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THE WORLD BANK ADOPTS ENVIRONMENTAL IMPACT ASSESSMENTS

José O. Castañeda

INTRODUCTION

The Multilateral Development Banks (MDBs)¹ were designed to promote political stability and economic growth in the Third World. These Banks lend in excess of twenty-five billion dollars every year, supporting a wide range of infrastructure and export-oriented projects in Africa, Asia and Latin America.² Yet, because their lending has focused on economic objectives, the MDBs have neglected to assess the environmental consequences of their projects.³ Such approach has led to extensive damage to Third World ecosystems, and has placed social and economic burdens on the regions the MDBs were trying to assist.

As a result of intense international pressure, the MDBs, and the World Bank in particular, decided to adopt environmental safeguards for their financing programs. This Comment deals with the basic mechanism the MDBs have embraced for this purpose, the Environmental Impact Assessment (EIA),⁴ and the

¹ The Multilateral Development Banks are autonomous international organizations created to encourage investment and to promote economic development and social stability. The United States participates in four Multilateral Development Banks: The World Bank, the Inter-American Developing Bank, the Asian Developing Bank, and the African Development Bank. See Jonathan Earl Sanford, *U.S. Policy Toward the Multilateral Development Banks: the Role of Congress*, 22 GEO. WASH. J. INT'L L. & ECON. 1, 3 n. 3 (1988).

² 135 Cong. Rec. S16664 (daily ed. Nov. 6, 1989) (statement of Sen. Lautenberg).

³ See Todd K. Martens, *Ending Tropical Deforestation: What is the Proper Role For the World Bank?*, 13 HARV. ENVTL. L. REV. 485, 492 (1989).

⁴ Although there are technical differences between the terms Environmental Impact Assessment (EIA), Environmental Impact Statement (EIS), and Environmental Impact Report (EIR), these differences are not significant for the purposes of this Comment. Therefore, the term Environmental Impact Assessment is used here generically and includes the other two terms.

EIA's application in international development projects. Section A of Part I examines the structure of EIAs and reviews federal court decisions regarding three of its basic components: completeness, a project's cumulative effects, and public participation. A study of federal court decisions dealing with EIAs is valuable to international development projects because many of the problems confronted in these projects are similar to those encountered in the United States. Section B applies these requirements to foreign projects. It also discusses some of the problems encountered in preparing EIAs for international development projects. Section C addresses the growing adoption of EIAs in international law.

Part II applies the lessons explored in Part I to the activities of the World Bank.⁵ Section A describes a number of World Bank projects in the agricultural, rural development, and hydroelectric power sectors. Despite their alleged economic contributions, these projects have led to serious environmental damage in the host countries. Section B describes recent changes in the World Bank's approach to lending. These changes include the Bank's adoption of EIAs for major projects around the world.

This Comment proposes that, adjusting for the structural differences between domestic and international projects, the MDBs can apply some of the solutions federal courts have given to EIA controversies. The application of these solutions would save MDBs resources and would contribute to their stated goal of protecting the environment.

PART I

A. *EIAs in the Federal Courts*

EIAs are defined as detailed studies of a project's reasonably foreseeable environmental effects.⁶ They are regarded as evi-

⁵ These World Bank projects are selected to illustrate the need for EIAs in foreign development projects for two reasons. First, the World Bank is the largest and most influential of the MDBs. Its lending policies have an enormous social, economic, and environmental impact on the Less Developed Countries (LDCs). Second, the World Bank has announced the adoption of EIAs for its future development projects. This means that the Bank will soon be confronting issues similar to those dealt with in federal and state courts.

⁶ See 22 C.F.R. § 216.1(c)(4) (1980).

dence of whether or not "an agency has actually taken a hard look at the environmental implications of a proposed action during the planning process."⁷ The basic task of EIAs is to see how a project might be harmful to that region's environment.⁸ To achieve this purpose, EIAs make a full inventory of the project's potentially disruptive factors.⁹ These factors range from the introduction of new infrastructures and increased energy demands on a region, to displacement of local populations and altered consumption patterns. EIAs apply these factors to a wide range of variables,¹⁰ including social conditions, land use patterns, waterway habitats, climate, and aesthetic and health considerations.¹¹

The National Environmental Policy Act¹² (NEPA) and the substantial body of case law that has evolved under it have identified several basic requirements for the proper implementation of EIAs. This Section deals with three of these requirements: completeness, cumulative impact assessment, and public participation.¹³

⁷ William L. Andreen, *In Pursuit of NEPA's Promise: The Role of Executive Oversight in the Implementation of Environmental Policy*, 64 IND. L.J. 205, 207 (1989).

⁸ For example, according to the National Science Foundation, an EIA prepared for an urban mass transportation program should include:

the increased noise and vibration, residential and business displacements, changes in development patterns and land use, community disruption resulting from the cumulative effects of other impacts, traffic and parking changes, effects on historic sites, degradation of local air quality and water quality . . . and the disruption of parklands, recreation areas, wetlands, floodplains, ecologically sensitive areas, natural and manmade hazardous materials sites, and the aesthetic quality of the area.

55 Fed. Reg. 28,236 (1990).

⁹ See generally Hollick, *The Role of Quantitative Decision-Making Methods in Environmental Impact Assessment*, 12 J. ENVTL MGMT. 65 (1981).

¹⁰ See generally L. CANTER & L. HILL, *HANDBOOK OF VARIABLES FOR ENVIRONMENTAL IMPACT ASSESSMENT* 4-11 (1979).

¹¹ The process of deciding on the number of variables and the extent of their study is defined as "scoping". The goal of scoping is to confine the assessment to a manageable number of issues. See 40 C.F.R. [2] 1501.7

¹² 42 U.S.C. §§ 4321-4361 (1982).

¹³ In addition, EIAs also require a response to public comments and a timely disclosure of relevant information on a project. See, e.g., *California v. Block*, 690 F.2d 753 (9th Cir. 1982) (the Forest Service was obliged to identify and discuss responsible opposing viewpoints); *Russian Hill Improvement Assn. v. Board of Permit Appeals*, 44 Ca. App.3d 158, 118 Cal. Rptr. 490, (1974), *appeal dismissed*, 422 U.S. 103 (1975) (disclosure of an EIA must be timed to permit input on both the making of the report and the subsequent decision). On the question of whether or not an EIA is required see: *Flint Ridge Dev. Co. v. Scenic Rivers Assn.*, 426 U.S. 776 (1976) (the purpose of an EIA is only served when

1. *Completeness*

The EIA completeness requirement, defined in terms of the level of information needed to achieve the objective of preventing harm to the environment,¹⁴ prescribes the inclusion of several specific considerations. First, EIAs must include a thorough discussion of the potential flaws of a project.¹⁵ Such discussion contributes to an efficient analysis of the involved costs, and helps to identify potentially adverse consequences. Second, completeness requires an analysis of a project's foreseeable alternatives.¹⁶ The identification of these alternatives is expected to en-

an agency has the power and time to consider environmental factors and act on them); *Weinberger v. Catholic Action of Hawaii*, 454 U.S. 139 (1981) (EIAs not required on nuclear weapons facility because the needed information is classified).

¹⁴ See *Environmental Def. F., Inc. v. Corps of Eng. of U.S. Army*, 492 F.2d 1123, 1136 (5th Cir. 1974) (the impact statement must be "sufficient to enable those who did not have a part in its compilation to understand and consider meaningfully the factors involved"). In circumstances where available information or technology is less than optimal, the planners are urged to use best professional judgment or experience with previous similar projects as the main methods of prediction. See William V. Kennedy, *Environmental Impact Assessment in North America and Western Europe: What Has Worked Out Where, How, and Why*, [monograph] 11 INT'L ENV'T REP. (BNA) No. 4, at 257 (Apr. 13, 1988). Completeness is also defined as "thoroughness" in the preparation of an EIA. See, e.g., *Oregon Environmental Council v. Kunzman*, 817 F.2d 484, 492 (9th Cir. 1987) (the court must determine whether the EIA contains a "reasonably thorough discussion of the significant aspects of the probable environmental consequences") (quoting *Trout Unlimited v. Morton*, 509 F.2d 1276, 1283 (9th Cir. 1974)). See also *Sierra Club v. Sigler*, 695 F.2d 957 (5th Cir. 1983) (an EIA must at least consider information relevant to the significant effect of a proposal if the information is both important and not based on "unreasonable speculation"); *Warm Springs Dam Task Force v. Gribble*, 621 F.2d 1017 (9th Cir. 1980) (an EIS must be particularly thorough when the environmental consequences of federal action are substantial).

¹⁵ Yates, *Environmental Impact Assessment: What it is and Why International Development Organizations Need it*, cited in 135 Cong. Rec. S16667 (daily ed. Nov. 6, 1989).

¹⁶ The requirement to study the alternatives to a project is found in 42 U.S.C. § 4332:

- (2) all agencies of the Federal Government shall -
 - (C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement of the responsible official on -
 - (i) the environmental impact of the proposed action, . . . and
 - (iii) alternatives to the proposed action.

