FOREST FIRES OF INDONESIA: STATE RESPONSIBILITY AND INTERNATIONAL LIABILITY

ALAN KHEE-JIN TAN*

A. *Introduction*

During the last few months of 1997, vast areas of South-east Asia were choked by air pollution caused by smoke arising from massive forest fires in Indonesia. Thick smoke blanketed not only Indonesian territory, but significant transboundary pollution was also caused to several neighbouring States, primarily Malaysia, Brunei and Singapore.[1] The problem was caused largely by the indiscriminate use of fire in the clearing of land by large-scale plantation owners and timber concessionaires on Indonesian territory. Land-clearing by government-sponsored transmigration programmes also involved significant burning. To lesser extents, small-scale "slash-and-burn" agricultural practices were implicated as well.[2] The problem was exacerbated by the onset of severe droughts associated with the El Niño climatic phenomenon and the presence of combustible peat bogs in several parts of the sprawling Indonesian archipelago.

The resultant smoke or "haze", as the air pollution problem became popularly known in the region, was carried by the winds to large areas of Indonesia as well as the affected neighbouring States. Severe air pollution and health effects were caused. At the height of the fires, provinces in the Indonesian territories of Sumatra and Kalimantan were recording air pollution levels considered to be hazardous to human life. As for transboundary injury, the whole territories of Singapore and Brunei, the western portion of Peninsular Malaysia facing Sumatra and the East Malaysian States bordering Kalimantan experienced the haze to varying

* Assistant Professor, Asia-Pacific Centre for Environmental Law, Faculty of Law, National University of Singapore. This article reflects the law and other developments as at 1 Apr. 1999. The author welcomes comments to alan.tan.law.95@aya.yale.edu

1. At the height of the fires, the smoke pall reached parts of Thailand, the Philippines and even northern Australia. Forest and brush fires also occurred within Malaysian and Bruneian territories. However, the scale of the Indonesian fires dwarfed all others in the region.

2. The Indonesian authorities conceded that more than 80% of the land and forest fires were caused by controlled burning to clear land for plantations and settlements "Jakarta Under Pressure to Solve Fire Problems", *Straits Times*, 11 Sept. 1997; "Indonesia Admits Forest Fires Are Man-Made", *Straits Times*, 10 Oct. 1997. Fires have apparently been used by large corporations in land disputes to drive out small-time farmers; see "Many Forests Set on Fire over Land Disputes, Says Research Centre", *Straits Times*, 23 Oct. 1997. See also Joko Waluyo, "Smoking Gun", *Inside Indonesia*, No.53 (Jan.–Mar. 1998), Indonesian Resources and Information Programme, Australia, Internet website at www.insideindonesia.org.

degrees of seriousness, depending on the strength and direction of the prevailing winds. Concern ran high among the population in the affected States, often over the perceived inaction and indifference of the Indonesian authorities and the apparent ineffectiveness of the political pressure being exerted by their respective governments.[3]

Throughout this period, the inhabitants of the affected regions, both in Indonesia and in the neighbouring States, suffered adverse health effects associated with smoke inhalation. There is great concern today over the long-term respiratory effects of the haze. In addition to direct human health effects, five million hectares of land and forests were affected in Indonesia,[4] with substantial damage caused to plant and animal life and human livelihood. Significant economic losses in the form of cancelled air flights and dwindling tourism were also recorded by countries in the region. Estimates of the total cost of the 1997 fires have only begun to surface, though the full extent of the damage will probably never be known. The most authoritative study to date estimates the total combined losses at a conservative US$4.5 billion for Indonesia, Singapore and Malaysia.[5] The long-term human health risks, as well as the damage arising from the loss of biological diversity, the impairment of crop productivity and the loss of confidence by foreign investors and tourists, have not been reflected in the estimates due to the inherent difficulties involved in the economic assessment of such losses.

The forest fires were swiftly followed by catastrophes of a different kind—the financial crisis sweeping through Asia soon engulfed Indonesia, dragging the national currency, the rupiah, to historic lows. The economic dislocations which ensued led to several months of social unrest culminating with the resignation of President Suharto in May 1998. The

3. For a critique of the way Singapore authorities handled the situation, see Dominic Nathan, "Diary of a Disaster: People Kept in the Haze for Far too Long", Sunday Review, *Sunday Times*, 12 Oct. 1997.

4. Of these, 50% were agriculture/plantation lands, 20% forests and 30% unproductive land: see study by WWF/EEPSEA, *infra* n.5. The same study estimates that 70 million people were affected throughout the region. Waluyo, *op. cit. supra* n.2, estimates that out of the 1.7 million hectares lost up to Sept. 1997 in Kalimantan alone, nearly 1.4 million hectares were burned by plantation companies and production forest operators. The estimates by both Waluyo and WWF/EEPSEA demonstrate that the fires were caused primarily by plantation and timber companies.

5. This was assessed in May 1998 by the Singapore-based Economy and Environment Programme for Southeast Asia (EEPSEA) and the World Wide Fund for Nature (WWF); see EEPSEA/WWF, *The Indonesian Fires and Haze of 1997: The Economic Toll* (1998). Details can be found on the Internet at www.idrc.org.sg/eepsea/htm. Direct fire-related losses amounted to $3.1 billion (borne by Indonesia alone), while haze-related damage came to $1.4 billion ($1 billion losses for Indonesia and $400 million for the injured neighbouring States). Thus, nearly 10% of the total damage was occasioned to neighbouring States. Whatever the uncertainties surrounding the extent of damage needed before State responsibility can be engaged, this article assumes that the damage occasioned to the injured States exceeds any minimum threshold required to establish responsibility, *infra* n.101.

advent of the economic and political distractions meant that the effective resolution of the forest fire problem was left largely to the forces of nature. Indeed, it was only with the arrival of heavy rains toward the end of 1997 that the fires were more effectively abated. For several months before that, the Indonesian authorities undertook various initiatives to combat the fires with the assistance of other countries and international organisations. However, the massive scale of the problem, coupled with the failure to control the relentless burning by unscrupulous plantation and timber operators, ensured that the fires raged on for months.

This article seeks to assess the case for assigning State responsibility to Indonesia for a breach of international obligations relating to transboundary injury arising from the 1997 forest fires. To the extent that the fires were caused by the deliberate action of private individuals in Indonesia and exacerbated by unfavourable natural conditions, questions arise as to how far the Indonesian State can be imputed with responsibility for the injury caused to other States. The law on State responsibility will be analysed to see if there exists at present an international obligation on States not to cause transboundary air pollution arising from the deliberate burning of forests. Following that, a comprehensive analysis of government conduct in the wake of the fires will be attempted to examine if Indonesia had breached any requisite international obligation.[6] Finally, the ongoing work of the International Law Commission will be examined, specifically in relation to its deliberations on the Draft Articles relating to International Liability for Injurious Consequences Arising Out of Acts Not Prohibited by International Law (hereafter "Draft Articles on International Liability").[7]

B. State Responsibility for Transboundary Injury

The notion of "responsibility" is widely accepted in international law to denote the duty of a State to make appropriate amends (or "reparation") following its breach of an international obligation.[8] According to the Draft Articles on State Responsibility produced by the International Law Commission, every internationally wrongful act of a State entails the

6. For a comprehensive description of the legal, institutional and administrative capacities for environmental regulation in Indonesia, see Tan, "Land/Forest Fires: Indonesian Environmental Legislation and Its Implementation", in Johnston and Lim (Eds), *Southeast Asian Land/Forest Fires: Science and Policy* (1999).

7. ILC 1998 Report, G.A.O.R., 53rd Sess., Supp.10 (A/53/10 and Corr.1).

8. See *Chorzow Factory* case (Merits) (1928) P.C.I.J. Ser.A, No.17, at p.47.

international responsibility of that State.[9] An internationally wrongful act exists when: "(a) conduct consisting of an action or omission is attributable to the State under international law; and (b) that conduct constitutes a breach of an international obligation of the State".[10] To the extent that "States" are juridical entities, conduct must remain the province of human action or omission. Hence, before a State can be responsible for human conduct violating international obligations, the same conduct must be juridically attributable to the State.[11] It is to the question of attribution of conduct that we first turn.

1. Attribution of conduct and State "due diligence"

The clearest case for attributing human conduct to a State is when the individuals engaged in conduct that violates international obligations can be characterised as State organs or agents. Where the municipal legal order of the State clearly acknowledges certain classes of individuals as State organs or agents, the attribution of their conduct to the State is axiomatic. Hence, the ILC Draft Articles on State Responsibility provide that the "conduct of any State organ having that status under the internal law of that State shall be considered as an act of the State concerned under international law, provided that organ was acting in that capacity in the case in question".[12] Thus, the acts and omissions of State organs like the military, police, customs or other officials form the clearest instances of attribution of conduct to the State.[13]

Apart from characterisation by a State's internal order, international law may independently determine the conduct of an individual or group to be attributable to the State. The need for an "objective" determination arises out of situations where the conduct of individuals or groups may

9. Art.1, ILC Draft Articles on State Responsibility, ILC 1996 Report, G.A.O.R., 51st Sess., Supp.10 (A/51/10), p.125. The Draft Articles on State Responsibility are widely considered to be reflective of customary international law. The Draft Articles were provisionally adopted on first reading by the ILC at its 48th session in 1996. At its 50th session in 1998, Arts.1 to 15 of Part One were referred to the Drafting Committee; see ILC 1998 Report, G.A.O.R., 53rd Sess., Supp.10 (A/53/10), available on the Internet at www.un.org/law/ilc. No substantive change is expected in the wording of the Draft Articles, save that a few articles (Arts.2, 6 and 11–14) have been proposed to be deleted. These deletions, together with other minor changes, are meant only to streamline the text of the Draft Articles, to excise formulations phrased in the negative and to subsume unnecessary provisions within other articles.

