmosphere do not absorb any of the heat escaping as infrared energy. Arrhenius discovered that even the small amounts of carbon dioxide in the atmosphere could absorb large amounts of heat. Arrhenius further reasoned that the burning of coal, oil, and natural gas could eventually release enough carbon dioxide to warm the earth.⁴¹ Jim Hansen, a climatologist at NASA's Goddard Institute for Space Studies, and others agree that enough greenhouse gases have accumulated in the atmosphere to make Arrhenius' prediction come true.⁴²

³⁸Amy D. Burke, "New Data Backs Claims Earth is Warming," *Chicago Tribune*, 28 February 1992, A1.

³⁹William K. Stevens, "Volcano's Eruption in Philippines may Counteract Global Warming," *New York Times*, 30 June 1991, A1.

⁴⁰Rudy Abramson, "Drilling for Frozen Secrets," *Los Angeles Times*, 4 January 1992, A1.

⁴¹Wallace S. Broecker, "Global Warming on 'Trial,'" *Natural History* (April 1992): 6.

⁴²*Ibid.*

The atmospheric concentration of CO₂ in 1990 was 353 parts per million by volume (ppmv), about 25 percent greater than it was in 1750, before the Industrial Revolution. The concentration of CH₄ was 1.72 ppmv in 1990, or slightly more than twice that of 1750. CFCs do not occur naturally and were not found in the atmosphere until production began a few decades ago.⁴³ During the last 100 years the average global air temperature near the surface has increased between 0.3° and 0.6°C (0.5° and 1.1°F).⁴⁴ This temperature rise could be contributed to greenhouse warming caused by human emissions of CO₂ and/or to natural climate variability; with today's limited understanding of the underlying phenomena, neither can be ruled out.⁴⁵

The greenhouse theory and climate models have developed rapidly over the last several decades with the aid of technological advancements, including satellites, supercomputers, and the study of ice-core samples from Antarctica and Greenland. Today, general circulation models (GCMs) of the atmosphere and ocean are the principal tools to project climatic changes. Some GCMs predict that an increase in greenhouse gas concentrations equivalent to a doubling of the preindustrial concentration of atmospheric CO₂ would produce a global average equilibrium temperature increase between 1.9° and 5.2°C (3.4° and 9.4°F).⁴⁶ Global warming could in turn lead to a change in climatic

⁴³*Policy Implications of Greenhouse Warming*, Washington D. C.: National Academy Press, 1991, 1. (This report represents the findings of a study conducted under the auspices of the Committee on Science, Engineering, and Public Policy, a unit of the councils of the National Academy of Sciences (NAS), the National Academy of Engineering, and the Institute of Medicine in response to the US Congress' call for "a NAS study on global climate change. . . [to] establish the scientific consensus on the rate and magnitude of climate change, estimate the projected impacts, and evaluate policy options for mitigating and responding to such changes."

⁴⁴*Ibid.*, 2.

⁴⁵*Ibid.*

⁴⁶*Ibid.*, 92

patterns that affect the distribution of rainfall, the intensity of storms and droughts, and the directions of prevailing winds and ocean currents, which would, of course, dramatically affect regional scale weather and climate.

However, many uncertainties are found within GCMs and other models. The National Academy of Sciences (NAS) listed the following major unknowns in predictions of greenhouse warming.⁴⁷

- Future emissions of greenhouse gases
- Role of oceans and biosphere in uptake of heat and CO₂
- Amount of CO₂ and carbon in the atmosphere, oceans, biota, and soils
- Effectiveness of sinks for CO₂ and other greenhouse gases, especially CH₄
- Interactions between temperature change and cloud formation and the resulting feedbacks
- Effects of global warming on biological sources of greenhouse gases
- Interactions between changing climate and ice cover and the resulting feedbacks
- Amount and regional distribution of precipitation
- Other factors, like variation in solar radiation

The uncertainties listed by the NAS illuminate our limited understanding of the Earth when viewed as a unified system. James Lovelock in his book, *Gaia: A New Look at Life on Earth* postulated that there is a collective interaction between all living and inanimate matter on the Earth in ways of infinitely delicate and circular complexity. This postulated collective, circular interaction, which today's GCMs in part attempt to duplicate, Lovelock named the Gaia Hypothesis.⁴⁸ Although the Gaia Hypothesis recognizes that the Earth has its own self-regulating mechanisms which may offset the warming effect caused by increased concentrations of CO₂ and other greenhouse gases,

⁴⁷Ibid., 94.

⁴⁸J. E. Lovelock, *Gaia: A New Look at Life on Earth*, Oxford: Oxford University Press, 1979, 11. (Gaia is named after the earth goddess of ancient Greece.)

the Gaia Hypothesis also sees the Earth as a living system in which the nonliving realm is continuously shaped by the presence of life, including man. Viewing the Earth as one living system leaves man with more questions than answers.

However, the NAS concluded that "[d]espite the great uncertainties, greenhouse warming is a potential threat sufficient to justify action now."⁴⁹ Among its recommendations, the NAS called for a reduction of global deforestation through international and country-by-country programs, especially in the tropical regions, and support for domestic and international reforestation efforts.⁵⁰

Following the recommendations of the NAS is a prudent approach towards global warming especially when viewed as a threat to national security. The US has in the past held to a conservative approach to external threats and particularly that posed by nuclear weapons. Senator Albert Gore Jr. (D-Tennessee) stated in his keynote address for the NAS Forum on Global Climate Change that

[w]hen nations perceive that they are threatened at the strategic level, they may be induced to think of drastic responses, involving sharp discontinuities from everyday approaches to policy. In military terms, this is the point when the United States begins to think of invoking nuclear weapons. The global environment may well involve responses that are, in comparative terms, just as radical.⁵¹

⁴⁹*Policy Implications of Greenhouse Warming*, 72.

⁵⁰*Ibid.*, 75-76.

⁵¹Senator Al Gore, "The Global Environment: A National Security Issue" a keynote address given at the National Academy of Sciences Forum on Global Climate Change, Washington D.C. on May 1, 1989. Copy obtained from Sen. Gore's office, Russell Building, Washington, D.C.

3. Deforestation in Southeast Asia

When most Americans think about rainforest devastation, they focus on Latin America, especially Brazil.⁵² However, the destruction of the rainforests is a global problem, the effects of which respect no national boundary. The loss of the Southeast Asian rainforests of Southeast Asia may have especially significant impacts on global climate and weather patterns, particularly over the US. These impacts may be greater than those due to the loss of the rainforests of Latin America or Africa because of the major role in global climate played by the Southeast Asia - tropical west Pacific Ocean region.⁵³

⁵²The recent movie "Medicine Man," starring Sean Connery, was filmed in South America and portrays a scientist racing against time and the destruction of the rainforest in a search for the cure to cancer. Another movie, "Fern Gully" filmed in Australia may provide American's with a broader view of deforestation.

⁵³Dr. Tom Murphree of the Department of Meteorology at the Naval Postgraduate School describes Southeast Asia and the tropical west Pacific Ocean as a crucial driving region for the global climate system. Interactions between the land, ocean, and atmosphere in this region impact weather and climate throughout the world. Murphree relates the global climate system to a large heat engine in which the winds and currents are driven by heating at various locations. The most important of these regions are the three tropical land masses of Southeast Asia, Central and South America, and Africa, along with their nearby tropical oceans. These three areas may be thought of as the three main cylinders of the global heat engine. Of these three, the Southeast Asian cylinder is the most powerful. The climate impacts of this region are especially significant for the temperate areas to the north and northeast — specifically for eastern China, Japan, the North Pacific Ocean, and North America.

The rainforests of these three tropical cylinders, and especially Southeast Asia, have a critical role in driving the global heat engine. These moist, dark green forested areas collect tremendous amounts of solar energy which they then release to the atmosphere. This heating drives strong upward motions of air over the forests. These vertical motions initiate the global scale winds and currents that govern worldwide weather patterns. Without the forests, it is likely that large variations in temperature, rainfall, and heating would occur, and relatively reliable weather patterns would be altered.

It is also likely that extratropical weather patterns would be significantly disrupted by the destruction of the tropical rainforests. The loss of the Southeast Asian rainforests would probably cause the greatest global disruptions, and an especially large disruption in North America. Such environmental disturbances could have serious consequences for such sectors of the US economy as agriculture, transportation, and utilities. One example of the possible impact of Southeast Asian climate change on the US economy is the drought during the summer of 1988. This drought, has been related by Murphree and others to unusual atmospheric heating in the Southeast Asian region. Severe economic disturbances occurred during this drought, including large crop losses throughout the central US grain belt and cancellation of barge traffic on the Mississippi-Missouri-Ohio river waterways. See Tom Murphree, "Anomalies in North American Climate: The Southeast Asian -Tropical West Pacific Connection," *Proceedings of the Eighth Annual*

Few nations within Southeast Asia have escaped the ravages of deforestation (see Figure 1). Relative to the total area of rainforest, destruction is perhaps greatest in Southeast Asia and is by far the most affected by commercial logging.⁵⁴ Philip Hurst, a British environmentalist who spent two years living in the Philippines, Thailand, Malaysia, and Indonesia, documented the destruction of the rainforests. Hurst, in the introduction to his book *Rainforest Politics*, states that 25,000 sq km (2.5 million hectares) of rainforest are destroyed in Southeast Asia each year and concludes that,

[These] forests are being destroyed through four major processes: shifting agriculture, tropical timber extraction, government sponsored transmigration schemes, and large-scale development projects.... Poverty underlies all these causes. The destruction of forests is a symptom of the development path chosen by poor nations as they strive, by whatever means, to improve the living standards of their populations. *Politics and ecological poverty can no longer be regarded as separate issues.*⁵⁵

The countries of Southeast Asia are of particular interest. Within the national security perspective, the Philippines is unique given its nearly 100 year relationship, albeit a love-hate relationship, with the US . The Philippines also suffers perhaps the most severe environmental degradation caused by deforestation. Malaysia, as the largest exporter of tropical hardwoods in the world, is also important in the global environmental context. Although logging has been banned on peninsular Malaysia, logging continues in the states of Sarawak and Sabah. The ongoing conflict between the government of Sarawak and the indigenous Penan tribe encapsulates the human rights aspect of deforestation found throughout Southeast Asia. Indonesia has also banned timber exports

Pacific Climate Workshop (Technical Report 31 of the Interagency Ecological Studies Program, California Department of Water Resources, Sacramento, CA), March 1992, 179-186.

⁵⁴"Hard Luck for Hardwoods," *The Economist*, 22 April 1989, 35.

⁵⁵Philip Hurst, *Rainforest Politics*, (London: Zed Books Ltd., 1990), xiii. Emphasis added. Hurst lived in Southeast Asia between November 1985 and May 1987.

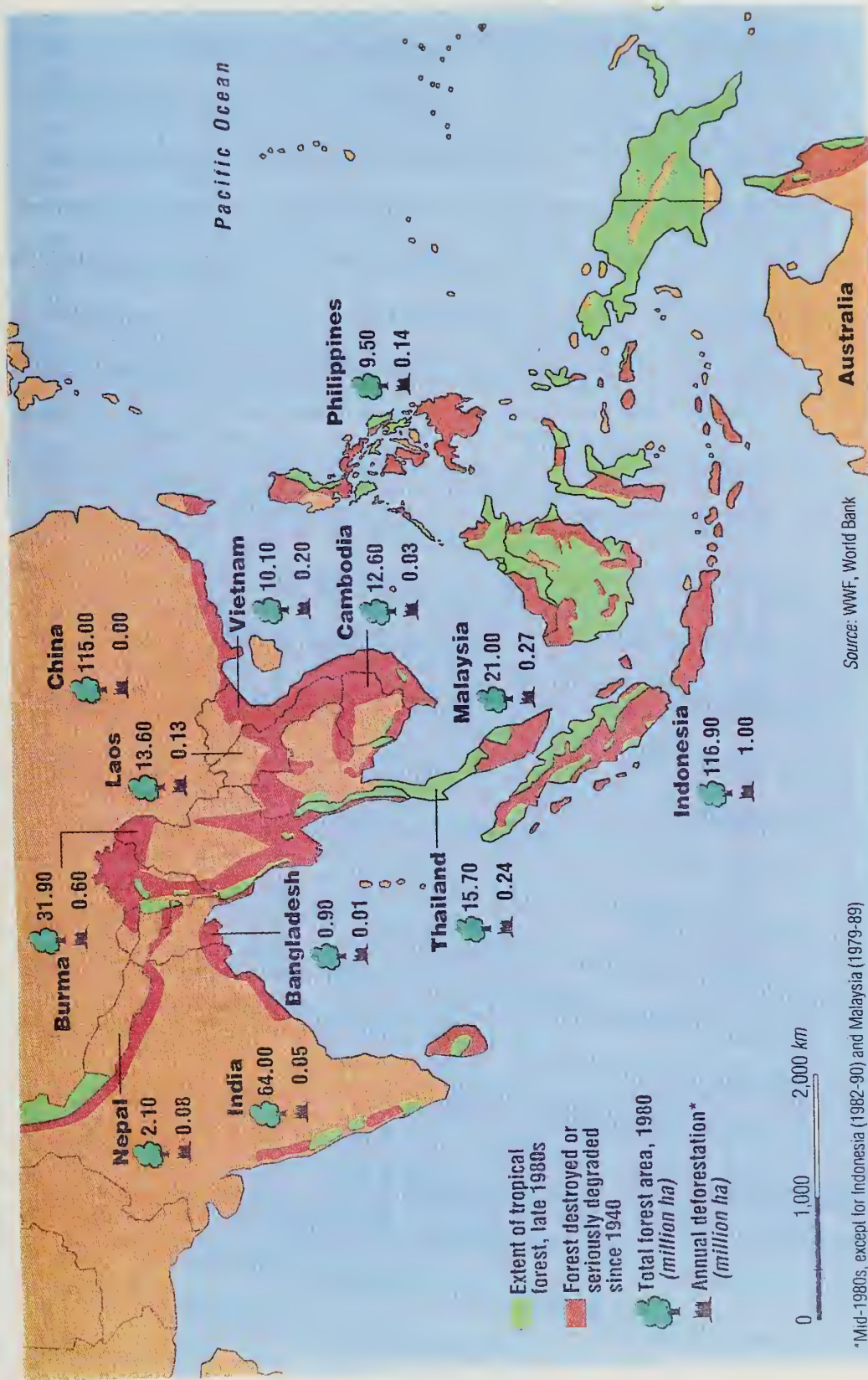


Figure 1. Deforestation in Southeast Asia
 (Reprinted from *Far Eastern Economic Review*, 4 June, 1992)

but is now striving to be the number one paper and pulp supplier in the world. Thailand, a long-time exporter of tropical hardwoods, is now a net importer, having banned all logging. After a ban on logging in Laos, and a timber export ban in Vietnam, Thailand will become increasingly dependent on hardwood imports from Burma and Cambodia. Burma, the regional pariah, faces trade sanctions from many western countries including the US. Burma's three-year old State Law and Order Restoration Council (SLORC), in turn, has become dependent on timber exports to finance its military regime.

"Saving the trees is only the first step Saving ourselves is the real goal."

Chandi Prasad Bhatt

III. THE RAINFORESTS OF SOUTHEAST ASIA : THE PHILIPPINES

The evolution of environmental awareness as a global and national security issue has occurred over twenty years following the lead of the UN from a global perspective to a regional and finally a national perspective. The rise of environmental awareness can be traced back to the UN Stockholm Conference on the Environment of 1972 from which arose the UN Environmental Program (UNEP). UNEP in turn gave birth to several regional programs including the ASEAN subregional Environmental Program in 1977 out of which was formed the ASEAN Experts group on the Environment (AEGE).⁵⁶ The AEGE met for the first time in Jakarta in 1978 where it modified the UNEP agenda, shifting the focus to regional marine ecosystems. At the time, no major regional trans-border disputes existed. In 1981, at the first Minister's Meeting on the Environment, held in Manila, the ministers promised "to ensure the protection of the ASEAN environment and the sustainability of its natural resources so that it can sustain continued development with the aim of eradicating poverty and attaining the highest possible quality of life."⁵⁷ Although AEGE's statements through the 1980s became more specific and action oriented with the inclusion of pilot projects, no binding legislation was set. Meanwhile, throughout the respective nations of ASEAN, particularly Indonesia, Thailand, Malaysia, and the Philippines, deforestation continued. Among these nations, the current state of the forests in the Philippines is perhaps the worst.

⁵⁶Mark A. McDowell, "Development and the Environment in ASEAN," *Pacific Affairs* 62 (Fall 1989):323.

⁵⁷Mundjat Danusaputro, *Towards an ASEAN Environmental Law* (Bandung: Binacipta, 1984), 73, quoted in McDowell, 324.

Recent events dramatically illustrated the devastating effects of deforestation. On 6 November 1991, flash floods hit areas of the Philippines never before affected by flooding as water rushed down hillsides laid bare by both legal and illegal logging. Thousands of Filipinos were reported missing or dead in the highest flood toll in over a decade.⁵⁸ Tragically, the floods represent only one step in a downward cycle initiated by deforestation. Deforestation leads to erosion, which leads to flooding followed by drought, which in turn causes more erosion.⁵⁹ As the downward cycle continues, reforestation becomes more difficult and more costly. At some point, reforestation may become impossible due to desertification.⁶⁰

A. STATISTICS

In its natural state, the Philippines, covering an area of 298,170 sq km, was completely forested. Prior to World War II the country had approximately 75 percent forest cover or 17 million hectares.⁶¹ By 1969, the forest cover had been reduced to 105,000 sq km of which only 80,000 sq km were rainforests. Moreover, only 47,000 sq km of the rain forests remained in a near-natural state. Through the 1970s, deforestation accelerated and did not slow until the mid-1980s. From 1969 through 1988, forest loss averaged 2100 sq km per year or 2 hectares every five minutes. This was three times the average for all tropical rain forests. By 1988 total forest cover had been reduced to

⁵⁸Seth Mydans, "More Than 2, 000 Die as Floods Swamp Towns in the Philippines," *New York Times*, 7 November 1991, A1.

⁵⁹Celso R. Roque, *Environment and Natural Resources: Status and Prospects*, (Metro Manila: Economic Development Foundation, 1990), 52.

⁶⁰Deforestation ultimately led to desertification on Haiti where reforestation is no longer possible.

⁶¹Roque, 4.

64,606 sq km (6.46 million hectares) or 22% of the total land area.⁶² Of these forests, a mere 4.4 million hectares were dipterocarp of which 0.9 million hectares were virgin forests. Dipterocarp forests are especially important to the Philippines in that they are the richest in biological diversity and the most commercially valuable of the five major forest types in the Philippines. Hence, as Nels Johnson of the World Research Institute stated, the tropical forests that remain are “scattered fragments, and tarnished relics of what were once some of the richest places in the biological world.”⁶³ Without a logging ban, the remaining forests will disappear by the year 2000. As T. M. Locsin, the former Executive Secretary for President Aquino and current editor-in-chief of the *Philippines Free Press* stated, the country would become “a Philippine Deserta—a Saudi Arabia without oil.”⁶⁴

B. ROLE OF THE GOVERNMENT

In her campaign for president, Aquino made no mention of the environment. However, as one Filipino analyst suggested, Aquino needed time to work on her government program.⁶⁵ As the campaign progressed, Aquino departed from speeches devoted to her husband and his ordeals under Marcos and developed a 6-point national

⁶²N. Mark Collins, Jeffrey A. Sayer and Timothy C. Whitmore, eds., *The Conservation Atlas of Tropical Forests: Asia and the Pacific* (New York: Simon & Schuster, 1990), 194. Note: A hectare is a metric unit of land measure equal to 10, 000 square meters: equivalent to 2.471 acres.

⁶³Nels Johnson and Pablo Alfonso, *Philippines Biodiversity Survey and Action Plan*, (Washington D.C. : World Resources Institute, 1991), 1.

⁶⁴Michael Duenas, “Stop Deforestation Now.” *Philippines Free Press*, 23 November 1991, 8.

⁶⁵Francisco S. Tatad, “Cory for President,” *Business Day*, 4 December 1985, 4; FBIS, 10 December 1985, P13. (Notably, Marcos saw the “... need to institute a whole array of reforms, adjustments and forward movement not only in the economy but education, skills training, political culture, social relationship and even in the **environment**.” *Business Day*, 23 December 1985, 26; FBIS, 24 December 1986, P2. Emphasis added.)

economic program.⁶⁶ Further, the day after she announced her economic plan, Aquino vowed to stop the expropriation of tribal ancestral lands by the government.⁶⁷ This issue remains inextricably linked to reforestation and any ban on logging.

The development of her government program continued after Aquino assumed office and came to include a concern for the environment. On 6 June 1986 Aquino launched the National Reforestation Program stating that

... the wealth of our forests served, and continues to serve, as the capital base of many a political fortune.... the lack of political will, combined with public corruption, conspired with private sector greed to deprive our nation of one of its most important natural advantages: rich forest lands.⁶⁸

Aquino set goals for the program of 600 thousand hectares of reforestation through 1992 and 1.4 million hectares through the year 2000. However, Aquino recognized that

This objective cannot be achieved by the government alone. We shall need the cooperation and support of Filipinos, acting individually or in concerted efforts through organizations and communities.⁶⁹

Finally, Aquino pledged her support for the Ministry of Natural Resources.

... your frustrations are over. We shall succeed in our objective, you will have the satisfaction of serving a government and a people who will give to the effort to rescue and restore our forest wealth, their all.⁷⁰

⁶⁶*Hong Kong AFP*, 6 January 1986; FBIS, 8 January 1986, P8-P9.

⁶⁷*Hong Kong AFP*, 7 January 1986; FBIS, 8 January 1986, P8.

⁶⁸*Republic of the Philippines Policy Statements: Speeches of President Corazon C. Aquino March 22 - August 5, 1986*. (Philippine Information Agency Printery: Quezon City, 1987), 95.

⁶⁹*Ibid.* 96.

⁷⁰*Ibid.*

1. National Forestation Program.

In establishing the National Forestation Program (NFP), Aquino set forward some clear and specific goals. However, the strategy for attaining those goals was placed within and influenced by the larger socioeconomic program. A profile of the NFP provided by the Asian Development Bank (ADB) states that,

... it is imperative to create conditions which do not inhibit investment or curtail beneficial use of resources in accordance with the principles of sustainable development.⁷¹

Implicit within the strategy is an emphasis on development rather than protection of the environment. During the first two years of the program, only 73,000 hectares (51,000 hectares and 22,000 hectares by the public and private sectors respectively) were reforested, falling well short of the goal of 100,000 hectares per year. The short fall was attributed to inadequate funding and a reliance on force account project implementation to achieve public sector targets.⁷² Moreover, the NFP failed to address adequately ongoing logging operations, both legal and illegal, and the effects of slash and burn practices carried on by some of the approximately 8 million Filipinos from 1.2 million families who derive their livelihood from forest lands.⁷³ As a result, the rate of deforestation remained at approximately 100,000 hectares per year, far exceeding the rate of reforestation.⁷⁴

⁷¹"A Profile of the National Forestation Program" (Manila: Asian Development Bank, 1990), 1. Photocopy obtained from Albab Akanda, Project Economist, Asian Development Bank.

⁷²Ibid., 7-8.

⁷³Some estimates place the number of Filipinos who derive their livelihood from the forests at 14 million. The last census was completed in 1980, and there are considerable differences of opinion regarding the exact rate of population growth.

⁷⁴Roque, 8-9. Dr. Roque also states that "There is no agreement on the rate of deforestation; neither is there a credible source of information. The meaning of 'deforestation' is not even clear." Dr. Roque served as Assistant Secretary for the Department of Natural Resources under Marcos from 1973 - 1983 and

Within the second year of the NFP, a shift in the mode of implementation from force accounts to contracts with the private sector was initiated. The shift included a P10,000 deposit per hectare from Timber License Agreement holders to be refunded upon reforestation of areas logged over at a ratio of one to one. USAID provided a \$6 million grant to fund the shift. The ADB followed with a \$120 million Forestry Sector Program Loan to support implementation of the NFP through 1992 with a first tranche of \$60 million. The shift in strategy resulted in a marked increase in reforestation in 1988 with a total of 64,773 hectares being reforested. Through 1989, the shift towards private contracts with the government accelerated and a total of 10,069 contracts were awarded by years end. As a result, 124,000 hectares were reforested in 1989. The NFP also generated employment for 188,000 Filipinos from 1988 through 1989, or approximately one new job for each hectare that was reforested. The generation of employment is also a direct result of privatization. Ninety percent of the contracts were awarded to individual families. The NFP also received additional support from the Overseas Economic Cooperation Fund of Japan in the form of a \$120 million loan, of which the first tranche became available in the third quarter of 1989. The grants and loans from foreign sources helped to ensure the ongoing reforestation projects and in a sense must hold the DENR accountable.

2. The Constitution

Environmental awareness and concern was institutionalized on 2 February 1987 with the ratification of the Philippine Constitution. Article II (Declaration of Principles and State Policies) Section 16 provides a fundamental statement of policy that “the State shall protect and advance the right of the people to a balanced and healthful ecology in

as Undersecretary for the Environment at the DENR from 1986 - 1990. Dr. Roque is now with the World Wildlife Fund and The Conservation Foundation in Washington D.C.

accord with the rhythm and harmony of nature.” More specifically, Article XII (National Economy and Patrimony) Sections 3 and 4 instruct Congress to take “into account the requirements of conservation, ecology and development” in managing the lands of the public domain. “[Further,] forest lands and natural parks shall be conserved and may not be increased or diminished, except by law. The Congress shall provide ... measures to prohibit logging in endangered forests and watershed areas.” Article XIII (Agrarian and Natural Resources Reform) Section 4 echoes Article XII. “[The] state shall encourage and undertake the just distribution of all agricultural lands, subject to such priorities and reasonable retention limits as the Congress may prescribe, taking into account ecological ... considerations, and subject to just compensation.”

Although the Constitution gives explicit recognition of environmental management, it does not provide the people with a vested interest in the land or any security through land tenure recognition. Article XII Section 3 states that “Lands of the public domain are classified into agricultural, forest, or timber, mineral lands, and national parks Alienable lands of the public domain shall be limited to agricultural lands.” This is significant given that the Philippine government claims ownership to more than 62% of the nation’s total land area amounting to 18.6 million hectares. 15.01 million of this 18.6 million hectares are classified as forestal. Only 2.71 million hectares are classified as agricultural and thus alienable public lands.⁷⁵ The lack of secure tenure or titling provides no incentive for land improvement or nutrient maintenance for the 8–10 million Filipinos who farm on forestal lands.⁷⁶

⁷⁵Owen J. Lynch and Kirk Talbott, “Legal Responses to the Philippine Deforestation Crises,” *New York University Journal of International Law and Politics* 20 (Spring 1988): 682.

⁷⁶*Philippines Environment and Natural Resource Management Study*, (Washington D.C.: World Bank, 1989), x, IBSN, 0-8213-1272-3.

However, the Constitution does guarantee the process of granting and ensuring indigenous or tribal communities their right to protect and manage ancestral forest areas. Article II (Declaration of Principles and State Policies) Section 22 declares that “The State recognizes and promotes the rights of indigenous cultural communities within the framework of national unity and development.” Article XII (National Economy and Patrimony) Section 5 states that “The State, subject to the provisions of this Constitution and national development policies and programs, shall protect the rights of indigenous cultural communities to their ancestral lands to ensure their economic, social, and cultural well being.” Article XIII (Agrarian and Natural Resources Reform) Section 6 dictates that “The State shall apply the principles of agrarian reform or stewardship, whenever applicable in accordance with law, in the disposition or utilization of other natural resources, including lands of the public domain under lease or concession suitable to agriculture, subject to prior rights, homestead rights of small settlers, and the rights of indigenous communities to their ancestral lands.” Given the legal basis of the Constitution, the DENR and the administration must differentiate between the indigenous or tribal peoples and other landless, migrant Filipinos, moving beyond the indiscriminate label of *kainginero* or slash-and-burn cultivator. The swidden agriculture as practiced by the indigenous people is an ecological and sustainable way of using the land.⁷⁷

3. Aquino's Other Priorities.

On 27 July 1987 President Aquino delivered her first State of the Nation Address to a Joint Session of Congress under the new Constitution. Aquino focused upon the foreign debt which stood in excess of \$28 billion, and she repeated her pledge to end

⁷⁷Roque, 12.

all threats to democracy by the end of her term. However, no mention was made of the environment.⁷⁸

The foreign debt was again a major theme in Aquino's second State of the Nation Address on 25 July 1988 as was the insurgency.

Great as our gains have been, we could have gone twice as fast and twice as far if we did not have one foot manacled to the debt. Our external debt must be dramatically reduced We cannot indefinitely give more than 40 percent of the budget for total debt service.⁷⁹

In reference to the Communist Party of the Philippines and the New Peoples Army, Aquino stated that

This may be remembered as the year the insurgency was broken To all of you who are in this chamber here because you won at the ballot box, democracy is beating back the challenge of the totalitarian left. We are winning because we have given back to the people the control of their lives and faith in the future.⁸⁰

Yet to the extent that the people had no control over their environment, they had no control over their lives and once again Aquino failed to provide some vision or concern for the environment which would give the people some faith in the future. As one analyst stated,

If one expects boldness, innovation and sweep about her vision for the nation, they are not found in the address [Since] many of us are looking forward to what is in store for a nation we would like to think has a future under a democratic system, we have to accept that the address launches us into an era of the Great Plod.⁸¹

⁷⁸"Text of Aquino's State of Nation Address," *Manila Bulletin*, 28 July 1987, 28. FBIS, 31 July 1987, L1-L7.

⁷⁹"Gives State of Nation Address," *Quezon City Radyo ng Bayan*, 25 July 1988; FBIS, 25 July 1988, 57.

⁸⁰*Ibid.*, 58.