NEPA's "alternative" requirement has been construed as consideration of "reasonable alternatives." *Vermont Yankee Nuclear Power Corp. v. NRDC, Inc.*, 435 U.S. 519 (1978). See generally William H. Rodgers, Jr., *A Hard Look at Vermont Yankee: Envi-*

hance the agency's choices and decisionmaking process.¹⁷

The courts have also confronted the issue of completeness in the context of the quality or amount of information available in the preparation of an EIA. If the missing information is relevant, merely recognizing gaps in the knowledge does not render them complete.¹⁸ However, if the information is not obtainable, or if what is available lacks scientific certainty, an agency promulgating a project must make reasonable predictions through various plausible scenarios.¹⁹ As stated in *Potomac Alliance v. U.S. Nuclear Regulatory Commission*:²⁰ "a lack of certainty concerning prospective environmental impacts cannot relieve an agency of responsibility for considering reasonably foreseeable contingencies that could lead to environmental damage."²¹

The Council on Environmental Quality (CEQ)²² requires EIAs to "affirmatively address deficiencies in the completeness and quality of the incorporated data . . ."²³ However, the extensive research needed to cover all information gaps would unduly burden the agency preparing an EIA. To alleviate this bur-

ronmental Law Under Close Scrutiny, 67 GEO. L. J. 699, 718 (1979); Roger D. Colton, *Utility Involvement in Energy Management: The Role of a State Power Plant Certification Statute*, 16 ENVTL. L. 175 (1986).

¹⁷ Jennifer Woodward, Comment, *Turning Down the Heat: What United States Laws Can Do to Help Ease Global Warming*, 39 AM. U.L. REV. 203, 219 (1989). A possible source of bias in preparing a project's alternatives is that these alternatives may be cast in negative terms to improve the proposal's chance of approval. See generally Mark B. Lapping, *Environmental Impact Assessment Methodologies: A Critique*, 4 ENVTL. AFF. 123 (1975).

¹⁸ *Scientists' Inst. for Pub. Info., Inc. v. Atomic Energy Com'n*, 481 F.2d 1079, 1092 (D.C. Cir. 1973).

¹⁹ *Id.*

²⁰ 682 F.2d 1030 (D.C. Cir. 1982).

²¹ *Id.* at 1036. But see *Izaak Walton League of America v. Marsh*, 655 F.2d 346, 377 (D.C. Cir. 1981), cert. denied, 454 U.S. 1092 (1981) ("NEPA does not require federal agencies to examine every possible environmental consequence. Detailed analysis is required only where impacts are likely So long as the environmental impact statement identifies areas of uncertainty, the agency has fulfilled its mission under NEPA.").

²² The CEQ was created simultaneously with the enactment of NEPA to assist in implementing NEPA's mandate. See 42 U.S.C. §§ 4342, 4344 (1982). See generally Dinah Bear, *The National Environmental Policy Act and the Council on Environmental Quality*, in ENVIRONMENTAL IMPACT ASSESSMENT 2 (Nicholas A. Robinson ed. 1987).

²³ Note, *Federal Agency Treatment of Uncertainty in Environmental Impact Statements under the CEQ's Amended NEPA Regulation § 1502.22: Worst Case Analysis or Risk Threshold?*, 86 MICH. L. REV. 777, 778 (1988).

den, the CEQ has ruled that where relevant information on the environmental effects of a project is not available a "rule of reason" applies.²⁴ The rule of reason test requires analysis of a project's consequences only to the extent that credible scientific evidence makes its detrimental effect "reasonably foreseeable."²⁵

The underlying objective of completeness is to prevent EIAs from avoiding discussion of potentially disastrous effects.²⁶ This point is illustrated in *Sierra Club v. Coleman*,²⁷ a federal district court decision regarding construction of the Pan-American Highway. The defendants in *Sierra Club v. Coleman*, the Department of Transportation and the Federal Highway Administration (FHWA), began construction on a section of the highway that passed through a rain forest shared by Panama and Colombia. The purpose of the project was to provide a road link between North and South America. The Sierra Club and several other environmental organizations sought to enjoin construction of the highway alleging that the EIA presented by the defendants did not satisfy the NEPA requirements.²⁸ The plaintiffs

²⁴ *Natural Resources Defense Council, Inc. v. Morton*, 458 F.2d 827, 837 (D.C. Cir. 1972) ("The statute, must be construed in the light of reason if it is not to demand what is, fairly speaking, not meaningfully possible, given . . . that the resources . . . available to meet the nation's needs are not infinite"). See also *Northwest Coal. for Altern. to Pesticides v. Lyng*, 844 F.2d 588, 591 (9th Cir. 1988) (under rule of reason, district court's reviewing Environmental Impact Statement "must make 'a pragmatic judgment whether the EIS's form, content and preparation foster both informed decision-making and informed public participation,'" and . . . "whether an EIS contains 'a reasonably thorough discussion of the significant aspects of the probable environmental consequences'") (quoting *California v. Block*, 690 F.2d 753, 761 (9th Cir. 1982)).

²⁵ *Natural Resources Defense Council v. Morton*, 458 F.2d 827, 837 (D.C. Cir. 1972). The rule of reason test has partially supplanted the more stringent "worst case" analysis test which required an agency to predict "the worst possible environmental consequences" where information was not available. Note, *supra* note 23, at 778. See also *Sierra Club v. Sigler*, 695 F.2d 957 (5th Cir. 1983) (CEQ worst case analysis would require that EIS for proposed construction of multipurpose deepwater port and crude oil distribution system discuss impact of total cargo loss of supertanker if real possibility of an oil spill is established).

²⁶ The U.S. Court of Appeals, District of Columbia, has held that "[c]onsiderations of administrative difficulty, delay or economic cost will not suffice to strip the section [referring to completeness of an EIA] of its fundamental importance." *Calvert Cliffs' Coord. Com. v. United States A E Com'n*, 449 F.2d 1109, 1115 (D.C. Cir. 1971).

²⁷ 405 F. Supp. 53 (D.D.C. 1975).

²⁸ A second substantive defect alleged by the plaintiffs was the failure of the report to adequately discuss possible alternatives to the route as required by NEPA under 42 U.S.C. § 4332(C)(iii) (1982). *Id.*

pointed out that the report failed to discuss properly the potential transmission of aftosa, a usually fatal livestock disease. The plaintiffs alleged that, even though the EIA briefly mentioned the aftosa problem, it did not assess its potential environmental impact in case the disease spread to the continental United States.

The court enjoined the project until the defendants could satisfy NEPA's completeness requirement. It held that a discussion of the possibility of the spread of the disease was an essential step in alerting the public and promoting informed debate on the project. The court observed that aftosa had the potential to cause billions of dollars in losses and could threaten the extinction of such endangered species as the American bison.²⁹ According to the court, an impact statement that failed to discuss this possibility was fatally deficient: "despite its elaborate table of contents and a generous ration of environmentally irrelevant 'filler,' the Assessment [was] not an adequate environmental impact statement."³⁰

2. Cumulative Effects

The cumulative effects³¹ of a project are a measure of the aggregate changes expected in an area when nearby "past, pre-

²⁹ *Id.*

³⁰ *Id.* at 56.

³¹ Federal regulations promulgated pursuant to the National Environmental Policy Act (NEPA), 42 U.S.C. § 4321 (1982), define cumulative impact as: the "incremental impact of the action when added to other past, present, and reasonably foreseeable future actions Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7 (1989).

When studying cumulative effects, an EIA must consider the direct, indirect and secondary consequences of a project. See Alison Rieser, *Managing the Cumulative Effects of Coastal Land Development: Can Maine Law Meet The Challenge?*, 39 ME. L. REV. 321 (1987). See generally Note, *The Cumulative Impact Assessment in CEQA: Is the Standard in "San Franciscans For Reasonable Growth" Attainable?*, 12 W. ST. U. L. REV. 801 (1985); Martha Sheehy, *The Development and Implementation of the Cumulative Impact Analysis Requirement*, 8 PUB. LAND L. REV. 129 (1987); Clark & Zinn, *Cumulative Effects in Environmental Assessment*, 4 COASTAL ZONE 2481 (1978); Dickert & Tuttle, *Cumulative Impact Assessment in Environmental Planning: A Coastal Wetlands Watershed Example*, 5 ENVTL. IMPACT ASSESSMENT REV. 37 (1985). See also *Kleppe v. Sierra Club*, 427 U.S. 390 (1976) (an agency must consider the effects of separate proposals that will have a cumulative or synergistic environmental impact upon a region.); *Whitman v. Board of Supervisors*, 88 Cal. App. 3d 397, 151 Cal. Rptr. 866 (1979) (in addition to considering existing projects, analysis of cumulative impact must include

sent and reasonably anticipated future projects"³² are considered. One case illustrating an agency's failure to consider the cumulative effects of a proposal is *Natural Resources Defense Council v. Callaway*.³³ In that case, the plaintiffs challenged the adequacy of an EIA regarding a plan to discharge 2.8 million cubic yards of harbor dredge spoil off the coast of New London, Connecticut. The Navy prepared an EIA without considering similar pending proposals for the area, and determined that the project's environmental effects were acceptable. The pending proposals planned to discharge an additional two million cubic yards of polluted spoil into the same coastal waters.³⁴ After discussing the potential damage that the combined projects could cause on the environment, the court rejected the EIA presented by the Navy and refused to let the Corps of Engineers isolate its proposal from the other projects.³⁵

The courts have also ruled on the degree of foreseeability that would trigger a cumulative effects study. While most decisions dealing with this issue reflect that foreseeable projects

projects already approved although not physically under construction); *Natural Resources Defense Council, Inc. v. Callaway*, 524 F.2d 79 (2d Cir. 1975) (report found inadequate for failing to discuss other recently authorized activities in the same field as those of the project).

