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## **Damming the Third World: Multilateral Development Banks, Environmental Diseconomies, and International Reform Pressures on the Lending Process**

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## **Damming the Third World: Multilateral Development Banks, Environmental Diseconomies, and International Reform Pressures on the Lending Process**

### **Keywords**

Banking, Banking Law, Developing Countries, Environmental Law, International Loans, Congress

# **Damming the Third World: Multilateral Development Banks, Environmental Diseconomies, and International Reform Pressures on the Lending Process**

ZYGMUNT J.B. PLATER\*

An "environmental" perspective on multilateral development bank (MDB) loans presents at least three points of analysis relevant to Third World development issues. First, it gives some very vivid and instructive examples of how the international development loan process can go awry. Second, in a practical sense it demonstrates why and how the lending process itself requires constructive reform. Third, in reviewing legal approaches to reform, including recent pressures on MDBs, it helps clarify a latent debate about the legitimacy of donor-nation pressure on international lending institutions.

This article focuses upon World Bank projects and processes, not only because they provide many useful examples of disastrous development loans, but also because in the past two years the World Bank, followed by other regional MDBs, has made a dramatic official shift in its willingness to recognize the seriousness of environmental problems caused by MDB projects. The new statements of policy and procedure reflect an attempt to reform the development loan process, to make it more rational and less prone to environmental disasters — an initiative that so far is winning mixed reviews.<sup>1</sup>

This article focuses on the particular example of MDB loans for the construction of large capital-intensive dam projects.<sup>2</sup> Dam construction

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\* Professor of Law, Boston College Law School. This article is based upon a speech delivered at the Annual Meeting of the International Third World Legal Studies Association, held in conjunction with the convention of the American Association of Law Schools, in Miami, January 8, 1988.

The author is one of those erstwhile Africanists of the 1960's generation who moved away from active involvement with Third World legal issues upon returning to the United States. Since returning from Africa, my work has involved questions of environmental law (including water resources law), and cases involving public works dams, with some limited involvement with international environmental issues in Japan, India, and South America. The present analysis is thus written primarily from the perspective of an arm's length observer rather than an active participant in international dam controversies.

I gratefully acknowledge the assistance of Albert Bedecarre, Boston College Law School Class of '90, and the helpful comments of Dr. Brent Blackwelder, Professor Peter Rogers, and Bruce Rich, Esq.

1. See brief analysis of the evolution of environmental planning considerations in World Bank development loans, *infra* text accompanying note 24.

2. Because the article's text is derived from a speech format, it is not extensively footnoted. Background data and further information on international dam building projects can

offers one discreet sector of development assistance initiative that can be viewed on its own terms. It is an area in which major problems have indeed surfaced over the years in World Bank and other MDB projects, and it is an area in which the banks have encountered vociferous opposition from a very effective coalition of Western and Third World environmental non-governmental organizations (NGOs). Dam building offers useful opportunities to examine how engineering and financing decisions can go astray, as well as offering a limited opportunity to applaud the Bank's recent development reform efforts.

This article is organized in three parts. The first part offers a brief introduction to the environmental perspective, and then sets out a spectrum of serious environmental diseconomies which have been caused by various international dam projects an accounting that requires the analytical observer to go beyond the usual broad and imprecise rubric of "social costs" or "economic externalities". The second section of the article focuses on MDB administrative process: why have problems occurred over the years in the implementation of international development projects, and how can decisions be improved? The final section analyzes a range of available legal approaches for modifying and improving the international development loan process, focusing on the practical example of several recent cases of donor-nation pressure on the MDBs. From an observer's perspective, the most noteworthy recent improvements in the development loan process are clearly attributable to external pressures applied to MDBs by major donor countries under NGO prodding — a development that may well worry some internationalists.

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be found in the following sources: *Environmental Performance of the Multilateral Development Banks: Hearings Before the Subcommittee on International Development Institutions and Finance of the House Committee on Banking, Finance, and Urban Affairs*, 100th Cong., 1st Sess. (1987) (particularly submissions of Bruce Rich, Esq. on behalf of the Environmental Defense Fund) [hereinafter Hearings]; Aufderheide and Rich, *Environmental Reform and the Multilateral Banks*, Spring 188 WORLD POL. J. 301 (1988); Rich, Funding Deforestation: Conservation Woes at the World Bank, THE NATION, Jan. 1989 [hereinafter Deforestation]; Rich, *The Multilateral Development Banks, Environmental Policy, and the United States*, 12 ECOLOGY L. Q. 681 (1985) [hereinafter Rich, MDBs]; Address to the World Resources Institute May 5, 1987 (Washington D.C.) by World Bank President Barber B. Conable (unpublished summary available from the World Bank); *Groups Call for Action to Block World Bank Loan*, NOT MAN APART, August 1988, at 7; *International Dams Newsletter*, Vol. 1, No. 1 Winter 1985-86 (all subsequent issues available through the Environmental Policy Center and Earth Island Institute); Rabben, *Brazil on the Brink - Land, Debt, and Democracy*, THE NATION, April 30, 1988, at 597; Castantreira, *Balbina Goes on Line*, EARTH ISLAND JOURNAL, Fall, 1987; *Damming the World*, NOT MAN APART, Oct. 1983, at 10; The World Bank, Environment and Development (1984); BUND FÜR UMWELT UND NATURSCHUTZ, (1987) (available from U.S. Environmental Defense Fund) [hereinafter *Fin. Ecol. Dis.*]; Colchester, *Hydropower Projects in Central India*, in AN END TO LAUGHTER, (1985); GESELLSCHAFT FÜR BEDROHTE VÖLKER (1984) [hereinafter Action for Threatened Peoples].

## I. THE ENVIRONMENTAL PERSPECTIVE AND ENVIRONMENTAL DISECONOMIES IN INTERNATIONAL DAM PROJECTS

### A. *Environmentalism*

Two very contrary images of environmentalism will help the reader understand the particular perspective of environmental analysts and activists in their role on the world stage. The first image is a broadly held generalization, particularly common amongst those in the international development profession: In the eyes of many promoters, most environmentalists are a small but noisy elite, inexperienced, primitive, petulant, opinionated amateurs, unfounded and insubstantial in their analysis, but unfortunately all too clever at mobilizing the media in quixotic campaigns to protect some endangered flower, fish, or dickey bird.<sup>3</sup> Environmentalists cannot see the forest for the trees; they are skewed in their vision and their values. In their criticism of MDB lending, they are simply "Bank-bashers."

The converse perspective is the environmentalists' view of themselves. On one hand, those who work in environmental initiatives know there is as much ecological diversity within the ranks of those who call themselves "environmentalists" as there is in a hectare of tropical rain forest, ranging from scattered cells of bright-eyed nihilists in eco-guerilla "direct actions", to polite associations of silk-stocking East Coast Brahmin, *noblesse oblige* conservationists; from loney guardians of a particular bog or forest, to advocacy organizations based in New York or Washington with thousands of members, dealing with dozens of issues around the country and the world. There are environmental groups dedicated to calm, rigorous scientific research while others emphasize economic analysis, sociological issues, legal analysis and segmentation, or artistic, historical, or quasi-religious values. Some are deeply involved in political lobbying, and others adamantly avoid political entanglement; some are characterized by Establishment sobriety, others by the fervor of camp meeting populism.

The United States has developed the most substantial and diverse environmental community; in recent years however, the U.S. example has been followed by a plethora of similarly diverse organizations in Western Europe, and in a growing number of Third World nations and localities. In some cases the distinctions between various groups in the environmental spectrum may be more defined than differences between a particular environmental organization and its non-environmental adversary. The environmental coalition that has induced recent reform pressures on the MDBs,<sup>4</sup> for example, has generally been characterized by its groups' pro-

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3. See *Tennessee Valley Auth. v. Hill*, 437 U.S. 153 (1978); Plater, *Reflections in a River: Agency Accountability and T.V.A.'s Tellico Dam Project*, 49 TENN. L. REV. 747 (1982); Plater, *In the Wake of the Snail Darter*, 19 J. OF L. REFORM 4 (1986).

4. This coalition was led by several U.S. groups, notably: the Environmental Defense Fund, Natural Resources Defense Council, National Wildlife Federation, Sierra Club, and Rain Forest Action Network. They were joined by: Probe International (Canada), Friends of

fessionalism, careful fact-finding, rigorous economic and legal analysis, and subtle political savvy.

On the other hand, there is a common thread that runs through virtually all the differing components of the environmental "movement" — a concern with values and ecological interconnectedness that displays practical as well as philosophical coherence. My environmental law students were once visited by David Brower, one of the more eminent U.S. environmental activists, who enjoyed the title role in the book, *Encounters With the Archdruid*.<sup>5</sup> Standing tall in front of the students, white-haired and raw-boned with piercing blue eyes, Brower stretched out his arm, with thumb and forefinger held about two inches apart, and said: Imagine if you will our entire planet reduced to this, the size of an egg . . . A computer ecologist did some interesting computations for me: If the planet Earth were reduced to the size of an egg, what do you think its total mass of air, of atmosphere, would be? And what would be the total mass of the water that, along with air and sunlight, sustains life on this Earth?

Based on those computations the sum total of atmosphere veiled around this egg planet Earth would be equivalent to no more than the volume of a large pea wrapped around the globe! And the water? That would be no more than the mass of a large match head, a tiny volume spread thin, just enough to fill the oceans, rivers and lakes of the world.

