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Asian Rainforest Politics, Case Studies and Applied Ecology

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ABSTRACT:

In this paper, we discussed about the Asian rainforest politics, case study and applied ecology. Southeast Asia stretches more than 6,000 kilometers (km) from west to east, from the Tropic of Cancer to south of the Equator, and from Burma's Himalayan foothills to the tropical islands of the Philippines and Indonesia. It has many different types of ecosystems and serves as a meeting point for animals from two different continents. The southernmost extent of Asian species can be found in Burma, Thailand, Indochina, and the majority of Malaysia. Many Oceania species can be found on the eastern Indonesian islands, which include western New Guinea and are located on the Australian continental shelf. Some of the wildest locations in the world are still found in this warm, fertile area, both on land and in the water.

KEYWORDS:

Cubic Meters, East Kalimantan, Illegal Logging, Million Hectares, National Park.

I. INTRODUCTION

Southeast Asia stretches more than 6,000 kilometers (km) from west to east, from the Tropic of Cancer to south of the Equator, and from Burma's Himalayan foothills to the tropical islands of the Philippines and Indonesia. It has many different types of ecosystems and serves as a meeting point for animals from two different continents. The southernmost extent of Asian species can be found in Burma, Thailand, Indochina, and the majority of Malaysia. Many Oceania species can be found on the eastern Indonesian islands, which include western New Guinea and are located on the Australian continental shelf. Some of the wildest locations in the world are still found in this warm, fertile area, both on land and in the water.

Dynamics

The area has long served as a focal point for case studies examining evolution and the effects of economic development on the sustainability of tropical forests. Alfred Russell Wallace (1823–1913), who travelled extensively in the area, is credited with starting this. In co-publishing the theory of natural selection with Charles Darwin (1809–82), he recognized a distinct split in the distribution of species in the region and reached the same conclusions. During the last ice age, Sumatra, Borneo, and the Greater Sundae Islands were connected by dry ground however, as the ice melted and sea levels rose once again, the countries of mainland tropical Asia and the Greater Sundae Islands were isolated. The islands still share plant and animal species with the mainland, including tall dipterocarp trees, monkeys, local deer, and hornbills, from before this fauna was able to travel across the land bridges. The Indomalaya biogeographically area includes these environments, together with the plants and animals that inhabit them. Irina Jaya (western New Guinea), Kai, and Am in eastern Indonesia, on the other hand, are located on the Australian continental shelf and are part of the Oceania biogeographically region. Mound-building birds, bowerbirds, parrots, and birds of paradise can be found here, but wallabies have taken over the deer's ecological niche.

Between Bali and Lombok, Borneo and Sulawesi, and Palawan and the rest of the Philippines are the islands that form Wallace's dividing line between these two biogeographically zones. It serves as a reminder of Southeast Asia's dynamic geological past and is still recognized as the biogeographically barrier for many plant families, as well as those of birds, mammals, insects, and other creatures. The islands of Sulawesi, the Philippines, the Moluccas, and the Lesser Sundaes serve as a meeting place for east and west coast flora and animals on the outskirts of these two biogeographically areas. Many of the species found there are unique to this region. Between 15 and 3 million years ago, in the area of the island of Sulawesi, outlying pieces of old drifting

supercontinents collided to form Southeast Asia. The area features some of the most stunning and diverse tropical environments in the world, shaped by its geological past and situated at a crossroads for animal and plant migrations. These include peat swamp forests, moss-covered cloud forests, and shrubby alpine plant groups, as well as muddy coastal mangroves and peat swamps [1].

The crowns of these enormous dipterocarp trees do not overlap in the tall, lowland dipterocarp forests. This crown shyness has a number of causes, one of which is that it prevents the proliferation of caterpillars that consume leaves. It has also facilitated the evolution of mammals and reptiles that can glide and jump, as well as enabling light to pass through the trees. The jungles on the eastern islands are lush with palms. There are tidal marshes, rainbow crater lakes, and jagged limestone hills with spear-like pinnacles, and enormous underground cave systems that lead to harsh, nutrient-poor heathlands. Volcanoes that are actively active also have these features. One of the wettest places on Earth is the misty moss forest in Northern Borneo at 3,500 meters, and the highlands are also exceedingly chilly. As there is just one canopy layer, enough light penetrates to encourage the growth of ground plants as well as hanging lichens, mosses, and other epiphytes. The trees are stunted, only reaching heights of 10 to 15 m (30 to 45 ft.). The radiating ridges and channels created in the lava flows are colonized by wind-blown seeds, and flora starts to cover the mountaintop as the lava and ash on a volcanic peak weather to fertile soil.

