

philippine studies

Ateneo de Manila University • Loyola Heights, Quezon City • 1108 Philippines

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Philippine Studies vol. 49, no. 2 (2001): 151–175

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Fri June 27 13:30:20 2008

Deforestation and Mangyan in Mindoro

Volker Schult

The island of Mindoro has an area of almost 10,000 square kilometers. Mountain ranges from northwest to southeast cover around forty percent. From these ranges numerous rivers run into the riparian areas. In the rainy season they become big rivers and overflow to the lower areas. The mountain ridges also divide the island into two different climatic zones. In the north and east there is no clear division between rainy and dry seasons. Rainfall is rather evenly distributed throughout the year, principally between July and November during the southwest monsoon (*habagat*) and between November and March during the northeast monsoon (*amihan*) with a short dry season from April to June. In the west and south, however, an extensive rain period starts in May and lasts until October, with a longer dry period the rest of the year. Typhoons strike the island particularly between August and December, causing heavy damage to the infrastructure, destroying crops and houses. The more or less evenly distributed rainfall in the east of Mindoro is favorable for cultivating agricultural products, and leads to faster vegetative growth than in the west, where cogon grass, a robust and high kind of grass, occupies large areas of land and erosion is a severe problem.¹

The total population of the provinces of Mindoro was 832,642 in 1990. More than 550,000 people lived in Oriental Mindoro, almost double the number of those in its sister province Occidental Mindoro. The population is heterogeneous, originating from the different provinces of Central Luzon, the Ilocos provinces and the Visayas. The average annual increase of population was between two and four percent in the last few decades. Basically, immigration proved responsible for this high figure. Most of Mindoro's residents live in coastal areas and

between 60 and 80 percent of them are farmers who make a living from the cultivation of wet rice fields, coconuts and citrus fruits.

The indigenous inhabitants of Mindoro, however, are the peaceful Mangyan who today predominantly inhabit the island's interior. Anthropologists divide them into six major ethno-linguistic groups, the Tadjawan, Alangan and Iraya in the north and the Hanunoo, Buhid and Taobuid in the south. According to latest estimations some 75,000 Mangyan lived in Mindoro in 1990, i.e. around nine percent of the total population. Most of the Mangyan families still live according to their traditional way of life in small local groups of 30 to 300 people. They make a modest living by means of shifting cultivation; harvesting rice, corn, and vegetables and gathering tubers and wild plants. Some still do a little hunting and raise hogs.² The Mangyan are, however, in danger of losing their cultural identity, which is unique in the Philippines. The constant influx of settlers in search of land, the conflict between the New People's Army (NPA) and the Philippine government, the encroachment of big corporations exploiting the natural resources and, most disastrous, environmental destruction are the principal factors endangering the basis of the Mangyan's way of life.

At the turn of the twentieth century, tropical forests covered almost two-thirds of Mindoro's total area and extended to the coastal regions. In 1908 a U.S. forestry expert stated that 63 percent of Mindoro's area was covered with forest, 36 percent was grass land and only one percent was cultivated area. More than two-thirds of the forests or 44 percent of Mindoro's total area were classified as of commercial value (Merriitt 1908, 13). Today the face of the island has almost completely altered. Wide areas of Mindoro are deforested. The forests have given way to settlements, farm land and pasture land for large cattle herds. In 1971 it was estimated that only approximately one-third of the island's total area was still covered with forest. The latest satellite maps and photos, however, reveal that this area has been further reduced, and only a small portion of primary forest, particularly around Mt. Halkon, is still left today.³ Unfortunately, this development in Mindoro fits into the overall development in the Philippines. Before World War I there had been around 60 million hectares of forest in the Philippines covering ca. 55 percent of the land area. It was estimated that only seven million hectares were left by 1987, most of it second growth. And this development continues.

The latest United Nations Food and Agriculture Organization (FAO) figures state that between 1990 and 1995 a total of more than 1.3 mil-

lion hectares of forest were destroyed, which amounts to 16.2 percent of the total forest area of the year 1990. The Philippines is destroying its forests at a faster pace than any other country in the world. Although government officials are involved in the often illegal export of timber, the indigenous peoples are still blamed for the forest destruction.⁴ Thus, it seems necessary not only to analyze the development of deforestation on Mindoro, but also to provide answers to the questions: What are the reasons for this rapid deforestation? To what extent are the Mangyan particularly affected? How did they react to this development?

American Colonialism, Logging Companies and the Mangyan

Although Mindoro played an important role as an entrepôt for Chinese goods before the establishment of Spanish colonization, it became a neglected island at the periphery of the archipelago after the Spanish conquest until the end of the nineteenth century. Mindoro was almost completely undeveloped. No roads existed between the few small coastal settlements, and thus the only way of communication was by ship. Only 0.3 percent of the island's total area was said to be cultivated in 1870, with the remaining area being classified as forested. During Spain's colonial rule, Mindoro was well-known for its rich and valuable trees which were used, for instance, for the construction of galleons in the shipyard of Cavite. Consequently, the value of export of all kinds of timber ranked first, though the Spaniards did not even exploit the remarkable quantities of valuable timber located near the coast. The overall export of products from Mindoro remained at a very low level until the end of Spanish colonialism (De la Cavada 1876, 2:35ff; Schult 1991, 30–34).

The predominantly Tagalog-speaking population of the small scattered and isolated settlements on the coast made a very modest living on a subsistence level at that time. They left their homes only to till their fields on cleared former forest land in the immediate vicinity of their settlements. Except for extremely dangerous situations, like the approach of Moro raiders, they avoided going into the hinterland with its inaccessible jungle, large streams and impenetrable swamps. Towering behind their settlements, massive mountain ranges covered with dense forests were quite often veiled in cloud: a most frightening panorama for the pious and quite often superstitious *tao* (common man).

