UCLA

UCLA Pacific Basin Law Journal

Title

The Daya Bay Nuclear Plant Project in the Light of International Environmental Law

Permalink

https://escholarship.org/uc/item/8j28s4gp

Journal

UCLA Pacific Basin Law Journal, 7(1-2)

Author

Mushkat, Roda

Publication Date

1990

DOI

10.5070/P871-2021951

Copyright Information

Copyright 1990 by the author(s). All rights reserved unless otherwise indicated. Contact the author(s) for any necessary permissions. Learn more at https://escholarship.org/terms

Peer reviewed

THE DAYA BAY NUCLEAR PLANT PROJECT IN THE LIGHT OF INTERNATIONAL ENVIRONMENTAL LAW

Roda Mushkat*

I. INTRODUCTION

Very few issues have spawned as much controversy in Hong Kong as the decision by the People's Republic of China to construct a nuclear power plant in Dava Bay, about fifty kilometers from the Hong Kong urban area. The debate triggered by this decision has revolved around complex constitutional and political questions regarding the relationship between the Hong Kong government and its people and between Hong Kong and the PRC. It has also brought into sharp focus environmental concerns shared by the international community as a whole. Preoccupation with the environmental dimension has intensified since the incident involving the nuclear power reactor at Chernobyl, which has drawn strong attention to the issue of state liability for environmental damage. However, the Daya Bay controversy highlights a less frequently discussed problem in international environmental law-namely, international obligations and the responsibility of states at the predamage stage. This article addresses these issues in the specific context of the Dava Bay nuclear project. The principal objectives are, first, to examine how the parties involved. China and Hong Kong. are constrained by international legal norms and, second, whether the constraints are binding both in theory and in practice.

II. THE INTERNATIONAL LEGAL FRAMEWORK

No rule of international law prohibits a state from building a nuclear power plant in its own territory. The sovereign right of a state to engage in activities within its territory and to regulate its nationals is regarded as one of the most fundamental principles of

^{*} Senior Lecturer in Law, University of Hong Kong; LL.B., Hebrew University; LL.M., Victoria University of Wellington; LL.D., University of South Africa; Post Graduate Diploma in International Law, University of Manchester; Member of the Israel Bar.

international law. 1 This principle has also been expressed in the domain of international environmental law. Most notably, the 1972 Declaration of the United Nations on the Human Environment proclaims the sovereign right of states, "in accordance with the Charter of the United Nations and the principles of international law," to "exploit their own resources pursuant to their own environmental policies."2

The principle of territorial sovereignty is, however, far from absolute.3 Instead, it is subject to an important qualification: a state must not permit the use of its territory for purposes injurious to the interests of others. This principle is thought to derive from the doctrine of abuse of rights,4 the concept of good neighbourliness,5 or the principle of territorial integrity.6 This limitation on states' sovereignty, often cited as the maxim sic utere tuo ut alienum non laedas, has also been reflected in international court decisions,⁷ state declarations at international conferences,8 resolutions of inter-

Territorial sovereignty involves the exclusive right to display the activities of a state. This right has as a corollary a duty: the obligation to protect within the territory the right of other states, in particular their right to integrity and inviolability in peace and in war, together with the rights which each state may claim for its nationals in foreign territory.

^{1.} See, e.g., 1974 Charter of Economic Rights and Duties, G.A. Res. 3281 (No. 29) art. 2, reprinted in 14 I.L.M. 251 (1975); 1949 Draft Declaration on the Rights and Duties of States, [1949] Y.B. INT'L L. COMM'N 286.

^{2.} The Stockholm Conference of 1972 Declaration on the Human Environment, U.N. Doc. A/CONF.48/14 (1972), reprinted in 11 I.L.M. at 1416, 1420 (1972) [hereinafter Stockholm Declaration].

^{3.} The Harmon Doctrine of absolute sovereignty of every nation within its own territory was not adhered to even when Judson Harmon, the Attorney General of the United States, first formulated it. Compare 21 Op. Att'y Gen. 274, 281 (1895) (articulating the doctrine) with id. at 283 (recommending that the Government act according to policy considerations because "the rules, principles, and precedents of international law impose no liability or obligation.").

^{4.} See F. BERBER, RIVERS IN INTERNATIONAL LAW, 195-210 (1959); B. CHENG, GENERAL PRINCIPLES OF LAW AS APPLIED BY INTERNATIONAL COURTS AND TRIBU-NALS, 121-36 (1953); H. LAUTERPACHT, THE DEVELOPMENT OF LAW BY THE INTER-NATIONAL COURT, 162-5 (1958).

^{5.} See Declaration on Principles of International Law Concerning Friendly Relations and Cooperation Among States, G.A. Res. 2625, 25 U.N. GAOR Supp. (No. 28) at 121, U.N. Doc. A/8082 (1970), reprinted in 9 I.L.M. at 1292 (1970); U.N. CHARTER

^{6.} See Max Huber's famous formulation of territorial sovereignty in the Island of Palmas Case (Neth. v. U.S.):

² R. Int'l Arb. Awards 831, 839 (1928).

^{7.} See, e.g., Lake Lanoux Arbitration (Fr. v. Spain) 24 I.L.R. 101 (Arb. Trib. 1957); Corfu Channel (U.K. v. Alb.) 1949 I.C.J. 4 (Judgement of Apr. 9); Trail Smelter Case (U.S. v. Can.) 3 R. Int'l Arb. Awards 1905 (1949). See generally MacChesney, Judicial Decisions, 53 Am. J. INT'L L. 156 (1959) (discussing Lake Lanoux).

^{8.} See, e.g., Resolutions of The Fourth International Parliamentary Conference on the Environment, reprinted in 2 ENVTL. POL'Y & L. at 109 (1976); Principles 21 and 22, Stockholm Declaration, supra note 2. See also Conference on Security and Co-operation in Europe: Final Act, Helsinki, 1975, reprinted in 14 I.L.M. at 1292 (1975).

national organisations,9 and regional and bilateral state practice.10

The emphasis on injurious effects of lawful or unlawful conduct or on actual damage caused in the territory of another state remains a common theme in the area of environmental law. In the Daya Bay case, however, the more controversial issue is that of responsibility under international law for transboundary environmental risks and potential harm.

In a pessimistic, or perhaps realistic, vein, one may echo Alexandre Kiss' statement that on the whole general international law does not recognise the principle of international liability for risk.¹¹ In a well-documented and reasoned article,¹² Gunther Handl, a leading expert on the subject, concludes that both judicial decisions and state practice require proof of "material damage" as a condition of state responsibility for transnational pollution. He believes that the infliction of a "moral injury" by proven transfrontier crossing of pollutants, although a violation of state sovereignty, would not trigger the polluting state's liability.¹³

Handl's main emphasis is on the "critical role of evidence in respect of material damage" rather than on the "admissibility as such of prospective damage as a basis for a claim grounded in the extraterritorial environmental effects of state activity." Yet he does not exclude the possibility that, where a state can meet strict evidentiary requirements regarding the probability of future material damage, an international tribunal may declare pollution-generating activity unlawful because of its expected territorial impact. 15

A similar approach is reflected in the International Law Association's 1978 Report. The 1978 Report infers from state practice a "duty of prevention of damage *likely* to give rise to interstate action," which is subject to a "high degree of evidence or the proof of

^{9.} See, e.g., Stockholm Declaration, supra note 2; Resolution on Co-operation between States in the Field of the Environment of Dec. 15, 1972, G.A. Res. 2995, U.N. GAOR Supp. (No. 30) at 421, reprinted in International Protection of the Environment: Treaties and Related Documents, (1975); Resolution on Development and Environment of Dec. 20, 1971, U.N. Doc. (No. 26) A/2849, reprinted in 11 I.L.M. at 422 (1972); see also Int'l L. Ass'n, Rules of International Law Applicable to Transfrontier Pollution Report of the Sixtieth Conference Held at Montreal, 1982 1-3 (1983) [hereinafter Montreal Report].

^{10.} See illustrations of both treaty and non-treaty-based state practice in INT'L L. ASS'N, REPORT OF THE SIXTY-FIRST CONFERENCE HELD AT PARIS, 1984 385-98 (1985) [hereinafter Paris Report] and in the Montreal Report, supra note 9, at 163-66.

^{11.} Kiss, *The International Protection of the Environment* in R. MACDONALD & D. JOHNSTON, THE STRUCTURE AND PROCESS OF INTERNATIONAL LAW 1069, 1076 (1983).

^{12.} Handl, Territorial Sovereignty and the Problem of Transnational Pollution, 69 Am. J. INT'L L. 50 (1975).

^{13.} Id. at 75.

^{14.} Id. at 74.

^{15.} Id. at 75.

high probability" that such damage will occur. 16

Definitions of pollution in major international legal texts also support the notion of an international responsibility based on risk of future damage. The 1972 Declaration of the United Nations Stockholm Conference on Human Environment provides that "states shall take all possible steps to prevent pollution of the seas by substances that are liable to create hazards to human health."17 The 1982 Convention on the Law of the Sea suggests a concept of risk in defining pollution as "the introduction by man, directly or indirectly, of substances or energy into the. . . environment. . . which results or is likely to result in such deleterious effects as. . . hazards to human health." Even the definitions incorporated in the widely supported Recommendation of the Organisation for Economic Cooperation and Development (OECD)19 and the Convention on Long-Range Transboundary Air Pollution²⁰ do not appear to require that damage have already occurred for liability to be imposed. Future risks are assumed in the description of such effects as "endanger[ing] human health."