Human Habitation

People have lived in the area for a very long time, and they have left their mark on the terrain. The vast tracts of formerly-forested terrain that are now open, rolling grasslands in Thailand, east Java, and the Lesser Sundae Islands, which stretch from Bali to Timor, were long ago cleared for cultivation and then abandoned. Once upon a time, traditional populations with low densities could engage in shifting cultivation in ecological harmony with their surroundings. The Mount people of Laos, the hill tribes of Burma, and the Land Kayaks of Borneo all cleared land, planted their crops, and then left the land lay fallow for a number of years before returning to cultivate it once more. More forest areas have been cut, frequently on fragile lands with nutrient-poor soils, as human populations have increased and isolated places have been made accessible to new settlements. For a year or two, these fields might support agriculture, but constant burning prevents them from reverting to secondary forest.

These deserted pastures eventually turn into a sea of ilang-ilang (cogon) grasslands. These are spreading over tropical Asia with increasing frequency. The hard, long grass is challenging to replace, is only useful for new grazing, and benefits greatly from burning. Fires rage through the grasslands, consuming the native forest and nearby plantations of recently planted trees. The region's wilderness regions are currently under extreme pressure from agricultural needs. Farmers who develop the land and then leave it are cutting down forests for plantations and to feed the world's ostensibly inexhaustible appetite for hardwoods. The loss of tropical rainforests is accelerating. If this rate persists, Malaysia, where an estimated 230,000 ha (570,000 acres) are cut down annually, will lose all of its remaining forest by the 1990s. As in Vietnam, where 2 million ha (5 million acres) of forest and mangroves were sprayed with herbicides like Agent Orange during the fight with the United States between 1964 and 1975, forests have also been lost as a result of war. Large portions of Borneo have been destroyed by forest fires, which during the 1983 dry year devoured 3.6 million ha (8.9 million acres) in Kalimantan, in the center and south of the island, and another million in Sabah, in the north [2], [3].

II. DISCUSSION

At least half of the forest cover in the majority of Southeast Asian nations has already disappeared. Only 9% of Java's populated island is still covered in trees. Even on Borneo, which is famed for its vast areas of tall dipterocarp and swamp forests, the boundaries of the forest are being pushed further inland and every significant river is clogged with floating logs. The disastrous deforestation of Southeast Asia will continue unless people all over the world become aware of the problem and there is a major decrease in the usage of tropical hardwoods. The necessity for conservation is occasionally widely known by the locals but disregarded by governments and economic interests who are more focused on immediate financial gain than the long-term costs of environmental irresponsibility. The Penang people of Sarawak are hunter-gatherers who collect wild foods and a few minor forest products for their own needs.

At the moment, they are constructing blockades to stop the trucks carrying lumber from the firms destroying their ancestral grounds. The fires that result in forest losses are sometimes attributed to locals who are trying to make a living via shifting cultivation, although the places that burn the most intensively are those that have already been logged. The loss of natural landscapes has had a negative impact on the ecosystem in several countries in the region, including droughts where there was once rain, floods that sweep down valleys that were once forested,

and erosion of coasts and slopes. The first ecosystems to vanish are lowland habitats, notably on the lush alluvial areas along river valleys. For construction and agriculture, swamps, mangroves, and wetlands are drained forests are cut down limestone hills are extracted for cement; coral reefs are burned for lime and they are destroyed by blasting to kill the fish. The advantages they offer, such as natural goods, fish nurseries, coastline protection, and watershed protection, are also lost as these ecosystems disappear.

