

# LEGAL POLICIES SURROUNDING THE DEGRADATION OF INDONESIA'S FORESTS

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## INTRODUCTION

Government officials, environmentalists, and non-governmental organizations have differed in estimating the precise size of Indonesia's forests. In 1991, Indonesia's State Forestry Department claimed that the country had 143<sup>1</sup> million hectares of forest (one hectare=10,000 square meters), the World Resources Institute (WRI) offered figures between 143 and 157 million hectares, the World Bank provided an estimate of 144 million, and the Food and Agriculture Organization of the United Nations

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1. See Malcolm Gillis, *Indonesia's Public Policies, Resource Management and the Tropical Forest*, in *PUBLIC POLICIES AND THE MISUSE OF FOREST RESOURCES* 45 (Robert Repetto & Malcolm Gillis eds., 1988).

supplied a number of only 113 million.<sup>2</sup> Charles Barber, writing for the WRI, cited a figure of 109 million hectares of forest that remained in the archipelago.<sup>3</sup> Regardless of the exact figures, Indonesia still possesses the second largest tropical forest area in the world<sup>4</sup> and the third largest forest area in relation to land mass.<sup>5</sup>

However, Indonesia's forests are unlikely to remain at their current size. After offering its estimates of forest area, Barber expressed concern over the rate of deforestation Indonesia experienced over the past four decades. He asserted that in 1950, Indonesia had approximately 152 million hectares of forest, but by 1985, that number had dropped to 119 million hectares, an average loss of 914,000 hectares per year. Between 1985 and 1989, the rate of deforestation increased to 1.3 million hectares per year.<sup>6</sup>

Although deforestation has accelerated in the last forty years, it originated as a serious problem to Indonesia's independence in the 1940's.<sup>7</sup> During the era of Dutch domination, logging generated substantial capital for the colonial power.<sup>8</sup> The Dutch administrators enacted laws to stimulate foreign investment with scant concern for the rights of the indigenous peoples.<sup>9</sup> Once the nation became independent, despite President Sukarno's "quasi-socialism" and "guided democracy" during his rule from 1949 to 1965, the Indonesian elite, composed of large land-owners, traders, and industrialists, generally dominated the government of the Republic of Indonesia.<sup>10</sup> As the Republic matured and began to confront issues of forestry and deforestation, it had to contend with three extremely different, and often conflicting, legal systems that regulated forestry: Dutch colonial laws, laws of the Republic, and *adat* or customary laws of the local people.

These three legal systems diverged in their policies towards forestry: the Dutch principally sought their own profit with little regard for indigenous law;<sup>11</sup> the Republic's law, in theory, served the welfare of the majority of the population, but, in practice, ignored local laws in order to

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2. See INDONESIA NETWORK ON TROPICAL FOREST CONSERVATION (SKEPHI), *SELLING OUR COMMON HERITAGE* 2 (1991).

3. See CHARLES VICTOR BARBER ET AL., *BREAKING THE LOGJAM: OBSTACLES TO FOREST POLICY REFORM IN INDONESIA AND THE UNITED STATES* 4 (1994).

4. See *id.*

5. See Editor's Note, 6 *ENVIRONESIA* 2 (Apr. 1992).

6. See Barber, *supra* note 3, at 5.

7. See Hira Jhamtani & Emmy Hafild, *Forest Resources—The Problems Faced* (SKEPHI) at 2.

8. See *id.*

9. See M.C. RICKLEFS, *A HISTORY OF MODERN INDONESIA* 118 (1981).

10. See *id.* at 225–71.

11. See SUDARGO GUATAMA & ROBERT N. HORNICK, *AN INTRODUCTION TO INDONESIAN LAW: UNITY AND DIVERSITY*, 66–70 (1974).

reap profits for the Indonesian elite and foreign investors;<sup>12</sup> and, *adat* law preserved the rights of the indigenous peoples to own land, often communally.<sup>13</sup>

Because the laws of the Republic dominated current land policy, the interests of the indigenous peoples were sacrificed. Many peasants whose families farmed the land for centuries were compelled, through excessive taxation, expropriation, or duplicitous manipulation, to sell or abandon their property so that logging companies could exploit the land in hopes of producing necessary capital for Indonesia.<sup>14</sup> Although the Indonesian government declared that its forestry policy would provide for the welfare of the population, in reality the elite, officials, and foreign companies were the primary beneficiaries. Transmigration and development programs that cleared forests benefited the nation as a whole, but such policies were not the main cause of deforestation in Indonesia.

Due to the complexity of both the traditional and modern Indonesian legal systems, an overview of the history of environmental laws of the archipelago may offer insight into current forestry policies. This consideration will begin with legislation the Dutch colonials enacted during their rule of the archipelago.

## I. HISTORICAL BACKGROUND

### A. *Era of Dutch Domination*

The Dutch, who had been lured by Portuguese accounts<sup>15</sup> and by reputed profits accruing to merchants trading with Southeast Asia, began arriving in the archipelago in 1595.<sup>16</sup> In 1602, they established the charter company, *Vereenigde oost Indische Compagnie*, commonly known as the Dutch East Indies Trading Company (VOC), to monopolize the spice and sugar trade.<sup>17</sup>

The VOC dominated colonial life for the next 100 years. During this period, the Dutch government's primary objective was to secure substantial

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12. See Barber, *supra* note 3, at 13.

13. See *id.* at 16.

14. See *Victims of Development*, 7 ENVIRONESIA 4, 6 (Jan.-Mar. 1990)

15. The Portuguese explored Indonesia before the arrival of the Dutch but a description of Portuguese influence on the Islands is unrelated to this essay on deforestation in Indonesia.