Moreover, it was said that primitive people and wild animals roamed these hostile jungles. And indeed, the Mangyan lived in small, mobile local groups in the island's interior.

The Mangyan supplement their subsistence agriculture by hunting and gathering forest products as food and as raw material for housing, craft goods and lighting. Thus, the forest is an integral part of their environment. They exploit it, but they also have a deep respect for the forest, where various spiritual forces have their home. This fact is emphasized when we take the Alangan Mangyan's word for world into consideration: *kubat*. But this term has a double denotation. It also means forest, i.e. the world is forest. This makes sense because throughout the centuries the world experienced by the Alangan Mangyan was the forest which always surrounded them. The traditional living space of the Alangan was covered by dense jungle, which also covered the river valleys, the slopes of the mountains and even the lowlands. This was true until the beginning of this century. From then on, men laid their hands on the forest and almost completely destroyed it, depriving the Mangyan of their living basis.

We are thus confronted with two different perceptions of forest. For the tao it means danger, hostility, and it is to be cleared and exploited ruthlessly for agricultural purposes. The Mangyan concept is ambivalent and more complex. Notwithstanding the fact that both, lowland Filipinos and Mangyan, used trees for housing or firewood, and both made a living by shifting cultivation, deforestation only took place on a very small scale. Shifting cultivation per se, although practiced in a rather crude way by the lowlanders, should not be characterized as being ecologically damaging. Shifting cultivation means clearing the trees and larger bushes and then burning the land. The land cleared in this way loses its fertility within two years and is abandoned. The period of recovery lasts 8–15 years. The Mangyan live in a more or less stable equilibrium with their natural environment, and do not regularly use new areas of virgin forest for their *kaingin* (swidden fields), but prefer second growth whenever possible. At the beginning of the twentieth century, due to this shifting cultivation and the different climatic conditions, there were already secondary forests on the east coast, whereas on the west coast, larger areas were covered with cogon grass.⁵ Thus, we have to take into consideration other factors which cause ecological disaster.

In the wake of the American-Philippine War, U.S. troops occupied the island in July 1901 and started establishing a colonial administra-

tion. Immediately, Governor Offley became aware of Mindoro's resources:

Mindoro is one vast forest, to get rid of half of which would be of immense benefit to the province from every standpoint, particularly as a sanitary measure. . . . The lowlands of Mindoro, and the same applies to the province, should be devoted to agricultural purposes, the mountains to forestry, where constant cutting for the next century would barely be noticeable. (RPC 1904, 1:544-45)

An inspection of the island made clear that indeed almost the whole area was still covered with forest. Even the northeastern region, Mindoro's political and economic center, was solidly wooded except for a strip two to five miles wide along the coast. It was noticed that the Filipinos used only the forest adjacent to their settlements for gathering resin for torches, buri palm leaves for mats, nipa palm leaves for thatching and bejuco for rope. Mangrove swamps provided a supply of firewood. Not much timber was needed locally, but because of a high demand and high prices, timber was exported to Manila.

The Americans concluded that this kind of exploitation of resources did not affect the virgin forest, except for areas around the larger towns where the land was cleared. But they also realized quite early that ecological damage had already affected wide areas. Grass land fire and *kaingin* were chief among the injuries caused to the forest. They particularly blamed the Mangyan, because the loss was great near and at the foothills of the mountains where the Mangyan lived and worked unhindered for a long time.⁶

Even the area around Mt. Halkon, the highest mountain of Mindoro (2,586 meters), was affected. Mt. Halkon was still surrounded by very dense forest, but the forest in the immediate vicinity of Mt. Halkon was destroyed by the Mangyan. All over the gentle slopes of the Binabay River there were clearings, to an altitude of more than 1,000 meters. In 1912, on his inspection tour of northeast Mindoro, Assistant Forester Rafael Medina also noticed severe damage to the forest caused by shifting cultivation. However, he did not simply blame the Mangyan, but analyzed the situation thoroughly. Medina said that the Mangyan were only indirectly responsible. The Christian lowlanders induced them to make *kaingin* because the Mangyan had to deliver crops in order to repay their debts. He suggested the establishment of a reservation under direct control of the provincial governor. It was necessary to deny the lowlanders access to this reservation. This was

an early proposal to protect not only the Mangyan but also the environment.⁷

In 1906 it had already been concluded that proper protection of the forest depended to a great extent on the attitude of the local inhabitants, so that every effort should be made to gain their confidence and cooperation. Thus, it would be better to regulate the *kaingin* than to forbid them entirely, because this was the traditional method of agriculture of the population. Every effort should be made to encourage people to apply for homesteads and occupy permanent farms.

As is often the case, however, reasonable suggestions were not translated into action. The consequence was that *kaingin* in public forests were completely forbidden by law.⁸ It further provided for a forestry tax, which became an important source of revenue. To implement this policy, the American colonial government introduced the western concept of landownership. The land was to be surveyed, registered and the owner received a legal title for his homestead. This meant that the farmers had to settle down in one place and to establish permanent field agriculture. The Americans thus tried to put an end to shifting cultivation, which they consider ecologically damaging and unproductive. Another reason was to implement more comprehensive political control and thorough taxation of the inhabitants.