Admittedly, reliance on these definitions may not be sufficient to establish international liability for environmental risk under positive international law. Kiss notes in his work on international protection of the environment that none of the legal instruments referred to above links transfrontier pollution with international liability and some explicitly refuse to acknowledge such a link.²¹

At the same time, principles 21 and 22 of the Stockholm Declaration—in themselves not legally binding but reflecting current community expectations²²—may be broadly read as incorporating responsibility for preventing effects which cannot be remedied or

^{16.} INT'L L. ASS'N, REPORT OF THE FIFTY-EIGHTH CONFERENCE HELD AT MANILA, 1978 400 (1980) [hereinafter Manila Report].

^{17.} Principle 7, Stockholm Declaration, supra note 2 [emphasis added].

^{18.} Convention on the Law of the Sea, Dec. 10, 1982, reprinted in 21 I.L.M. at 1261, 1271 (1982).

^{19.} Recommendation of the Council on Principles Concerning Transfrontier Pollution, O.E.C.D. Doc. C (74) 224 (1974), reprinted in 14 I.L.M. at 242, 243 (1975) [hereinafter OECD Principles].

^{20.} Convention on Long-Range Transboundary Air Pollution, adopted by acclamation Nov. 13, 1979, T.I.A.S. No. 10541, U.N. Doc. ECE/HLM.1/R.1 (1979), reprinted in 18 I.L.M. at 1442 (1979). The Convention entered into force for members of the Economic Commission of Europe on March 16, 1983.

^{21.} See Kiss, supra note 11, at 1077. In a footnote to art. 8(f) of the 1979 Convention on Long-Range Transboundary Air Pollution, the contracting parties agreed that "[t]he present Convention does not contain a rule of State liability as to damage." Convention on Long-Range Transboundary Air Pollution, supra note 20.

^{22.} The Declaration was adopted by the General Assembly with 115 votes for and 10 abstentions (the latter were those of the Soviet Bloc, indicating their absence from the Conference rather than a disapproval of the legal principles involved). In fact, numerous Soviet treaties support Principle 21. See the illustrations in 9 INTERNATIONAL PROTECTION OF THE ENVIRONMENT, supra note 9, at 4454, 4458, 4641.

compensated as well as liability for actual damage.²³ State practice cited in the 1978 Report of the International Law Association Committee on the Legal Aspects of the Conservation of the Environment (the "ILA Committee") and in the writings of international publicists led the ILA Committee to observe that "general international law includes the duty of states to prevent injuries likely to be caused by transfrontier pollution."²⁴

The ILA Committee also found support for its conclusion that a state is under a legal duty to prevent serious damage likely to occur to another state in the two main decisions in this area, the *Trail Smelter* and *Corfu Channel* cases.²⁵ Aware of the fact that the former case pertained to a situation where damage *had* occurred in the past, the ILA Committee nonetheless refused to interpret the tribunal's ruling as confined to past circumstances. This interpretation was broad, particularly since the American practice upon which the tribunal based its decision²⁶ reflected a duty to prevent future environmental damage.²⁷ Bearing in mind the eventual damage established in *Trail Smelter*, the ILA Committee similarly construed the *Corfu Channel* decision as implying such a future duty.²⁸

Prevention of future harm is particularly important given the prevalence of disputes which arise before dangerous activities which involve serious implications are actually carried out. Prevention is especially important where large investments have been made in infrastructure and where proprietary interests have been created. Furthermore, if restraint is postponed until there is clear and convincing evidence of acute damage, irreversible consequences affecting scarce resources may result. As the Executive Director of UNEP has elaborated, "In the field of the environment, emphasis must necessarily be on preventive rather than remedial measures. The compensation which may be payable is often poor consolation for an inflicted damage that is often irreparable."²⁹

^{23.} See Schneider, State Responsibility for Environmental Protection and Preservation, in International Law: A Contemporary Perspective 602, 604 (1985).

^{24.} MANILA REPORT. 402.

^{25.} Trail Smelter Case (U.S. v. Can.) 3 R. Int'l Arb. Awards 1905 (1949); Corfu Channel (U.K. v. Alb.) 1949 I.C.J. 4 (Judgement of Apr. 9).

^{26.} See, e.g., New York v. New Jersey, 256 U.S. 296, 309 (1921).

^{27.} It has also been suggested that the *Trail Smelter* case essentially applied a reasonableness standard, which might be modified to include risk creating activities "with potentially greater harm calling for abstention from conduct under proportionately lesser showing that harm will occur." *See* Kirgis, *Technological Challenge to the Shared Environment: U.S. Practice*, 66 Am. J. INT'L L. 290, 294 (1972). In addition, it should be noted that the Tribunal in the *Trail Smelter* arbitration had found that Canada's duties were not limited to repairing the harm that had occurred wrongfully but included the provision of reparation for any *future harm* that might occur without a wrongful act on Canada's part. *See* 3 R. Int'l Arb. Awards at 1980.

^{28.} MANILA REPORT, 400.

^{29.} Observations by the Executive Director on the Relationship Between G.A. Res.

It is not surprising, therefore, that prevention of environmental harm is strongly emphasised in the numerous reports produced by the International Law Commission of the United Nations (ILC) in its painstaking study International Liability for Injurious Consequences Arising Out of Acts Not Prohibited by International Law.30 The Special Rapporteur offered "complete support" with the objective of giving "pride of place to the duty, whenever possible, to avoid causing injuries, rather than to the substituted duty of providing reparations for injuries caused."31 Indeed, the "motive power" underlying the Special Rapporteur's Schematic Outline³² was the "duty of the source State, subject to factors such as sharing and the distribution of costs and benefits, to avoid—or minimise and repair—substantial, physical transboundary loss or injury which is foreseeable, not necessarily in its actual occurrence but as a risk associated with the conduct of an activity." [Emphasis added].33 Furthermore, the ILC's Report, contends that such a duty is a natural "concomitant of the exclusive or dominant jurisdiction which international law reposes in the source state as a territorial or controlling authority."34

The latter notion of state liability arising from harmful activities undertaken within its territorial control is well supported in certain areas of conventional state practice. For instance, a state may be liable for "ultra-hazardous" activities involving nuclear instal-

^{3129 (}XXVIII), Principles 21, 22 and 24 of the Stockholm Declaration and G.A. Res. 2995 (XXVII) and 2996 (XXVII) U.N. Doc. UNEP/GC/44 at 38, para. 79 (1975).

^{30.} See, e.g., Second Report on International Liability for Injurious Consequences Arising Out of Acts Not Prohibited by International Law, paras. 5-6 and 56-72, U.N. Doc. A/CN.4/346 and adds. 1-2, reprinted in [1981] 2 Y.B. INT'L L. COMM'N, pt. 1 at 104-05, 116-21, U.N. Doc. A/CN.4/Ser.A/1981/Add. 1 [hereinafter Second Report]; Report of the Commission to the General Assembly, 36 U.N. GAOR Supp. (No. 10) at paras. 167-68, U.N. Doc. A/36/10 (1980), reprinted in [1981] 2 Y.B. INT'L L. COMM'N, pt. 2 at 146, 148; Quentin-Baxter Preliminary Report, paras. 4-9, U.N. Doc. A/CN.4/334 and Adds. 1-2 (1980), reprinted in [1980] 2 Y.B. INT'L L. COMM'N, pt. 1 at 248-250, U.N. Doc. A/CN.4/SER.A/1980/Add.1.

^{31.} Third Report on International Liability for Injurious Consequences Arising Out of Acts Not Prohibited by International Law, para. 9, U.N. Doc. A/CN.4/360 and Corr. 1 (1982), reprinted in [1982] 2 Y.B. INT'L L. COMM'N, pt. 1, U.N. Doc. A/CN.4/SER.A/1982/Add. 1 [hereinafter Third Report].

^{32.} See id. para. 53; also reprinted in Report of the International Law Commission to the General Assembly [1984] 2 Y.B. INT'L L. COMM'N, pt. 2, paras. 104-56 [hereinafter Schematic Outline].

^{33.} Fourth Report on International Liability for Injurious Consequences Arising Out of Acts Not Prohibited by International Law, para. 63, U.N. Doc. A/CN.4/373 and adds. 1-2 (1983) reprinted in [1983] 2 Y.B. INT'L L. COMM'N, pt. 1, U.N. Doc. A/CN.4/SER.A/1983/Add.1 [hereinafter Fourth Report].

^{34.} Id., paras. 7-8. Note the analogy with the duties that a state owes, as a territorial or controlling authority, in respect of aliens within its borders.

^{35. &}quot;Ultra-hazardous" is employed in the sense used by C. Wilfred Jenks, namely as referring to the far-reaching consequences of hazardous activities rather than to the

lations, nuclear ships, space objects, or oil-related projects.³⁶ Evidence is also available regarding "extra-conventional" state practice that reflects international acceptance of strict liability in cases of transnational damage due to the miscarriage of recognizably dangerous activities.³⁷ According to the Special Rapporteur of the ILC's study,³⁸ the principle of strict liability need no longer be seen as "a static and exceptional departure from the classical system of state responsibility for wrongful acts and omissions but an ultimate development of broader tendencies, well grounded in existing state practice." [emphasis added].³⁹

Nor is state practice at the international level the only source of support for assigning strict liability for environmental injury under customary international law. Such a doctrine exists in varying forms (e.g., in relation to nuisance, trespass, ultra-hazardous activities or res ipsa loquitur) in most developed municipal legal systems.⁴⁰ The concept's acceptance by major (including socialist)⁴¹ countries has been viewed as giving it in effect the status of a "general principle of law recognised by civilised nations" and as such part of international law.⁴²

- 37. See references in Handl, State Liability for Accidental Transnational Environmental Damage by Private Persons, 74 Am. J. INT'L L. 525, 543-48 (1980).
 - 38. See supra text accompanying note 30.
 - 39. See Fourth Report, para. 6.

high degree of probability that a hazardous event will occur. See Jenks, Liability for Ultra-Hazardous Activities, 117 RECUEIL DES COURS 99, 107-10 (1966).