10. ILC Draft Articles, *idem*, Art.3.

11. See generally Ago, Second Report on State Responsibility (1970) II Y.B.I.L.C. 177, 189, UN Doc.A/CN.4/233 and Smith, *State Responsibility and the Marine Environment: The Rules of Decision* (1988), p.22.

12. Art.5, ILC Draft Articles on State Responsibility, *supra* n.9.

13. See e.g, the *Caire Claim* (*France* v. *Mexico*) (1929) 5 R.I.A.A. 516 (acts of soldiers); *Yeager* v. *Iran* (*US* v. *Iran*) (1987) 17 Iran–U.S.C.T.R. 92 (acts of revolutionaries); and more recently the *Rainbow Warrior* Case (1987) 26 I.L.M. 1346 (acts of secret service agents). See also ILC Draft Articles, *idem*, Art.10 (on *ultra vires* acts).

fairly be said to possess the character of a State or to be pursuant to State functions or goals, yet the internal legal order of that State may not formally treat these entities to be State representatives as such. In any case, an "objective" enquiry is needed to prevent States from cloaking their organs and agents with immunity either by omitting to designate them as such or by explicitly denying their status as organs or agents.[14]

Central to this enquiry is the conduct of individuals and corporations with which the State has close connection and involvement but which possess a legal identity distinct from the State. This becomes increasingly relevant in most States today where governmental functions are decentralised or devolved to private individuals or companies pursuant to privatisation programmes. Questions then arise as to whether these private sector entities can be said to be exercising governmental or quasi-governmental powers such as to justify attributing their conduct to the State. The prevailing consensus seems to be the International Law Commission's conclusion that attribution of conduct to a State is justified where the entity is "empowered, if only exceptionally and to a limited extent, to exercise specified functions which are akin to *those normally exercised by organs of the State*" (emphasis added).[15] Other variants of this objective test focus on the "public" character of the entity's authority or functions.[16]

In the Indonesian forest fire case, the actors involved in the deliberate burning of the forests appear to be private individuals or commercial concerns with no formal links to the Indonesian State. Not surprisingly, there is nothing within the Indonesian legal order which specifically provides for these private entities to be treated as State organs or agents. Certainly, the farmers who practise "slash-and-burn"agriculture cannot by any measure be viewed as State organs or agents whose conduct can be attributed to the State.[17] In relation to the large timber and plantation companies using fire to clear land and forests, it appears that many of

14. See *Yeager* v. *Iran*, *ibid*, where the Tribunal stated at para.42: "attributability of acts to the State is not limited to acts of organs formally recognised under internal law". The Tribunal added that if the position were otherwise "a State could avoid responsibility under international law merely by invoking its internal law". See also the comments of the ILC in relation to the reference to "internal law" in ILC Draft Articles *idem* Art.5 ILC 1998 Report, *supra* n.7, at paras.369 and 402.

15. ILC, Report to the General Assembly, 26th Sess. (1974) II Y.B.I.L.C. 269, 282, UN Doc.A/CN.4/Ser., cited in Smith, *op. cit. supra* n.11, at p.28.

16. See also Art.8, ILC Draft Articles on State Responsibility, *supra* n.9, which attributes to the State the conduct of a person or group of persons if such person or group of persons was in fact *acting on behalf of the State*, or was in fact *exercising elements of the governmental authority* in the absence of the official authorities and in circumstances which justified the exercise of those elements of authority (emphases added).

17. To the extent that some of these farmers belonged to government-organised farmers' co-operatives, a question of attribution to the State may possibly arise.

these are private limited liability entities with no formal connection to the State.

Nonetheless, the timber and plantation companies were involved in exploiting the natural resources of the State pursuant to explicit licensing or concession arrangements entered into by the State. To the extent that the Indonesian Constitution reposes control over all land and natural resources in the State,[18] it can be argued that the devolution of authority to exploit natural resources represents a devolution of government functions to private commercial entities pursuant to the latter's capacity as agents of the State.[19] Hence, these entities would effectively be conducting economic activities *on behalf of the State*, albeit earning profits for themselves in commercial ventures in return for concession or licence fees payable to the State. This argument would be bolstered if the State retains residual regulatory competence over the activities of these entities, as clearly the Indonesian government does over forestry, agricultural and settlement matters. Alternatively, attribution of conduct can perhaps be established by the fact that many of the companies in question are controlled, directly or indirectly, by the government through shareholding. Another means of attribution could be the fact that many of the companies are owned or controlled by individuals within, or closely aligned to, the Indonesian leadership.

However, these factors alone are insufficient to establish legal attributability, even in the objective sense, in the absence of clearer evidence that the relevant entities were exercising functions akin to those "normally exercised by organs of the State",[20] or were "acting on behalf of the State" or exercising "elements of the governmental authority".[21] The grant of licences to private entities to conduct economic activities is a widespread practice in most countries subscribing to free market economic policies. To allow attribution to the State of these entities' wrongful conduct in their pursuit of purely economic activities would be stretching the notions of "public functions" and "acts on behalf of the State" too far. In an age of decentralisation, privatisation and "small" government, there can hardly be any State competence which cannot be assigned to private concerns

18. *Undang-undang Dasar Negara Republik Indonesia 1945* (1945 Constitution of the Republic of Indonesia), Art.33(3).

19. This argument is strengthened by the fact that the activities concerned involved the clearing of land for agriculture and settlement, which is entirely pursuant to the Indonesian government's official "*transmigrasi*" or transmigration policy of resettling citizens from the more densely-populated islands to outlying, less populous ones. This is to be contrasted with, say, the operation of a private industrial factory not unlike the Trail Smelter, *infra* n.33, where it would be more tenuous to suggest that the private entity is effectively functioning on behalf of the State.

20. ILC Report, *supra* n.15 at p.282.

21. Art.8, ILC Draft Articles on State Responsibility, *supra* n.9. See also *Yeager* v. *Iran*, *supra* n.13, at paras.42–43.

and which cannot technically be said to entail some exercise of governmental functions.[22] Hence, the International Law Commission's test[23]should ordinarily embrace only the devolution of those competences which are more commonly understood to be within *exclusive* State powers, like law enforcement.[24] Where a wholly commercial enterprise with a profit motive is involved, as in the case of the Indonesian timber and plantation concessions in question, the argument for attribution to the State of private conduct is less tenable.[25]

Proceeding upon the basis that the actors involved in the deliberate burning of the forests were wholly private entities, attribution to the State of their conduct can perhaps be justified upon the alternative basis of State complicity in private conduct. Thus, "if the nation, or its ruler, approve and ratify the act of the citizen, it takes upon itself the act, and may then be regarded by the injured party as the real author of the affront of which the citizen was perhaps only the instrument".[26] On the facts of the Indonesian fires, however, it would be inaccurate to suggest that the Indonesian government had adopted the acts of its private citizens by failing to prevent the fires and to punish the perpetrators. "Complicity" inherently suggests a measure of intentional desire for, or at the very least, tolerance for or acquiescence in, the consequences of wrongful conduct. Considering the huge damage which Indonesian citizens themselves suffered and the concern demonstrated by Indonesian officialdom, there is no evidence to support the contention that the Indonesian State had actually "approved" of, "ratified" or even "encouraged" the acts of its private citizens.[27]

In any case, the complicity theory is largely discredited in contemporary jurisprudence. Attribution of private conduct to the State has instead proceeded upon a State's direct violation of an independent obligation to prevent or punish, rather than on an indirect basis of complicity. Thus as

22. Even military and police competences can be assigned to private operations—in some countries, private armies and police forces are not altogether unknown.

23. See ILC Report, *supra* n.15.

24. The ILC, in it latest discussions in 1998 on the Draft Articles on State Responsibility, noted the concern of a number of governments that the basis of attribution should be broad enough to ensure that States could not escape responsibility based on formal definitions of their constitutive organs, particularly in view of recent developments concerning the increasing delegation of public functions to the private sector. It was noted that no government had so far argued that the conditions for attribution should be more restrictively defined, see ILC Draft Articles on State Responsibility, ILC 1998 Report, *supra* n.7, at paras.363 and 390.

25. This is not to suggest categorically that whenever a profit element is involved, there can be no attribution to the State of private conduct. Rather, the profit motive should merely be an important factor in assessing the "public functions" character of any devolved activity in the context of the whole spectrum of possible degrees of devolution.

