

Greenwashing or Mainstreaming? New Measures of Environmental Rhetoric and Funding at the World Bank

September 10, 2009

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Abstract: Recent improvements in the quantity and quality of data available on World Bank development projects allow us to more accurately assess whether the Bank has “mainstreamed” environmental concerns into the IBRD/IDA portfolio. We argue that project-level budgets provide a more valid and accurate measure of environmental spending than traditional portfolio-level or project description-level measures of environmental spending at multilateral development banks. We construct an original dataset of all World Bank project documents with budgets from 1994-2007 and employ a principal-agent model to empirically test the “greenwashing” hypothesis. We find that the Bank has not increased mainstreamed environmental funding levels despite the approval of the Bank’s first official environment strategy in 2001. At the same time, we find that the Bank’s institution-level environmental rhetoric increased significantly during the study period. Nevertheless, at an operational-level, we find that when the Bank talks more about the environment, they spend more money on the environment.

Greenwashing or Mainstreaming?

New Measures of Environmental Rhetoric and Funding at the World Bank

Is the World Bank putting its money where its mouth is? Until recently, a lack of reliable data about the World Bank's environmental commitments has prevented scholars and policy makers alike from conducting rigorous, empirical analysis of the Bank's environment portfolio. While Bank experts and scholars have conducted numerous analyses of its environmental track record, most rely on case studies on the implementation of safeguard policies or analysis of published project descriptions (see World Bank 2002; Acharaya and Abuyuan 2002; Gutner 2002, 2004; Nielson and Tierney 2003, 2005). More problematic are studies conducted by civil society organizations that often rely on leaked documents and cherry picked cases to draw sweeping – often critical – conclusions about the Bank's environmental performance (see for example Environmental Defense 1994; Bretton Woods Watch 2007) Mallaby (2004a and 2004b) discusses the pitfalls of relying on such methods. Even when such studies are done well, few have sufficient data to compare environmental commitments over time.¹ As noted Bank scholar Robert Wade explains, “Each side of this debate uses rhetorical excess to win public support, portraying itself as virtuous and the other as villainous. The high stakes render their own accounts inherently suspect.”² Without solid evidence, the polarized debate of greening and greenwashing at the World Bank continues with little hope of resolution.

¹ See, for example, Chatterjee and Finger 1994; Connolly 1996; Lofstedt and Sjostedt 1996; Young 2002; Congleton 2006; and Lewis 2003. For the most rigorous contributions to date, see Keohnae and Levy 1997; Gutner 2002 and 2005; Nielson and Tierney 2003, 2005; Hicks, et al 2008.

² Wade 1997. The two sides in this debate are the Bank and its critics. The Bank claims that it has changed its portfolio and operations so that Bank projects in the developing world do less harm to the natural environment than they have done in the past. Critics argue that the Bank talks a good game on the environment, but when it comes to actually spending money and implementing the stated goal of “mainstreaming” the environment into its operations, the Bank fails to do so. Hence, these critics conclude, the Bank's environmental talk is simply “greenwashing” an otherwise dirty operation.

The difficulty surrounding the question of whether or not the Bank has greened is compounded by there being little consensus about the definition of “environmental aid.” The Bank itself offers puzzling accounts of its own environmental lending. Indeed, when quantifying environmental aid to Eastern Europe for the period 1990-1994, for example, the Bank provides three separate figures in three separate documents.³ Further, the accuracy of the Bank’s current methodology for categorizing environment-related projects consistently suffers from projects being mis-categorized and the categories themselves being so broad as to frequently overlap with one another.⁴ A 2002 World Bank environment review offers little consolation, saying only “defining the environment portfolio has always been somewhat arbitrary.”⁵ Despite the Bank’s attempts to remedy this with a new categorization system in 2001, the “Bank’s Quality Assurance Group warns that the quality of the new system depends on how well Bank staff define their work and how they understand the various new definitions.”⁶ Moreover, the “thematic sector codes” used to track a given project’s goals are still applied based on project *descriptions*, not project *budgets*.⁷

Our new measure of environmental lending is designed to capture the extent to which the Bank has greened its lending portfolio by quantifying the amount of money designated for environmental activities within each of the Bank’s projects. To examine trends in Bank environmental funding, we opened and analyzed budgets in all 3,817 projects in the IBRD/IDA portfolio approved by the Bank’s executive board over the period 1994-2007. We categorized

³ Connolly, et al 1996. They write, “The World Bank’s 1994 annual report, for example lists only one loan (\$18 million) in the environmental sector for Eastern Europe for the period of 1990-1994. Yet another publication it produces adds four other projects... This brings the total to \$788 million. Still other Bank documents include certain structural adjustment loans which contain energy or environmental components, and they push the total up by another \$1 billion.”

⁴ Acharaya and Abuyuan 2002; Gutner 2004.

⁵ Acharaya and Abuyuan 2002.

⁶ Gutner 2004.

⁷ Interview with World Bank environment specialist, December 17, 2007.

budget lines by whether or not they were expected to have beneficial impacts on the natural environment.⁸ We compared these funding amounts to computer-collected counts of how many times environmental terms were used in the same project documents. Further, we compared our project-level environmental funding levels to the Bank’s relative emphasis on the environment in institution-level documents, reports, and publications that it released each year. Together, these project- and institution-level environmental rhetoric scores allow us to examine trends in green “talk” at the Bank. More importantly, we describe and analyze trends in actual funding from project budget lines, which allows us to directly assess whether the Bank “walks the talk” to address environmental issues.

Significantly, we do not attempt to provide a comprehensive answer to the question of whether or not the Bank has mainstreamed the environment into its operations. We strive only to discern what effect the Bank’s environmental mainstreaming efforts have had on environmental funding and rhetoric at the project level. Put another way, while other studies focus on what affect environmental mainstreaming efforts have had on institutional *processes* at the Bank, we focus on how environmental mainstreaming has impacted *outputs* at the Bank. While the most accurate measure of the effectiveness of the Bank’s mainstreaming efforts would ultimately focus on the *outcomes* of Bank operations, the extremely high number of intervening variables and resource limitations make such analysis extremely difficult to perform accurately, if at all.⁹ We proceed as follows. First, we review the history of the environmental debate at the World Bank, in the media, and in scholarship. Second, we explain the rise of environmental

⁸ We used PLAID coding criteria for determining likely environmental impact of the various expenditures as outlined in *Greening Aid* (Hicks et al 2008). However, unlike Hicks et al, we did not code the entire cost of the project as either environmentally beneficial or harmful; instead, we opened the actual project budget and coded each budget item line by line. This method, while significantly more resource intensive, allows us to determine the proportion of the project actually devoted to environmental protection or remediation.