16. See Ricklefs, *supra* note 9, at 24.

17. See IN SEARCH OF SOUTHEAST ASIA 54 (David Joel Steinberg ed., 1985).

profits through trade rather than to administer the territory efficiently and effectively.<sup>18</sup> However, by the eighteenth century, realizing that additional gains necessitated greater control over the lands they had subjugated, the Dutch installed rulers throughout both Central and Western Java.<sup>19</sup> With the collapse of the VOC in 1799, the Dutch shifted their attention from commerce towards the potential income accruing from agriculture and forestry.<sup>20</sup>

Governor-General Johannes Van den Bosch introduced the Cultivation System in 1830.<sup>21</sup> Under this system, the Dutch compelled peasants to grow particular crops that benefited the Dutch controlled monopolies.<sup>22</sup> Once they had harvested the crops, the peasants presented them to the Dutch in place of land taxes.<sup>23</sup> In order to grow their own food, the peasants had to clear forest land, contributing to the early deforestation of the archipelago.<sup>24</sup>

During the Cultivation System era, the Dutch did not permit foreigners to own land in Indonesia because they did not want anyone to challenge their monopoly on Indonesian territory or goods. Although the Governor-General issued a law in 1854 that, in theory, permitted foreigners to lease Indonesian land, the law forbade investors from securing mortgages to finance their land acquisitions.<sup>25</sup> The investors therefore were able to lease only small areas, minimizing the practicability and profitability of such endeavors.<sup>26</sup> Thus, until the Dutch promulgated the Basic Agrarian Act of 1870 (the "BAA"), virtually no foreign enterprises existed on Indonesian soil.<sup>27</sup> Beginning in the middle of the nineteenth century, however, the Dutch recognized that their own capital resources were insufficient and thus sought to promote foreign investment in agriculture.<sup>28</sup> In 1870, they issued the BAA which permitted foreigners "(1) to acquire mortgageable land rights from the Government for periods of time long enough to make investment practical; and (2) to lease land from the indigenous people."<sup>29</sup>

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18 *See id.* at 54–56.

19 *See id.* at 146.

20 *See* Steinberg, *supra* note 17, at 152.

21 *See* Ricklefs, *supra* note 9, at 114.

22 *See* Gautama & Hornick, *supra* note 11, at 66.

23 *See id.* For a more in–depth description and historical study, *see* Steinberg, *supra* note 6, at 152–153.

24 *See* WOLF DONNER, LAND USE AND ENVIRONMENT IN INDONESIA 109 (1987).

25 *See* Gautama & Hornick, *supra* note 11, at 67.

26 *See id.*

27 *See id.*

28 *See id.* at 66.

29. *See id.*

Before the passage of the BAA, Dutch bureaucrats in Indonesia had been unconcerned with land outside of their immediate domain. Thus, unknowingly, they permitted the indigenous peoples to own and cultivate their lands according to *adat* law, without formal Western-style title to their property. However, in 1870, the King of the Netherlands attached the Royal Agrarian Decree to the BAA. This addition declared that all undocumented land belonged to the State.<sup>30</sup> Because land owned under *adat* law was never registered with colonial officials, the State had formal rights to all the land on which the indigenous farmers had lived for generations.<sup>31</sup> In hopes of augmenting the flow of foreign capital into Indonesia, the Dutch colonials capitalized on their rights under the Agrarian Decree by leasing nearly two million hectares of land to foreign timber interests during the last 70 years of colonial rule, thereby driving the peasants off their land.<sup>32</sup>

Before World War II, most Dutch and other foreign agricultural and forestry investors concentrated their ventures on the island of Java, primarily exploiting the teak plantations to garner forest products such as timber, charcoal, and firewood.<sup>33</sup> After Indonesia independence, however, the geographic scope of their activities widened dramatically.<sup>34</sup>

### B. Independent Indonesia

On August 17, 1945, future President Sukarno and future Vice-President Hatta proclaimed an independent Indonesia, but the Dutch initially resisted loss of control over their colony.<sup>35</sup> Indonesia did not become a sovereign state until December 1949.<sup>36</sup> Independence necessitated a new legal system for the country as well as a reconsideration of property rights. Lawmakers sought to institute land policies that rid Indonesia of three particularly oppressive colonial types of legislation.<sup>37</sup> First, the Dutch had enacted laws designed to entice foreign investment in land, often at the expense of Indonesian interests.<sup>38</sup> In 1945, foreign investors still owned eight million hectares of Indonesian land. New administrators worried that "even if this land were recovered, the colonial

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30. *See id.* at 70–71.

31. *See id.* at 70.

32. *See id.* at 68.

33. *See* Gillis, *supra* note 1, at 43, 53.

34. *See id.*

35. *See* Steinberg, *supra* note 17, at 378.

36. *See id.*

37. *See* Gautama & Hornick, *supra* note 11, at 66, 91.