26. Vattel, *Le Droit des gens ou principes de la loi naturelle* (trans. Fenwick, 1916), p.136, cited in Smith, *op. cit. supra* n.11, at p.35.

27. See generally Art.15 *bis*, ILC Draft Articles on State Responsibility, *supra* n.9.

decided in the *Janes* claim:[28] "The culprit is liable for having killed or murdered an American national: the Government is liable for not having measured up to its duty of diligently prosecuting and properly punishing the offender." Hence, the obligation of the State in relation to private conduct consists of its exercise of "due diligence" to prevent conduct which, if the State itself were to be the actor, would have breached its international obligations. In addition, if the conduct does occur, the obligation to punish the offender arises. In sum, the obligations to apprehend and punish wrongdoers are but expressions of the general obligation to prevent private individuals from engaging in conduct in which the State is itself prohibited from engaging.[29] These obligations rest simply upon the jurisdiction and control which the State exercises over the wrongdoer and the locus of the conduct.[30]

The above obligations are, however, not absolute. As will be examined below, the standard of the State's performance in discharging its obligation is not one of strict responsibility. State responsibility is engaged only if the State fails to perform its obligations of prevention and punishment with "due diligence". The State may thus avoid responsibility if it can show that the prohibited conduct of the private citizen occurred despite its having taken all diligent steps to prevent the conduct. In other words, if no reasonable degree of diligence could have prevented the event from taking place, State responsibility is not engaged. The determination of whether the relevant due diligence standard has been met in Indonesia's case will be left to the enquiry in infra Section B.3. Suffice it to say for the moment that an obligation to prevent and punish private wrongful conduct arises on the part of the State.

2. *Obligation to prevent transboundary injury*

The next enquiry involves identifying the precise obligation the breach of which entails State responsibility. As laid down in the ILC Draft Articles, State responsibility arises when the conduct which is attributable to the State constitutes a breach of an international obligation of that State.[31] In relation to transboundary environmental harm, the relevant international obligation which has emerged from the cumulative corpus of State practice, arbitral awards and the writings of eminent publicists is one of preventing transboundary injury arising from the exercise of

28. (*US* v. *Mexico*) (1926) 4 R.I.A.A. 82. See also the judgment of the ICJ in *US Diplomatic and Consular Staff in Tehran* (*US* v. *Iran*) I.C.J. Rep. 1980, and Jiménez de Arechaga, "International Responsibility", in Sørensen (ed.), *Manual of Public International Law* (1968), p.560.

29. Smith *op. cit. supra* n.11, at p.37.

30. These would be the nationality and territoriality bases of jurisdiction respectively. See generally "Research in International Law under the Auspices of the Harvard Law School: Jurisdiction with respect to Crime (pt II)" (1935) 29 A.J.I.L. 435.

31. Art. 3, ILC Draft Articles on State Responsibility, *supra* n.9.

sovereign rights within a State's territory. This duty to prevent is one of due diligence. In relation to State instrumentalities, the State must thus exercise due diligence to prevent transboundary harm arising from the conduct of State organs, agents or representatives as these are determined by municipal or international law.[32]

With regard to harm caused by private entities, we have seen from the analysis in the previous section that the State's obligation is to exercise due diligence to prevent and punish conduct which, if the State were itself the actor, would violate its international obligations. Thus, in relation to environmental injury, the State has an obligation of due diligence to prevent private actors within its territory, jurisdiction or control from causing transboundary environmental harm to other States or to areas beyond the limits of national jurisdiction. The State also has an obligation to punish the perpetrators of wrongful conduct if harm is occasioned. To reiterate the point on attribution, what is attributable to the State in this case is its own positive failure to prevent private wrongful conduct or to apprehend and punish the wrongdoer, and not the conduct of the wrongdoer itself.

The starting point in identifying the primary obligation of the State to prevent transboundary environmental injury, by State organs or private actors alike, is the principle of *sic utere tuo alienum non laedas* (one must use his own so as not to damage that of another). The principle's application in international law reaffirms the sovereign right of States to conduct activities within their own territories. However, no State has a right to conduct its activities in such manner as to cause injury to other States. The *sic utere tuo* principle first emerged in the jurisprudence of international law in the form of the celebrated *Trail Smelter* arbitral award.[33] The tribunal hearing the case concluded:[34]

> Under the principles of international law ... no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence.

Some 30 years later, this concept was restated in Principle 21 of the 1972 Stockholm Declaration on the Human Environment:[35]

> States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own

32. See *supra* nn.14–16 and accompanying text.

33. (1941) 3 R.I.A.A. 1907. This was an arbitration between the US and Canada arising from the undisputed damage caused to US territory from sulphur dioxide fumes emanating from a private smelting operation on the Canadian side of the two countries' border.

34. *Idem*, p.1965.

35. UN Doc.A/Conf.48/14 and Corr.I.

> natural resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

The prevention of transboundary harm to the environment of other States arising from activities lawfully conducted within the territory, jurisdiction or control of a State has been subsequently reiterated by Principle 2 of the Rio Declaration on Environment and Development.[36] Principle 2 substantially restates Principle 21 of the Stockholm Declaration.[37] The consensus of the majority of States in the world is further evidenced by the negotiations at the Third United Nations Conference on the Law of the Sea in relation to the causing of environmental damage to other States or to areas beyond national jurisdiction. Article 194(2) of the UN Convention on the Law of the Sea[38] reiterates the *sic utere tuo* principle as follows:

> States shall take all measures necessary to ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution to other States and their environment, and that pollution arising from incidents or activities under their jurisdiction or control does not spread beyond the areas where they exercise sovereign rights in accordance with this Convention.

The International Court of Justice held in the *Corfu Channel* case that every State has an obligation "not to allow knowingly its territory to be used for acts contrary to the rights of other States".[39] In the 1974 *Nuclear Test* cases before the International Court, Judge de Castro confirmed the obligation to prevent transboundary harm as a principle of international law.[40] More recently, the decision of the International Court in its advisory opinion of 8 July 1996 on the *Legality of the Use by a State of Nuclear Weapons in Armed Conflict*[41] evidences the existence of the obligation to prevent transboundary environmental harm arising from hazardous activities. Other arbitral awards, including the decision in the *Lac Lanoux* arbitration[42] between France and Spain and the *Gut Dam*

36. Reprinted in (1992) 31 I.L.M. 874.

37. Principle 2 differs slightly in two respects: it provides for States to have the sovereign right to exploit their own *resources* (Principle 21 having referred to *natural resources*) pursuant to their own environmental *and developmental* policies (Principle 21 having referred only to environmental policies). The reference to developmental policies was in explicit recognition of the growing importance attached to economic development, especially by the developing countries, by the time the 1992 UN Conference on Environment and Development (UNCED) was convened in Rio de Janeiro.

38. UN Doc.A/Conf.62/122, reprinted in (1982) 21 I.L.M. 1261.

39. (*UK* v. *Albania*) I.C.J. Rep. 1949, 4, 22.

40. (*Australia* v. *France*) I.C.J. Rep. 1974, 253 (Judgment) (Dissenting Opinion of Judge de Castro), at p.389. The majority did not address this issue.

41. I.C.J. Rep. 1996, 15.

42. (*France* v. *Spain*) (1957) 12 R.I.A.A. 281.

arbitration[43] between Canada and the United States have also confirmed the existence of the obligation to prevent transboundary harm.

State practice further evidences the existence of the obligation to prevent transboundary injury.[44] The submissions of Australia and New Zealand in the *Nuclear Test* cases,[45] the Mexican protests over injuries caused by stockyard fumes emanating from US territory,[46] the French–German and Swiss–German negotiations over cross-border industrial emissions[47] and the positions of the affected countries in response to the Chernobyl disaster in the former Soviet Union[48] provide but a few instances where the obligation to prevent transboundary harm has been recognised in international law. In addition, the participation of States in multilateral instruments addressing transboundary harm attests to the general acceptance of the international obligation to prevent such harm. Thus, the obligation has been entrenched in numerous treaties pertaining to the protection of the environment, nuclear accidents, international watercourses, space objects, prevention of marine pollution and hazardous waste management.[49]

In essence, the *sic utere tuo* principle, in its modern formulation as an obligation to prevent transboundary harm, has found its way into practically all contemporary international environmental agreements as well as "soft" law instruments such as recommendations and declarations. The weight of State practice, municipal and international judicial opinion and academic writings evidences the status of the obligation to prevent

43. See Bernhardt (Ed.), *Encyclopaedia of Public International Law*, Vol.II (1992) p.653; the Report of the Agent of the US, reprinted in (1965) 4 I.L.M. 473 and the Agreement establishing the Tribunal, reprinted in (1965) 4 I.L.M. 468.

44. See generally Lammers, *Pollution of International Watercourses* (1984), pp.346–347, 374–376.

45. I.C.J. Pleadings 1978, Vol.I. p.14 (*Australia* v. *France*); Vol.II, p.8 (*New Zealand* v. *France*).

46. Whiteman (1908) 6 Dig. Int. L. 256–257, cited in Smith, *op. cit. supra* n.11, at p.75.

47. International Law Association, *Report of the 58th Conference* (1978) pp.398–399.

48. In the aftermath of the Chernobyl incident, several affected States, including the Federal Republic of Germany and the UK, reserved their right to claim compensation from the USSR; see Sands, *Chernobyl: Law and Communication* (1988), pp.26–28.