⁹ For further discussion of why accessing IO performance using outcomes is extremely difficult see Hafner-Burton and Pollack 2009 and Gutner and Thompson 2008.

mainstreaming within the Bank and the subsequent accusations of greenwashing from the environmental community. Third, we explain the theoretical environment in which we believe the Bank is operating, derive hypotheses to test this theory, and explain how we operationalize these hypotheses in the methodology section. Finally, we test our hypotheses and discuss our results.

The Rise of Environmental Issues and Resource Tracking at the World Bank

To understand exactly why this new measure of environmental lending is both needed and more valid than previous measures, one must understand the context out of which environmental mainstreaming and tracking have grown. From its humble beginnings as a near afterthought of the Bretton Woods negotiations in 1944,¹⁰ the World Bank has become the single largest development finance organization in the world. In all, the Bank controls over \$200 billion in assets and regularly disburses over \$20 billion in loans per year.¹¹ This distinction has earned the Bank the near constant scrutiny of policy makers, civil society, and scholars. One of the most damning set of critiques concerns the environmental impacts of Bank projects. Critics of the Bank point to a slew of environmentally risky and controversial projects¹² and several internal Bank reports that are highly critical of the Bank's environmental track record, as proof that despite numerous attempts at reform, the Bank has failed to adequately take environmental protection seriously. Periodically during the past 25 years, an odd collection of environmentalists

¹⁰ Gwin 1997. While the IMF and GATT were the subjects of intense negotiations between the U.S., U.K., and France, the plan for the Bank was left largely unaltered from the original American proposal. Its initial capital stock was \$10 billion.

¹¹ World Bank 2006a.

¹² For characteristic environmental critiques see Rich 1994, Fox 2002, US House 1984, Danaher 1994.

and fiscal conservatives have portrayed the Bank as an international organization “run amok,”¹³ bent on economic development no matter the costs to the environment or indigenous populations and unconcerned with the financial burden that negative environmental impacts place on member states.¹⁴

Of course, the Bank management views its response to the issue of the environment quite differently. Indeed, the Bank was the first development bank to officially recognize the importance of addressing the environmental impacts of their projects, appointing an environmental adviser in 1970.¹⁵ As further evidence of this early leadership, the Bank was largely responsible for the language used in the “Declaration, Principals, and Recommendations” produced at the U.N. Stockholm Conference on the Human Environment two years later.¹⁶ According to the Bank, their constantly evolving set of environmental operating procedures is the result of the staff’s “increasing understanding of the relationship between environmental protection and development.”¹⁷ The Bank refers to this as “learning by doing.”¹⁸

¹³ An independent commission established by the U.S. Congress in 1998 found among other things that Multilateral Development Banks (MDBs) and the World Bank in particular to be suffering from “mission creep, lack of transparency and accountability, ... ineffectiveness, corruption in developing countries, and waste of resources.” See Meltzer Commission 2000. The complaints of U.S. Congressman Ron Paul (R-TX) are characteristic of the political right. He calls MDBs “a socialist giveaway that hands American taxpayers’ money to foreign dictatorships.” See Caplen 1999, 177; Pincus and Winters 2002, 19; Hicks, et al 2008, 184.

¹⁴ The Bank estimates that environmental degradation costs developing states between four and eight percent of their GDP annually. Such expenditure coupled with the enormous human cost of environmental degradation (estimated at 6 million lives annually) is considered by the Bank to be a great hindrance to development in the poorest countries of the world. (Kjorven, Olav and Lindhjem, Henrik, *Environment Strategy Papers No. 4: Strategic Environmental Assessment in World Bank Operations. Experience to Date*. ECON Centre for Economic Analysis. May 2002.)

¹⁵ Wade 1997, 618. Wade notes, “Because the Bank was later to become the target of savage environmental criticism, its early leadership in this area deserves emphasis.”

¹⁶ Gutner 2002, 52.

¹⁷ Shihata 1995.

¹⁸ World Bank 2002. This 2002 review of 30 World Bank biodiversity projects explains the “learning-through-doing approach” is applied “first, by adjusting the project’s design to respond to changing realities in the field and second, by applying what are sometimes called adaptive management,” which includes incorporating inputs from civil society and client governments to *inter alia* “reduce conflicts.” Wade (1997, 730), perhaps more aptly, refers to this as “learning through angst.” Rich (1994, 171) remarks, “As the World Bank pushed forward to project the image of environmental lender, it learned little from earlier mistakes. The Bank would always be ‘learning-by-doing,’ as [World Bank President] Conable and other officials put it, since it seemed to be incapable of remembering.”

As noted above, the Bank's attempts to respond to and mitigate the environmental degradation caused by its projects began in 1970 when then-World Bank president Robert McNamara appointed the Bank's first environmental advisor, James Lee, an epidemiologist by training. With an eye toward the upcoming Stockholm Conference on the Human Environment in 1972 and in response to the increasing concern for environment in popular and political culture, McNamara hoped to establish the Bank as a leader of the international response to environmental degradation (Wade 1997). Two years later at the Stockholm Conference, he seemed pleased with the Bank's progress, proclaiming that "By careful analysis, we have found, in every instance to date that we can reduce the danger of environmental hazards either at no cost to the project, or at a cost so moderate that the borrower has been fully agreeable to accepting the necessary safeguards." He continued that "Each project processed by the Bank is now reviewed by the Environment Office, and a careful in-house study is made of the ecological components." However his reassurances became more specious when he stated, "[W]hile in principle the Bank could refuse a loan on environmental grounds...the fact is no such case has yet arisen. Since initiating our environmental review, we have found that in every instance the recommended safeguards can and have been successfully negotiated." (McNamara 1972).

While McNamara portrayed the Bank's experiment with the environment office as an overwhelming success, Lee provides a more nuanced account. Lee recalls his relationship with operational Bank staffers as sometimes "bloody and adversarial" (Wade 1997). While McNamara claimed "every project" financed by the Bank was subject to review by the environment office, such oversight was minimal, as Lee was the sole member of this office at the time. As such, the Bank's environment portfolio in the early years was often limited to token environmental aspects of project planning, including at one point "relocating a power line so that

it would not spoil the view from a game lodge” in Tanzania (Wade 1997). On balance, Lee’s activities were aimed less at ecological considerations and more at mitigating the negative human health effects that some of the Bank’s larger projects were having on local populations (Wade 1997).