⁸¹Amando Doronila, "Aquino's Agenda for the Nation: The Great Plod," *Manila Chronicle*, 27 July 1988, 1; FBIS, 27 July 1988, 60.

4. Population Growth

A lack of direction also afflicted the government's population control program. The present population of the Philippines is approximately 60 million and at a growth rate of 2.4% will double by the year 2020. The Aquino administration failed to provide a consistent population control policy and was subject to a stoppage of funds from USAID in 1988. A September 1989 USAID report on sustainable development stated,

We are not confident that the [Philippine government] wishes to recognize the seriousness of this constraint. *If every recommendation we have made were immediately and effectively implemented, it would still only be buying time—and not very much—if effective population control is not rapidly put into place.*⁸²

Although the USAID report offered no explicit recommendations as to a population control program, the government must seek close cooperation with the leaders of the Philippine Catholic Church including the Catholic Bishops Conference of the Philippines and Cardinal Sin. Without the support of the Catholic Church, success seems unlikely.

C. AGENTS FOR CHANGE

In February 1988, six months prior to Aquino's State of the Nation address, the Catholic Bishops Conference of the Philippines provided an apocalyptic vision for the future and drew a direct link between the rural insurgency and the damaged environment in a pastoral letter signed by 99 of the 100 bishops. The statement was unprecedented in Roman Catholic Church history, going beyond any proclamations by Pope John Paul II. Read from all Catholic pulpits on 13 March 1988, the letter warned that " 'It is now a matter of life and death Despoliation results from not only 'human greed' but also

⁸²*Sustainable Natural Resources Assessment - Philippines* Manila: United States Agency for International Development, 1989. Emphasis as published. See also "A Menu for Malnutrition," *Far Eastern Economic Review*, 12 July 1990, 38. *Far Eastern Economic Review* reported that USAID, the program's primary donor, decided not to renew funding in December 1988 citing Philippine Government confusion over funding priorities. In 1990, a new five-year, \$40 million population package was agreed upon.

from 'the relentless drive of our plunder economy.' This in turn leads to 'an increase in political and social unrest.' ”⁸³ The Philippine bishops ranked “the ‘ruthless exploitation’ of land and water as an even ‘more deep-seated crisis than ‘political instability, economic decline and a growth in armed conflict.’ ”⁸⁴

The bishops provided one more voice to a growing grass-roots conservation movement fighting for control of the nation’s natural resources. In November 1988, Haribon Foundation, the Philippines’ oldest non-government environmental organization founded by Dr. Celso Roque in 1985, collected one million signatures to present to Aquino urging her to declare a logging ban in Palawan, considered “the last frontier, the last national treasure of exotic flora and fauna.” ⁸⁵ However, Palawan remains typical of traditional Philippine politics with the interlocking interests of politicians, government officials, the military, and businessmen who control the economy.

One man, Jose “Pepito” Alvarez controls over 50% of the timber concessions covering 25% of the total land area of Palawan or 168,000 hectares through two corporations: Pagdanan Timber Products (PTP) and Nation-wide Princesa Timber (NPT) whose Timber License Agreements (TLAs) expire in 2007 and in 1999.⁸⁶ In a June 1991 study, the ADB estimated that the net profit from these concessions was \$4,673 per hectare making logging a multibillion dollar industry.⁸⁷

⁸³James Clad, “The Fragile Forests,” *Far Eastern Economic Review*, 25 February 1988, 19.

⁷³Ibid.

⁸⁵James Clad and Marites D. Vitug, “The Politics of Plunder,” *Far Eastern Economic Review*, 24 November 1989, 48.

⁸⁶James Clad, “The Timber Tycoon and His Influential Friends,” *Far Eastern Economic Review*, 24 November 1988, 48.

⁸⁷Clad, “The Politics of Plunder,” 49.

In early 1988, a British consulting firm claimed that PTP and NPT were guilty of gross overcuts and of constantly expanding concessions. A senior Palawan provincial board member followed with a letter in July 1988 to DENR Secretary Fulgencio Factoran protesting PTP's actions and requested a log count.⁸⁸ No action was taken, and critics suggested it was due to political patronage. Notably, Alvarez funded Ramon Mitra's successful 1987 congressional campaign and subsequent election as Speaker of the House.⁸⁹ As late as 1989, commercial loggers were the biggest single source of money for political campaigns.⁹⁰ Mitra has not denied receiving money from Alvarez but asserts that the money received was Alvarez's personal contribution, not the companies. Mitra became the LDP's candidate for president for the May 1992 elections. In turn, the LDP failed to take a strong stand against illegal logging or to promote a total commercial logging ban.⁹¹

In 1989, Aquino seemed to take a renewed interest in the environment in response to the campaign carried on by the environmentalists and the Roman Catholic Church. On 18 March 1989, Aquino announced a ban on all timber exports stating that,

The [environmental] devastation that has been visited by the greed of commerce, the corruption of officials and the ignorance of men in our fair country has got to stop.⁹²

⁸⁸Clad, "The Timber Tycoon and His Influential Friends," 48.

⁸⁹Ibid. (*The Economist*, "A Brazilian Tale," 18 February 1989, reported that Alvarez in turn placed a \$1.2 million libel suit against *Far Eastern Economic Review* and its correspondents over their story on Philippine logging.)

⁹⁰"A Brazilian Tale," *The Economist*, 18 February 1989, 31.

⁹¹Philip M. Lustre, Jr., "The LDP: Big and That's All," *Philippines Free Press*, 24 August 1991, 34.

⁹²Clayton Jones, "Aquino Joins Bid to Protect Forests," *Christian Science Monitor*, 22 March 1989, 4.

Having the clear support of Aquino, which aides said was lacking in the past, DENR Secretary Factoran added that he planned to reduce the number of TLAs by half or more by 1990.⁹³

Aquino's renewed commitment to the environment was also apparent in her 24 July 1989 State of the Nation Address. One analyst suggested that the environment was one of "six key themes that loomed large in her legislative agenda and program for the government."⁹⁴

[For] our development to be at all sustainable we need to redress the years of degradation and neglect of the environment and preserve what remains of our natural resources As we emerge from a singular preoccupation with economic recovery, we must remind ourselves of initiatives that will have a major impact now and profound implications tomorrow While the lead in the environmental movement must be taken by the Department of Environment and Natural Resources, responsibility must be assumed by all of us.⁹⁵

Seven days after the Philippines was rocked for over 45 seconds by an earthquake which registered 7.7 on the Richter scale, Aquino delivered her fourth State of the Nation Address on 24 July 1990. In her remarks about the environment, Aquino stated,

Our efforts at increased production must be complemented by our reinvigorated drive for conservation I am pleased to report that we marked a milestone last year in our reforestation program. In 1989, we reversed the deforestation trend. We have now planted more areas with trees than the areas wasted by the irresponsible exploitation of our forest resources. *Linking arms* with our people and

⁹³Ibid.

⁹⁴"The Aquino Program," *Philippine Daily Globe*, 25 July 1989, 4; FBIS, 25 July 1989, 61. (The editorial states that "Aquino's third message to Congress ... is arguably her best ... it spells out clearly and coherently what her administration stands for and what it proposes to pursue on many issues Six key themes loom large in her legislative agenda and program for government And finally sixth, she sounded an alarm on the environment, calling for a massive program to conserve and protect natural resources, with the largest reforestation drive in Philippine history as its centerpiece.")

⁹⁵"Aquino Gives State of Nation Address," *Quezon City Radyo ng Bayan*, 24 July 1989; FBIS, 24 July 1989, 62-64.

nongovernmental organizations, we have created a vision of development without destruction. To underscore this commitment, I directed the Department of Environment and Natural Resources on June 1, 1990 to blast all roads leading to virgin forests being used by illegal loggers. Furthermore, we have drastically reduced the number of timber license agreements from 142 to 75.⁹⁶

A statement from the Central Bank substantiated in part Aquino's claims of progress. According to Central Bank statistics, foreign exchange earnings from forest products declined by 21.5% to \$197 million from the 1988 level of \$251 million as a result of the export ban.⁹⁷ However, these figures do not take into account illegal logging which USAID estimates at one-half to several times the legal cut.⁹⁸

Enforcement of any ban on logging is made difficult by the DENR's limited budget which allows for only one guard for every 3,000 hectares.⁹⁹ Moreover, in several cases, members of the Armed Forces of the Philippines and local officials have been the perpetrators. To aid in the enforcement of total logging bans, such as the one put into effect in the province of Bukidnon, Mindanao in 1989, the DENR has deputized local Church and community members to act as forest officers, with power to arrest offenders and confiscate illegal logs. Being a forest guard is a dangerous occupation in the

⁹⁶"Aquino's State of Nation Address Opens Congress," *Quezon City Radyo ng Bayan*, 23 July 1990; FBIS, 24 July 1990, 56. Emphasis added. Note: "Linking arms" refers to the *Kabisig* movement which Aquino announced at the Independence Day celebrations, 12 June 1990. For a further discussion of *Kabisig*, see pp. 50-52.

⁹⁷Rica D. Delfino, "Share of Agro-Forestry in Exports Income Down in 89," *Business Star*, 15 March 1990, 2; FBIS, 21 March 1990, 45.

⁹⁸Marites Danguilan-Vitug, "Fighting for Life," *Far Eastern Economic Review*, 13 June 1991, 53.

⁹⁹*Ibid.*, 52.

Philippines. Throughout the country, 321 forest guards have been killed by illegal loggers and their protectors.¹⁰⁰

Among those deputized in Bukidnon were all priests from the Diocese of Malaybalay including Father Nerilito Satur. DENR reported that Father Satur of Malaybalay had helped apprehend over 6,000 board feet of timber from February to August 1991 including over 1100 board feet of illegally cut lumber loaded in a weapons carrier on 16 July 1991.¹⁰¹ On 14 October 1991, Fr. Satur was killed by three armed men reportedly connected with illegal logging in the province of Bukidnon. Bishop Rosales, in his letter dated 25 October 1991, informed the 403rd Infantry Brigade Commander, Colonel Cristino Piol, that Catalino Gabisan (26th Infantry Battalion) was involved in the killing and enclosed several affidavits as well as a copy of the Warrant of Arrest. Bishop Rosales also requested the withdrawal of the 26th Infantry Battalion and the Citizen's Armed Forces Guerrilla Unit (CAFGU) Detachment from the area, sending copies of his letter to President Aquino and her Chief of Staff, Lieutenant General Abadia to ensure some action.¹⁰²

At least 10 priests have been killed in the last six years by private militiamen believed to be working for big business interests involved in the timber and mineral exploitation in Mindanao. Moreover, church workers say that for every murder of a priest there are many more incidents of harassment, intimidation and threats against

¹⁰⁰Barbara Goldof, "Environment: Green Activism a Dangerous Calling in the Philippines," *Inter Press Service*, 3 December 1991. Copy obtained via EcoNet, "cab. philippine" conference, 15 December 1991.

¹⁰¹Cynthia L. de Leon, "Bukidnon Priest's Killers Identified by 2 Witnesses," *Philippine Daily Inquirer*, 24 October 1991, 12. Copy obtained from Sierra Club, Washington D.C.

¹⁰²Copy of Bishop Rosales letter obtained via facsimile from Christina Cobourn, Columban Fathers Justice & Peace Office, Washington D.C.

church workers, nuns and priests. Rape or subversion charges were filed against several environmentally active priests and other vocal opponents in Mindanao between 1990 and 1991 including Rex Mansmann, charged with raping a 13-year-old tribal girl. Church workers state that the charges are part of a smear campaign by logging and mining firms which Mansmann prevented from entering the tribal reservation.¹⁰³

Members of the environmental group Haribon were charged with subversion and arrested by intelligence agents of U2-Western Command and members of the Philippine National Police (PNP) after exposing the illegal logging and export of the protected ebony tree, *kamagong*, otherwise known as "black gold." The members of Haribon had confiscated a shipment of *kamagong* that was bound for the Malaysian state of Sabah. Immediately after the incident, the military raided the Haribon office in Puerto Princesa and claimed that the Haribon members were communists in possession of subversive documents and several firearms.¹⁰⁴ As with Fr. Satur, the environmentalists were assisting the DENR. Following reports in the *Philippine Daily Inquirer* and press releases by the Haribon Foundation, Secretary of Defense Fidel Ramos ordered a conference between the Brigadier General Braulio B. Balbas Jr., Commander, Western Command (COMWESCOM) together with Superintendent Nestorio Gualberto, Provincial Director, Palawan PNP, on one side and Attorney Maximo Kalaw, Jr. and staff of the Haribon Foundation on the other, in the presence of a representative of the Economic Intelligence and Investigation Bureau and members of the press. In a report on

¹⁰³"Philippines: Green Priests Targeted by Loggers," *Inter Press Service*, 28 October 1991. Copy obtained via EcoNet, "rainfor. genera" conference, 1 November 1991.

¹⁰⁴Renardo B. Lopez, "'War' Between Haribon and the Military," *Philippine Daily Inquirer*, 15 March 1991, 4. Copy obtained from Philippine Development Forum, Washington D.C. (Lopez also states that "The 'war' between Haribon and the military in Palawan is a significant chapter in Philippine history because it is an acid test for true democracy and will decide future ecology conservation trends.")

the conference addressed to Secretary Ramos, Deputy Chief of Staff, Alexander P. Aguirre stated

I affirmed ... that Haribon is an organization engaged in the protection of the environment and is neither a subversive organization nor a communist front as alleged in media reports. While there were members of the organization found to be subversives by WESCOM, this could merely be incidental, and Haribon, as a whole, cannot be cited for subversion nor be held accountable for the individual acts of its members considering the circumstances of their employment. This however does not preclude the AFP and the PNP from undertaking the necessary legal action against certain personnel of the Foundation identified as members of the CPP/NPA/NDF as evidence warrants.¹⁰⁵

Aguirre also reported that COMWESCOM was directed to cooperate with Haribon Foundation in the accomplishment of the latter's mission of environmental protection.

Kalaw clarified that, as the country's largest environmental organization, Haribon was committed to cooperate with all individuals and organizations who share the concern for the continuing degradation of Palawan's forests and that this commitment went beyond ideological considerations. Kalaw also welcomed the military's expression of support for the cause of the environment.¹⁰⁶ A strong international outcry which included action taken by GLOBE and the Congressional Human Rights Caucus in Washington D.C. provided some protection for the Haribon members, but the charges remain.¹⁰⁷

¹⁰⁵Alexander P. Aguirre, Major General, AFP, Deputy Chief of Staff, to Secretary Fidel V. Ramos, Department of National Defense, 15 March 1991 and "Haribon Foundation - Military Cooperation for Ecological Security," press statement, Haribon Foundation, 15 March 1991. Copies obtained from Philippine Development Forum, Washington D.C.

¹⁰⁶"Haribon Foundation - Military Cooperation for Ecological Security."

¹⁰⁷Christina Cobourn, "Philippine Human Rights Violations: A Block to Sustainable Development," report for Philippine Development Forum, Washington D.C. dated 31 October 1991 and submitted for a Congressional briefing. Copy obtained via facsimile.

At a meeting held in Tokyo on 3 July 1991, the GLOBE International General Assembly adopted an "Action Agenda" concerning Palawan which reiterated concern for the environmental activists in the province and throughout the Philippines. GLOBE made several requests of the Philippine government:

- Take immediate action against illegal logging practices in Palawan;
- Immediately ban all commercial logging in the natural forest of Palawan;
- Elucidate the recent arrests of environmentalists in Palawan and ensure that NGOs are enabled to operate within the national legislation without impediment; and
- Improve the integration of environmental conditions in all development programs throughout the project cycle.¹⁰⁸

Other confrontations with the military and paramilitary groups have occurred in northern Luzon. Henry Dumoldol, an Isneg tribal leader from Kalinga-Apayao in the northern Cordillera region of Luzon was murdered by paramilitary men on 26 July 1991. Witnesses stated that members of the paramilitary group had been trained and supervised by the military. Dumoldol had formed the Nabuangan Community Alliance which, with the assistance of the Legal Rights and Natural Resources Center, Friends of the Earth—Philippines obtained a contract reforestation agreement with the DENR, and petitioned the government to recognize their control and management over their ancestral areas. A *bodong* or peace pact was celebrated earlier to delineate existing tribal boundaries in 1989. Dumoldol also advocated sustainable development, taught the people about the importance of protecting the environment and initiated an anti-logging campaign. In early 1991, hundreds of tribal families fled their homes as a result of air and ground

¹⁰⁸GLOBE International, "GLOBE International Action Agenda: Biodiversity Protection in Palawan, the Philippines," Tokyo, 3 July 1992. Copy obtained from GLOBE - US, Washington D.C.

bombardment by Philippine Army Units. Isneg leaders claim the military is working in coordination with logging companies to gain access to the Isneg dipterocarp forests.¹⁰⁹

Antoinette Royo, Staff Attorney of the Research Policy and Development Division of the Legal Rights and Natural Resources Center (LRC), said that the LRC is presently handling fifteen cases including that of the Isneg tribe. Progress towards ensuring the rights of the indigenous tribal communities has been painfully slow. Senate Bill 909, initially drafted and actively supported by the Legal Rights and Natural Resources Center and which would further recognize the rights of tribal communities to ancestral lands, barely reached a second reading after four years.¹¹⁰

One hundred and eighty tribal groups from throughout the Philippines have also formed an umbrella group, the National Federation of Indigenous Peoples (KAMP), to lobby for their interests as recognized in the Constitution. Many of the tribal groups have sought Certificates of Ancestral Land Claims (CALCs) from the DENR. The DENR had initiated the CALCs in anticipation of the passage by Congress of the law implementing the Constitutional provisions on ancestral lands. Due to the inaction of the Philippine Congress, KAMP warns that the CALCs are just "mere pieces of paper." Despite the uncertainty, some tribal groups have, in desperation, sought the CALCs. Three such tribal groups are the Batacs, the Palawanons, and the Tagbanuas which number about 75,000. All three tribal groups are located on Palawan.¹¹¹

¹⁰⁹Cobourn, "Philippine Human Rights Violations."

¹¹⁰Antoinette Royo, interview by author, phone conversation, Washington, D.C., 13 November 1991 and Quezon City, Philippines, 28 May 1992.

¹¹¹Ramon Isberto, "Philippines: Desperate Tribals Pursue Ancestral Land Claims," *Inter Press Service*, 23 March 1992. Copy obtained via EcoNet, "cab. philippine" conference, 28 March 1992.

The Legal Rights and Natural Resources Center has also been critical of the Paper Industries Corporation of the Philippines (PICOP) and its treatment of a local tribal group. According to the World Bank, PICOP has established industrial tree plantations in Mindanao in an attempt to provide a sustainable source to meet the demand for pulpwood and fuelwood and has met with moderate success since 1986.¹¹² However, the Legal Rights and Natural Resources Center maintains that in the field, absent World Bank knowledge, PICOP maintains a payroll for the PICOP Infantry Battalion which acts as a CAFGU and has harassed indigenous (Manobo) tribal farmers, whose ancestral lands are situated inside the plantation area. Antoinette Royo states that documented cases of illegal arrests, grave threats, and forced labor are available. The Manobo community stands witness to the illegal logging undertaken by PICOP in the secondary forest area allegedly within its concession.

On 4 February 1992, the GLOBE International General Assembly convened in Washington D.C. and adopted an 'Action Agenda' on logging in the Philippines which expressed support for those individuals and institutions in the Philippines who are working for the recognition and delineation of ancestral domain rights. The 'Action Agenda' also enunciated support for an investigation of those responsible for the continuing harassment of development workers and those working to protect the environment and an independent investigation and delivery of justice in the murders of Fr. Satur and Henry Dumoldol. More generally, GLOBE called for the arrest and prosecution of all civilian and military officials reportedly involved in illegal logging.

Amnesty International (AI) has also been critical of the strategies employed by the AFP and the CAFGUs in numerous Urgent Action Alerts and in the report

¹¹²*Philippines Environment and Natural Resource Management Study* (Washington D.C.: The World Bank, 1989), 15.

Philippines: The Killing Goes On published in January 1992.¹¹³ Although many of the tribal communities inhabit areas in which the New Peoples Army and the Moslem National Liberation Front have bases of operations, AI also recognizes that those same lands have considerable economic value.

Resistance to the exploitation of the land and its natural resources has placed many communities in conflict with powerful commercial interests and not infrequently with the government's own security forces. Organizations established to defend tribal community interests have often been labeled by the military as fronts for the CPP/NPA and leaders or members of such organizations have become the victims of extrajudicial execution and other violations.¹¹⁴

AI also made several proposals to stop the extra-judicial executions:

- Maintain strict control including a clear chain of command over all those personnel authorized to use force;
- Dismantle all armed vigilante groups including private armies;
- Disband all CAFGUs as soon as possible; and
- Prohibit explicitly the public "red-labeling" of alleged government opponents by government authorities and by members of government and government-backed security forces.¹¹⁵

Given the involvement of the AFP and CAFGUs in support of illegal logging, some environmentalists have become critical of US policies. Maximo Kalaw, President of Green Forum and the Haribon Foundation has criticized the US stating,

Military aid from Washington and timber markets in Japan are fueling the devastation Evidence mounts that members of Philippine paramilitary groups and armed forces—who depend on US military assistance for some eighty percent

¹¹³Amnesty International is an independent worldwide movement working for the international protection of human rights. It seeks the release of men and women detained anywhere because of their beliefs, color, sex, ethnic origin, language or religious creed, provided that they have not used nor advocated violence. These are termed prisoners of conscience. It works for fair and prompt trials for all political prisoners and works on behalf of such people detained without charge or trial. It opposes the death penalty and torture or other cruel, inhuman or degrading treatment or punishment of all prisoners without reservation.

¹¹⁴*Philippines: The Killing Goes On* (New York: Amnesty International USA, 1992), 37.

¹¹⁵*Ibid.*, 97.

of their operating, maintenance and supply budget—are supporting illegal logging. In looting the forests of the Philippines to enrich themselves and support local politicians, they have brushed aside the public they should be defending, and have harassed and killed courageous community leaders opposing the destruction Fate placed the Philippines in an active seismic and volcanic belt, and athwart main thoroughfares for typhoons. But policymakers in Washington and Tokyo must not contribute to further tragedies and higher death tolls. Before we succumb to compassion fatigue, let's prevent avoidable tragedies, by putting a stop to illegal logging and timber trade, and shifting assistance from those who destroy the forest to groups who preserve their land and future. Let's emphasize *natural* security as the basis of national security.¹¹⁶

The Philippine Development Forum (PDF) located in Washington D.C. has also been critical of US policy. In a report prepared for a Congressional briefing, the PDF stated,

A greater emphasis on human rights by the new US Ambassador to the Philippines would ... bolster those in the Philippine government concerned about military abuses. *Without a doubt, though, cutting US military aid to the Philippines would do the most to de-escalate the war which is proving to be so destructive to the life systems of the Philippines.* The Philippine military budget is overwhelmingly dependent on US aid for their operations, maintenance and supply budgets. Cutting their resources would only serve to strengthen those in Philippine society who are committed to pursuing peaceful solutions to the social conflict.¹¹⁷

Ironically, after the US completes its withdrawal from Subic, some 11,000 hectares of forest may be threatened. The area includes a critical 2,000 hectare watershed which supplies the base with 10 million gallons of water daily. The forests, which represent the last remaining tract of virgin forest in central Luzon and which extend from Subic up to an adjacent national park in Bataan province, have been protected by some 600 US and Filipino soldiers for the last 20 years. In contrast the national park suffers

¹¹⁶Richard Forrest and Maximo Kalaw, Jr., "The Philippines: Watersheds and bloodshed," 13 November 1991. Facsimile from the National Wildlife Fund to the Sierra Club.

¹¹⁷Cobourn, "Philippine Human Rights Violations: A Block to Sustainable Development." Emphasis as found.

intrusions from illegal loggers, cattle grazers and slash and burn farmers. A new 25-kilometer road next to the park has raised the possibility of encroachment into Subic.¹¹⁸

The government plans to convert Subic into an industrial zone complex. President Aquino has already signed a law designating Subic and adjacent areas a duty-free zone.¹¹⁹ Some domestic and overseas corporations based in Singapore and Hong Kong have already expressed interest. However, for the plans to succeed, the forest areas must be maintained to ensure adequate water supply for the communities and industrial establishments. DENR undersecretary Victor Ramos stated that the government would use a community-oriented approach to protect the forest utilizing a \$1 million grant from USAID. Tribal community leaders have expressed concern that poverty in the lowlands will drive people to farm the forest.¹²⁰ Mayor Richard Gordon of Olongapo, the designated head of the free trade zone, remains optimistic, seeing commercial possibilities. For decades, US pilots have learned jungle survival techniques from the Aeta aborigines who live in the rainforest. Gordon says that soon tourists will be able to do the same.¹²¹

President Aquino, frustrated with a Congress which failed to share in her avowed idealism, formed *Kabisig* or the Linking Arms Movement, which had its beginnings in the aftermath of the last and bloodiest coup attempt carried out against her government in December 1989 by members of the Reform the Armed Forces Movement,

¹¹⁸Isagani de Castro, "Philippines: Forests in US Base Under Threat," *Inter Press Service*, 24 April 1992. Copy obtained via EcoNet, "cab. philippine" conference, 27 April 1992.

¹¹⁹"Aquino Signs Subic Duty-Free Bill," *Asian Wall Street Journal*, 17 March 1992, 4.

¹²⁰de Castro, "Forests in US Base Under Threat."

¹²¹Lawrence MacDonald, "Philippine Officials Squabble Over Subic," *Asian Wall Street Journal*, 13-14 March 1992, 1 and 20.

Soldiers of the Filipino People and the Young Officers Union. The office of the Executive Secretary was designated as the coordinating center with Mario Taguiwalo, the health undersecretary with leftist credentials, as the head of the Kabisig Secretariat. Three loyalist governors including Daniel Lacson of Negros Occidental were named to coordinate local government units. Aquino chose Oscar Orbos as the pointman for the movement.¹²² Although Kabisig has been criticized as an attempt to go around Congress and an indication of Aquino's failure to control the political system and particularly the ruling LDP coalition, Kabisig has made the Manila government more open to NGOs, POs and other civic organizations including environmental organizations such as Haribon Foundation and NGO networks such as Green Forum—Philippines. Most government departments, including the DENR, now have an NGO liaison officer, and NGOs play an important role in implementing government projects and to some extent help plan the projects.¹²³

Yet *Kabisig* has also been criticized. Antoinette Royo states that it is incorrect to attribute to *Kabisig* the government's recognition of NGO involvement in project implementation by its agencies. President Aquino's recognition of the NGOs' key role in governance began in 1986 when she was raised to power by their active lobby. NGOs earned this recognition. In a consultation with NGO coalitions, *Kabisig* in fact did not receive support. It was seen by the NGOs as an indication of government's failure to understand the NGO philosophy and an attempt to coopt them.¹²⁴

¹²²John McBeth, "Spirit of 1986," *Far Eastern Economic Review*, 5 July 1990, 18.

¹²³Donald Goertzen, "Agents for Change," *Far Eastern Economic Review*, 8 August 1991, 20-21.

¹²⁴Antoinette Royo, written correspondence, 15 May 1992.

Antoinette Royo also states that Kabisig is now operating independently of existing NGOs, being a government organization, and is seen as competing with them, giving rise to confusion, both by funders and benefactors. Kabisig has also become a source of corruption and is seen as an affront to genuine people empowerment. ¹²⁵

Some hope for the environment lies in the outcome of the May 1992 Philippine national elections due to the actions of several environmental networks. Specifically, the Green Forum–Philippines initiated an “Earth Vote–Philippines” voter registration drive, setting a target of 10 percent or 3 million registered voters in order to form a constituency for the environment and sustainable development. Green Forum believes that a block of 10 percent of the registered voters is large enough to swing the Presidential election. The Green Forum also published a “Political Guide for Sustainable Development” which rated candidates’ past performance on sustainable development issues.¹²⁶ Fidel Ramos, a West Point graduate and ex-Defense Secretary under Aquino, apparently reached an understanding with the Haribon Foundation in his successful run for the presidency in 1992. It will be interesting to see if he follows his victory with any favors to those concerned with the fate of the environment. ¹²⁷

The national elections may have also been used to thwart approval of the Total Commercial Logging Ban (TCLB) as the Philippine Congress adjourned for the

¹²⁵ibid.

¹²⁶The Green Forum - Philippines is composed of over 700 NGOs, POs, and Church groups. An “Earth Vote” pamphlet states that “the emerging ‘green’ sustainable development movement carries with it the scientific, philosophical, theological and management underpinnings to provide a basis for transcending competing ideologies and focusing on assuring the country’s life flow . . . [forming] a kind of BIOCRACY together with focus on people’s participation in community units in their own development to actualize DEMOCRACY.”

¹²⁷Maximo “Junie” Kalaw, Jr., “From Manila to Rio: The Philippines and the Earth Summit,” speech given at the Eye Gallery, San Francisco, 5 November 1991.

campaign in February 1992. On 25 July 1991, the Philippine Senate approved the TCLB under Senate Bill No. 1404 after more than three years of deliberation. The House passed its own bill which opted for a selective logging ban which would allow logging in areas deemed to have sufficient forest cover. The differences were to be reconciled by a bicameral conference committee. On 11 February 1992, Senate President Neptali Gonzales and House Speaker Ramon Mitra announced that the log ban was "deemed ratified" and ready for signing into law by President Aquino. However, press reports stated that the bill had died in this final stage when several House committee members refused to sign the final draft. Gonzales and Mitra insisted that there was no impediment for President Aquino to sign the bill. But Maximo Kalaw stated that the Mitra camp may have been out to keep the real status of the logging ban muddled until after the election.

We have heard reports that three of the six house members of the conference committee who voted in favour of the log ban are retracting their votes [Mitra] will get publicity mileage out of his widely publicized support for the logging ban, but in the end we will get hit with a technical knockout because it turns out the bill was not technically passed by Congress.¹²⁸

Following the adjournment of the Philippine Congress, the PDF issued an Urgent Action Alert with the support of the Rainforest Action Network.