49. ILC, Draft Articles on International Liability, General Commentary, in *op. cit. supra* n.7. The obligation to prevent harm is also reiterated by authoritative sources like UN General Assembly Resolution 2995 (XXVII) of 15 Dec. 1972 on co-operation between States in the field of the environment, G.A.O.R., 27th Sess., Supp.30 (A/27/30), p.42; the Experts Group on Environmental Law of the World Commission on Environment and Development — see Munro and Lammers (Eds), *Environmental Protection and Sustainable Development* (1987), p.7; and the 1978 UNEP Draft Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilisation of Natural Resources Shared by Two or More States, G.A.O.R., 33rd Sess. Supp.25 (A/33/25), annex I, reprinted in (1978) 17 I.L.M. 1098.

transboundary harm as a principle of customary international law.[50] Indeed, there can be little doubt that the obligation to prevent transboundary harm has attained general and widespread acceptance as a fundamental principle of international environmental law. The consensus on the cogency of the preventive obligation is particularly strong in relation to "ultrahazardous" activities which cause serious transboundary harm.[51]

In the light of the customary status of the obligation to prevent transboundary harm, it is clear that Indonesia owed an obligation to neighbouring States to prevent transboundary injury arising from the forest-burning activities occurring within its territory. Whilst the clearing of land and forests for economic activities (and even the use of fire for these purposes) would be within its sovereign prerogative, Indonesia owed an obligation to prevent transboundary harm arising from these activities from being caused to other States. In any event, given the adverse health and economic injuries caused to the injured States, the use of fire in clearing land and forests can be viewed as an ultra-hazardous activity. The conduct of such activities would invite not only the parent obligation to prevent, but a higher standard of diligence to be adhered to by the injuring State in satisfying the preventive obligation. It is to the standard of performance that we now turn.

3. *Breach of obligation to prevent transboundary injury*

(a) The "due diligence" standard. Once it is established that Indonesia owed an obligation to prevent transboundary harm arising from the burning of land and forests on its territory, it remains to be assessed if it has breached this obligation. This calls into question the issue of the standard of performance expected of States in discharging that obligation. As stated above, the standard of the obligation to prevent transboundary harm is one of "due diligence". However, the precise content or standard of the "due diligence" obligation is far from certain. Exactly how much must the State have done to satisfy the level of

50. See Goldie, "A General View of International Environmental Law — A Survey of Capabilities, Trends and Limits", in *Colloque La Haye* (1973) pp.66–69; Kirgis, "Technological Challenge of the Shared Environment: US Practice" 1974 66 A.J.I.L. 291; and Sands, *Principles of International Environmental Law*, Vol.I (1995), p.194. In relation to transboundary air pollution specifically, see Arts.3(1) and 4, 1982 Montreal Draft Rules on Transboundary Pollution, *International Law Association 60th Report* (1982); Art.2, Institut de Droit International (IDI) Resolution on Transboundary Air Pollution, 62 Ann. I.D.I., II (1987); and the 1979 ECE Convention on Long Range Transboundary Air Pollution, reprinted in (1979) 18 I.L.M. 1442.

51. See Jenks, "Liability for Ultrahazardous Activities in International Law" (1966–I) 117 Hag. Rec. 99; Smith, *op. cit. supra* n.11, at pp.40–41 and 119–121; and Handl, "International Liability of States for Marine Pollution" (1983), 21 Can. Y.B.I.L. 101. See *infra* n.63 and accompanying text.

diligence required? Addressing this question entails assessing the particular State's capacity in dealing with the wrongful conduct of its private citizens. In this regard, there is no unanimity as to whether "due diligence" should be assessed in the light of the subjective capabilities of the State, or in view only of an objective international standard.

Whilst several arbitral awards have tended to support an objective standard,[52] recognition has frequently been given to the capabilities of the State within the specific circumstances of the case. Thus, diligence of the State has been crafted in terms of "resources available to the state"[53] or "means at the disposal"[54] of the State. In recent years, increasing emphasis has been given to State capacity in light of the concern expressed by developing countries that they should not be held up to the same standards as the developed countries. Thus, Principle 11 of the Rio Declaration on Environment and Development provides.[55]

> States shall enact effective environmental legislation. Environmental standards, management objectives and priorities should reflect the environmental and developmental context to which they apply. Standards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries, in particular developing countries.

Nevertheless, whilst the economic level of a State is recognised to be a relevant factor in determining whether it has adhered to its obligation of due diligence, there is also strong general recognition that the State's economic level cannot be used to discharge it from its obligations under international law. The contemporary view appears to be a hybrid of the two approaches: diligence is considered in the light of the State's particular capacities—if, however, its conduct falls below an international minimum standard, responsibility will nevertheless lie.[56]

The element of due diligence as the requisite standard for the obligation to prevent transboundary harm is well recognised in inter-

52. See e.g. *Alabama* case (*US* v. *UK*) (1872), in J.B. Moore, *History and Digest of the International Arbitrations to which the United States has been a party*, Vol. I, pp.572–573; *Neer* case (*U.S.* v. *Mexico*) (1926) 4 R.I.A.A. 60; *Montijo* case (*U.S* v. *Colombia*) (1874), in Moore, *idem*, Vol. II, p.1421.

53. Garcia-Amador, Draft Articles on the Responsibility of the State for Injuries Caused in its Territory to the Person or Property of Aliens, reprinted in Garcia-Amador, Sohn and Baxter (Eds), *Recent Codification of the Law of State Responsibility for Injury to Aliens*, Vol.1 (1974), p.130.

54. *US Diplomatic and Consular Staff*, *supra* n.28, at p.33.

55. *Supra* n.36.

56. See generally Smith, *op. cit. supra* n.11, at p.40.

national law. It is reflected in numerous multilateral agreements,[57] resolutions of international conferences and organisations,[58] State practice,[59] decisions of tribunals,[60] writings of publicists[61] and the work of the International Law Commission.[62] The actual conduct of States required to meet the due diligence standard would naturally depend on the circumstances of the particular situation. However, a few general propositions can be made. Due diligence generally requires the exercise of the full extent of the legal authority at the State's disposal over its State organs as well as private actors to prevent wrongful conduct. There is common agreement that States should install the necessary legislative and administrative mechanisms to govern the conduct of its organs as well as private actors operating within its territory or coming under its jurisdiction or control.

This would mean, at the very least, that laws should be enacted and implemented to ensure that State and private conduct do not cause harm to other States and their nationals, as well as to areas beyond national jurisdiction. Specifically, activities that risk causing transboundary harm should be identified, authorised and regulated. The State is under a continuing obligation to keep itself apprised of the activities of its organs and private actors. This obligation extends to pre-existing activities as well as to new ones. It is a continuing obligation, in the sense that the State must continue to exercise vigilance in case the nature of the activities and the risks they entail change with time. Finally, if harm were to occur, there is an obligation to punish the offender. The due diligence obligation to prevent transboundary harm is thus one of conduct, not result. Just because the anticipated harm materialises does not mean that the State has breached the obligation, if it can be shown that the State had taken all due diligence measures to prevent the injury. Hence, if no due diligence would have succeeded in preventing the injury, no breach of the obligation is entailed.

57. See e.g. Art.194(1), 1982 UN Convention on the Law of the Sea, *supra* n.38; Arts.I, II and VII(2), 1972 London Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter, reprinted in (1972) 11 I.L.M. 1294; Art.2, Vienna Convention for the Protection of the Ozone Layer, reprinted in (1987) 26 I.L.M. 1529; Art.2, Convention on the Protection and Use of Transboundary Watercourses and International Lakes, reprinted in (1992) 31 I.L.M. 1312.

58. See e.g. Principle 21, World Charter for Nature, General Assembly Res.37/7 of 28 Oct. 1982; OECD, Report by the Environment Committee, *Responsibility and Liability of States in Relation to Transfrontier Pollution* (1984), p.4.

59. See e.g. the 1986 dispute between Germany and Switzerland relating to the pollution of the Rhine by Sandoz, a Swiss pharmaceutical industry.

60. See e.g. *Alabama* case, *supra* n.52.

61. See generally Sands, *op. cit. supra* n.50, at p.638.

62. ILC, Draft Articles on International Liability, Art.3 and commentary thereto, in *op. cit. supra* n.7.

Varying due diligence standards may apply depending on the particular circumstances of the conduct concerned. There exists support for an elevated due diligence requirement in certain categories of cases where due diligence would merge into a strict regime. In such cases, the diligence required of a State is that necessary to prevent the conduct in question. A failure to prevent automatically translates into a failure of due diligence. Within the environmental realm, such elevated standards appear to be relevant in the case of preventing transboundary harm arising from ultra-hazardous activities.[63]

Arising within the general milieu of the obligation to prevent harm are what may be considered associated due diligence obligations to co-operate in good faith with other States and to make timely notification of activities with significant risks of causing transboundary harm.[64] Other such obligations include the obligations to provide other States with all available information, to consult with these States on the preventive measures to be taken, to notify these States once an incident with the risk of causing harm occurs, to make available to nationals of other States the judicial or other procedures for seeking redress and to settle disputes in an expeditious and pacific manner.