Logging Politics

When the Malaysian Prime Minister Mahathir Mohamad threatened to boycott the 1992 United Nations Conference on the Environment and Development (UNCED) in Brazil over what he perceived as First World environmentalists' abuse of Third World Countries, the politics of conservation in South East Asia first came to the attention of the world. William Stiff wrote an article titled Deforesting Malaysia in the November 1991 issue of Monitor that examined this topic. This perceived slight appeared to be centered on a book written by Philip Hurst and released the year prior titled Rainforest Politics: Ecological Destruction in South-East Asia. Six case studies from the Philippines, Indonesia, Malaysia, Papua New Guinea, Thailand, and Burma were presented by Hurst. He outlined the negative effects of forest degradation on people and the economy based on his own knowledge of the region. His investigation showed that its core causes date back to colonial times, when natural resources were exploited for western markets. Other issues that contribute include the lack of access to traditional farming lands by small farmers, poorly thought-out development plans, and the strains of foreign debt.

The development agencies held the common belief that the poor were the primary source of pressure on tropical forests in the 1980s and early 1990s. Many NGOs worked hard to show how land and wealth concentration processes which were in turn influenced by macroeconomic pressures and international trade were related to deforestation, landlessness, and poverty. In order to address the related issues of ecological injustice and deforestation, they urged for secure tenure for indigenous peoples and participatory agrarian reforms for peasants. Studies done afterwards showed that the amount of forest lost due to logging was much greater than first believed. Studies by non-governmental organizations (NGO) shown how the needs of the timber, and later the paper and pulp, industries were greatly simplified and damaged both boreal and temperate forests. Additionally, they brought attention to the actions of migratory loggers who have been expanding their operations outside of South-East Asia and pose an increasingly serious threat to the world's forests. They also studied the political ecology of forest loss and uncovered corruption in the timber sector.

World Bank and WWF Cooperate

In 1997, the World Bank and the Worldwide Fund for Nature (WWF) announced the formation of a new Alliance that would be based on a shared plan to achieve the WWF's twin campaign goals of setting aside 10% of all major forest ecosystems as protected areas and adding 200 million additional hectares of the world's forests to sustainable forest management by the year 2005. The collaboration combined the World Bank's financial clout with the WWF's capacity to collaborate with many different stakeholders. It was critical to visualize what was happening to forests on a practical level. Concerns over whether these aims are achievable or possibly too low have grown as a result of better data on deforestation trends. According to updated FAO and WRI data, global annual forest loss is now projected to be 15 million hectares per year, suggesting that forest loss was still accelerating at the time.

A further 200 million hectares of the world's total 3.2 billion hectares of forest would be lost to agriculture by 2050, and up to half of the remaining forests would be subject to logging at a rate of 2 cubic meters per hectare per year to meet a demand for 3 billion cubic meters of industrial round wood annually. According to one estimate, up to half of all forests are projected to remain unavailable to logging for the foreseeable future, therefore this may be pushing logging to its limits. In order to satisfy market needs, the WWF/World Bank Alliance proposed an Intensification Model that was very compatible with the Bank's current forest strategy. According to this scenario, 200 million hectares of forests would still inevitably be lost to agricultural expansion, but 600 million hectares of forest would be intensively managed for silviculture and plantations, yielding up to 5 cubic meters of round wood per hectare per year for the global market, potentially freeing up an additional 900 million hectares of forest for additional protected areas, while still leaving a further 1.5 billion hectares of forests relatively unaffected. Marcus Colchester conducted a critical analysis of this collaboration and the results it foresaw in 2000.

With a project designed to cut global deforestation rates by 10% by 2010, the WWF and the World Bank extended its Alliance for Forest Conservation and Sustainable Use (Forest Alliance) in May 2005. On May 26, 2005, during the fifth session of the UN Forum on Forests, the two organizations reaffirmed their commitment to the Forest Alliance pact for an additional five years. The plan was created to aid in the creation of new forest

protected areas, improved management of forests outside of protected areas, and more efficient management of existing protected areas. Additionally, it will make regional collaboration and the implementation of laws in favor of better forest management possible. The Heart of Borneo conservation Programme was formally introduced the following year, with the three Borne a government of Brunei Darussalam, Indonesia, and Malaysia pledging their support. The three nations' plan aims to protect one of the world's most significant hubs of biological diversity, which includes over 220,000 km2 of equatorial forests and a wide variety of wildlife. In the previous ten years, 361 new species have been found, according to a recent WWF report. Only 50% of Borneo's forest cover is still present now, compared to 75% in the middle of the 1980s. According to WWF, if the current rate of deforestation of 1.3 million hectares per year continues, all lowland rainforests in Kalimantan, the Indonesian portion of Borneo, would be gone by 2010. That is around a third the size of Switzerland in terms of area.