When the Philippine Congress adjourned in February, without passing the Total Commercial Log Ban Bill, the fate of the Philippine forests and the only hope of preventing the ecological, social, and human tragedy of deforestation was left imperiled. The Task Force for a Total commercial Logging Ban (comprised of over 40 Philippine environmental and development groups) is urging President Corazon Aquino to call for a special session to approve the compromise bill agreed upon in conference committee. Your support is urgently needed. International pressure is likely to make the difference.¹²⁹

¹²⁸Ramon Isberto, "Philippines: Election Campaign Maneuvering Muddles Log Ban Issue," *Inter Press Service*, 12 February 1992. Copy obtained via EcoNet, "cab. philippine" conference, 17 February 1992.

¹²⁹"Urgent Action Alert: Help Save the Philippines Last Remaining Tropical Forests," EcoNet, "rainfor. genera" conference, 7 April 1992.

The Action Alert also criticized the present system of management .

Despite reductions in the number of timber license agreements, selective logging bans in areas like Samar and Bukidnon, and the 1992 ban on logging in primary forest, logging continues relatively unabated. Enforcing these partial bans is nearly impossible and actually more difficult than enforcing a total ban for several reasons. First, the government has not yet delineated the primary forests, therefore they are being cut faster than they can be identified. Second, the government is unable to monitor logging in restricted areas due to a lack of funding and manpower and corruption among some officials. Third, there is no means for distinguishing between legally and illegally cut logs.¹³⁰

The Alert concluded with a call for letters and facsimiles in support of the TCLB to be sent to President Aquino, Congressman Ramon Mitra, Senator Orlando Mercado, Senator Heherson Alvarez, and Congressman Jerome Paras. Specifically, the Alert requested that President Aquino to call a special session of Congress to approve the bill on 25 May 1992 as the members reconvened to validate the election results. The Alert stated that after 25 May it would be too late, predicting that it would take years for the new Congress to pass a bill.

In March 1992, President Aquino declared six provinces in Mindanao disaster areas after a prolonged drought caused power shortages, heavy crop damage and forest fires which razed some 2,000 hectares over a three week period. Power shortages have affected the entire country and have slowed growth, but the situation is especially critical on the southern island which is highly dependent (93 percent) on hydroelectric power.¹³¹ The power shortage has renewed pressure to build a geothermal power plant atop Mount Apo, the highest mountain in the country which has been classified as a National Park by

¹³⁰Ibid.

¹³¹"Asian-Pacific Briefs: The Philippines - Disaster Areas Declared," *Asian Wall Street Journal*, 19 March 1992, 4; Raphael Pura and Lawrence MacDonald, "Power Shortages Mar Philippine Outlook," *Asian Wall Street Journal*, 6 May 1992, 1 and 6; and Isagani de Castro, "Philippines: Power-Hungry Islands Eye Geothermal Energy," *Inter Press Service*, 19 March 1992. Copy obtained via EcoNet, "reg. philippines" conference, 28 March 1992.

the Philippines, the UN and ASEAN. Some businessmen estimate that about \$770 million in industrial output and 300,000 jobs may be lost if the drought and blackouts continue.¹³²

The project had been discontinued in December 1988 after protests by local tribal groups, the Catholic church and the DENR. Secretary Factoran sent a memorandum to President Aquino on 25 July 1988 that declared the activities of the Philippine National Oil Company in Mount Apo "patently illegal."¹³³

As the PNOC continued to pressure Manila throughout 1989 and 1990, the tribal leaders came together to strengthen their stand against the project. On 28 July 1990, after four days of consultation, some 42 tribal leaders representing the Lumads signed a resolution reaffirming their commitment to fight for and die in defense of Apo Sandawa.¹³⁴ The Kinaiyahan Foundation supported the tribal groups and criticized the improper maintenance of existing power plants. The Foundation also noted that the supply of energy from the hydro-electric plants diminished rapidly because of the ongoing legal and illegal logging, causing the destruction of critical watersheds.¹³⁵

The issue continues today with the aid of the Catholic Church. Bishop Juan de Dios Pueblos of the Kidapawan Diocese sent a letter to the DENR refusing to endorse the project in February 1992. The DENR, relenting to pressure from Manila, granted a

¹³²de Castro, "Power Hungry Islands."

¹³³*The Assault on Apo Sandawa: APO Sandawa - PNOC Primer* (Davao City, Philippines: Kinaiyahan Foundation, Inc., 1990), 4. Copy obtained via Missionary Society of St. Columban, Campaign for Debt and Development Alternatives, Washington D.C.

¹³⁴*ibid.*, 11. (The Lumads number 450, 000 and belong to the Diangan, Tagabawa, Ubo and Manobo tribes.)

¹³⁵*ibid.*, 3.

certificate of clearance with 28 conditions including a scheme that would guarantee a sharing of benefits among the affected communities, payment of a royalty to the tribes and safeguards to keep the project environmentally sound. The PNOC obtained the support of one group called the Cotabato Tribal Consultative Council in March 1992, but Task Force Sandawa, which has opposed the project since 1988, remains unmoved. Chairman Socrates Semilla claims that the majority of the tribal groups remain opposed to the project and that the sulfur-rich geothermal waste from the PNOC drillings has already damaged the environment.¹³⁶

During her term in office, Aquino took the first tentative steps to reverse deforestation in Philippines. Logging has been banned in more than 40 provinces, and the export of logs is now illegal. TLAs have been reduced to 62 from 137, and the land under concession has been reduced from 5.4 million hectares to 2.3 million hectares. In 1990, the DENR and the private sector reforested 191,000 hectares. Forestry development will continue under a 25-year master plan completed in 1990 and funded by the ADB and the Finnish International Development Agency. Moreover, according to Secretary Factoran, the contract of foreign loans by the DENR which go beyond 1992, lock the next government into pursuing what has been started.¹³⁷

The success of existing reforestation projects depends upon the development of an evaluation program and incentives to care for the newly planted seedlings. Christina Cobourn of the Columban Fathers Justice and Peace Office in Washington D.C. notes that those Filipinos involved in reforestation projects are paid by the number of seedlings

¹³⁶de Castro, "Power Hungry Islands."

¹³⁷Marites Danguilan-Vitug, "Fighting for Life," *Far Eastern Economic Review*, 13 June 1991, 52-53.

planted, not by those seedlings which survive. In the past, survival rates have been as low as 20%.

The number of agencies responsible for reforestation projects should be reduced so that policy making and implementation are controlled by the DENR. Presently, the DENR must formulate policy in conjunction with the Department of Agriculture and the Department of Agrarian Reform among others. The DENR should also concentrate its efforts on the four islands of Mindanao, Palawan, Mindoro and Luzon given the DENR's limited resources and manpower.¹³⁸ In order to successfully enforce the logging and export bans and to compensate for the limited resources, the DENR must continue to cultivate working relationships with the various environmental groups, other NGOs and the Church and truly support them especially when in conflict with members of the military. The total number of concessions granted by the DENR should be further reduced as per the Total Commercial Logging Ban. Finally, the DENR and the new administration must actively seek out bilateral and multilateral debt-for-nature swaps to relieve the overwhelming burden that the debt imposes.

In conclusion, deforestation will remain a critical policy issue in the Philippines complicated by both internal and external factors in the short and long term. The long term effects of demography and a slow change in the political economy marked by the rise of the NGOs within the Philippines in conjunction with external factors, especially the growing global concern for the Earth's ecosystem within the "New World Order," will lead to slower but continued environmental degradation up to the year 2000. Think how tragically the US could become encumbered in our security relations with the

¹³⁸Johnson, 58. These islands are most important for conservation efforts given their species concentration and levels of endemism. Dr. Celso Roque concurred with this assessment as per phone conversation.

Philippines if America ignored the vast importance of forests and logs in determining the total course of politics in the Philippines.

IV. ELSEWHERE IN SOUTHEAST ASIA:

A. MALAYSIA

1. Statistics

Malaysia supplies 80 percent of tropical sawlogs in international trade and is the largest supplier of tropical sawnwood. Timber represents Malaysia's second-largest commodity export, earning \$3.1 billion in 1990.¹³⁹ Between 1963 and 1987, 2.8 million hectares or 30 percent of Sarawak's total forest area was logged by timber companies. The total cutting area for all of Malaysia today is estimated to be as high as 700,000 hectares per year. Only 4.4 million hectares of undisturbed forest remain.¹⁴⁰ Kuala Lumpur imposed an export ban on tropical hardwood from peninsular Malaysia in 1990. Sabah and Sarawak, which account for 90 percent of Malaysia's hardwood exports were free to ignore the ban since the forestry sector remains under State vice Federal jurisdiction. Without compensation from the federal government, Sabah and Sarawak are unlikely to stop exports. Between 1980 and 1988, the forestry sector provided over 50 percent of the state revenues. Log royalties formed 95 percent of the forestry sector total.¹⁴¹ However, in response to recommendations by the ITTO, Sarawak has pledged

¹³⁹Suhaini Aznam, "Timber and Tribes," *Far Eastern Economic Review*, 1 August 1991, 20.

¹⁴⁰*Malaysia Forestry Subsector Study* (Washington D.C.: The World Bank, 1991), i.

¹⁴¹"Malaysian State Reluctant to Ban Log Exports without Government Compensation," *Kyodo News Service*, 29 August 1990. Copy obtained via EcoNet, "ran. tropictimber" conference.

to reduce its annual timber production to 9 million cubic meters by 1994. Sarawak produced over 18 million cubic meters in 1990.¹⁴²

2. The Role of the Government

Sustained yield forestry is official Federal and State government policy. However, the World Bank criticized present practices in a survey completed last year and warned Malaysia that the country's rate of logging was four times what it considers sustainable. The Bank concluded that if present trends continue, forestry in Malaysia should be regarded as a "sunset industry." At present rates, forests will be practically exhausted on the Peninsula and in Sabah in the mid-1990s and only a few years later in Sarawak.¹⁴³

According to the Bank, ". . . harvesting is carried out haphazardly, with unnecessary and excessive damage to the residual forest, preventing regeneration of a commercial forest at the anticipated rate [T]he regenerating forest is too often relogged prematurely and in violation of regulations, leading to its total degradation."¹⁴⁴

The main reform that the Bank calls for is a sharp change in the way concessions are handed out. The present concession system fails to provide any accountability nor does the system encourage any long term interest in the forests. During the most recent state election held in 1987, the level of patronage was revealed. While campaigning, the nephew of the former Chief Minister of Sarawak made known that his uncle had granted concessions covering 1.25 million hectares of forest to his eight

¹⁴²"Malaysia Aims New Study at Logging Foes," *Kyodo News Service*, 7 March 1992. Copy obtained via Dialog Information Services, Inc.

¹⁴³*Malaysia Forestry Subsector Study*, i.

¹⁴⁴*Ibid.*, ii.

daughters. The uncle, in turn, divulged that friends and relations of his nephew, Datuk Patinggi Haji Abdul Taib bin Mahmud, the present Chief Minister, have licenses for 1.6 million hectares.¹⁴⁵

To ensure that concessionaires are held accountable, concession ownership should be made a matter of public record. Concession owners should also be held responsible for the action of their agents including foreign logging contractors who manage their concessions. In order to encourage a long-term interest in the forests, concession licenses need to be extended to at least as long as a full production cycle, subject to satisfactory performance as guaranteed by a performance deposit. Performance must also be annually affirmed by Forestry Department monitoring. Royalty levels associated with concessions ought to be increased to capture supra-normal profits, or windfall rents should be established.¹⁴⁶

However, any steps by the government to increase incentives for sustainable management and to ensure accountability and a long term interest will ultimately fail if supervision of concessions is not increased. The Bank stated that professional foresters should make frequent field trips to inspect private logging operations rather than remain in government offices. Private loggers should be required to employ professional foresters and forestry engineers to plan and supervise logging operations in the field. Post-harvest inspections and inventory combined with regular and routine monitoring during the regeneration period by Forest Department professionals should be a prerequisite for the return of the performance deposit.

¹⁴⁵"The Dwindling Forest Beyond Long San," *The Economist*, 18 August 1990, 23.

¹⁴⁶*Malaysia Forestry Subsector Study*.

The Bank also criticized parastatals that manage very large areas of forest, including much of the remaining virgin forest. Parastatals, which are largely independent of the Forestry Department, have acted no better than private companies and have failed to invest profits in other viable long term industries. Measures should be taken to increase the responsibility and public accountability of the parastatals to ensure that they are held to the same standard as the private licensee.¹⁴⁷

The Bank also recommended major and immediate reductions in both the volume of timber and the area of forest logged annually. Areas of virgin forest logged annually in Peninsular Malaysia, Sabah, and Sarawak should be immediately reduced to 60,000, 60,000, and 150,000 hectares per year respectively, including State Land Forests (SLFs) and Permanent Forest Estates (PFEs).¹⁴⁸ Moreover, rates of regrowth have been vastly overestimated. According to the Bank, at even the most optimistic growth rates and assuming a much improved marketing and sale of lesser known species, the annual increment of commercial species and commercial-sized timber is only 1 cubic meter per hectare. The Bank concludes that since 7 million of the 9.2 million hectares of logged forest were exploited in the 1980s, few forests will be ready for another cut until the middle of the next century.¹⁴⁹

The Bank also recommended a substantial extension of PFEs, preceded by an effective means for resolving conflicting claims between indigenous peoples and the forestry sector through either a ". . . once-for -all statewide Native Customary Rights (NCR) registration process or a legally-mandatory time frame for NCR registration and

¹⁴⁷Ibid. v.

¹⁴⁸Ibid., iv.

¹⁴⁹Ibid., 7-8.

negotiation in areas where use changes are proposed."¹⁵⁰ The Bank estimates that some 350,000 indigenous people in Sabah and between 500,000 and 700,000 in Sarawak depend to some extent on forests for their livelihoods. In Sarawak alone, the indigenous communities make use of an estimated 2 million hectares of the forests beyond that required for shifting cultivation.

The federal government has failed to apply a law which requires an Environmental Impact Assessment. Gurmit Singh, the founder of the Environmental Protection Society Malaysia (EPSM), the country's first NGO dedicated solely to the environment, lobbied ten years for mandatory environmental impact statements, a policy adopted by the Federal government in 1988. Singh has noted that virtually all logging is exempt and that public access to environmental impact statements is often blocked by Malaysia's Official Secrets Act.¹⁵¹ The World Bank stated that, "Despite the Constitutional limitations on the Federal role, it ... has one powerful tool which has not yet been applied in the forestry arena—the Environmental Impact Assessment requirement. This could usefully and legitimately be employed to review proposed changes in status from TPA to production forest, PFE to SLF or forest to agriculture."¹⁵²

The World Bank report did not explicitly address illegal logging or corruption within the forestry departments although such practices have been acknowledged by the government. On 15 June 1991, Primary Minister Datuk Seri Lim Keng Yaik disclosed that four states in peninsular Malaysia had exceeded their logging quotas by as much as 300 percent. Complaints sent to government officials by timber businessmen also

¹⁵⁰*ibid.* v.

¹⁵¹Rush, *The Last Tree*, 69-70.

¹⁵²*Malaysia Forestry Subsector Study*, vii-viii.

revealed illegal actions in Sabah and Sarawak. The actions included the underdeclared volume of logs for export, logs illegally transported to ships or timber carriers without documentation, the false registration of the species of trees felled, and the harvesting of trees below minimum girth. The loss of revenues to the state likely exceeds several \$100 million.¹⁵³

The Federal and State governments have reacted to criticism of Malaysia's forestry policies. Prime Minister Mahatir, in response to criticism of Malaysia's logging industry by foreign environmentalists, placed the issue within the global context and the North-South debate pointing out that the richest one-fifth of the world produces four-fifths of the greenhouse gases.¹⁵⁴ In his keynote address to the economic ministers of the Association of Southeast Asian Nations (ASEAN) in October 1991, Prime Minister Mahatir spoke out strongly against the campaigns of western green groups.

Individually we will be victims of these global campaigns United we stand a reasonable chance. We in ASEAN can no longer remain passive and indifferent to these campaigns hoping that they will, in time fizzle away. They have assumed serious proportions and are being used to obstruct the economic growth of the developing countries.¹⁵⁵

At a conference on environmental problems held in Kuala Lumpur on 26-29 April 1992, Mahatir once again placed the environment within the North-South debate with references to eco-imperialism. "When we achieved independence we thought we would be free. But the North is still subjecting us to imperial pressures."

¹⁵³Doug Tsuruoka, "Cutting Down to Size: Businessman Cry Foul in Malaysia's Logging Industry," *Far Eastern Economic Review*, 4 July 1991, 43-46.

¹⁵⁴"Tropical Heat," *The Economist*, 15 February 1992, 37.

¹⁵⁵K.T. Arusu, "ASEAN Urges Joint Action Against Western Green Groups," *Reuter*, 7 October 1991. Copy obtained via EcoNet, "rainfor. genera" conference, 15 October 1991.

Law Hieng Ding, Minister of Science, Technology, and Environment, upon his return from a week-long visit to Japan on Friday, 6 March 1992 accused the SOS Sarawak Campaign Committee, based in Japan, of disseminating misleading information and said his ministry may consider legal action. "It's high time we ... do something to put the picture right as there has been a lot of misunderstanding about Malaysia's rainforests. My ministry will be in close contact with its counterpart in Japan to correct the misconceptions."¹⁵⁶

Primary Industries Minister Lim Keng Yaik announced plans for a multimillion dollar study and a media blitz aimed at countering "biased" foreign media reports of the country's logging operations. The study by foreign researchers will be conducted over the next few years and will cost between \$1.8 and 3.6 million. Special attention is to be given to Sarawak which has been the focus of antilogging campaigns by environmentalists.¹⁵⁷ Lim said Malaysia will look into how timber concessions are awarded and use satellites to check illegal logging. Lim also announced that he would lead a delegation on a two-week tour of five European nations in May 1992 to present Malaysia's forest policies and to "test the [western] media to see if they will give us a chance to speak or not We have to put up a plan of action to counter illegal and biased NGO environmental groups who are applying very strong pressure to governments of the West to do something against Malaysia in a campaign of Malaysia-bashing." The nations

¹⁵⁶"Logging Protests Said Cutting Japan's Tropical Wood Mart," *Kyodo News Service*, 7 March 1992. Copy obtained via Dialog Information Services, Inc.

¹⁵⁷"Malaysia Aims New Study at Logging Foes."

Lim said he would visit included Sweden, Belgium, Germany, Britain and the Netherlands.¹⁵⁸

3. Agents for Change

Foreign environmentalists have been active in protesting deforestation in Malaysia. On July 5, 1991 eight environmentalists were arrested after effectively shutting down the port at Kuala Baram, Sarawak's largest export base, located at the mouth of the Baram River for nine hours.¹⁵⁹ The protesters demanded a twenty-year moratorium on logging in Sarawak and that 18,000 sq km of virgin forest be set aside for the Penans. The environmentalists, four men and four women, represented five countries: the US, Great Britain, Germany, Sweden, and Australia. The environmentalists were all convicted of trespassing and served jail terms of 50 to 80 days. Miri magistrate, Mohamed Che Kadir, upon sentencing the environmentalists stated that they should have stayed in their own countries which, being developed and industrialized, were also responsible for environmental degradation. He added that the court was bound to give a deterrent sentence as "We cannot give the world the impression that [foreigners] can come to this country and do as they like."¹⁶⁰

On 4 December 1991, demonstrators prevented the ship M. V. Singa Wilstream, carrying tropical timber from Malaysia, from docking in Tilbury, England. Four demonstrators chained themselves to the lock gates to prevent the ship from

¹⁵⁸Lai Kwok Kin, "Malaysia to Cut Logging, Counter Environmentalists," *Reuter*, 9 April 1992 and "Malaysia to Fight Anti-logging Campaign in Europe," *Reuter*, 31 March 1992. Copies obtained via EcoNet, "rainfor. timber" conference, 10 April 1992 and 1 April 1992.

¹⁵⁹Kamatchy Sappani, "Foreign Antilogging Activists Arrested in Malaysia," *Kyodo News Service*, 11 August 1991. Copy obtained via Dialog Information Services, Inc. (The protesters, who entered Malaysia as tourists, chained themselves to four loading cranes after unfurling banners which read "Stop Timber Exports." One banner depicted the rising sun flag of Japan, which imports 90 percent of Sarawak's timber.)

¹⁶⁰*Ibid.*

entering, while four boats containing Earth First! and Sea Shepherd activists buzzed around the ship and attached a magnetic banner to the hull proclaiming "Timber Imports = Rainforest Death!!" Other demonstrators blocked the entrance to the port and chanted "Earth First! Profits Last" and "Send it back to Sarawak." One woman climbed a crane and delayed unloading. The action represented an unprecedented coalition of environmental groups including Friends of the Earth, The Green Party, Sea Shepherd, Sea Action, Rainforest Action Groups, and Earth First! Jake Burbridge, one of the Earth First! activists who had recently returned from a prison sentence in Sarawak, and who had initiated and coordinated the demonstration said, "This action is the first stage in a campaign to ban the importation of tropical timber from Malaysia. Within months we will be focusing on every port. The people of Britain have shown that they do not want the timber here. We will not tolerate this immoral trade in death any longer. The murderers and criminals of the international timber trade are on the run and we're after them."¹⁶¹ Burbridge also said he was fulfilling a pledge to the tribal people of Sarawak including the Penans.

On 23 March 1992, 32 activists from Earth First! and Rainforest Action Groups blocked the Malaysian Airlines office in Piccadilly, London. Each protester adopted the name of one of the tribal people who faced trial that same day in Sarawak. The 32 tribal people had been arrested for blockading logging roads.¹⁶²

A boycott of Do-It-Yourself (DIY) superstores in Britain by the Friends of the Earth Tropical Rainforest Campaign has also proved successful. Initiated on 8 November

¹⁶¹J. Torrance, "Earth First! Activists Say Send it Back to Sarawak," EcoNet, "rainfor. genera" conference, 5 December 1991.

¹⁶²G. Marshall, "32 Arrests in UK Sarawak Action," EcoNet, "rainfor. genera" conference, 26 March 1992.

1991, the boycott targeted one hundred branches of the 'Big Six' DIY group that includes B&Q, Do-It-All, Great Mills, Sainsbury's Homebase, and Texas Homecare and Wickes. Two of the branches were assaulted with a fifty-foot chainsaw. Simon Counsel, a leader of the FOE campaign stated ,

As market leaders and major purchasers of timber products, the DIY superstores have a special responsibility to ensure that their products don't help to wreck the rainforests. The vast majority of rainforest timber imported into the UK doesn't even come from so-called 'sustainably managed' sources. The DIY superstores should cease selling rainforest timber products unless they can prove that they don't harm the environment.¹⁶³

FOE noted that tropical rainforest timbers used widely in DIY products included luan or Philippines Mahogany, ramin from Indonesia and Malaysia, Brazilian mahogany and sapele from West Africa.

FOE followed up the boycott with a survey of DIY shoppers in November–December 1991. The survey asked shoppers if they were concerned about the destruction of the rainforests. Ninety-one percent replied that they were and 58 percent said that if they knew a timber product came from the rainforest, they would not buy it. Ninety-three percent of those surveyed believed that shops should label rainforest products.¹⁶⁴

In response to the FOE's "Stop the Chainstore Massacre" campaign, Sainsbury's Homebase, Texas Homecare, and B&Q announced in December 1991 their intention to stop selling tropical rainforest timber that damaged the environment. The stores committed themselves to phasing out all timber coming from ecologically destructive sources by 1995 under a scheme developed by the World Wildlife Fund (WWF).

¹⁶³"Tropical Hardwood Chainstore Massacre," EcoNet, "rainfor. genera" conference, 11 November 1991.

¹⁶⁴"FOE Timber Survey of Stores," EcoNet, "rainfor. genera" conference, 26 March 1992.

Another plan, a joint environmental policy adopted by the Timber Trade Federation and the WWF aims to achieve the same outcome by 2000.¹⁶⁵

Malaysia has protested the efforts of FOE in seeking to protect the rainforests by granting "eco-labels" for approved tropical timber products. Minister of Primary Industries Lim Keng Yaik stated, "Some big DIY stores in Britain have come out in support of the proposal with the mistaken belief that it will save the tropical rainforests, boost their sales and appease the NGOs." Lim described eco-labeling as discriminatory against Third World countries and in effect represented a non-tariff trade barrier. "Imagine if we in Malaysia would propose setting our own eco-labeling system for products ... imported from Britain. Will British producers allow our council to visit and inspect their factories to see if they are polluting the environment."¹⁶⁶

The Penans, the last tribe of hunter-gatherers left in Borneo, together with several settled communities including the Iban, Kayan, Kenyah, Kelabit, and Lun Bawang, have protested logging in Sarawak since 1987.¹⁶⁷ The native communities have joined together in establishing blockades composed of logs, frail wooden structures, or human barriers of men, women and children on various logging roads throughout Sarawak. Led by Harrison Ngua, a member of the tribal Kayan people of the Baram region who runs the Sarawak branch of Sahabat Alam Malaysia (SAM) or Friends of the Earth Malaysia, representatives of the various Sarawak native communities have visited the capital city of Kuala Lumpur meeting with several federal representatives including

¹⁶⁵"FOE Success in DIY Practice." EcoNet, "rainfor. genera" conference, 12 December 1991.

¹⁶⁶"Malaysia Slams 'Eco-labeling'." *Reuter*, 25 April 1992. Copy obtained via EcoNet, "rainfor. timber" conference, 9 May 1992.

¹⁶⁷Stan Sesser, "A Reporter at Large: Logging the Rainforest," *The New Yorker*, 27 May 1991, 42-67 who investigated the 'timber trail' from Sarawak to Japan in 1990 and spent considerable time in the Baram River region, provides a highly descriptive account of the plight of the natives of Sarawak.

the Deputy Prime Minister, the Environment Minister, the Energy Minister, the Minister for Primary Industries, and the Education Minister. Appeals to stop logging in their forests, for recognition of their rights to customary land and for compensation for damage done to their forests, their farmlands, their water supply and ancestral graves have received significant international publicity as well as support from several public interest groups, including the Bar Council, the Malaysian Youth Council and the Islamic Youth Movement.¹⁶⁸ The state government has responded by arresting hundreds of the native peoples. SAM representative Harrison Nguwa was detained in October 1987 under the Internal Security Act for 60 days after which he was placed under house arrest for nearly two years.¹⁶⁹ On 25 November 1987, the Sarawak State Legislative Assembly amended the state Forest Ordinance making it an offense to set up any structure on any road constructed by a timber license or permit holder. The amendment also established a two-year jail term and a fine of M\$6,000.¹⁷⁰ The Penans and other groups have continued the blockades despite the amendment to the Forest Ordinance claiming that the

¹⁶⁸James Rush, *The Last Tree: Reclaiming the Environment in Tropical Asia* (New York: The Asia Society, 1991), 73.

¹⁶⁹Marcus Colchester, "Native Protests Stifled in Malaysian Government Crackdown," *The Ecologist* 17 (1987): 189. The Internal Security Act (ISA), introduced in 1960, invests the Malaysian executive with wide ranging powers of arrest and preventive detention for persons deemed to be a threat to national security. The provisions contained in the ISA exist pursuant to Article 149 of the Malaysian constitution, which invests the Malaysian parliament with the authority to create "special powers against subversion, organized violence and acts and crimes prejudicial to the public." A major amendment enacted in June 1989 barred the judicial review of all actions or decisions taken by the King or Home Minister in exercise of their discretionary power under the ISA. Section 8 of the ISA authorizes the Minister of Home Affairs the power to detain anyone whose activities are deemed "prejudicial to the security of Malaysia." Under Section 73 of the ISA, police officers have the power to arrest any person, without a warrant, and detain him for up to 60 days for investigation if grounds for detention under Section 8 are believed to exist, or if they believe that the person "has acted or is about to act or is likely to act in any manner prejudicial to the security of Malaysia."

¹⁷⁰*Solving Sarawak's Forest and Native Problem* (Penang: Sahabat Alam Malaysia, 1990), 26.

law was unjust since the logging roads are found on their land. Blockades throughout 1988 and 1989 were followed by more mass arrests.¹⁷¹

The native communities have attempted to use the legal process to stop the logging. In June 1989, members of the Kayan in Uma Bawang filed an injunction against the timber licensee, the timber contractor, and the State Government to stop the indiscriminate logging. The case was taken up in court nearly a year later. The Sarawak Penan Association was registered by the government in October 1989 after nearly two years. SAM has also issued press releases calling for a revamp of the Sarawak Forest Management Policy and Plan.¹⁷² In 1990, Harrison Ngua won election to the Malaysian Federal Parliament against Luhar Wan, the Malaysian deputy Minister of Public Works who had been backed by several timber companies.¹⁷³

Frustrated by the courts, the Penan and other native groups have continued to erect blockades. During the most recent blockade, called "the last stand of the Penan," 400 natives blockaded logging roads at Long Ajeng, in Sarawak's Ulu Baram district, for nine months. The blockade was dismantled by riot-squad police on 25 February 1992.

The Penan together with the other tribal communities have received some support from Europe and the US. In July 1988, the European Parliament unanimously adopted a resolution calling on member states to suspend imports of timber from Sarawak until it could be established that the imports were from concessions which did not damage the environment or threaten the way of life of the indigenous peoples. On 23 November 1989, the European Parliament passed a second unanimous resolution

¹⁷¹Ibid.

¹⁷²Ibid., 28 and 32.