(b) Assessing "due diligence" for the Indonesian fires. Given that any breach of the due diligence obligation to prevent transboundary harm is one of conduct, a factual analysis of the response to the forest fires undertaken by the competent Indonesian authorities is in order. It must be reiterated that the level of due diligence a State is held to varies widely according to the particular circumstances of the case. Thus, factors like the magnitude of the fires and the harm caused, the degree of risks entailed, climatic and other natural conditions, past knowledge of and experience with fires, availability of external assistance and the inherent capacity of the injuring State to deal with the problem become relevant in assessing due diligence. In general, the extent of the diligence required is proportional to the risks involved.

As stated above, there is authority for the proposition that the requisite level of due diligence is elevated to one of strict responsibility in certain categories of cases involving ultra-hazardous activities.[65] The following analysis will attempt to show that the due diligence obligation has been breached by Indonesia even without the need to characterise the burning of forests as ultra-hazardous activities. Hence, State responsibility is engaged even if the conventional lower standard of diligence is employed.

63. See the works cited *supra* n.51. The classic examples of ultra-hazardous activities include space operations, nuclear activities and pollution of the seas by oil or hazardous substances. Strict responsibility for these activities is generally prescribed in multilateral conventions.

64. See generally Sands, *op. cit. supra* n.50, at p.596.

65. See the works cited *supra* n.51.

It thus follows that responsibility will attach if the burning can be considered as an ultra-hazardous activity.

Prior to transboundary injury being caused to the injured States, Indonesia would have been under a due diligence obligation to take all appropriate measures to prevent the risk of transboundary harm from materialising.[66] Meeting this obligation would entail the appreciation by the injuring State of all the relevant facts and information which it has available to it to permit an adequate assessment of the situation. In the case of the 1997 fires, there is ample evidence to suggest that forest burning had been rampant in Indonesia at least since the beginning of that year. Indeed, the clearing of land by the use of fire is a continuous, year-long activity in Indonesia which has been practised for decades.[67] From past trends, the use of fire would abate only during certain months of the year when seasonal rains made conditions too wet for burning.

That significant transboundary haze injury was caused to Brunei, Malaysia and Singapore in previous years, the most recent being 1991 and 1994, would have brought sufficient notice to Indonesia that the problem was at risk of recurring in 1997. This knowledge of the likelihood of recurrence is bolstered by the fact that Indonesia knew, or must be taken to know, that the El Niño climatic phenomenon was or would be occurring in 1997, bringing with it extended drought conditions. Further, knowledge that the soil in certain parts of the country was rich in combustible peat, particularly in Sumatra and Kalimantan, must be imputed to Indonesia.

Most importantly, Indonesia knew, or ought to be taken to know, that massive land-clearing activities using fire were being undertaken by timber and plantation companies, as well as small-scale farmers. The risks posed by large-scale commercial burning have long been recognised in Indonesia. Indeed, it is common knowledge in Indonesia, as well as in the neighbouring countries and the world at large, that burning by profit-motivated timber and plantation interests had long been practised in Indonesia and was primarily responsible for haze episodes in previous years. Indeed, burning remains the quickest and cheapest method of clearing logged land of secondary growth for purposes of agriculture, settlement or other uses.

66. See generally Arts.16, 20, 23 and 26, ILC Draft Articles on State Responsibility, *supra* n.9.

67. In fairness to Indonesia, clearing land by the use of fire is commonly practised throughout South-East Asia, indeed in many countries around the world. The problem of anthropogenic (human-caused) fires has long been recognised by ASEAN (the Association of South-East Asian Nations) multilateral co-operation efforts. The 1995 ASEAN Cooperation Plan on Transboundary Pollution, reprinted in Koh, *ASEAN Documents Relating to the Environment* (1996), established broad policy measures to combat the problem through regional co-operation, but has evidently been of little practical effect in relation to the Indonesian fires.

In any event, there is evidence to suggest that Indonesia had known about the threat of forest fires in its provinces as early as the 1980s and had actually received assistance and plans from donor countries such as Germany to tackle the problem.[68] However, the implementation of these plans never took place due to political and administrative problems.[69] Foreign experts generally felt that there was a lack of enforcement and political will in the country, especially when the fires involved "concession companies which are understandably more interested in timber exploitation".[70] The frustration of the general public in the injured States, both during the 1997 fires and during earlier occurrences, had much to do with the fact that many of the commercial concerns implicated in the use of fires were closely linked to the Indonesian government. Indeed, several of the operators were known family members or close associates of the top Indonesian leaders.[71]

The cumulative force of Indonesia's knowledge, or what it ought to have known, relating to the deliberate burning practices of large commercial concerns, the fact that transboundary injury had been caused in the past, the likelihood of this recurring in 1997 and harming neighbouring States, the advent of dry conditions accompanying the El Niño phenomenon and the peat-rich conditions of its territories, established a clear obligation on Indonesia's part to take concrete and effective measures to prevent transboundary harm before this was occasioned. Given the impossibility of controlling weather conditions, specifically the winds which would carry the smoke to neighbouring countries, the obligation to prevent transboundary harm would naturally have to be discharged by controlling the human elements which were the direct cause of the fires.

In particular, laws and policies should have been enacted and implemented in time to prohibit the large-scale use of fire to clear land. Due diligence efforts would have had to be made to identify operators likely to resort to the use of fire. The imposition of large penalties should have been required to deter potential violators effectively. Specific warnings should have been given to logging and plantation companies known to have used burning methods in the past. Judicial or administrative action should then be taken to punish those violating a prohibition on burning. In short, a clear obligation to prevent and punish was borne by the Indonesian State. On an even more far-sighted scale, long-term forest management and land use policies would have been needed to provide

68. "Indonesia Ignored Fire-Fighting Plans", *Straits Times*, 23 Mar. 1998.
69. *Ibid.*
70. *Ibid.*
71. See e.g. " 'Connections' Won't Protect Fire Starters, Says Jakarta", *Straits Times*, 7 Oct. 1997.

feasible alternatives to the use of fire in clearing land. "Slash-and-burn" practices would need to be progressively discouraged and phased out among farmers. Large-scale commercial burning would have to be either tightly controlled or banned, especially during drought-stricken periods. In the pursuit of these admittedly difficult and complex policy choices, Indonesia would presumably have been expected to request foreign assistance, especially given the fact that it is a developing country with limited financial and manpower resources.

The haze struck the three injured States as early as April 1997. However, it was not until August 1997 and thereafter that the situation became intolerable. For a long while, certain government officials in Indonesia maintained that the fires were caused by natural climatic conditions. The Indonesian authorities were soon compelled to admit that the fires were mainly man-made.[72] There was an explicit admission in September 1997 that 80 per cent of the fires were caused by the deliberate action of commercial entities involved in clearing land for plantations and settlements.[73] On 16 September 1997, and again on 5 October 1997, President Suharto took the unprecedented step of apologising explicitly to the injured States for the haze caused by the forest fires. It was clear by then that the fires were burning out of control.

Even after the apology tendered by President Suharto in September 1997, certain quarters within the Indonesian government were still adamant that the haze was caused by a natural disaster linked to the El Niño weather condition.[74] All this while, meteorological services in Singapore and the United States had been monitoring the fires, or "hot-spots" as they were known, through the use of satellites. The information gleaned from satellite pictures enabled them to conclude with precision not only the exact locations where the fires were raging, but also the occurrence of land clearing through systematic burning. This provided incontrovertible proof that the fires were man-made and were being deliberately started to clear vast plantations in Kalimantan and South Sumatra.[75]

The information obtained from the daily satellite surveillance was continuously passed on to the Indonesian authorities by their Singapore and US counterparts. From the perspective of international obligations,

72. "Indonesia Admits Forest Fires Are Man-Made", *supra* n.2.

73. "Jakarta Under Pressure to Solve Fire Problems", *supra* n.2. See also Waluyo and EEPSEA/WWF, *op. cit. supra* nn.2, 5.

74. In late Sept. 1997, the statement of the Indonesian Coordinating Minister for People's Welfare to this effect provoked controversy in the neighbouring States; see e.g. "What a Mockery of Suharto Apology, Says DAP Leader", *Straits Times*, 30 Sept. 1997.

75. In an apparent response to official Indonesian assertions that the fires were a natural phenomenon, The *Straits Times* of Singapore, in its front-page report of 30 Sept. 1997, published satellite pictures which revealed that many fires were being ignited deliberately in timber and oil palm plantations.

therefore, Indonesia would henceforth have possessed the precise information it needed to discharge its obligations to identify the whereabouts of the fires and to enforce its laws strictly against the commercial companies engaged in forest burning. However, it became clear throughout the haze episode that effective laws were not being enacted or implemented in time to prevent the fires from spreading out of control and harming the interests of other States. No early preventive steps were taken to enact and enforce laws effectively to prevent deliberate forest burning until 9 September 1997, when the fires had already raged out of control and significant transboundary harm had already been caused. On that day, the Indonesian President issued a decree banning all forms of deliberate open burning.[76] This decree, together with the few pieces of existing legislation covering the subject,[77] appeared to promise action in dealing with the fire-starters.