The same was true with regard to the Mangyan. In spite of the American efforts, however, they persisted in their traditional way of life. The Americans tried to induce the Mangyan to settle down permanently in special settlements. Although they invested quite a lot of money and energy the minority policy proved to be a failure. The Mangyan simply abandoned these places as soon as possible or when they thought the settlements were no longer of any advantage to them. That was quite often the case when the free distribution of rice came to an end. Thus, the Mangyan stuck once again to their traditional, peaceful and effective way of reaction, retreating into the interior of Mindoro.⁹

Another important aspect of the American colonial policy was to foster the economic development of the archipelago, which included the commercial exploitation of the Philippine forests. With regard to Mindoro, the provincial governor reported:

When one considers that, in addition to the coast forests, which alone have given to Mindoro the reputation of being one of the best of the timber producing provinces of the Philippines, there are large areas of

land covered with much better and denser growth, he must realize that the future of the lumber industry of Mindoro rests upon a firm basis. (RPC 1908, 1:345)

To stimulate clearing in commercial quantities, the Americans issued licenses to individuals and to lumber and logging companies. On 3 July 1905 the U.S. authorities granted the American-owned Mindoro Lumber and Logging Company a twenty-year license covering the area between the rivers of Socol, near Bongabon, and Wasig. The area extended thirty kilometers along the coast and up to sixteen kilometers inland. The company enjoyed the exclusive right to exploit the forests. On 38 percent of the total area trees grew in commercial quantities. The methods used to manage Mindoro's largest lumber company were not effective, and working conditions were hard. The Filipino workers cleared the trees with axes and cut them into logs measuring three to six meters. These were transported on sledges tugged by six to eight carabaos on provisional trails to the small sawmill of Cawayan. From there they were carried by carts pulled by one or two carabaos on a 4.5 kilometer-long small wooden narrow-gauge railway to the shore. There, the lumber was loaded on ships bound straight for the United States.

One big problem of the commercial logging companies was manpower. Workers had to be recruited from the well-populated areas of Mindoro and adjacent islands. The mediocre output and arduous as well as difficult transportation entailed heavy costs. Two laborers could clear and cut two to four trees of average size per day. The costs could have been drastically reduced had there been better equipment and a more efficient organization of the company. The major problem of lumber companies and the main cost factor, however, was the transportation and shipping of timber. Because steamers did not sail regularly, the major companies had to provide their own transportation, whereas smaller companies had to enter into contracts with the few ship owners. Owing to the lack of adequate piers, with the exception of Calapan, the floating timber was hauled to ships anchored off-shore. Weather conditions were of major importance. Frequent and sudden storms delayed loading and transporting, and posed serious danger to both the workers and the sailors. In spite of the rich timber resources, very few entrepreneurs invested in Mindoro because of constraints in adequate infrastructure and manpower. Low wages and an abundant supply of natural resources alone did not suffice to attract capital.¹⁰

The commercially operating lumber and logging companies were located primarily in the northwest around Paluan and Abra de Ilog and around Pinamalayan and Bongabon on the east coast. The smaller companies were owned by Filipinos. They had to apply for renewal of their licenses every year. Individuals were also granted licenses for commercial logging. Apart from important local figures, such as the future provincial governor Juan Morente from Pinamalayan, American citizens also secured such licenses. Charles A. Barber, for instance, settled down in the sitio of Cupang, Barrio Sumagui near Bongabon around 1905. Barber was not only engaged in logging, but also acquired land, on which he cultivated abaca and coconuts. The local coconut producers profited from the Mindoro Lumber and Logging Company in their vicinity. Their steamers, which sailed from Pinamalayan to the USA, were not only loaded with timber, but also with coconuts.¹¹

The transformation of Mindoro's economy from a subsistence agriculture to an export-oriented cash crop agriculture and the exploitation of its natural resources in commercial quantities could not be successful without a proper infrastructure and an increase in population. An example from Governor Stone's annual report of 1913 may illustrate the situation. He wrote that there were still 40 hectare areas of hemp land for sale within three kilometers of the provincial capital of Calapan for a small amount of money, because the transport of the crop to the market was impossible (Stone 1913). The basis for the introduction of a cash crop economy also in Mindoro were the tariff acts of 1909 and 1913 establishing free trade between the Philippines and the United States of America. Henceforth, the producers of copra, sugar or abaca found a large and stable market for their products in the USA. Copra, for instance, became Mindoro's leading cash crop.¹² Even a new cash crop, sugar cane, found its way to Mindoro. In 1910 the San Jose Hacienda in the southwest corner of Mindoro, with more than 22,000 hectares, was sold to American businessmen. They established the largest and most modern sugar hacienda in the Philippines, with a permanent work force of 3,000 to 4,000 men and many more seasonal workers.¹³

Vast tracts of idle land were available on Mindoro, but migration remained at a very low level. From 1904 to 1913, only around 1,000 people applied for a homestead. The decisive breakthrough in this transformation process came with the construction of the so-called Calapan South Road. The plan was to construct a road from the pro-

vincial capital of Calapan to the prosperous town of Pinamalayan around 70 kilometers south of Calapan on the east coast. This provincial road was to be continued to Bongabon, the largest logging area. This road was not built along the east coast, but straight through the fertile but barely accessible northeastern plain. The idea behind this project was to open up this area for settlers from the overcrowded provinces of Central Luzon and to bring agricultural land into cultivation. Preliminary work on the road began in 1915, but it took the government until 1932 to open the road from Calapan to Pinamalayan. Thus, the first and until today most important road was finished.

It had a great impact on the further development of the island. For the first time in Mindoro history it was possible to transport large quantities of crops from the interior to the provincial capital of Calapan and from there to Batangas and Manila. With the progress of the road, more and more settlers poured into the island. The number of new homesteaders increased to around 10,000 up to 1920. New barrios came into existence along the road and more and more land was cleared. Nobody, however, cared about the Mangyan and deforestation. Both, Mangyan and forest, were regarded as obstacles in the "bright future" of Mindoro. The forest was destroyed and the Mangyan retreated further into the island's interior or were settled on reservations (Schult 1991a, 95–101).

Modern Logging and Deforestation (1930 to ca. 1950)

The transformation of the economy and the infrastructural development also had consequences for the lumber and logging companies. The era of modern logging had now commenced.

Timber Production in Mindoro (in cubic meters)

1902	1907	1911	1916	1921	1931	1951
3,708	8,610	9,016	13,059	13,076	56,218	84,473

This table illustrates the new development. The timber production increased drastically between the years 1921 and 1951 (Navarro 1923/24, appendix v; Landicho 1952, 177). A consequence was the reduction of forest land in Mindoro as shown in the following table (Merritt 1908, 13; Landicho 1952, 168).