^{36.} See, e.g., 1976 Convention on Civil Liability for Oil Pollution Damage Resulting from Exploration for and Exploitation of Seabed Mineral Resources, opened for signature May 1, 1977, reprinted in 16 I.L.M. at 1450-51 (1977); Convention Relating to Civil Liability in the Field of Maritime Carriage of Nuclear Materials, Dec. 18, 1971, reprinted in 11 I.L.M. at 277 (1972); Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, Dec. 18, 1971, reprinted in 11 I.L.M. at 284 (1972); Convention on Liability for Damage Caused by Objects Launched into Outer Space, Mar. 29, 1972, 24 U.S.T. 2389, T.I.A.S. No. 7762, reprinted in 10 I.L.M. at 965 (1971); International Convention on Civil Liability for Oil Pollution Damage, Nov. 29, 1969, 973 U.N.T.S. 3, reprinted in 9 I.L.M. at 45 (1970); 1963 Vienna Convention on Civil Liability for Nuclear Damage, reprinted in 2 I.L.M. at 727 (1963); 1962 Brussels Convention on the Liability of Operators of Nuclear Ships, reprinted in 57 Am. J. INT'L L. at 268 (1963); Paris Convention on Third Party Liability in the Field of Nuclear Energy, July 29, 1960, O.E.C.D. Doc. C (60) 93, reprinted in 55 Am. J. INT'L L. at 1082 (1961) and the 1963 Additional Protocol, reprinted in 2 I.L.M. at 685 (1963).

^{40.} Often mentioned in this connection is the famous case of *Rylands v. Fletcher*, 3 L.R.-E. & I. App. (H.L. 1868), which a century ago laid down the rule of strict liability for injuries caused as a result of use of land. *See also* Handl, *International Liability of States for Marine Pollution*, 21 CAN. Y.B. INT'L L. 85, 100 n.67 (1983) (for references to other jurisdictions).

^{41.} See Handl, supra note 40, at 101 n.69.

^{42.} Id. at 101. See also the statement made by the Canadian government in its claim vis-a-vis the Soviet Union for compensation for damages resulting from the Cosmos 954 crash: "Statement of Claim, Annex A to Note FLA 268 of Jan. 23, 1979 from

Distinguished jurists also support the concept.⁴³ Aware of the seriousness of increasing incidences of transnational risks, C. Wilfred Jenks, for instance, has urged all those who regard international law as a "body of living principle," responsive to the "growing needs of international society," to accept strict liability for ultra-hazardous activities.⁴⁴ More recently, Ian Brownlie, in his treatise on state responsibility, has reaffirmed his earlier proposition⁴⁵ that liability for "extra-hazardous operations" may be the outcome of the application of "normal principles of international responsibility" which govern the relations of adjacent territorial sovereigns.⁴⁶

Strict liability may not always be the desirable regime for activities which have foreseeable injurious consequences. Some form of risk-sharing or balancing of interests may be appropriate in certain circumstances.⁴⁷ Nonetheless, the state practice and literature alluded to above are primarily concerned with the *risk inherent in the activities themselves*. In addition, the authorities cited reaffirm the legal responsibility of a state for activities within its territory or control which may give rise to consequences affecting the use or enjoyment of areas beyond the limits of that state's jurisdiction. Also acknowledged is the need to invoke a new system of obligations in which the source of an international liability is the causal connection between an activity and the occurrence of serious harm rather than a wrongful act of state.

Where no actual damage has occurred a question may still be raised as to what constitutes a "risk" for the purpose of establishing international liability. For example, would the mere existence of a nuclear plant near a border provide the basis for a state's liability?

Kiss doubts whether it is realistic to think that states would accept liability under such circumstances.⁴⁸ Handl, on the other hand, in an article discussing this particular issue, concludes that it is generally impermissible for a state to decide unilaterally to locate an activity involving a major risk of transboundary harm in a fron-

the Department of External Affairs of Canada to the Soviet Ambassador to Ottawa," reprinted in 18 I.L.M. at 889, 902 (1979).

^{43.} See Handl, supra note 37, at 332 n.125; see also Dupuy, International Liability for Transfrontier Pollution, in TRENDS IN ENVIRONMENTAL POLICY AND LAW 363, 377 (International Union for Conservation of Nature and Natural Resources Environmental Policy and Law Paper No. 15) (1980).

^{44.} Jenks, supra note 35, at 177.

^{45.} See I. Brownlie, Principles of International Law 285 (1979).

^{46.} I. Brownlie, State Responsibility 50 (1983).

^{47.} See International Law Commission Debates, 1851st Meeting of June 29, 1984, reprinted in [1984] 1 Y.B. INT'L L. COMM'N at para. 24. See also Magraw, Transboundary Harm: The International Law Commission's Study on "International Liability," 80 Am. J. INT'L L. 305, 327 (1986) (on the advantages and shortcomings of each approach).

^{48.} See Kiss, supra note 11, at 1077.

tier area. He contends that such an action constitutes an implicit abrogation of the neighbouring state's territorial sovereignty and is also an inefficient and hence unreasonable allocation of shared resources.⁴⁹

Yet, Handl does not suggest that the mere construction of a nuclear power plant near the border gives rise to a legal claim, or that injunctive relief should be issued to prevent states from engaging in an activity which creates a recognisable risk of transboundary harm. Rather, he believes that where a significant risk (i.e. "risk of serious harmful consequences which cannot be eliminated by reasonable safety measures")⁵⁰ is suspected, the source state is under a legal obligation to take certain *procedural* steps—such as, the provision of prior information, the offer or the acceptance of a request for consultation, and performance of a transboundary impact assessment—aimed at minimising the risk.⁵¹ It is the enforcement of *this* obligation that the potentially affected state would be entitled to demand.

Handl further contends that such procedural restraints on unilateral state action (or, at a minimum, the duty of prior information and consultation) form part of customary international law.⁵² This contention is generally supported by state practice as evidenced in multilateral⁵³ and bilateral⁵⁴ agreements, resolutions of interna-

^{49.} Handl, An International Legal Perspective on Conduct of Abnormally Dangerous Activities on Frontier Areas: The Case of Nuclear Power Plant Siting, 7 ECOLOGY L.Q. 1 (1978).

^{50.} Handl, Liability as an Obligation Established by a Primary Rule of International Law. Some Basic Reflections on the International Law Commission's Work, 16 NETH. Y.B. INT'L L. 49, 75 (1985).

^{51.} In

^{52.} Id. See also Handl, The Environment, International Rights and Responsibilities, 74 AM. Soc. INT'L L. PROC. 223, 224-28 (1980); and MANILA REPORT, supra note 16, at 407.

^{53.} See, e.g., Convention on Long-Range Transboundary Air Pollution, art. 8; 1972 Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft, Feb. 15, 1972, art. 5, 932 U.N.T.S. 3, reprinted in 11 I.L.M. at 262 (1972); Convention on the Pollution of the North Sea by Oil, June 9, 1969, art. 6, 704 U.N.T.S. 3, reprinted in 9 I.L.M. at 359 (1970). More recently, see also Convention on the Law of the Sea, art. 204-06, which obligates states having reasonable grounds for expecting that planned activities under their jurisdiction or control may cause substantial pollution of the marine environment to "assess potential effects of these activities" and to "communicate reports of them."

^{54.} See the Agreement on the Exchange of Information on Weather Modification Activities, Mar. 26, 1975, United States-Canada, art. 3, 26 U.S.T. 540, T.I.A.S. No. 8056, which provides an example of an area where a duty to provide information is commonly embodied in relevant agreements. Another such area is nuclear activities in border districts. See, e.g., Agreement Regulating the Exchange of Information Along the Border, July 4, 1977, Denmark-Federal Republic of Germany, reprinted in 11 I.L.M. at 214 (1978). For specific incidents depicting bilateral exchanges of information, see the Manila Report, supra note 16, at 406-07.

tional organisations,⁵⁵ and declarations and statements of principles adopted at international conferences or made by international⁵⁶ and regional⁵⁷ organisations. Indeed, in light of such state practice,⁵⁸ the ILC Special Rapporteur has concluded in a proposed Schematic Outline⁵⁹ that a "compound primary obligation" consisting of a se-

Under Art. 16 States must provide prior and timely notification and relevant information to the other concerned States, and make an environmental assessment of planned activities which may have significant transboundary effects. . Art. 17 stipulates that States of origin shall consult at an early stage and in good faith with other concerned States regarding existing or potential transboundary interference with the use of a natural resource or the environment.