38. *See id.* at 68. As previously noted, non-Dutch foreign investors controlled nearly two million hectares, and the Dutch owned the remaining six million.

orientation of most of the regulations would impede efforts to protect the interests of the new Indonesian State and the Indonesian people."<sup>39</sup> Second, the Dutch had created a dual legal system subjecting Indonesian-owned land to different and less privileged laws than those of the Western-owned or controlled land.<sup>40</sup> Third, the colonials had deliberately limited the laws governing indigenous land, offering them flexibility to alter policies concerning property rights in order to suit their own interests.<sup>41</sup>

The Constitution of 1945, from which all Indonesia laws emanate, addressed land ownership and provided a foundation for forest and natural resource management. Article 33, paragraphs 2 and 3 of the Constitution states:

Branches of production which are important for the State and which affect the lives of most people, shall be controlled by the State. Land and water resources and the natural riches therein shall be controlled by the State and be made use of for the greatest welfare of the people.<sup>42</sup>

Unlike its Dutch predecessors, the first Indonesian legal code also recognized *adat* law provided that such customary regulations did not baldly conflict with state or government interests.<sup>43</sup> The Constitution was thus the first written document to offer legitimacy to *adat* standards though it no doubt protected the government's interests by imposing limitations on the applicability of traditional laws. It also permitted provisions of Dutch colonial law to remain unchanged as long as they did not contradict national policy.<sup>44</sup>

The Constitution does not refer specifically to deforestation, environmental degradation, or natural resource exploitation because such concerns enjoyed relatively little attention at that time.<sup>45</sup> Nevertheless, it gave the government the power to control the forests and to enact more

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39. *See id.* at 78.

40. *See id.*

41. *See id.* at 78–79.

42. Charles Victor Barber, *The Legal and Regulatory Framework for Forest Production in Indonesia*, FORESTRY SECTOR DEVELOPMENT PLANNING PROJECT FAO/UNDP INS/83/019, at 7 (Feb. 1990).

43. *See* DAVID SONNENFELD, ORIGINS OF INDONESIA'S LOG EXPORT BAN: A STRUGGLE FOR LOCAL CONTROL OF NATURAL RESOURCES? 6 (draft) (May 3, 1991).

44. *See id.* at 7.

45. *See* Barber, *supra* note 3, at 29. Even the United States did not begin to implement environmental regulations until between 1937 and 1955 when fifteen states took the initiative to enact legislation. *See id.*

specific laws designed to enforce its mandate over agricultural and forest lands.<sup>46</sup>

### C. Basic Agrarian Law of 1960

Fifteen years elapsed before the Indonesian government capitalized upon these constitutionally-granted powers.<sup>47</sup> Finally, in September of 1960, it promulgated the Basic Agrarian Law of 1960 (the "BAL").<sup>48</sup> Formally repealing the Dutch Agrarian Act of 1870 and the linked Royal Agrarian Decree, the BAL established a framework for Indonesian environmental regulation.<sup>49</sup> It stated that "the earth, water and air space, including natural resources contained therein in the highest instance is [sic] controlled by the state being an Authoritarian organization [of] the entire population."<sup>50</sup> The BAL once again left the *adat* law intact, provided that these traditional rights did not conflict with the government principle of national unity. Conceding that *adat* encompassed the laws of the earth, water, and air space because of the traditional view that *adat* controls natural elements, the government, nonetheless, had an escape because "in reality *adat* laws are so diverse and widespread that [it] is nearly impossible to adequately incorporate all *adat* principles into a national law."<sup>51</sup>

Shortly thereafter, the government began to chip away at traditional *adat* property rights. In 1963, the Indonesian government, like the nineteenth century Dutch colonial administrators, invited foreign investors to participate in logging in order to increase the flow of foreign capital in the archipelago.<sup>52</sup> However, true forest exploitation did not begin until the government enacted the Basic Forestry Law of 1967; a law in theory designed to alleviate the economic and social problems the newly-installed government faced.<sup>53</sup>

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46. See Charles Zerner, *Community Rights, Customary Law and the Law of Timber Concessions in Indonesia's Forests: Legal Options and Alternatives in Designing the Commons*, 29 FORESTRY STUDIES UTF/INS/065, 15-16 (March 1990).

47. See Gautama & Hornick, *supra* note 11, at 79.

48. *Who is Violating Whose Laws?*, 4 ENVIRONESIA 11 (April-Aug.1990).

49. *See id.*

50. Skephi, *supra* note 2, at 7-8.

51. *Who is Violating Whose Laws?*, *supra* note 48.

52. See Jhamtani & Hafild, *supra* note 7, at 2.

53. *See id.*

*D. Basic Forestry Law of 1967*

After a massacre and a coup d'etat in 1965, the so-called right-wing New Order government, headed by a middle-aged general named Suharto, took power in 1966.<sup>54</sup> Justifying its usurpation and its overthrow of the Sukarno regime, the new government accused indigenous communists supported by China of plotting to assassinate politicians and military commanders in order to establish a totalitarian state.<sup>55</sup> Such accusations were doubtless overdrawn, but there is no doubt that the new government inherited a debt-ridden nation afflicted with galloping inflation and extremely high unemployment.<sup>56</sup> The new leadership counted upon the country's bountiful natural resources to stimulate the economy by providing employment, foreign capital, and investment.<sup>57</sup> The emphasis on such exploitation of natural resources or raw materials set the stage for damage to the environment and, in particular, to the forests, by, in a sense, reverting to the Dutch policy of extractive industries, though the new policy would presumably stimulate Indonesian development rather than profiting a foreign power.<sup>58</sup> World Bank environmentalist Braga Carlos Alberto Primo writes that the "market and government failures are the main culprits behind deforestation in . . . Indonesia."<sup>59</sup>

The Basic Forestry Law of 1967 (the "BFL"), embodied these policies, preempting the BAL and creating the Ministry of Forestry to govern Indonesia's public forest lands.<sup>60</sup> The Government explained its purposes in promulgating the new law, describing the following state functions:

- (a) the control of water-systems, flood and erosion control and maintenance of soil fertility;
- (b) the production and marketing of forest products in the interests of the people in general and particularly on behalf of development, industry and export;

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54. See Barber, *supra* note 3, at 42.