Looking at the students, Brower asked, "Thinking of those limits, can you any longer not believe that our planet is a tremendously vulnerable little system, totally dependent on this fragile tissue of air and water, a thin fabric of life support made up of all the air and water the Earth will ever have?"

Brower's egg illustrates environmentalists' common perspective on environmentalism, an ultimately utilitarian approach in planetary terms if not project terms, based upon an attempt to make a rational accounting of all of the real long term residual costs of modern technology including consideration of economically intangible as well as tangible values, in a context of limited and fragile resources. It is an approach characterized by a consistent skepticism about projects that do not reflect comprehensive overall economic and ecological accounting.<sup>6</sup> From both perspectives, in the view of the development profes-

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the Earth and Survival International (Great Britain), Rain Forest Information (W. Germany), and a number of Third World organizations.

5. JOHN MCPHEE, *ENCOUNTERS WITH THE ARCHDRUID* (1971).

6. Although development interests here and abroad often chafe at environmentalists' meddling, and seek to characterize it as a narrow and unrealistic aesthetic initiative, the record reviewed here shows that the engineers and the people who fund them, often need the cold dose of reality represented by environmental queries. This would allow them to plan successful developments. In some cases, this will result in scrapping large-ticket capital-intensive projects. Rational systems require that there be someone built into the process whose role is the check whether the Emperor is really wearing clothes. Absent such, an effective component in the MDB process, the environmentalist must take on this role.

Thus, Environmentalism is not viewed by its advocates as a rarified aesthetic concept.

sion and in their own eyes, environmentalists often appear to be like little limpets clinging to the coattails of the engineers and financiers who day in and day out decide what will be accomplished. Developers consider this constant surveillance of issues by environmentalists to be nothing less than harassment. To the contrary, of course, Environmentalists view their efforts as broadly helpful. In either event, both recognize that environmentalists usually remain outsiders to the decisional process.

Nevertheless, environmentalists do pose important questions. Environmental accounting on large dam projects in the Third World is a case in point, illustrating the MDB process, its problems, and a functional role for environmentalism.

## II. ENVIRONMENTAL DISECONOMIES IN INTERNATIONAL DAM PROJECTS

There have been many problems with large-dam development loans over the years, some well known and some not so well known. Even without adopting a North/South debt-enslavement conspiracy theory, it is possible to discern projects that have not necessarily improved developing nations' overall economic positions, where the institutional structure and momentum of the MDB lending process failed to prevent harmful economic programs and projects, and indeed created, fostered, and encouraged them.

Most well-read individuals today have a vague notion that large dam projects have produced some unanticipated problems over the years. The Aswan Dam is the most familiar example. It was a large reservoir-based development project that brought schistosomiasis outbreaks and severely-altered river flows while destroying one of the world's most productive agricultural zones in the Nile Valley and its delta region.

Environmental problems occur in a remarkably large number of different categories of residual effects, which for our purposes should not merely be lumped into the minimizing rubric of "social costs" or "external costs" as economists often feel compelled to do. Those terms tend to insulate or depreciate the overall dimensions of indirect costs imposed by various projects, and, even more imprecisely, imply that at least within the "internal" terms of a particular development project there is accurate accounting of potential costs.

Rational analysis is served better by dividing the different categories of environmental diseconomies into three classes.

The first class would include system effects like the loss of an endangered species, an effect not generally tangible in national or local eco-

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This is a minor luxury when weighed against pressing human needs for development. Most environmental issues are based on the activists' insistence on the overall long term accounting of real benefits, costs, and alternatives — seeking to make administrative decisions rational only in terms of human utility. In practice, this usually means that environmental groups try to pull into an accounting, all the various real costs in order to achieve overall rationality.

conomic terms, but affecting human and ecological values, aesthetics, or planetary health. Thus, Class I diseconomies are less likely to receive consideration from the development profession based on developmental pragmatics, but are relegated to protective initiatives based on altruistic principles.

Class II effects involve off-site problems directly caused by a project that are economically tangible in national or local terms, although often not considered in MDB project accounting before or after the fact. An example would be the Aswan Dam's spreading of schistosomiasis.

Class III diseconomies include unforeseen mistakes such as building nuclear plants on earthquake faults: problems caused by a project itself that undercut the specific purpose and function of the project and thus should have been accountable in project planners' own terms of direct project self-interest. Class III effects demonstrate why it is wrong to regard environmental costs as "external" costs.

Large dams cause diseconomies in all three classes of project effects.

#### Project Benefits:

Most often, the engineers and planners who design dam-oriented development projects are quite accurate in their most obvious and direct project calculations. The annual volume and flow of a river can be known quite precisely, as can be the projects exact dimensions, the height from the bedrock base of the dam to the top of the spillway, creating a power head that will probably produce the projected capacity of electrical generation or the projected volume of diverted irrigation flows. In brief, whatever direct benefits the structure will mechanically produce are likely, at least in the short term, to be more or less accurately estimated in the project designing and funding process.<sup>7</sup>

#### Project Costs:

Yet logic dictates that the estimated *costs* of a project are as important as the benefits, and a project's costs typically are not fully accounted for in the MDB project price tag - notwithstanding the chronic overruns that seem to be inevitable in such projects once underway.

The following catalog of environmental costs is not likely to be represented in full in any one dam project, but all of the listed diseconomies have occurred in past projects, including World Bank financed projects. It is far more likely that many of these costs will be found cumulated in any

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7. For a detailed overall benefit-cost study of projects, see Rogers, *Planning Without Facts: A Framework for Economic Evaluation of the Three Gorges Project*, (unpublished paper presented at the December 6, 1986 symposium of the Education and Science Society in New York). Some past projects have not only experienced environmental diseconomies, but have resulted in great harms — causing an entire project to be viewed as a mistake. For example, the Balbino dam in Brazil, completed with World Bank financing. The millions of dollars spent on such projects may leave the host country in worse economic position than before. Official observers now admit the Balbino dam to be a "disaster".



Third World dam project than that none will be found. Sadly enough, virtually all Third World international development dam projects to date have suffered from a dysfunctional constrained scope of review which failed to consider serious direct and indirect environmental diseconomies.

With recent efforts by the World Bank and other regional MDBs to effect radical improvements in their decision-making processes, the following list may, one hopes, become a checklist of past disasters to be avoided in the future, rather than an historical prologue for continuing failures of project planning.

*A. Class I Environmental Costs:*

1. Displacement of indigenous peoples

Dams in tropical areas often displace extremely vulnerable indigenous cultures.<sup>8</sup> The actual number of persons forced from their ancestral homes may be relatively small, which coupled with the fact that they are often primitive or minority tribes further diminishes the attention paid them by national and international development officials. For some cultures and some peoples, however, the dislocation means death. The Bayano Dam in Panama eliminated 80% of the settled villages of the Cuna Indians. As with the Tucurui Dam in Brazil (chronicled in the semi-fictional movie "The Emerald Forest") some displaced persons from dam areas have been pushed into the territory of enemy peoples, leading to the decimation of tribal warfare. The dislocated indigenous peoples, who may never have received notice from national authorities prior to the rise of impounded waters in their homelands, often lose their religious culture as well, since many such peoples are deistic and intimately tied to the physical features of their environment.

In the forced migrations of both primitive and modernized dislocates, there can be serious disruption of social and economic life, the straining or splitting of family ties, often producing disassociated personality traits, accompanied by alcoholism or other anti-social effects, the migration of destitute individuals to cities, and so on. The numbers of dispossessed may in some cases be quite large. The Xingu Dams currently being urged upon on the World Bank by some of its staff and by the government of Brazil, would flood more than 4,000 square kilometers. The Narmada Dams project in India would ultimately displace more than 1.5 million people, in a process that has already begun with its first dam, the Sardar Sarovar Dam which is now in the process of dispossessing 70,000.<sup>9</sup> Boghdad (Indira Sarovar) Dam also in India would displace tens of thousands more.<sup>10</sup> Even these large numbers, however, are often treated

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8. J.C.N. Paul, *International Development Agencies, Human Rights and Humane Development Projects*, 17 DEN. J. OF INT'L. L. & POL'Y 67 (1989).

9. The ousted Indians who had legal title were promised title to land elsewhere, but the program has worked poorly to date. They have been left in many cases with non arable land that is not irrigated, a further irony since irrigation is a posited benefit of the dam.

10. It was recently reported that the Indian government has formally asked the World

as relatively insignificant by the national and MDB development officials who plan the projects. After all, the Indian subcontinent now has 783 million people and will have over a billion by the year 2000. The "oustees" as they are officially termed represent little political consequence; they are small tribal and ethnic minorities in the vast Indian state.

## 2. Rare and Endangered Wildlife

In addition to the loss of habitat for wildlife,<sup>11</sup> generally, the elimination of river valleys often destroys the last refuge of endangered species. The Indira Sarovar Dam would eliminate a major part of some of India's most endangered species, including the Bengal tiger, the mouse deer, the sloth bear, a particular species of buffalo, and a giant squirrel species, while generating only 106 megawatts (MW) of electricity. The Nam Choan Dam on the River Kwai Yai in Thailand will eliminate the six rarest animal species in that nation. Rare plant species are also typically lost in the flooding of a river. Because they seem to represent only aesthetic values of a rather *recherche* elite, these costs are of little moment to development planners and financiers. In fact there is a utilitarian argument to be made for the preservation of endangered species — that if we don't preserve them we lose possible future knowledge about important medicines and chemical processes, the structure of which will never be discovered if we throw away the natural models, "like burning a book before we've learned to read it." Unfortunately, such arguments do not present immediate fiscal payoffs, so the preservation of rare and endangered wildlife is typically resigned to the status of a philosophic ideal, honored in the breach.