³² 40 C.F.R. § 1508.7 (1986). See M. Andriette Adams, Note, *The Cumulative Impact Assessment in CEQA: Is the Standard in San Franciscans For Reasonable Growth Attainable?*, 12 W. Sr. U. L. Rev. 801, 804 (1985).

³³ 524 F.2d 79 (2d Cir. 1975).

³⁴ *Id.* at 87. In rejecting the Navy's EIA the court also sought to set a limit on the extent of an EIA's cumulative impact analysis:

The Navy is not required to study and report on the effect of its dumping on the whole of Long Island Sound, a relationship as yet not understood. Nor does it need to consider other projects so far removed in time or distance from its own that the interrelationship, if any, between them is unknown or speculative. However, it is required at least to disclose in its EIS other planned or proposed dredging in the area . . . with a discussion and analysis of the combined environmental impact of its own and these other projects.

Id. at 90.

³⁵ The court's decision on this issue partially reads:

In view of the failure of the Navy's Final EIS to make any mention whatsoever of all of these proposed projects or to analyze the possible cumulative effects of the Navy's dumping of 2.8 million cubic yards of highly polluted spoil with the proposals for dredging of an additional 2.15 million cubic yards, . . . appellants renew their contention, rejected below, that the EIS is deficient. We agree that in this respect the EIS failed to furnish information essential to the environmental decision-making process.

Id. at 87.

need to be included in EIAs,³⁶ a minority of courts have held that the mere possibility of future actions is insufficient to impose the obligation of conducting further research.³⁷ The latter view was illustrated in *Park County Resource Council v. United States Department of Agriculture*,³⁸ where the Wyoming federal district court ruled on whether or not the Bureau of Land Management had to consider potential field developments when issuing an oil lease.³⁹ The court held that the EIA required analysis only of the exploratory well at issue.⁴⁰ According to the court, the possibility that oil may be discovered in the future, and that the entire field may some day be developed, was a mere speculation not sufficient to impose the cumulative impact analysis requirement.⁴¹

3. Public Participation

Public participation in EIAs improves the quality of the information brought to the decisionmakers,⁴² and assists in identifying priorities and mobilizing political support.⁴³ The public

³⁶ See, e.g., *City of Davis v. Coleman*, 521 F.2d 661 (9th Cir. 1975) ("Uncertainty about the pace and direction of development merely suggests the need for exploring in the [EIA] alternative scenarios . . . Drafting an [EIA] necessarily involves some degree of forecasting."); *Concerned About Trident v. Rumsfeld*, 555 F.2d 817 (D.C. Cir. 1977) (an EIA on the construction of a nuclear submarine base invalid for failure to consider the environmental effects of the future operations of the base). See generally Martha Sheehy, *The Development and Implementation of the Cumulative Impact Analysis Requirement*, 8 PUB. LAND. L. REV. 129, 136-37 (1987).

³⁷ See, e.g.; *Atchison, Topeka & Santa Fe Rwy. Co. v. Callaway (II)*, 480 F. Supp. 972, 997 (D.D.C. 1979), *aff'd sub nom. Isaak Walton League of America v. Marsh*, 655 F.2d 346 (D.C. Cir. 1981) (the effects of subsequent upstream ship and barge traffic did not have to be discussed in an EIA on the expansion of a lock and dam partially because no proposal for upstream expansion was actually under consideration).

³⁸ 613 F. Supp. 1182 (D. Wyo. 1985).

³⁹ *Id.* at 1188.

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² Some courts have also taken into consideration the presence or absence of public protest against a particular project as an indication of its potential environmental impact. See, e.g., *State Dept. of Ecology v. Ballard Elks Lodge No. 827*, 84 Wash.2d 551, 527 P.2d 1121 (1974) (grant of a permit for shoreline development was not 'clearly erroneous' where the effects of the project are de minimis and no public protest has been registered in opposition to it).

⁴³ See *Trout Unlimited v. Morton*, 509 F.2d 1276 (9th Cir. 1974) (preparation of an EIS provides the public with information on the environmental impact of a proposed project, and encourages public participation in the development of that information).

participants in domestic EIAs are said to include, in addition to the affected local population, governmental agencies, technical personnel, and representatives of non-governmental organizations (NGOs). Where participation from these groups has been lacking, state and federal courts have invalidated the project.⁴⁴

Public participation requirements are included in NEPA⁴⁵ and various state legislation.⁴⁶ The courts have required that information an agency gives to the public be sufficiently detailed to foster meaningful discussion.⁴⁷ According to one court, the object of the requirement is to allow public participants "do more than merely state their point of view before the agency in general terms."⁴⁸ This issue was dealt with in *Friends of the Earth v. Hall*,⁴⁹ and arose out of the Navy's plan to build a port in the State of Washington. In that case, a group of environmental organizations sought to enjoin a dredging permit the Army Corps of Engineers had granted the Navy pursuant to this project.⁵⁰ The court issued the injunction on the grounds that the EIAs submitted by the COE had failed to disclose relevant technical and scientific information.⁵¹ Thus, according to the court, the

See also Note, EIS Supplements for Improperly Completed Projects: A Logical Extension of Judicial Review Under NEPA, 81 MICH. L. REV. 221, 226 (1982).

⁴⁴ *See, e.g., Eastlake Community Council v. Roanoke Associates*, 82 Wash.2d 475, 513 P.2d 36 (1973) (consultation with public agencies and interested citizens deemed crucial to an EIA).

⁴⁵ *See* 40 C.F.R. § 1503.4 (1987). *See also, Trustees for Alaska v. Hodel*, 806 F.2d 1378 (9th Cir. 1986) (government failed to comply with regulations under NEPA by deciding to submit environmental impact report to Congress without an opportunity for public comment).

⁴⁶ *See, e.g., 23 C.F.R. § 790.1-11* (1987) (providing for public participation in the elaboration of an EIS under the Transportation Act).

⁴⁷ *See Oregon Natural Resources Council v. Marsh*, 832 F.2d 1489 (9th Cir. 1987), *rev'd on other grounds*, 490 U.S. 360 (1989) (when information essential to a reasoned choice is lacking, and the cost of obtaining it is not exorbitant, the agency must include it in the EIS).

⁴⁸ *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council*, 435 U.S. 519, 533 (1978). *See also Portland Cement Ass'n v. Ruckelshaus*, 486 F.2d 375, 394 (D.C. Cir. 1973), *cert. denied*, 417 U.S. 921 (1974).

⁴⁹ 693 F. Supp. 904 (W.D. Wash. 1988).

⁵⁰ *Id.* at 916. Since the site had been previously used to discharge industrial waste, approximately one third of the dredge spoil was contaminated with metals and organic compounds. The area covering the waterway was described as a "two to six foot deep layer of thick soup closely resembling 'black mayonnaise'. . . ." *Id.*

⁵¹ The court held that the EIS failed to "disclose and address uncertainty and scientific controversy" regarding the technical features of the dredging method, as well as the

EIA did not satisfy the primary purpose of "providing decisionmakers with 'an environmental disclosure sufficiently detailed to aid in the substantive decision whether to proceed with the project'. . . and . . . 'the public with information and an opportunity to participate in gathering information.'"⁵²

B. *International Application of Court-developed EIA Requirements*

1. *Completeness in Foreign Project EIAs*

The study of foreseeable alternatives, as part of the complete requirement of a domestic project's EIA, is equally relevant to foreign projects.⁵³ If these alternatives are ignored, the host country may be burdened with unnecessary environmental costs or inefficient resource allocations. At the very least, such deficiency could compound "the underlying problems [they were] designed to solve."⁵⁴ In a worst-case scenario these burdens could be so extensive that the project may have to be cancelled.

The alternatives to an international project may include scaled down versions of the original proposal or the use of appropriate technology and indigenous production methods. The MDBs, however, would need to change their traditional approach to development if they want to embrace these alternatives fully. For example, a basic goal of MDB development assis-

risk of harm it posed to the environment. *Id.* at 922.

⁵² *Id.* (citing *Methow Valley Citizens Council v. Regional Forester*, 833 F.2d 810, 814 (9th Cir. 1987)). In order to foster adequate public participation, an agency must give notice of a project proposal in advance of any major decision about it. See *Russian Hill Improvement Ass'n. v. Board of Permit Appeals*, 44 Ca. App. 3d 158, 118 Cal. Rptr. 490 (First Dist., DN. Two 1974), *appeal dismissed*, 422 U.S. 1030 (1975) (disclosure of an EIA must be timed so as to permit input into both the making of the report and the subsequent decision based on it).

⁵³ The World Bank has adopted this requirement in its guidelines on EIAs. Accordingly, a proposed investment's "design, site, technology, and operational alternatives should be compared systematically in terms of their potential environmental impacts; capital and recurrent costs; suitability under local conditions; and institutional, training, and monitoring requirements." WORLD BANK, OPERATIONAL DIRECTIVE, Oct. 31, 1989, at Annex A1.