The devastation of Borneo's forests is also fueled by logging, forest fires, and the conversion of forests into plantations. Additionally, the three governments of Borneo recently unveiled new conservation initiatives for the Heart of Borneo. More than 200,000 ha of important forest habitat in Sabah will be protected, according to Malaysia, for the sake of orangutans, elephants, and rhinos. There are two conservation areas in Brunei. And an 800,000ha new national park has been suggested by Indonesia. The Heart of Borneo Programme, in accordance with WWF, signals the end of ambitions to establish the largest palm oil plantation in the world in Kalimantan along Indonesia's mountainous border with Malaysia. The plan, which was backed by Chinese money, was anticipated to encompass 1.8 million hectares and would have had negative, long-lasting effects on the Heart of Borneo. On degraded, non-forested land, WWF frequently advocated for the establishment of new oil palm plantations. It is a renowned logging region [4], [5].

Kalimantan East

East Kalimantan, which has a total area of around 200,000 km2, was the subject of Philip Hurst's first case study. About Borneo. There were reportedly 173,000 km2 of forest in 1981, 130,000 of which had been set aside for logging. Kalimantan as a whole provided nearly a third of the nation's timber exports in the 1980s. Despite this economic contribution, profits went primarily to a small few and did little to raise locals' conditions of living. 'Critical lands' covering more than 10,000 km2 were present in Kalimantan by 1984, which was harmful for an agricultural region. The studies have supported this. Hurst used the instance of the United States as an introduction to the politics of logging. Weyerhaeuser Corporation serves as a fair illustration of the politics surrounding logging concessions in this area at the moment. The beginning of Hurst's tale takes place in the late 1960s, when Weyerhaeuser's logging concessions in the Philippines were starting to lose money. Weyerhaeuser joined forces with the International Timber Corporation of Indonesia (ITCI) in order to develop its business.

In East Kalimantan, ITCI acquired rights to 386,000 acres of primary hill forest in 1971. Because ITCI was a trust that President Suharto personally established, Weyerhaeuser was never able to buy out its partner. Weyerhaeuser only officially controlled 65% of ITCI, but they contributed the entire US$32 million investment. Both parties benefited: Weyerhaeuser held control over ITCI's finances, and ITCI gained a sizeable working capital without making any investments. The top 73 Generals in Suharto's 'New Order' regime were among ITCI's largest owners. The alliance amounted to Suharto rewarding the military elite of Indonesia for their allegiance. The average yearly log sales for the first seven years of ITCI were US$37 million. This one concession produced 1.6 million tons of wood for $66 million in 1977. It's unclear how much of this sum represented Weyerhaeuser's pure profit. For a business with similar funding, the forest expert Norman Myers predicted that the foreign shareholder would make more than US$3 million in profit annually. The Three Ministers Decree of 1980 required all logging enterprises to reinvest revenues in processing facilities, however Weyerhaeuser left ITCI in 1984 because it did not agree with the decree. In short, Weyerhaeuser's approach was typical of foreign investment in Indonesia's timber business at the time.

They had no interest in managing the forest or processing wood after they had harvested the highest-value wood. The overcut forest and tinderbox that the concessionaires left behind were exposed when fires engulfed 3.5 million acres of the area in 1982–1983. Roughly 20 million cubic feet. Main forest timber meters and an additional 35 million c. There were meters of secondary woodland removed. Communities and Forest Management in East Kalimantan: Pathway to Environmental Stability was the title of a Southeast Asia Sustainable Forest Management Network report that was published in 1993. This was edited by Mark Poffenberger and Betsy McGean from the University of California, Berkeley's Centre for Southeast Asian Studies, International and Area Studies. In this study, the Southeast Asia Sustainable Forest Management Network's Indonesian members present a preliminary overview of some of their research findings. National planners have considered forest utilization as a vehicle to drive economic growth and as a land pool to absorb

Java's expanding population because approximately three-quarters of the nation's land area is officially covered by forest [6], [7].