¹⁷³Robin Hanbury-Tenison, "No Surrender in Sarawak," *New Scientist*, 1 December 1990, 29.

appealing to the Malaysian authorities to refrain from arresting and detaining the native peoples. The resolution also urged the ITTO mission to Sarawak to include native rights in their terms of reference.¹⁷⁴ Four US Congressional staff and five representatives from US public interest groups who visited Sarawak in 1989, reported that current logging procedures degraded the environment and adversely impacted the health and well-being of the native populations of Sarawak.¹⁷⁵ On 2 April 1992, Senator Albert Gore Jr. introduced a Senate resolution in support of the Penan. At a news conference, Senator Gore stated,

The struggle of the Penan Indians ... deserves more than our respect and admiration. It deserves our support, action, and attention. These are the front lines of the war against nature. This battle is being waged around the world with dire consequences. The courage of the Penan Indians and others in the region to stand up and fight for their history, their culture, and their environment must be recognized The Penan are desperately trying to hold off the bulldozers and chainsaws. Now they face harassment from their government as well.¹⁷⁶

Senator Gore's resolution stated that the US should call on the government of Malaysia to act immediately in defense of Sarawak's environment by reducing the annual rate of timber by at least two-thirds and by formally recognizing and upholding the customary land rights and internationally recognized human rights of all the indigenous peoples of Malaysia.¹⁷⁷

Amnesty International (AI) has also been active in supporting the indigenous peoples of Sarawak. On 5 February 1992 police authorities arrested Anderson Mutang

¹⁷⁴*Solving Sarawak's Forest and Native Problem*, 26 and 32.

¹⁷⁵*Ibid.*, 28.

¹⁷⁶Press Release. Copy obtained from Senator Gore's office, SR393 Russell Building, Washington D.C.

¹⁷⁷*Ibid.*

Urud, a Kelabit and Executive Director of the Sarawak Indigenous People's Alliance (SIPA). SIPA was established in 1991 to operate an information and research center promoting sustainable land use, to work with indigenous communities affected by logging, to act as a liaison between organizations and people interested in alternative development and agriculture, and to promote the trade of local indigenous craft. AI believed that Mutang had been arrested under the Emergency (Public Order and Prevention of Crime) Ordinance, 1969 which allows for detention without a charge or trial, because of his non-violent activities against logging operations in Sarawak. Mutang has been described as an active and articulate spokesperson for the concerns of tribal communities and was honored at an awards ceremony in the US Congress as a member of the Penan Association of Sarawak in 1990. Mutang had also met with officials of the World Bank and addressed the UN Working Group on Indigenous People in 1991.

AI, via their Urgent Action network, intervened on Mutang's behalf requesting his immediate and unconditional release if he was not to be charged with a recognizable offense. AI also urged that Mutang be granted immediate access to medical facilities and demanded that his fundamental human rights in accordance with internationally accepted legal standards be recognized.¹⁷⁸

The Global Legislators for a Balanced Environment (GLOBE) and the Congressional Human Rights Forum and Human Rights Caucus located in Washington D.C. also sent protest letters to the Malaysian Ambassador.

Across Canada, several environmental groups joined the protest against the arrest of Mutang. From 21–26 February, 1992 the Environmental Youth Alliance, Students Advocating a Viable Environment, the Canadian Environmental Network, the

¹⁷⁸Amnesty International to Urgent Action distribution, 13 February 1992. Copy obtained from Amnesty International USA, Washington D.C.

Western Canada Wilderness Committee, and private citizen groups joined together for protest marches, information pickets, candle light vigils, and hunger strikes in 16 cities across Canada. The protests targeted Malaysian Tourist Information centers and the Malaysian Consulates. ¹⁷⁹

Several environmental groups in the US led by the Sierra Club also protested the arrest of Mutang. In a letter addressed to Prime Minister Mahatir, dated 19 February 1992, the groups expressed their concern for Mutang and requested his immediate and unconditional release if there were indeed no legitimate charges. The letter also referenced the long-term protest of the tribal people in Sarawak.

Arrests and further detentions will not resolve the conflicts but will instead cause further injustice, hardship, and international condemnation. We encourage authorities to actively and quickly seek a peaceful resolution of the long, ongoing crises between native customary land rights and logging in Sarawak. To move towards resolution, we strongly urge authorities to recognize indigenous land and cultural rights and to revise logging policies and relevant laws to ensure that the forest resources, the unparalleled tropical ecosystem and local people are equally protected.¹⁸⁰

The environmental groups allied with the Sierra Club included the Environmental Defense Fund, National Wildlife Federation, FOE, Rainforest Alliance, National Audubon Society, Natural Resources Defense Council, Worldwatch Institute, Rainforest Action Network, and Greenpeace. Copies of the letter were also sent to Secretary of State James Baker, Ambassador Paul Cleveland at the US Embassy in Malaysia, and Chris Redfern, the Malaysian Country Officer at the World Bank.

¹⁷⁹"Canada-wide Protests in Support of the Indigenous Peoples of Sarawak," EcoNet, "rainfor. genera" conference, 21 February 1992.

¹⁸⁰Cathy Fogel, "U.S. NGOs Respond to Penan Alert," EcoNet, "rainfor. genera" conference, 19 February 1992.

In a following press release, Cathy Fogel, Director of the Tropical Forest Campaign for Sierra Club, stated

The world should be moving toward international cooperation. From tribesman to statesman, all have a stake in protecting forests. Instead we see this retrograde response - the suppression of human and legal rights and the devastation of an irreplaceable ecosystem. Malaysia stands in stark contrast to the governments of Brazil and Columbia, both of which recently moved to protect vast forest areas as indigenous territories.¹⁸¹

AI announced Mutang's release on bail on 3 March 1992 after he was charged with running an illegal society.¹⁸² Having learned that the Sarawak government was going to arrest him a second time and charge him with criminal intimidation and abetment of criminal intimidation, Mutang fled Malaysia on 27 March 1992. Mutang's lawyer, Antalai Sawing said that fear that Mutang would urge the Penan people to set up new blockades prompted the government's pending charges.¹⁸³

Three members of SAM were signatories of the Charter and Resolution of "The International Alliance of the Indigenous-Tribal Peoples of the Tropical Forests" on 15 February 1992 in Penang. Including Malaysia, the signatories represented 14 different countries: Argentina, Bolivia, Brazil, Costa Rica, Guyana, India, Indonesia, Panama, Papua New Guinea, the Philippines, Rwanda, Thailand, and Venezuela.

We ... present this charter as a response to hundreds of years of continual encroachment and colonization of our territories and the undermining of our lives, livelihoods and cultures caused by the destruction of the forests that our survival depends on we declare the following principles, goals, and demands respect for our human, political, social, economic and cultural rights, respect for our right to

¹⁸¹Roni Lieberman, "Environmentalists Stunned by Malaysian Arrests," EcoNet, "rainfor. genera" conference, 20 February 1992.

¹⁸²Amnesty International to Urgent Action distribution, 6 March 1992. Copy obtained from Amnesty International USA, Washington D.C.

¹⁸³Terry Gould, "'Andy' Mutang Flees Malaysia under Threat of Arrest," *Environment News Service*, 30 March 1992. Copy obtained via EcoNet, "rainfor. timber" conference.

self-determination, and to pursue our own ways of life *there can be no rational or sustainable development of the forests and of our peoples until our fundamental rights as peoples are represented.*¹⁸⁴

The Charter contains 48 separate articles and specifically addresses recognition, definition and demarcation of territories, land tenure, the need for land reform and sets forward decision making principles. The Charter also addresses development policies and calls for social, cultural and environmental impact assessments prior to any major initiative, tripartite commissions to include international funding agencies, the government, and representatives from the indigenous communities, and cancellation of all mining concessions within tribal territories. A halt to all transmigration schemes is also demanded. Under forest policies, the Charter demands a halt to all new logging concessions and a suspension of existing ones that affect tribal territories. The Charter also cites the importance of biodiversity and conservation, rights to intellectual property including biotechnologies, and research under joint control and guidance.

... we have proved that the problems of the indigenous and tribal peoples are similar in Africa, Asia, and the Americas; that the same ecocide, and ethnocide carries on regardless; and that those responsible are united and coordinated at the international policy-making level regarding both natural resources and the denial of the right to self-determination of our peoples.¹⁸⁵

The Resolution also established five working committees:

- Committee of Organization and Campaigns
- Committee for Disseminating and Securing Support for the Charter
- Committee on Relations with UNCED and the UN System
- Committee on Relations with the Multilateral Agencies
- Committee on Relations with International Solidarity Movements.

¹⁸⁴*Charter of the Indigenous - Tribal Peoples of the Tropical Forests* Emphasis added. (Copy obtained from the World Resource Institute, Washington D.C.)

¹⁸⁵*Resolution of the Conference of Indigenous - Tribal Peoples of the Tropical Forests* (February 1992) Emphasis added. Copy obtained from the World Resource Institute, Washington D.C.)

One of the first acts of the alliance was to denounce the uncontrolled logging in Sarawak and the continuing arrests and detention of the native people. The conference also noted that some of the same logging companies operating in Sarawak were conducting logging operations on tribal lands in Amazonia. The alliance also called for an end to oil palm plantations and colonization schemes on the island of Siberut, Indonesia and recognition of indigenous peoples' rights to their territories in Peninsular Malaysia, Papua New Guinea, the Philippines and Thailand.¹⁸⁶

The Charter was subsequently supported by over 20 organizations including the World Rainforest Movement, Third World Network, Friends of the Earth (FOE) International, FOE Netherlands, NOVIB (Netherlands), Coalition for Environment and Development Concerns (Finland), FOE Sweden, Swedish Society for Nature Conservation, FOE England and Wales, Survival International (UK), Down to Earth: the International Campaign for Ecological Justice in Indonesia, SOS Siberut (UK), FOE USA, Rainforest Action Network (USA), Japan Tropical Forest Action Network, Sarawak Campaign Committee (Japan), World Economy Ecology and Development (Germany), Rainforest Information Centre (Australia), FOE Philippines, Green Forum (Philippines), Legal Rights and Natural Resource Center (Philippines), Project for Ecological Recovery (Thailand), and Towards Ecological Recovery and Regional Alliances (Thailand). Support by the various NGOs together with the signatories representing countries from every continent represents a coordinated effort that joins North and South and clearly illustrates the convergence of human rights and the environment.

¹⁸⁶"Global Alliance of Indigenous Peoples of the Rainforest," *Third World Network*, 17 February 1992. Copy obtained via EcoNet, "rainfor. genera" conference.

The Sierra Club International Program has sought to protect the rainforests of Malaysia and has supported the Penan and the other tribal communities through criticism of development programs sponsored by multilateral lending agencies including the World Bank. In a letter dated 10 April 1992, the Sierra Club denounced a \$50 million World Bank lending project under which the government would build roads to transport raw logs from the last remaining primary forest in northeastern Sarawak. As proposed, the World Bank Sarawak Roads Project loan would fund the initial phase of a much larger scheme, with a total cost estimated at \$100 million. The project would upgrade or open 160 kilometers of road, ultimately linking Sarawak and Sabah by highway around Brunei. The roads will also cut directly adjacent to areas inhabited by some 500 members of the Penan tribe. The Sierra Club urged all interested members to write the President of the World Bank, Mr. Lewis Preston, demanding that the project be canceled or that an Environmental Impact Assessment be completed for the entire project not just the portion funded by the World Bank.¹⁸⁷

B. INDONESIA

1. Statistics

Indonesia is a collection of over 13,000 islands including Sumatra, Java, the Lesser Sunda Islands including Timor, Kalimantan, the southern region of Borneo, Sulawesi, the Moluccas, and Irian Jaya or Western New Guinea. Indonesia has a total land area of 1,475,000 sq km (147,500,000 hectares) and contains more tropical rainforest than any other nation in the Asia-Pacific region and is second only to Brazil

¹⁸⁷Tropical Forests Campaign, Sierra Club International Program to distribution, 10 April 1992. Copy obtained via EcoNet, "rainfor. genera" conference.

worldwide. Rainforests cover 1,148,400 sq km or 78 percent of the total land area.¹⁸⁸ Rainforests occur throughout the archipelago but the greatest extents are in Kalimantan and Irian Jaya, each with a third of a million sq km and Sumatra with almost a quarter million. However, little of the rainforest is pristine. The lowland forests of Sumatra and Kalimantan in particular have been heavily logged. The consequences of forest loss include an increase in "critical lands," soil erosion, flash flooding, and local changes in climate. Indonesia has over 8.6 million hectares of "critical lands" or areas the government describes as unable to fulfill any of the normal soil functions, including water absorption or the production of a subsistence crop. The government has classified 12 million hectares as having "serious erosion problems."¹⁸⁹ In Java, the one million hectares of critical lands are increasing at a rate of 200,000 hectares per year. The island was already losing 770 million tons of topsoil annually by the late 1970s. The conditions outside Java are even more precarious.

Although Indonesia prohibited all log exports in 1980 under the 'Three Ministers Decree' and banned rattan exports in 1986, annual deforestation rates in the late 1980s reached 12,000 sq km (1.2 million hectares) up from an average of 6,000 sq km between 1980-1985.¹⁹⁰ Present rates of deforestation are mainly due to government transmigration schemes and logging which supports a growing sawnwood and plywood industry. Rates are likely to increase as Indonesia drives to become the number one paper and pulp producer in the world.

¹⁸⁸Collins, *Conservation Atlas*, 143.

¹⁸⁹Hurst, *Rainforest Politics*, 4.

¹⁹⁰Collins, *Conservation Atlas*.

2. The Role of the Government

"We want to make Indonesia the biggest pulp and paper producer in the world," announced the Indonesian Minister for Industry in 1989.¹⁹¹ The development of the paper and pulp industry follows Indonesia's move into the plywood industry. Following the log-export ban of 1980, plywood exports rose from 283,000 cubic meters in 1980 to 3.5 million in 1987. Today, Indonesia accounts for approximately 70 percent of the world's plywood traded on international markets.¹⁹² Indonesia hopes that the paper and pulp industry will repeat the meteoric rise of its plywood industry.

The development of the paper and pulp industry was well under way by 1989. Production of paper rose 24 percent a year from 400,000 tons in 1984 to 931,400 tons in 1988. Paper production surpassed the 1 million ton mark in 1989 and increased to 1.37 million tons in 1990. Pulp production reached 700,000 tons the same year. Investment in the industry rose from \$202 million in 1984 to \$1.6 billion in 1989. The government plans to accelerate the already expanding growth by building 56 large-scale pulp and paper mills in the next 15 years, 10 of these by 1995. If all plans materialize, Indonesia's pulp output will reach 7.6 million tons by the early years of the next century and paper production capacity is expected to reach 5 million tons by the year 2000.¹⁹³ Recently, India's largest paper and pulp manufacturer, Ballarpur Industries Ltd., and PT Takengon Pulp & Paper Utama, a subsidiary of PT Risjadson Holding & Investment Co. of Indonesia, agreed to a paper and rayon-grade pulp joint venture in Indonesia. The joint-

¹⁹¹*Pulping the Rainforest: The Rise of Indonesia's Paper and Pulp Industry* (London: Down to Earth International Campaign for Ecological Justice in Indonesia, 1991), 1. (Down to Earth is a project of the Asia Pacific Peoples' Environment Network [APPEN] centered in Penang, Malaysia.)

¹⁹²Hurst, *Rainforest Politics*, 20-21.

¹⁹³*Pulping the Rainforest*, 2

venture company plans to invest \$285 million in the plant to produce 1,000 tons a day of paper-grade pulp for export. The joint venture was also given 166,000 hectares of land for plantation. Lalit Thapar, the chairman and managing director of Ballarpur, stated that Indonesia would be one of the most competitive producers of pulp in world by the turn of the century.¹⁹⁴

Following its expansive growth, the pulp industry's demand for wood will increase tenfold between 1988 and 2000, from 908,000 cubic meters in 1988 to 9.2 million cubic meters by the year 2000. The government plans to meet this demand by developing timber estates or *Hutan Tanaman Industri* (HTI). The Forestry Department aims to plant 1.5 million hectares of HTI by the end of Pelita V, the fifth five-year development plan, in 1995 and will expand the amount to 6.2 million hectares by the year 2000. One central nursery is to be developed in all 27 provinces. However, according to the draft National Forestry Action Plan, yield from current plantings will not be available until after the year 2000. Further, HTI development has fallen well below national targets. Under Pelita IV, only 68,000 hectares were established, far short of the 1.5 million hectares planned for 1984-1989. Hence, pressure on Indonesia's natural forests may increase.¹⁹⁵

Logging companies may also maximize profits by clear cutting natural forests and then replanting them as HTIs. Indonesia's Population and Environment Minister states that regulations require companies investing in HTIs to provide their own raw

¹⁹⁴Suman Dubey, "Ballarpur to Set Up, Manage Pulp Venture in Indonesia," *Asian Wall Street Journal*, 31 March 1992, 4. (In contrast, corporate paper producers in India are not permitted to own plantations and must obtain wood from trees grown on community land or from private individuals. Ballarpur has also invested in Phoenix Pulp & Paper Mills Ltd. in Thailand whose capacity is being doubled to over 600 tons per day.)

¹⁹⁵*Pulping the Rainforest*, 2.

materials on unused barren and critical lands. However, given the governments past performance in enforcing Indonesia's selective felling system, *Tebang Polih* Indonesia (TPI), there are no guarantees that the HTIs will be developed properly.

TPI requires that only trees greater than 50 cm at breast height may be cut. Further, at least 25 trees 25-49 cm at breast height must be left intact on each hectare logged or enrichment logging should take place. The cutting cycle is stipulated at 35 years. Not only do some environmentalists believe that the TPI is inherently flawed, applying the same standards to many different forest types, but the TPI has not been enforced. Throughout the islands, but particularly in Kalimantan and Sumatra, concessions have failed to leave the required the 25 select crop trees per hectare and those left have been severely damaged. Moreover, concessions have logged many trees smaller than the legal minimum.¹⁹⁶

The government with the support of the World Bank has planned to employ a foreign company to oversee loggers, sawmills, and plywood makers in order to improve the management of Indonesia's tropical forests. Jakarta has earmarked \$10 million for a four year period. The inspection service would use a combination of remote sensory techniques, aerial photography, and field checks. In an attempt to minimize opposition, Jakarta plans inspections in only three provinces: Riau, East Kalimantan, and the Moluccas. If the project is successful after an initial four-year run, private inspection will be extended to cover the entire country. The government stands to gain over \$200 million in lost revenues from royalty fees of \$10 per cubic meter of wood extracted.¹⁹⁷

¹⁹⁶Hurst, *Rainforest Politics*, 16-18.

¹⁹⁷Adam Schwartz, "Emerald Forest: Foreigners Tipped to Check Indonesia Tree Felling," *Far Eastern Economic Review*, 7 February 1991, 51.

Transmigration schemes have also had a deleterious effect on the rainforests. Transmigration is largely driven by the high population density of Java which now exceeds 690 people per sq km. In contrast, Irian Jaya and Kalimantan have three and twelve people per sq km respectively. Transmigration is seen as a means to both relieve population pressures and reduce poverty, and the government remains committed to the program. Under Pelita IV (1984-1989), the government planned to relocate 750,000 families. The number under Pelita V (1989-1994) has been reduced to 550,000 families representing approximately 2.5 million people. During Pelita V, 2 million hectares of 'conversion' forest will be used for transmigration sites. A target of 40,000 families has been specifically set for HTI transmigration schemes under Pelita V.¹⁹⁸

Forest fires raged throughout Kalimantan and Sumatra from August through October of 1991. Over 50,000 hectares of forest were destroyed and Malaysia, Singapore, Brunei, and southern Thailand were left shrouded in haze for months reducing visibility and disrupting air and sea traffic in some countries.¹⁹⁹ The forest park of Bukit Soeharto in East Kalimantan was reported to be on fire again in March 1992. A correspondent from the official news agency Antara reported that the fire was sparked by hot embers remaining from the previous year.²⁰⁰ Similar fires beset Kalimantan following a severe drought in 1982-1983 destroying over 30,000 sq km comprised mostly of logged forest containing substantial amounts of dry debris.²⁰¹

¹⁹⁸*Pulping the Rainforest*, 15.

¹⁹⁹Paul Jacob, "Jakarta asks West for Help to Fight Forest Fires," *Straits Times*, 12 October 1991, 1.

²⁰⁰"Kalimantan: Fires Again." EcoNet, "reg. indonesia" conference, 31 March 1992.

²⁰¹Collins, *Conservation Atlas*. 141.

NGOs including environmental groups have faced increasing pressure from Jakarta following the killing of some 100 people in East Timor by army troops in November 1991.²⁰² In January 1992, Home Affairs Minister General Rudini (retired) warned a meeting of NGOs against "selling out the country."²⁰³ The General requested the NGOs to formulate a code of ethics that would form the basis of cooperation and relations with the government and which would allow the government to "exercise its supervisory task flexibly while preventing the NGOs from betraying the country."²⁰⁴ In February 1992, Defense Minister Gen. L. B. Murdani said an investigation of NGOs would focus on direct receipt of funds from foreign donors, misuse of the 'public mission' and relations with foreign NGOs.

On 25 March 1992, the Indonesian government rejected all aid from the Netherlands including \$10 million for high priority forestry projects over the next five years.²⁰⁵ The Netherlands had earlier linked its aid to human rights abuses following the incident in East Timor.²⁰⁶ President Suharto warned in a banquet speech for visiting

²⁰²"Request from U.S. Senators to Visit East Timor Rejected," *Reuter*, 21 April 1992. Copy obtained via EcoNet, "reg. indonesia" conference, 21 April 1992. (Claiborne Pell, chairman of the Senate Foreign Relations Committee, and David Boren, chairman of the Senate Select Committee on Intelligence, were denied a request to visit East Timor in April 1992. Indonesian State Secretary Murdiono stated, "It is unnecessary. Why visit East Timor? Let the people of East Timor remain calm and carry on with developing their territory. They should not be disturbed.")

²⁰³"Indonesian NGOs Under Pressure," *Down to Earth* 16 (March 1992): 13. Copy obtained from Down to Earth, London.

²⁰⁴*Ibid.*

²⁰⁵"Dutch Forestry Aid Projects Stopped," EcoNet, "reg. indonesia" conference, 9 April 1992.

²⁰⁶"Sacked Timor Generals in US." *Reuter*, 5 May 1992 reported that the two generals who were relieved of their posts following the massacre in East Timor are now planning to study management in the US. Major-General Sintong Panjaitan, who commanded the Udayana region which includes East Timor, has already left for Harvard Business School. Copy obtained via EcoNet, 'reg. indonesia' conference, 5 May 1992.

Australian Prime Minister Paul Keating that any attempt to impose alien values on Indonesia would be regarded as a violation of its sovereignty. "We will accept suggestions even criticism put forward in a spirit of brotherhood. But criticism that only exaggerates the backwardness of our national development effort and interferes in domestic affairs is a different matter."²⁰⁷ Although Dutch aid is less than 2 percent of the \$4.75 billion pledged by donors, some analysts believe programs including environmental projects could be affected. Yoshinri Murai, an expert on Japanese Official Development Aid, commenting on Japan's policies towards Indonesia, noted that Tokyo preferred to support official projects rather than those of NGOs which was the favored method of the Dutch. "NGOs operating in Indonesia are strongly dependent on Dutch aid. These organizations will now be silenced and their activities adversely affected by the Dutch pull-out."²⁰⁸

Jakarta insured that the NGOs would be adversely effected by the new policies.

On 24 April 1992, the Minister of the Interior, Rudini announced that

... all social organizations and institutions, such as NGOs, whether in the form of foundations, organizations or other institutions; professional associations; consumer organizations; or legal aid institutes; social organizations; religious organizations; or similar agencies, are hereby forbidden to receive aid from the Dutch government or aid from any Dutch NGO which receives funds from the Dutch government.²⁰⁹

The Minister added that any social organizations and institutions which violated the policy would be penalized under existing regulations. The government also deemed it

²⁰⁷"Suharto Warns the World," EcoNet, "reg. indonesia" conference, 21 April 1992.

²⁰⁸A. Pakabar, "Japan Hypocrisy on Human Rights," EcoNet, "reg. indonesia" conference, 10 April 1992.

²⁰⁹A. Pakabar, "Asia Watch: Attack on NGOs," EcoNet, "reg. indonesia" conference, 29 April 1992.

"not relevant" for the social organizations and institutions to participate in the International NGO Forum on Indonesia (INGI).²¹⁰

INGI had been originally founded by with the assistance of NOVIB and other Dutch organizations to give Indonesian NGOs a voice in the donor countries providing development to Indonesia. Those donor countries, together with the World Bank and representatives of other multilateral lending institutions, meet once a year in a forum called the Inter-Governmental Group on Indonesia (IGGI). In addition to banning Dutch aid, Jakarta dissolved the IGGI on 25 March 1992.²¹¹

3. Agents of Change

At the national level, there are two major environmental groups in Indonesia: WALHI or the Indonesian Environment Forum and SKEPHI, the Network for Forest Conservation in Indonesia. The Indonesian Environment Forum is a coalition of 400 separate organizations.²¹² Formed in 1980, WALHI links the scientists, intellectuals, nature lovers, development workers, and rights activists who make up the environmental movement.²¹³ SKEPHI emerged from WALHI in response to the great fire in Kalimantan in 1982-1983. Although SKEPHI takes a more confrontational approach than WALHI, the two groups have joined together with local Christian missions and international conservation societies to stop the uncontrolled expansion of paper and pulp mills. In 1989 they were successful in dissuading Scott Paper Company from pushing

²¹⁰Ibid.

²¹¹Adam Schwartz, "Tilting at Windmills," *Far Eastern Economic Review*, 9 April 1992, 10-11.

²¹²Norman Myers, *The Primary Source: Tropical Forests and Our Future* (New York: W.W. Norton & Company, 1990), 300.

²¹³Rush, *The Last Tree*, 82.

through a massive paper and pulp project in partnership with Indonesia's giant Astra conglomerate that was to be located in Irian Jaya.²¹⁴

Various NGOs including WALHI have reacted to mounting pressure applied by Jakarta in the first half of 1992. Following the ban on Dutch aid, M. S. Zulkarnaen, WALHI's executive director stated that his organization would seek aid from other international NGOs and continue with its projects.²¹⁵ In recent years, WALHI has received aid from the Asia and Ford Foundations, USAID and others. Indonesia's leading human rights group, the Legal Aid Foundation (LBH), which has close ties to WALHI, also vowed to continue. Although LBH had been funded by NOVIB, a Dutch NGO, for ten years, the foundation said it would continue to provide free legal aid.²¹⁶ However, another LBH official expressed some skepticism noting that 80 percent of LBH's funds came from the Netherlands.²¹⁷ In a press release dated 29 April 1992, the Legal Aid Foundation commented on the aid received from the Dutch.

The Legal Aid Foundation has cooperated with donor organizations ... on the basis of mutual respect; there were no strings attached to the aid. On this understanding, the mission, the orientation, and activities of LBH are in no way directed or determined by the donor or by concepts or philosophies which contradicted the spirit of the 1945 constitution in bringing into existence a country based on the rule of law, committed to democracy and social justice. Thus, a dimension of nationalism colored the views, attitude and outlook of the Legal Aid Foundation and all of its parts

²¹⁴Ibid., 84.

²¹⁵A. Pakabar, "NGOs Protest Aid Ban," EcoNet, "reg. indonesia" conference, 29 April 1992.

²¹⁶Ibid.

²¹⁷"LBH on Verge of Collapse," *Reuter*, 1 May 1992. Copy obtained via EcoNet, "reg. indonesia" conference, 1 May 1992.

The [LBH] as a participant in the INGI is founded on a concern for national development problems and views the INGI forum as fulfilling an important function in campaigning for the right of the people to development.²¹⁸

Asia Watch, a group similar to Amnesty International, criticized the Jakarta ban on Dutch aid.

The statement by Minister Rudini is clearly an attack on the NGOs which have been most critical of the Indonesian government including the Legal Aid Foundation of Indonesia, the country's largest human rights organization Asia Watch is concerned that the statement ... suggests that the Indonesian government is attempting to further constrain the activities of NGOs and restrict the exercise of freedom of expression and freedom of association in Indonesia. [Asia Watch] calls upon the American embassy in Jakarta and the United States State Department to make it clear to the Indonesian government that it strongly supports the work of NGOs like the Legal Aid Foundation; WALHI, the environmental organization; the Consumers' Association of Indonesia; INGI; and other organizations that have been implicitly attacked in Minister Rudini's statements [The Bush Administration] should also take an unambiguous, public stance in support of the need to link development assistance and respect for human rights.²¹⁹

Several US environmental groups also lent their support to WALHI, LBH and the other NGOs. In an open letter to the Jakarta government dated 7 May 1992, the Environmental Defense Fund, Friends of the Earth (US), the Natural Resources Defense Council, the Development Group for Alternative Policies, the Bank Information Center, and the National Wildlife Federation stated,

We strongly condemn General Rudini's statement and believe that this is an attempt by the Indonesian government to crush the activities and the basic freedom of speech and association of Indonesian NGOs and the undermine the work of INGI ... which provides an alternative voice and vision on development, human rights and environment in Indonesia. The statement is clearly an attempt to silence NGOs who have been most critical of the Indonesian government such as the Legal Aid Foundation It is clear

... that the Indonesian government has underestimated the international stature of INGI INGI represents a broad cross section of NGOs ... and provides a unique forum for north/south dialogue. The function and dynamics of INGI has relevance

²¹⁸"Asia Watch: Attack on NGOs."

²¹⁹Ibid.

far beyond the relationship between Dutch and Indonesian NGOs INGI is a forum which fosters basic democratic values in development such as public participation, access to information, informed consent, and environmental and social impact assessments. The function of INGI also extends beyond IGGI, and will continue despite the dissolution of IGGI.²²⁰

The US environmental groups also called upon the US government to engage in dialogue with Jakarta emphasizing US support for the NGOs and "continuation of INGI and its link to improving the lives of the poor and disadvantaged and promoting sustainable development and environmental quality."²²¹ The group urged the US to take a strong and unequivocal stand on the link between aid and human rights in Indonesia.