Despite these shortcomings, the Bank was seen as a leader with regard to the environment at this time¹⁹ – mostly as a result of McNamara’s appointment of Lee and the Bank’s leadership role in the run-up to the Stockholm Conference. That said, environmental concerns had little impact on project planning. Official Bank policy was changed in 1971 to require that a project’s “impact on the environment should be considered ... as appropriate.” This policy change, according to an Operations Evaluation Department (OED) report issued much later, “showed no discernable increase in attention to environmental matters” (Wade 1997, 617). In 1975, the Bank went a step further, adopting a new policy document entitled “Guidelines on Environmental Dimensions of Projects.” These guidelines, however, amounted to little more than a “check list of things to watch out for in different kinds of projects, and their use by project staff was entirely voluntary” (Wade 1997). The environment office was involved only tangentially or “at the eleventh hour” in many of the Bank’s projects (Caldwell 1981: 38) and had only the most limited oversight authority.²⁰ Moreover, Lee was the Environment Office’s only employee until 1973, when a second environment specialist was brought on board. It would not be until 1978 that the Bank’s third environment specialist, Robert Goodland, was hired. The

¹⁹ In 1981, the National Wildlife Foundation awarded a Special Environmental Achievement Award to the Bank for its “leadership in environmentally sound development...” (Wade 1997). Lee became a bit of an environment celebrity, “besieged with invitations to conferences” (Wade 1997). As Lee recalled later, “The interest [in the Bank’s environment activities] was incredible. And all coming to the Bank for information, for assistance. Everybody in those days wanted to study the Bank” (Lee, Oral History, 1985).

²⁰ Wade (1997) explains, the OEA “staff had less authority over the project decisions than other offices or departments within the central advisory staff; unlike the other advisers (for irrigation, tree crops, and so on), the environmental advisor had no sign-off powers that would have allowed him to block a project going forward for Board approval.”

small staff (Table 1) and centralized nature of the Bank’s environment office hampered Lee’s efforts and ensured the environment was not systematically integrated into the priorities of Bank staff (Wade 1997, 628).

Table 1: Environment Staff 1975-2008**

<i>Year</i>	<i>Number of Staff</i>
1975	2
1980	3
1985	5
1990	106 (270)*
1995	162 (300)*
2002	188
2003	201
2004	228
2008	215

*Numbers in parentheses count Bank staffers who work on environmental issues, but are not technically part of the Environment Department – figures not available for all years.

**The World Bank’s environment staffers were members of the Office of Environment and Scientific Affairs until 1987 at which point a full-fledged Environment Department was created.

Data from 1975-1995 is from Wade 1997. Data from 2002-2004 is from World Bank 2004. Data from 2008 is from World Bank 2008.

Despite McNamara’s claims, the early years of the Environment Office had little effect on the Bank’s lending behavior. In fact, the 1970s and early 1980s witnessed some of the Bank’s most egregious environmental abuses. In Cameroon in 1973, 37,000 acres of sub-tropical forest were cleared to make way for rubber plantations and in Nepal in 1974, the Bank approved a project that would ultimately clear 43,000 acres of tropical forest, and displace nearly 10,000 families—many of whom were already environmental refugees. The project in Nepal degraded conditions there to such an extent that in 1983 Nepal was loaned a further \$18 million to reforest the region (Rich 1994). Such failures were not isolated, as a 1989 OED review of the Bank’s environment sector from 1972-1985 found that just over a third of the projects were classified as “successful” (World Bank 1989).

World Bank funding for major highway, settlement and mining projects deep in the Brazilian Amazon raised major alarms in the mid-1980s and threatened the Bank's major funding (Keck and Sikkink 1997; Neilson and Tierney 2003). 1987 saw the Bank's first round of significant environmental reforms. The Bank upgraded the Office of Environmental and Scientific Affairs to the Environment Department and increased the size of the staff. Further, World Bank president Barber Conable created a new category of "environment" loan. These reforms, however, did not provide the sweeping changes for which many environmentalists and indeed even the Bank's Executive Directors were hoping. The new Environment Department still had little-to-no oversight authority (Wade 1997) and the Bank continued to fund environmentally risky development projects (Rich 1994). Further, two independent reports found that Bank staff had failed to implement its own environmental safeguards and were succumbing to the "approval culture" in which they sought approval for loans over potential environmental failings (Wappenhans 1992, 14; and Weaver 2008).

1992, the year in which the US withheld over a billion dollars from the Bank's IDA replenishment, marked a significant shift in Bank staffer's attitudes toward the environment. With the UN's Rio Earth Summit on the horizon and still reeling from near constant attacks from NGOs, the Bank dedicated its 1992 World Development Report to the environment. Entitled, *Development and the Environment*, the report helped change the attitudes of many in the Bank including the report's editor Andrew Steer who, as Robert Wade (1997) explains, "had no previous involvement with environmental issues, and his conversion helped other economists change their minds." The apparent momentum of environmental consciousness within the Bank in 1992 would be matched in subsequent years with unprecedented increases in the Bank's environmental lending.

Pillaging the GEF and the Rise of Mainstreaming at the World Bank

In this context, the concept of “mainstreaming the environment” was born. In 1991, Mohamed El-Ashry, who had worked previously for the Environmental Defense Fund and the World Resources Institute, joined the Bank as director of the Environment Department. As Wade (1997) explains, “El-Ashry brought a rare combination of technical skill (he was a trained geologist), management skill, and a vast network of environmental contacts. ... Under El-Ashry, the department consolidated itself and began to play a larger leadership role, intellectually and organizationally.” By the end of 1992, the word “mainstreaming” had become a “buzz-word” in and around the Bank (Wade 1997). The concept had solidified in the minds of the sustainable development community and was understood to express the need for “a significant shift in emphasis from ‘development’ and ‘environment’ as two separate perspectives to a fully integrated approach toward ‘environmentally sustainable development’” (World Bank 1993, 134). Over the subsequent years, the notion of mainstreaming would change little but was implemented with halting progress, as Bank staff began to “resent the environmental specialists.”²¹ Non-environment staff saw the environment department’s directives to conduct environmental studies and to make modifications to project designs as roadblocks on the way to project approval that did little but add “costs and delays” to projects (Wade 1997). And no wonder, Bank staffers at the time were rewarded for moving projects forward on schedule and under budget – not for reducing the negative environmental impacts of their projects (Wappenhans 1992, Wade 1997, Gutner 2002).

²¹ The chief of the water and sanitation division explained at the time, “The environmental establishment at the Bank ... is increasingly seen as a policeman, not as a unit assisting our staff and borrowers to do better.” (Wade 1997, 716). An engineer at the Bank lamented, “As a civil engineer I feel strongly that we are a responsive profession – we can and do take account of society’s evolving concerns and put them into the specifications. We don’t have to be forced to do it by some PhD in biology.” (Wade 1997, 716-717). See also Weaver 2008.