Forest land is desired by migrants for cultivation. Businesspeople look for possibilities to make money. The richness of the cultural and biological diversity is recognized by non-governmental organizations, who work to protect it. For indigenous people, the forest is the source of their traditions and the continuity of their culture. None of the aforementioned viewpoints were attempted to be justified by the East Kalimantan case studies. Instead, they described how human forest interactions had recently changed the ecosystem and society in the provincial study locations. According to the report, there has been a rapid process of forest degradation, especially in high pressure areas close to roads and urban centers, as a result of forest utilization practices by concessionaires, developers, migrants, and local communities. Researchers asked, how can Indonesia best manage its millions of hectares of degraded forest lands? They came to the conclusion that while some of this area can be developed for settlements, agriculture, and quickly expanding timber plantations, a significant majority might be best left to regenerate naturally under the protection of local communities. They discovered that the native Dayan people in Dataram and Dial Lay shared a profound understanding of the ecological and restorative processes of the forest based on decades of long cycle agriculture.

According to conventional knowledge and more recent scientific research, controlled cutting and burning can result in rapid regrowth. Enrichment planting and other environmental interventions could significantly boost the output of valuable non-timber and timber forest products. The Kayaks, Katia, and migratory communities were worried about the future of their towns and the natural resources they depended on. The researchers urged planners, academics, and community development experts in their conclusion to provide forest people the legal custodial authority they need to repair damaged forest ecosystems and restore their biological richness and economic viability. For the following 25 years, fires and illegal logging were two of East Kalimantan's main problems. According to a 2006 report by Ferdinando's Aging Presto and Krysta Obidzinski from the Centre for International Forestry Research (CIFOR), illegal logging and unreported timber processing cost the East Kalimantan provincial government over US$100 million annually in lost business tax revenue. The intangible costs of the loss of biodiversity and water services are not included in this. Neither the social cost of future natural disasters nor the job losses brought on by the clearing of forests. The amount of timber that can now be produced sustainably cannot keep up with demand. The CIFOR study estimates that East Kalimantan's timber sector has a yearly production capacity of roughly 9.1 million cubic meters of wood.

The capacity reaches 60 million cubic meters for the entirety of Indonesia. This stands in stark contrast to the 5.7 million cubic meters that the Ministry of Forestry was permitted to cut in 2004. The report takes a fairly standard estimate that the industry in East Kalimantan is working at only 60 percent of its potential capacity, which equates to the need for timber in the region being around 5.5 million cubic meters for the past five years show that the official quantity of log production from natural forest has been around 2.1 million cubic meters per year. Subtract this official million cubic meters from the 60 percent estimated output, and there is an apparent deficit of 3.3 million cubic meter of logs. These 3.3 million cubic meters of timber is being processed without any taxes being paid to the provincial government. There is also the lost revenue incurred through illegal timber smuggling to neighboring countries. This was over two million cubic meters in 2000. In total, undocumented timber processing and illegal logging amount to a revenue loss of Rap 856 billion a year - about $US107 million a year - half the annual revenue of the region. This is money that could be spent on poverty reduction programs, job creation schemes, new schools and health centers.

There is an oversupply of timber on the market, and this appears to be from illegal or at least undocumented sources; this timber costs less because the suppliers do not have to pay tax or meet the other financial obligations associated with this production, which should cause prices to rise given falling supply and increasing demand. East Kalimantan produced 6.6 million cubic meters of timber in 1974, according to official government statistics however, the estimate of the Ministry of Forestry for 2004 is only 1.6 million cubic meters. The decline in output is caused by a number of factors, including the 1997/98 forest fires and recent land use changes, through to unsustainable and illegal logging, which is also associated with climate change. Legal timber production will undoubtedly become unprofitable at the current timber prices, which are as low as US$45–50 per cubic meter, in part because illegal loggers have weaker negotiating power and can therefore pay significantly lower wages. The report's authors offer a variety of solutions to the issue of illegal logging, including restructuring the timber industries, increasing the supply of timber from plantations, improving the management of natural forests, and making timber industry regulations more transparent and strengthening law enforcement procedures.

