

# Deforestation and its effects



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Deforestation refers to the cutting down of trees in the forests. Devoid of trees, a forest ceases to exist. For this reason, deforestation is also known as the destruction of forests. It is caused by a variety of human activities meant to satisfy human needs and wants. For instance, logging, which has been identified as the number one cause of deforestation, is an activity which is primarily aimed at satisfying man's need for dwelling. More people means more houses are needed, and increases in housing requirement means a proportional rise in the need for lumber as a primary construction material. Ergo, more trees need to be felled.

It follows, therefore, that in the absence of effective government intervention and control, deforestation through logging is dictated by population growth both domestically and worldwide. Indonesia provides an interesting case study. The escalation in logging activities in the country was influenced both by the rapid increase in its population and the rise in lumber requirements of developed countries. During the 21-year period from 1980 to 2001 alone, Indonesia's population growth stood at a robust 46%, registering an increase of 68 million people from 147 million to a whopping 215 million (Energy Information Administration).

At the same time, Indonesia is the number one source of tropical timber for developed countries today, with gross annual earnings of more than US\$5 billion. Forty-eight million hectares or more than half of its total forest area of 88, 495, 000 hectares is covered by numerous logging concessions today. The combined volume of domestic and international demands for Indonesia's timber resulted to the rapid dissipation of its forest cover. During the

sixteen-year period from 1990 up to 2005 alone, 31.72% of its forest, or 28,072,000 hectares, had been denuded (Mongabay.com).

One of the immediate effects of deforestation in Indonesia was the loss of its wildlife species. Its Javan and Bali tigers are already extinct, the Sumatran and Javan rhinoceros are on the verge of extinction, and orangutan is already an endangered species (Mongabay.com). Moreover, because of forest denudation, Indonesia has been repeatedly hit by landslides and flash floods. Twenty-six tourists were killed in East Java on December 11, 2002 when a flash flood from an adjacent mountain swept down a spring resort.

Several days later, on December 27, ten people were killed by a landslide in the island of Sumatra. The following year, on November 3, 2003, thousands of logs which were swept down a mountain by a flash flood in Northern Sumatra, left 200 people dead in another tourist resort. In the town of Bandung, West Java, 15 people were killed by another landslide on April 21, 2004, while one hundred forty-three were killed in Cimahi, also in West Java, on February 21, 2005 by a landslide which was triggered by torrential rains.

Meanwhile, in the town of Jember, East Java, a huge mudslide which accompanied a flashflood left 77 people dead last January 1, 2006. Hundreds of houses were also destroyed in that incident. Finally, on January 4, 2006, more than 200 people were feared to have died when another landslide which was triggered by heavy rains buried 102 houses in Banjarnegara, Central Java (TMC net). Shown below is a flooded portion of eastern Aceh, Indonesia (Bakkara). Another significant cause of deforestation in Indonesia had been the massive forest conversion to agriculture, specifically oil-palm plantations.

The increase in the demand for biofuel had triggered a massive conversion of its rainforests to oil-palm plantations. Although cutting of trees in virgin rainforests had been declared illegal, the government allowed the act as long as it would be done for the purpose of converting the forests into oil-palm plantations. From a low of 600, 000 hectares in 1985, oil-palm plantations rapidly increased to more than 4 million hectares by year 2006. Immediately, environmentalists became alarmed for the sake of the wildlife species which could be affected.

Specifically, concern was voiced over the fate of 361 new species discovered between 1994 and 2004 in Borneo Island, whose habitat were threatened by the planned forest conversion involving an area of 2 million hectares (Mongabay. com). Unfortunately, the method of forest conversion adopted in Indonesia did not only cause floods, landslides, and loss of wildlife habitat. It also contributed greatly to air pollution, aside from destroying property. Practicing what they considered as the fastest and most efficient manner of clearing forests, they resorted to “ burning. ” Forests were burned before the monsoon rains fell.

Unfortunately, whenever the burning process coincided with the el nino phenomenon (which always came unannounced), the fires became uncontrollable, burning more than the area targeted for conversion, destroying private property in the process. One such fire which went wild after coinciding with el nino was the one in Borneo in 1997 which burned more than 2 million hectares, resulting to losses in the vicinity of \$9. 3 billion. The haze which accompanied these Indonesian forest fires also

caused severe health and economic problems not only in Indonesia but also in her neighbors in Southeast Asia.

In fact the haze caused by the fires between 2005 and 2006 even strained the relations between Indonesia and her Southeast Asian neighbors because of the adverse effects they caused on ecology, health, and the economy of the countries in the region. Moreover, it was reported that forest fires in Borneo and Sumatra had killed about 1000 orangutans in 2006. It was also estimated that the fires in 1997 alone “ released 2. 67 billion tons of carbon dioxide into the atmosphere” (Mongabay. com).