El-Ashry, who by then had become the first CEO of the Global Environment Facility (GEF) – a fund administered by UNDP, UNEP, and the World Bank – began pushing the Bank to codify environmental mainstreaming in some official capacity. As the GEF expanded in size and influence throughout the 1990's, Bank staffers increasingly relied on the GEF as a source of environmental funds for their projects.²² A 1999 OED review of the Bank's environmental lending found, in some operating environments, "environmental staff have noted that using GEF funds is almost the only way to get an environment project into the program" (World Bank 1999). In the mid-1990s, El-Ashry began pressuring the Bank to use GEF funds in the way they were intended: to augment, not substitute for the environmental funding from within the Bank.

To this end, members of both the GEF and the Bank's environment department proposed drafting an official Bank policy document related to mainstreaming – the goal was to have the World Bank's Executive Board officially endorse the notion that environmental concerns could not be addressed by isolating concern for the environment in a small subset of Bank projects.²³ By 1997, the idea stalled, as key policy and technical staffers at the Bank were "not on board"—and sufficient support could not be garnered from the board.²⁴ They argued that the Bank had already addressed the mainstreaming question by implementing and strengthening environmental safeguards throughout the 1990s. While the Board had indeed tangentially addressed the concept of mainstreaming with its various changes to the Bank's operating policies, the implementation of Environmental Assessments and environmental safeguards were still viewed by many Bank staffers as expensive detours on the path to project approval – not as means to improve project implementation (Wade 1997). As one OED evaluation of the Bank's environmental record put it,

²² Interview with former high-level GEF official, Washington DC, January 2008.

²³ Interview with former high-level GEF official, January 2008 and Interview with World Bank Environment Specialist, January 2008.

²⁴ Interview with high-level World Bank Environment Department official, January 2008.

“the linkages between macroeconomic policy, poverty alleviation, and environmental sustainability were not explicitly forged.”²⁵

2001 Environment Strategy, 2002 Tracking System, and 2008 IEG Review

By 1999, momentum had shifted. Then-World Bank President James Wolfensohn’s massive \$250 million reorganization effort, known as the “Strategic Compact,” was well underway. Wolfensohn saw the Bank as an “ungainly octopus” (Mallaby 2004a). Coming from the private financial sector, Wolfensohn argued forcefully that the Bank was too centralized and suffering from significant malaise. To remedy this, he turned to a private sector management theory in vogue at the time known as the “management matrix.” As Mallaby (2004) explains:

To be closer to its clients, the Bank needed to create a new cadre of decentralized country directors ... with the power to make decisions without burning up time in long consultations with Washington. To improve project quality, meanwhile, the Bank needed strong technical leaders to oversee its specialists: the water engineers should no longer be scattered among the regions; they should be part of a central department that pooled experiences from all over the world and applied the lessons to all countries. ... The Bank’s foot soldiers – water engineers and malaria experts and primary-education specialists – would report simultaneously to two bosses: a country director (who pressed you to deliver for the client fast), and a technical manager (who pressed you to deliver quality).

For the Environment Department, this meant being pushed into the newly created Environmentally and Socially Sustainable Development Network (ESSD) along with the Agriculture and Rural Development Department and the Social Development Department. Control of the Bank’s administrative budget (which included funds for project planning and design) was placed primarily in the hands of country directors who were stationed in the Bank’s client countries around the world (Nielson, Tierney, and Weaver 2006). This had significant consequences for the Bank’s environment specialists who now had to “sell” most of his or her

²⁵ World Bank 2003.

forty-two staff weeks a year to the country departments in the form of help with handling the environmental aspects of projects and whose EAs he or she may be later asked to approve” (Wade 1997). This put environment staffers in a difficult position, as those environment specialists who country offices found particularly hard to please, would be less likely to reliably bill out their time and if the condition became chronic, “would be invited to seek employment elsewhere” (Wade 1997). While the Bank saw mixed benefits from Wolfensohn’s reorganization scheme, one significant result was the creation of the Bank’s first environment strategy.

Part of Wolfensohn’s new matrix management system involved not just helping client countries define development goals through Country Assistance Strategies (CAS), but also clearly articulating the substantive goals for the Bank’s army of specialists. By centralizing specialists within “thematic networks,” Wolfensohn hoped the Bank could build on its most successful and effective project designs. Specialists would work closely with teams in client countries, while sharing knowledge and pooling their experiences with other Bank specialists. As part of this effort, each technical department, including the Environment Department, was required to draft and submit to the Executive Board for approval a sector strategy document. As one environment specialist intimately involved with the resulting strategy’s preparation put it, the Bank management wanted to “balance the matrix”²⁶ – with client country directors on one axis, specialist department directors on the other and the Bank’s specialists managing the directives of their dual masters in the middle.

The Environment Department’s strategy planning began in early 1999 with a “Draft Initiating Memorandum” which described the environment department’s key goals: (World Bank 1999). Ultimately, the strategy boasted three main strategic objectives: improving the quality of life in client countries, improving the quality of growth in client countries, and

²⁶ Interview with World Bank Environment Department official, January 2008.

improving the regional and global commons. All three of these objectives were somewhat novel for a multilateral development bank to publically embrace.²⁷ On July 12, 2001 the Executive Board approved and endorsed the environment strategy.²⁸ After years of sometimes-bitter debate within the Bank, mainstreaming – the notion that the Bank should integrate environmental concerns into all of its operations – had become official policy.

A year later, the Bank introduced a new way of tracking Bank operations.²⁹ Previously, Bank projects were assigned to one or two sectors – based not on what issues the project was intended to address, but rather based on the administrative unit in the Bank from which the project emanated.³⁰ Under this old project tracking system, there was no way to systematically track the Bank’s environmental activities in any area other than stand-alone environmental lending. As a result, in the Bank’s project tracking system, water projects were isolated from transportation projects and environment projects were separated from both. This was the case despite the fact that many projects financed by the Bank had significant impacts on a number of different sectors. The new system changed this by providing a two-dimensional view of the intended goals of any given project.

Under the new tracking system projects are assigned up to five different sectors based on “which part of the economy receives support.”³¹ Each of these sectors is assigned on a “percentage basis” – depending on how significantly each sector is supported. For example, if 19 percent of a project’s funds were targeted at improving crop production, the project’s team leader would assign “crops” as one of the project’s “sector codes” and give it a weight of 19 percent. A

²⁷ Interview with senior World Bank water specialist, member of the environment department conducted by Robert Marschinski, April 2004. Transcript obtained from Marschinski.

²⁸ Unfortunately, the minutes for this board meeting are not available to the public. Asked by the authors to release them, the World Bank’s Public Information Services unit refused.

²⁹ Interview with World Bank Environment Specialist in January of 2008.