Vegetative Cover of Mindoro

<u>Classification</u>	<u>1908</u>	<u>1951</u>
Commercial forest	44%	35.2%
<u>Non-commercial forest</u>	<u>19%</u>	<u>14.3%</u>
Forest	63%	49.5%
Cultivated area	1%	25.9%
<u>Others</u>	<u>36%</u>	<u>24.6%</u>
Total	100%	100%

The establishment of the Sumagui Timber Co. in 1929 meant the beginning of modern logging in Mindoro. The company was capitalized with ₱200,000. Almost 100,000 hectares of land located between Pinamalayan, Bongabon and Bulalacao comprised its concession. Trees in commercial quantities covered an area of about 38,000 hectares. The owners secured the construction of a small road connecting the provincial road to their area of concession at their own expense. In the 1930s they commenced the so-called tractor and truck logging in Mindoro for the first time. Subsequently, this technology resulted in lower costs of production, and business became a promising venture.

As a consequence of Japanese expansion into Southeast Asia, the Japanese took over Sumagui Timber Co. in 1932. The company transported its timber directly to Manila and on ocean-going vessels to the USA, Japan and Korea. Japanese businessmen acquired more lumber companies on the east coast, for instance the Mindoro Timber Co., in the 1930s while American lumber interests in Mindoro took a back seat. Due to the ever more intensive and detailed discussion on a future Philippine independence from the United States, many U.S. entrepreneurs ceased investing in the Philippines or left the country altogether. Immediately before the war, Sumagui Co. exported logs worth ₱82,827.68 to Japan and Korea.¹⁴

The Japanese occupation of Mindoro during World War II stopped the timber business almost completely, although the Japanese needed timber in large quantities. Guerrilla activities, lack of manpower and an inadequate infrastructure put a stop to it. On behalf of the U.S. Army, logging operations began immediately after the war in the Bongabong area on the former concession of Sumagui Co. At first the lumber produced was for military purposes. But the post-war econo-

mies in Asia needed large quantities of firewood, and wood for construction and industry. Because of this heavy demand, commercial forestry in Mindoro took dramatic strides. Furthermore, the Philippines relied upon the earnings of foreign currencies to speed up the process of reconstruction from the damage wrought by the war. This business venture promised high profits. The number of sawmills increased from eight at the end of 1946 to twenty in June 1947. In 1948, twenty-four sawmills were already in operation in Mindoro. There was no lack of cheap manpower because many new settlers coming to Mindoro worked in that industry. A lot of farmers did likewise as a second occupation. The lumber and logging companies employed more than 1,000 people in 1951 and entire municipalities, such as Bongabon, depended upon logging.

In contrast to the pre-war period, mechanized logging on a large scale brought about changes. Heavy trucks and cranes were used, because many commercial forest areas were in the interior and hardly accessible. In 1946 and 1947, Mindoro was, next to Zamboanga in Mindanao, the second largest lumber exporter. In the two years following, the volume increased. In the meantime, however, competition from other provinces of Mindanao commenced, and from 1950 on the lumber boom in Mindoro came to an end. To gain access to the commercially useable trees, the laborers had to go further inland. But lack of roads and the entrepreneurs' unwillingness to pour in the necessary large investments, because most of them were looking for quick profit, brought an end to the timber bonanza.¹⁵

The short but intense bonanza of the post-war period did not only have negative results on poorly managed and capitalized companies, but also caused irreversible damage to the environment. The island's face was fundamentally changed. The Office of Forestry estimated the commercially usable quantities of forests to be more than 50 percent of Mindoro's total area in 1924. In 1951 these figures had dropped to only 35 percent. There was no legal obligation for the lumber companies to reforest. The population, however, soon saw and felt the consequences of uncontrolled logging:

Ayon sa palagay ng sumulat nito, at sa palagay ng ilang mamamayan, ay kaya naging malubha ang panganib na apawan ng tubig at pinsalain ang buhay at kabuhayan ng mamamayan sa Bongabon, Oriental Mindoro, ay dahil sa pagkaalis ng malalaking kahoy sa malapit sa pangpang ng Ilog ng Bongabon mula ng dumami ang Sawmills.¹⁶

The result was the transformation of the river into a rocky stream, and the shifting of the river mouth around ten kilometers to the north. Flooding became a severe problem. This had happened time and again, the people of Bongabon recalled, even before the deforestation of the river valley, but not with such dramatic consequences. A strong typhoon hit the Bongabon area in November 1951 and because of deforestation the inhabitants feared for their lives. Many houses were destroyed and the loss of livestock was heavy. Until the 1930s the Bongabon area had still been forested right down to the coast. But after the war a Chinese entrepreneur constructed logging trails into the interior. He systematically logged out the river valley. After a few years the Chinese entrepreneur was replaced by an operator under contract to a transnational corporation. After he had taken out all the export-quality timber, his concession was subdivided among three smaller local companies. All these operators built trails further into the interior to obtain access to high-quality timber, thus encroaching into Mangyan land (Isler 1952, 19–21; Gibson 1986, 21ff.)

The Policy of Deforestation and the Mangyan Reaction

Since the 1950s, wealthy families on the coastal area of Bongabon began to invest in the interior. They hired workers, either their tenants or newly arrived immigrants, to clear the land and transform it into farms. Quite often these tenants were promised pieces of land of their own. Some of the landlords transformed their land from rice cultivation to cattle breeding on the foothills. Apart from the forest that was cleared, the victims were the Mangyan living on these lands. Half of the area in Oriental Mindoro was classified as forest reserve, and thus closed for the settlement of non-Mangyan. But the government was either unable or unwilling to control their own regulations. More and more settlers poured into the interior following the logging trails, and were given land rights by landlords and government officials. Most of these new settlers practiced a highly destructive form of shifting cultivation. They planted their land with cash crops year after year until the land was exhausted. Then they moved to another area and the same procedure commenced all over again.