- 57. Regional organisations such as the Inter-American Judicial Committee and the Asian-African Legal Consultative Committee both included a duty of prior consultation in respective documents (1965 Draft Convention on the Use of International Rivers and Lakes for Industrial and Agricultural Purposes and the Draft Proposition VIII on the Law of International Rivers) cited in Handl, The Principle of Equitable Use as Applied to Internationally Shared Natural Resources: its Role in Resolving Potential International Disputes Over Transfrontier Pollution. 14 REVUE BELGE DE DROIT INTERNA-TIONAL 40, 66 (1978-79); see also Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, Mar. 24, 1983, arts. 9(2), 12-13, reprinted in 22 I.L.M. at 227, 230 (1983); Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region, approved Mar. 23, 1981, arts. 13-14, reprinted in 20 I.L.M. at 746, 750 (1981); Athens Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources, approved May 17, 1980, art. 13, reprinted in 19 I.L.M. at 869, 873 (1980); the Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment From Pollution, April 24, 1978, arts. 9-11, reprinted in 17 I.L.M. at 511, 516 (1978). Note also the recently concluded Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, Nov. 24, 1986, art. 16, reprinted in 26 I.L.M. at 41, 48 (1987).
- 58. Collated in Survey of State Practice Relevant to International Liability for Injurious Consequences Arising Out of Acts Not Prohibited by International Law Prepared by the Secretariat, U.N. Doc. ST/LEG/15 (1984).

^{55.} See, e.g., U.N. General Assembly Resolution on Environmental Cooperation Concerning Natural Resources Shared by States, U.N. Doc. A/RES/3129 (No. 28), reprinted in 13 I.L.M. at 232-33 (1974), which stipulates that co-operation between countries sharing natural resources must be developed "on the basis of a system of information and prior consultation within the framework of the normal relations existing between them." Such a directive is echoed in the Charter of Economic Rights and Duties of States, art. 3, supra note 1, at 255.

^{56.} See, e.g., OECD Principles, supra note 19, which specify that countries should exchange "all relevant scientific information and data on transfrontier pollution" and should "promptly warn other potentially affected countries of any substances which may cause any sudden increase in the level of pollution in areas outside the country of origin of pollution." Similar prescriptions are included in UNEP Draft Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States, Principles 6 and 7, reprinted in 17 I.L.M. at 1097, 1098-99 (1978) [hereinafter UNEP Draft Principles]; see also Rules 5 and 6 of the Montreal Report, supra note 9; for a recent restatement of such duties, see Legal Principles for Environmental Protection and Substainable Development, adopted by the World Commission on Environment and Development, reprinted in 16 Envtl. Pol'y & L. at 168, 169 (1986) [hereinafter WCED Legal Principles]:

^{59.} Third Report, supra note 31, at 29.

ries of four duties to prevent, inform, negotiate and repair does exist. This obligation, which derives its normative base from international law principles of cooperation, solidarity, good faith, equity and bon voisinage (good neighbourliness) between the "acting (source) state" and "affected state," 60 is of great importance in that it provides states with the opportunity to assess extraterritorial danger which threatens them, to explore alternatives to environmentally harmful activities and to prevent significant transboundary damage before it occurs.

In effect, such an obligation is essential to the compliance with the "international legal mandate" ⁶¹ embodied in Principle 21 of the Stockholm declaration. Only by exchanging "all relevant information," ⁶² establishing a joint fact-finding machinery, ⁶³ entering into negotiations with a view to constructing a conventional regime for reconciling conflicting interests ⁶⁴ and by paying reparations if harm occurs, ⁶⁵ can states ensure that activities within their jurisdiction or control do not cause transboundary injury.

These basic requirements also constitute part of an overall primary duty of rational and responsible eco-management embodied in the concept of "shared natural resources." Best articulated in UNEP's Draft Principles of Conduct, 7 this concept enjoins each state "to avoid to the maximum extent possible and to reduce to the minimum extent possible" the adverse environmental effects beyond its jurisdiction of the utilization of a shared natural resource. 68

Indeed, notwithstanding the difference in focus between the "shared resources" concept and the sic utere principle, between conservation and the protection of sovereign rights, ⁶⁹ both generate similar obligations at the intragovernmental level with respect to environmental assessments, notification, exchange of information, consultation, and providing equal access to administrative and judicial proceedings. ⁷⁰

^{60.} See Report by the International Law Commission on the Work of the 35th Session, U.N. GAOR, 38th Sess. Supp. (No. 10) at 197, U.N. Doc. A/38/10 (1983).

^{61.} Handl, supra note 52, at 224.

^{62.} Schematic Outline, supra note 32, § 2, art. 1.

^{63.} Schematic Outline, supra note 32, § 2, art. 6.

^{64.} Schematic Outline, supra note 32, § 3, art. 1(c).

^{65.} Schematic Outline, supra note 32, § 4.

^{66.} See the discussion of the concept and its expression in positive international law in Kiss, supra note 11, at 1080-83.

^{67.} UNEP Draft Principles, supra note 56.

^{68.} Kiss, supra note 11, at 1081.

^{69.} For a discussion of the different approaches to the question of transfrontier pollution, see Riphagen, The International Concern for the Environment as Expressed in the Concepts of the "Common Heritage of Mankind" and of "Shared Natural Resources," in TRENDS IN ENVIRONMENTAL LAW AND POLICY, supra note 43, at 343-62.

^{70.} Compare UNEP Draft Principles, supra note 56, with OECD Principles, supra note 19.

Thus, whether for reasons grounded in fundamental rules of sovereignty or local and regional solidarities, a state contemplating an activity which may create a risk of significantly affecting the environment of another state (e.g., the construction of a nuclear plant on its borders) is legally bound to give timely notice to the affected party, provide relevant information, engage in consultation, and enter into negotiation with a view to concluding an environmental cooperation agreement and minimising any potential threat.

Needless to say, implementation and enforcement of such procedural duties raise some practical problems. Daniel Magraw notes, 71 for instance, the lack of standards for determining the relevancy and availability of information to be provided by the source state or the validity of claims by the latter that it could not disclose all relevant and available information for security reasons. Other factors which may pose difficulties are the degree to which the source state may be held accountable for the activities of private persons and the response of the private sector to a possible governmental incursion in the course of information gathering.

An attempt to overcome these problems by means of bilateral agreements may encounter additional problems which are inherent in arrangements of this type, namely the differing environmental objectives and domestic legal regimes of the parties, lack of coordination between the various agencies responsible for ecological matters, or a tradition of mistrust between the nations involved.⁷²

At the same time, the prevalence of successful binational cooperative efforts, whether in the form of joint commissions, 73 joint contingency plans, 74 or specific bilateral agreements, 75 lends support to the proposition that in the absence of clearly defined and comprehensive international standards pertaining to the procedural

^{71.} See Magraw, supra note 47, at 329.

^{72.} See Sinclair, The Environmental Cooperation Agreement Between Mexico and the U.S.: A Response to the Pollution Problem of the Netherlands, 19 CORNELL INT'L L.J. 97 (1986) (discussion of such political and institutional obstacles).

^{73.} Particularly in the common management of water resources (e.g., international rivers such as the Rhine and Moselle, and international lakes such as the Lake of Constance and Lake Geneva.) See Nanda, Emerging Trends in the Use of International Law and Institutions for the Management of International Water Resources, 6 Den. J. INT'L L. & POL'Y 239 (1976).

^{74.} See, e.g., 1974 Joint Canada-US Marine Pollution Contingency Plan and 1979 Canada-Denmark Marine Pollution Contingency Plan (analysed in Rochon, Remarks, Am. Soc. INT'L L. PROC. 234-37 (1980)).

^{75.} Such agreements typically cover weather modification, nuclear activities in frontier areas, utilisation of internationally shared fresh-water resources and activities in the marine environment. See sources cited supra note 54. See also Handl, supra note 52, at 225. Recent examples include Agreement to Cooperate in the Solution of Environmental Problems in the Border Area, Aug. 14, 1983, Mexico-United States, reprinted in 22 I.L.M. at 1025 (1983).

duties imposed on source states, such standards may nonetheless be established under bilateral arrangements.

Enforcement of the relevant duties and standards involves perhaps more fundamental questions, such as against whom the duties should be enforced; especially when the activity potentially leading to transboundary harm is undertaken by private persons or is a joint venture of some type.

It appears, however, that the answer to this question lies in the key concept of "control." International responsibility for transnational injury arising out of dangerous activity is grounded in the control asserted and exercised by the state where such activity is located. As Handl has observed, "The state's liability flows. . .from that fundamental notion of guarantee owed the international community as the tit for tat for international recognition of the state's exclusive jurisdiction over its territory." Since private management of activity of this kind is bound to be subject, ultimately, to authorisation and supervision by the controlling state, the latter is directly implicated. It is, therefore, the controlling state's duty to supply pertinent data regarding transboundary risks arising out of an activity within its control and to enter into relevant consultations.

Another issue of enforcement relates to whom the duties are owed. For example, can they be enforced by individuals in the "affected state?" A positive answer to this question may be given on the basis of OECD Resolutions and the UNEP Code of Conduct.⁷⁹ Both sources recommend the introduction by countries of a system under which any actual or potential victim of transboundary pollution would have recourse, for the purpose of prevention and compensation to the authorities (administrative or judicial) of the

^{76.} Handl, supra note 37, at 559 n.156. See also, in this connection, the International Court of Justice's determination in its Advisory Opinion on the Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) Notwithstanding Security Council Resolution 276, 1971 I.C.J. 16, at 54, para. 118, that physical control of a territory, rather than sovereignty or legitimacy of title, constitutes the basis of state liability for acts affecting the other states.