55. See *id.* See also Ricklefs, *supra* note 9, at 275.

56. See *id.*

57. See *id.*

58. See Jhamtami & Hafild, *supra* note 7, at 2.

59. CARLOS ALBERTO PRIMO BRAGA, TROPICAL FORESTS AND TRADE POLICY: THE CASE OF INDONESIA AND BRAZIL 10 (Paper given at the Symposium on International Trade and the Environment, Nov. 21–22, 1991).

60. See Barber, *supra* note 3, at 14, 17.

(c) *the various means of living for the people existing within, as well as around, the forests;*

(d) *the protection of nature in general, particularly in the interest of science, culture, national defence, recreation and tourism;*

(e) transmigration, agriculture, plantations and animal husbandry;

(f) *other matters of benefit to the people.*<sup>61</sup>

Although government officials asserted that BFL did not overturn *adat* law, its emphasis on corporate and private ownership conflicted with indigenous rights to the land.<sup>62</sup> *Adat* regulations, which were intertwined with and based upon religious rituals and supernatural beliefs<sup>63</sup> as well as upon hierarchical relationships within a group, emphasized communal ownership of land. Formal individual property rights in land did not exist although land that the community considered unworkable could be used for individual garden plots.<sup>64</sup> The new BFL thus clashed with centuries of indigenous rights and regulations.

Proceeding with this new legislation despite its challenge to *adat* laws, Indonesia experienced a dramatic increase in commercial logging funded both by Indonesian and foreign investors.<sup>65</sup> Under BFL, the government leased approximately 600 concessions, often on communally owned lands as defined by *adat* laws.<sup>66</sup> As a result, the nation's foreign exchange earnings in forestry increased from US\$6 million in 1966 to US\$564 million in 1974. By 1979, Indonesia exported US\$2.1 billion worth of timber and was the world's largest tropical log producer, controlling 41 percent of the market.<sup>67</sup> The majority of new enterprises cut timber from the forests on the Outer Islands such as Kalimantan (Indonesian Borneo) and Sumatra rather than concentrating their efforts on the teak plantations in Java, as most previous loggers had done.<sup>68</sup>

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61. See Zerner, *supra* note 46 (emphasis added).

62. See Gillis, *supra* note 1, at 49.

63. See Barber, *supra* note 3, at 16–17.

64. See *id.*

65. See Robert Repetto, *The Forest for the Trees? Government Policies and the Misuse of Forest Resources*, World Resources Institute 1988, at 43.

66. See Sonnenfeld, *supra* note 43, at 8, 9.

67. Gillis, *supra* note 1, at 54.

68. Kusawata Kartawinata, *The Environmental Consequences of Tree Removal from the Forests in Indonesia* 192.

The Indonesian Government entertained commercial logging concessions to increase its capital. In so doing, it may have undermined the purported intentions of BFL—to protect the communities and the environment in and around the forests.

## II. FORESTS AND DEFORESTATION

The Indonesian archipelago consists of a total of about 190.9 million hectares of land,<sup>69</sup> and the most recent environmental statistics estimate that 56 percent, approximately 109 million hectares, are forests.<sup>70</sup> These forests play a crucial role in Indonesia's domestic and export economies, supplying timber and many non-wood forest products such as resin, bauxite, and rattan.<sup>71</sup> However, Indonesian businesses and foreign enterprises, having learned that timber is in great demand and thus commands high prices,<sup>72</sup> have concentrated on timber. These loggers have contributed substantially to, but have not been the sole cause of, Indonesia's extensive deforestation crisis.

Other factors that have added to Indonesia's deforestation include government and private development projects, transmigration policies, slash and burn farming or swidden agriculture, conversion of forests to commercial plantations, and mining and oil exploration and production.<sup>73</sup> The following sections will address the four most important causes of deforestation and explore the often unsuccessful legal remedies the Indonesian government has proposed.

### A. Commercial Logging

Beginning in 1967 with the BFL, an investor first needed to secure a concession from the Ministry of Forestry in order to exploit a forest.<sup>74</sup> The government granted concessions, or rights, to exploit the forests for twenty

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69. See SANDRA MONIAGA, TOWARDS COMMUNITY-BASED FORESTRY AND RECOGNITION OF ADAT PROPERTY RIGHTS IN THE OUTER ISLANDS OF INDONESIA: A LEGAL AND POLICY ANALYSIS 3 (Paper presented at the Workshop on Legal Issues in Social Forestry organized by the Environment and Policy Institute, East-West Center (Nov. 4–6, 1991)).

70. Barber, *supra* note 3, at 5. For earlier figures and a brief discussion of Indonesian deforestation rates, see *infra* page 1.