The Mangyan's only chance was to leave the land and retreat further into the hinterland. The problem was, however, that because of poorer soil quality in the mountain area, life became much harder for the Mangyan. Thus, some of them preferred to be hired as farm or

cattle hands, who were quite often underpaid. Since the 1950s a change in the Mangyan's way of life and relation towards the Christian lowlanders has been visible. Owing to the encroachment of thousands of settlers into the interior, many Mangyan have come into closer contact with them. Because a retreat into the mountain areas has become difficult, more Mangyan have begun to reside in permanent settlements and are engaged in more intensive business activities with the settlers (Gibson 1986, 21–22, 27).

Another consequence of the encroachment of settlers was that the Mangyan who also relied on forest products to make a living had to go deeper into the interior where portions of primary forest still existed. An important activity of the Mangyan was hunting, as older Mangyan reported. Nowadays this is rare. Hunting activities were always done in groups because it meant moving deep into the forests where *labang* (animal or evil spirits) lived. Monkeys, deer, tamaraw and above all wild pigs, were hunted during the dry season and a good number of animals were caught by means of traps during the rainy season. Hunting was economically motivated, while women looked for wild root crops for times of scarcity. The men also gathered honey and beeswax. Hunting is now an arduous undertaking however. The Mangyan, for instance the Buhid of the Fay Valley, have to go long ways to arrive at forest areas, and moreover, animals have become rare. One reason is the natural increase of the Mangyan population in this valley, and the overexploitation of resources. The main cause, however, is the permanent encroachment of settlers since the 1950s and the clearing of land which is used for cattle breeding.

The Philippine government leased the complete Fay Valley to Berteng Santos, member of an influential family in San Jose, as cattle area. The Mangyan of this area worry about the destruction of their living basis, because retreat, their traditional way of response in case of danger, is now hardly possible. Life in areas above 900 meters is very hard and moreover, the Mangyan living in the upper areas are afraid that more people cannot be fed. But the Mangyan react in a flexible way to changing environmental conditions. One possibility to show the cattle breeders and the government that this is their territory is to settle down permanently and to mark their fields. That means at least partially adapting to the lowlanders' way of life and stopping their traditional shifting cultivation. On the other hand, the overexploitation of the soil requires a very careful use of fire, and more land must lie fallow to recover. A change in the cultivation of crops has also

taken place. The Mangyan cultivate, for instance, more banana and fruit trees as well as other perennial plants (Erni 1993, 75–82, 87–91).

From 1950 to 1980, the area of Mindoro covered with forest was reduced from 50 percent to a level below one-third of the island's total area. The dramatic development is not characterized by mere percentage, but by the fact that the primary forests have been almost completely destroyed. Only around Mt. Halkon and Mt. Calavite do larger areas of primary forest still exist, whereas fifty years ago almost the entire island was covered with jungle. The continually uncontrolled deforestation has caused irreversible ecological damage. Responsible for this dramatic situation was principally the demand of the old and newly industrialized nations for high quality lumber. Mindoro exported primarily to Japan, Taiwan, Singapore and France. To gain access to the commercially high quality trees, the companies still used wasteful methods of logging. Trees blocking the laborers' way were cleared and left to rot. The laborers sawed out only the best parts of the commercially usable trees and left the rest. Reforestation never took place. People already criticized the extremely wasteful logging operations around Puerto Galera in 1968. It was said that this kind of logging had to be considered a crime and at the same time a collective act of suicide, because the forests were the nation's treasures (Garcia 1968, 754; Schult 1991, 129).

The declaration of martial law in September 1972 made the application for logging concessions much easier due to Presidential Decrees. In 1974, eleven legal commercial licenses for companies, such as Mindoro Timberland, Calapan Development Corp. or Oriental Mindoro Trading, had been approved for Oriental Mindoro. A total of 81,000 hectares of land was under legal concession. This was around 38 percent of the province's total area covered with forests.¹⁷ Consequences followed hard on deforestation. Apart from the Mangyan, the lowland population and even the town dwellers were now also severely affected. For instance, a great flood in Mamburao, the provincial capital of Occidental Mindoro, destroyed roads, bridges, school buildings and residential houses in 1978. It killed a few people and many livestock. Only then did the residents become aware of their fragile ecological situation. It made them conscious of the importance of reforestation and the improvement of flood control projects (Candelario 1982).

The problem was, however, that apart from foreign companies, President Marcos' cronies were the greatest profiteers of these commer-

cial logging operations. Sugrains Agricultural Development Corporation was granted a logging license in the municipalities of Puerto Galera and San Teodoro in December 1981. The main stockholder of this company with Swedish shares, and Chairman of the Board of Directors was Manuel Elizalde, Presidential Adviser on National Minorities and crony of President Marcos. The company distributed one sub-license of almost 6,500 hectares to the match producer Provident Tree Farms Inc. (PTFI), owned by Alfonso Ponce Enrile, relative of the Secretary of National Defense, Juan Ponce Enrile.

By May 1982, problems for the Mangyan living on the leased land had already begun. Twenty Mangyan families had been evicted from their lands by armed men and their plantations were destroyed. But lowlanders of the San Teodoro area were also worried about future development. Complaints arose that flooding had become a problem in some barangays of San Teodoro most probably due to the clearing and burning of some 200 hectares on the Sugrain lease. After protests from among the population, the company started a campaign of intimidation and expulsion carried out by paid bandits without hindrance from the local authorities. Around 5,000 Mangyan were threatened with expulsion from their home territories by PTFI. Twenty heavily armed men, hired by the company, threatened the people in the area after having expelled 200 families and destroyed their harvest. On 26 June 1983, 102 heads of Mangyan families sent a petition to President Marcos asking him to cancel the concession because they had no other place to go, and they were not willing to leave their ancestral land. But nothing happened. Government agencies like PANAMIN or the Bureau of Forest Development (BFD) did not take action on behalf of the Mangyan living in this area.