## 3. Archaeological Losses

Over aeons past, human settlements have usually been located along rivers, hence major human archaeological sites are likely to be lost when a river is dammed. In the proposed Usamacinta Dam project along the Mexican-Guatemalan border, there appear to be many unexplored Mayan sites that will never be seen and understood before they are forever swallowed up under the waters and mud of another reservoir. As U.S. environmentalists have learned, archaeological sites do not possess direct economic value in terms relevant to the development planners who undertake reservoir projects, so their loss is not considered to present much of a utilitarian argument for negative accounting.

### B. *Class II Environmental Costs*

This is the area of project-cause diseconomies which is most often

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Bank to cancel the Indira Sarovar Dam project based upon re-evaluations that national interests were served better without it. 3 EARTH ISLAND J. No. 4, at 13 (Fall 1988).

11. The habitat of elephants in Southern India is being flooded. In the Kerala State, elephant migratory routes are being diverted by the reservoirs and canals associated with dam projects. As well, the other six new dam projects planned for Kerala will destroy much of the area's remaining forest habitat.

covered by revisionist resource economists, and includes by far the longest checklist of problems:

1. Deforestation

Tropical forests usually represent a major national asset in sustainable timber resource supply, as well as constituting a major source of oxygen recharge and ecosystem maintenance. The world's tropical forests, however, are being eliminated at a rate of one to two percent a year under the onslaught of slash-and-burn agriculture and national transmigration campaigns often funded by MDBs.<sup>12</sup> Dams accelerate the process by removing major segments of tropical forests, often with little relation to the scope of benefits provided. The Balbina Dam in Brazil, which has sacrificed 2430 square kilometers of rain forest in order to generate only 125 megawatts of power, has been described as a "disaster" by the Brazilian economics ministry that renamed it even before it has become operational. The project was completed with a World Bank energy sector loan at a cost of US \$800 million.

2. Water quality effects

Beyond the acidification of impounded waters referred to below, water quality behind dams typically suffers serious degradation. Even if the muddiness and suspended solids precipitate out in the sedimentation process, impounded water is typically loaded with nutrients. When its flows are further warmed by sunlight, it often blossoms into a thick algal soup, with substantial deoxygenation and proliferation of waterweed. Though fish populations often increase dramatically in the first few years of an impoundment's life, the disturbed balance of the riverine ecosystem typically makes fish populations crash five to ten years after project completion and waterweed and algae take over the impoundment. Chemical herbicides can be used to attempt to control the waterweed problem, but these cost money and create major potential local health hazards as a further spin-off effect.

Furthermore, downstream effects of dams also cause major changes in the fish life of a river system. As in the case of the Three Gorges Dam in China, there may be a threat of losing nutrients and historical temperature conditions down river as well as an increase in saturated nitrogen problems caused by high dams that may give downstream fish "the bends," engorging their organs with nitrogen bubbles that kill them.

3. Other down river effects

As the Aswan Dam illustrated most familiarly, the impoundment of a river eliminates ancient flooding cycles which typically have been built into the ecological and human balance of downstream river valley uses. The lack of seasonal floods can eliminate the re-fertilizing effect of sediment deposition; without the recharge from upstream erosion, land adja-

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12. *Fin. Eco. Dis.*, supra note 2, at 4.

cent to the downstream sediment flow is cut away and disappears, particularly in the estuaries where entire deltas can slowly dissipate.<sup>13</sup>

#### 4. Seismic effects and mudslides

The collection of a large mass of water accumulates immense weight on the area of the dam site and impoundment, weight so unnatural that it may actually throw off the subterranean geological balance of a region, triggering earthquakes and other seismic effects. Mud slides may also reduce the effect of the impoundment, triggered by erosion undercutting or by destabilization caused by human deforestation efforts attracted by the reservoir development itself.

#### 5. Human dislocation effects

As noted above in the case of indigenous peoples, the dislocation of human settlements can pose serious problems to the inhabitants involved. There are also tangible indirect economic costs that may be felt in national and regional terms, as people are shifted from more fertile to less fertile lands, and packed into higher density populations.

#### 6. Disease

The spread of the snail-borne schistosomiasis bilharzia parasite in the Aswan system is well known. Dams cause diseases in a broad range of cases including, in addition to schistosomiasis, the spread of onchocerciasis or river blindness, and increased exposure to malaria. The Tehri dam project has recently been blamed for the exposure of more than eight million people to malaria parasites, in a residual effect that had been known to health scientists at least since Ghana's Volta dam project which was completed in 1959, two decades earlier. The health effects caused by dams are often accentuated by the fact that they occur in regions far removed established health care supply. Nevertheless, they do not seem to attract the prior attention of project planners.

#### 7. Irrigation problems

Schistosomiasis and other waterborne diseases are carried by the irrigation systems of dam projects. Other serious diseconomies can occur in irrigation programs as well. Lands which are irrigated, especially in hot climates, tend to concentrate whatever mineral salts exist in the river water, thereby producing an increasingly salinized soil system through evaporation. India's Punjab has large sections of once-arable land now salted by intense irrigation.<sup>14</sup> In other cases, as in the Kiambere Dam and Bura irrigation projects on Kenya's Tana River, the irrigated lands may turn out to be unsuitable for the intensive levels of irrigated agriculture posited by the engineers as the basis for irrigation benefits. The World

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13. Like Aswan, the Three Gorges Dam will cause coastal erosion and saltwater intrusion problems, *id.* at 12-13.

14. See *Gesellschaft für Bedrohte Völker*, *supra* note 2.

Bank's Tana River project created less than half the irrigable hectares it was originally planned to develop, seriously diminishing the benefits promised to the dislocated populations, and raising the cost of those benefits to an average of more than US \$20,000 per household.

#### 8. Sabotage potential

Another major potentially catastrophic diseconomy which typically is not discussed by project planners is that the focus of so much capital, technology, and pent-up hydrologic pressure at *one* location increases the incentives for, and possibilities of sabotage. A high dam more than 200 meters tall may be less than 10 meters thick in poured concrete at its base. One car bomb driven over the dam anywhere along its up river side could wipe out the investment as well as the downstream population, cities, and economy.<sup>15</sup> Even without active sabotage, dams may contribute seriously to civil unrest. Frustration and anger against the Chico Dam plans in Ferdinand Marcos' Philippines were apparently the main reason that many local peasants and tribe members (whose political affiliation previously had been toward the Presbyterian missionary church) turned toward the communist New Peoples Army.

#### 9. Class dislocation

Other politico-economic effects of big dams de-stabilize human social ecology as well as natural ecology. Poor people most often suffer the losses of large dam projects, while the more modernized and wealthier sectors of the population typically reap the benefits of dam construction. The natural tensions flowing from such situations can have substantial effects.

#### 10. Dysfunctional Settlement Patterns

When a dam goes into an area, it typically attracts hordes of unskilled laborers who migrate from other areas of the country. As in the Brazilian projects, the immigrants often exacerbate problems by killing or exploiting the indigenous residents of the region, setting up shanty towns, establishing settlements lacking in government services, and practicing a form of agriculture that may accelerate the deterioration of land quality. Increased inappropriate agricultural practices, such as slash and burn agriculture and slope farming, may also drastically increase sediment loads pouring into the impoundments.

#### 11. Loss of Foregone Development Assets

Implicit in a number of the foregoing categories is the fact that dams not only eliminate particular assets and resources located in their impoundment areas, but also eliminate whatever potential there was for appropriate economic development based upon those assets. The loss of fertile soils is a classic example. The most fertile soils of any region typically

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15. The only recorded instance of this type of sabotage occurred in World War II.

are those lying in the river valleys, and these are the soils which will be completely eliminated as a useful national resource by the effects of an impoundment. The fertility of the soils, rather than crop-raising, then contributes to the dysfunctional biological oxygen demand and algal pollution effects of the impoundment. In this regard it is politically understandable why engineering and feasibility studies for large dams never include agricultural maps classifying the quality of soils that will be lost under the impoundments. In the same way, they rarely include maps showing archaeological losses, nor losses of mineral deposits which will be placed under water. Typically, project planning maps cover only the discreet towns and commercial centers existing within the projected reservoir areas, entities which obviously and unavoidably will require removal operations. To register the existence of valuable assets to be lost in the project area would directly undercut the project's cost-benefit ratios, and hence is counter intuitive to development planners.

#### 12. Cumulative effects

The practical reality of a large dam project is that many of the foregoing costs have cumulative synergistic effects. The biological, human, social, and economic effects of a series of dam projects in a region can cause qualitatively greater compounded problems, as populations grow more densely settled, on less fertile ground, with more susceptibility to disease, and less availability of food.

#### 13. Alternative Technologies Avoided

Finally, a further logical loss caused by major capital focus on dam projects is that they foreclose a nation's ability to undertake alternative technologies for development. The \$500 million Nam Choan Dam in Thailand will cause a host of environmental problems, while the cost of its construction and its electrical power supply system will prevent Thailand from investing in cogeneration technology. Cogeneration could have produced more gigawatt hours than the dam for only one-fourth the dam project's cost, by providing appropriate generation facilities in conjunction with the boilers of already-existing sugar processing plants throughout the country.<sup>16</sup> In 1986 it was predicted that electricity consumption by major power users in Brazil could be cut 30% by the year 2000 through energy conservation and efficiency measures. Such programs would cost \$10 billion compared to the \$44 billion that building the unnecessary 22,000 megawatts of generating power would cost. The institutional initiative and bureaucratic mass represented by dam projects foreclose the implementation of potentially more beneficial national development strategies, and the resultant costs can be tangible and cumulative.