71. See Sonnenfeld, *supra* note 43, at 4.

72. See Braga, *supra* note 21, at 11. In 1988, hardwood products accounted for 13.8% of total exports. See *id.*

73. See Barber, *supra* note 2, at 5, 6; Skephi, *supra* note 2, at 5.

74. See Sonnenfeld, *supra* note 43, at 8–11.

years with an option to extend up to thirty-five years.<sup>75</sup> Under the system of Selective Cutting instituted in 1967, a concessionaire could harvest only one-twentieth of the concession per year, in theory permitting the remaining area of forest to remain untouched or to regenerate.<sup>76</sup> This assumes not only that the concessionaires would reforest the area, but also that in cutting the one-twentieth, they would not harm the rest of the forest. Forestry Law Consultant Charles Zerner wrote that the loggers damaged forests beyond the area designated for selective cutting and that such losses

are not factored into the economic calculations and decisions made on the losses and benefits of logging . . . . Selective cutting damages so much of the residual timber in a concession block that, for example, in a concession worth U.S.\$10 million where \$5 million is harvested, the value of the remaining residual standing may be only \$3 million.<sup>77</sup>

In addition to not permitting companies to harvest more than one-twentieth of their concession per year, the government forbade companies from cutting down trees less than sixty centimeters in diameter and required the companies to provide the government with one, five, ten, and fifteen year plans of their anticipated logging activities.<sup>78</sup> The Indonesian government imposed a ten percent tax on all logs exported outside of Indonesia hoping to increase its revenue.<sup>79</sup> Companies, however, rarely abided by these regulations, harvesting far more than one-twentieth of their concessions per year, cutting down young trees smaller than sixty centimeters diameter, failing to pay the export tax, and exploiting the government's policy of offering a tax holiday for the first four to six years of their project.<sup>80</sup> A 1988 WRI study suggested that between 1967 and 1983, logging companies paid no taxes to the Indonesian government and estimates conservatively that the Indonesian government lost as much as US\$2 billion in tax revenue from concession holders.<sup>81</sup> A more recent study noted that "no logging company has ever been prosecuted for illegal felling of trees on a reserve."<sup>82</sup> In 1990, the Ministry of Forestry affirmed that only

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75. *See id.* at 10.

76. *See id.*

77. Zerner, *supra* note 46, at 5.

78. *See* Sonnenfeld, *supra* note 43, at 10.

79. *See id.*

80. *See id.*

81. *See* ROBERT REPETTO, *THE FOREST FOR THE TREE? GOVERNMENT POLICIES AND THE MISUSE OF FOREST RESOURCES* 43 (1988).

82. Barber, *supra* note 3, at 20 (citation omitted.)

about four percent of the companies that held concessions complied with the forestry laws and regulations.<sup>83</sup> Little money from logging and deforestation expeditions entered the Indonesian economy; most of it went either into urban bureaucrats' pockets or out of Indonesia with foreign investors.<sup>84</sup> Thus, although the Indonesian government took steps to diversify its economy and generate foreign capital by expanding into natural resources in 1967, the venture was not as successful as the government had anticipated and in fact operated against the stated BFL intentions of protecting forest dwellers and natural resources.

Concerned about the number of logs leaving the country while netting minimal profit for the state, the government of Indonesia, in 1978, increased the export tax from ten to twenty percent.<sup>85</sup> This added expense compelled investors to process their harvest in Indonesia which boosted domestic wood production and increased the number of plywood mills from 16 to 182 between 1977 and 1983.<sup>86</sup> Indonesia shifted from a status as one of the world's largest exporters of logs in the 1970's and early 1980's to one of the largest plywood exporters in the mid-1980's.<sup>87</sup>

In 1980, the government took two additional steps to limit the export of logs. The Ministry of Agriculture, Industry and Trade enacted a ban on log exports to be phased in by 1985.<sup>88</sup> A few months later, the government added a deposit of US\$4 per cubic meter on all timber extracted from the forests on Kalimantan or Sumatra, which was intended to be a reforestation fee.<sup>89</sup> In theory, the government refunded this fee when logging companies proved they had established reforestation projects. In practice, the companies, in part as a result of corruption, failed to reforest the areas they destroyed.<sup>90</sup> Therefore, the government held onto the money for its own use.<sup>91</sup> The few deforestation programs that the government and private companies initiated failed to restore most of the forests to their original state.<sup>92</sup> Reforestation efforts focused on softwood, which is fast-growing,

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83. *See id.* at 20,21.

84. Walhi & Ylbhi, *Mistaking Plantations for Indonesia's Tropical Forest: Indonesia's Pulp and Paper Industry, Communities and Environment* 3 (1992).

85. *See* Sonnenfeld, *supra* note 43, at 13. BFL had established this rate in 1967. *See id.*

86. *See* Gillis, *supra* note 1, at 69.

87. *See* Sonnenfeld, *supra* note 43, at 1.

88. *See* Gillis, *supra* note 1, at 55.

89. *See* Sonnenfeld, *supra* note 43, at 17. The government increased this fee to \$10 per cubic meter in 1991 but even so this sum did not reflect the costs of reforestation. *See id.*

90. *See* Gillis, *supra* note 1, at 62.

91. *See id.*

92. *See* Barber, *supra* note 3, at 6.

but did not emphasize the replacement of hardwood.<sup>93</sup> As a result of these new taxation and fee policies, the government witnessed a tremendous decline in the value of logs leaving Indonesia.<sup>94</sup> Log exports totaled US\$2.17 billion in 1979; three years later, in 1982 the number dropped to US\$0.9 billion. This substantial decrease reflected the impact of the government's crackdown on the industry.<sup>95</sup>

### *B. Victims of Development*

The government, failing to recognize that many people live in the forest and earn their livelihood from wood and non-wood forest products, granted concessions without considering the people.<sup>96</sup> Commercial logging ventures claimed numerous victims throughout the archipelago, robbing the indigenous people of their livelihood and sometimes compelling them to join an industrial world with which they had scant experience.