A similar event happened in Magsaysay, Occidental Mindoro in 1982. The Southern Mindoro Lumber Corporation (SOMILCO) sent loggers to land leased to a Mangyan foundation for the preservation and protection of their culture. Among its tasks was the protection of the ecosystem and natural resources of their ancestral land. This organization was founded in 1978 and the land was leased to them in December 1981 by the Ministry of Natural Resources. Illegal logging, which started in June 1982 continued, although letters of complaints were sent to the BFD. Finally, in April 1983 the right of the Mangyan in the disputed area was recognized and the logs cut illegally by SOMILCO came under Mangyan custody and were to be used for building homes or bridges.¹⁸

Not only Mangyan but also lowland Filipinos were affected by the consequences of deforestation. A cry for help was sent by the mayor of Abra de Ilog to the regional director of the Ministry of Public Works and Highways (MPWH). The agricultural town of Abra was in danger of going under water because of massive siltation brought about by illegal logging. Several thousand ricefields were threatened in the valley because there was no longer any vegetation cover on the mountains except for the grass lands on nearby ranches. This area had been jungle before and had never been flooded, as the mayor reported.¹⁹

These examples emphasize the dangerous situation for both, Mangyan and lowland Filipinos alike, due to legal and illegal logging. Government agencies and cronies including the President himself were involved in this lucrative business at the expense of the environment and the people, particularly the indigenous population. Apart from small partial successes, no essential change in policy took place. On the contrary, protests were dangerous and could even cause violent responses.

After the end of the Marcos regime, many people in the Philippines hoped for a fundamental change of politics under the new democratic government of President Corazon Aquino. But her government seemed to give unrestricted priority to economic rather than to ecological considerations. Shortly before his resignation as Minister of Natural Resources, Ernesto Maceda approved a logging permit, Timber License Agreement (TLA) No. 376, on 38,630 hectares of land around Mt. Halkon to the Oriental Wood Processing Corp. The municipalities affected were Puerto Galera, San Teodoro, Baco, Victoria, Sta. Cruz and Sablayan. Allegedly involved in this transaction were Deputy Minister Ignacio and OIC (Official-in-Charge) Governor Espiritu.

The area covered was one of the last large primary forest areas of Mindoro. Coinciding with the Tamaraw Wild Life Reservation and Harrison Park, it touched the Mangyan's traditional areas of settlement.²⁰ Some 30,000 Mangyan were affected by TLA No. 376 which endangered their basis of livelihood. The lowland population of the above municipalities were also against this project. They were afraid that a deforested mountain area would threaten a reliable and adequate water supply for their paddy fields in the lowlands. Because of the common danger, an interest alliance between local authorities, lowland population and Mangyan supported by missionaries came into existence. The activities of the New People's Army (NPA) may also have played a role. The NPA began to gain support from the local population, and the guerrillas threatened to interrupt the activities of

the timber company. Confronted with such an opposition, Governor Espiritu dissociated himself from this project. After vehement common protests from this alliance, the Aquino government finally cancelled the license on 21 October 1987.²¹

Another major point of dispute between the Mangyan and commercial interests of large corporations in Manila is the coal mining project in Bulalacao. In 1983 F.F. Cruz & Co. entered the Bulalacao area with its supposedly rich coal deposits.²² The concession granted around 15,000 hectares of land to the company in 1984. Approximately one-third was occupied by 3,000 to 5,000 Hanunoo Mangyan. This deal only became clear to the population as three communities inquired about their application for a Communal Forest Lease.²³ They learned that a mining company had already applied for a timber license permit in this area. The company did not bother about the still impending situation, but started to cut down trees for the construction of a twelve-kilometer access road and for wooden props used as tunnel support for underground mining.

With the assistance of lawyers and non-government organizations, the Mangyan sent a petition to President Aquino emphasizing the negative effects on the environment and the population, both Mangyan and lowlanders. Apart from other points, they underlined the massive loss of forest resources through overlogging. First effects of the soil erosion were already recognizable. The lowlanders' ricefields would also be affected by the seasonal alteration of drought and flooding.

The company, however, tried to blame the Mangyan's shifting cultivation as the main source of environmental destruction. They promised to involve the Mangyan in their plan to set up a social forestry program that would include the planting of Taiwanese acacia trees and perennial crops. Apart from ignorance of the Mangyan's balanced system of agriculture and livelihood, the mining corporations in the Philippines do not have a good reputation with regard to reforestation. Despite the Mangyan petition, no effective action was undertaken by the government.

This changed when a surprised public was confronted with a collective demonstration of 3,500 Mangyan on the coal site in the spring of 1986. Mangyan from different tribes, even from Occidental Mindoro, came together in common protest. Governor Espiritu tried to negotiate a compromise with F.F. Cruz to cease its operation for a while to analyze the demands of the people involved. But the company simply ignored a temporary freeze order.

On 27 December 1986 the public was again taken by surprise. Some 5,000 Mangyan came together in a protest march from the town of Bansud to Pinamalayan to make the non-Mangyan population aware of their demands. This time they did not only demonstrate against the coal company but also against the timber license for Oriental Wood Processing Corp. On 17 August 1986 the Samahan Pantribu ng mga Mangyan sa Mindoro (SPMM or Indigenous Association of the Mangyan in Mindoro) the first ever Mangyan intertribal organization, was founded. Impressed by these actions, the government gave in and ordered the two companies to suspend their operations at the beginning of 1987.