^{77.} See, e.g., reference to a comparative study on national legislation of member states of the EEC in Kiss, *supra* note 11, at 1077 n.44.

^{78.} Handl, supra note 37, at 558. See also the observations made during the 185th meeting of the International Law Commission, supra note 47, to the effect that imputability is "a function of a state to control the activity."

^{79.} See OECD Principles, supra note 19, at 245, tit. D, "Principle of Equal Right of Hearing"; Recommendation on Equal Right of Access in Relation to Transfrontier Pollution, O.E.C.D. Doc. C (77) 55 (Final), reprinted in 15 I.L.M. 1218 (1976); Recommendation for the Implementation of a Regime of Equal Right of Access and Non-Discrimination in Relation to Transfrontier Pollution, O.E.C.D. Doc. C (77) 28 (Final), reprinted in 16 I.L.M. at 977 (1977); and UNEP Draft Principles, supra note 56, at 1097, 1099. A similar provision is contained in article 20 of WCED Legal Principles, 16 ENVIL. POL'Y & L. at 169 (1986).

country where the risk originated. Furthermore, once admitted to the administrative and judicial network, the alien victim must be dealt with in the same way as local citizens would be treated in comparable circumstances.

Such entitlements have also been incorporated into the 1974 Nordic Environmental Protection Convention.⁸⁰ Unfortunately, the initiative taken by the members of the Nordic Council (Denmark, Finland, Norway and Sweden) generally has not been followed by other states, and, while development in this direction may be discerned,⁸¹ it is generally difficult to claim recognition of a "right to equal access" under customary international law.

As a matter of fact, in the present mood of states, any overly formal enforcement structure is likely to encounter a fair measure of resistance. It was such a realistic assessment of states' attitudes which lead the Special Rapporteur to adopt a soft approach⁸² in his Schematic Outline of International Liability for Injurious Consequences Arising Out of Acts Not Prohibited by the Law.⁸³ Modeled on the system of responsibility constructed under the 1982 United Nations Convention on the Law of the Sea,⁸⁴ the Schematic Outline reposes multiple discretions in states but furnishes them with rules or guidelines for accommodating the rights and interests of others.⁸⁵

Thus, the obligations to inform, consult, and negotiate⁸⁶ are emasculated by the stipulation that failure to comply with the relevant prescriptions would "not in itself give rise to any right of ac-

^{80.} Convention on the Protection of the Environment Between Denmark, Finland, Norway, and Sweden, Feb. 19, 1974, reprinted in 13 I.L.M. at 591, 592 (1974). Accordingly, any individual who is affected or may be affected by nuisance from harmful activities has the right to challenge the permissibility of such activities before the appropriate court or administrative authority of that state (as well as to appear against any decision) regardless of the fact that he is not a citizen of that state but of another contracting state.

^{81.} See, e.g., the 1982 Canada-United States Uniform Transboundary Pollution Reciprocal Access Act (also known as the Draft Treaty on a Regime of Equal Access and Remedy in Cases of Transfrontier Pollution), analysed in Rosencranz, The Uniform Transboundary Pollution Reciprocal Access Act, 15 ENVTL. POL'Y & L. 105 (1985), and reprinted in Comment, Who'll Stop the Rain: Resolution Mechanisms for U.S.-Canadian Transboundary Pollution Disputes, 12 Den. J. Int'l L. & Pol'Y at 51, 87-88 (1982). Rosencranz also notes that even without an international agreement U.S. courts have entertained suits involving extraterritorial damages from pollution flowing across the United States-Canada Border. 15 ENVTL. POL'Y & L. 105.

^{82.} On a general trend towards "relative normativity," see Weil, Towards Relative Normativity in International Law, 77 Am. J. INT'L L. 413 (1983). For a "soft" criticism of the soft approach taken by the Special Rapporteur, see Handl, supra note 50, at 72-76. 79.

^{83.} Fourth Report, supra note 33.

^{84.} For an analysis of the Law of the Sea scheme, see Allott, *Power Sharing in the Law of the Sea*, 77 Am. J. INT'L L. 1, 26-27 (1983).

^{85.} See Third Report, supra note 31, paras. 30-33.

^{86.} Schematic Outline, supra note 32, §§ 2-3.

These obligations are not, however, without legal tion."87 consequences, and legitimate expectations are created that "unless it is otherwise agreed, the acting state has a continuing duty to keep under review the activity that gives or may give rise to loss or injury: to take or continue whatever remedial measures it considers necessary and feasible to safeguard the interests of the affected state: and, as far as possible, to provide information to the affected state about the action it is taking."88 Additionally, "[t]o the extent that the acting state has not made available to an affected state information that is more accessible to the acting state concerning the nature and effects of an activity and the means of verifying and assessing" that information, the affected state shall be allowed "a liberal recourse to inferences of fact and circumstantial evidence in order to establish whether the activity does or may give rise to injury."89 Moreover, failure to cooperate at the preliminary phases of prevention, fact finding, consultation, and negotiation would place the deviant state in a disadvantageous position at the reparations stage if a loss or injury occurred.90

It appears, therefore, that international law's classical dilemma, compliance without compulsion, may be largely avoided in the context of environmental prescriptions through informal constraints. Furthermore, evidence may be adduced to show that although there is no enforceable duty binding states under international law to refrain from creating or authorising the creation of transfrontier risks, American practice at least has now evolved into an acknowledgment of a duty "to abstain from proposed action if the damage could be serious and if available safeguards do not give substantial assurances of safety."91 Indeed, according to one writer, transfrontier risk creation in certain circumstances may be iusticiable and the proper subject of injunctive relief. 92 At minimum, prospective harm to a neighbouring state constitutes an undeniable component⁹³ of a "balancing of interests" process on which environmental decision-making must be premised in order to "ensure to acting states as much freedom of choice in relation to activities

^{87.} Schematic Outline, supra note 32, § 2, art. 8.

^{88.} *Id*

^{89.} Schematic Outline, supra note 32, § 5, art. 4. A quasi res ipsa loquitur of this type—and possibly the inspiration for the present provision—is contained in the ICJ's judgement in the Corfu Channel Case (U.K. v. Alb.), 1949 I.C.J. 4, at 18 (Judgement of Apr. 9).

^{90.} Third Report, supra note 31, paras. 26, 28, 32.

^{91.} Kirgis, supra note 27, at 318. See, in particular, the discussion of relevant examples, id. at 291-320. For similar instances of other states' practice, see MANILA REPORT, supra note 16, at 401-2.

^{92.} See Schneider, supra note 23, at 611-13.

^{93.} For a study of the responsiveness of governments to environmental risks inherent in their activities, see Wetstone & Rosencranz, Transboundary Air Pollution in Europe: A Survey of National Responses, 9 COLUM. J. ENVTL. L. 1 (1983).

within their territory or control, as is compatible with adequate protection of the interests of affected states."94

While the parameters of constraints are not always readily ascertainable, the freedom of states to use their shared environment is clearly circumscribed by internationally acknowledged norms. States' decision-making processes concerning activities which are likely to have transboundary effects have transcended national boundaries and become a matter of international concern. Such internationalisation has been achieved through recognition of duties skillfully consolidated by the International Law Commission as a primary obligation of prevention, information, negotiation, and reparation. Notwithstanding the difficulties in implementation and enforcement, and despite the prevalence of soft law, a framework has been created for a cooperative regulatory regime, conventional or otherwise, which is both desirable and workable.

III. CHINA'S PERCEPTION OF ITS INTERNATIONAL OBLIGATIONS WITH RESPECT TO THE ENVIRONMENT

Under international law states may incur international responsibility for transboundary harm. Hence, we need to address the issue of whether, and to what extent, China considers itself bound by international norms concerning the environment.

An insight to China's international stand on environmental questions may be derived from its pronouncements during the 1972 United Nations Conference on the Human Environment held in Stockholm.⁹⁵ While refusing to take part in voting on the Declaration adopted by the Conference because of the lack of consensus on all the Declaration's clauses,⁹⁶ the Chinese delegation nonetheless voiced its strong support for the Conference⁹⁷ and its approval of

^{94.} Schematic Outline, supra note 32, § 5, art. 1. The relevant factors to such a balancing of interests are listed in section 6 and include: the degree of probability and seriousness of injury; the existence of preventive or alternative means; the importance of the activity to the acting state; the economic viability of the activity; the capacity of the acting state to take measures of prevention or make reparation or undertake alternative activities; the interests of both the acting and affected states and their compatibility with the interests of the general community. Id., § 6. For a review of international legal practice sanctioning a balance of interests approach and legal literature recommending it, see Handl, Balancing of Interests and International Liability for the Pollution of International Watercourses: Customary Principles of Law Revisited, 13 CAN. Y.B. INT'L L. 156, 177-86 (1975).

^{95.} See Report of the U.N. Conference on the Human Environment, Stockholm June 5-16 1972, U.N. Doc. A/CONF.48/14/Rev.1 (1973).

^{96.} See Chinese Delegation Makes Statement on "Declaration on Human Environment," PEKING REV. June 23, 1972, at 8.