⁵⁴ George D. Appelbaum, Comment, *Controlling the Environmental Hazards of International Development*, 5 *ECOLOGY L. Q.* 321, 335 (1976).

tance is to foster the economic competitiveness of the LDCs in international markets. This is to be achieved by promoting economies of scale⁵⁵ and full use of each country's comparative advantage.⁵⁶ That goal, however, is not conducive to the approval of small, localized projects with few, if any, foreign components.⁵⁷ Since the current organizational structure of the MDBs is geared towards large-scale, capital intensive projects, the time required to assess small projects may be considered an inefficient use of staff.⁵⁸ In addition, low cost projects such as agricultural cooperatives, cottage industries, or labor intensive manufacture, are not deemed as glamorous or representative of progress as large dams or transcontinental highways. In the words of one commentator, "To MDB staff, it surely must be more enticing to use their time to produce a multi-million dollar dam rather than a lower budget, lower-tech appropriate development project."⁵⁹

Foreign project EIAs should also include the cultural variations that may affect their environmental consequences. A good example of the role of such cultural variations is diet. The effects of pesticide residue build-up are more severe in a country where fish is an essential part of the diet than in a country with varied sources of protein.⁶⁰ Consequently, an EIA for an agricultural project must consider dietary factors, and depending on the circumstances, may even suggest stricter regulations on pes-

⁵⁵ "Economies of scale" refers to a proportionally greater increase in returns obtained from a given increase in inputs. Thus, in many production processes "when you double all inputs you may find that your output is more than doubled." P. SAMUELSON, *ECONOMICS* (11th ed. 1980).

⁵⁶ Since all nations differ in their natural resources, the relative cost of transforming one commodity into another domestically also differs. To the extent that one nation can produce a commodity by using less or cheaper resources than another, that nation is said to have a comparative advantage in that commodity. Thus a land-rich area will have a comparative advantage in food production over a coal-rich area, which will in turn have a comparative advantage in energy output. *Id.* at 649.

⁵⁷ See Jonathan Earl Sanford, *U.S. Policy Toward the Multilateral Development Banks: the Role of Congress*, 22 *GEO. WASH. J. INT'L L. & ECON.* 1, 64 (1988).

⁵⁸ Bruce M. Rich, *The Multilateral Development Banks, Environmental Policy, and the United States*, 12 *ECOLOGY L. Q.* 681, 742 (1985).

⁵⁹ Zygmunt J. B. Plater, *Multilateral Development Banks, Environmental Diseconomies, and International Reform Pressures on the Lending Process: The Example of Third World Dam-Building Projects*, 9 *B.C. THIRD WORLD L. J.* 169, 190 (1989).

⁶⁰ See Appelbaum, *supra* note 54, at 335.

ticide use.

Another element bearing on completeness of foreign EIAs is the project's opportunity costs. Traditional development theory holds that as long as a country is able to achieve large-scale, technologically-advanced levels of production, that country is attaining economic development.⁶¹ However, there is today a different characterization of development. Capital intensive projects, even if economically successful in a narrow sense, may not appear as good choices once their opportunity costs are assessed. The extent of these costs is illustrated in tobacco production projects. Even leaving aside the health implications of smoking,⁶² most LDCs producing tobacco do so at the expense of taking land and labor away from food production. In addition, the curing process of tobacco leaves predominantly followed in the LDCs requires large quantities of wood for fuel, a practice that has led to further deforestation.⁶³

2. *Cumulative Impact in Foreign Projects*

The cumulative effects of multiple projects in a single region are not difficult to appreciate. The combined harm of activities such as fossil fuel burning, deforestation, and the use of insecticides "are ultimately profound in a crowded world."⁶⁴ Even small-scale MDB projects tend to overwhelm local resources, and otherwise overburden existing infrastructures.

Equally relevant, although less conspicuous than the MDB projects, are the effects of small-size projects planned by government agencies in the host country. These projects usually escape international scrutiny because they utilize mostly local resources. Any harm to the environment they pose could, therefore, continue largely undetected. Yet, a review of the cumula-

⁶¹ See GRIFFIN, *ALTERNATIVE STRATEGIES FOR ECONOMIC DEVELOPMENT* 29 (1989).

⁶² Partially as a result of the advertising efforts of the tobacco industry, the LDCs consume approximately three quarters of the tobacco they produce. Furthermore, the aggregate annual tobacco consumption of these countries has grown at a rate of four percent, as opposed to one percent growth in the developed countries. See Rich, *supra* note 58, at 699.

⁶³ It is estimated that curing one acre of tobacco in the LDCs requires one acre of wood for fuel. *Id.* at 701.

⁶⁴ Mark Allan Gray, *The United Nations Environmental Programme: An Assessment*. 20 *ENVTL. L.* 291, 292 (1990).

tive effects of these small local projects helps to identify activities that are harmful to the environment, by themselves or in combination with larger projects.

3. *Public Participation in the LDCs*

Public participation in the elaboration of EIAs promotes political awareness and institutionalizes MDBs' response to local needs and values.⁶⁵ A threshold question deals with the subject of what is considered "public" in international development projects. While the answer may vary depending on the particular country, at least three distinct groups of participants have been identified: the immediately affected populations, the local governments, and the private preservation or non-government organizations (NGOs).

The people living within the geographic location of a project are in the best position to comment on the likely effects of the project on their everyday lives.⁶⁶ Ideally, such grassroots participation in project decisions brings about increasing political participation.⁶⁷ However, the ruling elites in non-democratic societies may actively discourage such participation if it is perceived as a threat to their own power. Another difficulty in securing popular participation lies in the dissemination of information. Apathy, illiteracy, and lack of adequate media are among the strongest barriers to effective communication, particularly in the poorest and most isolated regions of the LDCs.⁶⁸

⁶⁵ See Edgmon, *A Systems Resource Approach to Citizen Participation: the Case of the Corps of Engineers*, 15 WATER RESOURCES BULL. 1341 (1979).

⁶⁶ Despite its renewed claims to heed local participation in a project's decision, a common criticism of World Bank policies by Washington-based NGOs is that "the Bank still listens least to those who will be affected most." Dena Liebman, *Default or Deliver? The World Bank promised to mend its lending ways, but over the sound of rustling paper can be heard the chainsaw's buzz*, 75 SIERRA 24, 27 (Sept.-Oct. 1990).

⁶⁷ See generally H. Jeffrey Leonard & David Morell, *Emergence of Environmental Concern in Developing Countries: A Political Perspective*, 17 STAN. J. INT'L L. 281 (1981).

⁶⁸ A study about a water project that was proposed by the COE in Iowa found that even though the project had become a prominent local issue, relatively few people knew about it. The study also found that the people who were to receive the greatest personal benefits from the project were not, as a group, better informed than those who perceived few or no benefits at all. See Bultena, Rogers & Conner, *CHARACTERISTICS AND CORRELATES OF PUBLIC KNOWLEDGE ABOUT A WATER RESOURCE DEVELOPMENT ISSUE* (Iowa State University ed. 1975).

Collecting information from the affected populations is a major task that requires adequate training and organization. Where these elements are lacking, built-in biases towards the project may pass undetected. For example, the residents of an economically stagnant region may strongly support a large infrastructure project in the belief that some economic activity, regardless of the underlying costs, is better than no activity at all. On the other hand, a valuable project may be totally rejected by local residents if, for ideological reasons, they perceived it as a tool of economic subjugation by the developed countries.

The main actors in the elaboration of EIAs for foreign development projects are ultimately the local governments. However, most LDCs lack adequate funds and personnel trained in fields relevant to these studies. Their final contribution to the anticipated technical and political debate would therefore be incomplete at best. In an effort to remedy this situation, most MDBs, as well as some government agencies and private environmental organizations, have established training and financial support programs. The Environmental Protection Agency, for example, has approved, as a program for helping the LDCs, "activities which strengthen the recipient nation's infrastructure and capability to deal with its current and future environmental problems."⁶⁹ The World Bank has also pledged to encourage the use of local expertise in the preparation of EIAs, and has designed "Environmental Assessment Guidelines" that strengthen the capacity of the developing countries to deal with environmental problems.⁷⁰

As in the case of private participation in EIAs, government participation may also be distorted by personal bias. Thus, government officials or political coalitions may be willing to support a project if they perceive any personal gain. These officials may, for example, exaggerate a project's job-creating capacity, its foreign-exchange earning potential, or any other indicator of economic success. The possibility of such bias increases in cases of

⁶⁹ EPA *Developing Countries Strategy and Program Status Report*, July 1987, 10 INT'L ENVTL. REP. (BNA) No. 9, at 469 (Sept. 9, 1987).

⁷⁰ Barber B. Conable, *Development and the Environment: a Global Balance*, 5 AM. U. J. INT'L L. & POL'Y 235 (1990) (speech delivered by World Bank President Barber B. Conable at the Tokyo Conference on the Global Environment and Human Response Toward Sustainable Development, Sept. 11, 1989).

large projects that mobilize substantial foreign and local resources. Conversely, these officials may purposefully underestimate a project's total cost or its significant environmental effects.⁷¹ Even absent dishonesty, official bias may exist where LDC planners believe that environmental considerations do not justify rejection of projects deemed essential to their development.