³⁰ World Bank QAG 2002 - Annual Report on Portfolio Performance.

³¹ World Bank Website 2008. As the Bank writes, a given project may be assigned "up to five sectors, allocated by percent of funds committed for each sector to that project."

task team leader can now assign up to five sector codes to a project, but their cumulative weights must not exceed 100 percent.

In addition, a project can be assigned to up to five different themes, which are assigned by task team leaders either primary or secondary status. Unlike sectors, the share of a given project said to be dedicated to a given theme is based on the number of other primary and secondary themes a project has been assigned to. Primary themes are weighted twice as much as secondary themes. So, for example, if just two primary themes were applied to a given project, each primary theme would be given a weight of 50 percent. If two secondary themes were added to the same project, however, the primary themes' weights would be automatically reduced to 33.3 percent while the secondary themes would be weighted at 16.6 percent.³² These percentages are used by the bank to measure their support for their thematic objectives.³³ The task team leader on a given Bank project determines the themes and sectors that the project addressed.

The controversial Chad-Cameroon oil pipeline that was approved in 2000,³⁴ for example, was assigned four primary themes: "Pollution management and environmental health, Other economic management, Other financial and private sector development, Environmental policies and institutions." No secondary themes were applied to the project. As such, each theme was given a weight of 25 percent. The Bank calculates its overall support for a given theme in a given year using the weights automatically assigned by the project-tracking database. Therefore, in the case of the Chad-Cameroon oil pipeline, 50 percent of the funds the Bank committed to the

³² Interview with World Bank official via email, July 2007. The official explained that the Bank's project tracking software "automatically assigns weights to the themes for tabulation purposes (each primary theme is given two times the weight assigned to secondary themes)."

³³ Interview with Environment Department official via email, Washington DC, July 2008.

³⁴ As the New York Times summarized, "the World Bank helped finance a 665-mile pipeline for an oil consortium led by Exxon Mobil, linking oil fields in southern Chad with Atlantic Ocean terminals in Cameroon. In exchange, the government of Chad agreed to channel most of its royalties into fighting poverty." World Bank withdrew from the project in September 2008 after a series of investigations revealed that much of the royalties were being squandered by the Chadian government.

project would be added to the Bank’s “Environment and Natural Resources Management” (ENRM) commitments for 2000 because the primary themes “pollution management and environmental health” and “environmental policies and institutions” – each weighted automatically at 25 percent of the commitment amount – both fall under the ENRM major theme.

The accuracy of this coding system – as with any coding system – depends not only on the coder’s familiarity with the project being coded, but also on the coder’s familiarity with the coding system. The “Bank’s Quality Assurance Group warns that the quality of the new system depends on how well Bank staff define their work and how they understand the various new definitions.”³⁵ The new system was retroactively applied to projects approved before 2001.³⁶ While the thematic coding system is an improvement over the Bank’s previous system, it is remains somewhat arbitrary. Specifically, a project can receive a particular thematic code even if the project does not actually budget money to address that theme. Rather, themes are meant to reflect the “goals/activities of Bank activities.”³⁷ This, of course, dramatically reduces the usefulness of the thematic coding system – a fact that the World Bank itself confirmed in the summer of 2008.

Indeed, on July 22, 2008 the World Bank’s Independent Evaluation Group (IEG) released its assessment of the Bank’s performance with regard to environmental sustainability. Distressingly, the IEG concluded that the way the Bank tracks its lending likely overstates actual environmental commitments. The report stated:

The Bank’s thematic coding process, moreover, appears to overestimate actual commitments for ENRM; the Bank tends to overstate the amount dedicated to environmental improvement in many of the largest investment projects.

³⁵ Gutner 2004.

³⁶ Anyone who has experience categorizing development projects can understand how this decision could cause both reliability and validity problems.

³⁷ World Bank Website 2008.

The IEG report concluded that “the amount of Bank lending for ENRM purposes *could not be determined*, but official lending figures appear to be overstated” [emphasis added]. In the Bank’s Chad-Cameroon pipeline project, we see evidence of the weaknesses of the thematic coding system quite dramatically. Despite the thematic coding system allotting 50 percent of the Bank’s commitments to environmental themes, our analysis of the project’s budget found no spending for environmental remediation at all.

Indicator of Action? Skyrocketing Environmental Rhetoric

If the Bank’s member countries turned to the Bank’s public institution-level rhetoric³⁸ on the environment as an indicator of whether their agent had taken up their concerns, they would have been presented with a dramatic picture of change. As Figure 1 shows, in 2001 when the environment strategy was approved, the Bank categorized just 3 percent of its new publically released documents, publications, and reports as topically related to the environment.³⁹ By 2006 that figure had surged to 32 percent before dropping off slightly in 2007 to 29 percent. Since the approval of the 2001 environment strategy, the Bank increased the rate at which it published environment themed publications by an astounding 967 percent. But while the Bank clearly greened its rhetoric, did it green its actual lending behavior? To what extent did the Bank mainstream environmental funding into its operations?

³⁸ As opposed to project-level environmental rhetoric.

³⁹ As we detail in the methodology section, we used the Bank’s online documents database to obtain this measure in July 2008. Figures represent the percentage of new publications, documents, and reports per year that the Bank categorized as environment related.