Other leading dissidents also criticized the government. Ali Sadikin, a retired general and former Jakarta governor stated "The ban is immoral." Sadikin found it particularly absurd that NGOs were not allowed to receive aid while the Dutch foreign trade minister van Rooij was in Jakarta to discuss trade with Indonesia.²²² van Rooij concluded talks with several Indonesian ministers on 1 May 1992 stating that they were "cordial and receptive." Economic links were also tied to Vietnam. van Rooij added that Dutch businessmen could gain a foothold in Vietnam through joint ventures with Indonesian partners who already have strong links in Vietnam.²²³

In an apparent response to the strategies of the NGOs, Jakarta moved to apply the Social Organizations Law to citizen groups concerned with economic justice, human rights, religious activities, consumer protection, environmental quality, and other matters.

²²⁰A. Pakabar, "US NGOs Condemn Rudini on INGI," EcoNet, "reg. indonesia" conference, 8 May 1992.

²²¹Ibid.

²²²"LBH on Verge of Collapse."

²²³Bob Mantiri, "Indonesia: Dutch to Boost Trade with Jakarta despite Massacre Row," *Inter Press Service*, 1 May 1992. Copy obtained via EcoNet, "reg. indonesia" conference, 2 May 1992.

Under the Social Organizations Law, NGOs that receive foreign funding without first getting approval by the Indonesian government would be dissolved. The new initiative makes it extremely difficult for NGOs to seek replacement funds for the lost Dutch money.²²⁴

Members of the Mentawi people of Indonesia's Siberut island have also protested government policies. Siberut, an island off the western coast of Sumatra, has been declared a biosphere reserve under the UNESCO Man and Biosphere Program. However, since 1960 the mangrove forests on the Mentawi's land has been cut by loggers, and now Jakarta has announced a transmigration scheme that would move 10,000 settlers to Siberut. The government also plans to set up huge oil palm estates covering up to 200,000 hectares or half of Siberut in cooperation with the World Bank which has funded an expansion of tree crop cultivation to reduce the country's dependence on oil and natural gas for foreign exchange. The Mentawi leaders, for the first time in November 1991, signed a petition requesting the government to reconsider. "We are very concerned about our future and that of the environment."²²⁵ The government has not recognized the land rights of many of the indigenous people of Indonesia. In December 1991, a workshop on the development of Siberut was canceled by the government one day before the scheduled date. Sponsors for the event including SKEPHI were unable to obtain the necessary documents from the Indonesian intelligence agency, Bais. The workshop was designed to bring together indigenous islanders,

²²⁴"Indonesian NGOs Threatened." EcoNet, "en. alerts" conference, 11 May 1992.

²²⁵A. Pakabar, "The Siege of Siberut." EcoNet, "reg. indonesia" conference, 6 April 1992.

government officials, and environmentalists to discuss alternatives to destructive development.²²⁶

A resolution adopted at the Conference of the Indigenous Tribal Peoples of the Tropical Forests in February 1992 declared its support for the Mentawi people. The resolution called upon the government to

- stop the continuing destruction of Siberut's rainforests by the action of commercial logging activities;
- withdraw plans for the transmigration of settlers onto the island;
- withdraw plans for the establishment of oil palm plantations;
- respect the traditional land ownership patterns of the Mentawi as recognized by their *adat* law; and
- disengage from the policy of forcible resettlement of indigenous people from the forests into government villages.

The resolution concluded, "Henceforth, we ask that all future development policies for the island of Siberut incorporate the active and willing participation of the local people."²²⁷

The World Rainforest Movement (WRM) based in Penang, Malaysia also called upon the Indonesian government to respect the rights of the Mentawi. In a letter to President Suharto, dated 21 February 1992 and signed by 20 other NGOs, the WRM called for a halt to logging, transmigration, oil palm development, forced resettlement and uncontrolled tourism.²²⁸

Asmat Progress and Development Foundation, a private organization under the tutelage of Siti Hartinah, President Suharto's wife, arranged a trip funded by Freeport

²²⁶"Security Authorities Cancel Siberut Workshop." *Down to Earth* 16 (March 1992), 4.

²²⁷Ibid.

²²⁸Ibid.

Indonesia Inc. with the purpose of dressing the ethnic minorities of Irian Jaya.²²⁹ Irian Jaya is dominated by Freeport Indonesia (FI). Freeport's giant copper and gold mines account for about three-quarters of all exports from Indonesia's largest and least populated province and make FI Indonesia's third largest taxpayer.²³⁰ However, one Indonesian government environmentalist criticized FI's environmental record. " [I]t blew me away to realize that in the past 18 years they'd done zero monitoring (of the environmental impact). They'd have been killed in North America. It was the ugly American in the Third World."²³¹ FI's 10,000 hectare mining concession, located along the central highlands at an elevation of 13,100 feet and 70 miles inland, encompassed the traditional land claims of the Amungme people. After the Amungme blew up a FI pipeline, government troops attacked the Amungme and forced several villages down to the coast where they have suffered cultural collapse.²³² Following a new discovery which gives FI the largest single gold reserves as well as the fifth largest copper mine in the world, the Indonesian government extended FI's contract for up to 50 years and will allow for the exploration of another 2 million plus hectares.²³³ FI has become more

²²⁹Margot Cohen, "Indonesian Fashion: The 'Primitive' Provincial Look," *Asian Wall Street Journal*, 6-7 March 1992, 11.

²³⁰Jonathan Thatcher, "Freeport Expects New Deposits," *Reuter*, 8 May 1992. Copy obtained via EcoNet, "reg. indonesia" conference, 8 May 1992. See also Adam Schwartz, "Mining a Mountain: US Firm Brings Jobs and Controversy to Irian Jaya," *Far Eastern Economic Review*, 4 July 1991, 47-48.

²³¹Jonathan Thatcher, "Freeport Still Controversial," *Reuter*, 8 May 1992. Copy obtained via EcoNet, "reg. indonesia" conference, 8 May 1992.

²³²Hurst, *Rainforest Politics*, 8.

²³³Thatcher, "Freeport Expects New Deposits." See also Caleb Solomon, "Freeport to Shed Energy Reserves Amid Plan to Borrow \$500 Million," *Asian Wall Street Journal*, 17-18 January 1992, 2. FI has spun off oil and gas reserves to finance \$500 million in spending on the copper and gold discoveries.

sensitive to the environment and has expressed concern about logging near the mine fearing that it will be blamed if the environment is damaged.

C. THAILAND–BURMA–INDOCHINA

1. Statistics

Since 1960, nearly 16 million hectares of Thailand's forest have been denuded due to legal and illegal logging as well as timber cutting by farmers for home building and fuel. Today, government statistics state that only 28.8 percent of the country is forest land, a reduction from 53 percent in 1961.²³⁴ Similar statistics apply to Burma, Thailand's western neighbor. Through 1962, approximately 38.6 million hectares or 59 percent of the country remained under rainforest. A recent national report submitted to FAO suggested that in 1988 no more than 36 percent or 24.5 million hectares remained. The estimated rate of deforestation in Burma is 600,000 hectares per year or over 2 percent of the remaining rainforest. As a result of deforestation, 200,000 people were left homeless and hundreds died during severe flooding in southeastern Burma.²³⁵ Indochina has also experienced increasing rates of deforestation over the last three decades. Between 1945 and 1975, Vietnam experienced a nearly continuous state of war which caused death and suffering to millions of people as well as severe damage to natural resources. During Vietnam's second conflict 2.2 million hectares of farmland and forest were destroyed mainly in the south of the country by intensive bombing, tactical spraying, and mechanical clearing of forest. At least 12 percent of the forests in South Vietnam were sprayed at least once. Despite the intensity of deforestation during the

²³⁴Collins, *Conservation Atlas*, 227.

²³⁵Aye Chang Naing, "On Burma." Speech delivered to the participants of the International Students' Festival 1992 in Trondheim, Norway. Copy obtained via EcoNet, "reg. seasia" conference, 5 May 1992.

wars, Vietnam has experienced a greater amount of deforestation since 1975. Wood was needed to rebuild the country and to provide fuel for a growing population which nearly doubled between 1945 and 1985. Slash and burn agriculture also continued. FAO estimates for 1988 place deforestation rates in excess of 300,000 hectares per year. Today almost 50 percent of the country is unproductive wasteland.²³⁶

Between Vietnam and Thailand lie Cambodia and Laos. As early as 1960, rainforests covered over half of Cambodia. The largest incursions into the remaining forest occurred during the Indochinese wars and under the regime of the Khmer Rouge headed by Pol Pot. During the Vietnam war, the various paths of the Ho Chi Minh trail which wound through eastern Cambodia were subject to repeated bombing, herbicide spraying, laying of mines and other military operations. The Vietnam war was followed by a civil war in Cambodia. Upon assuming power in 1974, the Khmer Rouge forced the entire population of Phnom Penh and of other towns into the country to clear new lands for agriculture. Apart from causing indescribable human misery and the deaths of as many as 3 million people, the reign of terror wrought by the Khmer Rouge had disastrous environmental consequences as extensive areas of forest were cleared. Some normalcy returned in 1978 under Vietnamese occupation and the establishment of an alternative government under Hun Sen. Recent estimates reveal that only about a quarter of the original forest remains and only a tenth is primary forest. Authorities in both Vietnam and Cambodia agree that deforestation has affected the water flow of the Mekong River system. Due to the loss of forest in its water catchments, the Mekong now floods more frequently and violently in the wet seasons and is very low during the dry seasons. The problem has been compounded by similar deforestation in Thailand, southern China and

²³⁶Collins, *Conservation Atlas*, 234.

Laos.²³⁷ Intact rainforest in Laos is estimated at 4.2 million hectares or 18 percent of the land area. Shifting cultivation and related uncontrolled fires have been the major cause of deforestation in the past. Today, uncontrolled or poorly controlled logging have increasingly contributed to forest loss. A ministerial announcement in 1989 indicated that 200,000 hectares of forest are destroyed each year.

2. Role of the Governments

In November 1988, 359 people were killed and hundreds more made homeless in the south of the Thailand. Their houses were buried under an avalanche of logs and mud. The watersheds from where the floods originated had been logged over and clear-felled for rubber plantations. By mid-January 1989, then Prime Minister Chatichai Choonhavan issued a Royal Decree to ban logging that was accepted by the House of Representatives that May. A second decree revoked all logging concessions.²³⁸

The government is now seeking to maintain 40 percent forest cover comprising 15 percent natural protection forest and 25 percent production forest. In order to achieve this goal the army has instituted a project known as Khor Chor Kor or Project for Agricultural Land Distribution to Poor People Living in Degraded Forests. The project aims to move 250,000 families in the northeast over the next five years and later to extend Khor Chor Kor to the entire country. The goal is to release the degraded forest areas for reforestation by resettling peasants on smaller holdings in other already settled, degraded forest areas.

Following the 1988 military coup in Burma and the 1989 logging ban in Thailand, the pressure to exploit the Burmese rainforests has increased dramatically.

²³⁷Ibid., 114.

²³⁸Ibid., 222.

Since 1988, Burma has moved from seventh to third on the list of nations with the greatest rates of deforestation. Almost all Thai logging companies are owned either wholly or partially by military officers or their relatives. The Burmese government sells lumber concessions to these companies without restrictions on methods or tree size.²³⁹ Louisa Benson Craig, a Karen who has lived in the US for 25 years and who is a current member of the International Burma Campaign and the Democratic Alliance of Burma, described her visit to the Burma-Thai border in April 1991. She stated that 23 teak concessions have been granted to Thai lumber corporations. The logging roads constructed by the corporations serve a dual purpose: they allow loggers access to the teak forests but also give greater mobility to the military under the SLORC as they carry out their campaign against the Karen and other minority groups dependent upon the forests for their survival. Destruction of the rainforest also gives the military a tactical advantage by denying the minority groups any refuge or tactical cover.²⁴⁰

Burma's junta is attracted to the quick cash and foreign currency that the teak industry offers and has shown no interest in 'minor forest products' such as resins, rattan, nuts, and fruits which are less damaging and more profitable in the long run. Short term gains are important in financing the purchase of arms from the People's Republic of China (PRC). Burma under the SLORC, one of the least developed countries in the world, purchased over \$1.2 billion in arms from the PRC in 1990.²⁴¹

²³⁹Matthew Burnett, "Forests and People - Victims in Burma," *Christian Science Monitor*, 6 April 1992, 19.

²⁴⁰Craig, Luisa Benson. Interview by author, 17 May 1992. Phone conversation. Santa Monica, California. As a member of the Democratic Alliance of Burma, Ms. Craig corresponds on a weekly basis with members of the Karen people in Burma. She spent one month near the Burma-Thai border in April 1991.

²⁴¹*Ibid.* See also Humphrey Hawksley, "Tales of Horror on Burma's Western Front," *Asian Wall Street Journal*, 24 February 1992, 6.

Arms may also be obtained through a type of barter arrangement with the PRC. Edith Mirante, who initiated Project MAJE, an information center on Burmese and Thai issues in 1986, recently returned from Kuchin , the northern Burmese state.²⁴² Ms. Mirante observed convoys of logging trucks crossing into China day and night. She stated that timber and large amounts of opium are traded for arms under a type of barter agreement.

Thailand's relations with her eastern neighbors in Indochina continue to be shaped by a foreign and economic policy first set forward by ousted Prime Minister Chatichai Choonhavan that seeks to turn Indochina from "a battlefield into a marketplace." Although Thai policies have led to improved relations overall with her neighbors, the Lao have been critical of Thai businessmen who are viewed as corrupt and greedy. The Lao were especially critical of the monopoly on cross-border trade held by the Thai state-owned trucking agency, the Express Transport Organization (ETO). Lao traders were only allowed to use ETO in transporting their goods, including timber, from Laos to Thai ports. ETO in turn charged exorbitant rates. The net effect had been that the Lao were paid half the market price for timber, while Thai buyers and ETO officials made huge profits. Laotians in turn could not profitably set up sawmills or process the wood domestically to gain the added value before exporting it.²⁴³

Vietnam, in a program initiated under Ho Chi Minh more than 30 years ago, is attempting to replace their forests by replanting some 500 million trees each year. However this is not enough. Professor Vo Quy, founder of Vietnam's growing

²⁴²Mirante, Edith. Interview by author. 17 May 1992. Phone conversation. Cranford, New Jersey. Ms. Mirante has lived in northern Thailand for extended periods of time between 1982 and 1988. She was deported by the Thai government in 1988. Ms. Mirante returned to Thailand in August - September 1991.

²⁴³Rodney Tasker and Paul Handley, "Focus Thailand 1991: The Good Neighbors," *Far Eastern Economic Review*, 18 July 1991, 36-38.

environmental movement and architect of the national plan for environmental recovery asks, ". . . can Vietnam replant fast enough? We should stop cutting down our primary forest and set up the replanting of our wasteland, which now covers nearly 40 percent of the country."²⁴⁴

3. Agents of Change

Environmental NGOs have been politically active in Thailand since the early 1970s, as an outgrowth of the student movement and the successful revolution in October 1973.²⁴⁵ In the early 1980s, the Project for Ecological Recovery (PER) was formed with the purpose of coordinating the various efforts of local pressure groups with NGOs, allies in the media, and members of government. The PER played a significant role in pressuring the government to ban all logging in January 1989. Today the PER opposes the governments reforestation policies on both an environmental and human rights basis.²⁴⁶ Vitoon Peumpongsacharoen, director of the PER stated that the only way to prevent further destruction is to give the encroachers rights to the degraded land they already occupy. "In reality you cannot move them out. The Thai government has never been successful in resettlement programs."²⁴⁷

The Thai media has also been critical of policies and members within the short-lived Suchinda government. A golf course scandal involving the alleged illegal encroachment on forest reserves at a national park northeast of Bangkok received

²⁴⁴Elizabeth Kemf, "Casualties of Vietnam's Recovery." *New Scientist*, 14 September 1991, 40.

²⁴⁵Rush, *The Last Tree*, 74.

²⁴⁶*Ibid.* 77.

²⁴⁷Paul Handley, "The Land Wars: Peasants and Priests Battle Army's Forest Plan." *Far Eastern Economic Review*, 31 October 1991, 15.

significant press coverage when it was discovered that Jack Nicklaus, the former leading US player-turned designer, used a Thai Airforce helicopter to survey the area. In response to questions by the press, the Thai Air Force Commander stated that it was "normal for some military officers to have their personal business stakes." The press also drew attention to the fact that other top military officials including the former Prime Minister Suchinda had connections to similar golf-course projects.²⁴⁸ Over 182 golf courses have been constructed in the last year, each covering between 160 to 320 hectares.

The hilltribes in northern Thailand, or the montagnards, have also been criticized by environmental activists, particularly a 'green' Buddhist monk. The montagnards including the Hmong, the Karen and other tribal groups under government sponsorship converted their poppy fields to cabbages, potatoes, coffee, fruit trees, flowers and other cash crops beginning in the mid-1980s. Foreign donors including the US, Canada, Western Germany and Norway assisted the effort. The montagnards are now condemned for deforestation, soil erosion, and water depletion. Ironically, opium was environment-friendly relative to cash crops which are more land-intensive.

Some of the conflict has surrounded the village of Pa Kluai situated in the hills above Mae Soi village. The Hmong of Pa Kuai have been accused of cultivating more than their allotted land under a Norwegian-assisted project. Several Mae Soi villagers led by the 'green' Buddhist monk Ajarn Pongsak raised a 14-km barbed wire fence along a project boundary. In other areas, RFD rangers have arrested tribesmen hoeing cabbages in overly steep grade or have planted rapid-growing pine in fields left fallow by the tribals. Some NGOs are now seeking to establish a system of contour farming that is

²⁴⁸Rodney Tasker, "Focus Thailand 1991: The March to Democracy," *Far Eastern Economic Review*, 18 July 1991, 33-34.

environment friendly . The system would allow the montagnards to remain in the hills indefinitely while meeting the demands of the villagers below.²⁴⁹

As early as July 1989, US environmental groups including the Rainforest Action Network (RAN) called for a boycott of teak from Burma citing both environmental and human rights interests. In "Alert 40" the RAN stated,

The RAN board has agreed to support the World Rainforest Movement's April 17 declaration calling for a ban on all imports of tropical timber and wood products from natural products At the moment it is particularly critical to boycott Burmese and so called Thai teak. The recent ban on logging in Thailand and Laos has increased the demand for teak from Burma, which has some 80 percent of the world's supply, and the Burmese government, desperate for funds to finance its brutal war on indigenous tribespeople, has accelerated its sales of teak concessions to outside interests, mostly Thai lumber companies Consumers should assume all teak is Burmese unless retailers can prove it to be otherwise.²⁵⁰

RAN has also supported legislative efforts. In April 1990, RAN urged members to write their state senators to support SR 822 co-sponsored by Senator Moynihan (D-New York) and Senator Symms (R-Idaho). The bill sought to ban imports of certain articles from Burma and was opposed by the International Hardwood Products Association, prompted by Dean Hardwoods in North Carolina.²⁵¹ RAN supported similar efforts in the House of Representatives. In August 1990 HR 1594 passed the Congress and was signed by President Bush. The legislation directed the President to impose sanctions against the Burmese government if the military junta did not hand over power to the elected civilian government by 1 October 1990. Under the bill the President was

²⁴⁹Ibid.

²⁵⁰"RAN Alert 40: Burmese Teak." EcoNet, "rainfor. timber" conference, 2 September 1990.

²⁵¹"Burma Teak Update." EcoNet, "rainfor. timber" conference, 2 September 1990.

required to "give primary consideration" to the imposition of sanctions on those products which constitute major imports from Burma.²⁵²

The Sierra Club issued a press release on 10 December 1991 demanding the Bush administration to stop Burmese teak imports. Larry Williams, International Program Director of Sierra Club stated,

The Bush Administration has not gone far enough in applying sanctions against the regime. The United States is party to the extinction of wildlife and oppression of tribal cultures when we import wood from Burma. By continuing to import this wood, the U.S. is encouraging the obliteration of the vast teak forests in Burma. Burma's forests are estimated to contain 80 percent of the world's remaining natural teak stands. The U.S. must send a clear message by stopping the import of wood from Burma.²⁵³

The press release also noted that Burma's forest is disappearing at a rate of 3 percent per year and at the current rate will have vanished by 1995 along with rare wildlife including tigers, rhinoceros, tapirs, leopards and elephants. The Sierra Club credited the massive increase in logging to Burmese General U Ne Win, who sold logging rights to 43 Thai timber companies and is using the hard currency to finance military operations.²⁵⁴

The Asian Human Rights Commission based in Kowloon, Hong Kong has initiated a Burma Campaign. Other groups active in planning the campaign include the Burma Rights Movement for Action, the Asian Center for the Progress of Peoples, and the Asian Students Association. The aims of the campaign are centered on human rights:

- To campaign for the unconditional release of all political prisoners in Burma;
- To make Asian people aware [of] human rights violations in Burma;

²⁵²"Burma Action Alert," EcoNet, "rainfor. timber" conference, 2 September 1990.

²⁵³Press Release. Copy obtained for the Sierra Club, Washington, D.C.

²⁵⁴Ibid.

- To call on Asian people to draw attention of their own governments and business companies to the relation of their aid or investments with the human rights violation in Burma.²⁵⁵

In their open letter, the Asian Human Rights Commission noted that the SLORC welcomes foreign investments and continues to sell off Burma's vast natural resources to neighboring countries to earn foreign currency.

Foreign investments in Burma have increased drastically since September 1988. These investments are used by the SLORC to support its repression of the people of Burma. The people have benefited little. Such investments are, indeed, investments in the death of the people of Burma

.... A large part of [the] investments come from Asia, especially some ASEAN countries. Thailand was the first to invest in logging worth more than \$100 million, and other countries have followed. Malaysian, Singaporean, and Hong Kong companies were awarded fishing licenses along the sea coast of Burma. Production-sharing contracts have been signed with a number of foreign oil companies from the US, Japan, South Korea, [and] Canada.²⁵⁶

The Asian Human Rights Commission noted that some of the oil concessions were in virgin forest areas. Under the "Action Guide" for the Burma Campaign, individuals are urged to contact environmental groups in their country to protest the massive logging and over fishing in Burma by foreign companies.

On 16 April 1992, three leading members of the US foreign policy establishment called upon the UN Security Council to impose economic sanctions against Burma's military government, and to consider organizing relief for minority groups under assault from the army. The three are Morton Abramowitz, Peter Tarnoff and Richard Holbrooke. Abramowitz, the former US ambassador, is President of the Carnegie Endowment for International Peace. Tarnoff is President of the New York-based Council on Foreign Relations, and Holbrooke, the Assistant Secretary of State for

²⁵⁵"Burma Campaign," EcoNet, "reg. seasia" conference, 5 May 1992.

²⁵⁶Ibid.

East Asian Affairs under President Carter, is currently managing director of Lehman Brothers, the brokerage house in New York. The trio also believe the Security Council should impose an international arms embargo against Rangoon as part of a strategy designed to change Burma's policies or to aid the overthrow of the SLORC. Specifically, Washington and other governments should encourage the PRC to cease exporting arms to Burma and impose an immediate international boycott on Burmese timber exports.²⁵⁷

Three senators introduced a resolution calling for an international arms embargo and an end to all US trade with Burma. The senators also criticized the Bush administration for being soft on the SLORC because of its alliance with the PRC.²⁵⁸

Burma's Southeast Asia neighbors have only recently criticized Rangoon's policies following the persecution of Burmese Muslims. Thousands of Burmese Muslims have fled to Bangladesh and now number over 200,000. The refugees in their struggle to survive threaten one of the few remaining forests in eastern Bangladesh.²⁵⁹

On 4 November 1991, children from 4 schools in Hamburg, Germany and members of the group Rettet den Regenwald blockaded the Burmese ship Sagiang for three hours in Hamburg harbor. Unloading of teak logs was suspended. Regenwald reported that 30 boxes marked for the Defense Ministry were waiting for shipment to Burma. The environmental group also noted that the German company Fritz Werner operates an ammunition and gun factory in Burma.²⁶⁰

²⁵⁷"Burma: U.S. Foreign Policy Stalwarts Urge U.N. Action," *Inter Press Service*, 16 April 1992. Copy obtained via EcoNet, "reg. seasia" conference, 19 April 1992.

²⁵⁸Ibid.

²⁵⁹Yuli Ismartono, "Burma: Doubts Linger Over Rangoon's Sudden Change of Heart," *Inter Press Service*, 28 April 1992. Copy obtained via EcoNet, "reg. seasia" conference, 1 May 1992.

²⁶⁰"Children Block Unloading of Logs," EcoNet, "rainfor. genera" conference, 12 November 1991.

Thailand's ban on logging has not only abetted the exploitation of Burma's rainforests by Thai lumber corporations but has increased pressure on logging in Laos, Cambodia, and Vietnam. On 26 August 1991, Prime Minister Khamtai Siphandon by order of decree banned all logging in Laos.

Timber exploitation is to be halted nationwide Wood poaching and counterfeiting of official documents and bribery of cadres and people are rampant. These shortcomings and mistakes have increasingly destroyed the country's forestry resources and environment. ²⁶¹

The decree also stated that corruption involving foreign concessions was a major reason behind the government's decision. Although Laos had banned timber exports to Thailand since January 1989, this has not stopped logs from crossing the Lao-Thai border.²⁶² Sisavat Keodounphan, the army's chief of staff and the mayor of Vientiane, was dismissed from the Laos Politburo in March 1991 during the party congress. Sisavat had been involved in some of the more lucrative trade deals with Thai lumber companies. Any message Sisavat's dismissal may have provided was lost when he was later designated as the minister for agriculture.²⁶³

Fearing uncontrolled exploitation of its forests, the government of Vietnam has taken actions similar to Laos. In March 1992, Vietnam announced a ban on the export of raw timber.²⁶⁴ Following the ban, Vietnamese logging companies turned to illegal logging in Cambodia's border provinces. The UN estimates that illegal Vietnamese

²⁶¹"Econews: Laos Bans Logging." *AFP*, 18 September 1991. Copy obtained via EcoNet, "rainfor. timber" conference, 19 September 1991.

²⁶²Ibid.

²⁶³"The Lost World of Laos." *The Economist*, 7 December 1991, 38.

²⁶⁴Raphael Pura, "ASEAN Probes Vietnam for Business Links," *Asian Wall Street Journal*, 10-11 April 1992, 4.

loggers will export 250,000 cubic meters of Cambodian timber this year.²⁶⁵ Led by the Vietnamese, Cambodia's four political factions have begun their own logging drive to raise funds for the May 1993 elections. The UN estimates that a total of 1.2 million cubic meters will be logged in Cambodia this year.²⁶⁶

Deforestation has clearly led to conflict throughout Indochina and the Southeast Asian region. The conflict is likely to continue as each country seeks to impose logging regulations and export bans and as logging corporations continue to cross borders to maintain their supply.

²⁶⁵"Tree Thieves," *Far Eastern Economic Review*, 11 June 1992, 7.

²⁶⁶Jon Liden and Murray Heibert, "Cambodian Assault: Loggers are Quick to Exploit the Peace," 4 June 1992, 64.

V. JAPAN AND DEFORESTATION IN SOUTHEAST ASIA

A. THE JAPAN CONNECTION

. Certainly, the various national governments of Southeast Asia must accept a large share of responsibility for deforestation in their respective countries. However, Japan, through mercantilist policies often carried out under the guise of foreign aid in conjunction with Japan's large trading corporations and other companies supported by MITI and the Ministry of Finance, has played a major role in deforestation. Japan is by far the leading importer of tropical timber in the world, accounting for 29 percent of total imports. Japan imports nearly four times as much as Korea and over seven times as much as the US (see Table 1).

TABLE 1. IMPORTS OF TROPICAL TIMBERS* BY MAJOR CONSUMING COUNTRIES

COUNTRY	1988	1989
Japan	18,383,644	23,939,512
South Korea	6,008,160	6,027,300
United States	5,122,450	3,605,848
United Kingdom	2,859,822	2,586,634
Netherlands	1,984,686	2,350,914
France	2,076,242	2,249,956
Italy	1,623,764	1,860,012
Germany	1,597,052	1,738,320
Spain	1,085,660	1,165,400

Units: Cubic Meters of Roundwood Equivalents

* Includes logs, plywood, and sawnwood

(Source: Japan Tropical Forest Action Network/1991)

Japan's dominance in the tropical timber trade is even more pronounced in Southeast Asia. Through 1986, Japan imported about one-third of all Southeast Asia's log exports by volume, three times as much per person than the European Economic Community. Moreover, Japanese timber importers have concentrated on buying only the cheapest and least processed form of timber: raw logs, clear-cut in virgin forests that are not replanted.²⁶⁷ Japan has imported timber from nearly every country in Southeast Asia and the Pacific (see Table 2).

TABLE 2. TROPICAL LOG IMPORTS BY JAPAN FROM THE ASIA-PACIFIC REGION

COUNTRY	1988	1989	1990
Malaysia			
Sarawak	5,350,575	6,682,589	6,749,139
Sabah	5,259,869	4,640,775	3,420,411
Peninsular	10,816	0	0
Subtotal	10,621,260	11,323,364	10,169,550
Burma	18,792	16,981	16,655
Cambodia	8,504	9,490	9,913
Fiji	0	0	0
Indonesia	0	0	0
Laos	17,242	22,017	14,120
PNG	770,248	890,641	625,891
Philippines	32,899	52,481	23,432
Solomon Islands	177,755	233,496	227,624
Vanuatu	2,951	0	0
Vietnam	5,792	11,652	14,371
Western Samoa	507	0	0
TOTAL	11,655,950	12,560,122	11,101,556

Units: Cubic Meters

(Source: Japan Lumber Importers Association—Prepared by the Japan Tropical Forest Action Network and Friends of the Earth Japan/August 1991)

²⁶⁷“Hard Luck for Hardwoods.” The EEC imported the same number of logs by volume as Japan, however, exporters earned 20% more from Europe because it bought more processed woods: sawn wood, veneer and plywood.