If illegal logging is not properly addressed, presto and Budinski predict that unemployment in the area will rise due to the business's short-term benefits and that it's unequal distribution of profits will harm the area's

environment and economic future. Forestry is the main source of livelihood in East Kalimantan. In 2005 the system for verifying the legality of timber known as the 'legality standard', the outcome of an MOU between the governments of Indonesia and UK, had clearly not been agreed upon by the stakeholders in East Kalimantan. However, the independent parties that instigated the system. The Nature Conservancy (TNC) of America, the Department for International Development (DFID) of UK and SGS/URS Forestry (a TNC consultant) continued to attempt to spread information about it in East Kalimantan. The East Kalimantan Working Group on Forests, (Coordinator, Yoga Sofia), the Director of Basic (Ade Faldo) and the Coordinator of Working Group 30 (Public Policy Advocacy Foundation), Akhtar Al Bari. Yoga, Ade Faldo and Akhtar hoped that later there would be a system which supports the conservation of the forest and takes the part of the local communities. They admitted concern for the situation of the forestry sector. Up to now, after almost 40 years selling timber, Indonesia has not yet been able to say that the timber from the forest is harvested according to law, i.e., that it is legal. This is a very shameful situation, said Ade Faldo on the web site Illegal-logging.info.

Politics in the Orang-Tan's Industry

The orangutans whose name, appropriately, means 'man of the woods' - is the only great ape living outside Central Africa. It is also the most arboreal of the great apes, and well adapted for life in the trees. It moves through the forest swinging by its arms from branch to branch, a style of movement that has led it to develop arms that are half as long again as its legs; when hanging loosely they reach almost to its ankles. The orangutan's long, narrow hands and feet are, similarly, adaptations for grasping branches. On the ground it moves awkwardly on its hind legs with arms held over its head. When moving more quickly it uses its long arms like crutches, pivoting on clenched fists and swinging its body between them. Usually, it lives either singly or in twos, occasionally in small groups of up to four individual animals. Old males live apart except briefly when mating. The orangutans' feeds mainly on fruit-notably the evil-smelling but pleasant-tasting fruit of the durian tree - supplemented by leaves, bark, birds' eggs, freshwater crustaceans, and insects.

Females and young sleep in the trees 10 m/30 ft or more above the ground. Each female makes a nest in the form of a simple platform in the form of a tree, put together in a matter of minutes. Nests are seldom used more than once. A female orangutan may be successful in raising no more than two or three young during her lifetime due to the low reproductive potential of the species. Females do not reach sexual maturity until they are about ten years old, reproduce only every fourth year, and the single young must be breastfed for at least 12 months before becoming fully independent. The Borne an orangutans and Sumatran orangutans are genetically and physically distinct from one another, and the Sumatran orangutan's population is smaller. Both species are critically endangered due to habitat loss and poaching, and it is essential that they be saved from extinction. Orang-tans are believed to be declining at a rate of several thousand a year; there may be as many as 180,000 in Sumatra and Kalimantan, with another 4,000 or so in Sabah and Sarawak the only orangutans that can be regarded as reasonably secure are the 20,000 or so estimated to occur in established reserves; however, these reserves are in need of more stringent protection and higher standards of management.

The Sumatran orangutan's population has been forced to move into upland forest as a result of their jungle habitat being burned and logged and the loss of their food sources; current estimates indicate that they could go extinct in the wild in less than 10 years. Illegal logging and the purposeful starting of forest fires to convert virgin forest to timber and palm oil plantations are the main factors responsible for the loss of over 80% of orangutan habitat over the past century. Habitat destruction has arisen from the need to provide cultivated land for the constantly expanding human population, and from extensive commercialized exploitation of the primary forest in which the orangutan lives. Fire is a further hazard: in 1983, a huge fire destroyed about 30,000 km2 of forest, including 8,000 km2 of primary forest. Most of the orangutans in Sarawak and Sabah occur in 'forest reserves', a designation implying protection, but the term is misleading. Forest reserves are expressly earmarked for licensed timber extraction by contractors from whom the government draws a royalty. Clear felling of the forest has had the effect of splitting the orangutans into small, often isolated, groups, making their survival difficult. Heavy losses have also been incurred in capturing orangutans both for medical research purposes and for the pet trade.