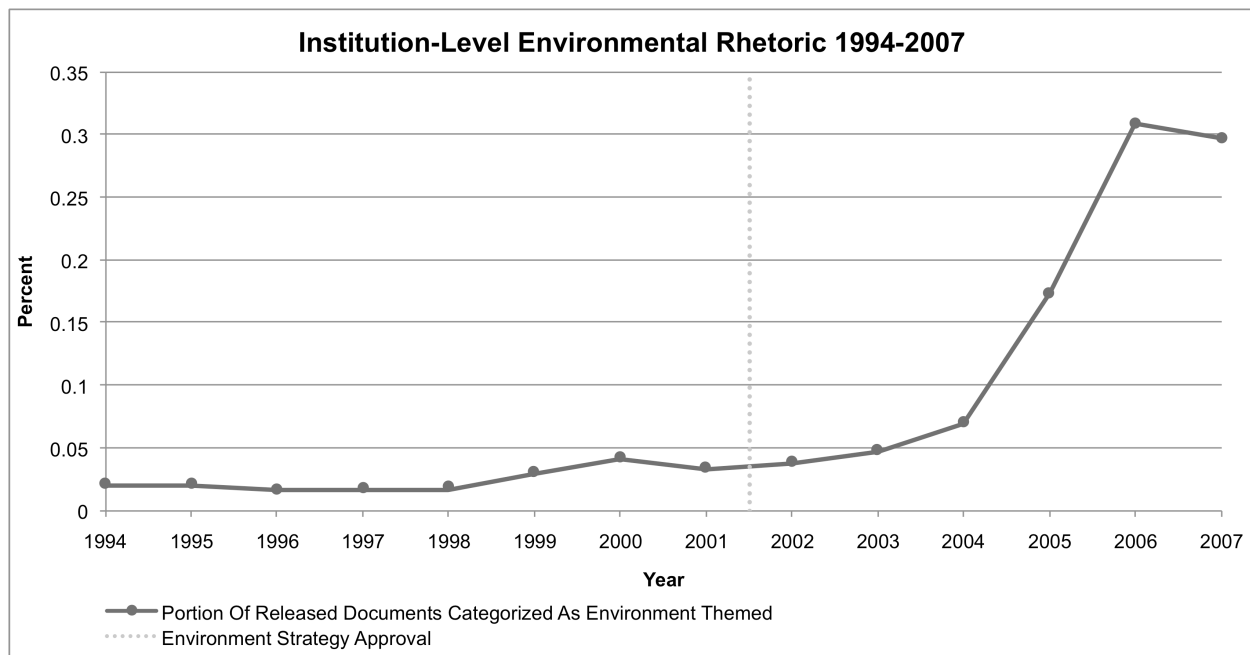


Figure 1: Institution-Level Environmental Rhetoric. Measured as the proportion of new documents, reports, and publications released to the public each year by the Bank categorized as “environment” related.

As the IEG report explains and we reiterate below, the way in which the Bank currently tracks its lending is problematic. The report finds that the Bank’s coding system tends to “overestimate actual commitments” for environmental activities and that the Bank “tends to overstate the amount [of funding] dedicated to environmental improvement in many of the largest investment projects.” Meanwhile, the Bank management contends that the official tracking system is conservative, “[T]he sector and thematic classification and coding system may well understate the Bank’s environmental support to countries.” As we explain below, the straight answer is that the Bank cannot accurately report – in dollar terms – its mainstreamed environmental commitments. Because the Bank’s coding and tracking system focuses on the “thematic objectives” of a given project as determined by a task team leader, and not at how those goals and objectives are actually funded in project budgets, the Bank’s project tracking system is poorly suited to tracking the Bank’s mainstreamed environmental commitments.

Arguing that the significant increase in environmental publications reflects actual changes in lending behavior on the part of the Bank is likely to be met with skepticism by environmental NGOs. Indeed, over the course of the 1980s and 1990s, the Bank garnered a reputation for “greenwashing” – that is to say greening its rhetoric while failing to modify its actual lending behavior. This reputation, however, has been based on an extremely unrepresentative sample of Bank operations. A continuous trickle of internal reports critical of the Bank’s environmental performance fed the always-hungry civil-society public relations campaign being waged against the bank. To what extent is this reputation for greenwashing merited?

In the following pages we outline a new approach to measuring the environmental commitments at the World Bank that accounts for the way in which the Bank talks about and allocates environmental funding. Utilizing the vast amount of data now freely available about the Bank’s lending – including the Bank’s detailed project-level documentation – this study represents the first effort to quantify mainstreaming using project-level budget data. For every project in the Bank’s IBRD/IDA portfolio from 1994-2007, we measure the portion of each project budget that is devoted to mitigating or improving the project’s environmental impacts. Additionally, for each project, we quantify the proportion of project documentation devoted to environmental considerations. Drawing on a principal-agent framework, we statistically test the “greenwashing” hypothesis.

Theory and Hypotheses

Donor governments have often elected to pool their resources in order to increase the effectiveness of their efforts to promote economic growth, reduce poverty, prevent famine, or

reduce corruption.⁴⁰ The most prominent exemplar of these pooled development resources is the World Bank, though such collaboration is also manifest in the smaller regional development banks and various development funds administered by the United Nations. The Bank provides money, research, and expertise that many developing countries and other international organizations around the world could ill-afford on their own. As important, Duncan (1997) notes that many bilateral and other multilateral aid agencies see World Bank involvement in a given project as a necessary condition for offering their own (often limited) resources.⁴¹

Leveraging a principal-agent (P-A) framework to model interaction between IOs and their member states, scholars have found that variation and dispersion of member state preferences over time have direct and measurable effects on IO behavior. Contrary to the popular belief that IOs are unaccountable to their member states, P-A scholars argue that as member preferences converge on the desirability of particular outcomes (as they did on environmental issues in the 1980s and 90s at the World Bank), IO bureaucrats are more likely to enact policies that promote such outcomes.⁴²

The P-A model most appropriate for analyzing the World Bank – where member states delegate as a group – is that of a *collective principal*. As Figure 2 illustrates, the member governments of the Bank have collectively delegated to the management and staff the task of designing projects and distributing development assistance. Notice, the Bank does not independently contract with each member state. Rather, the Bank is the agent of and responsible

⁴⁰ Principal-Agent theory has been used to explain why states might delegate the authority to allocate their own resources to a multilateral agency. For example, see Congleton 2006; Rodrik 2004; Milner 2006; and Hicks et al 2008.

⁴¹ Bank involvement provides a signal to other funders that the project is sound. Duncan 1997: 393.

⁴² Copelovitch 2006; Nielson and Tierney 2007; Lyne, et al. forthcoming.

to the negotiated directives of the Bank's Executive Board of Directors as a group.⁴³ In order to direct or redirect their agent, the members of the principal must negotiate amongst themselves and then deliver their common directive to the agent. If the members of the principal cannot agree on some new directive or if the members of the principal cannot observe the behavior of their agent, then the agent has more room to maneuver and can implement policy that is consistent with its own preferences, rather than the collective preference of its principal.⁴⁴

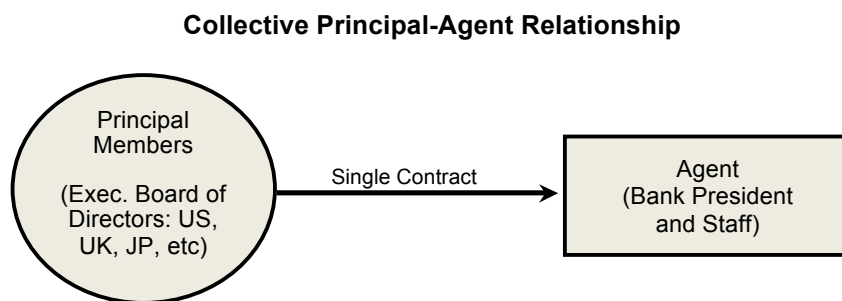


Figure 2: The Collective Principal. World Bank member states make up the collective principal (the Executive Board of Directors). As a group, they have negotiated a single delegation contract with the Bank staff via the Bank president. To direct or redirect their agent, member states must come to some negotiated decision and communicate this to the agent as a group. Member states cannot, in accordance with their contract, unilaterally redirect the agent.