As is apparent from Table 2, Malaysia is Japan's number one supplier of tropical timber, accounting for over 90 percent of Japan's timber imports from Southeast Asia. In 1989, Japanese imports of Sarawak logs jumped twenty-seven percent and represented fifty-three percent of Japan's total tropical-log import volume. That year, Sarawak sent almost half its logs to Japan.²⁶⁸ Much of the timber trade is controlled by the *sogo shosha*, giant, octopus-like general trading corporations that dominate Japanese foreign trade (see Table 3).

TABLE 3. TROPICAL LOG IMPORTS FROM SARAWAK BY JAPANESE COMPANIES

COMPANY	1988	1989	1990
Nichimen Corp.	397,000	503,236	656,633
Marubeni Corp.*	479,000	555,432	537,479
Nissho Iwai Corp.	389,000	495,745	349,312
Ataka Mokuzai	288,000	379,129	331,028
Mitsui & Co.	207,000	266,459	293,828
Yuasa Sangyo	66,000	257,673	284,155
Itoh & Co.	288,000	340,085	268,677
Okura Shoji	212,000	221,885	265,406
Mitsubishi Corp.*	261,000	298,000	248,395
Sumitomo Corp.*	162,000	251,875	273,039
Sumitomo Forestry	427,000	354,963	134,357
Others	2,084,000	2,761,323	3,106,830
Total:	5,260,000	6,685,805	6,749,139

Units: Cubic Meters

* Includes Subsidiaries and Affiliated Companies

(Source: Japan Lumber Importers Association—Prepared by the Japan Tropical Forest Action Network and Friends of the Earth Japan/August 1991)

²⁶⁸Stan Sesser, "A Reporter at Large: Logging the Rainforest," *The New Yorker*, 27 May 1991, 66.

1. The Sogo Shosha (Trading Corporations)

One of the greatest factors in the dramatic deforestation of Southeast Asia has been the rise of the *sogo shosha*. All *sogo shosha* are involved in the tropical timber trade and import most of Japan's timber (see Table 4). Between 70–80 percent of the tropical wood that reaches Japan is made into plywood, of which 30 percent is used for furniture and 55 percent goes to construction.²⁶⁹

TABLE 4. IMPORTS OF TROPICAL TIMBER* BY JAPANESE COMPANIES

COMPANY	1988	1989	1990
Nissho Iwai	1,358,715	1,591,081	1,261,158
Mitsubishi Corp	1,256,580	1,455,292	1,253,752
Itoh & Co.	1,292,288	1,690,203	1,237,119
Marubeni Corp.	1,393,934	1,502,534	1,153,887
Sumitomo Forestry	1,505,424	1,542,734	1,134,710
Nichimen Corp.	930,295	1,025,004	1,038,858
Mitsui & Co.	694,123	826,028	719,225
Sumitomo Corp.	549,181	713,659	529,817

* Includes logs, plywood and sawnwood, but not woodchips

Units: Cubic Meters of Roundwood Equivalents

(Source: Japan Tropical Forest Action Network/February 1991)

Ninety-six percent of Japan's plywood is made from tropical hardwoods.²⁷⁰ The 163 companies within the six major groups excluding financial institutions account for 15 percent of total sales and 15 percent of total capital of all Japanese companies.²⁷¹ Through their vast networks, the *sogo shosha* supply manufacturers with 87 percent of

²⁶⁹Catherine Rubinstein, "Timber Trade," *Intersect* (July 1990), 15.

²⁷⁰Sesser, 66. The construction industry uses plywood in constructing molds for concrete. These plywood molds, called *kopane*, are only used two or three times and then thrown out or burned.

²⁷¹Masami Iida, "Interlocking Firms Lock out Foes," *Japan Economic Journal*, 17 June 1991, 5.

their log requirements and control the distribution of 71 percent of the output of plywood mills.²⁷²

The *sogo shosha* not only import and distribute tropical hardwoods, but they are end users. The imported hardwoods are used predominantly in the construction and the paper and pulp sectors which account for up to 28 percent of total sales. Total sales by sector or commodity for Nissho Iwai, Nichimen, and C. Itoh as published by *Japan Chemical Week* are shown below (see Table 5.1 through 5.3).

TABLE 5.1. SALES FOR NISSHO IWAI CORPORATION BY COMMODITY

COMMODITY	FY89	FY90
Metals	8,112,972	5,188,258
Machinery & construction	1,745,156	2,283,143
Energy	2,329,276	3,003,516
Fibers & textiles	465,161	407,288
Timber, general products & chemicals	1,446,037	1,544,969
Foodstuffs	948,905	916,035
TOTAL	15,047,507	13,343,209

Units: ¥ Millions

(Source: Japan Chemical Week, 25 July 1991)

TABLE 5.2. SALES FOR NICHIMEN CORPORATION BY COMMODITY

COMMODITY	FY89	FY90
Metals & fuel	2,840,161	3,140,012
Machinery & construction	931,963	963,419
Chemicals & synthetic resins	297,510	326,950
Fibers & textiles	452,427	468,478
Foodstuffs	960,234	887,207
Timber, paper, pulp & others	411,423	398,774
TOTAL	5893718	6184840

Units: ¥ Millions

(Source: Japan Chemical Week, 25 July 1991)

²⁷²Rubinstein, 15.

TABLE 5.3. SALES FOR C. ITOH & CO., LTD. BY COMMODITY

COMMODITY	FY89	FY90
Fibers & textiles	2,166,454	2,233,051
Machinery & Construction	5,664,406	5,306,972
Metals	6,413,430	5,974,972
Foodstuffs	2,109,199	2,247,967
Timber, paper & general products	975,979	962,542
Energy & chemicals	3,203,269	3,846,453
TOTAL	20,532,742	20,595,959

Units: ¥ Millions

(Source: Japan Chemical Week, 25 July 1991)

2. Japanese Foreign Aid

Japan's vast foreign aid program for its Southeast Asian neighbors has fueled the problem of deforestation. In 1990, Japan surpassed the US as the number one foreign aid donor. Japan's aid budget for 1990 was approximately \$10 billion.²⁷³ Today, Japan is the top bilateral aid donor to 25 developing countries. Japan is the largest contributor to the Asian Development Bank, and ranks second in the World Bank, the International Monetary Fund, the Inter-American Development Bank, and the African Development Bank.²⁷⁴

However, the majority of Japan's aid is in the form of low-interest loans rather than grants. These loans are provided by the Overseas Economic Cooperation Fund (OECF) under the Organization of Economic Cooperation and Development's definition of "Official Development Assistance (ODA)." The volume of OECF funds, roughly \$5.5 billion for 1989, makes it the third largest development funding institution in the world,

²⁷³Edmund Klamann, "Aid Machine Struggles with Ecology Issues," *Japan Economic Journal*, 30 June 1990, 1.

²⁷⁴Richard A. Forrest, "Japanese Aid and the Environment," *The Ecologist* 21 (January/February 1991) 24.

after the World Bank and USAID. OECF loans are for capital-intensive infrastructure projects and account for 56 percent of Japan's ODA. (Loans comprise less than 10 percent of US ODA.)²⁷⁵

Throughout the sixties and seventies, Japan's ODA was used to create markets for Japanese goods and to introduce Japanese banks and trading companies into developing countries. Japan's ODA was also used to transplant hazardous and energy-intensive processing facilities to offshore sites throughout Southeast Asia and to build large-scale facilities for exploiting and processing raw materials including timber.

In Sarawak, the Japanese government sent foreign aid to build bridges and logging roads, justifying the move by arguing that the roads would be traveled by local people. These efforts were directed by Japanese engineers and completed with heavy machinery provided by Japanese companies. A National Wildlife Federation study later pointed out that locals could only use the roads by hitchhiking rides on the many logging trucks.²⁷⁶ Later, Diet questioning by an opposition party member triggered an investigation which forced C. Itoh to repay a government loan made in connection with the project.²⁷⁷

Although there have been several environment-related concessions and initiatives in Japanese aid policy including support for the Philippine National Reforestation Program, the foreign aid machine remains essentially the same. All aid loans must still be approved by three frequently squabbling ministries: the Ministry of Finance, MITI, and the Ministry of Foreign Affairs. No project can be considered for aid

²⁷⁵Ibid., 26.

²⁷⁶Sesser, 66.

²⁷⁷Jerome Sayer, "Saving Face," *American Chamber of Commerce in Japan Journal* (July 1990), 40.

unless it has been officially requested by the recipient country. Budget requests, environmental assessments and other data remain undisclosed to the public or the Diet until after a project is approved. Finally, aid agencies remain understaffed and lack the personnel to do proper project evaluation.

The foreign aid machine also contains some significant intricacies. Japan's foreign assistance agencies also provide loans for, and equity investment in, private Japanese companies. This facilitates packages of 'mixed credits', combined packages of ODA and private capital for a project, using 'soft' official financing to assist Japanese companies venturing overseas. (For example, C. Itoh receives contracts amounting to between \$350 and \$400 million annually from Japanese ODA.²⁷⁸) Although the ODA portion may be covered by environmental or other restrictions, the auxiliary funding and secondary projects that often follow are outside the scope of environmental assessments, and have no policies to guide or regulate them.²⁷⁹ Japanese consulting companies assist foreign governments by providing a link to Japan's complex and disorientating foreign aid bureaucracy. Knowing which projects the bureaucracy will approve, consulting firms often advise foreign governments to request particular projects.

3. A Code of Conduct

Environmentalists have called upon the Japanese government for help, requesting that Japanese foreign aid be tied to forest conservation and requesting the government to encourage Japanese importers to follow a 'code of conduct' under which

²⁷⁸Robert M. Orr, "From the Land of the Rising Sun: the Private Sector and Japanese Official Development Assistance," *Japan Economic Journal*, 27 January 1990, 17.

²⁷⁹Forrest, 26-27.

they would agree to take logs only from sustainable concessions.²⁸⁰ However, a change in Japanese policy is unlikely in the short term.

Japan may not provide a resolution to global environmental problems and particularly deforestation due to the economic, political, and social structures within Japan. Specifically, Japan is driven by a growth economy based upon the import of natural resources including tropical timber. Politically, the Japanese Diet will remain controlled by the Liberal Democratic Party (LDP) which has shown little commitment to the global environment and has provided only token assistance to countries in Southeast Asia. Further, any green movement that may develop in Japan will be resisted by those within the ruling LDP who are beholden to business interests. Socially, the development of a green movement will remain unlikely due to a lack of awareness perpetuated by a denial of responsibility for deforestation or a solution.

B. BARRIERS TO CHANGE WITHIN JAPAN

Japanese corporations and foreign aid programs will continue in the short term to devastate the rainforests of Southeast Asia. A substantive change in Japanese environmental policies is unlikely due to the structural barriers inherent to the economic, political, and social systems of Japan.

1. Economic Barriers

The Japanese economy presents several barriers to change in Japan's environmental policies including the importance of continued growth, the profit motive, and the essential role of wood within the entire economy. Wood plays a part in more activities of modern economies than any other commodity. Almost every major industry depends on forest products in a least one of its processes. Not surprisingly, the amount of

²⁸⁰Ibid. West German importers have already agreed to follow this 'code of conduct.'

industrial timber now consumed worldwide has risen to 1.5 billion tons, an amount that exceeds steel and plastics.²⁸¹

Japan is similar to other developed countries . Out of a total of 58,336,000 Japanese employed by industry, over twelve percent are employed by those industries most closely associated with wood and wood products (see Table 6). Similarly, over eleven percent of all establishments are associated with wood and wood product industries (see Table 7).

TABLE 6. NUMBER OF PERSONS EMPLOYED BY INDUSTRY

TOTAL (EMPLOYED BY ALL INDUSTRIES)	58,336,000
Construction	5,295,000
Manufacturing	
Lumber and wood products	331,000
Furniture and fixtures	327,000
Pulp, paper, and paper products	336,000
Publishing, printing and allied industries	758,000
SUBTOTAL (WOOD INDUSTRIES)	7,047,000

Source: Japan Statistical Yearbook 1991

²⁸¹George Kurian, ed., *The New Book of World Rankings* (New York: Facts on File, 1991), 122.

TABLE 7. NUMBER OF ESTABLISHMENTS BY INDUSTRY

TOTAL (ALL INDUSTRIAL ESTABLISHMENTS)	6,708,759
Construction	576,417
Manufacturing	
Lumber and wood products	39,128
Furniture and fixtures	48,080
Pulp, paper and paper products	19,174
Publishing, printing and allied industries	67,674
SUBTOTAL (WOOD INDUSTRIES)	750,473

Source: Japan Statistical Yearbook 1991

Recently, wood and wood product industries have experienced high growth. Specifically, the GNP elasticity of paper and cardboard, the ratio between an industry's growth and growth in overall GNP has risen from about 0.8 ten years ago to roughly 1.4 in the last few years.²⁸² Production of fine office papers increased 20 percent between 1987 and 1990. Paper consumption is now so strongly linked to economic growth that the financial statements of major pulp and paper companies are used by analysts as indicators of the state of the economy.²⁸³ Falling costs through cheaper imports and increased demand for paper have also brought about very visible improvements in the profit pictures of paper manufacturing companies. These trends, high growth and profits,

²⁸² "Access Nippon" 1990 Edition, (Tokyo: Access Nippon Inc., 1990), 96.

²⁸³ Joe Rinkevich, "A Situational Overview of Bintuni Bay," *Japan Environment Monitor*, 30 June 1990, 16.

should continue to increase as the demand of 'information paper' products such as heat-sensitive facsimile paper and paper for ordinary copy machines increases.²⁸⁴

Investment in construction, the largest sector associated with the wood and wood product industry, was projected to be Y70.11 trillion for 1989 or 18 percent of GNP, the largest in the world. The prosperous conditions of the construction industry are expected to continue both in the mid and long term.²⁸⁵ In 1990, the Japan housing market was the largest in the world with more than 1.6 million starts.²⁸⁶ A 1988 Ministry of Construction survey confirmed the frustration felt by many Japanese. The survey found that less than 1 in 6 households was content with its living accommodations.²⁸⁷

In *The Coming War with Japan*, George Friedman states that "Growth drives the Japanese economy and a decline in its growth can threaten the very fabric of Japanese society."²⁸⁸ Friedman argues that Japanese corporations, operating under a high debt to equity ratio, often face a cash flow crisis posed by debt repayment schedules.²⁸⁹ Japanese corporations, rather than rely on investors who share in risk-taking, borrow the money they require for continued expansion from banks who must be repaid on a regular basis. In order to obtain sufficient cash flow, Japanese corporations must expand their

²⁸⁴"Access Nippon," 96-98.

²⁸⁵Ibid., 165-166.

²⁸⁶Todd Cambell, "Knock on Wood," *Business Tokyo* (January 1992), 24.

²⁸⁷Ibid. Since 1980, floor space has shrunk from 845 square feet per household to 730 square feet. By comparison, the average American dwelling is a spacious 1,440 square feet.

²⁸⁸Friedman, *The Coming War with Japan*, (New York: St. Martins Press, 1991), 139.

²⁸⁹Edwin O. Reischauer, *The Japanese Today: Change and Continuity*, (Cambridge: Harvard University Press, 1988), 331. Reischauer states that debt-equity ratios sometimes run as high as 80 to 20 percent.

market share often at the expense of their profit margin. (Such actions are often viewed as 'dumping' by Americans and other Westerners.)²⁹⁰ In turn, actions that hinder growth, including environmental measures that cut off the supply of raw materials which fuel Japan's economy, are not welcome by the Japanese.²⁹¹

2. Bureaucratic and Political Barriers

The importance placed on economic growth is illustrated by the dominance of the Ministry of International Trade and Industry (MITI) and the Ministry of Finance (MOF) within the hierarchy of the 12 cabinet ministries. Prestowitz likens MITI to the US Department of Defense—MITI views industrial and trade issues as closely related to the nation's overall security and deems it necessary to provide guidance, that is, exercise power to maintain that security.²⁹² Thus the dominance of MITI and the MOF is unlikely to change in the short term, and the bureaucracy as a whole will not support environmental policies which may hinder growth including those set forth by the Environmental Agency.

²⁹⁰Friedman, 135-157. "Japanese behavior resembles nothing so much as that of a Western company facing a large quarterly interest payment to a bank, ordering its sales staff to clear out inventory, even at a loss, in order to generate cash. What is or should be a fairly rare occurrence in a Western corporation is standard operating procedure in Japan.... This is a normal pattern in all Japanese export markets."

²⁹¹In the new world order, Japan's concern regarding access to raw materials and imports in general will grow. During the Cold War, free trade was politically expedient. Today, as evidenced in the 1992 presidential campaign, 'America First' is now popular. Moreover, free trade is increasingly subject to environmental interests found within the US Congress. Last year, environmental issues were central to the debate on the extension of fast-track authority in regard to the Mexican free trade agreement. As the battle was pitched, a loose labor-environmental axis was formed which opposed the fast-track extension. The extension of fast track authority was only approved after President Bush proposed an environmental 'action plan' on 1 May 1991. In April 1991, Sen. Al Gore (D-Tennessee), proposed a bill (S. 1159) to provide for the labeling or marking of tropical wood and tropical wood products sold in the US which would facilitate a breakdown of the total cubic meters of lumber, plywood, veneers, furniture containing tropical hardwoods, and logs imported, increase consumer awareness, and encourage sustainable development of tropical forests. (Copy of S.1159, "Tropical Forest Consumer Information and Protection Act of 1991" received from Senator Gore's office, 393 Russell Senate Office Building, Washington D.C.)

²⁹²Prestowitz, 223-224.

The foreign aid bureaucracy will also remain unchanged and uncommitted to the environment. Many experts have suggested a greater reliance upon 'outsiders' including foreign experts and non-profit organizations and the local staffers at overseas offices.²⁹³ However, this would require that the bureaucracy yield some of its authority on aid policy to these 'outsiders' which is unlikely in the short term.

Politics presents an even greater barrier to change on environmental policies than the bureaucracy due to the dominance of the LDP. The LDP has controlled the Japanese Diet for over three decades. Although the LDP is itself a coalition, it has been successful in maintaining solidarity. Two factors insure the continuance of party discipline. First, individual Diet candidates need an official party endorsement as well as financial aid to have much chance of being elected. Secondly, once elected to the Diet, members "have little hope of political plums unless they adhere strictly to party discipline."²⁹⁴ The factions within the LDP in turn help to perpetuate the system. No one faction forms a majority within the LDP. Hence, individual factions must work within the party to promote their respective leader for party president and prime minister.

The weaker, ideologically inspired political groups or individuals have no leverage of any kind over the status quo other than the little material pressure they are sometimes able to muster. In short, Japanese political practice is a matter of 'might is right' disguised by assurances and tokens of 'benevolence'.²⁹⁵

The status quo is supported or maintained by business leaders who seek to influence LDP leaders and factions. The construction industry in particular is tied to politicians and foreign aid. In the past, more than half of the political bribery scandals in Japan each

²⁹³Klaman, 5.

²⁹⁴Reischauer, 270.

²⁹⁵Karel van Wolferen, *The Enigma of Japanese Power* (New York: Vintage Books, 1990), 244.

year have involved the construction sector.²⁹⁶ In early 1992, Fumio Abe, a former minister who is a close associate of Prime Minister Miyazawa, was arrested on suspicion of taking bribes from Kyowa Corp., a now bankrupt steel-frame manufacturer. Prosecutors allege that Abe accepted Y80 million from Kyowa during 1989 and 1990 in exchange for information about government plans to build a new expressway between Hakodate and Esashi in Hokkaido. Abe has admitted receiving Y100 million from Kyowa in legal political contributions, but denied using his political influence to aid the company. Abe resigned as the secretary general of the Kochikai, the LDP faction headed by Miyazawa, in December 1991, shortly after the first allegations that he had received illegal contributions.²⁹⁷

The Kyowa scandal has brought new calls for reform. Yet, reform seems unlikely. Three political-reform bills were killed last autumn in a parliamentary committee, provoking the resignation of Prime Minister Kaifu who had staked his political career on the bills. Real reform which addresses the critical issue of the high cost of fighting elections under the current multi-member constituency system would be revolutionary. Revolution is not part of Japan's history. Reischauer describes Japan's modern political development as

... basically evolutionary rather than revolutionary, giving it a certain degree of stability and suggesting that further changes, whatever they may be, are likely to grow naturally out of conditions within Japan.²⁹⁸

Yet conditions for evolutionary let alone revolutionary change are hard to affect within the Japanese Diet. This may be attributed to an absence of open debate. Rather,

²⁹⁶Forrest, 27.

²⁹⁷Robert Delfs, "Poisoned Friendship," *Far Eastern Economic Review*, 23 January 1991, 11.

²⁹⁸Reischauer, 238.

interpellations, the questioning of cabinet members on problems of government, serve mainly to inform the mass media and the general public of the 'party line' in an effort to build public support. Both houses also elect their own presiding officers, who have broad powers, including the right to limit debate in order to avoid filibusters.²⁹⁹ Thus, opposition members, the likely source of any future green movement, remain stymied.

The Japanese Supreme Court, through a series of landmark decisions in the 1970s, established the principle that a polluter must pay individuals who are damaged. In so doing, the Court restrained the government policy of economic growth at any price.³⁰⁰ However, this did not mark the rise of an activist Court. Rather the Court was responding to the broad Japanese concept of *kogai* or 'public injury' and treated such issues as local cases. In general, the cases themselves were pressed forward by local ad hoc organizations called local residents' movements, not the national parties. Today, the Court remains predisposed to supporting the majority vote of the Diet and is not likely to interfere in international trade including timber. Domestic standards will not be applied to the overseas operations of trading corporations even though individuals, albeit of another country, may be damaged.

3. Japanese Sociological Barriers

The Japan Tropical Forest Action Network (JATAN) has yet to penetrate the Japanese consciousness. A 1989 survey by the prime minister's office showed that while a majority of the Japanese population is concerned about pollution and nature preservation, only 18 percent had ever participated in environmental activities, and only 7

²⁹⁹Reischauer, 250-251.

³⁰⁰Ibid., 258 and 286-288. The most famous of the cases, Reischauer states, was that of mercury poisoning through marine products at the Kyushu town of Minamata, where the source of pollution was identified as early as 1959, but a final Supreme Court decision was not handed down until 1978.

percent said they would make small donations to private conservation groups.³⁰¹ Another poll conducted by a United Nations agency in 1988 revealed that among citizens, government officials and scholars in 14 countries, the Japanese were the least concerned about environmental issues and the least ready to offer money or other assistance to help out.³⁰² 1990 was the first year that Japanese environmentalists, including 20 members of JATAN, participated in World Rain Forest Week. JATAN members passed out leaflets as a folk singer entertained on a warm, sunny day. Thousands of people passed by during an hour but only about thirty stopped to see what was going on, and about two-thirds were foreigners. In the short term, it is unlikely that JATAN and other environmental activists will spur a mass movement to stop deforestation in Southeast Asia due to several sociological barriers.³⁰³

Relative to past and present domestic environmental concerns, the rainforests become distant and inconsequential. As noted previously, the environmental movement of the sixties and seventies was a localized movement where groups concerned themselves with only a single issue, such as a polluting factory, a plan for a local nuclear plant or industrial zone, or the noise of a local airport. The effects of domestic industrial pollution were immediate and threatening, especially three notorious diseases: the Minamata disease, Itai-itai disease, and Yokkaichi asthma.³⁰⁴ T. J. Pempel provides the following description of the infamous Minamata case.

³⁰¹Kathryn Graven, "Japan's Timber Consumption Draws Fire," *Asian Wall Street Journal*, 8 February 1990, 8.

³⁰²*Ibid.*

³⁰³Sesser, 65.

³⁰⁴T. J. Pempel, *Policy and Politics in Japan: Creative Conservatism* (Philadelphia: Temple University Press, 1982), 222. Minamata disease, linked to methyl mercury, a byproduct in the manufacture

As fish floated belly up in Minamata bay, as cats and dogs leaped violently about, convulsed and died, as birds dropped inexplicably from the sky, and as the number of human cripples mounted into the hundreds and as dozens of deaths took place, it became increasingly clear to victims and supporters that [Chisso Petrochemical Corporation's] dumping of methyl mercury ... was the first link in the causal chain.... [The] disease could affect children born to victims. The end result was the creation of large numbers of human vegetables in the small city of Minamata.³⁰⁵

By the mid-1960s, Japan had experienced a general breakdown in the character of its environment. Noise, water, and air pollution had become pervasive. In May 1976, Tokyo officially recognized 1548 victims of mercury poisoning with 186 dead and over 3500 additional victims awaiting certification, 350 victims of cadmium poisoning and 120 dead, 232 cases of hexavalent chromium poisoning and 41 dead, and over 30,000 victims of air pollution.³⁰⁶

Obviously, the domestic environmental degradation was extreme. Yet, groups including enterprise unions did not support the victims and the environmentalists. The polluting companies provided jobs and concern for the environment threatened those jobs. Today, it is hard to imagine the growth of a similar movement to stop deforestation in the short term when some Japanese failed to respond to such extreme conditions in the past.

'Culturalism' forms another sociological barrier to change in regard to deforestation. The Japanese have a near obsession with their uniqueness. Exclusion comes naturally to groups that are tightly bound by a self-conscious sense of

of acetaldehyde and vinyl chloride, destroys the brain and the central nervous system and was first recognized in the town of Minamata in 1956, later along the Agano River in 1965, and in 1973, along the Sea of Ariaka. Itai-itai, (literally the 'ouch-ouch disease') caused by cadmium in rice, was first noticed in 1955 in the Toyama Prefecture. Yokkaichi asthma, a lung ailment, was the result of complex smoke and soot emissions in the city of Yokkaichi.

³⁰⁵Ibid., 224-225.

³⁰⁶Nester, 382-383.

uniqueness.³⁰⁷ Harmony of the group and belonging to the group are most important to individual Japanese. Individuals associated with two environmental groups, JATAN and Friends of the Earth Japan, are treated politely but yet are not accepted.

Zoologist Hideo Obara, considered one of the deans of Japanese environmentalism, sheds some light on another aspect of Japanese culture. Although many Japanese regularly stress their historical and cultural ties with nature and say they love creation, Obara notes that Japanese do not hesitate to alter nature, preferring to bring some sign of nature, such as a Bonsai tree, into their house. Nature, like the Bonsai tree, is not necessarily beautiful until shaped or molded by human hands.³⁰⁸ This attitude is reflected is perhaps also reflected in Japan's beached which are blighted by litter.

The Japanese media have done little to break through the insularity formed by culturalism. At an international ecology conference held in Kyoto, Randy Hayes, founder of the Rain Forest Action Network based in San Francisco, accused Japanese journalists of covering domestic issues such as pollution from golf courses while ignoring ecological problems abroad.³⁰⁹ Yoichi Kuroda, secretary general of JATAN, added that compared to foreign and Japanese English-language newspapers, there is little or no coverage by the Japanese press of demonstrations, here or abroad, against Japanese companies' logging activities in the Third World.³¹⁰

³⁰⁷Clyde V. Prestowitz, *Trading Places: How We Are Giving Our Future to Japan and How to Reclaim it* (New York: Basic Books, Inc., 1988), 192 and 203.

³⁰⁸Jacob M. Schlesinger, "Japan's Environmental Record Improves," *Asian Wall Street Journal*, 27 February 1992, 1 and 14. (The attitude symbolized by the Bonsai tree seems to be completely opposite of that commonly found in America which views nature as beautiful left untouched or in a pristine state.)

³⁰⁹John M. Flanagan, "Media Rapped for Ignoring Ecology," *Japan Times*, 9 June 1990. (The pollution associated with golf courses stems from the use of agricultural chemicals in maintaining the greens and fairways.)

³¹⁰*Ibid.*

C. AGENTS FOR CHANGE

There exist several agents for change in environmental policy. Perhaps the most significant are several members of the LDP including Kosugi Takashi, Japan Coordinator for Global Legislators Organized for a Balanced Environment (GLOBE). GLOBE provides Kosugi Takashi an international forum and support in seeking change in Japan's environmental policies. Specifically, GLOBE has called upon the government of Japan to take measures to halt all illegal log imports from the Philippines and to consider publication of all import figures by country of origin to facilitate the understanding of discrepancies between trade figures of Japan and other countries.³¹¹ Kosugi Takashi is also head of the Lower House committee on environmental issues. Two former environmental ministers, Aichi Kazuo and Aoki Masahisa, support Kosugi Takashi within the Lower House. These three have a unique opportunity to change environmental policy from within Japan while reaching out for international support.

JATAN is also a significant agent for change. JATAN's membership of 750 represents a core of activists who can continually raise the consciousness of the Japanese. JATAN has been aided recently by a renewed interest within the media as well as a greater interest shown by the college-age Japanese.³¹²

Several local governments have responded to the mounting criticism of the use of tropical hardwoods in *kopane*. Following action by the Tokyo Metropolitan Government, the Osaka Municipal Government announced that it would reduce the quantity of tropical hardwood used in construction of public projects. *Kopane* will be replaced with other materials such as aluminum to form concrete molds. The Osaka and Kyoto prefectural

³¹¹"GLOBE International Action Agenda: Logging in the Philippines," Global Legislators for a Balanced Environment, Washington D.C., 4 February 1992.