Further, dam projects may produce benefits that are not particularly needed by a nation, and may promote inappropriate low-multiplier ex-

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16. Hearings, *supra* note 2 (statement by Bruce Rich).

plorative industries. The Bakun Dam in Sarawak, besides eliminating the homes of five thousand tribal people and contributing to serious deforestation problems, is being built as a location for the Reynolds Aluminum Co. facilities which were prevented by pollution laws from expanding operations along the Elbe River in the Federal Republic of Germany. Reynolds will accordingly move its operations and its pollution to the Third World, at Bakun Dam.

### *C. Class III Environmental Costs*

It is extraordinary to discover that a major environmental category of project defects that are quite serious, quite foreseeable, and not at all "external" to project accounting, have nevertheless regularly escaped the prior attention, and subsequently haunted the project efforts, of international dam builders.

#### *1. Sedimentation*

Rivers carry suspended solids eroded from upstream in their watersheds. When the flow of a river is slowed behind a dam, the soils and sands carried by the water precipitate down, and can fill up a reservoir impoundment area with remarkable speed. One large project on the Yellow River in China (a Soviet project), so miscalculated the sedimentation rate that the dam was filled up with mud deposits before it was even finished. It now stands as an embarrassing albatross, the river flowing straight over its spillway with no effective water storage impoundment effect. The Tehri Dam in India was planned to produce benefits over a serviceable life of 100 years. Because of sedimentation, it currently is likely to be filled up in thirty to forty years. The Tarbela Dam in Pakistan completed in the 1970's will have mud levels reaching its hydroelectric intakes by 1992, requiring multi-million dollar retro-fitting is an attempt to rectify the situation. The \$20 billion Three Gorges Dam project in China risks massive sedimentation from its impoundment effect on the muddy Yangtze River. This sedimentation is unlikely to be prevented by recently-designed diversion tunnels near the dam site. Moreover, sedimentation turns out to be a problem that is not restricted to areas nearest the dam. Waters slow far upstream where they enter the impoundment, in some cases beginning to deposit their sediment loads a hundred miles from the dam structure itself, causing obstructions and water elevations unforeseen by the engineers.<sup>17</sup>

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17. When river waters deposit their suspended solids at the upstream end of a reservoir, they form large sand bars that rise toward the level of the reservoir itself. Because the suspended grains of sand and soil interlock upon deposition, they do not dislodge by increased water flows on the upper surface. Accordingly, the "hump" of deposited sediments expands, and forces the waters to rise over it causing further up river sediment deposits. As this process continues, the upstream elevation of the reservoir may rise as much as a meter higher than top of the reservoir causing extreme flooding. This changes the hydrologic characteristics of the planned impoundment as well. Interview with Dr. Philip Williams, in Washington, D.C. (April 18, 1987) (Dr. Williams is a freelance hydrologist).

Sedimentation also causes a large number of indirect Class II diseconomies that are typically ignored by feasibility studies. Because sedimentation so seriously eliminates water storage capacity, cutting down on hydroelectric and irrigation potential, it is simply extraordinary that engineering feasibility studies can repeatedly ignore or underestimate its effects.

## 2. Scour and other structural effects

Large dams produce downstream discharges of tremendous force, which can cause unforeseen destructive effects to the dam structures themselves. The Tarbela dam had a concrete spillway that produced flows strong enough to cut the spillway itself away on the downstream side, requiring construction of a massive deflector system rushed into place to control the destructive process.

## 3. Destructive water quality

Large dams typically cause major off site Class II water quality consequences. Where large amounts of trees and vegetation were simply inundated without being removed from the reservoir area prior to impoundment, there is a marked increase in the acidity of the river's waters, which not only has ecological effects but also causes extensive corrosion of hydroelectric turbines so that they can be used for only a fraction of their normal working lives. This happens in a number of tropical dams, particularly large shallow impoundments like Brazil's Tucuruí or Balbina dams. Drifting vegetation and logs clog turbines and spillways in a long-continuing process in which the organic materials of the impoundment area break up and slowly drift downstream.

## 4. Structural failure

Approximately one percent of the world's dams actually do fail, sometimes because their bedrock geology was not sufficiently studied (as with the Teton Dam in the United States). In others seismic effects are generated by the dams themselves, by having such huge masses of water collected in fragile geological zones. These obvious and direct Class III costs have often been used by environmentalists to build cases for modification or abandonment of international dam projects. Though they represent serious concerns, including spill over effects into more extended Class II diseconomies, the momentum of the development process still produces contemporary dam project designs without taking sufficient account of even these most direct project problems. This is most perplexing, in light of the promoters' purported project orientation.

## Summary: MDB Dam Projects Cause Serious Real Environmental Costs

In sum, the catalog of potential and existing problems caused by large dam projects is sobering, and would seem to require logical consideration along with the glowing promises of development that typically accompany such proposals. Serious environmental problems do occur. The



World Bank has been a major part of the problem, spending \$30 billion to date for large dams in the Third World, with at least 400,000 involuntarily displaced persons dislocated from reservoir impoundment areas since 1979. Despite recent improvements in World Bank policy, another 1.5 million persons in India's Narmada Project alone may have to leave. Indeed, the momentum of the World Bank lending process over the past decades not only failed to prevent but appears to have created, fostered, and encouraged diseconomic projects in a number of Third World nations.

### III. ADMINISTRATIVE PROCESS: PROBLEMS AND REFORMS

#### A. *The Causes of the Problems*

Faced with the preceding catalogue of diseconomies and their serious cumulative effects, the question is how such problems could have occurred? In many cases in the past, the answer seems to be that MDBs, to a major degree, simply ignored these potential diseconomies in their large dam development projects. The engineers and financial development planners who hypothesized and created projects did not take account of a wide array of negative economic effects, tangible as well as intangible. At another level, however, the question must be asked why the process did so ignore predictable and measurably substantial diseconomies. To surmise how the international lending process may go awry, it is relevant to view the process from an environmentalist observer's perspective. To an environmentalist, the problem comes down to the fact that the MDB development loan process is a closed system which quite naturally resists consideration of the negative consequences of its own development mission.

A large dam project can be born in a number of different ways, by the request of a host nation government, by the suggestion of international engineering and construction companies which often lobby Third World governments to urge them to request dams. If one goes back through project histories, however, the primary project initiators in many cases are the multi-lateral development bank's staffers themselves. Bank staff constantly review conditions in client regions and, as in the case of the World Bank, prepare "sector analyses" which hypothesize a variety of different development projects which may be attractive opportunities for World Bank loans.

Already environmentalist observers would assert that there is a problem. Within the World Bank, staffers have "lending targets", which are levels of monetary lending that the Bank wishes to achieve in a given year. These lending targets are typically increased annually by the Bank's management. This form of incentive loads the dice in favor of large capital-intensive projects and against lower-budget alternatives that might ultimately prove to be more fitting development initiatives considering the needs of target nations. Appropriate lower-tech alternatives may exist, but may take as much time and effort in their preparation as plans for

large projects. Low tech projects include agricultural cooperative systems, decentralized low-technology production facilities, public education, low mechanization modern agriculture, and other decentralized infrastructure projects. To some MDB staff, it surely must be more enticing to use their time to produce a multimillion dollar dam.

Once a dam project is hypothesized and given a name ("identified" in World Bank parlance) it already begins to take on a life of its own. The host country makes a formal request for MDB consideration of the dam project. A sign of the realities of project planning is that in some cases the host country government may not be actively involved with the preparation of its own request, and may get to see it as prepared by the MDB staff only shortly before the time the formal request is actually made. Within the MDB as well as the host nation, the name gives the project a concrete identity. It becomes "the Dunkoro Dam Project", and the concept of naming is clear: a particular place, a particular kind of project, a known development commodity, a particularly highly-focused form of capital investment, and a particular set of stirring development images - mighty piers of concrete, thundering spillways, clouds of white spume with electrical generation towers in the background.

Once "identified", the proposed dam project goes into the preparation feasibility study stages preparing and processing a "project brief".<sup>18</sup> This is very much a closed process and typically carried out by MDB staff and/or working groups from engineering firms involved in the development profession. There is typically no input whatsoever from those who will be most directly effected by the dam proposal, and often very little input from the host country government. Feasibility studies tend to be construction analyses done by the potential construction interests. For instance, the feasibility study for the Three Gorges Dam in China was prepared by a consortium of Canadian corporations who were likely to be prime candidates for the construction of the dam itself. Multinational contractors are an intimate part of the development profession, and typically play an active role within the MDB planning process. The graphics prepared in the feasibility studies incorporate the shortcomings noted in the environmental overview above by tending to focus on the dam structure itself and its reservoir impoundment, on projected power demand curves and repayment schedules. The studies do not include maps of the natural assets that will be eliminated by the project, no soil maps showing the fertile soils that will be inundated, with little or no attempt to assess intangible costs and potential development assets foregone. Generally, feasibility studies tend to prove the feasibility of the projects as hypothesized.