Despite the benefits of delegation outlined in the P-A literature,⁴⁵ principals are rarely able to hire or create agents that are perfectly obedient or efficient. Whether intentionally or not, agents often deviate from the desires of their principals. The competing preferences of agents and principles clash when oversight and monitoring mechanisms fail to restrain the free-will of agents or when the initial contract fails to capture and negotiate the entrenched interests of both parties. Thus, when environmental NGOs accuse the Bank of “greenwashing” they are accusing the Bank of changing its rhetoric to please its principal to pursue its own institutional preferences, rather than actually implementing their directives.

⁴³ As noted above, the Bank is ultimately responsible to the Banks Board of Governors, but in practice nearly all Bank business is conducted at the direction of the Executive Board, which has been delegated substantial authority by the Board of Governors.

⁴⁴ For elaboration see Tierney 2008.

⁴⁵ Hawkins et al 2006; Bradley and Kelley 2008.

Using our new measure of mainstreamed environmental funding and rhetoric, we can determine if and to what extent the Bank is shirking its principal's directives. Taking the Executive Board's approval of the Bank's first environmental strategy as a directive from the collective principal (the Executive Board) to the agent (the Bank and its staff) we test to see if and to what extent the Bank is shirking when it comes to mainstreaming environmental funding.

Such shirking will likely manifest itself in two ways. First and most directly, if the Bank is shirking, we will observe no increase in mainstreamed environmental funding levels after the environment strategy's approval. Less directly but perhaps more troubling, shirking will be manifested as greenwashing – that is to say the Bank will have modified its environmental rhetoric, but not its actual behavior – environmental funding levels. We will know such greenwashing is taking place if our observed trends in the Bank's institutional environmental rhetoric are unrelated to trends in its environmental funding levels. At the project-level, we will know greenwashing is taking place if environmental rhetoric level is unrelated to mainstreamed environmental funding at the project level.

From this we draw the following hypotheses:

H1: The Environment Strategy had no effect on the amount of mainstreaming that occurs in the Bank's lending portfolio.

H2: Increases in environmental rhetoric at the institution level after the approval of the environment strategy are unrelated to the amount of mainstreaming that occurs in the Bank's lending portfolio.

H3: Increases in environmental rhetoric at the project level are unrelated to the amount of mainstreaming that occurs at the project level.

A New Measure of Mainstreamed Environmental Funding

Our new measure of environmental funding is designed to capture the extent to which the Bank has greened its lending portfolio, by quantifying the amount of money designated for environmental activities within each of the Bank's projects. Put another way, we attempt to discern what effect the Bank's mainstreaming efforts have had on the Bank's most consequential outputs: lending operations. Our focus on Bank outputs – as opposed to changes in institutional policies or processes – is significant because, as Hafner-Burton and Pollack (2009) note, even the most elaborate attempts to mainstream particular norms or values often fail to produce changes in actual behavior. By focusing on Bank outputs, we can measure the extent to which changes in environmental mainstreaming policy directives from the Executive board (the principal) result in actual changes in behavior of Bank staff (the agent).

Accurately measuring changes in output requires constructing a clear, concise, and transparent definition of what constitutes “environmental funding” at the project level. In defining such funding, we attempt to avoid activities that sound eco-friendly, but are actually irrelevant or damaging to the natural environment, and to include activities that sound decidedly unglamorous and damaging to the environment, but are actually likely to be beneficial.⁴⁶

Previous attempts to define environmental spending have been fragmented, hampering efforts by scholars and policy makers to compare the Bank's performance overtime or to other development institutions. Connolly, Gutner, and Bedarff (1996) rightly lament, “[A]vailable data are highly distorted by the lack of any common definition of what is or is not ‘environmental

⁴⁶ For example, one might be inclined to classify forestry or agriculture projects as environmentally friendly, when on average they are among the most damaging projects carried out by development banks (Gutner 2002). Sewerage and water sanitation projects, while sometimes sounding “dirty,” can have enormous beneficial impacts on local environments (Fitzgerald and Sloan 2005).

assistance.”⁴⁷ The Bank itself has characterized its definition of environmental aid as “arbitrary” (Acharaya and Abuyuan 2002: 25).

In order to accurately establish a measure of greening at the Bank, scholars and policy makers must adopt a transparent, parsimonious, and empirically sound definition of environmental lending (see Goodland and Daly 1996). In their examination of over 400,000 aid projects Hicks et al (2008) defined environmentally sustainable projects as “those that one might expect to have an immediate positive impact on the environment. Such projects usually have clear, measurable goals and criteria for success with immediate environmental impacts.” In addition to these environmental (strictly defined) projects, there are a number of environmental (broadly defined) projects “that have less definable, longer-range positive environmental effects ... or are preventive in nature.”⁴⁸ Hicks et al (2008) apply these definitions to entire projects, categorizing development projects based on their principal substantive activities as outlined in short project descriptions. For example, projects aimed at increasing energy efficiency, preserving biodiversity, or protecting natural resources are all coded as “environmental projects.” While the project-level approach employed by Hicks et al may be an improvement over previous empirical efforts, it still provides only a rough estimate of actual “environmental spending” because so many development projects serve multiple purposes and fund work in multiple sectors.

In this paper we use the same substantive definitions for categorizing activities, but we do so at the budget level, rather than the project level. Hence, we provide a more accurate measure of exactly how much of each Bank project is environmentally friendly. Such budget-level coding

⁴⁷ These sentiments were echoed in interviews conducted in Fall 2007 and Winter 2008 with senior officials and mid-level staffers at the World Bank, GEF, and USAID.

⁴⁸ These projects were classified as “Environmental Strictly Defined.” See Hicks et al 2008, 24-25.

includes components of projects that fit the *Greening Aid* definition of environmental funding, while excluding those components that do not.

As noted above, the increasing quality and quantity of data available from the Bank allows scholars to empirically test many of the popular and scholarly hypotheses regarding the Bank's behavior and outputs with regard to the environment in more accurate and novel ways. Indeed, over the last 20 years Bank observers have gone from relying on annual reports and leaked Bank documents to having first-hand access to project-level documents and their budgets on nearly any World Bank project from any computer in the world with an Internet connection. Still, the most accurate systematic analysis of the Bank's environmental lending is not possible to conduct using the pre-coded variables provided by the Bank in their project database, as information regarding the constituent parts of a project's budget is not included. To analyze project budgets, one must review the documentation for each Bank project individually – an extremely resource intensive process. As a result, little work has been done on exactly how the Bank allocates funding within projects. We address this gap in the literature by analyzing the budgets of all projects in the Bank's IBRD/IDA portfolio in the period 1994-2007. Documentation is reliably available from the Bank for most years after 1994, when significant transparency reforms were required by its member states.