Logging companies entered forests inhabited by indigenous peoples who, according to *adat* law, had rights to the land.<sup>97</sup> Providing the companies with the legal right to expel natives from their land, the government responded by issuing Government Regulation No. 21 in 1970, which shifted control over the forests from provincial governments to the central government in Jakarta. The regulation stated:

- (1) the rights of the traditional communities and . . . [their] associates to harvest forest products is based on regulations of hukum *adat* [*adat* or customary law] as long as in reality they exist, and should be regulated so as not to disrupt forest exploration . . . .
- (3) For general security in the forest area under exploitation, *the practice of people's rights to harvest forest products are [sic] frozen.*<sup>98</sup>

With one fell swoop, the government swept aside land claims based upon *adat* law if they impeded "forest exploration," apparently a euphemism for continued logging.<sup>99</sup> This permitted the Ministry of Forestry to grant

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93. *See id.*

94. *See Gillis, supra* note 1, at 55.

95. *See id.*

96. *See Moniaga, supra* note 68, at 7.

97. *See Skephi, supra* note 2, at 15–17.

98. *See id.* at 17 (emphasis added).

99. *See id.*

concessions at its discretion offering optimal conditions for bribery and graft.<sup>100</sup>

Reacting to this regulation, the Governor of Kalimantan (a largely forested island) expressed his reservations about enforcing the new forestry policy to a reporter from the environmental magazine *WALHI--Friends of the Earth Indonesia*.<sup>101</sup> The law required him to expel illegal loggers, i.e. those who did not have permits from the Ministry of Forestry in Jakarta.<sup>102</sup> The so-called "illegal loggers," he explained, were the local people who had lived and depended on these forests for forty years but had no way of obtaining permits from the bureaucrats in Jakarta.<sup>103</sup> He asserted that concessionaires, using the pretext of protecting the safety of the population, demanded that local people be denied access to the areas around the company operations.<sup>104</sup> Such prohibitions, he declared, ought to be rescinded because they contravened *adat* law and undermined the traditional rights of the local people and ignored their welfare.<sup>105</sup> The Governor's concerns fell on the deaf ears of the Jakarta bureaucrats, and the laws remain unchanged.<sup>106</sup> Demonstrating scant respect for *adat* law or for the indigenous people, the Indonesian government strayed from the intentions expressed in the Constitution of 1945 to serve the greatest welfare of the Indonesian people.

A second region that deforestation has harmed is a sub-district in northwest Central Sulawesi, Dampelas Sojol (Dansol), which has incurred substantial costs as a result of commercial logging.<sup>107</sup> The area's primary products are copra, cloves, cacao, ebony, softwood, rattan, and resin, and ebony and softwood are its two main exports.<sup>108</sup> Attracted by the possibility of producing timber and earning substantial profit, three Indonesian logging companies arrived in Dansol in the late 1960's.<sup>109</sup> The companies did not abide by the government's logging regulations and repeatedly moved the concession border posts, making incursions on the villagers' land.<sup>110</sup> One company expropriated farmlands in order to plant palapi and ebony,

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100. See *Consolidation of Power in the Forest Industry*, 4 ENVIRONESIA 1 at 14 (April-Aug. 1990).

101. See *id.*

102. See *id.*

103. See *id.*

104. See *id.*

105. See *id.*

106. See *id.*

107. See *Victims of Development*, *supra* note 14.

108. See *id.*

109. See *id.*

110. See *id.*

undermining the villagers' ability to cultivate.<sup>111</sup> It placed signs on the land, which informed the community that "it is prohibited to cut trees and cultivate crops" and "[w]hoever disobeys [this rule] will be imprisoned for 10 years or face a fine of up to Rp. 100 milyars [US\$50,000]."<sup>112</sup> Yet neither the local authorities nor the Indonesian government attempted to prevent such illegal incursions.<sup>113</sup> They repeatedly compromised traditional *adat* communal privileges for the benefit of the concessionaires, justifying their inaction with Government Regulation No. 21 (1970), which had severely circumscribed *adat* regulations.<sup>114</sup> By ravaging the land so it could not be farmed in the future, the companies in Dansol generated enormous profits for themselves and apparently for the bureaucrats in Jakarta.<sup>115</sup> According to their critics, these bureaucrats were well paid for their support and for their apparent lack of concern for the *adat* laws<sup>116</sup> but never offered to compensate the people of these communities for their lost lands.<sup>117</sup> Forbidding the local people from cultivating what was traditionally their own land, these concessionaires provoked resentment and increased the chances that the indigenous population would illegally log, resulting in environmental and biological degradation.<sup>118</sup>

In 1978, President Suharto told the Indonesian people that the objective of the forest industry in Indonesia was "to increase job opportunities, [and] to raise the income of the mass of the people."<sup>119</sup> Perhaps the legal violations could be justified, or at least explained, if the companies had entered Central Sulawesi with intentions of training and employing local people or returning some of their profit to the Sulawesi economy, as Suharto suggested. However, the companies did not entertain such charitable designs. Most companies did not devote substantial resources to train the indigenous people to work in their logging factories.<sup>120</sup> Instead, the companies preferred to attract urban dweller, who were often trained in industrial work, to the forest areas, creating a "'boom-town' syndrome" and a significant population increase in the region.<sup>121</sup> Oftentimes, as loggers deplete a forest, the companies move out to exploit new lands, leaving the

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111. *See id.*

112. *See id.*

113. *See id.*

114. *See Skephi, supra note 2.*

115. *See Victims of Development, supra note 14.*

116. *See id.* at 4, 6, 11.