After the identification and preparation stages in the project cycle, the dam proposal passes to the project appraisal report stage. At this point the staff takes the initial feasibility studies and prepares an overall

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18. See generally, The World Bank, *The Project Cycle* (1987).

presentation of the project for the Board, typically including an overall cost-benefit assessment. Prior to 1987, this appraisal stage was the only occasion where the small environmental staff of the World Bank was required to have any formal involvement in the project analysis process. Unfortunately, project appraisal reports replicate much of the same mission momentum discernible in prior stages of the process. From the perspective of outside observers, environmental analysts, and resource economists, the benefit projections typically tend to expand estimated potential benefits, and constrain the range and magnitude of estimated direct and indirect project costs. The environmental inputs and commentary on projects at this stage tend to be rather flaccid and forlorn. In the case of the Nam Choan Dam on the River Kwai Yai, the environmental staff noted the presence of six endangered species, yet was only able to insert the comment that these rarest species, "will be forced to move elsewhere". The tone of the environmental staff was resigned to the inevitability of project completion, positing a biological relocation which in scientific terms was highly unlikely to be successful.

In some cases projected benefits do not aggregate sufficient amounts to justify projected costs. World Bank project appraisal reports have occasionally based their subsequent positive judgments that a project should move forward on the assertion that the dam would create substantial amounts of "unquantified benefits." This rationale is paralleled by American pork barrel construction agencies which claim intangible multiplier effects on the plus side of the ledger while typically avoiding consideration of unquantified negatives.

In some cases, as with the Narmada project, the host country ministries will promote the development loan, while by-passing normal domestic review by those ministries that might raise questions regarding indigenous peoples, population resettlement problems, and environmental impacts. In the Narmada case the government of India had not issued its required environmental clearance prior to project approval. The necessary studies had not been made, yet the environment ministry was pressured into making "preliminary approval" without a factual record, thus permitting the loan to be executed.

Prior to final loan commitment, a project must be approved by the Board of Directors. By this time the process has gone from "lending target", through increasing institutional investment in the production of the dam proposal, and substantial momentum has been generated within the MDB. It is little wonder that the executive directors rarely if ever have refused to approve such projects, absent extraordinary external pressures.<sup>19</sup>

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19. Some environmental observers argue that the boards of directors that represent donor nations (i.e. the Executive directors) consistently defer to the staff on major loans and, therefore, exercise little control over the MDB's. According to some sources within the profession, the members of the dam building fraternity all carry around a handbook listing

*B. An environmental perspective on the process*

Looking at this development process, environmental analysts would note the institutional mission's orientation throughout the stages of project development which narrows the scope of planning considerations and makes the ultimate project a foregone conclusion. Throughout the process the development loan is dominated by the engineering perspective — namely, what can be done physically, with existing technology — and the multifaceted inducements of large capital-intensive projects. There are institutional benefits for all the varied interests in the development profession, for multinational construction corporations and their home governments, (Italy and France, for example, have often taken a strong role in encouraging construction of such large projects by their own nationals), for promotional "insiders" within the host country (development ministries and those interests which will profit most directly in fiscal and political terms from the project activity), and for the MDB itself. The active participants in the formation and development of the particular project become invested in its progress. The participating interests will profit either in fiscal terms or in mission terms with a sense of accomplishment for having built a particular large dam.

Environmentalists would analyze this problem as an immensely powerful decisional process run entirely by "insiders" whose direct motivations (profit, institutional momentum, political power accrued, etc.) are not directly tied to the overall best rational development of the particular country or region. The main motivator for most participants in the process is unlikely to be "doing what is best for Gabon." Environmentalists would assert that Gabon's particular national needs merely serve as an opportunity for the engine of the development apparatus to do its thing. Hence, the focus is on building the largest possible projects, with an aversion to low-tech low-budget projects like investment in education, social infrastructure, and decentralized production. Environmental critics recognize, that focus on rational accounting may actually miss the real motivations of some of the development establishment as it applies to a particular project. Rationality is not necessarily the dominating internal drive. The altruistic desire to transfer maximum benefits to a needy people is not always the dominating motive for large capital-intensive project promoters. The self-serving motivations of human nature are what environmentalists see, and to some extent there may be truth in the observation. Human organizations seek to perpetuate themselves. There is a need to keep sustaining and expanding activity to justify organizational existence. There is ego gratification the image of something very large that has resulted from one's efforts. Profits for some of the actors in the development process are certainly a motivation. In some cases involving developing countries, corruption may help push along projects that involve billions of dollars. There is also a sort of engineer's technological impera-

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the world's biggest dams, and spend their time publishing papers in an attempt to prove theirs is the biggest.

tive, "what can be built must be built". In the case of dams, moreover, there may even be a touch of atavistic magic. There is something visceral in the pleasure that comes from making nature do one's work, throwing up a fragile barrier before the forces of a river's hydraulic power, watching the river tamed from raging torrent to placid pond, rising up behind a man-made wall. There is also something of an engineering competition. The largest power output dam in the world, Itaipu in Brazil, generates about 11000 megawatts (MW). When it became clear that raising the planned height of the Three Gorges Dam in China could make it the largest generator dam in the world (13,000 MW), the project's engineers planned to substantially increase the dam's originally - hypothesized elevation. Since then, the planners for the dam at Xingu in Brazil are meeting the Three Gorges challenge, apparently planning their dam so that theirs can be the biggest.<sup>20</sup>

### *C. Reforms and Reformers*

It may well be that the environmental perspective is unnecessarily jaundiced. The record of MDB development loans for large dam projects over the years, however, continuing in the present and projected into the immediate future, indicates that serious problems indeed do occur. Development initiatives with serious diseconomies are not only not prevented, but are born, nurtured, and pushed to the fruition by the MDB development lending mechanism over-capitalized and under-planned. It is thus altogether likely that some of these dam projects should not, if there were an overall rational accounting, be built, while others should be undertaken only with very severe modifications and mitigation built into the project proposals.

Only recently has such overall rational accounting been encouraged within the MDB process itself. Pressures for reform have been generated not from within the MDB structure or within the development profession, but by external reformers, almost exclusively non-governmental organizations in affected Third World regions and similar interest groups in the developed nations. The coalition that mobilized reform pressures upon MDB development lending was initially put together by representatives of several U.S. environmental groups that had developed extensive legal and political expertise in the course of fifteen years of domestic environmental initiatives, many, as it happens, involved water projects. These groups included the Environmental Defense Fund, the Environmental Policy Institute, the National Resources Defense Council, Sierra Club, National Wildlife Federation, Friends of the Earth, and Rain forest Action Network. Some of these groups had occasional international ex-

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20. According to one source within the profession who would rather not be quoted by name, "the members of the dam building fraternity all carry around with them this handbook listing the world's biggest dams; they're forever publishing papers trying to prove that theirs is the biggest — the tallest, the widest, the most massive, the biggest earth-fill, most water impounded, highest generative capacity, etc."

periences, but the MDB reform effort was notable for its comprehensiveness, persistence, and international networking. It soon was joined by the Canadian Probe International, the British branches of Friends of the Earth and Survival International, the West German Regenwald (Rain forest) Information, plus a critically important number of Third World NGOs which formed to resist local development projects and joined the network, sometimes at the risk of lives and safety.<sup>21</sup>

This coalition began to build an analytical factual record detailing the destructive consequences and diseconomies of the MDB's neoclassical economics approach to development lending. In the case of dams, they collected examples of cases involving most of the kinds of project diseconomies noted earlier. The strategy was to focus pressure on the World Bank, figuring that it was potentially more responsive than the host countries or the smaller regional MDBs, and was vulnerable in the political context of the U.S. and many Western donor nations. The World Bank did not have a developed or extensive political constituency within the U.S. Congress or European parliaments. In functional terms, the NGO coalition urged a series of changes in the way MDBs planned their development project, including:

1. Early overview analysis

A meaningful, comprehensive, realistic hard look, at an early stage of project analysis, incorporating a sufficient rational overview so that projects which make little overall sense can be filtered out of the process quickly, before they gather institutional investment and momentum.

2. Active open consideration of alternatives

One of the major problems that reformers see in the process is that once the MDB staff and development interests have focused on a particular high-technology, highly capitalized project idea, they systematically avoid considering ranges of alternatives that might preclude the adoption of the proposed dam. Rational cost-benefit analysis development planning can only be done in a context of considering common sense alternatives to proposals. Some form of environmental impact statement process, reviewable within the agency and by external observers, is useful in attempting to assure that the indirect intangible or long term diffuse and cumulative diseconomies of a project will be considered along with the direct projected benefits normally featured in feasibility studies.

Open information is part of a rational process. MDBs have characteristically kept their data confidential and inaccessible while projects were brought to the point of construction. Nevertheless, the computer profession reminds us of the epigram "garbage-in-garbage-out"; a decisional process can only be as good as the range and accuracy of the data supplied. If a process systematically excludes all data that is negative to com-

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21. See Aufderheide and Rich, *supra* note 2, at 311-313.

pletion of a project, then it cannot be expected that the decision will be fully rational nor that the project will develop as planned. "What the banks are in some need of, from the environmentalists' perspective, is *glasnost*."<sup>22</sup>

### 3. Participation of non-government organizations

NGOs are an important source of real life evidence of the effects of a project on a region, nation, and indeed the planet. NGO participation is important in more than political terms. It assures that a wide range of real costs and benefits will be considered in determining the feasibility of a project. Until recently the World Bank, like other MDBs, asserted that it was inappropriate for it to communicate with NGOs because "the Bank can talk only with governments." Ironically, there always existed a constant flow of communication between MDBs and a large number of private entities, particularly multinational construction firms, development consultants, and representatives of regional development associations. The integration of informed NGO participants into the development process is a way to open a conduit of relevant information that is otherwise typically excluded from development loan considerations.