There is a lucrative market for baby orangutans in many parts of the Far East, and the high prices paid prove an irresistible temptation to smugglers. The capture of baby orangutans generally involves slaughtering their mothers; few of the young survive the separation. Young orangutans are delicate animals and are susceptible to the same diseases as human beings. Captured animals are generally kept under unhygienic conditions and forced to exist on an unnatural diet, with the result that most of them die from malnutrition or disease. For every young orangutan that survives in captivity, ten die. The International Union of Directors of Zoological Gardens has also introduced strict regulations governing the acquisition of orangutans, and the governments of Singapore and Hong Kong have prohibited the import and export of young orangutans. Biological field stations have been

established in both Borneo and Sumatra with the purpose of rehabilitating confiscated pets and smuggled orangutans for reintroduction to the wild. Gunning leaser National Park is one of the biggest national parks in Indonesia (950,000 hectare).

Actually, it's a collection of various nature reserves and forests: Gunning Leaser, Nature Reserve Kappa, Nature Reserve Clute, Sounder Langat Wildlife Reserve, Ketambe Research Station, Sigil Barat and Dolor Sembilan. Most parts of the national park lie in the region Aceh Tenggara (SE Aceh). Other parts are situated in the region east Aceh, south Aceh, and Langat (a part of North Sumatra). The Gunning Leaser National Park comprises more than 100 kilometers of the Bukit Barinas Mountains. It has been declared a world heritage site by the United Nations Educational, Scientific and Cultural Organization because of its complete ecosystem. The park consists of steep, almost inaccessible mountainous terrain. The altitude ranges from 0 meter, in Clute (South Aceh), to 3,381 meters, on top of the Gunning leaser (Southeast Aceh). The Alas River cuts the park into an eastern and western half. Apart from mountains there are several other ecosystems beach forest, swamp areas, lowland rainforest, alpine and mountain forest.

The tsunami that struck the coastal region in 2005 with its epicenter at Malabo in western Aceh is the most recent threat to this ecosystem. In Aceh, more than 70% of the inhabitants of some coastal villages are reported to have died. The official death toll is at 111,171, while more than 127,000 other people remain missing. The exact number of victims will probably never be known. View a news report about the previously mentioned initiative at the prospects for the species have been greatly improved by the creation of the Danu Valley Conservation Area (427 km2) in Eastern Sabah, an area unsuitable for agriculture and believed to contain a significant number of orangutans as well as a group of Sumatran Rhinoceroses. The only area in Sabah with a legally protected population of orangutans is the Tobin Wildlife Reserve (1,205 km2 / 465 sq. miss). This wildlife sanctuary in southwestern Sarawak lies adjacent to the international border with Indonesia and falls within the Sri Amman, Sib, Shrike, and Kaput divisions. It originally covered an area of 187,000 hectares and was created as a protected forest in 1940. Sarawak Lanjak-Enomau National Park was created in 1983, with the proposed Bataan Ai National Park adjoining the southern border of the Lana Intimae Sanctuary.

The sanctuary is now known to have 1,053 species of insects, 235 species of birds, 73 species of reptiles and amphibians, 82 species of fish, and 2,807 species of vascular plants, 218 species of medicinal plants, 158 species of jungle fruits, 108 species of jungle vegetables, 500 species of fungi, 42 species of lichens, 6 species of primates, 48 species of small mammals, and 73 species of reptiles and amphibians. In 1990, the International Tropical Timber Organization (ITTO) recommended that the Lanjak-Entimau Wildlife Sanctuary to be developed as a Totally Protected Area. This development is crucial to the conservation of tropical biodiversity because of the richness of its flora and fauna and its close links to the Benton Keri Hun National Park in West Kalimantan, Indonesia. Other than biodiversity conservation, the project also aims to support sustainable livelihoods among local residents living on its periphery. Therefore, in 1993, the Sarawak government embarked on a cross-border cooperation with the Indonesian government to develop and establish the Lanjak-Entimau/Benton Keri Hun as a Totally Protected Area, in which ITTO acts as a catalyst and facilitator. In Sarawak, the project began in 1993. On the Indonesian side, the first phase commenced in 1995. This combined areas of 1.1 million hectares is not only the region's first tropical forest Trans boundary biodiversity conservation area (TBCA) but and also one of the world's largest. This TCBA constitutes the most important sanctuary in Borneo for about 3,000 orang tans, perhaps 10% of the world's remaining wild population of the species, and other rare and threatened plant and animal species.