But this was only a temporary victory for the Mangyan with regard to F.F. Cruz. The company reacted with a new strategy. They isolated the Mangyan from the lowlanders by promising the latter a bright future, by intimidating the Mangyan and bribing their leaders. This strategy and the influence of the corporation owner in Manila proved to be successful. On 26 October 1987 the company was permitted to resume its operations. The non-consultation policy of the Marcos-era seemed to continue in this case. The company's timber license, however, has remained suspended since 1986. It was advised to get the necessary lumber supply either from its own nursery or from a plantation in San Teodoro in the north of Oriental Mindoro under concession to PTFL. But the report of a non-government organization inquiring into this affair says:

However, there is much evidence the mining company has chosen to further denude the already heavily degraded hills in the immediate vicinity by hiring Visayan settlers and Mangyan to cut the trees needed for tunnel supports. (TABAK 1990, 76)

In 1988 the company decided that it was no longer necessary to transport the lumber from far away San Teodoro because lowland farmers and Mangyan offered plenty of wood. The effects of the company's need for lumber can be seen on the hillsides above the mine. It has recently been cleared and is practically denuded up to the hill tops. The access road built in 1984 has become a further source of erosion because no reforestation has been done. Every rainy season, floods are now sent down the hill. In November 1988 a rushflood, according to a resident the first ever experienced in this area, caused much damage to the lowland farmers. The company, however, put the blame on the Mangyan and the small loggers. The promised economic

progress has failed to materialize so far for the residents of Bulalacao (TABAK 1990, 55–82; Geiger and Blum 1993, 195–99). Time will tell whether it is possible not only to continue the common protest of the Mangyan but also to include the lowlanders in this protest for the protection and preservation of the environment they both depend on. But the latest information gives cause for a more pessimistic view. Ecological destruction in the mining area is going on at full scale.

Another severe situation has meanwhile emerged, again to the detriment of the Mangyan and the environment. In a rather absurd move, the government of President Fidel Ramos granted more than 1,000 hectares of forest lands from the Iraya domain in the Baco-San Teodoro area in the north of Mindoro to the Rebolusyonaryong Alyansang Makabansa Foundation Inc. (Ramfi) in 1996. This is an industrial forestry project by former military rebels which is officially declared a reforestation project, but concerned citizens are afraid that it only benefits big-time loggers because under this project it is also possible to circumvent the official log ban. These putschists, the so-called RAMboys (Reform the Armed Forces Movement) tried several times to overthrow the legitimate government of the Philippines by bloody coups. Now these putschists have been rewarded with land grants, land which belongs to the Mangyan. Mangyan of the Kapulungang Para sa Lupaing Ninuno (KPLN or Assembly for Ancestral Land), composed of all Mangyan tribes of Mindoro, and supported by non-government organizations and missionaries, protested again in a non-violent way during President Ramos' visit to Mindoro on October 11. They presented a petition to the President that included among other things the demand to enact into law the Mangyan Ancestral Domain Act of 1996, which recognizes the right of indigenous communities to the ownership of ancestral domain, to stop licenses to environmental destructive projects and to hold consultations and seek permission from Mangyan for government projects when ancestral domain is affected. The question which remains to be answered is, if the government is really concerned about reforestation, why not give the millions of pesos to the Mangyan, the original inhabitants of this area, rather than to Ramfi? The Mangyan know much better than anybody else how to spend the money in a useful way for ecological reconstruction.²⁴

The latest government land use plan does not augur well for the environment and the Mangyan of Mindoro. Mindoro will be part of

the new sub-region MIMAROPA (Mindoro, Marinduque, Romblon, Palawan). The government intends to invest up to 53 billion pesos in the next few years in infrastructural and economic projects. The trend for Oriental Mindoro is the development of an intensive agriculture and tourism as well as urbanization. Mindoro's future role is to supply the industrial area from Manila to Batangas with agricultural products. Maps have already been prepared by the government on which large areas are marked DO, open for development, ignoring, however, the Mangyan ancestral domain and environmental aspects. Supported by Fr. Dinter, other maps are now in preparation on which the Mangyan territory and their rights on land are indicated in order to present them together with petitions to the government (Letter, Fr. Dinter, 18 May 1997).

These cases again emphasize that it is necessary for the different Mangyan tribes to organize themselves in order not to be played off against each other. Only common Mangyan protest can have the desired effect. It will be even more effective if it is possible to get more and more lowlanders involved in various protest activities, because environmental destruction affects both groups.

Conclusion

At the beginning of the twentieth century the island of Mindoro was almost completely covered with forest. Fifty years later primary forest existed only in some areas in the interior. In spite of early American colonial reports at the beginning of the twentieth century, the Mangyan's traditional shifting agriculture did not lead to severe destruction of the forests of Mindoro. Factors that finally brought about such ecological damage were the transformation of the island's economy from subsistence to cash crop agriculture, the introduction of commercial logging and infrastructural development. Further, the American colonial government fostered massive immigration of settlers to the underpopulated island of Mindoro with its vast idle resources. At that time communities of Mangyan still lived even near the coast. As more and more settlers encroached, they acted in their traditional peaceful way. In case of danger the Mangyan simply moved into the quite often inaccessible interior and returned whenever the danger was over. This flexible response to external threats had proved to be successful over the centuries and was possible because enough space was available.

The situation for the Mangyan exacerbated dramatically after World War II. An improved infrastructure and the encroachment of big modern logging companies, which built access roads into remote forest areas and cut down trees on a large scale, made it possible for settlers in search of land to penetrate further and further into the interior. Many Mangyan had fled into the hinterland during the war. As they returned to their pre-war settlements and kaingin, they quite often found them already occupied by settlers or logging companies. Because of land scarcity or poor living conditions on infertile land in the mountains, it was hardly possible for the Mangyan to further retreat. Thus, more Mangyan adapted in certain ways to this new situation. Groups of Mangyan began to settle down in settlements, quite often encouraged by missionaries who supported them in various aspects. They tried to obtain titles for their land, cultivated crops on permanent fields and engaged in trade with the lowland communities.