### 4. Subsequent realistic audits

Projects as they are completed and put into operation should be subject to retrospective studies for determining the extent to which they actually realized the benefits posited and the extent to which diseconomies and costs have created problems. Because the actual performance of dams has been so problematic, there appears never to have been a comprehensive accounting overview of the true costs and benefits of a completed international dam project. The World Bank does prepare some retrospective project reports, but these are quite limited in the scope of accounted costs and consequential effects. This hesitancy, environmentalists would say, demonstrates an aversion to gathering the hard facts which might reveal that other ongoing projects had better not be built. As a means of mid-course correction and process feedback, retrospective audits are a logical requirement of an ongoing successful development program.

### 5. External accountability

If it is difficult for a system to police itself, it is useful to have mechanisms set up for outside observers to have an authoritative analytical role in the process. Whether this be some form of judicial review, or economic and social review tribunal, external accountability is one of the ways in which the mistakes of the past can realistically be improved.

Those reformers who have been attempting to implement these functional improvements in the MDB development loan system have been skeptical of MDB reform from within, and rarely find it practical to focus their efforts on intellectual persuasion. For their part, the MDBs have

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22. *Id.* at 318.

until recently responded inhospitably to the reform message. Over the past decade, the most active efforts for environmental reforms in the lending process have come from outside the institutional structure. In Third World dam locations, for example, projects have been resisted through strikes, demonstrations, sabotage, and human road blocks. These efforts have often garnered publicity, have sometimes encouraged some political re-evaluation of positions, but rarely have been successful in the long term, and rarely have been able to present its positions in a comprehensively, articulated form. Some resistance to the current development process has been in the nature of civil insurgencies. In other cases, there have been political backlashes against development initiatives. In the developed nations some NGOs, not necessarily part of the MDB coalition have staged media events in an attempt to embarrass the MDBs through sit-ins, or hanging banners with embarrassing messages on the facades of MDB headquarters.

If giving consideration to the problems and potential reforms of the MDB development loan system is valuable, there must be more credible means by which the system can integrate the merits of these pluralistic points of view.

#### IV. LEGAL AVENUES FOR REFORM, AND THE QUESTION OF DONOR-NATION PRESSURE

Faced with a situation poisoning MDB development interests and their NGO critics at loggerheads, it is altogether desirable that some institutionalized resolution of the issues be found within the legal system, rather than in the protracted "eco-guerilla" actions in the Western media and back country locations of Third World projects.

##### A. *Evolving International Law Norms*

The law, of course, operates in different ways in different arenas. At the most general level, a reformation of the MDB lending process would involve legal initiatives aimed at defining specifically applicable principles of international law. Professor Paul has analyzed how the definition of human rights in developing countries could provide a basis for MDBs to reform the process by which they may disrupt and dispossess indigenous populations in development areas.<sup>23</sup> The dramatic human costs occasioned by the World Bank's Narmada project, or the Balbina and Itaparica projects in Brazil, might well provide a setting where such human rights might be perceived as threatened. At this level, however, the definition of international law principles is quite abstract, and as yet provides little practically applicable legal theory.

Some environmental activists have accordingly gone beyond the broad definition of human rights to assert that in some cases MDB dam

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23. Paul, *supra* note 8.



projects have implemented "genocide" in their effect upon indigenous peoples. If such a claim were substantiated, it could draw upon recognized positive international law norms and conventions. Such claims of genocide, however, represent an extremely drastic avenue for integrating human costs into development planning. A genocide argument is not likely to promote careful adjustment of interests, but rather invites inflexible polarization.

Other broad international principles might be found in international declarations, such as the U.N. Declaration on the Human Environment issued at Stockholm in 1972. In particular, Articles 13, 14, 15 and 25 of that Declaration might arguably declare international law principles requiring overall review and sensitivity to social and natural resource dis-economies caused by development projects. Of course, the problem with the Stockholm Declaration and other such general declarations is they have no direct practical applicability and must await future specific implementation by U.N. action, by treaty or convention.

### *B. International Conventions*

Some existing conventions do offer potential applicability to the problems posed by poorly conceived dam development projects. A fascinating example occurred in the Narmada project. There, faced with massive dislocation of indigenous people and little planning for relocation and mitigation of the effects on villages and tribal cultures, threatened indigenous peoples formed a union under the auspices of the International Federation of Plantation and Agricultural Workers (IFPAW). In October, 1985, the IFPAW filed a complaint with the International Labor Organization in Geneva alleging multiple violations of Convention Article 107 of the International Labor Organization. Under the terms of that convention, signatory nations including India are prohibited from taking development actions which lower the living standard of indigenous peoples or fail to supply them with equivalent cultivatable land. The ILO forwarded those allegations to India, with an initial official expression of concern that the convention was being violated. Faced with this ILO inquiry, both the government of India and the World Bank responded with indignation to the international second-guessing of their plans for Narmada. After several months of tense political negotiations, the ILO was persuaded to withdraw from its review of the effects of the Narmada project. Despite the fact that the ILO intervention was ultimately neutralized, however, this initiative showed the potential utility of review and pressure embodied in existing conventions, as well as the potent ability of the development structure to resist such intervention.

### *C. Internal MDB Law*

There exist within the MDBs several types of "law" which can effect the implementation of reform in the development process. In 1980 all major MDBs signed a "Declaration of Environmental Policies and Proce-

dures Relating to Development", a general statement of commitment to integrate environmental concerns into the development planning process. Some MDBs, including the World Bank, took minor actions to implement the declaration, including hiring of one or more environmentalists on staff.<sup>24</sup> In general the actions of the MDBs amounted to little more than symbolic gestures. A poll of the Bank's regional directors three years after the signing showed that a significant number knew nothing of the existence of the Bank's environmental policy declaration.

Each MDB does have the potential to issue internal regulations and guidelines that would assure implementation of analysis at effective points in the decision-making process. Until recently, however, there was evidently little interest in doing so. The concerns of environmental and indigenous people's advocates were treated as minor marginal considerations. Furthermore, there is "law" in each development loan itself, a sort of project-by-project "law of the case". When an MDB negotiates a development loan with a host country, it can write in whatever requirements it wishes, and these requirements can apply tremendous constraints upon host countries to assure that projects planned will not create human or ecological destruction. Unfortunately, this potential is only as good as the institutional motivation setting it into effect, and such incentive has been hard to discern.

The World Bank can be applauded, however, for actions it has taken in the past two years. On May 5, 1987, Chairman Barber Conable made a formal address asserting that environmental considerations were not only useful ideals to integrate into the planning process, but substantively functional necessities to assure successful projects. "Good ecology", he stated, "is good economics . . . If indeed the World Bank has been part of the problem in the past, it can and will be a strong force in finding solutions in the future."<sup>25</sup> Conable's address was the first major change within the World Bank's internal government and appears to have led to practical results. The Bapai Dam in Nepal appears to have been halted under the review due to the chairman's address. From around the world, NGOs and the environment ministers of host countries have reported that World Bank staff and development interests within the particular countries have taken seriously for the first time the arguments, data, and environmental accounting procedures. The Inter American Development Bank has hired an environmental staff. The African Development Bank also appears to have internalized the lesson that projects that create environmental problems will often have an economic backlash that renders major development loan initiatives nugatory. In the Itaparica Dam in Brazil, the World Bank insisted that the "law of the project" include not only promises on the part of the host country government that indigenous

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24. In 1984 the Bank incorporated comprehensive policy declarations and procedures into the Operations Manual. Yet these procedures seem to have been breached. President Conable's Address, *supra* note 2.

25. *Id.*

people would be adequately relocated, (assurances which in the past had often turned out to be merely rhetorical,) but also that enforceable contracts be made with local NGOs so that if relocation efforts were non-existent or inadequate, the persons directly affected would have an immediately available legal remedy in the courts of the host country.<sup>26</sup>

In the last two years the World Bank has implemented a major reorganization, dividing its operations into four global regions with a central directorate in Washington, D.C. In 1980, the World Bank had one ecologist on its entire world-wide staff. In May 1987 the World Bank had only three environmental reviewers, trying to analyze 300 projects each year in addition to their public relations duties.<sup>27</sup> After the reorganization and President Conable's environmental policy declaration of May 5, 1987, the Bank created an Environmental Department in Washington, D.C. and environmental units in each region. Environmental guidelines and the Operations Manual have been updated, and a new sensitivity to environmental diseconomies is evident.

Because of the inherent tensions between promotional momentum and conservation principles, environmental observers are as skeptical as ever about internal MDB reform efforts and have adopted a wait and see attitude. "We like what they're saying," says one participant, "but we are still seeing the same old stuff coming out at the end of the pipeline, especially in the energy sector."<sup>28</sup> They find hope in the fact that after years of insistence that "the Bank will talk only to governments", the World Bank has entered into active dialogues with the NGOs, including the establishment of a formal "World Bank - NGO Committee" to institutionalize communication.<sup>29</sup>

Noting the apparent dramatic shift in MDB environmental consciousness, environmental observers nevertheless ponder why this shift has occurred. In part the MDB's newfound recognition of the rational

26. There are reports that Electrosul, a state utility, has recently reneged on such a promise. NOT MAN APART. *supra* note 2, at 7.