Local and international NGOs, on the other hand, are important participants in the elaboration of EIAs because of their independence, the size of their membership, and their organizational skills. As stated by the Brundtland Commission, "[NGOs] have . . . played an indispensable role since the Stockholm Conference in identifying risks, in assessing environmental impacts and designing and implementing measures to deal with them, and in maintaining the high degree of public and political interest required as a basis for action."⁷² Because a government entity cannot be expected to be an efficient overseer of its own work, NGOs also play the role of outside observers that bring authoritative opinions on a project's desirability. NGO participation is even more relevant where decisions on a project are made by "insiders" whose motivations are not necessarily tied "to the overall rational development of the particular country or region."⁷³

Local NGOs are also important shapers of public opinion. They are able to generate valuable debate by preparing "State of the Environment" reports and other position papers,⁷⁴ and organizing symposiums. Additionally, international NGOs provide valuable training and support for the local NGOs. They also have been instrumental, as in the case of Debt for Nature

⁷¹ The social and economic consequences of overestimating employment capacity are more evident when a project is near completion. As a study on large dams points out: "A completed dam requires very few maintenance personnel. This fact is especially important to the native population, which might find themselves permanently unemployed after working for a few years -having lost their land and their livelihood in the process." GOLDSMITH & HILDYARD, *THE SOCIAL AND ENVIRONMENTAL EFFECTS OF LARGE DAMS* 266-75 (1984).

⁷² WORLD COMMISSION ON THE ENVIRONMENT AND DEVELOPMENT, *OUR COMMON FUTURE* (1987), at 326.

⁷³ Plater, *supra* note 59, at 193.

⁷⁴ *Id.* at 345, n.24.

Swaps,⁷⁵ in translating foreign assistance into meaningful environmental programs. Furthermore, the highly publicized changes in environmental policy professed by the MDBs came mainly as a result of NGO activities.⁷⁶ The MDBs, for their part, are aware of the importance of NGOs in shaping international environmental policy, and, consequently, they have been trying to forge close relationships with these groups.⁷⁷

C. EIAs and International Law

Under settled principles of international law, a sovereign state is to refrain from activities that are damaging to the environment.⁷⁸ This concept was adopted in such international documents as the Stockholm Declaration of the United Nations Conference on the Human Environment,⁷⁹ the Nairobi Declaration on the State of Worldwide Environment,⁸⁰ and the U.N. World

⁷⁵ See Jose O. Castaneda, Comment, *Debt for Nature Swaps: an Attractive Solution to a Pressing Global Problem*, 2 PACE Y.B. INT'L L. 135 (1990).

⁷⁶ *Id.* at 195.

⁷⁷ The World Bank has developed close links with such prominent NGOs as the International Union for the Conservation of Nature and Natural Resources, the World Fund for Nature, the World Resources Institute, and the International Institute for Environment and Development. See WORLD BANK, ENVIRONMENT AND DEVELOPMENT: IMPLEMENTING THE WORLD BANK'S NEW POLICIES (1988), at 10.

⁷⁸ The International Court of Justice held in the *Corfu Channel Case*, 1949 I.C.J. Rep. 4, that international law obligates every state "not to allow knowingly its territory to be used for acts contrary to international law." See also *Trail Smelter Case*, 3 U.N. Rep. Int. Arb. Awards 1911 (1941) ("[U]nder the principles of international law, as well as of the law of the United States, no State has the right to permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another . . .").

⁷⁹ Report of the United Nations Conference on the Human Environment, U.N. Doc. A/Conf. 48/14 and Corr. 1, reprinted in 11 I.L.M. 1416 (1972). The conference sponsors international environmental protection in such areas as transboundary pollution and economic development. See principles 9 and 21. The Conference led to the creation of the United Nations Environmental Programme (UNEP). See Depuy, *United Nations Environmental Programme*, 5 ENCYCLOPEDIA OF PUBLIC INT'L L. 13, 19-23 (1983). Although UNEP has been criticized for not assuming a stronger role in implementing and enforcing its environmental agenda, it has been vastly successful in its support for environmental management and planning. See Gray, *supra* note 63, at 295. See generally T. C. Bacon, *The Role of the United Nations Environment Program (UNEP) in the Development of International Environmental Law*, 12 CAN. Y.B. INT'L L. 255 (1974).

⁸⁰ Nairobi Declaration on the State of Worldwide Environment, 10 U.N. Environment Programme (Tenth Session, Agenda Item 4) at 1, UNEP/GC.10/Inf.5 (1982), reprinted in 21 I.L.M. 676 (1982). The declaration states that "Prevention of damage to the environment is preferable to onerous and costly measures to undo harm that has already been done." *Id.* at para. 9, 21 I.L.M. 678. See also *Taking the Stand: from*

Charter for Nature.⁸¹

The use of EIAs in international projects is also part of international law.⁸² The United Nations Convention on the Law of the Sea, for example, requires states to conduct environmental assessments of activities that affect the marine environment.⁸³ The European Economic Community's (EEC) Directive on Environmental Projects also requires that member states use EIAs as part of their project approvals.⁸⁴ EIAs are embodied in such diverse treaties as the 1985 Agreement of the Association of South-East Asian Nations on the Conservation of Nature and Natural Resources,⁸⁵ the 1981 Convention for the Protection of the Marine Environment and the Coastal Area of the South-East Pacific,⁸⁶ and the 1983 Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region.⁸⁷

Additional support for the use of EIAs in international projects has come from the United States government.⁸⁸ One of the first directives on this subject can be traced to the Agency

Stockholm 1972 to Nairobi 1982, Declarations of the World Environment, 9 ENVTL. POL'Y & L. 45, 46 (1982).

⁸¹ World Charter for Nature, G.A. Res. 37/7, 37 U.N. GAOR Supp. (no. 51) at 17, U.N. Doc. A/37/51 (1983), reprinted in 22 I.L.M. 455 (1983).

⁸² See Alexandra S. Timoshenko, *The Problem of Preventing Damage to the Environment in National and International Law: Impact Assessment and International Consultations*, 5 PACE ENVTL. L.R. 475, 480 (1988).

⁸³ United Nations Convention on the Law of the Sea, Dec. 10, 1982, U.N. Doc. A/Conf.62/122 (1982), reprinted in 21 I.L.M. 1261 (1982). See also *Goals and Principles for Environmental Impact Assessment*, UNEP/GC.14/17, Nairobi, 1987.

⁸⁴ European Community Directive on Environmental Assessments, 28 O.J. Eur. Comm. 40 (No. L 175) (1985). See also Robinson, *Innovations for Global Environmental Institutions: Meeting the Challenge Anew*, ELI Aug. 14, 1989.

⁸⁵ Reprinted in 15 ENVTL. POL'Y & L. 64 (1985).

⁸⁶ INTERNATIONAL PROTECTION OF THE ENVIRONMENT, TREATIES, AND RELATED DOCUMENTS, II/A/24-03-83-a (Oceana Publ. eds. 1990).

⁸⁷ 22 I.L.M. 227 (1983).

⁸⁸ In the United States, the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. § 4321 et seq., requires that all legislation proposals on "major Federal actions significantly affecting the quality of the human environment" prepare an EIA. 42 U.S.C. § 4332(2)(C) (1982). The Environmental Protection Agency (EPA) has also stated its intention to assist developing countries to "establish the principle and mechanisms for systematic environmental impact assessment by governments and international bodies for all major development projects, including those with potential transboundary effects." *EPA Developing Countries Strategy and Program Status Report, July 1987*, 10 INT'L ENVTL. REP. (BNA), No. 9, 468 (Sept. 9, 1987).

for Inter-American Development (AID), a bilateral assistance institution. Pursuant to an Executive Order on the Foreign Environmental Effects of Federal Actions,⁸⁹ AID adopted regulations that required EIAs for eleven categories of projects.⁹⁰ As a result, AID is said to have "the most stringent and comprehensive environmental planning procedures of any development agency."⁹¹

Support for the use of EIAs in multilateral, as opposed to bilateral, development projects is contemplated in the International Development and Finance Act of 1989.⁹² The Act requires the Secretary of the Treasury to instruct the United States Executive Directors of each MDB "to assure that systematic, detailed environmental impact assessment (EIA) of . . . projects with significant environmental impacts, are conducted early in the project cycle."⁹³ Under the Act, the U.S. Directors are required not to vote for a project unless "an assessment analyzing the environmental impacts of the proposed action and of alternatives to the proposed action . . . has been completed by the borrowing country or the institution"⁹⁴

Such congressional support presages a greater use of EIAs in international projects. However, some potential problems still hinder their full utilization. One of these problems relates to the quality of the underlying research conducted to produce the final document. The consequence of an inadequately prepared EIA is that it becomes a conduit for invalid conclusions about the desirability of a project.⁹⁵ This problem is particularly rele-

⁸⁹ Exec. Order No. 12,114, 3 C.F.R. 356 (1979).

⁹⁰ These categories include hydrothermal plants, road construction, irrigation projects, large-scale agricultural mechanization projects, and land development and resettlement projects. 22 C.F.R. § 216.2(d) (1985).

⁹¹ Rich, *supra* note 58, at 665. These procedures have been reinforced by recent Congressional enactments, to which the Agency is "held accountable by environmental groups and the judiciary." John Horberry, *The Accountability of Development Assistance Agencies: The Case of Environmental Policy*, 12 *ECOLOGICAL L.Q.* 817, 846 (1985).

⁹² 22 U.S.C.S. § 2621 (1990)

⁹³ 22 U.S.C.S. § 2621(a)(4).