^{97.} See the statement of Keng Te (leader of the Chinese delegation) reprinted in China's Stand on the Question of Human Environment, PEKING REV. June 16, 1972, at 5. On the active and influential role played by China at the Stockholm conference, see

key principles incorporated in the Declaration, particularly those which the delegation succeeded in reformulating in accordance with its own Ten Cardinal Principles on Amending the Declaration on Human Environment.⁹⁸

China joined other participant states in declaring that "protection and improvement of the human environment is a major issue which affects the well being of peoples and economic development throughout the world; it is the urgent desire of the peoples of the whole world and the duty of all governments." Chinese endorsement was also extended to the principle of international and regional cooperation which emphasises international environmental law, subject, however, to the overriding principle of state sovereignty.

China's commitment to environmental protection is clearly evident both in international¹⁰¹ and internal¹⁰² pronouncements, yet because its main preoccupation remains with protecting its national interests, China overlooks the transboundary aspects of the environment.¹⁰³ Chinese willingness to be bound by general norms (particularly where these are perceived as a vehicle for promoting a new world order)¹⁰⁴ is, moreover, circumscribed by several characteristic factors: the country's ad hoc approach to international legal problems;¹⁰⁵ the complex attitude it displays towards environmental issues¹⁰⁶ leading China to adopt subjective and inconsistent posi-

Sohn, The Stockholm Declaration on the Human Environment, 14 HARV. INT'L L.J. 423 (1973).

^{98.} Ten Cardinal Principles on Amending the Declaration on Human Environment, reprinted in PEKING REV. June 23, 1972, at 8 [hereinafter Ten Cardinal Principles].

^{99.} See Report of the U.N. Conference on the Human Environment, U.N. Doc. A/CONF.48/WG1/CRP23 (1972).

^{100.} See Principle 10, Ten Cardinal Principles, supra note 98.

^{101.} See Report of the U.N. Conference on the Human Environment, Stockholm June 5-16, 1972, U.N. Doc. A/CONF.48/14/Rev.1 at 3.

^{102.} See, e.g., CONST. OF THE PEOPLE'S REPUBLIC OF CHINA (1982), art. 26, reprinted in 2 Laws and Regulations of the People's Republic of China at 15 (1984), which reaffirms the State's fundamental responsibility to protect the natural environment needed for the life of the people; and the Draft Environmental Protection Law of the People's Republic of China, reprinted in Foreign Broadcast Informantion Service-China, Sept. 18, 1979 at L1, which stipulates:

[[]T]he function of the Environmental Protection Law of the PRC is to ensure during the construction of a modernised socialist state, rational use of natural environment, prevention and elimination of environmental pollution and damage to ecosystems, in order to create a clean and favourable living and working environment, protect the health of the people and promote economic development.

^{103.} Lester Ross and Mitchell Silk note that numerous Chinese writings in the field do not address the question of pollution across jurisdictions. Environmental Law and Policy in the People's Republic of China 73 (1987).

^{104.} See S. Kim, China, the U.N., and World Order 492 (1979).

^{105.} See J. Greenfield, China and the Law of the Sea, Air, and Environment 230 (1979).

^{106.} See Gresser, The Principle of Multiple Use in Chinese Environmental Law, Do-

tions on selected topics; 107 the lack of a true international perspective, even when international law principles are referred to; 108 vagueness in official statements; 109 and the extreme demands to which China subjects the international decision-making process. 110

As a developing country, China may also claim that its pressing developmental needs should be accorded priority over any international environmental obligations of the type discussed in the first part of this article. Such sentiments lay behind statements made by the Chinese delegation to the 1972 Stockholm Conference. The delegation argued for a distinctive treatment of developing countries in view of their urgent need "to develop their national economy, build a modern industry and modern agriculture and achieve complete economic independence so as to safeguard and consolidate their national independence" as against the responsibility of some highly developed countries for the "destruction of the environment of other countries and the impairment of the environment of the world."

At the same time, China does not seem to take an extreme position on the relationship between development and the environment. In fact, it emphasises their mutual harmony and perceives them as "opposites constituting a unified whole." It also accepts the "polluter pay principle," proclaiming that "[a]ll countries have the right to protect their environment from pollution from outside.

ING BUSINESS WITH CHINA 447, 531 (1983) (statement of the Chinese Representative in the First Session of U.N.E.P. Governing Council): "[E]nvironmental problems may vary from one country to another due to the differences in their respective natural conditions, levels of economic development, social systems and positions held in the international political and economic fabric."

^{107.} For example, China's distinction between "just and unjust pollution" as is reflected in its justification of atmospheric tests for national security considerations. See S. KIM, supra note 104, at 490.

^{108.} See J. GREENFIELD, supra note 105, at 234-35.

^{109.} Id. at 230-31.

^{110.} As Jeanette Greenfield notes in the conclusion to her comprehensive study: [T]he Chinese will not accept any provisions of a proposed international document determined by any international committee, if those provisions were derived by methods not approved of. . . . [They will] never consent to be bound by any instrument which while generally approved of contains any items not positively supported by the PRC.

^{111.} Gresser, supra note 106, at 527. Some support for the Chinese position is reflected in Principle 23 of the Stockholm Declaration, which provides:

Without prejudice to such criteria as may be agreed upon by the international community or to standards which will have to be determined nationally, it will be essential in all cases to consider the system of values prevailing in each country and the extent for the most advanced countries but which may be inappropriate and of unwarranted social cost for the developing countries.

^{112.} See Gresser, supra note 106, at 540-41 (statement of the Chinese Representative to the Meeting of the United Nations General Assembly Economic and Financial Committee, Oct. 21, 1977).

Any victim country whose environment is seriously polluted and poisoned by harmful substances discharged or dumped at will by another country is entitled to claim compensation from the culprit country."¹¹³

It is possible, therefore, that rather than deny responsibility under the international law of transboundary harm, Chinese authorities will follow the line adopted in the Schematic Outline. 114 While the Outline does not expressly provide preferential treatment for developing countries, it employs a balance of interests analysis, which may have the effect of giving special consideration to the concerns of developing countries. 115 Such a proposition dovetails with the concept espoused in the 1982 Convention on the Law of the Sea, 116 namely, one standard of care for all nations combined with special financial and technical assistance to developing states in order to help them meet this uniform standard. 117

It is also evident that the Chinese government is attempting, if insufficiently, to discharge its international obligations with respect to the Daya Bay nuclear plant. China has promised relevant information¹¹⁸ and has given verbal assurances in relation mainly to remedial measures, including the creation of coordinated contingency plans¹¹⁹ and the establishment of an emergency response centre which would provide immediate technical support in the event of an accident at the plant.¹²⁰ A Chinese licencing authority, the National Nuclear Safety Bureau, has also been established,¹²¹ although neither a basic law on atomic energy nor specific guidelines follow-

^{113.} Principle 7, Ten Cardinal Principles, supra note 98.

^{114.} See Schematic Outline, supra note 32.

^{115.} For a detailed discussion of the ILC's approach, see Magraw, The International Law Commission's Study of International Liability for Nonprohibited Acts as it Relates to Developing States, 61 WASH. L. REV. 1041 (1986).

^{116.} Convention on the Law of the Sea, supra note 18. The PRC is a signatory to the Convention.

^{117.} See id., arts. 202-203 (dealing with "Protection and Preservation of the Marine Environment").

^{118.} See the reference to the Chinese promise to release environmental impact and safety analysis reports in LEG. Co. PROC. 1575 (Oct. 15, 1986) (H.K.). Unfortunately, what was hailed as a promise by Chinese Vice Premier Li Peng to form an independent advisory committee with participation of Hong Kong people [see report by Legislative Councillors on their visit to Beijing on September 20, 1986, in LEG. Co. PROC. at 58, 63, 85, 87 (Oct. 15, 1986) (H.K.)], which would have allowed Hong Kong first hand information concerning each stage of the construction of the Daya Bay plant, has failed to materialise. See Yu, HK Not on Daya Bay Safety Board, S. China Morning Post, May 1987, at 1-2; Ho, Chinese Statement Shatters HK's Hopes. No "Monitor" Role in Daya Project, H.K. Standard, May 9, 1987, at 3.

^{119.} See LEG. Co. PROC. 85 (Oct. 15, 1986) (H.K.).

^{120.} Id. See also Ho, Direct Link to Monitor Daya Plant Mishaps, H.K. Standard, Mar. 31, 1987, at 3.

^{121.} It should be noted, however, that the Bureau is by no means an independent watchdog, since the director of the National Nuclear Safety Board is also the director of the Scientific and Technological Commission under the Ministry of Nuclear Industry;

ing the standards approved by the International Atomic Energy Agency (of which China is a member) has yet been formulated. 122

On a more formal international level, China, although not officially a party to the 1963 Vienna Convention on Civil Liability for Nuclear Damage. 123 has accepted the 1963 Vienna Convention in spirit. Specifically, China has acknowledged the liability of the Dava Bay plant operators for damage from nuclear incidents. It has also agreed to indemnify the operators if their insurance coverage is inadequate to satisfy claims for compensation, but not in excess of an arbitrarily fixed limit of H.K.\$630 million.¹²⁴ China has also signed two multilateral conventions¹²⁵ which together require it to provide early notification of any uncontrolled release of radioactive materials from civilian installations and to provide assistance in the event of a nuclear accident. In order to demonstrate "China's sincerity in committing itself to international cooperation in nuclear safety" its representative made a "special statement of voluntary application" which extended the Conventions to accidents not originally covered by them. 126

At a practical level, however, while informal discussions and other exchanges have been reported, 127 regrettably no attempts have been made by the Chinese to enter into negotiations with a view to forming a comprehensive conventional regime that would deal with and regulate the complex environmental issues arising from the construction of a nuclear power plant in such a close proximity to Hong Kong.

in other words, the governmental agency that constructs and operates the nuclear plant works closely with the one that supervises it.