117. *See Zerner, supra note 45, at 10.*

118. *See id.*

119. Sonnenfeld, *supra note 43, at 13-14.*

120. Gillis, *supra note 11, at 58.*

121. *Id.*

population it had lured to the forest community without jobs and with few possibilities for future employment.<sup>122</sup> For the most part, the Indonesian people and state have gained little from commercial logging and the resulting deforestation although the bureaucrats and investors have apparently reaped substantial sums, partly through graft.<sup>123</sup> A recent New York Times article confirmed that "[f]ormer President Suharto, his family and close associates own more than 22 million acres of Indonesian forest, according to a report by the Forest Ministry. The Minister of Forestry and Plantations, Muslimin Nasution, said that there was a "strong indication" that the holdings were acquired by the Suharto family through "corruptive, collusive and nepotistic practices."<sup>124</sup> The elite and the foreign companies, with the connivance of bureaucrats, have been granted legal rights from the government to exploit the forests while the ordinary people, who rely on *adat*, have often been expelled from their lands and denied legal access to the forests.<sup>125</sup>

### C. Transmigration and Development

Although commercial logging has played a crucial role in Indonesia's deforestation, the Government's transmigration and development projects have been another contributing factor.<sup>126</sup> In fact, some environmentalists suggest that transmigration has caused greater deforestation than commercial logging.<sup>127</sup> However, such estimates fail to recognize the relationship between commercial logging and transmigration. Forestry Consultant Charles Zerner wrote, "logging roads create in-roads to previously inaccessible forest regions, providing a venue or right of way for unregulated forest access: a portal through which hundreds of thousands of spontaneous migrants (without government support) as well as disenchanting, so-called 'deserter' transmigrants move into the forest."<sup>128</sup>

The islands of Java, Bali, Lombok, and Madura are the homelands for the majority of the Indonesian population but comprise only about eight

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122. See DOWN TO EARTH INTERNATIONAL CAMPAIGN FOR ECOLOGICAL JUSTICE IN INDONESIA, PULPING THE RAINFOREST: THE RISE OF INDONESIA'S PULP AND PAPER INDUSTRY, Special Report No. 1, 16 (July 1991).

123. See *Victims of Development*, *supra* note 14.

124. See N.Y. TIMES, Dec. 2, 1998, at A8.

125. Barber, *supra* note 3, at 13.

126. See Gillis, *supra* note 1, at 45.

127. See *id.*

128. Zerner, *supra* note 42, at 11.

percent of the total land mass.<sup>129</sup> To relieve severe over-crowding on these islands and to promote economic development on the Outer Islands, in 1969, the government instituted a policy to assist settlers with all of their moving expenses and give them "about five acres of land, materials for a simple house, seed, pesticides, a supply of food and set of clothes."<sup>130</sup> Often funded by the World Bank, transmigration projects cleared between 15,000 and 20,000 square kilometers of forest during the late 1970's.<sup>131</sup> Bruce Rich, author of a book criticizing World Bank programs from an environmental perspective, estimated that the figures are closer to 40,000 or 50,000 square kilometers and that much "clearing" remains unreported.<sup>132</sup> The World Bank did acknowledge that, under the transmigration program, between 1980 and 1986 two million people moved to the Outer Islands.<sup>133</sup>

The Outer Islands are afflicted with poor soil, relatively unsuitable for agriculture, but Javanese, fearful they have no future in their own overcrowded island, often move willingly to these islands.<sup>134</sup> Ibu Barokah, a woman who transmigrated from Java to Sumatra asserted that "the land on Java was better for crops . . . but on Java I worked on land owned by other[s]. Here, I own the land."<sup>135</sup>

The transmigration program destroys Indonesia's forests but also creates employment and alleviates overcrowding. Unlike the policy concerning commercial logging deforestation, current government policy does not appear to have promoted this project intentionally to exploit the indigenous people. Some cynical observers, however, assert that transmigration provides an inexpensive source of labor for the Indonesian government<sup>136</sup> and a way to "Javanize" the Outer Islands,<sup>137</sup> a program labeled "Javanization."<sup>138</sup> Yet the government needs to cope with the deterioration of living standards for ordinary people on the overcrowded islands, and it ought to be accorded some credit for devising a plan, despite

129. See WORLD BANK, *INDONESIA: SUSTAINABLE DEVELOPMENT OF FORESTS, LAND AND WATER* xiii (1990).

130. Philip Shenon, *Rearranging the Population: Indonesia Weighs the Pluses and Minuses*, N.Y. TIMES, Oct. 8, 1991 at A12.

131. SEE BRUCE RICH, *MORTGAGING THE EARTH: THE WORLD BANK, ENVIRONMENTAL IMPOVERISHMENT, AND THE CRISIS OF DEVELOPMENT* 36 (1994).

132. *Id.*

133. See World Bank, *supra* note 129, at xv.

134. See Shenon, *supra* note 130, at A12.

135. *Id.*

136. See Down to Earth International Campaign for Ecological Justice in Indonesia, *supra* note 122.

137. Rich, *supra* note 59, at 35.

138. Shenon, *supra* note 58, at A12.

its flaws. Perhaps through its transmigration projects, the government, as it pledged in the Constitution of 1945, is serving "the greatest welfare of the people" by electing to value economic development above natural resources.<sup>139</sup>

In attempting to stimulate the Indonesian economy and create jobs, the Indonesian government and private enterprises have cleared forest throughout the country.<sup>140</sup> They have built roads through forests so that land can be developed, dammed rivers so that under-populated regions can be inhabited, and have initiated other development projects. Although such programs may damage and even destroy Indonesia's forest, they can be understood, if not justified, by the country's attempts to develop. Outlawing development projects or transmigration would stunt Indonesia's economic progress and growth.<sup>141</sup>