⁹⁴ 22 U.S.C.S. § 262m-7. The Act also requires that all reports containing EIAs be made available to agencies and interested groups in the affected countries.

⁹⁵ This problem is partially ameliorated by the continuous influx of scientists and scholars doing research in the Third World. In addition, the United States Congress has passed legislation making available to the MDBs government personnel for the preparation of EIAs. See 22 U.S.C.S. § 262p-1 (Law. Co-op. 1990).

vant in the poorest LDCs where data on basic resources is scarce.⁹⁶

Another source of concern is the additional costs that preparation of EIAs imposes on the Third World. However, while the gathering of a team of experts and their scientific equipment to complete these assessments may represent a substantial burden to the LDCs,⁹⁷ these burdens pale in comparison to the potential environmental costs of unsound projects.⁹⁸ In addition, projects for which EIAs have been completed tend to be trimmed down when environmentally harmful components are modified or eliminated. Finally, the costs associated with time delays can also be reduced if EIAs are commenced together with other studies, such as economic and engineering feasibility, that take place during the initial phase of a project.

PART II

A. *Environmentally Unsound Projects of the World Bank*

The World Bank⁹⁹ is a multilateral financial institution created to foster economic growth in the less developed coun-

⁹⁶ The World Bank intends to strengthen the capacity of the recipient countries to estimate a proposal's environmental components. Thus, according to a recent World Bank publication:

Since the environmental assessment is the borrower's responsibility, the ultimate success of the directive will depend on strengthening the environmental expertise within member countries. Projects with major potential impacts thus normally need to include an institutional development and training component. In addition, to help develop environmental capacity in the country, the Bank encourages the use of local expertise in the preparation of assessments and stresses the need for training courses for local specialists and consultants.

WORLD BANK, *THE WORLD BANK AND THE ENVIRONMENT* 64 (1990).

⁹⁷ It is estimated that an EIA represents no more than one percent of the total cost of the project. Cong. Rec., *supra* note 15, at S16668.

⁹⁸ To alleviate these costs, the World Bank helps to finance the elaboration of EIAs. The Bank does this either through Project Preparation Facility Advances or Technical Assistance Grants for the Environment. WORLD BANK, *OPERATIONAL DIRECTIVE* (Oct. 31, 1989), at 5.

⁹⁹ The World Bank is part of a group of international assistance institutions that include the International Development Association (IDA) and the International Finance Corporation (IFC). See Henry J. Bitterman, *Negotiation of the Articles of Agreement of the International Bank for Reconstruction and Development*, 5 INT'L LAW. 59 (1971). In theory, the Bank's policy is dictated by the Board of Governors, whose members are the finance ministers of the donor countries. John Horberry, *The Accountability of Development Assistance Agencies: The Case of Environmental Policies*, 12 ECOL. L.Q. 817, 821

tries.¹⁰⁰ In carrying out its mission, the World Bank has become the largest donor of development aid, and the recognized leader in international economic planning. However, while pursuing its traditional economic objectives, the Bank neglected to assess the environmental consequences of its projects.¹⁰¹ This lack of con-

(1985). In practice, however, the Board of Governors delegates its decision making powers to the Board of Executive Directors. This Board consists of twenty-one members, five of which represent the Bank's largest shareholders: the United States, Great Britain, Germany, Japan and France. The other sixteen members are elected by the governors to represent groups of lesser shareholder countries. Voting rights at the Bank are, therefore, proportional to the capital participation of each member. Bruce M. Rich, *The Multilateral Development Banks, Environmental Policy, and the United States*, 12 *Ecology L.Q.* 681, 684 (1985).

¹⁰⁰ The International Bank for Reconstruction and Development (IBRD or World Bank) was founded in 1945 at the Bretton Woods Conference. Its original goal was "To assist in the reconstruction and development of territories of members by facilitating the investment of capital for productive purposes" *Articles of Agreement of the International Bank for Reconstruction and Development*, 2 U.N.T.S. 134 (1947), Art. 1.

Political economy theorists disagree about the value of foreign aid in the development process. A radical view posits that such aid, far from bringing the LDCs to the "take-off stage" of self-sustained growth, actually retards it by distorting price relationships, drowning local entrepreneurship, and imposing economic models alien to local conditions. In this context, foreign aid is seen as an instrument of continuing political and economic dominance over the Third World. Foreign aid is blamed for lowering the international competitiveness of the LDCs, and for widening the gap between North and South. It is also said to promote inefficiency by allowing recipient governments to disguise the effects of ill-conceived economic policies. Finally, foreign aid is said to perpetuate the structural dependency of the LDCs. In the words of one author, "if the only measurable impact of all these decades of development has been to turn tenacious survivors into helpless dependents, . . . then [it seems] . . . beyond dispute that aid doesn't work." G. HANCOCK, *THE LORDS OF POVERTY, THE POWER, PRESTIGE, AND CORRUPTION OF THE INTERNATIONAL AID BUSINESS* 190 (1989) (emphasis omitted). See also J.E. Spero, *THE POLITICS OF INTERNATIONAL ECONOMIC RELATIONS* 10 (1985); R.A. ISAAK, *INTERNATIONAL POLITICAL ECONOMY* 216 (1991). Cf. M.B. KRAUSS, *DEVELOPMENT WITHOUT AID* (1983) ("The industrialized welfare states try to make up in foreign aid what they take away from the Third World through foreign trade.").

In contrast, a moderate view of the role of aid in development holds that the Third World, although ultimately responsible for its own development, cannot be left alone against market forces that tend to accentuate existing inequalities. See INDEPENDENT COMMISSION FOR INTERNATIONAL DEVELOPMENT ISSUES, *NORTH-SOUTH: A PROGRAM FOR SURVIVAL* (BRANDT COMMISSION) (1980). According to this view, the problems with capital flows to the LDCs, including development aid, is their inadequacy to fill their balance of payments gaps. In addition, while a substantial expansion of development aid will be beneficial, its effectiveness could also be improved by making it less project specific, and by coupling it with reform in the international trade mechanisms to promote exports. J. BHAGWATI, *THE ECONOMICS OF UNDERDEVELOPED COUNTRIES* 206, 219 (1977).

¹⁰¹ Cf. Passel, *Rebel Economists Add Ecological Cost to Price of Progress*, N.Y. TIMES, Nov. 27, 1990, at C1, col. 1.

cern has resulted in dire consequences in some recipient countries.

The loans depicted below illustrate some of the negative effects of World Bank projects in three sectors: agricultural, rural development, and hydroelectric power. Before studying these case examples, it is important to bear in mind that the effects of World Bank projects through the LDCs are magnified by several factors. First, the majority of World Bank loans support projects in sectors of great environmental sensitivity.¹⁰² Second, since most loans require that the recipient country participate with additional local funds, the Bank's impact on the recipient country is greater than the initial loan implies.¹⁰³ Third, the recipient countries usually lack the technology and political will needed to check the adverse consequences of a project, even when these effects are identified early.¹⁰⁴

1. *Agricultural Projects*

A common objective of agricultural projects in the Third World is to increase productivity through mechanization and mass production. Yet, one of the effects of mechanization of agricultural production is the displacement of farm labor. Once out of their former homes, these people usually relocate to frontier

¹⁰² Although the Bank provides financing for most economic sectors, the large majority of the loans are destined for agricultural projects (twenty-three percent in 1988), which include rural development and forestry. The next highest funding is for transportation projects (fourteen percent), followed by energy (twelve percent), and industry (eleven percent). Goodland, *Environment and Development: Progress of the World Bank*, 156 GEOGRAPHICAL J. 149 (1990). See generally E. GOLDSMITH AND N. HILYARD, CCFs]THE SOCIAL AND ENVIRONMENTAL EFFECTS OF LARGE DAMS (2 Vols. 1984, 1986).

¹⁰³ Rich, *supra* note 99, at 686. According to information presented in a congressional hearing, for every dollar the United States gives the World Bank, the Bank receives \$3.55 from other donors. Subsequently, based on this amount, the Bank is able to borrow \$57.06 from international capital markets. The Bank would then be able to lend \$61.61 to the recipient developing country. In addition, World Bank funding normally spurs co-financing by other development agencies, private banks, and government agencies, at a ratio of three to one. As a result, the original \$1 donated can generate a total of \$246.44 to finance projects. *Id.* at 683 n.9.

¹⁰⁴ A project proposal is usually first presented to the Bank by the recipient country. If further interest develops the Bank sends an appraisal team to the country "to examine the technical, financial and legal aspects of the transaction, and to see whether the propos[al] provide[s] a net economic and productive benefit . . ." James R. Silkenat, *The Role of International Development Institutions in International Project Financing: IBRD, IFC and Co-Financing Techniques*, 17 INT'L LAW. 615, 619 (1983).

regions where the land is less productive and support facilities are almost non-existent. Consequently, their diet and sanitary conditions deteriorate, and their vulnerability to endemic or contagious diseases increases.¹⁰⁶ Most agricultural projects also contemplate an increase in the use of pesticides and fertilizers.¹⁰⁶ Aside from the price and foreign exchange disruptions these products cause, pesticide residue usually end up contaminating surrounding waterways. This could eventually cause drinking water contamination, loss of aquatic fauna and eutrophication of reservoirs.¹⁰⁷

Probably the most disastrous projects financed by the World Bank involve the colonization and agricultural development of tropical rain forests. One of the largest of these projects, in terms of the funds involved, the area covered, and the populations displaced, is Brazil's Northwest Development Program, also known as the Polonoroeste project. From 1981 to 1985 the World Bank disbursed nearly half a billion dollars, out of an estimated \$1.6 billion total cost, in support of Polonoroeste.¹⁰⁸

The project centered on the construction of a 1500-kilometer highway leading into the heart of the Amazon forest. The highway was designed to encourage the creation of new settlements and to open land for agriculture.¹⁰⁹ Despite its promising economic benefits, the project was laden with problems. First, the project caused grave damage to the environment. Clearing

¹⁰⁶ See generally Waddy, *Medical Problems Arising from the Making of Lakes in the Tropics*, in *MAN-MADE LAKES*, (R.H. Lowe-McConnell ed. 1966).