^{122.} An indication that these are planned has been given. See LEG. Co. PROC. 70-71 (Oct. 15, 1986) (H.K.).

^{123.} See sources cited supra note 36. China is not party to any other convention on liability for nuclear damage, such as the 1960 Paris Convention on Third Party Liability in the Field of Nuclear Energy and the 1963 Additional Protocol.

^{124.} The operator of the plant, the Guangdong Nuclear Power Joint Venture Company (GNPJVC), will be liable for the first HK\$37.8 million. Objections were raised by local pressure groups against the low ceiling (less than half the cost of the plant) for claims. See Innis, Daya Bay Limit for Damages Condemned, S. China Morning Post, Apr. 2, 1987, at 1. It should be pointed out, however, that the amount in question does not fall below the minimum prescribed under the Vienna Convention which is U.S.\$5 million.

^{125.} Convention on Early Notification of Nuclear Accident, Sept. 26, 1986, reprinted in 25 I.L.M. at 1370 (1986); and Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, Sept. 26, 1986, reprinted in 25 I.L.M. at 1377 (1986) [hereinafter collectively referred to as Vienna Convention].

^{126.} See Vienna Convention, 25 I.L.M. at 1394.

^{127.} See the speech by the Financial Secretary reported in LEG. Co. PROC. 1133 (May 2, 1986) (H.K.).

IV. THE "AFFECTED STATE"—HONG KONG

While Hong Kong is entitled to demand that China comply with its duties under international environmental law, Hong Kong need not rely exclusively on China's response. A case for some form of unilateral action can be made, particularly where, as here, there is both private and governmental involvement on the part of the affected party. Given the magnitude of environmental risk which the Daya Bay project entails, 128 Hong Kong should have input in the relevant decision-making process. 129 This input could be satisfied either by conducting independent environmental impact assessments and channelling information concerning foreseeable transboundary harm or by establishing an objective fact-finding machinery that enjoys the power to make binding recommendations.

Indeed, initiatives of this type would be consistent with a contemporary trend of vesting states with greater powers to control external sources of environmental hazards.¹³⁰ However, in light of China's strong belief in sovereignty, particularly in the context of environmental norms,¹³¹ any local initiatives would most likely be interpreted as attempts to obstruct China's right to conduct its international affairs free from intervention.¹³²

^{128.} According to a Report on Daya Bay by the United Kingdom's Atomic Energy Authority at Harwell, there is a 1-in-333 chance of Hong Kong being devastated by an accident in the Daya Bay Plant's thirtieth year of operation. See Lee, Odds of N-Plant Accident 333 to 1, S. China Morning Post, May 1, 1987, at 3.

^{129.} See Schematic Outline, supra note 32, §§ 2(2), 2(4).

^{130.} Such a movement towards what Myres McDougal and Jan Schneider call "impact territoriality," The Protection of the Environment and World Public Order: Some Recent Developments, 45 Miss. L.J. 1085, 1112 (1974), is evidenced by the oil pollution damage conventions such as the 1969 International Convention on the High Seas in Case of Oil Pollution Casualties, reprinted in 9 I.L.M. at 25 (1969), which authorises parties to take such measures as may be necessary "to prevent, mitigate or eliminate grave and imminent danger to their threat of pollution of sea by oil, following upon a maritime casualty or acts related to such casualty, which may reasonably be expected to result in major harmful consequences." See also 1982 Convention on the Law of the Sea, supra note 18; and 1969 Bonn Agreement Concerning Pollution of the North Sea by Oil, reprinted in 9 I.L.M. at 359 (1970). States have also assumed extraterritorial powers to protect their environmental integrity by municipal legislation. See, e.g., Water Quality Improvement Act, Pub. L. No. 91-224, § 11, 84 Stat. 91 (1970), superseded by Pub. L. 92-500, § 311, 86 Stat. 816 (1972); Navigation Act, 1912-1973, 8 AUSTL. ACTS P.; Arctic Waters Pollution Prevention Act, CAN. REV. STAT. ch. A-12 (1985) (by which Canada claimed jurisdiction over an extensive area of the sea for antipollution measures); Oil in Navigable Waters Act, 1971, ch. 21.

^{131.} See J. GREENFIELD, supra note 105, at 231. See also Gresser, supra note 106, at 531 (statement by the Chinese Representative to the First Session of UNEP Governing Council):

[[]S]overeignty of all countries must be respected when an international action for the preservation and improvement of the human environment is taken. No one should impose its will upon others or outstretch itself. There must be no violation of sovereignty, no interference in internal affairs and no encroachment upon the interests of any country.

^{132.} The Chinese position has recently been made clear by top executives at the

By the same token the Hong Kong Government has not demonstrated its willingness to undertake preventive measures; instead it has deferred to "Chinese responsibility for designing, constructing and operating a Chinese nuclear plant on Chinese soil." Local initiatives have been limited to commissioning consultancy studies which would furnish the Hong Kong government with "an independent and expert evaluation of the environment and safety impact of the plant on Hong Kong." The aim of these studies is to enable Hong Kong "to provide public reassurance and to take effective action in the unlikely event of an accident." 134

It may be argued that Hong Kong is estopped from forcing preventive plans on China or generally contesting the legality of the Chinese decision to build the nuclear plant on its border because Hong Kong has actually consented to sharing both risk and the benefits that the plant will produce.¹³⁵ The Daya Bay project even received the Hong Kong Government's support at various stages of its development. To begin with, the Government did not object to a request, in 1979, by the China Light and Power Company (a Hong Kong company) for permission to enter into a feasibility study with the Guangdong Power Company (a utility in the People's Republic). The government accepted the study (which dealt with site selection, equipment and system design), endorsed the establishment and guaranteed financing of the Hong Kong Nuclear Investment Company¹³⁶ and, in January 1985, finally approved the contractual arrangements leading to the formation of a joint venture between the Hong Kong Nuclear Investment Company (as the Hong Kong partner) and the Guangdong Power Company. The Government also agreed to purchase electricity from the project. 137

Daya Bay plant, who confirmed that there would be no Hong Kong representation on any official body set up by the PRC to monitor nuclear safety and regulatory control at Daya Bay. See Yu, supra note 118; Ho, supra note 118. Hong Kong is nonetheless "allowed" to form its own "consultancy organization" on the nuclear project and cooperate with the Chinese body by liaising through the New China News Agency. Note also a suggestion made by a Legislative Councillor that China's objection to local participation stems from its perception of a "monitoring" role as a "superior decision-making power while monitoring in the sense of access to information and offering of advice may still be acceptable to it." Yu, Call for More Say in Daya Bay Project, S. China Morning Post, June 29, 1987, at 17.

^{133.} Comments by the Government on the Questions Raised by the Committee of Concern for Nuclear Energy and the UMELCO Members on the Daya Bay Nuclear Plant, LEG. Co. PROC. 1539, 1556 (July 16, 1986) (H.K.).

^{134.} Id. at 1555.

^{135.} For a discussion of the validity of such a claim, see Handl, supra note 49, at 7, 35-36, 42, 47.

^{136.} Note that the Secretary for Economic Services and the Secretary for Monetary Affairs are directors of this company. See Leg. Co. Proc. 1133 (May 7, 1986) (H.K.) (information supplied by the Financial Secretary).

^{137.} Formally, the involvement of the Hong Kong government flows from the provisions of a Scheme of Control, which requires China Light and Power Company (CLP)

At the same time, the Hong Kong government could argue that a "fundamental change of circumstances" has revoked its intial consent. To substantiate such an argument, it could cite the change in the economic considerations which led to the Government's approval of the project, 138 the occurrence of the Chernobyl disaster which provoked worldwide debate about the safety of civil nuclear energy programmes 139 and which was followed by cancellation and shelving of nuclear projects in many European (e.g. Holland, Belgium, Finland) and eastern Asian countries (such as Taiwan and the Philippines), 140 the strongly adverse reaction of the Hong Kong public, which was originally kept largely in the dark about the project, 141 and the rising social costs in general. 142

It should also be emphasised that the Hong Kong government's initial approval is only one factor in the balance of interests analysis proposed by the Special Rapporteur in the Schematic Outline. 143 Given the nature of the threat, Hong Kong, as the exposed state, is at least entitled to an equitable solution and a mutually accepted agreement regarding the conduct of the risk-creating activity at issue. 144 Hong Kong may demand, as its Legislative Councillors have already demanded, 145 that China sign a cross-boundary environmental cooperation agreement which will enable the local authorities to ensure that the plant operators are maintaining ap-

and its associates to submit a financing plan for consideration and approval by the Executive Council whenever major proposals for major additions to the company's system have been finalised. Strictly speaking, therefore, it would have been necessary only for the government to be formally consulted when the Daya Bay project was well advanced, but CLP took the view from the outset that the size and the significance of the project required the approval of the Hong Kong government and, as indicated, such approval was readily given. See Leg. Co. Proc. 1610-11 (July 16, 1986) (H.K.) (Financial Secretary's reply at the adjournment debate).