27. *Deforestation*, *supra* note 2, at 3.

28. Telephone interview with Dr. Brent Blackwelder (Nov. 30, 1988).

29. The following is from an affirmative speech to the Society for International Development on April 22, 1988, by Moeen A. Qureshi, the Senior Vice President of Operations in the World bank:

The doors of our headquarters and of our resident missions around the world are open. We hope new partners for development and new allies against poverty, will come to see us, even though World Bank staff seeks to find them . . . As late as ten years ago, what we knew about World Bank operations in many countries depended mainly on bureaucratic lines of information and supervision. Within developing country-governments implementing agencies reported on what they were doing, and country authorities tried to maintain quality control. The Bank supervised the projects it financed, but within the Bank too, we depended on bureaucratic lines of management . . .

In today's global village, NGO networks can report a problem in rural Northeast Brazil to Sao Paulo, and even throughout the world within a week. Where bureaucratic eyes are astigmatic, NGO's provide vivid images of what is really happening at the grassroots level.

importance of environmental accounting may be attributed to a significant 1987 report of the World Commission on Environment and Development.<sup>30</sup> This "Brundtland Report" was available to President Conable in draft form when he made his May 5th speech, prepared by a blue ribbon international commission, (Mrs. Brundtland is the Prime Minister of Norway and was among high ranking national officials from 22 nations; the U.S. representative was William Ruckelshaus), which issued a strong call for drastic changes in international environmental performance. The report targeted international economic pressures and lending programs as important causes of past problems, and indispensable parts of necessary fundamental international environmental reforms.

While environmentalists may applaud the MDB initiatives they have seen within the last two years, there remains a strong and not unreasonable suspicion in the minds of many NGO observers that the dominating reasons these reforms were implemented were due to outside forces. A critical motivation for the World Bank's policy shift, beyond the intellectual persuasions of the Brundtland commission's findings, appears to have been a practical threat of statutory pressure on Bank appropriations, and a subsequent barrage of pressures from donor nations, orchestrated by the coalition of environmental NGOs.

#### *D. Donor-Nation Pressure on MDB Policy*

There is no accepted analysis of the status and legitimacy of donor-nation pressure seeking to force particular policy initiatives upon international lending organizations, but actions focussed on environmentalism and indigenous peoples have recently created prime examples of this phenomenon. An initial and quite dramatic example of such socio-ecological pressure originated in a U.S. congressional initiative. Over the past ten years, the United States NGO coalition has been increasingly successful in persuading members of Congress that capital-intensive, multi-lateral development projects may cause more problems than they solve.

The environmental coalition levied congressional financial pressures on the MDBs drawing upon the tactics of a successful initiative against commercial whaling which used U.S. statutes threatening import cutoffs to pressure parties to the International Whaling Convention. Senator Robert Kasten, Republican from Wisconsin and past chairman of the relevant Senate appropriations subcommittee, emerged as a particularly important congressional figure in this initiative, which was backed by current chairman Daniel Inouye and Rep. David Obey, who holds the parallel position in the House. Over the last several fiscal years, Kasten and Obey have attached an elaborate statutory provision to the annual bill appropriating money for the World Bank.<sup>31</sup> These appropriations rid-

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30. See e.g., Pub.L. No. 99-500, Title 1 sec. 161(f), 100 Stat. 1783-232 (1986).

31. BRUNDTLAND, OUR COMMON FUTURE (1987). President Conable's public shift in policy followed shortly after a CBS "60 Minutes" excoriation of the Bank's Polonozoeste Pro-

ers declared that the executive directors of MDBs who were appointed by the U.S. must "vigorously promote the integration of environmental and cultural assessments and protections in the processing of multilateral loans," while attaching further requirements to enforce that goal. The statutory language is detailed, contains very specific mandates and prohibitions, and has been enforced by periodic accountings from the Treasury, which through its IDCA and NAC is directly responsible for briefing U.S. executive directors to the World Bank and other multilateral development banks. The U.S. Congress has held 21 hearings on the environmental problems of Bank lending over the past five years.<sup>32</sup> Because of the pressure applied through U.S. legislation upon the Treasury department, the U.S. representatives have undertaken critical reviews of ongoing development loan proposals and in several cases have voted against or abstained from loan approvals. Because the United States wields such a major bloc of votes within the MDBs (voting being proportionate to the financial sponsorship share of each nation), such actions have created more than a mere symbolic stance, and have enforced upon the World Bank the need to pay attention to the environmental principles the American statutes represent.

The pressures brought to bear upon the MDBs did not stop with the U.S. initiatives. In the past two years there has been a growing number of Western donor nations which have joined in with declarations of the practical importance of environmental analyses in MDB lending, and direct requests that the MDB boards incorporate environmental review into a reformed development loan process. These pressures have come from West Germany, Great Britain, the Netherlands, and the Scandinavian countries. At recent Bank annual meetings in Berlin, Canada asked the Board of Directors to implement an environmental impact statement review procedure for all development construction loan projects.

The NGO coalition, in sum, has helped to marshal a wide range of external donor nation pressures upon the MDB lending process, and can be credited with a fair measure of whatever successes flow from the ongoing MDB reforms.

#### *E. The Propriety of Donor Nation Pressure on MDBs*

Even assuming that salutary environmental reforms were instigated because of donor-nation pressure, the use of direct pressure on an international compact entity raises worrisome concerns in some observers' minds. No matter how altruistic, certain nations have the ability to influence the MDBs in part because they possess financial leverage on the Bank board. What then is the propriety of a donor nation's applying di-

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ject. See *Deforestation*, *supra* note 2, at 1.

32. By statute, the Agency for International Development in the U.S. Department of State is required to publish a biannual list of MDB projects that confront environmental problems, as an "early warning system". Aufderheide and Rich, *supra* note 2 at 309-310.

rect pressure to lending decisions of the Bank? The question is presented with particular clarity in the recent U.S. environmental initiative since the U.S. Congress applied its pressure via direct statutory enactment (although the same issue is present in less formal interventions.) For purposes of analysis, let us take two separable types of formal, unilateral donor-nation action: first, the Kasten-type appropriations situation where specific directions are given to a country's Executive Director on the Bank board to cast votes or to refrain from voting on particular issues. Second is the further troubling possibility of direct economic threats — the threatened withdrawal of funding to the World Bank tied to conditions of Bank action or inaction on particular loans and particular issues. This second category of pressure, moreover, may be further separated into threats designed merely to withhold extensions or commitments for further funding for the Bank, and a more drastic form of statutory condition cutting off appropriations for previously agreed funding commitments meeting existing Bank quota obligations.

There is a spectrum of arguments to be applied to both categories of unilateral donor pressures on MDBs: at one extreme are the opinions of those members of Congress who attach policy conditions to appropriations bills. Succinctly stated by Senator Kasten's office,<sup>33</sup> it is always the right of a sovereign people to determine how their tax dollars are going to be spent. If the legislature attaches directive conditions to its funding bills, or threatens a cut-off based on a particular policy position, that is an intrinsic right of a democratic people. The office of Senator Steven Symms of Idaho echoes the same position.<sup>34</sup> If World Bank loans in the agricultural and mining sector create Third World competitors for Idaho farmers and mining corporations, it is appropriate for a member of Congress to attempt to limit the effects of World Bank-financed competition through appropriations riders.

As recently as the Foreign Aid Appropriations Act for fiscal 1989, Senator Symms prepared conditional amendments, that stopped short of a retroactive cut-off of committed funds.<sup>35</sup> One amendment provided that if a loan designed to produce debt service revenue was approved by the Bank over the dissent of the American representative, future U.S. commitments of funds to the Bank would be reduced proportionately. No such amendments have passed the Congress, however. (The Treasury de-

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33. Telephone interview with staff member in the office of Senator Robert Kasten (January 4, 1988).

34. Telephone interview with staff member in the office of Senator Steven Symms (November, 4, 1988).

35. See Amendment to the Foreign Aid Appropriations Bill for Fiscal 1989, adopted on the Senate floor, 133 CONG. REC. S9270 (daily ed. July 7, 1987) and the debate thereupon (subsequently removed from the statute as passed). The congressional offices make the further point that, since Bank loans are based on borrowing from commercial banks, and not merely upon appropriations granted by member states, the withdrawal of funds is not a direct undercutting of the Bank's lending programs. At the most, it might cause the bond rating of the Bank to drop, requiring higher interest rates, but lending could continue.

partment, which instructs the U.S. MDB representatives, has announced that it views such amendments as violations of international legal commitments and hinted strongly that the agency would argue for a veto in such a case. For its part, the World Bank has made it clear that it would not accept any grant of funds from a member state if such conditions were attached.)

At the other end of the spectrum is the quite skeptical position taken by Dr. Ibrahim Shihata, Vice-President and General Counsel of the World Bank. In his speech to the International Third World Legal Studies Association in Miami,<sup>36</sup> and in memoranda prepared within the Bank in other similar controversies, Dr. Shihata has argued eloquently that all such unilateral threats or suasions applied by donor nations were improper and *contra legem* under international agreements, unless the policy conditions were directly related to the economic integrity of the Bank and its loans to member states. Going back to cases arising in the early 1970's and earlier, Dr. Shihata has argued that both Article IV, section 10 and article V, section 5(c) of the Bank's charter prohibit such direct interference. Article V provides:

[T]he President, officers and staff of the Bank in the discharge of their offices, owe their duty to the Bank and to no other authority. Each member of the Bank shall respect the international character of this duty and shall refrain from all attempts to influence any [officers] in the discharge of their duties.