¹⁰⁶ The World Bank encourages the production and use of pesticides in the Third World through agro-industrial development loans. See Rich, *supra* note 99, at 696-97. A case example of the negative effects of the misuse of pesticides is the near collapse of the cotton industry in the Sudan, where the purchase of the increasing amounts of pesticides needed to maintain production has disrupted price balances and caused environmental degradation. *Id.* According to testimony given to Congress, the cotton producing region of Gezira has "Unacceptable residues of DDT[.] . . . [O]ther persistent, organochloride insecticides now occur widely in water, mother's milk, livestock, fish, and wildlife." *Environmental Impact of Multilateral Development Bank-Funded Projects: Hearings Before the Subcomm. on International Development Institutions and Finance of the House Comm. on Banking, Finance and Urban Affairs*, 98th Cong., 1st Sess., at 553-54 (1983). See Rich, *supra* note 99, at 698.

¹⁰⁷ George D. Appelbaum, Comment, *Controlling the Environmental Hazards of International Development*, 5 *ECOLOGY L.Q.* 321, 328 (1976).

¹⁰⁸ Rich, *supra* note 99, at 694.

¹⁰⁹ Todd K. Martens, *Ending Tropical Deforestation: What is the Proper Role for the World Bank?*, 13 *HARV. ENVTL. L.R.* 485, 494 (1989).

forest land for pasture or agriculture proved unsound since, once the vegetation was razed or burned, the remaining thin layer of soil had minimal productive value.¹¹⁰ Furthermore, the land clearing process increased the accumulation of harmful gases in the atmosphere. This effect was brought about by two interlocking events: While razing the land hinders the normal oxygen-production cycle, burning the trees that have been razed releases additional amounts of carbon dioxide into the atmosphere.¹¹¹ Second, the Polonoroeste project caused enormous human suffering. Thousands of peasants, lured to the jungle by land development schemes, moved with their families under subsistence conditions.¹¹² The peasants were subsequently joined by waves of city dwellers seeking escape from their urban plight. Conflicts with displaced native tribes developed, and faction wars, hunger, and disease ensued.¹¹³

Following widespread international concern for the fate of the region's Indian population, the World Bank attached environmental conditions to their loans to the Brazilian government. Under these conditions, the government was to implement health measures, set aside over fifteen Indian reserves, and create biological parks and stations.¹¹⁴ Unfortunately, the Brazilian government did not allocate enough funds to meet the new challenge, and very few of the promised measures were implemented. The project continued unabated, and the area became the largest enclave of deforestation in the Amazon. Finally, in March 1985, under relentless international pressure, the Bank suspended disbursements for the Polonoroeste project. It was the first time that the Bank halted a development project for environmental reasons.¹¹⁵

¹¹⁰ Bertrand, *Ecological Processes and Life Support Systems*, in *SUSTAINING TOMORROW* 30 (Thibodeau & Field eds. 1984).

¹¹¹ Scott, *The Disappearing Forests*, *FAR E. ECON. REV.*, Jan. 12, 1989, at 34.

¹¹² Jose A. Lutzenberger, *The Systematic Demolition of the Tropical Rain Forest in the Amazon*, 12 *ECOLOGIST* 248, 249 (1982).

¹¹³ See generally *id.* at 250-51. See also Cockburn, *Amazon Symbiosis: Social Justice and Environmental Protection*, *WALL ST. J.*, Dec. 29, 1988, at A7, col. 4.

¹¹⁴ Rich, *supra* note 99, at 695.

¹¹⁵ *Id.* at 696.

2. Rural Development Projects

Another Amazon region project, the Carajas Iron Ore complex, illustrates some of the consequences of unsound rural development activities.¹¹⁶ Initiated under a \$304 million loan, the project included construction of several iron ore smelters and a 600-mile railroad to transport the ore.¹¹⁷ However, the project also contemplated the burning of 58,000 square miles of pristine Amazon forest in order to provide charcoal for the smelters.¹¹⁸ The project was designed with a built-in ecological imbalance: The operation of the smelters would not be profitable if it had to include the costs of reforesting the destroyed areas.¹¹⁹

3. Hydroelectric Power Projects

Hydroelectric power projects present an array of potential threats to the environment. Dams could alter the chemistry of the water downstream, eliminate vital nutrients from the food chain,¹²⁰ affect the indigenous fauna and flora, and contribute to the proliferation of water borne diseases.¹²¹ Dams may also eradicate plant and animal species¹²² and dislocate native popula-

¹¹⁶ See Hall, *Agrarian Crisis in Brazil Amazonia: The Grand Carajas Programme*, 23 J. DEV. STUD. 522 (1987).

¹¹⁷ Sierra Club, *1989-90 Conservation Campaign, International Development Lending Reform*, printed in 135 Cong. Rec. S16,666 (daily ed. Nov. 6, 1989) (report introduced by Sen. Lautenberg).

¹¹⁸ *Id.*

¹¹⁹ Ruellan, *Le Projet du Gran Carajas au Bresil, un Saccage Lucratif des Forets*, LE MONDE DIPLOMATIQUE, Sept. 1989, at 3 (Paris, Fr.). See also Mahar, *Deforestation in Brazil's Amazon Region*, in World Bank, ENVIRONMENTAL MANAGEMENT AND ECONOMIC DEVELOPMENT 87, 108 (G. Schramm & J. Warford eds. 1989).

¹²⁰ As a result of construction of the Aswan High Dam in Egypt, for example, the amount of nutrients the Nile carried to the Eastern Mediterranean decreased dramatically. This caused a near obliteration of the sardine population and the demise of the local fishing industry. George, *The Role of the Aswan High Dam in Changing the Fisheries of the Southeastern Mediterranean*, in THE CARELESS TECHNOLOGY 320 (M. Farvar & J. Milton eds. 1972).

¹²¹ The construction of dams and the numerous irrigation canals that feed from them have contributed to a substantial increase in the incidence of schistosomiasis. These man-made water projects constitute "an ideal perennial environment for the snail host and a means of spreading the worm throughout the continent." Comment, *supra* note 102, at 327.

¹²² Zygmunt J. B. Plater, *Damming the Third World*, 17 DEN. J. INT'L L. & POL'Y 121, 128 (1988).

tions.¹²³ In addition, the weight of the water contained in large dams could alter the pressure on the earth's crust, and lead to possible earthquakes or landslides.¹²⁴

An example of an ecologically harmful hydroelectric power project is the Singrauli Power Plant in India.¹²⁵ This project was part of a large industrialization plan approved by the World Bank for Singrauli, a region which only two decades ago provided a safe habitat for a wide variety of animal species. This is no longer the case today due to the constant influx of settlers and entrepreneurs. The project itself is a source of pollution because ash emissions from the thermal plant are spread over the area. In addition, airborne particulate blown into an adjacent reservoir has caused floods, and has "so encrusted the soil that agriculture is almost impossible."¹²⁶

B. *World Bank Response*

The World Bank has not been oblivious to the consequences of these environmentally unsound projects.¹²⁷ In 1979, with the creation of the Office of Environmental Adviser, it became the first multilateral development institution to issue environmental

¹²³ *Id.* at 127.

¹²⁴ Omo-Fadaka, *The Misuse of Science and Technology*, WORLD FUTURE STUDIES CONFERENCE ON SCIENCE AND TECHNOLOGY AND THE FUTURE (1979), reprinted in INTERNATIONAL LAW AND WORLD ORDER 990 (B. Weston, R. Falk & A. D'Amato eds. 1980). The weight of the water accumulated at the Koyna Dam in India produced an earthquake that killed 200 people in 1967. Comment, *supra* note 107, at 324.

¹²⁵ 135 Cong. Rec. S16,664-66 (daily ed. Nov. 6, 1989).

¹²⁶ *Id.*

¹²⁷ The Bank has conceded that project planners have often overlooked technical links in places where they are fairly obvious. This is illustrated by loans for municipal water supply works, where an increase in the water flow not matched by a corresponding increase in sewer capacity may lead to serious water pollution problems. See WORLD BANK, ENVIRONMENT, GROWTH AND DEVELOPMENT 12 (1987). Another example provided by the Bank is forestry projects that involve the introduction of eucalyptus:

[E]ucalyptus plantations are often economically important, but they cannot fulfill all of the functions of natural forests, which provide game, herbal medicines, natural fibers, and fodder and browse. . . . In some eucalyptus plantations erosion has been accelerated on steep slopes because the trees alone do not retain enough soil, and they inhibit the growth of understory plants. Eucalyptus trees also deplete groundwater much faster than other species. Because of these problems such projects as the Candi Watershed Project in India have had to shift to other species.