³¹²Phone conversation with Sonoko Kawakami of JATAN on 23 March 1992.

governments plan similar projects. In the Osaka Municipal test project, aluminum will account for 60 percent of all concrete molds. However, one contractor on the test project cited several limitations including a lack of companies specializing in recycling the aluminum molds and greater costs for small subcontractors who prepare the molds. *Kopane* is approximately one-tenth the cost of aluminum. For the trend to continue, local governments will have to subsidize small and medium sized contractors.³¹³

Oddly, the development of a new adhesive may save the rainforests of Southeast Asia. Two companies, Honen Seiyaku and Oshika Shinko, recently developed adhesives especially suitable for use on plywood made from conifers, which is generally not as smooth as plywood made from hardwoods.³¹⁴ The wood industry accounts for over one-third of all adhesive output and the Japan Adhesive Industry Association reported that plywood adhesive output rose to 530,351 m tons, and shipments rose to 510,088 m tons worth Y41,055 million in 1990.³¹⁵ Already, Japan has begun to shift wood supplies to Russia, North America, and New Zealand. In 1991, a \$1 billion joint venture was proposed between Japan and Russia. Japan hopes to trade logging equipment to Russia for 6 million cubic meters of logs and 400,000 cubic meters of wood products over a five year period.³¹⁶ Domestically, new political channels must be found, perhaps similar to those established in the environmental movement of the sixties and seventies. Although

³¹³Sachiko Hirao, "Osaka Moves to Cut Back on Use of Tropical Timber," *Japan Times Weekly (International Edition)*, 11-17 May 1992, 4.

³¹⁴"Conifer Boards Bonded Faster with New Adhesive," *Japan Chemical Week*, 19 December 1991, 7 and "Oshika Shinko Develops Adhesive for Needle-leaved-tree Plywoods," *Japan Chemical Week*, 5 December 1991, 5.

³¹⁵"Adhesive Demand Keeping Favorable Tone," *Japan Chemical Week*, 26 September 1991, 3.

³¹⁶"Japan to Develop Forests in Siberia," *World Wood* (August 1991), 6.

corporate behavior may be influenced by pressure from Japanese consumers, media, and government, pressure from abroad may be the most effective influence.

Mitsubishi, perhaps the best known and most visible *sogo shosha* worldwide, has already proved sensitive to criticism from environmentalists in Europe and the US.³¹⁷ In September 1989, an environmental group destroyed a car made by Mitsubishi Motors Corp. by using a crane to drop a log onto it. The demonstration took place in front of the company's representative in Rotterdam as activists shouted "Don't buy cars produced by Mitsubishi, destroyer of tropical rain forests!"³¹⁸ Environmentalists also launched a 'facsimile attack,' clogging the company's overseas office lines with protest messages, and boycotted Mitsubishi cars and consumer electronics. In April 1990, Mitsubishi organized an in-house environmental department and announced plans to collect used paper in its offices in order to improve its environmental image.³¹⁹ The other *sogo shosha* have followed Mitsubishi's lead in establishing environmental offices.³²⁰

However, there seems to be no real commitment when measured in dollars. Mitsubishi and 86 other members of the Japan Lumber Importers' Association have publicized their contributions to a \$70,000 fund aimed at promoting environmental research. That represents a commitment of about \$800 per company.³²¹

³¹⁷"Conservation Groups Target Trading Firms," *Japan Economic Journal*, 28 July 1990, 26.

³¹⁸"Return of the Mitsubishi Zaibatsu," *Daily Yomiuri*, 17 May 1990, 1.

³¹⁹"Conservation Groups Target Trading Firms."

³²⁰"C. Itoh Sets up Environment Office," *Japan Times*, 25 July 1990, 11.

³²¹Karl Schoenberger, "Hunger for Wood Still Ravages Rain Forests," *Daily Yomiuri*, 27 December 1989, 3.

Mitsubishi's image has also been tarnished by the recent removal of a comic book from Japanese high schools at the request of the Education Ministry. The comic book, part of a series proposed by the Science and Technology Educational Association to introduce students to Japanese corporations, was intended to polish up the image of the *sogo shosha* but had the opposite affect. One chapter in the 216-page Mitsubishi comic book depicts a man named Hino, modeled after a real-life employee, who is told to find a way to demonstrate that Mitsubishi is doing its part to help solve global environmental problems. In aerial surveys of the Philippines, Malaysia and Indonesia, Hino finds green forests where he expects to find hills laid bare by logging. In other areas, Hino finds bare hills and scrub forest supposedly left by local tribes practicing slash and burn agriculture. Citing FAO statistics, the comic book states that the greatest damage is caused by clearing of tropical rainforests for farming. The comic ends by explaining Mitsubishi's support for a \$1.5 million project to recreate a forest ecosystem in Sarawak with trees native to the region.³²² JATAN has criticized the project which does not address present rates of deforestation.

The Japanese government has also submitted to international pressure and lent at least symbolic support for the environment in international forums and organizations including the International Tropical Timber Organization and the Asian Development Bank. Japan has also supported environmental initiatives put forward by the Group of Seven and the Earth Summit.

Environmental issues formed a major part of the Group of Seven economic declaration issued at the close of the London economic summit in July 1991. The declaration said that

³²²Elaine Kurtenbach, "Mitsubishi Logging." *Associated Press*, 30 March 1992. Copy obtained via EcoNet, "rainfor. timber " conference, 1 April 1992.

Growing market economies can best mobilize the means for protecting the environment, while democratic systems ensure proper accountability Environmental considerations should be integrated into ... government policies in a way that reflects their economic costs.³²³

The declaration also promised assistance to developing nations to cope with environmental problems stated that the seven leaders remained concerned about the destruction of tropical rainforests and welcomed the spread debt for nature exchanges with an emphasis on forests.

Recently, over 100 members of the Japanese Diet expressed their desire to attend the Earth Summit in Brazil. (A lesser number of Diet members were allowed to attend when the Summit coincided with a vote on the use of Japanese military as UN peacekeeping forces.) However, some analysts see the rush of Japanese politicians eagerly addressing environmental problems as being only a matter of political expediency. Faced with elections for the Upper House in July 1992 which may be accompanied by a Lower House election, some LDP members may hope to divert attention away from the recent run of bribery scandals. Prime Minister Kiichi Miyazawa, suffering from very poor popularity ratings, has also hinted that he would like to attend the Earth Summit.

However, former Prime Minister Takeshita has added some substance to the environmental movement. At a 6 March 1992 forum on the subject of environmental clean-up, sponsored by the Japan Global Environment Committee, a group headed by the chairman of the Keidanren, the Japanese Federation of Economic Organizations, Takeshita stated,

Diet members are beginning to take interest in environmental problems. Any politician who ignores these issues deserved to be called a nitwit and a coward. In the past, environmentalism was a movement of anti-government, anti-

³²³"Group of Seven Summit Declarations," *US Department of State Dispatch*, 22 July 1991, 522.

establishment, fringe elements. Not anymore. The movement is part of the political mainstream.³²⁴

Japan's support for the Climate-Change Treaty signed at the Earth Summit added some substance to the environmental movement within Japan. However, Japan's support for the original Climate-Change Treaty which sought to reduce CO₂ emissions to 1990 levels by the year 2000 played to Japan's strength. Japan, one of the most efficient countries in the industrialized world would sacrifice little to meet the goal. Japanese corporations may also be better positioned to take advantage of increased demand for high-tech pollution control devices or more efficient manufacturing processes. In these changes, a distinct pattern may be discerned. Japan, in solving severe domestic environmental problems moved from denial or indifference to symbolic action, to a technocratic response and solution.

³²⁴"LDP Pols Scurry to Hug the Environment," *Japan Access*, 30 March 1992, 1 and 3.

VI. THE US AND DEFORESTATION IN SOUTHEAST ASIA

YESTERDAY AND TODAY

The US has become more 'green' over the last 20 years. Grass roots movements are active throughout America and environmental groups are now effective lobbyists in Washington D.C. and in state capitals. The effectiveness of environmental lobbyists with the support of key congressmen is reflected in the 'greening' of US foreign aid programs, trade agreements including NAFTA and America's leadership on global environmental issues including the reduction of CFCs. However, the 'greening' of the US has been an evolutionary process. In the past, America's environmental record in Southeast Asia was marred by the logging practices of US corporations in the Philippines and Indonesia.

A. THE PHILIPPINES

US corporations entered the Philippines after the Spanish-American War in 1898. However, intensive logging did not occur until after World War II. From the end of the Second World War until the early 1970s, the logging industry grew rapidly. In 1969, logging exports exceeded 11 million cubic meters, nearly triple that of 1955. Annual average outputs of 10 million cubic meters were maintained until 1974.³²⁵ After 1974, exports dropped drastically due to forest depletion, world recession, competition from other log-producing countries including Indonesia and the Malaysian states of Sabah and Sarawak, and heightened conservation awareness.

³²⁵Collins, *Conservation Atlas*, 194. See also Robert Repetto and Malcolm Gillis, eds., *Public Policies and the Misuse of Forest Resources* (New York: Cambridge University Press, 1988),

Following the devastation of Ormoc in the wake of tropical storm Uring in November 1991, the *Philippine Free Press* denounced US logging companies for their role in deforestation in the Philippines and agreed with President Aquino that present day illegal loggers were not responsible for the tragedy.

... "illegal logging" going on at present in that place should not be blamed for the Ormoc tragedy because the Ormoc area was totally logged by the end of the 1950s. For a long time now, it has been a dusty desert waiting for a rainstorm to turn into a muddy torrent sweeping everything and everyone under it. Illegal logging going on elsewhere in Leyte will account for flash floods that will kill hundreds or thousands in those places at some future date. But not for this celebrated one we are now bemoaning.

The truth is US logging companies stripped the Philippines bare by the end of the 1960s. They came here and implemented a scorched earth policy on our forests that no government dared question and which the pre-martial law press, except for the FREE PRESS, was too stupid or too corrupt to denounce. And a review of FREE PRESS back issues reveals that it even missed the identity of the main culprits—all-American companies. It is remarkable how a fact so large could have been overlooked.

Companies like Findlay Miller and Basilan Lumber deployed barges straight from overseas and beached them in the various islands. Mammoth crews of tree cutters with electric saws and bulldozers assaulted the islands' forests, mowing down the trees without regard to size, and then picking the most commercial logs and leaving the rest to rot. They rolled or floated the logs down to the shore to be loaded directly on to barges, and then to ships offshore. No fees, no licenses, no regulation, no nothing. They had timber licenses but that was the last connection these rapacious companies had with the central Philippine government—except for bribes, presumably. This was for their country. Luneta was for Philippine Independence parades but the rest of our then forest-rich islands belonged to the great American timber companies to be logged like there was no tomorrow. And, indeed, there was no tomorrow for the US companies which had no intention of sticking around to harvest the next growth of trees they had not planted anyway.³²⁶

³²⁶"Thanks, America," *Philippines Free Press*, 30 November 1991, 21. (In the mid-1960s Filipino entrepreneur Andres Soriano and Swedish corporations instituted reforestation programs. President Aquino later gave an award to a Swedish corporation as one of her first official acts.)

B. INDONESIA

In the late 1960s, as US corporations' logging concessions in the Philippines became less profitable, Weyerhaeuser and others sought to expand their operations. At the same time, Indonesia sought foreign investment and expertise in its drive to enter the world timber market. Weyerhaeuser entered into a partnership with the International Timber Corporation of Indonesia (ITCI), a trust established by President Suharto in which the top 73 Generals in Suharto's government were the major shareholders. In 1971, ITCI gained a 386,000 hectare concession of primary forest in East Kalimantan, and Weyerhaeuser provided the operations' total investment of \$32 million. (Georgia Pacific and Unilever also obtained concessions in Kalimantan.) Through the first seven years ITCI's log sales averaged \$37 million annually, and in 1977 output from the one concession in East Kalimantan reached 1.6 million tons worth \$66 million. However, in 1978 the government doubled export taxes to 20 percent, and in 1980, the Three Ministers Decree put greater pressure on all logging operations to reinvest profits in processing facilities. Plywood exports remained exempt from taxes. These measures marked the beginning of Indonesia's drive to become the largest supplier of tropical plywood on the international market. Weyerhaeuser pulled out of ITCI in 1984 showing no interest in timber processing or managing the forest.³²⁷

C. THE US ROLE TODAY

Today, the US plays a relatively minor role in deforestation in Southeast Asia. In 1989, the US ranked third in total hardwood imports behind Japan and South Korea (see Table 1) and ranks fourth if the countries of the EEC are considered as a whole.

³²⁷Hurst, *Rainforest Politics*, 34 and Repetto and Gillis, *Public Policies and the Misuse of Forest Resources*, 53-98.

However, nearly 80 percent of all US hardwood imports originate in Southeast Asia with approximately 78 percent of that subtotal supplied by Indonesia (see Table 8 and 9).

TABLE 8. US TROPICAL HARDWOOD* IMPORTS FROM THE ASIA-PACIFIC REGION

COUNTRY	1991
Burma	979
Hong Kong	738
Indonesia	710,049
Japan	628
Malaysia	139,515
Papua New Guinea	0
Philippines	14,858
Singapore	5,888
South Korea	176
Taiwan	27,682
Thailand	4,434
Subtotal	904,947
WORLD	1,120,780

Units: Cubic meters

*Includes plywood, lumber, and Logs

(Source: U.S. Department of Commerce)

TABLE 9. US TROPICAL HARDWOOD VENEER IMPORTS FROM THE ASIA-PACIFIC REGION

COUNTRY	1991
Burma	0
Fiji	1,726,744
Hong Kong	39,241
Indonesia	850,731
Japan	449,401
Malaysia	6,032,374
New Zealand	30,740
Philippines	6,811,863
Singapore	2,031,541
Taiwan	59,673
Thailand	181,353
Subtotal	18,213,661
World	128,552,615

Units: Square meters

(Source: U.S. Department of Commerce)

The Rainforest Action Network has targeted several US companies that have subsidiaries involved in tropical timber operations. These companies include Boise Cascade Corp., Champion International, Georgia-Pacific Corp., Great Northern Nekoosa, International Paper, Kimberly-Clark, and Weyerhaeuser. The Rainforest Action Network encourages activists to write, call or do whatever is appropriate to urge the companies to ensure that they are trading only in products from sustainably managed rainforests. Several of the companies that RAN has targeted have subsidiaries active in the Philippines (see Table 10).

TABLE 10. MAJOR AMERICAN LOGGING INTERESTS IN THE PHILIPPINES

LOCAL COMPANY (SUBSIDIARY)	US OWNER (PARENT)
Liang Bay	Georgia-Pacific Corp.
Findlay Millar Co.	Findlay Millar Co.
Zamboanga Wood Products	Boise-Cascade Corp.
Paper & Industrial Corp. of the Philippines (PICOP)	International Paper Andres Soriano & Associated Companies
Bislig Bay Lumber	International Paper Andres Soriano
Basilan Lumber Co.	Weyerhaeuser Corp.

(Source: Hurst, *Rainforest Politics*, 201)

D. THE GREENING OF THE US

1. Interagency Task Force on Tropical Forests

As early as the late 1970s, the destruction of the Earth's rainforests were a matter of concern for the United States. In his Environmental Message of 2 August 1979, President Carter cited the work of the United States' Interagency Task Force on Tropical Forests. President Carter requested that the Task Force's findings and conclusions be reported to him. In its report, the Task Force confirmed the conclusions of the United States Strategy Conference on Tropical Deforestation held 12-14 June 1978 in Washington D.C.:

The world is being confronted by an extremely serious problem with immediate and long-range socio-economic and ecological consequences as the result of the accelerating loss of forest and vegetative cover in the humid and semiarid lands within or near the tropical latitudes. Further, the community of nations must quickly launch an accelerated and coordinated attack on the problem if this greatly undervalued and probably irreplaceable resources are to be protected from virtual destruction by the early part of the next century.³²⁸

The Task Force determined that the US has a broad set of interests in the tropical forests including political, humanitarian, economic, environmental as well as educational and scientific interests. In order to satisfy the interests of the US, the Task Force established short, medium and long term goals. By the year 2000, the Task Force stated that the worldwide forest areas should be relatively static or expanding as reforestation and aforestation efforts offset cutting and other losses. The Task Force set forward a strategy for the US with both domestic and international components recognizing the need to complement the efforts of FAO through bilateral development assistance and support of applied and basic research. The Task Force also recognized

³²⁸ *The World's Tropical Forests: A Policy, Strategy, and Program for the United States, Report to the President by a U.S. Interagency Task Force on Tropical Forests* (Washington D.C.: U.S. Printing Office, 1980), 1.

resource monitoring through the use of LANDSAT and environmental impact assessments as principal components in carrying out the strategy. Since 1978, the US strategy first set forward by the Task Force has evolved as have the various government agencies including USAID.

2. US Agency for International Development

In the past, various environmental groups criticized USAID for its development policies. Environmentalists accused USAID of sponsoring roads that led to deforestation, lending money to Third World governments for grandiose projects that frequently hastened environmental degradation, subsidizing large farmers use of pesticides and fertilizer while ignoring the growing numbers of poor farmers, and promoting cattle ranching. Today, some environmental groups praise USAID. Jane Lyons, an international projects director for the National Audubon Society states that "AID is beginning to come around."³²⁹ The Rainforest Alliance Tropical Conservation Newsbureau reports that a principal USAID planning document contains a conclusion that could have been written by the National Audubon Society or the World Wildlife Fund. The document states,

Development plans . . . will fail unless they contain ambitious measures to replant the region's forests, protect its critical watersheds, rehabilitate its degraded lands, and help its desperately poor small farmers to earn a decent living by sustainable farming measures.³³⁰

Environmental groups are now allowed to manage on-the-ground projects, and USAID funds and cooperates with NGOs. John Vaughn, a senior USAID resources

³²⁹D. Jukofsky, "The Greening of USAID," Rainforest Alliance Tropical Conservation Newsbureau, 11 May 1992. Copy obtained via EcoNet, "rainfor.genera" conference, 20 May 1992.

³³⁰Ibid.

advisor states ". . . this is the first time in history where the US government has gone to NGOs and said we will follow your lead."³³¹

3. Congress

The US Congress has pushed the greening of USAID. Beginning in 1975, a federal court ruled that the National Environmental Policy Act 1970 required USAID to prepare environmental impact statements before pesticides were sold to developing countries. In 1986, Congress amended the Foreign Assistance Act placing emphasis on saving the tropical rainforests and biodiversity. In 1991, the Congress budgeted \$50 million for the World Bank's Global Environmental Fund designed to aid developing countries manage environmental problems including deforestation. The money represented part of a \$15.3 billion foreign aid appropriation which reduced the administrations budget for military aid while increasing economic and environmental aid.³³²

Congress has also eagerly funded NASA's Mission to Planet Earth. In 1990, Congress put \$652 million into the program and today the project is competing with Space Station Freedom. Among the companies seeking a piece of the project are several defense contractors: General Electric, TRW, and Hughes Aircraft. The centerpiece of the program is a satellite platform called the Earth Observing System which will measure the Earth's temperature, winds, clouds, rain, lightning and radiation levels. The goal is to learn how man is changing the Earth to help lawmakers decide what measures are required to slow or reverse the damage. Concern for the environment has gone hand-in-hand with the knowledge that big science projects, like weapons projects of the not too

³³¹Ibid.

³³²P. Davis, "The Greening of Foreign Aid," *Congressional Quarterly*, 15 June 1991, 1600.

distant past offer ample opportunity for home-state spending. NASA, like the Pentagon, has spread projects over key congressional districts. California, Pennsylvania, Texas, and New York all benefit from the project. NASA estimates that the project will cost anywhere from \$36.5 to \$41 billion.³³³

4. Local Movements

Since 1990, several states and cities within the US have banned the use of tropical timber by government agencies, public benefit corporations, and in public construction. The state of Arizona was the first to ban the use of tropical timber by all state agencies. On 31 July 1991, Governor Mario Cuomo of New York signed bill 7476-A, "An Act to Amend the State Finance Law, in relation to prohibiting the purchase of any tropical hardwood products." The law forbids the state to purchase any tropical wood products such as cabinets, paneling, moldings, doorskins, or sawnwood. The bill excluded tropical plywood until July 1992 due to budget problems.³³⁴

Following in the path of Santa Monica, California and Bellingham, Washington, San Francisco Board of Supervisors voted unanimously to ban the use of tropical timber by any San Francisco department or agency on 3 December 1990. Supervisor Nancy Walker, the sponsor of the ordinance stated,

I hope that this step will lead to greater awareness of the problem. When many local governments and states join together and move to ban this environmentally sensitive hardwood, we will see change.³³⁵

³³³Ibid.

³³⁴Victor Menotti, "New York State International Movement to Save Tropical Rainforests," EcoNet, "rainfor. timber" conference, 31 July 1991.

³³⁵Pam Wellner, "City Takes Action to Save Tropical Rainforests," EcoNet, "rainfor. timber" conference, 3 December 1990.

The city of Baltimore enacted a ban on tropical timber on 10 January 1991 making it the fourth city nationwide to do so. The local Baltimore Rainforest Action Group was instrumental in the passage of the ban. On 27 November 1991, the Mayor of Harrisburg, the capital of Pennsylvania, signed an executive order that prohibits the use of tropical timber products in municipal construction projects. The intent of the order as stated is

to encourage others in the public and private sectors to cease the use of tropical rainforest hardwoods and thus reduce both the demand for and the use of such ... woods.³³⁶

The most recent local movement occurred in Minneapolis, Minnesota. After six months of lobbying by the local Minnesota Rainforest Action Group, the city council held a public hearing on a proposed ban on 27 April 1992. Minneapolis was the first city in which the International Hardwood Products Association (IHPA) led a full scale opposition to a local tropical timber ban. The involvement of the IHPA is evidence of the growing success of local Rainforest Action Groups across the country and the changing attitude of Americans nationwide.

³³⁶Jason Grant, "Harrisburg Joins Timber Ban," EcoNet, "rainfor. genera" conference, 27 November 1991.

VII. CONCLUSIONS AND RECOMMENDATIONS FOR US POLICY

Over the last 20 years, in the midst of the Cold War, Americans have demonstrated a growing concern for the domestic and global environment. American values are reflected in those environmental concerns. Those values, those ideals, should not only be the basis of our domestic policy, but should be central to the formation of our national security strategy or the grand strategy of the US.

From a national security perspective, the potential threats posed by the loss of the Earth's rainforests are so great they should be addressed in a conservative manner which considers the worst possible scenarios. Moreover, conflict surrounding deforestation in Southeast Asia, an area of increasing economic, military, and political importance to the US, already exists at several levels, and the effects of ecological destruction have already led to general instability in some areas.

On 27 September 1991, following the failed coup attempt in the Soviet Union, President Bush announced a unilateral reduction of nuclear arms by the US. President Bush should now call for a unilateral reduction of CO₂. America is the Earth's greatest producer of CO₂ on a per capita basis. A unilateral reduction would give the world, particularly developing countries, a clear sign of America's commitment to the global environment and especially on the related issues of deforestation and global warming. As a leader, America could then encourage developing countries to conserve their natural resources including the rainforests. President Bush has hesitated to take action while trying to balance the trade-off between economic and environmental health, but recent reports indicate that the costs would be less than expected. Economists Dale Jorgenson of Harvard and Peter Wilcoxon of the University of Texas calculate that the cost of stabilizing CO₂ output at current levels through the year 2000 (the Rio treaty goal)

would result in a net loss of \$14.8 billion or 0.2 percent of GNP.³³⁷ Economists at the EPA and elsewhere have calculated that if the US aggressively pushes energy-conservation programs, it should come within a few percentage points of meeting Rio treaty goals without any tax.³³⁸ A report submitted by the Natural Resources Defense Council (NRDC) goes still further. NRDC analysis, utilizing Department of Energy estimates of GNP growth and measures listed in the Administration's National Energy Strategy, determined that CO₂ emissions could be stabilized at a profit.³³⁹

Defense contractors, suffering from cutbacks in the post-Cold War era may also benefit from a green strategy. Some have already benefited from NASA's Mission to Planet Earth. Former CIA director William Colby states, "I think that Lockheed and the other big defense industries can find a role in the area of environmental improvement And they will have as rich and a good a business after they make the transition."³⁴⁰

Part of the US strategy should include broader support for debt for nature swaps as supported by the World Wildlife Fund. Gus Speth, president of the World Resources Institute points out, "By an accident of history and geography, half of the Third World external debt and over two-thirds of global deforestation occur in the same fourteen developing countries."³⁴¹ Poor nations sent \$43 billion more to the industrialized nations

³³⁷Bob Davis, "In Rio, They're Eying Greenhouse Two-Step," *Wall Street Journal*, 20 April 1992, A1.

³³⁸Ibid.

³³⁹Daniel A. Lashoff and David D. Doniger, *A Climate for Investment: How the US Can Stabilize CO₂ Emissions through Profitable Measures the White House Already Supports* (Washington D.C.: Natural Resources Defense Council, 1992), 1 and 3. (Copy obtained via EcoNet, "en. climate" conference.)

³⁴⁰Satchell, 52.

³⁴¹T. H. Tietenberg, "The Poverty Connection to Environmental Policy," *Challenge* 33 (September/October 1990), 28.

in interest and principal repayments than they received in new capital.³⁴² Moreover, pressure on developing countries to exploit their natural resources will increase as they must now compete with the countries of Eastern Europe and the Commonwealth of Independent States for scarce aid dollars.

Those within the Department of Defense should seek to understand the consequences of environmental degradation and the loss of natural resources and how or when those factors may lead to instability and conflict. The DOD must also become more aware of the possibilities of environmental terrorism.

The US military can play a major role in addressing deforestation in Southeast Asia through officer exchange programs. A "green" US military, by sharing a concern for the rainforests and the global environment with foreign exchange officers, may have a direct and positive impact on halting deforestation throughout Southeast Asia. The impact may be the greatest with respect to the Philippines, Indonesia, Thailand and Burma where the military leadership either is the government or plays a major role in the formation and implementation of domestic environmental policy. The influence of the US military in this role should not be dismissed or underestimated. Notably, president-elect Fidel Ramos, a West Point graduate, remained loyal to President Corazon Aquino through seven coup attempts as her Chief of Staff and later as her Secretary for Defense. His loyalty may be attributed in part to the shared belief that the military must submit to the freely elected civilian authority.

More specifically, the Navy should consider offering a seminar devoted to environmental issues as part of the area studies and strategic planning curriculum within the National Security Affairs department at the Naval Postgraduate School. The

³⁴²Ibid.

academic atmosphere would provide an ideal setting for engaging officers from Southeast Asia as well as other regions of the World on environmental issues and investigating the causes and effects of ecological destruction. The US should not impose its values on others but yet should be ready to promote a concern for the environment that is in every nation's self interest. Notably, Australian naval exchange officers, already in attendance at the Naval Postgraduate School, form a basis from which to expand the program.

The environment and national security could also be discussed in other forums such as the National War College or by various groups within the DOD. Recently, the Strategic Studies Institute at the U.S. Army War College sponsored a roundtable held at the Hoover Institute. The purpose of the roundtable was to assess the impact of environmental changes on US national security as well as the implications for international security.

Military aid should also be redirected to stop deforestation. The Philippines lacks an adequate coast guard or navy to enforce the ban on exports of tropical timber. Joint operations, similar to existing joint drug operations in Latin America, could also be incorporated. The Sea Bees and Army Corps of Civil Engineer personnel could also be involved in "conservation corps" type operations in supplementing existing national reforestation efforts. (Units such as the Illinois Army National Guard already carry out social service operations such as construction of schools in generally inaccessible rural areas throughout Central America.) Specially trained Sea Bees could also be utilized as the "World Fireman" (vice the "World Policeman") in aiding countries such as Indonesia extinguish forest fires which in the past have destroyed several million hectares of tropical rainforest.

The US Navy has demonstrated a growing commitment to being a good steward of the Earth's oceans and in turn to the global environment. Through a new initiative, "GREEN 51," the US Navy plans to introduce the first environmentally sound ship in the world. GREEN 51 includes new fuel and oil systems that exceed MARPOL treaty specifications. Several other green systems have already been introduced to the fleet. These include a plastic waste processor, a solid waste pulper, and a shipboard vertical trash compactor (SVTC) as well as a small Navy compactor (SNAC) for weight critical ships. A video entitled "US Naval Environmental Challenge 1992" has also been distributed in conjunction with the 'green systems.' The US Navy is also committed to eliminating CFCs, including CFC-12, and has begun conversion to Hydro-Flouro-Carbons (HFCs). Halon 1211 and 1301 are being replaced by the less-ozone- depleting C6. Moving beyond shipboard systems, the US Navy has also instituted a Navy-wide program of recycling aluminum cans that supports the Morale, Welfare and Recreation (MWR) departments and has introduced both an industrial and non-industrial Environmental Awards Program . A green Navy could well serve as an environmental ambassador abroad sharing not only green technology but a green attitude with the navies and, in turn, the nations of the world. By doing so, the US Navy can raise global environmental awareness. Indeed, other nation's including Canada have already made requests for the solid waste equipment now being introduced to the fleet. A program should be established that promotes the Navy's green systems and which makes them available to navies of the developing world.

Further research should explore the conflict surrounding the rainforests of Africa and Latin America. Further research must also go beyond deforestation and evaluate how other environmental problems such as fresh water shortages in the Middle East may lead to conflict. From a tactical or military perspective, an investigation of how to minimize

both the short and long term impact of modern warfare on the environment should be carried out.

Just as global environmental concerns including the interrelated issues of climate change, food security, water supply, deforestation, and biodiversity respect no international boundaries and have contributed to conflict, they may also serve as an opportunity for nations to work together for their mutual benefit. East can meet West as North and South come together to solve the Earth's environmental problems.

APPENDIX

Research for this thesis involved contacts with several NGOs, both in the US and abroad, which are active on deforestation and related human rights issues. NGOs within the US from which assistance was obtained during a one-week research trip to Washington D.C included the World Resource Institute (WRI), the Sierra Club, Global Legislators for a Balanced Environment (GLOBE), Amnesty International, the Philippine Development Forum and the Missionary Society of Saint Columban Campaign for Debt and Development Alternatives. The Rainforest Action Network (RAN), and the Philippine Environmental Support Network (PESN) were contacted in San Francisco. PESN also sponsored a talk by Maximo "Junie" Kalaw, President of the Haribon Foundation in the Philippines. Assistance was also obtained from members of the International Burma Campaign. Abroad, contacts were made with the Japan Tropical Forest Action Network (JATAN) in Tokyo, the Legal Rights and Natural Resources Center in Quezon City and the Green Forum, Metro Manila, Philippines via phone conversations and written correspondence.