On 19 September 1997, at the height of the haze catastrophe, a landmark environmental law—the 1997 Act Concerning the Management of the Living Environment[78] (hereafter "Environmental Management Act")—was brought into force in Indonesia. It was clear that the Act had been hastily passed in order to address the increasingly difficult and desperate forest fires situation. Nonetheless, even after the coming into force of the Decree of 9 September 1997 and the Environmental Management Act, the fires were hardly brought under control. In the first place, the Act is a broad and general framework environmental law which contains no specific provisions on forest fire control.[79] Indeed, its passage within the Indonesian legislative order had been anticipated for some years to replace an older piece of environmental legislation.[80] Hence, it was merely opportune that the Act was coming up for final approval at the time of the forest fire crisis—its passage may have been accelerated by the fires, but in no way was it specifically enacted to provide meaningful resolution of the problem.

76. "Suharto Bans Land Clearing by Burning", *Straits Times*, 10 Sept. 1997.

77. Decree of the Minister for Forestry and Plantations No.260/KEP II/1995 on Guidelines for the Prevention and Control of Forest Fires; Decree of the Minister for Forestry and Plantations No.188/KEP II/1995 on the Establishment of a National Forest Fire Management Centre; Decree of the Minister of State for the Environment No.18/MENLH/3/1995 on the Establishment of the National Coordination Team on Land Fire Management; Decree of the Director General of Estate Corps No.38/KB110/DJBUN/5/1995 on Technical Guidelines for Land Clearance Without Burning to Develop Plantations; Circular Letter of the Directorate General of the Environment and Settlement No.SE256/PL/1995 on Land Preparation in fiscal year 1995/1996.

78. Act No.23 of 1997 Concerning the Management of the Living Environment (EMA).

79. However, the Clarification to Art.3 of the EMA does provide generally that "the state prohibits activities involving the exploitation of natural resources within its territorial jurisdiction which causes loss to the territorial jurisdiction of other states, as well as protects the state against the impact of activities conducted outside the state territory" (trans. by present author).

80. Act No.4 of 1982 on Environmental Management.

That being said, it must be pointed out that the Environmental Management Act does contain general penalty provisions which may potentially apply to convicted forest fire offenders.[81] These penalties include imprisonment for up to 15 years and fines of up to 750 million rupiah (approximately US$75,000) for intentional environmental offences which result in death or serious injury.[82] Hence, if the Act had been effectively enforced against the operators and owners of the plantations who were using fire to clear land, significant results might have been achieved. Even if the substantive provisions of the Act did not specifically outlaw the practice of forest burning, resort could have been made to the Presidential Decree of 9 September 1997, which effectively banned open burning.

Yet, it did not appear that the provisions of these new laws were being effectively enforced against the majority of companies which were still burning their concession areas in defiance of the law. In fact, the operators of the commercial plantations reportedly stepped up their burning activities in anticipation of the wet season and possible government action. In short, no effective laws were enacted for a long time to prevent harm from materialising—even after the relevant laws were enacted, these were not universally and effectively enforced to prevent further burning.

It must be noted that some measures, albeit patchy ones, were taken by the Indonesian authorities largely *after* the fires had become a major problem and transboundary injury caused. Following international outcry over the forest fires, some 176 companies were specifically identified and named in the Indonesian media for violating the Presidential Decree of 9 September 1997.[83] Out of these, a total of 29 companies had 154 of their operating licences suspended or revoked.[84] In October 1997 it was reported that Indonesian authorities were gathering evidence to prosecute these 29 forestry and plantation firms.[85] Two months later, the Minister for People's Welfare was quoted as saying that 19 companies had been identified as forest burners and that four had been prosecuted.[86]

81. For an analysis of the EMA provisions, see Tan, *op. cit. supra* n.6.

82. See Arts.41–46, EMA. Note that where corporations are convicted, fines are increased by a third. In addition, the individuals behind the corporation's operations may also be convicted.

83. The "blacklist" of culprits appeared in several Indonesian newspapers on 16 Sept. 1997, and was reproduced in Singapore's *Straits Times*, 17 Sept. 1997.

84. What, Exactly, Has Jakarta Done to Beat the Haze?", *Straits Times*, 8 Oct. 1997. It is not clear if these firms have been allowed to resume operations.

85. "Indonesia Gathering Evidence Against 29 Forestry Firms", *ibid.* The author has not been able to ascertain if these firms have been prosecuted, or whether the four firms prosecuted in 1997, *infra* n.86, or the five firms to be prosecuted in 1998, *infra* n.87, are among the original 29 which were blacklisted.

86. *Straits Times*, 12 Dec. 1997.

However, in spite of these efforts to bring several firms to justice, the fires raged on unabated and the haze continued to afflict the injured States for months. It can only be concluded that the laws had simply not been enforced against the majority of operators, who were still defiantly using fire to clear land. In essence, the measures which were taken were mere drops in the ocean. The massive scale of the fires and the great risks of transboundary injury they entailed simply demanded much more effective action than was actually taken. In this regard, a strong case can be made for Indonesia's failure to live up to its due diligence obligation to prevent transboundary harm to other States.

In the aftermath of the great haze problem of 1997, there has been a handful of reported prosecutions of timber and plantation companies. In April 1998 plans were reportedly afoot to charge five East Kalimantan firms for their forest-burning activities.[87] In October 1998 a regional court in South Sumatra found two local logging firms guilty of deliberately torching their land and causing environmental destruction.[88] Nine other firms which were charged along with the two found guilty were, however, acquitted. The 11 firms were brought to court not by the government, but by Indonesia's leading non-governmental environmental watchdog, WALHI. The court did not impose any fine[89]—the two guilty firms were merely ordered to reforest their areas, to create forest-fighting squads and to pay court expenses. Whether or not similar prosecutions will be successful in the future and to what extent the perpetrators will be punished remain to be seen. It is unlikely that the relatively lenient penalties imposed to date will effectively deter potential violators. In this regard, Indonesia may have breached its obligation to punish offenders adequately in order to deter and prevent future transboundary harm.

In the light of the growing recognition that the capacity of a State should be a relevant factor in determining whether it has acted with due diligence, some attention needs to be paid to the contention that the Indonesian State had done all it possibly could under the circumstances. The monumental tasks facing environmental regulators in Indonesia is well-documented elsewhere.[90] Suffice it to say here that the great complexity and diversity of this archipelagic country, with its massive reliance on decentralisation of power to provincial authorities, make it extremely difficult to co-ordinate effective regulatory action. Well-

87. "5 Firms to be Sued over Fires", *Straits Times*, 25 Apr. 1998. It appeared that these firms were to be charged and punished under the 1997 EMA.

88. *Kompas* (an Indonesian daily), 19 Oct. 1998, as reported by AFP, 19 Oct. 1998.

89. WALHI had initially demanded a two trillion rupiah (US$250 million) collective compensation fine from all the defendants, *ibid*. The court did not accede to this.

90. Jan Michiel Otto, "Implementation of Environmental Law in Indonesia: Some Administrative and Judicial Challenges" (1996) II(1) Indonesian Law and Administrative Rev.32. See also Tan, *op. cit. supra* n.6.

intentioned central governmental efforts are frequently hampered by bureaucratic tussles, provincial intransigence in implementing directives and the vested interests of rapacious but well-connected individuals and corporations.[91]

These kinds of problem illustrate the generally unsatisfactory level of environmental law enforcement in Indonesia. However, as much as one may sympathise with the difficulties involved in addressing the forest fire problem in a country like Indonesia, it is a fundamental principle of international law that a State may not pray in aid deficiencies in its internal legal order to escape its international obligations.[92] With regard to our present analysis, the capacities of a State and its administrative machinery to meet international obligations go only towards determining the level of diligence to be expected from it—they cannot wholly exculpate a State from honouring its obligations. Given that the Indonesian government was well cognisant of the fact that forest-burning activities were occurring within its territory and that these activities were accurately pinpointed and unequivocally proved by satellite technology, it was under a clear obligation to use the full extent of its legal and administrative authority, including police and military powers, to control effectively the activities of the timber and plantation owners.

The obligation of due diligence, as developed in international law, is proportional to the scale of the risks and the extent of harm caused or posed to other States. The massive scale of the fires, together with the devastating harm they caused not only to Indonesia but to other States, required much more preventive and remedial action than that which Indonesia in fact undertook. This is so even if one were to take into account Indonesia's lack of capacity to deal with the problem.[93] For one thing, stronger enforcement action could have been taken against all the offending companies. Given that the identities of these companies were never in doubt and that evidentiary difficulties were absent, stringent enforcement action would objectively *not* have been beyond Indonesia's capacity. To the extent that this action was not taken, the case for State responsibility on the part of Indonesia is made out.