#### *D. Slash and Burn Farming or Swidden Agriculture*

A fourth cause of deforestation is slash and burn farming or swidden agriculture, a common method of clearing the land.<sup>142</sup> Clifford Geertz, an anthropologist who studies Indonesia, offered this description of swidden agriculture:

the burning of the slashed plot is at base a means both of accelerating the process of decay and of directing that processing in such a fashion that the nutrients it releases are channeled as fully as possible into certain selected food-producing plants. A significant proportion of the mineral energy upon which swidden cultivates, and especially the grains, draw for their growth comes from the ash remains of the fired forest, rather than from the soil as such, so that the completeness with which a plot is burnt is a crucial factor in determining its yield.<sup>143</sup>

Others who study Indonesian ecology emphasize that such agriculture is most often practiced in areas of poor tropical soil and low population density.<sup>144</sup>

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139. INDON. CONST. (1948) ch. XIV, art. 33, section 3.

140. See Gillis, *supra* note 1 at 56-57.

141. See *Victims of Development*, *supra* note 14, at 6.

142. See Walhi & Ylbhi, *supra* note 83, at 12.

143. CLIFFORD GEERTZ, AGRICULTURAL INVOLUTION: THE PROCESSES OF ECOLOGICAL CHANGE IN INDONESIA 22 (1963).

144. See *id.* at 15.

Transmigrants who move to the Outer Islands and are faced with the poor soil in their new habitat often have no choice but to practice swidden agriculture.<sup>145</sup> Much of the swidden agriculture occurs in forest regions that have been "logged over. In such cases, the entry of swidden cultivators is merely the *coup de grace* for the forest stand rather than the cause of deforestation."<sup>146</sup> Thus swidden and resulting deforestation can be an indirect result of transmigration in forests that commercial loggers have previously damaged.

Swidden agriculture often results in severe forest fires.<sup>147</sup> The fires on the island of Sumatra in September and October 1997, which disseminated smoke throughout Singapore, Malaysia, and Southern Thailand, were the result of unusually aggressive land clearing and a delayed monsoon season.<sup>148</sup>

#### CONCLUSION

In the nineteenth century, to generate capital for colonial officials, Dutch policymakers blithely ignoring *adat* regulations, enacted laws that resulted in deforestation. Following the policies of their predecessor, Indonesian government officials circumscribed *adat* law and devised laws and regulations under the pretext of promoting economic development which actually permitted loggers to exploit the forest in hopes of garnering a profit.

The Indonesian Constitution of 1945 gave the government the power to regulate natural resources to serve the greatest welfare of the people. However, after drafting this document, government bureaucrats and the elite administered natural resources to benefit indigenous and foreign timber interests (and apparently themselves) with little regard for the greatest welfare of the indigenous Indonesians. Environmentalist David Sonnenfeld wrote:

the GOI [Government of Indonesia], representing the interests of domestic capital, was asserting the 'rights' of those interests over the natural and social resources of the Indonesian archipelago, against international capital, and

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145. See Jhamtani and Hafild, *supra* note 7, at 6.

146. Gillis, *supra* note 1, at 47-48.

147. See Walhi & Ylbhi, *supra* note 83, at 12.

148. See Nicholas D. Kristof, *Asian Pollution is Widening Its Deadly Reach*, N.Y. TIMES, Nov. 29, 1997 at A7.

with indifference to the 'rights' of indigenous populations of the so-called 'Outer Islands'.<sup>149</sup>

Providing concessions to native and foreign corporations to stimulate the Indonesian economy, the government violated *adat* property rights. The economic interests of the Indonesian elite and of native and foreign companies tended to dictate the enactment of BFL and Government Regulation No. 21, laws which seemed to justify logging operations and the dispossession of ordinary people who held legitimate *adat* claims to agricultural and forest lands. Despite initial assertions of support for *adat* laws, the government devised vague and piecemeal legislation which provided a means for native and foreign developers to exploit the forest lands for their own profit with little concern for replenishing and restoring the resources they so blithely uprooted.

The resulting management of the forests has caused what may become an international catastrophe. Depleting Indonesia's forests damages not only the Indonesian environment and ecology but also the global environment through extinction of endangered species and emission of toxins into the atmosphere. Forest *degradation* and its international consequences could perhaps be understood if, as in transmigration and swidden agriculture, it benefited the country's indigenous people. If the proceeds from commercial logging stimulated the country's economy and were used for development, such deforestation would still need to be controlled but could at least be explained. However, loggers currently enter forest areas and expropriate lands that the indigenous people have held for centuries, offering them scarcely any reimbursement. This form of *degradation* hardly benefits the population except for a few bureaucrats and government officials in Jakarta and therefore cannot be justified.

Precise and carefully crafted comprehensive land use legislation which provides for development of Indonesia's forest resources while averting environmental depredation is essential although enforcement will probably encounter serious obstacles. Without such legislation and such enforcement, which balances the need for economic growth with protection of Indonesia's precious forests, the country's great resource could be destroyed and indeed the entire world's ecosystem could be damaged. The enactment of such laws and their enforcement will require limitations on foreign and native timber interests and on avaricious officials and bureaucrats, at best, difficult to tackle. Lobbying and pressure exerted by interested foreign powers, various agencies of the United Nations, and world environmental

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149. Sonnenfeld, *supra* note 43, at 2.

organizations may prompt some legislation; but powerful economic interests and needs have to be overcome. Will laws, by themselves, be sufficient to halt forest degradation or will basic socio-economic changes within the country and changes in Indonesian attitudes toward their valuable tropical forests also be required?