Deforestation must be considered in the broader context of environmental destruction, economic exploitation and the Mangyan's struggle for cultural survival. Since the middle of the 1980s the situation of the Mangyan has deteriorated dramatically. Although the island has already been heavily deforested, more concessions to logging and mining companies and former military rebels have been granted by the government, ignoring the ecological consequences and the rights of the indigenous population.

But this time the Mangyan have reacted differently. For the first time in their history, members of the different tribes founded an inter-tribal organization to gain public attention for their concerns. They have organized peaceful protest marches and the national press in Manila has reported on their demands. Now a wider public is informed about the problems of the Mangyan and one can only hope that the pressure on the government will increase to at least acknowledge the Mangyans' rights to their land.

Environmental destruction and land scarcity have forced the Mangyan to find new forms of reaction to external threats in order to survive and preserve their culture and way of life. Luckily, they have still kept one part of their traditional way of reaction, their peacefulness. The Mangyan will hopefully not be forced to ignore this significant part of their culture.

Notes

The author is grateful to Mrs Clare Özdemir for grammatical corrections.

1. Merritt 1908, 22ff.; Landicho 1952, 30–33; Wernstedt and Spencer 1967, 428–32.
2. *Census of Population* 1990; *Environmental Analysis: Occidental Mindoro* 1983; *Socio-Economic Profile: Oriental Mindoro* 1985; Tweddell 1970; Barbian 1977; Lopez-Gonzaga 1983, 9ff.; Gibson 1986, 19; Postma 1988, xvi; Helbling and Schult 1997.
3. For example, Landsat, 24 Dec. 1977 and SPOT satellite photo of 1987; Erni 1996, 43–46; 73–74; Schult 1991, 129; Helbling 1996, 21.
4. Emmanuel 1990, 103ff.; Lynch 1990, 109ff.; *Süddeutsche Zeitung*, 10 April 1997, 23.
5. Merritt 1908, 9ff., 27; RPC 1906, 2: 108; Lopez-Gonzaga 1983, 111ff.; Gibson 1986, 33ff.; Bräunlein and Lauser 1993, 93ff., 313ff.; Helbling 1996, 112ff.
6. RPC 1906, 3: 681, 699; RPC 1907, 2: 154; RPC 1908, 1: 344–45.
7. Merritt 1906, 21; Merrill 1907, 199–200; Merritt 1908, 12, 23–24 characterized in this respect the Mangyan as “irresponsible people”; MPP 1912, no. 9.
8. Due to lack of personnel the enforcement of this law was hardly possible. Mindoro, Batangas and Romblon were part of Forest District No. 5. The headquarters was in Calapan but only one forester, two assistant foresters, two rangers and some native helpers were in charge of the large island of Mindoro (RPC 1906, 2: 108).
9. RPC 1904, 1: 544–45; RPC 1906, 3: 705; RPC 1907, 1: 148–50; RPC 1908, 2: 168–70; Landicho 1952, 173–74; Jandusay 1955, 68–70; Schult 1993, 19ff.
10. Merritt 1906, 9ff.; Merritt 1908, 13, 25–27; RPC 1907, 1: 148–50; RPC 1908, 2: 168–70; Jandusay 1955, 68–70.
11. HDP, vol. 72, 1953 “Slaked”; Isler 1952, 12; Merritt 1906, 9ff.
12. The area of farmland devoted to coconut trees increased from 2,700 hectares in 1912 to 18,000 hectares in 1939 (Schult 1991a, 96–97).
13. For a more detailed history of the San Jose Sugar Hacienda see, Schult 1991b, 458–74.
14. Landicho 1952, 171, 175–76, 180; Jandusay 1955, 69, 71, 93–98; Schult 1991, 62–63.
15. Jandusay 1955, 72ff., 142; Landicho 1952, 153–54, 168ff.; HDP, vol. 72, “Bongabon, Conrazon, Morente, Bucayao, Comunal, Pakyas,” Vol. 73, “Kalsapa”; Schult 1991, 117–18.
16. “In accordance with the opinion of the writer and some inhabitants, the danger of floods threatening life and possession of the population of Bongabon, Oriental Mindoro, had reached a critical stage due to the deforestation of the large forest near the River Bongabon by the increasing number of sawmills” (author’s translation) (Isler 1952, 19).
17. Garcia 1968, 728ff.; *Socio-Economic Profile: Oriental Mindoro* 1985; Schult 1991, 129.
18. *Malaya*, 2 Aug. 1985, 1, 6; *Patunay* 1984, 2: 5–6; *European Companies*, 23.
19. “Mindoro Town is Sinking,” *Bulletin Today*, 17 Feb. 1983.
20. Governor General Harrison declared 140,000 hectares of land as natural reservation in 1920 (Executive Order No. 9). Commonwealth Act No. 73 of 1936 (Tamaraw Law) prohibited the killing, hunting and wounding of Tamaraws, a unique, small species of carabaos only living in Mindoro. Republic Act No. 1086 of 15 June 1954 confirmed this law.

21. *Philippine Daily Inquirer*, 2 Oct. 1986; *Manila Bulletin*, 15 Feb. 1987; *Island Sentinel*, 16–22 Feb. 1987, 23 Feb. and 1 March 1987; letter Fr. Dinter, 25 March 1989; Schult 1991, 161.

22. The existence of these coal deposits have already been known since 1879 when they were discovered accidentally. The Spanish colonial government planned to exploit the resources but the outbreak of the Philippine Revolution in 1898 stopped any further activities (Schult 1991, 32).

23. The three communities had organized a foundation, the Pundasyon Hanunoo-Mangyan, in 1981 in order to apply for the Communal Forest Lease (TABAK 1990, 58).

24. *Philippine Daily Inquirer*, 24 Oct. 1996, 9 and 2 Nov. 1996, 2; Letter Fr. Dinter, 19 Nov. 1996.

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