Based upon the above analysis, it can be argued that Indonesia is internationally responsible for the occurrence of large-scale fires and consequent transboundary injury to neighbouring States by failing to control the actions of its citizens within its territory. It first failed to prevent transboundary harm by not using its legislative and administrative powers to the fullest extent possible to prevent the fires from being

91. Otto, *ibid.* Otto also describes the problems associated with access to justice in the courts.

92. See Art.4, ILC Draft Articles on State Responsibility, *supra* n.9.

93. The financial crisis had by the end of 1997 crippled the Indonesian economy.

started by the commercial enterprises. Once these fires had been detected and transboundary harm occasioned to the injured States, Indonesia further failed to control the actions of the commercial enterprises and to compel them to cease their harmful conduct. Further, based upon the lenient penalties imposed to date, it would appear that Indonesia has breached its obligation to punish the offenders adequately in order to prevent future violations.

The preceding analysis is based upon characterising the forest burning as conventional activities with risks of causing transboundary harm to other States. In this regard, a minimum standard of due diligence was required of Indonesia to prevent causing harm to areas beyond its national jurisdiction. However, given the widespread and devastating losses occasioned not only to human health, but also to plant and animal life, biological diversity and economic activities, the deliberate forest burning of 1997 can justifiably be characterised as an ultra-hazardous activity attracting a higher level of diligence approximating strict responsibility without fault. On this level of analysis, there is an even stronger case that Indonesia has breached its obligation to prevent transboundary harm.

An argument to this effect would be bolstered by the fact that the damage caused by the forest fires was not restricted to Indonesia and its neighbouring States. Indeed, the emission of vast amounts of carbon dioxide into the atmosphere constituted global concern. Some studies estimate the carbon dioxide emission levels of the 1997 fires and their consequent global warming effects to have been greater than the total output and effects of Western European industries.[94] The destruction of millions of hectares of forests and the biological diversity contained within them, arguably a common concern of mankind, further demonstrates that the losses arising from the fires affected the interests of all States in the world. Hence, whatever level of due diligence is employed, and even if the most sympathetic consideration is given to Indonesia's lack of capacity to prevent transboundary harm, a clear case for State responsibility can ultimately be made.

The above analysis does not impugn Indonesia's conduct in relation to its efforts, albeit futile, in attempting to fight and put out the fires. To this end, substantial foreign assistance and co-operation were offered to and accepted by Indonesia throughout the period of the fires. Injured States like Malaysia sent fire-fighting personnel, Singapore contributed satellite monitoring services and various other States sent extensive fire-fighting equipment and expertise, ranging from technical advisers to aircraft for

94. "Indonesian Fires Bad for Region's Ecosystem", *Straits Times*, 18 Oct. 1997.

water bombing and cloud seeding.[95] In general, the co-operation between Indonesia and foreign countries and international organisations was satisfactory, the futility of fire-fighting efforts being attributed mainly to the sheer magnitude of the fires.

Thus, in relation to fire-fighting efforts, the obligations to co-operate with other countries, to provide them with adequate information and to accept international assistance have generally been met by Indonesia. What constitutes the basis of Indonesia's responsibility is its failure to control effectively the activities of the timber and plantation companies operating within its territory. It is with respect to this failure that Indonesia has not exercised due diligence in preventing transboundary harm to other States and to other areas beyond its national jurisdiction, thereby attracting State responsibility for its conduct.

C. ILC Draft Articles on International Liability for Injurious Consequences Arising Out of Acts Not Prohibited by International Law

1. Obligation to prevent or minimise transboundary harm

In the course of the International Law Commission's work on its Draft Articles on State Responsibility, it was recognised that some negative consequences might nevertheless attach to injury even in the absence of the traditional condition of fault. As had been firmly established, fault was a necessary prerequisite to the due diligence standard traditionally employed in assessing the conduct of States. However, support for strict responsibility was beginning to emerge in State practice and judicial and arbitral decisions as well as in doctrinal writings, particularly in relation to injury arising out of activities termed "ultrahazardous".[96] For its part, the Commission began active consideration of this new issue, not under the familiar rubric of state responsibility, but under a separate heading altogether. Thus, at its thirtieth session in 1978, the Commission included the topic of "International Liability for Injurious Consequences Arising Out of Acts not Prohibited by International Law" in its work programme.[97]

95. Assistance for putting out fires and preventing future ones came from, among others, the Asian Development Bank, the UN Disaster Assessment and Coordination group, the UN Development Programme (UNDP) (which financed more than 1,000 unemployed volunteers to fight blazing fires in East Kalimantan in Mar. 1998), the UN Environment Programme (UNEP), the US-sponsored South East Asian Environment Initiative, the Integrated Forest Fire Management team (a German–Indonesian collaboration working in Samarinda, East Kalimantan) and a host of bilateral assistance offers from several countries.

96. See the works cited *supra* n.51.

97. *Supra* n.7.

The work on the new topic was inspired largely by the concern that when a State goes about its legitimate business in a reasonable manner, causing incidental loss or injury to another State will not necessarily engage the international responsibility of the acting State. In other words, there may be a whole host of activities which, even though causing incidental loss to other States, fall short of fault or ultra-hazard. Consequently, they remain legal and are not prohibited by international law. In such situations, following the normal rules of State responsibility, the underlying activity and the injury it causes cannot be subject to prohibition. However, this would have the unfair consequence of the injured State being left to bear the entire loss or injury. Hence, to maintain an equitable balance between the acting States' freedom of action and the injured States' need to be compensated for their losses, a regime based upon "liability", as opposed to "responsibility",[98] was needed to establish consequences for injury which did not require resort to prohibition. "Liability" would thus entail relief ranging from compensation to satisfaction or other measures short of prohibition. The activities specifically anticipated by the International Law Commission to fall under this regime would be those entailing a risk of causing transboundary environmental damage to other States.

In 1996 the Commission established a working group to review the topic in all its aspects in the light of the discussions held over the years. This working group produced a comprehensive report[99] which dealt not only with the question of prevention but also the issue of compensation or other relief. In the view of the working group, the principles relating to the issues of "prevention" and "international liability" were distinct enough to be treated separately. Thus, the Commission decided that the work on "prevention" would proceed first under the subtitle "Prevention of transboundary damage from hazardous activities".

In its most recent session in 1998, the Commission adopted on first reading the set of 17 draft articles on prevention of transboundary damage arising from hazardous activities.[100] These draft articles are entirely consistent with the customary obligation to prevent transboundary damage discussed above, the only distinction being that they apply exclusively to activities which are not prohibited under international law and are thus not subject to cessation or prohibition. Article 3, the main provision which lays out the obligation to prevent harm, provides that "States shall take all appropriate measures to prevent, or to minimise the

98. Responsibility of course, denoted "wrongfulness". Since that which is "wrongful" must not occur, among the consequences of "responsibility" is prohibition.

99. The Report, supra n.9, was introduced by the chairman of the working group at the 2,465th and 2,471st meetings of the ILC on 19 and 25 July 1996. The decision to split the issues of prevention and liability had been made as early as the ILC's 44th session in 1992.

100. 2,560th to 2,563rd meetings, 12–13 Aug. 1998, *supra* n.7.

risk of, significant transboundary harm".[101] This obligation is one of due diligence, with the conduct of the State being determinative of whether the State has complied with its obligations under the draft articles.

States also bear associated obligations to co-operate in good faith and to seek the assistance of international organisations,[102] to take necessary legislative, administrative or other action including suitable monitoring mechanisms to implement the draft articles[103] and to authorise activities falling under the scope of these articles by means of an impact assessment.[104] Information is to be provided to the public likely to be affected by a relevant activity.[105] In addition, the customary obligations of notification,[106] consultation on preventive measures based upon an equitable balance of interests,[107] exchange of information,[108] non-discriminatory access to the injuring State's judicial or other dispute-settlement procedures[109] and expeditious and peaceful settlement of disputes[110] are laid down.

Assuming for our purposes that the forest-burning activities of the timber and plantation companies in Indonesia were legitimate commercial activities not prohibited by international law, an obligation would nevertheless arise on Indonesia's part to prevent or to minimise the risks of significant transboundary harm. Much of what has been discussed above relating to Indonesia's failure to prevent transboundary harm under the customary rules of State responsibility applies here with equal force. The arguments will not be reiterated—suffice it to emphasise here that the failure on the part of Indonesia to enact and implement adequate legislative and administrative controls over its private citizens constitutes a breach of the obligation in Article 3. Associated obligations which may have been breached include Indonesia's failure to authorise the activities of its private citizens in a manner consistent with the draft articles by evaluating the transboundary impact of the said activities, its failure to provide timely notification and information pertaining to the activities

101. "Risk of causing significant transboundary harm" is defined in Art.2 of the Draft Articles on International Liability to encompass "a low probability of causing disastrous harm and a high probability of causing other significant harm". On damage generally, see the definition of "air pollution" in Art.1(a), 1979 ECE Convention on Long Range Transboundary Air Pollution, *supra* n.50 and Sands, *op. cit. supra* n.50, at pp.632–634.

102. Art.4, Draft Articles on International Liability.

103. *Idem*, Art.5.

104. *Idem*, Arts.7 and 8.