- 138. In 1981 the prices of crude oil and coal soared and the Daya Bay plant seemed to offer a cheaper alternative of electricity for the territory. With the recent steep decline in the prices of oil, coal, and natural gas, questions may be raised as to the financial viability of the project.
- 139. See, e.g., A. Moberg, Before and After Chernobyl: Nuclear Power in Crisis. A Country by Country Report (1986).
- 140. Leg. Co. Proc. 1601 (July 16, 1986) (H.K.) (information provided by Legislative Councillor Hui).
- 141. In an unprecedented move, one million signatures of Hong Kong people were collected against the construction of the Daya Bay nuclear power plant. See Leg. Co. Proc. 30 (Oct. 15, 1986) (H.K.). See also the report on public opinion polls in Majority Still Anxious Over Daya Bay Safety, S. China Morning Post, Mar. 23, 1987.
- 142. Worries about the Daya Bay plant appear to offset efforts to secure the prosperity and stability of Hong Kong in the time when it is going through a sensitive transition period. See the point raised by Legislative Councillor Tam in LEG. Co. PROC. 1581-2 (July 16, 1986) (H.K.).
 - 143. See Schematic Outline, supra note 32.
 - 144. See Handl, supra note 49, at 49.
- 145. See the report by the fact-finding delegation on their visits to the United States, Europe, and Japan in Leg. Co. Proc. (Aug. 30, 1986) (H.K.).

propriate safety standards, to monitor radioactivity at close range, to exchange information and to coordinate contingency planning for Hong Kong. 146 Such an agreement should require China to share technical information with Hong Kong, to cooperate in implementing any quality standards stipulated in the treaty, to notify Hong Kong of known potential environmental hazards, to combine technical resources, to abate any existing pollution-generating nuisance, to coordinate relevant national policies, and to prepare transnational environmental impact statements. Lastly, the agreement should require China to continue consulting with Hong Kong for the purpose of suppressing environmental risk and to prepare contingency plans which may be acted upon if an environmental harm within the ambit of the convention occurs.

In addition to establishing obligations and standards of conduct, the agreement should set up administrative machinery (e.g., an international joint commission) for the enforcement of the rules and standards prescribed by the instrument. Finally, a comprehensive agreement could also indicate the remedies available to victims of transnational harm emanating from the Daya Bay nuclear plant. To guarantee that these remedies will be effective, the agreement should establish a compensation fund for victim relief or a compulsory third-party insurance scheme on the risk-creator side.

In the absence of an all-embracing treaty regime, the Hong Kong people, as potentially affected subjects, are likely to find that the avenues of relief available to them are rather inadequate. Under international law, states have assumed responsibility for preventing transboundary harm and, to a reasonable extent, have been accorded ample powers to protect their national resources. International legal recourse, which includes both litigious and diplomatic procedures, is ill-adapted to affording viable remedies to private interests. 147 Specifically, individuals seeking diplomatic support for their claims may encounter "formidable barriers," 148 ranging from the establishment of a nationality link, justiciability of the dispute (i.e. a breach of legal, as distinct from moral or political, duty) and jurisdiction of the tribunal, to the most demanding requirement of exhaustion of local remedies. 149

^{146.} Id., ref. 5.3.3(1).

^{147.} See the thorough discussion in P. McNamara, The Availability of Civil Remedies to Protect Persons and Property from Transfrontier Pollution Injury (Veröffentlichungen ans dem Institut für Internationale Angelegenheiten der Universität Hamburg Bd. 9) (1981).

^{148.} See McDougal & Schneider, supra note 130, at 1110.

^{149.} See P. McNamara, supra note 147, at 62-66. McNamara would also add to the list of impediments the "ill-developed" state of the substantive environmental law on which the aggrieved party must reply. See, however, Handl, supra note 52, at 232, for the view that private pollution victims should not be required to exhaust local remedies in the country where the environmental harm originates because there is "no volun-

With the transfer of sovereignty over Hong Kong to China in 1997, the Hong Kong people, who are presently entitled to British diplomatic protection, may not be able to avail themselves of the ["burdensome"]¹⁵⁰ international option. Under the Sino-British Joint Declaration, ¹⁵¹ such protection would be extended neither in the Hong Kong Special Administrative Region nor in any other part of China. ¹⁵²

Any harm resulting from the Daya Bay nuclear plant may, nonetheless, give rise to a civil action under the laws of both China¹⁵³ and Hong Kong¹⁵⁴ and hence be subject to judicial proceedings in the courts of either party. However, due to the problems inherent in the rules of private international law,¹⁵⁵ the difficulties of enforcing injunctions outside the jurisdiction, and the fact that China is not legally obligated to allow aliens¹⁵⁶ access to its courts for injuries sustained outside its borders, private litigation may prove to be an ineffective remedy for the citizens of Hong Kong.

Private claims might be facilitated by intergovernmental meas-

tary link between the injured individual and the polluting state." See also Hoffman, State Responsibility in International Law and Transboundary Pollution Injuries, 25 INT'L & COMP. L.Q. 509 (1976) (attempting to vindicate public remedies).

^{150.} See McCaffrey, Transboundary Pollution Injuries: Jurisdictional Considerations in Private Litigation Between Canada and the United States, 3 CAL. W. INT'L L.J. 191, 193 (1973).

^{151.} See Draft Agreement Between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the People's Republic of China on the Future of Hong Kong, Sept. 26, 1984, reprinted in 23 I.L.M. at 1366 (1984).

^{152.} Given the extensive autonomy projected for Hong Kong and its semi-sovereign status for various purposes, the issue remains within the context of transboundary environmental harm.

^{153.} See GENERAL PRINCIPLES OF CIVIL LAW OF THE PEOPLE'S REPUBLIC OF CHINA, arts. 123-24, 34 Am. J. COMP. L. 715, 738 (1986), which provide (respectively) that "[w]here engaging in work which constitutes high risk to the surrounding. . . results in damages to another, there must be civil liability;" and "[w]here there is a violation of State provisions for the protection of the environment from pollution, and the pollution of the environment causes loss to another, there must be civil liability according to law."

^{154.} Under Hong Kong's common law, transboundary harm might be actionable if it falls within the ambit of trespass, negligence, nuisance, or occupier's liability.

^{155.} For example, reconciliation of conflicting competent forums, determination of the "proper law," proof of foreign law, etc. Note that the provisions concerning "Foreign Civil Relationships" in China's civil code, arts. 142-150, are confined to the issue of applicable law, leaving jurisdictional questions largely unregulated. MINFA TONGZE [GENERAL PRINCIPLES OF CIVIL LAW OF THE PEOPLE'S REPUBLIC OF CHINA], Apr. 12, 1986, arts. 142-50, China Ls. for Foreign Bus. (CCH Austl.) ¶ 19-150. It is not clear whether aliens have access to Chinese courts or are entitled to sue the Chinese government. Nor is it clear whether citizens of the People's Republic would accept the jurisdiction of Hong Kong courts.

^{156.} For conflict of laws purposes, Hong Kong residents may be considered aliens in the context of "one country, two systems."

ures and supporting legislation. Particularly useful would be an agreement modeled on the Nordic Convention¹⁵⁷ providing any resident of the contracting parties, who is or may be affected by a nuisance caused by an environmentally harmful activity conducted in the territory of one party, with the right to sue in the competent courts or to appear before appropriate administrative agencies. Such an agreement should provide that the injured resident may obtain a remedy, damages, an injunction, an administrative order, or any other existing form of relief, as if he were a citizen of the party whose procedures he seeks to utilise, without discrimination on the merits or at the remedial stage. Ideally, Hong Kong and China should follow OECD recommendations for the implementation of regimes of equal access and nondiscrimination 158 with a view to encouraging administrative cooperation, harmonising procedures and, ultimately, standardising relevant rules of liability for environmental damage. 159

V. CONCLUSION

This article has shown that, notwithstanding the absence of a rule of international law that prohibits it from constructing a nuclear power plant in its territory, China is under an obligation to prevent environmental harm, to inform other relevant parties of the risk of such harm, to negotiate with them with a view to establishing a mutually satisfactory regulatory regime, and to repair any damage which may occur. Furthermore, there is reason to believe that China is aware of its obligations and sympathetic to environmental concerns.

Nonetheless, protection of the environment is by no means the sole value which China considers important. It appears to accord more weight to developmental needs; and when seeking to reconcile environmental and developmental objectives, it is likely to emphasise the latter. On cost-benefit grounds, therefore, the Chinese may be reluctant to take a strict view of their obligations under international environmental law.

China exhibits an extreme sensitivity whenever it encounters actions which it perceives as a challenge to its sovereign power. Chinese leadership may see the strong grass-roots resistance to the Daya Bay project in Hong Kong as an attempt to undercut its authority and consequently respond in a hostile manner.

Once grass-roots agitation in Hong Kong subsides, China and

^{157.} Convention on the Environment, supra note 80.

^{158.} OECD Principle, supra note 19.

^{159.} Note also the proposals referred to in P. McNamara, *supra* note 147, at 157-59, concerning transnational compensation funds and the expansion of the class of legally protected interests to include, for instance, economic loss.

Hong Kong should be persuaded to establish joint institutional mechanisms designed to take account of the environmental values and interests of both parties. The Chinese may not be amenable to legalistic arguments predicated on seemingly abstract rights, but they are not averse to striking a compromise from a position of strength, particularly if the act of "giving" can be presented as a generous gesture made to enhance the principles of coexistence and cooperation. If China opts to offer concrete concessions, international environmental law can provide the basis for constructing an institutional framework that minimises any adverse consequences which may result from locating a nuclear plant so close to the Hong Kong urban area.