Id. at 13.

guidelines for its projects.¹²⁸ These guidelines were later expanded¹²⁹ and made available to other development institutions.¹³⁰ The Bank also issued a "Declaration of Environmental Policies and Procedures Relating to Economic Development"¹³¹ which intended to further incorporate environmental concerns into its project financing.¹³² The Bank's commitment to change its past lending practices is reflected in the following excerpt:

The experience of governments and development agencies over the past two decades provides several important lessons on the environmental aspects of development projects. The lessons relate to the potential of projects to satisfy the multiple criteria of sustainable growth, poverty alleviation, and sound environmental management. They also relate to the importance of technical links and sociological and cultural factors¹³³

Unfortunately, these commitments proved of little practical effect to the LDCs at the time. In the words of one commentator, "resource decisions were made with little or no recognition of complex ecosystem relationships or state-of-the-art scientific understanding of those relationships."¹³⁴ A plausible explanation for this failure, rendered in organizational theory terms, is that the Bank still had in place "structural barriers" to the adoption of its stated environmental objectives.¹³⁵ Thus, while the Bank's

¹²⁸ WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT, *OUR COMMON FUTURE* 337-38 (1987).

¹²⁹ See WORLD BANK, *ENVIRONMENTAL, HEALTH, AND HUMAN ECOLOGICAL CONSIDERATIONS IN ECONOMIC PROJECTS* (1972).

¹³⁰ Ibrahim F. I. Shihata, *The World Bank and Human Rights: An Analysis of the Legal Issue and the Record of Achievements*, 17 DEN. J. INT'L L. & POL'Y 39, 61 (1988).

¹³¹ 19 I.L.M. 524 (1980). The Declaration called for international development organizations to, inter alia, "initiate . . . research and studies leading to improvement of project appraisal, implementation and evaluation methodologies, including cost-benefit analysis, of environmental protection measures" *Id.* at 525.

¹³² Carol Klein-Chesivoir, Comment, *Avoiding Environmental Injury: The Case for Widespread Use of Environmental Impact Assessments in International Development Projects*, 30 VA. J. INT'L L. 517, 531 (1990). The Bank's commitment to environmental guidelines for its projects was reaffirmed by its President, A. W. Clausen, in a 1981 speech in which he said that countries must pursue environmental management if sustainable development was to be achieved. A. W. Clausen, *Sustainable Development: the Global Imperative*, reprinted in 2 ENVIRONMENTALIST 25 (1982).

¹³³ WORLD BANK, *ENVIRONMENT, GROWTH AND DEVELOPMENT* 10 (1987).

¹³⁴ Paul J. Culhane, *NEPA's Impacts on Federal Agencies, Anticipated and Unanticipated*, 20 ENVTL. L. 681, 685 (1990).

¹³⁵ For an insightful study of these structural barriers, see John Horberry, *The Ac-*

official goal was to review every project for its environmental consequences, by 1983 only six staff members, out of a total of six thousand, had been assigned to the environmental office.¹³⁶

It was not until President Barber Conable announced a substantial reorganization of the Bank in May 1987 that environmental concerns were finally integrated into its planning process.¹³⁷ Mr. Conable increased the number of staff devoted to environmental work,¹³⁸ created a centralized Environmental Department, and set the goal of having "4,000 environmentally sensitive staff in the Bank."¹³⁹

These changes provided the background for the Bank's adoption of EIAs as a way to incorporate environmental considerations into its lending activities.¹⁴⁰ The Bank formalized this evaluation process for development projects in its Operational Directive for EIAs.¹⁴¹ These directives differentiate between project-specific EIAs and regional and sectoral EIAs. Project-specific EIAs are defined as those used in individual development projects, such as dams or irrigation projects, which have signifi-

countability of Development Assistance Agencies: The Case of Environmental Policy, 12 *ECOL. L.Q.* 817. Summarizing the problems that MDBs face in implementing new policies, Horberry states:

Development assistance agencies often face conflicting demands, both external and internal, when they attempt to implement a new policy The agencies are expected to respond to the concerns of donors, meet the expectations of recipients, and overcome the hurdles peculiar to their task environments. Consequently, they tend to pay lip service to the general objectives of new policies without dramatically changing the actual management of their programs. In addition, as large organizations, these agencies inevitably suffer from bureaucratic ills and internal conflicts that stifle or distort their operations.

Id. at 833.

¹³⁶ Bruce M. Rich, *The Multilateral Development Banks, Environmental Policy and the United States*, 12 *ECOL. L.Q.* 681, 707 (1985).

¹³⁷ The reorganization plan followed a Bank study which emphasized the need to address environmental issues on a comprehensive basis and recommended coordination between the developing countries, MDBs and nongovernmental organizations. See *WORLD BANK, ENVIRONMENT, GROWTH AND DEVELOPMENT* 28-32 (1987).

¹³⁸ *WORLD BANK, ENVIRONMENT AND DEVELOPMENT: IMPLEMENTING THE WORLD BANK'S NEW POLICIES* 3 (1988).

¹³⁹ *WORLD BANK, STRIKING A BALANCE: THE ENVIRONMENTAL CHALLENGE OF DEVELOPMENT* 9 (1989) (quoting Environment Department Director Kenneth Piddington).

¹⁴⁰ *WORLD BANK, THE WORLD BANK AND THE ENVIRONMENT: FIRST ANNUAL REPORT, FISCAL 1990*, at 62 (1990).

¹⁴¹ *WORLD BANK, OPERATIONAL DIRECTIVE 4.00, ANNEX A: ENVIRONMENTAL ASSESSMENTS* (Oct. 31, 1989).

cant environmental issues.¹⁴² Regional and sectoral EIAs, on the other hand, are those used with smaller projects that are concentrated in a single region. Conducting a series of project specific EIAs for the latter projects would result, according to the Bank, in an inefficient allocation of resources.¹⁴³

The World Bank is said to be now fully committed to consider the environmental effects of the projects it finances.¹⁴⁴ The Bank has indicated unequivocally that it will require EIAs for major project proposals, and has begun to look into such requirements as cumulative effect assessment and public participation. For example, according to an official, if the Bank finds a serious structural conflict between its own projects and locally-initiated projects it will be willing to withdraw its proposal.¹⁴⁵ In addition, the Bank has officially stated its intent to "[w]ork closely with borrowers to use systematically the environmental assessment methodology in the preparation and evaluation of projects,"¹⁴⁶ and has announced new efforts to "introduce explicit environmental considerations into development planning and activities."¹⁴⁷ However, these concerted efforts to use EIAs in international development projects are relatively new. For this reason, the experience acquired from federal courts' handling EIAs could benefit the Bank and other development financing institutions with similar objectives.

CONCLUSION

MDBs are the major source of development assistance to the Third World. Their loans are intended to promote economic growth and social stability. However, because of their traditional concern with economic and engineering feasibility, these banks have historically neglected the environmental effects of their

¹⁴² *Id.* at 1.

¹⁴³ *Id.* at 2. The area of study may be defined on a physical or biological basis, such as a habitat or a river basin. *Id.*

¹⁴⁴ See *Help for the Environment*, WALL ST. J., Nov. 29, 1990, at A8, col. 4.

¹⁴⁵ Telephone interview with Robert Goodland, Advisor for Environmental Assessments, World Bank, Wash. D.C. (Apr. 2, 1991).

¹⁴⁶ WORLD BANK, SUPPORT FOR THE ENVIRONMENT: A PROGRESS REPORT 41 (Sept. 1989).

¹⁴⁷ WORLD BANK, STRIKING A BALANCE: THE ENVIRONMENTAL CHALLENGE OF DEVELOPMENT 10 (1989).

projects. As a result, some Third World projects have caused serious environmental damage in the recipient countries.

In seeking to prevent future harm from similar projects, nongovernment organizations pressed the MDBs to change their lending policies and take into account environmental issues. The mechanism recommended for that end has been the Environmental Impact Assessment, a document that identifies the foreseeable environmental consequences of a project. Further support for the use of EIAs in international development projects has come from congressional legislation, the United Nations, and the European Community.

The response from the MDBs has been largely positive. The World Bank, the largest and most influential of the MDBs, has published operational memoranda indicating its intention to require EIAs for their future projects.¹⁴⁸ Other development assistance institutions have taken similar steps.

In carrying out these objectives, the MDBs will encounter a variety of EIA-related problems that are similar to those already resolved by the federal court system. This Comment described three elements of EIAs addressed by the courts: completeness, cumulative impacts, and public participation. This Comment proposes that these decisions can provide valuable guidance to the MDBs, and could assist them when they confront similar situations in international projects. It is hoped that by drawing from the extensive experience of domestic courts in the area of EIAs, the MDBs would find efficient ways to implement sound environmental safeguards for their development projects.

¹⁴⁸ World Bank officials have declared, as recently as September 1990, that "environmental concerns are given prominence in its lending policies for projects in developing countries." *Environmentalist Charge World Bank Report With "Green Washing" Policies*, 13 INT'L ENV'T'L REP. (BNA) No. 10 (Sept. 26, 1990), at 388. However, this assertion has been disputed by The People's Network for Eco-Development, a coalition of private environmental groups, which points out that only two percent of the \$20 billion in annual World Bank lending enhances environmental protection. *Id.*