Article IV adds that in the deliberation of the Bank and its officers,

[O]nly economic considerations shall be relevant to their decisions, and these considerations shall be weighed impartially in order to achieve the purposes stated in Article 1 [setting forth the productive development mandate of the World Bank].<sup>37</sup>

Dr. Shihata said these conclusions "clearly indicate that, as a general principle, the Bank, including its Executive Directors, may not take into account political considerations."<sup>38</sup> Based on the articles above, Dr. Shihata has concluded that member [states] of the Bank are under an obligation not to influence the Bank's President and staff in the discharge of their duties, and Executive Directors are under the duty not to act as the instrumentality of member [states] to exert such prohibited influence. However, Dr. Shihata also "recognized that there was no legal sanction available to challenge a vote by an Executive Director which is motivated

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36. This was in conjunction with the AALS annual meeting in Miami Beach, Florida on January 8, 1988. See Shihata, *The World Bank and Human Rights: An Analysis of the Legal Issues and the Record of Achievements*, 17 DEN. J. INT'L. L. & POL'Y 39 (1988).

37. *Id.*

38. Prohibitions of Political Activities Under the International Bank of Reconstruction and Development Articles of Agreement and Its Relevance to the Work of the Executive Directors, sec. M87-1409, at 8 (December 23, 1987)(unpublished World Bank document available at World Bank headquarters).

by political considerations."

One fundamental proposition of Dr. Shihata's argument is that constraints like environmental or human rights accounting are political. He specifically recognizes that in some circumstances "there are political situations which have effects on the country's *economy* or on the *feasibility* of project implementation or monitoring which should be taken into account."<sup>39</sup> Insofar as there can be established a direct or indirect link between the environmental consequences of a loan and the ability of the nation to repay it, that economic nexus would justify such "political" intervention. As a general proposition, however, the argument stakes out a strong presumptive position against the propriety and legality of such "political" interference by any member state in the activities of the Board of Directors. Dr. Shihata's position is echoed by the foreign investment committee of the American Branch of the International Law Association. That committee recently released a report strongly condemning efforts by certain signatories of international agreements, specifically the United States as a member of the Multilateral Investment Guarantee Agency (MIGA), attaching statutory conditions to participatory activities under the MIGA international convention.

The Committee believes that such a unilateral directive to a multilateral economic institution . . . will be unacceptable to the other parties to the Convention. They will question the right of one nation to dictate to the Agency that the nation's [interests] must be protected . . . at the expense of other signatory nations. If these conditions are required, U.S. participation in this multilateral Agency will be barred [sic] and [the Convention] would effectively be destroyed.<sup>40</sup>

Lying somewhere between these two positions is the opinion of several MDB legal counselors who informally expressed a fundamental pragmatism about such donor-nation pressures on international lending. A "whole host of appropriations riders" has been attached to recent U.S. funding statutes, and according to an informal World Bank source, the Bank has implicitly taken the position that such pressure is appropriate since it merely involves guidance to a national representative by its member state. Critical to the middle of the road position lies a modification of Dr. Shihata's fundamental distinction. If indeed the Bank's Executive Directors are legally to be regarded as individuals deriving their authority from and owing their paramount loyalty to the Bank, (Shihata argues) rather than as representatives of their appointive or elective member states, then political pressure exerted upon them is improper and the scope of permissible "economic-linked" political pressure is narrowed concomitantly. The pressures of a particular national special interest undercuts the required dominance of the collective international enterprise.

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39. *Id.*

40. Committee on Foreign Investment (American Branch) International Law Association (chaired by David G. Gill), "Report" (Oct. 15, 1987).



If, on the other hand, one regards and accepts the status of Executive Directors as delegates representing the position of the states that put them on the Board, then many instances of donor-nation pressure upon MDBs become less troublesome, and less destructive of the international agreement underlying the MDB process. Such recognition de-escalates the latent tension represented by an alleged nonfunctional "violation" of international agreement, in effect rationalizing reality.

Political reality indicates that some unilateral pressure on MDBs is inevitable and will take place regardless of whether pressure is formal or informal, direct or indirect, linked to economic concerns or not. The initial choice of an Executive Director is guided to some degree by the character and political predilections of the appointee, and to consider that political communication in this modern age would be limited only to discussions prior to appointment ignores modern international political reality. From this middle perspective, the application of pressure to the appointees of member states, or to the elected representatives of blocks of member states, is perhaps best regarded with a shrug. In any event, the compromise position would note that the donor nation directives are not an attempt to bind the MDB organization as such.

It follows, according to the middle position, that the only case where donor-nation political interference with lending decisions becomes "*contra legem*" is the situation where the prior commitment of a member state to contribute a specified amount of money is unilaterally rescinded in whole or part according to various political conditions. In such a case, a prior binding international agreement is being unilaterally abrogated. In other situations, including conditional refusals to commit further supplementary contributions, a member state is merely exercising its right to contract or to decline to contract. An example of the latter phenomenon occurred when the U.S. Congress passed P.L. 98-191 in November of 1983, with instructions to Executive Directors to refrain completely from voting unless the representatives had consulted with and received approval from appropriate Senate committees. Even this type of continuing stringent condition was arguably proper because it was attached to a resolution agreeing to increase the quota for contribution to the Bank, a financial undertaking that had not been previously agreed to.

Once consent is given it is binding, and unilateral withdrawals or rescissions are not appropriate after a commitment has been made. Short of such action, however, unilateral pressure is as pragmatically acceptable as it is inevitable.<sup>41</sup> "The whole world is political; the whole world is economic"; and it is therefore unrealistic to expect political pressure not to occur. It is possible to argue that most political intervention can be found to be indirectly linked to concerns about the "economic" ability of the

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41. See also, J. Gold, *The Growing Role of the IMF's Stand-By Arrangement*, 1984 J. Bus. L. 308, 315 (1984).

debtor nation to repay a development loan.<sup>42</sup>

From the pragmatic middle perspective, the further forms of hortatory donor-nation environmental pressure that have been applied to MDBs by Canada, West Germany, the Scandinavian countries and others, are not at all inappropriate. The World Bank is a major actor in the Third World, created and funded primarily by developed Western nations. What happens ecologically, economically, and sociopolitically in the Third World inevitably affects world order and the diverse interests of the developed states.

The most problematic legal situation, then, would be presented by unilateral rescissions of prior existing commitments to the Bank not the bare fact of political pressure on bank lending decisions. Even in such cases, it is true, the Bank has no enforcement mechanism, and it is questionable to what extent it would seek formal legal redress. As so often in international law, the resolution of such controversies would come down to a very basic question of internationalism. If the political actor deems domestic political and legal considerations to be dominant over international commitments, there is no effective constraint except the burden of world opinion - that of member states and the international legal profession. Most states have clearly accepted the doctrines of internationalism in their concept of law. Absent radical domestic political changes, it appears that doctrines of state sovereignty will usually not be applied casually to abrogate international development commitments.

#### SUMMARY

From the foregoing discussion it can be asserted that large international development projects, like the construction of dams in tropical areas of the Third World, present a wide range of troubling consequences that have often been systematically and disastrously excluded from prior planning efforts and MDB lending procedures. The failure of the international development loan process to review and understand the many serious diseconomies caused by such dam projects is attributable at least in part to completely understandable internal institutional dynamics. An institution that is geared up towards large capital-intensive projects may find it counterproductive and motivationally unattractive to consider reasons for such projects not to be built.

The environmental movement has applied much political pressure upon MDBs over the past decade, largely without success until the mid-

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42. In the case of the Chilean loans, the U.S. government has required its representatives to dissent from development loans so long as the regime continues to violate human rights. Yet, World Bank staffers have generally seemed to take a non-committal position, refusing to condemn this stance officially as a violation of international law or internal Bank Articles. This apathetic attitude may reflect an implicit interpretation of the U.S. pressures as linked to "economic" matters. It may even reflect a more straightforward recognition that major states' representatives will use political considerations and there is nothing the Bank can do about it.

1980's, attempting to reform the lending process that has produced a series of disasters in international water development. In the last two years the World Bank and other MDBs have made major procedural reforms within their internal processes designed to address the problem of environmental diseconomies in their projects. To outward appearances, this major change of heart on the part of the MDBs can be attributed in at least significant part to the pressure applied under NGO prodding by donor nations, including direct unilateral mandates to directors, requiring environmental reviews and standards in the MDB lending process, with the implicit potential for funding threats in the future.

The external pressure of donor nations presents a tangible and persuasive catalyst to the internal reform of MDB institutions. Such pressure, however, raises some questions about the propriety and even legality of the phenomenon, irrespective of the arguably salutary changes it may work in the implementation of international lending. From the perspective of jurists sensitive to the development of international legal norms, it is at least troubling that such a phenomenon has no inherent limits. In the short run, environmental observers will say that important sets of environmental considerations are now being considered where before they might never have been. The health of the planet may thus continue to benefit from the efforts of the 1980's. Debates about the proper relationship between MDBs and individual donor states — and between previously-insulated MDBs and the growing consensus about their broader international responsibilities — are likewise likely to continue into the future.