Another significant source was EcoNet. EcoNet is part of the Institute of Global Communications (IGC) network, a division of the Tides foundation, which "allows users throughout the world to communicate and share information through electronic mail (email), conferences, and a user directory" utilizing a modem and a local access number. The conferences covering specific topics including Indonesia, the Philippines and general rainforest issues proved especially helpful. EcoNet provided access to material from overseas that would not otherwise have been available. EcoNet in and of itself represents a significant development in the growing environmental movement.

BIBLIOGRAPHY

BOOKS:

- Besher, A., ed. *The Pacific Rim Almanac*, New York: Harper Collins Publishers, 1991.
- Brown, J. W., ed. *In the U.S. Interest: Resources, Growth, and Security in the Developing World*. Boulder: Westview Press, 1990.
- Brown, L. R. and others. *State of the World 1992: A Worldwatch Institute Report on Progress Toward a Sustainable Society*. New York: W. W. Norton & Company, 1992.
- Feshbach, M. and Friendly, A., *Ecocide in the USSR*. New York: Basic Books, 1992.
- Friedman, G. and Meredith L. *The Coming War with Japan*. New York: St. Martins Press, 1991.
- Gibney, F. *Japan the Fragile Superpower*. 2d ed. New York: New American Library, 1985.
- Gore, A. *Earth in the Balance: Ecology and the Human Spirit*. Boston: Houghton Mifflin Company, 1992.
- Hurst, P. *Rainforest Politics: Ecological Destruction in South-East Asia*. London: Zed Books, 1990.
- King, A. and Schneider, B., *The First Global Revolution: A Report by the Club of Rome*. New York: Pantheon Books, 1991.
- Manes, C. *Green Rage: Radical Environmentalism and the Unmaking of Civilization*. Boston: Little, Brown and Company, 1990.
- McDonagh, A. *The Greening of the Church*. New York: Orbis Books, 1990.
- Miller, K and Tangle, L., *Trees of Life: Saving Tropical Forests and their Biological Wealth*. Boston: Beacon Press, 1991.
- Nester, William R. *The Foundation of Japanese Power: Continuities, Changes, Challenges*. Armonk, New York: M. E. Sharp Inc., 1990.
- Pempel, T. J. *Policy and Politics in Japan*. Philadelphia: Temple University Press, 1982.
- Reischauer, Edwin O. *The Japanese Today: Change and Continuity*. Cambridge: Harvard University Press, 1988.
- Rush, James. *The Last Tree: Reclaiming the Environment in Tropical Asia*. New York: The Asia Society, 1991.

Scherr, S. J., ed. *Defending the Earth: Abuses of Human Rights and the Environment*. New York: Human Rights Watch and Natural Resources Defense Council, 1992.

van Wolferen, Karel. *The Enigma of Japanese Power*. New York: Vintage Books, 1990.

Wilson, E. O. ed. *Biodiversity*. Washington D.C.: National Academy Press, 1988.

REPORTS:

de Beer, Jenne H. and Melanie J. McDermott. *The Economic Value of Non-timber Forest Products in Southeast Asia with emphasis on Indonesia, Malaysia and Thailand*. Amsterdam: International Union for Conservation of Nature and Natural Resources (IUCN), 1989.

Johnson, Nels and Pablo Alfonso. *Philippines Biodiversity Survey and Action Plan Final Report*. Washington D. C.: World Resources Institute, 1991.

Lashof, Daniel A. and David D. Doniger. *A Climate for Investment: How the U.S. Can Stabilize CO2 Emissions through Profitable Measures the White House Already Supports*. Washington D.C.: Natural Resources Defense Counsel, 1992.

Nectoux, Francois and Yoichi Kuroda. *Timber from the South Seas: An Analysis of Japan's Tropical Timber Trade and Its Environmental Impact*. Washington D.C.: World Wildlife Fund International, 1989.

Panayotou, Theodore and Chartchai Parasuk. *Industrializing Thailand and Its Impact on the Environment—Land and Forest: Projecting Demand and Managing Encroachment*. Ambassador City Jontien, Chon Buri, Thailand: Thailand Development Research Institute, 1990.

Philippines Environment and Natural Resource Management Study. Washington D.C.: The World Bank, 1989. ISBN 0-8213-1272-3.

Policy Implications of Greenhouse Warming. Washington D. C.: National Academy Press, 1991.

Renner, Michael. *National Security: The Economic and Environmental Dimensions (Worldwatch Paper 89)*. Washington D. C.: Worldwatch Institute, 1989.

Roque, Celso R. *Environment and Natural Resources: Status and Prospects*. Metro Manila: Economic Development Foundation, 1990.

Sustainable Natural Resources Assessment—Philippines. Manila: Unites States Agency for International Development, 1989.

PERIODICALS:

Allen, Jamie. "Damned Land." *Far Eastern Economic Review*, 16 April 1992, 67.

_____. "Waste and Money." *Far Eastern Economic Review*, 26 September 1991, 60-62.

Arquiza, Yasmin D. "Toll on the Atoll." *Far Eastern Economic Review*, 15 March 1990, 32-34.

Aznam, Suhaini. "Timber and Tribes: An Ecological Struggle in the Forests of Sarawak." *Far Eastern Economic Review*, 1 August 1991, 19-20.

Bigman, David. "A Plan to End LDC Debt and Save the Environment Too." *Challenge* 33 (July/August 1990): 33-37.

"A Brazilian Tale." *The Economist*, 18 February 1989, 31-32.

Broeker, Wallace S. "Global Warming on Trial." *Natural History* (April 1992): 6-14.

Bush, George. "What I Believe about the Environment." *EPA Journal* 16 (January 1990): 2-3.

Carpenter, Betsy. "A Faulty Greenhouse?" *U.S. News and World Report*, 25 December 1989, 52-58.

"The Charm of Green Money." *The Economist*, 5 May 1990, 19-20.

Clad, James. "The Fragile Forests." *Far Eastern Economic Review*, 25 February 1988, 19-20.

_____. "Entrenched Concessions." *Far Eastern Economic Review*, 25 February 1988, 19.

_____. "The Timber Tycoon and His Influential Friends." *Far Eastern Economic Review*, 24 November 1988, 48-49.

Clad, James and Marites D. Vitug. "The Politics of Plunder." *Far Eastern Economic Review*, 24 November 1988, 48-50.

Clifford, Mark. "Kicking up a Stink." *Far Eastern Economic Review*, 18 October 1990, 72-73.

Cohen, Margot. "A Menu for Malnutrition." *Far Eastern Economic Review*, 12 July 1990, 39.

"Cool It." *The Economist*, 10 November 1990, 51.

Cribb, Robert. "The Politics of Pollution Control in Indonesia." *Asian Survey* 30 (December 1990): 1123-1135.

- Cross, Michael. "Logging Agreement Fails to Protect Sarawak." *New Scientist*, 1 December 1990, 23.
- "The Dwindling Forest Beyond Long San." *The Economist*, 18 August 1990, 23-24.
- Danguilan-Vitug, Marites. "Fighting for Life." *Far Eastern Economic Review*, 13 June 1991, 52-53.
- Delfs, Robert. "Poisoned Friendship." *Far Eastern Economic Review*, 23 January 1992, 11.
- "Developing Countries and Today's World." *Asia and Africa Today* 2 (March 1990): 3.
- Dorfman, Robert. "Protecting the Global Environment: An Immodest Proposal." *World Development* 19 (January 1991): 103-110.
- Duenas, Michael. "Killer Flood." *Philippines Free Press*, 23 November 1991, 4-5 and 21.
- _____. "Stop Deforestation—Now!" *Philippines Free Press*, 23 November 1991, 8-9.
- Elegant, Simon. "Jungle Fevers." *Far Eastern Economic Review*, 12 December 1991, 40 and 44.
- Forrest, Richard A. "Japanese Aid and the Environment." *The Ecologist* 21 (January/February 1991) 24-32.
- Friedland, Jonathan. "Pulp and Paper: Aiming for a World Market." *Far Eastern Economic Review*, 18 April 1991, 50-51.
- Friedland, Jonathan and Bertil Lintner. "A Policy of Pillage: Burmese Junta Retreats from Business Liberalization." *Far Eastern Economic Review*, 8 August 1991, 56-58.
- "FY 1993 International Affairs Budget Overview." *US Department of State Dispatch Supplement*, 2-11.
- Goertzen, Donald. "Agents for Change." *Far Eastern Economic Review*, 8 August 1991, 20-21.
- _____. "The Silent War." *Far Eastern Economic Review*, 8 August 1991, 23.
- Goldstein, Carl. "Not Just Paper Profits." *Far Eastern Economic Review*, 15 September 1988, 95-98.
- Gromyko, Anatoli. "East-West: From Rivalry to Cooperation in the Third World." *Asia and Africa Today* 1 (January 1990): 2-5.
- Green, Peter and David Bartal. "The Death of the Baltic: Turning a Sea into Toxic Soup." *U.S. News and World Report*, 13 April 1992, 47.

- “Green Indicators: Measured Muck.” *The Economist*, 2 February 1991, 42.
- “Green Storm Falling.” *The Economist*, 8 December 1990, 14-15.
- “Group of Seven (G-7) Summit Declarations.” *US Department of State Dispatch*, 22 July 1991, 519-527.
- Hanbury-Tenison, Robin. “No Surrender in Sarawak.” *New Scientist*, 1 December 1990, 28-29.
- Handley, Paul. “The Land Wars: Peasants and Priests Battle Army's Forest Plan.” *Far Eastern Economic Review*, 31 October 1991, 15-16.
- _____. “Broken Promise: Eviction of Villagers Clears Way for Plantation.” *Far Eastern Economic Review*, 31 October 1991, 18.
- _____. “Victims of Success.” *Far Eastern Economic Review*, 19 September 1991, 44.
- _____. “Focus Thailand 1991: Poverty - How the Other Half Lives.” *Far Eastern Economic Review*, 18 July 1991, 47-48.
- _____. “Sapping the Soil.” *Far Eastern Economic Review*, 31 October 1991, 16.
- “Hard Luck for Hardwoods.” *The Economist*, 22 April 1989, 34-35.
- Jain, Purnendra C. “Green Politics and Citizen Power in Japan: The Zushi Movement.” *Asian Survey* 31 (June 1991): 559-575.
- “Japan's Green Tinge.” *The Economist*, 2 February 1991, 32.
- Johnstone, Bob. “False Economics.” *Far Eastern Economic Review*, 19 September 1991, 37-38.
- _____. “Chemical Reaction.” *Far Eastern Economic Review*, 19 September 1991, 38.
- Kaye, Lincoln. “Of Cabbages and Cultures: Buddhist 'Greens' Aim to Oust Thailand's Hill Tribes.” *Far Eastern Economic Review*, 13 December 1992, 35-37.
- Kelly, Neil. “Focus Thailand 1991: Tourism—Counting the Cost.” *Far Eastern Economic Review*, 18 July 1991, 44.
- Kempf, Elizabeth. “Casualties of Vietnam's Recovery.” *New Scientist*, 14 September 1991, 40-43.
- Kiyohiko Arafune. “Japan as an Environmental Pariah.” *Economic Eye* 12 (Winter 1991): 13-17.
- Kyosuke Mori. “One Corporation's Attempt to Regenerate Tropical Forests.” *Economic Eye* 12 (Winter 1991): 30-32.

- Liden, Joe and Murray Hiebert. "Cambodian Assault: Loggers are Quick to Exploit the Peace." *Far Eastern Economic Review*, 4 June 1992, 64.
- Lintner, Bertil. "Burmese Plunder: Rangoon Unleashes an Onslaught of Logging." *Far Eastern Economic Review*, 4 June 1992, 63.
- Locsin, Teodoro M. "The Sharks." *Philippines Free Press*, 23 November 1991, 1-3.
- "The Lost World of Laos." *The Economist*, 7 December 1991, 37-38.
- Maari Konya. "Eco-tech Crusade." *Japan Update* 2 (November 1991): 22-24.
- Marshall, George. "FAO and Tropical Forestry." *The Ecologist* 21 (March/April 1991), 66-72.
- Mathews, Jessica Tuchman. "Redefining Security." *Foreign Affairs* 68 (Spring 1989): 162-177.
- Miller, Alan S. "Three Reports on Japan and the Global Environment." *Environment* 31 (July/August 1988): 25-29.
- Leonard, Andrew. "Garden of Subversion." *Far Eastern Economic Review*, 19 July 1990, 33.
- _____. "Savior or Seducer." *Far Eastern Economic Review*, 13 December 1990, 36-37.
- McBeth, John. "Roots of Tragedy: Deforestation Blamed for Storm Disaster." *Far Eastern Economic Review*, 21 November 1991, 20.
- _____. "Forest of Family Trees." *Far Eastern Economic Review*, 27 September 1990, 36-27.
- _____. "A New People-power." *Far Eastern Economic Review*, 8 August 1991, 22.
- McDowell, Mark A. "Development and the Environment in ASEAN." *Pacific Affairs* 62 (Fall 1989): 307-329.
- Miller, Jon. "Troubled Waters." *Far Eastern Economic Review*, 15 March 1990, 34.
- Myers, Norman. "The Global Environment: The Future Depends Upon It." *Challenge* 33 (January/February 1990): 57-58.
- Naoya Kitamura. "Using Foreign Aid to Combat Global Warming." *Economic Eye* 12 (Winter 1991): 18-19.
- Oxley, Paul. "Hope." *Columban Mission* 74 (October 1991): 28-30.
- Pearce, Fred. "Ecology and the New Colonialism." *New Scientist*, 1 February 1992, 55-56.

- _____. "Sarawak Study Disappoints Rainforest Campaigners." *New Scientist*, 2 June 1990, 25.
- _____. "Hit and Run in Sarawak." *New Scientist*, 12 May 1990, 46-49.
- Pfieffer, E. W. "Degreening Vietnam." *Natural History* (November 1990), 37-40.
- "Project for Tropical Forest Regeneration in Malaysia." *Tradescope* 11 (June 1991), 23-24.
- Pope, Victoria. "Poisoning Russia's River of Plenty." *U.S. News and World Report*, 13 April 1992, 49-51.
- Prins, Gwyn. "Politics and the Environment." *International Affairs* 66 (October 1990): 711-730.
- Satchell, Michael. "The Whole Earth Agenda." *U.S. News and World Report*, 25 December, 1989, 50-52.
- Sattaur, Omar. "Forest 'Preservation' Plan Comes Under Fire from Third World Group." *New Scientist*, 31 March 1990, 25.
- _____. "Indonesia Pulps its Rainforest." *New Scientist*, 24 August 1991, 15.
- Scheraga, Joel D. "Combating Global Warming." *Challenge* 33 (July/August 1990): 28-32.
- Schwartz, Adam and Michael Vatikiotis. "See You in Rio." *Far Eastern Economic Review*, 4 June 1992, 60-61.
- Schwartz, Adam. "Trade for Trees: Tariff Reform will Help Save the Forests." *Far Eastern Economic Review*, 4 June 1992, 60.
- _____. "Traveller's Tales." *Far Eastern Economic Review*, 21 May 1992, 29.
- _____. "Emerald Forest: Foreigners Tipped to Check Indonesian Tree Felling." *Far Eastern Economic Review*, 7 February 1992, 51.
- _____. "Hazed and Confused: West Criticized for Inactivity on Forest Fires." *Far Eastern Economic Review*, 31 October 1991, 18-19.
- _____. "Mining a Mountain: US Firm Brings Jobs and Controversy to Irian Jaya." *Far Eastern Economic Review*, 4 July 1991, 47-48.
- Scott, Margaret. "Spoiling for a Fight." *Far Eastern Economic Review*, 27 December 1990, 42.
- _____. "The Disappearing Forests." *Far Eastern Economic Review*, 12 January 1989, 34-38.

- _____. "Unequal to the Task." *Far Eastern Economic Review*, 12 January 1989, 38.
- _____. "Making Hard Choices for the Years Ahead." *Far Eastern Economic Review*, 10 April 1986, 90-91.
- _____. "Reclaiming Land from a Worthless Grass." *Far Eastern Economic Review*, 10 April 1986, 91-92.
- _____. "Sabah Softwoods Bets on Future Shortage." *Far Eastern Economic Review*, 10 April 1986, 92.
- _____. "Southeast Asia's Forests: Lost for the Trees." *Far Eastern Economic Review*, 10 April 1986, 89-90.
- Seaward, Nick. "Malaysia Strikes Back at Environmental Lobby." *Far Eastern Economic Review*, 28 April 1988, 48.
- Sesser, Stan. "A Reporter at Large: Logging the Rainforest." *The New Yorker*, 27 May 1991, 42-67.
- "Should Trade Go Green." *The Economist*, 26 January 1991, 13-14.
- Stanglin, Douglas. "Toxic Wasteland." *U.S. News and World Report*, 13 April 1992, 40-46.
- _____. "Breathing Sulfur and Eating Lead." *U.S. News and World Report*, 13 April 1992, 46-49.
- Steif, William. "An Evil on the Earth." *The Progressive* (February 1992): 41-43.
- Sun, Marjorie. "Keeping the Planet Green." *Far Eastern Economic Review*, 18 July 1991, 78.
- Tasker, Rodney and Paul Handley. "Focus Thailand 1991: The Good Neighbors." *Far Eastern Economic Review*, 18 July 1991, 36-42.
- Tasker, Rodney. "Focus Thailand 1991: The March to Democracy." *Far Eastern Economic Review*, 18 July 1991, 33-36.
- _____. "Forest Fires." *Far Eastern Economic Review*, 23 March 1989, 13.
- _____. "Losing Nature's Cures." *Far Eastern Economic Review*, 28 April 1988, 48.
- Tietenberg, Thomas H. "The Poverty Connection to Environmental Policy." Challenge 33 (September/October 1990): 26-32.
- "Tree Thieves." *Far Eastern Economic Review*, 11 June 1992, 7.
- Tsuruoka, Doug. "Cutting Down to Size: Businessmen Cry Foul in Malaysia's Logging Industry." *Far Eastern Economic Review*, 4 July 1991, 43-46.

"US-Asia Environmental Partnership." *US Department of State Dispatch*, 13 January 1992, 22.

"US Prepares for UN Conference on Environment and Development." *US Department of State Dispatch*, 9 March 1992, 195-197.

Vatikiotis, Michael. "Malaysia's War: Government Hits Back at its Critics." *Far Eastern Economic Review*, 4 June 1992, 65.

_____. "Priming for Rio: Malaysia Sets the Tone for Earth Summit Agenda." *Far Eastern Economic Review*, 14 May 1992, 22.

_____. "Dollar Democracy." *Far Eastern Economic Review*, 26 September 1991, 35.

Vitug, Marites. "Faith in the Forest: A New Breed of Activist Priests Push a Green Version of Liberation Theology." *Far Eastern Economic Review*, 23 April 1992.

"The World through Green-tinted Specs." *The Economist*, 19 May 1990, 52.

NEWSPAPERS:

"Aquino Signs Subic Duty-Free Bill." *Asian Wall Street Journal*, 17 March 1992, 4.

"Asian-Pacific Briefs: Malaysia—Palm Oil Imports." *Asian Wall Street Journal*, 17 February 1992, 7.

"Asian-Pacific Briefs: The Philippines—Disaster Areas Declared." *Asian Wall Street Journal*, 19 March 1992, 4.

Burnett, Matthew. "Forests and People—Victims in Burma." *Christian Science Monitor*, 6 April 1992, 19.

Chanda, Nayan. "U.S. Maintains Broad Military Pacts." *Asian Wall Street Journal*, 8 April 1992, 1 and 8.

Cohen, Margot. "Indonesian Fashion: The 'Primitive' Provincial Look." *Asian Wall Street Journal*, 6-7 March 1992, 11.

Dubey, Suman. "Ballarpur to Set Up, Manage Pulp Venture in Indonesia." *Asian Wall Street Journal*, 31 March 1992, 4.

Egan, Timothy. "Trees that Yield a Drug for Cancer are Wasted." *New York Times*, 29 January 1991, A1 and A9.

Garcia, Arnold. "Palawan Board Bares Lumber Smuggling Try." *Daily Globe* (Manila), 9 October 1990, 7.

Greenberger, Robert S. "North-South Split: With Cold War Over, Poorer Nations Face Neglect by the Rich—Aid Programs are Dwindling, and the Disappointment Could

Blight Democracy—Playing the Ecology Card." *Wall Street Journal*, 14 May 1992, A1 and A6.

Gutfield, Rose. "Accord on Climate-Change Treaty Begins Attack on Global Warming." *Asian Wall Street Journal*, 11 May 1992, 8.

_____. "White House Figures Indicate Cutting Greenhouse Gases Could Be Fairly Easy." *Wall Street Journal*, 27 April 1992, B6.

Haberman, Clyde. "A Sympathetic Pope Visits Some of Africa's Poorest." *New York Times*, 29 January 1990, A13.

Hawksley, Humphrey. "Tales of Horror on Burma's Western Front." *Asian Wall Street Journal*, 24 February 1992, 6.

Hilts, Philip J. "Senate Backs Faster Protection of Ozone Layer as Bush Relents." *New York Times*, 5 February 1992, A1 and C18.

"John Paul Urges Christians to Protect the Environment." *New York Times*, 13 July 1987, A2.

Jones, Clayton. "Japan to Cut Back on Logging." *Christian Science Monitor*, 7 June 1991, 8.

_____. "Aquino Joins Bid to Protect Forests." *Christian Science Monitor*, 22 March 1989, 4.

Labog, Juliet. "Balbas: Haribon Staff Arrested in Palawan are Rebs." *Philippine Daily Inquirer*, 23 February 1991, 13.

Lehner, Urban C. "Japanese Firms Vie for Vietnam Niche." *Asian Wall Street Journal*, 18 February 1992, 1 and 6.

Leung, Julia. "U.S. Policies are Attacked at ADB Session." *Asian Wall Street Journal*, 6 May 1992, 1 and 11.

_____. "Investment in Southeast Asia Seen Easing." *Asian Wall Street Journal*, 13 April 1992, 1.

Lewis, Paul. "U.S. Under Fire in Talks at U.N. on Environment." *New York Times*, 24 March 1992, A1 and A4.

Logan, Marc. "WESCOM Chief: 14 Haribon Members Have Ties with Rebs." *Philippine Times Journal*, 9 March 1991.

MacDonald, Lawrence and Raphael Pura. "Debt-Ridden NPC Cuts Electricity Rates." *Asian Wall Street Journal*, 6 May 1992, 6.

MacDonald, Lawrence. "Philippine Officials Squabble Over Subic." *Asian Wall Street Journal*, 13-14 March 1992, 1 and 20.

- Masaganda, Owen. "16 Rebel Leaders Nabbed in Palawan." *Manila Bulletin*, 11 March 1991, 1 and 18.
- Mathews, Jessica. "The Union of Soviet Socialist Pollution." *Washington Post*, 22 March 1991.
- Melloan, George. "Flying Down to Rio for Fun and Profits." *Asian Wall Street Journal*, 12 May 1992, 10.
- Parmelee, Jennifer. "Pope Urges Decade of Nonviolence." *Washington Post*, 2 January 1990, A10.
- "PNP Rapped for Arrest of Haribon Staff." *Philippine Daily Inquirer*, 22 February 1991, 1 and 14.
- Pura, Raphael and Lawrence MacDonald. "Power Shortages Mar Philippine Outlook." *Asian Wall Street Journal*, 6 May 1992, 1 and 6.
- Pura, Raphael. "Finances Debated Before Earth Summit." *Asian Wall Street Journal*, 28 April 1992, 1 and 5.
- _____. "ASEAN Probes Vietnam for Business Links." *Asian Wall Street Journal*, 10-11 April 1992, 1 and 4.
- _____. "ASEAN Seeks Stronger Ties with Vietnam." *Asian Wall Street Journal*, 9 April 1992, 1 and 14.
- Sachiko Hirao. "Osaka Moves to Cut Back on Use of Timber." *Japan Times Weekly (International Edition)*, 11-17 May 1992, 4.
- "SC Allows Warrantless Searches by DENR." *Philippine Daily Inquirer*, 9 March 1991.
- Schlesinger, Jacob M. "Japan's Environmental Record Improves—Wildlife Trade Cut Sharply, but Whaling and Logging Remain Problems." *Asian Wall Street Journal*, 27 February 1992, 1 and 14.
- Schneider, Keith. "White House on Conflicting Paths As It Agrees to Protection of Owl." *New York Times*, 15 May 1992, A1 and A8.
- Sherbin, Robert. "Same Rifts Remain as ADB Meeting Ends." *Asian Wall Street Journal*, 7 May 1992, 3.
- Simons, Marlise. "North-South Chasm is Threatening Search for Environmental Solutions." *New York Times*, 17 March 1992, A5.
- _____. "Ecological Plea from Executives: International Group Urges Action at Rio." *New York Times*, 8 May 1991, C1 and C8.
- Stevens, William K. "Experts Say Logging of Vast Siberian Forest Could Foster Warming." *New York Times*, 28 January 1992, B7.

_____. "Talks Seek to Prevent Huge Loss of Species." *New York Times*, 3 March 1992, B8.

Solomon, Caleb. "Freeport to Shed Energy Reserves Amid Plan to Borrow \$500 Million." *Asian Wall Street Journal*, 17-18 January 1992, 2.

Taylor, Jeffrey. "Global Market in Pollution Rights Proposed by U.N." *Wall Street Journal*, 31 January 1992, C1 and C12.

Tefft, Sheila. "Thai Loggers Devastate Forest." *Christian Science Monitor*, 26 December 1990, 3.

FOREIGN BROADCAST INFORMATION SERVICE:

"Aquino's State of Nation Address Opens Congress." *Quezon City Radyo ng Bayan*, 23 July 1990. FBIS, 24 July 1990, 56.

"The Aquino Program." *Philippine Daily Globe*, 25 July 1989, 4. FBIS, 25 July 1989, 61.

"Aquino Gives State of Nation Address." *Quezon City Radyo ng Bayan*, 24 July 1989. FBIS, 24 July 1989, 62-64.

Delfino, Rica D. "Share of Agro-Forestry in Exports Income Down in 89." *Business Star*, 15 March 1990, 2. FBIS, 21 March 1990, 45.

Dorinila, Amando. "Aquino's Agenda for the Nation: The Great Plod." *Manila Chronicle*, 27 July 1988, 1. FBIS, 27 July 1988, 60.

"Gives State of Nation Address." *Quezon City Radyo ng Bayan*, 25 July 1988. FBIS, 25 July 1988, 57.

"Text of Aquino's State of Nation Address." *Manila Bulletin*, 28 July 1987, 28. FBIS, 31 July 1987, L1-L7.

Hong Kong AFP, 7 January 1986. FBIS, 8 January 1986, P8

Hong Kong AFP, 6 January 1986. FBIS, 8 January 1986, P8-P9.

UNPUBLISHED SOURCES:

Buss, Claude A. "Strategic Studies in a Changing World." A report of the 25th Anniversary Conference Strategic and Defense Studies Center Research School of Pacific Studies Australian National University Canberra, Australia presented at the Naval Postgraduate School, Monterey, CA., 1991.

Vogt, Bill Major USA. Untitled. A paper discussing Poland's environmental problems presented at the Naval Postgraduate School, Monterey, CA., 1991.

INTERVIEWS:

Akanda, Albab, Asian Development Bank (ADB), Manila. Interview by author, 9 October 1991, Naval Postgraduate School, Monterey, CA. Phone conversation.

Bautista, Ebert, Director of the Special Concerns Office, Philippine Department of Environment and Natural Resources, Manila. Interview by author, 9 October 1991, Naval Postgraduate School, Monterey, CA. Phone conversation.

Cobourn, Chris, Columban Missionaries Justice and Peace Office, Washington D.C. Interview by author, 8 November 1991, Naval Postgraduate School, Monterey, CA. Phone conversation.

Durst, Patrick, Coordinator of Asia and NE Division, USDA Forest Service, Washington, D.C. Interview by author, 11 October 1991, Naval Postgraduate School, Monterey, CA. Phone conversation.

Fay, Chib, Environmental Policy Institute (Friends of the Earth), Washington D.C. Interview by author, 12 November 1991, Naval Postgraduate School, Monterey, CA. Phone conversation.

Johnson, Nels, World Resource Institute, Washington D.C. Interview by author, 10 October 1991, Naval Postgraduate School, Monterey, CA. Phone conversation.

Kawakami, Sonoko, Japan Tropical Forest Action Network, Tokyo. Interview by author, 22 March 1991, Naval Postgraduate School, Monterey, CA. Phone conversation.

Lynch, Owen, former professor at the University of Philippines College of Law, Manila from 1981-1988, Washington D.C. Interview by author, 11 October 1991, Naval Postgraduate School, Monterey, CA. Phone conversation.

Messina, Stephanie, Philippine Environmental Support Network, San Francisco. Interview by author, 11 October 1991, Naval Postgraduate School, Monterey, CA. Phone conversation.

Queblatin, Ed, U.S. Agency for International Development (USAID), Manila. Interview by author, 9 October 1991, Naval Postgraduate School, Monterey, CA. Phone conversation.

Roque, Celso, World Wildlife Fund and former executive of Philippine Department of the Environment and Natural Resources, Washington D.C. Interview by author, 11 October 1991, Naval Postgraduate School, Monterey, CA. Phone conversation.

Smith, Jennifer, coordinator of Philippine Development Forum, Washington D.C. Interview by author, 11 October 1991, Naval Postgraduate School, Monterey, CA. Phone conversation.



GAYLORD S





3 2768 00018948 4