TCBA Sanctuary Here

Deprived of their forest cover, they are increasingly confronted by ever-expanding human populations. The search for food forces them to stray into farms and palm oil plantations where they are frequently killed or fall victim to poachers. The only hope for these orangutan refugees, and for orang-Utah in general, is an effective survival Programme. Although there are several active rehabilitation centers for Borne an orangutan, until 2002 Sumatra only had one, the Boohoo Orangutan Centre (BOC), which was forced to close its doors to new arrivals in 1996 because it had too many orangutans and nowhere to put them. These factors, combined with the tourist boom in the 1990s at Boohoo, left Sumatra without a working center [8], [9].

Forest and People

More than 30 logging operations were working on about 400 km2 of forest along the Abram River alone in 1990, according to Philip Hurst's case study on the effects of logging on indigenous peoples. This brought attention to the deteriorating relationships between the longhouse communities in the upper reaches of the Abram and Lambing rivers and the logging companies that had been going on since the mid-1970s. Only half of the 10,000

Penang people still lived their original nomadic lifestyle in the forests as a result of the timber industry's dramatic disruption of their way of life beginning in the 1960s the majority of settled Penang had relocated as part of government resettlement programmes.

Penman's Past in Relation to the Logging of the Rainforest

Since the mid-1980s, logging roads have extended so far into the interior that even the most remote Penang groups can no longer avoid logging concessions. As a result, there have been ongoing issues with logging operations scaring away wildlife, causing the silting of rivers, killing fish, and contaminating drinking water supplies. The Penang have generally tried to avoid the logging companies by moving towards the Kalimantan border in response to deforestation.

The Government's Perspective

The internet is full of the websites of organizations presenting the view of forest peoples, and urging western folk to lobby and boycott aimed at supporting the likes of the Penang. On the other side the Malaysia government makes statements that it continues to strongly support international efforts to promote and ensure sustainability in forest management. Its long-term view is that, if the global community wishes to halt deforestation and improve forest management and conserve biodiversity it should be willing to share the cost entailed. Some additional US$125 billion a year is estimated to be required to achieve the necessary improvement in forestry management practices worldwide. Since UNCED in 1992 the additional resources pledged by the developed nations to assist Third World countries in this field are still not forthcoming. On these ground tropical forests are undervalued. In particular, the international community which values tropical forests for their biodiversity as a carbon sink is still unprepared to pay for these services.

The cost of implementing sustainable forest management in Peninsular Malaysia alone is estimated to be RM1.7 billion, which must be covered by royalties and levies on forestry products. The achievement of sustainability cannot be attained overnight, nor are the goals static; rather, the entire process is dynamic and evolving. Malaysia says it is still committed to ITTO's Objective Year 2000, and concrete steps have already been put in place to help achieve this goal. The package of measures that have been agreed upon and are being implemented, in the opinion of Y.B. Data' Seri Dr. Lim King Yak, Minister of Primary Industries of Malaysia, represents a comprehensive and concerted effort by all segments of the community and stakeholders towards sustainability. In other words, Malaysia is confident that it will achieve sustainable forest management within the given time frame and that Malaysia will remain green for future generations to c Apart from logging and clearing land for agriculture, other impacts include removal of primates as agricultural pests, as food for human or pet consumption, as bait, and the taking of live animals [10], [11].

III. CONCLUSION

Asian rainforests have enormous ecological value because they serve as habitat for a variety of plant and animal species, regulate the climate globally, and provide essential ecosystem services. These rainforests are, however, seriously threatened by deforestation, illegal logging, encroachment for agriculture, and infrastructural construction. Asian nations have made efforts to address these issues as they have come to understand the need of protecting the rainforests. Numerous nations have created protected areas, put laws in place to control logging and land use, and taken part in international projects to stop deforestation. To ensure that their rights and viewpoints are honored, there has also been an increasing focus on incorporating local communities, indigenous groups, and civil society organizations in decision-making processes.

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