105. *Idem*, Art.9 The "public likely to be affected" includes that of the injuring State as well as of other affected States; see Commentary to Art.9.

106. *Idem*, Art.10.

107. *Idem*, Arts.11 and 12.

108. *Idem*, Art.14.

109. *Idem*, Art.16.

110. *Idem*, Art.17.

and its failure to enter into consultations with the injured States with a view to establishing adequate preventive measures.

2. International liability

Ultimately, what would be of greatest interest to the injured States is the issue of liability. To this end, we must examine the principles which the International Law Commission suggests are relevant to the question of compensation and other relief. Due to the Commission's decision to deal first with the issue of prevention, the 1998 report[111] is limited to the obligation of States to prevent or minimise transboundary harm *before* it is caused. No consideration is given to State obligations *after* harm occurs, which is an issue for forthcoming Commission deliberations. Thus, the assessment provided here relates only to past work done on the matter. To facilitate our analysis on the issue of liability, reference is made to the 1996 report of the working group,[112] which considered issues pertaining to liability as well as prevention before the two issues were formally split. Article 5 of the draft articles appended to the 1996 Report provides: "In accordance with the present articles, liability arises from significant transboundary harm caused by an activity referred to in Article 1 and shall give rise to compensation or other relief."

The commentary to Article 5 goes on to enumerate the State practice, judicial and arbitral awards and writings of publicists which the working group felt would evidence the international law status of the concept of liability for transboundary harm.[113] The issues relating to the precise nature and extent of relief are dealt with in chapter III of the draft articles (Articles 20 to 22).[114] Applying Article 5 to the facts of the Indonesian forest fires, Indonesia would be under an international obligation to provide compensation or other relief when significant transboundary harm occurs as a result of the fires. Pursuant to chapter III, compensation or other relief should be effected either through affording the nationals of

111. *Supra* n.7.

112. *Supra* n.9.

113. *Ibid.* The Report cites the following: Principle 22 of the Stockholm Declaration and Principle 13 of the Rio Declaration (States encouraged to co-operate in developing international law on liability and compensation for environmental damage), treaties with established liability regimes (e.g. treaties on oil transportation, oil pollution and nuclear energy material), judicial and arbitral decisions (*Trail Smelter, Lac Lanoux, Nuclear Test* cases), and State practice (*inter alia*, US compensation for Japanese fishermen and Marshall Islanders following nuclear tests at Eniwetok and Bikini Atolls respectively in the 1950s; the 1971 grounding of the Liberian tanker *Juliana* in Japanese waters and the Liberian Government's payment of compensation to Japanese interests; and the Cherry Point oil spill in the US with the resultant damage to Canadian beaches and the Canadian government's subsequent invocation of the *Trail Smelter* principle).

114. Chapter III is without prejudice to any other arrangements which the parties may have agreed upon, or to the due exercise of the jurisdiction of the courts of the States where the injury occurred.

the injured States non-discriminatory access to the Indonesian judicial system,[115] or through negotiation between Indonesia and the affected States based on the guiding principles of Article 22.[116]

One of the more interesting aspects of Article 22 is the International Law Commission's belief that the extent to which the affected States shares in the benefit of the activity may affect the level of compensation payable. During the 1997 forest fires, there were allegations in the Indonesian media, as well as in those of the injured States, that several of the large companies involved in deliberate burning were actually jointly owned by Indonesian and injured State nationals. If this is true, the injured States themselves would have been under an obligation to control the activities of their own nationals who enjoyed equity ownership and control over the offending Indonesian companies.[117]

Other relevant factors outlined in Article 22 relate to the extent to which the law of the injured State provides for compensation or other relief for the same harm and the standards of protection applied in relation to a comparable activity by the affected State and in regional and international practice. At the height of the 1997 drought, at least two of the injured States, Malaysia and Brunei, had their own hands full struggling with fires igniting within their own territories. The scale of these was of course much smaller than the Indonesian fires. However, from all indications, the governments of these States appeared to have encountered similar problems in controlling their own fires, especially in relation to blazes which were deliberately started. Whilst this is not the forum to go into the legal and administrative responses of these States in tackling their own fires, suffice it to say that the difficulties they

115. Art.20, *supra* n.9.

116. These criteria are (a), the extent to which the State of origin has complied with its obligations of prevention; (b) the extent to which it has exercised due diligence in preventing or minimising the damage; (c) the extent of its knowing or means of knowing that an activity referred to was being or was about to be carried out in its territory or otherwise under its jurisdiction or control; (d) the extent to which it benefits from the activity; (e) the extent to which the affected State shares in the benefit of the activity; (f) the extent to which assistance to either State is available from or has been provided by third States or international organisations; (g) the extent to which compensation is reasonably available to or has been provided to injured persons, whether through proceedings in the courts of the State of origin or otherwise; (h) the extent to which the law of the injured State provides for compensation or other relief for the same harm; (i) the standards of protection applied in relation to a comparable activity by the affected State and in regional and international practice; and (j) the extent to which the State of origin has taken measures to assist the affected State in minimising harm. Note that Art.22 does not bar negotiations between the State of origin and private injured parties or negotiations between the injured parties and the operator of the activity causing the significant transboundary harm.

117. The jurisdiction of the injured States would be established on the basis of the nationality of the perpetrator; see *supra* n.30.

encountered may be relevant in assessing Indonesia's liability for failing to prevent transboundary harm arising from its forest fires.[118]

One final observation is in order. In the aftermath of the 1997 forest fires, there have been practically no developments whatsoever in relation to the question of liability and compensation, be it under the framework of State responsibility or the International Law Commission's work on liability. No inter-State negotiations have been known to be conducted in relation to liability and compensation. This is where the political realities of the situation overwhelm whatever academic analyses are attempted on this matter. The peculiar geo-political constraints surrounding relations between the injured States and Indonesia render the question of liability moot. Indeed, no future action is anticipated on the issue of liability; it is a foregone conclusion among injured State citizens that compensation from Indonesia is not forthcoming. In the first place the preliminary question as to whether Indonesia breached the obligation of preventing transboundary harm has never even been publicly raised by the injured States.[119] The onset of the Asian financial crisis and the domestic political upheavals in Indonesia have all but assured that the matter be left to rest. The ongoing intercourse between Indonesia and its neighbours today is limited to discussing co-operation to prevent future fires, consistent with the long-practised ASEAN policy of dialogue, persuasion and engagement as opposed to confrontation.

D. Conclusion

From the above analysis, a case exists for holding Indonesia responsible for its failure to prevent transboundary harm to other States arising from the forest fires of 1997. State responsibility is engaged by virtue of the fact that Indonesia failed to exercise its due diligence obligation to prevent and punish the activities of its private citizens who were deliberately setting fire to land and forests for commercial profit. Alternatively, the burning of land and forests can be considered an ultra-hazardous activity which imposed strict responsibility on Indonesia to prevent transboundary harm. In this regard, Indonesia's failure to prevent such harm

118. It must be reiterated that the preceding analyses of Art.5 and the provisions of chapter III have been based upon the conclusions of the 1996 working group on the issue of liability, *supra* n.9. Further work on this matter remains to be done in future ILC sessions. That being said, there is every reason to believe that the principles enshrined in Art.5 and chapter III reflect general law and are likely to remain substantially unaltered by future ILC deliberations on the matter.

119. Contrast this to the affected States which reserved their position as to the international obligations of the USSR in the wake of the Chernobyl disaster, *supra* n.48. Even though the payment of compensation was recognised to be unlikely, the injured States have at least reserved their position that the USSR owed certain international obligations relating to its activities. No such position seems to have been taken by the injured States in the 1997 forest fire disaster.

necessarily engaged its responsibility. Arising from the International Law Commission's ongoing work, activities occurring within Indonesian territory which are not prohibited by international law nevertheless entail liability when injury is caused to other States.

Whatever theoretical basis is employed to demonstrate Indonesia's international responsibility for the transboundary harm caused by the fires of 1997, it does not appear that political realities will provide for that natural consequence of responsibility to unfold—*viz.* the obligation to effect adequate reparations for the harm caused. Indeed, the apology of the Indonesian President may well be the most that the injured States and their nationals can expect as reparation for the injury caused.

Postscript

In April 1999, a top Indonesian official warned ominously that the forest fire and haze problem could recur in the middle of this year. The head of Indonesia's national team for disaster relief and control, Professor Haryono Suyono, was quoted by the *Straits Times* of 29 April 1999 as saying that he expected the dry season in 1999 to last much longer than it did in 1997. Recognising the lack of law enforcement as a major problem, Professor Haryono added that the new political climate of openness in Indonesia had emboldened the perpetrators of the fires. In this regard, "people are not scared of the authorities", and "many are testing the waters, which is why the problem is starting all over again". Professor Haryono admitted that despite having the relevant laws, Indonesia had to date taken "little action" against plantation and forest firms. With the ongoing political, social and economic uncertainties in Indonesia, the governmental will and financial resources needed to combat forest fires are even more lacking than in 1997. Hence, it appears that a repeat of the forest fire and haze episode—perhaps with even greater degrees of severity—cannot be ruled out this year, or at any time in the near future.