Project Appraisal Documents. The Bank makes available a number of different reports for each project, the most useful of which – for purposes of this study – is the project proposal. This proposal is known at the Bank as a Project Appraisal Document (PAD). A PAD is prepared for each project the Bank plans to finance and includes a detailed outline of the specific need the project addresses, explains the overall implementation plan, and provides a detailed estimated budget. The Executive Board reviews the PAD when considering each project for approval. The

PAD includes all the information needed to quantify the extent to which the Bank has mainstreamed environmental concerns at the project level. We measure this mainstreaming in two ways: first, through a detailed analysis of each project's estimated budget and subsequently with an automated measure of the amount of environmental rhetoric that is used in the PAD.

Measuring Mainstreamed Environmental Funding. For this study, we adopt an independent measurement system developed by the PLAID project at the College of William and Mary and already in use in the development lending literature. Versions of this system have been used extensively in peer-reviewed research.⁴⁹

A budget line is added to a project's running mainstreamed environmental funding total if the funded activity is "expect to have an immediate positive impact on the environment." Such environmental spending includes "projects targeting energy conservation, biodiversity protection, soil conservation, watershed protection, reforestation, access to clean water, and air pollution mitigation, energy efficiency, industrial reforestation, family planning, desalinization, genetic diversity, sustainable development, and Agenda 21 projects" (Hicks, et al. 2008). Table 1 provides a comprehensive list of activities considered to be environmentally beneficial.

Project-Level Environmental Rhetoric Score. For each project, the Bank's relative rhetorical emphasis on environmental concerns is calculated with a simple computer program. For each project, the program downloads the PAD and counts the number of times environment-themed words are used (Table 2 provides a list these words). The total number of environment-themed words is divided by the total number of words in the PAD to generate the environmental rhetoric score – a measure of the relative amount of the document that is devoted to environmental concerns. For the sake of comparing environmental rhetoric trends to the trends of

⁴⁹ See Nielson and Tierney 2003, 2005, 2007; Hicks et al 2008

other environmental outputs, we standardize the environmental rhetoric score for each project by multiplying it by 10,000.

Table 2: Words and phrases counted as Environmental Rhetoric in PADs. A simple computer program is used to parse documents for their use of environmental rhetoric. The environmental rhetoric score is calculated for a given project by dividing the total number of words in the PAD into the total number of environmental key words in the same PAD.

Water supply	Ecosystems	Energy efficiency
Sanitation	Ecotourism	Energy efficient
Water resources	Eco-tourism	Erosion control
Waste management	Energy conservation	Genetic diversity
Waste disposal	Reforestation	Soil fertility
Renewable energy	National park	Sustainable development
Geothermal energy	Rainwater harvesting	Environmental education
Solar energy / power	Recycling	Environmental training
Wind energy / power	Recycle	Rainwater collection
Ocean energy / power	Desertification	EMP
Biomass	Soil conservation	GEF
Environmental protection	Solid waste treatment	Climate change
Biosphere protection	Water treatment	Climate change mitigation
Environmental education	Waste treatment	Climate change adaptation
Bio-diversity	Wastewater treatment	Montreal Protocol
Biodiversity	Sewage treatment	UNEP
Site preservation	Watershed protection	GEF
Clean water	Reproductive health	Global Environment Facility
Air pollution	Family planning	Earth Summit
CFC	Agenda 21	Environmental assessment
Improved drainage	Desalination	Environmental degradation
Improve drainage	Drought control	Environmental sustainability

Descriptive Results: Environmental Funding Trends at the Bank

Quality of Bank's thematic sector coding system.

Over the period 1994-2007, the Bank coded 995 of the 3,817 projects approved by the Executive Board with at least one environmental theme. According to our budget-level analysis of each of those projects' documents,⁵⁰ 42.5 percent of those contain no mainstreamed environmental funding. This confirms the IEG's recent conclusion that the Bank's thematic-sector coding system tends to "overestimate actual commitments." The Bank's coding system, as currently designed also appears to miss some mainstreamed funding. Indeed, 5.6 percent of

⁵⁰ Detailed project documents for 150 of the 995 (15%) of the projects flagged as environment-themed by Bank's thematic-sector coding system were unavailable. In total, 25% of the 3,817 projects in the study period were missing detailed project documents. We employ listwise deletion on missing cases, recognizing the disadvantages of the technique. In future revisions, more robust handling of missing cases may be employed.

projects in the study period that are not coded as environment-themed by the Bank do, in fact, contain mainstreamed environmental funding according to our analysis. These trends are fairly consistent over the entire period of study, suggesting that the error does not stem from the fact that the Bank retroactively coded all of its projects after adopting its new coding system in 2002. Because the Bank does not code based on the objectives of entire projects, but rather only the portion of a given project that it finances, further analysis of the Bank's coding system is not possible with our data.

Mainstreaming trends at the World Bank.

As Figure 3 shows, over the period of study, the average World Bank project budget was 8 percent mainstreamed environmental funding.⁵¹ The Bank saw its highest levels of mainstreamed funding in 1994, with the average project budget approved in that year being 12 percent environmental funding. Average mainstreamed funding per project declined steadily in the following years before bottoming out at 8.1 percent in 1999. Such declines might be attributed to the relative decline in large infrastructure projects undertaken in the late 1990's largely due to pressure from the Bank's Western member governments (Nielson and Tierney 2003). Smaller and less invasive projects in less environmentally sensitive sectors understandably garner much less mainstreamed environmental funding. In 2000, mainstreamed environmental spending spiked due to what appears to be a significant increase in the proportion of projects mapped to the water and environment sector boards.⁵² In 2001, mainstreamed funding slumped again to 7.7 percent of the average project budget, the lowest point in our period of

⁵¹ In total, 25% of the 3,817 projects in the study period were missing detailed project documents. We employ listwise deletion on missing cases, recognizing the disadvantages of the technique. In future revisions, more robust handling of missing cases may be employed.

⁵² The budget of the average project mapped to the water sector board is 58.02 percent mainstreamed environmental funding. Likewise with the environment sector board, where project budgets average 50.1 percent mainstreamed environmental funding. By contrast, the budget of the average project outside those two sectors is only 4.5 percent mainstreamed environmental funding.

study. From 2001 on, overall mainstreamed environmental funding has remained relatively steady hovering around 9 percent of the average project budget. This trend, however, hides some significant increases in mainstreamed environmental funding in projects that the Bank categorizes as most likely to negatively impact the environment.

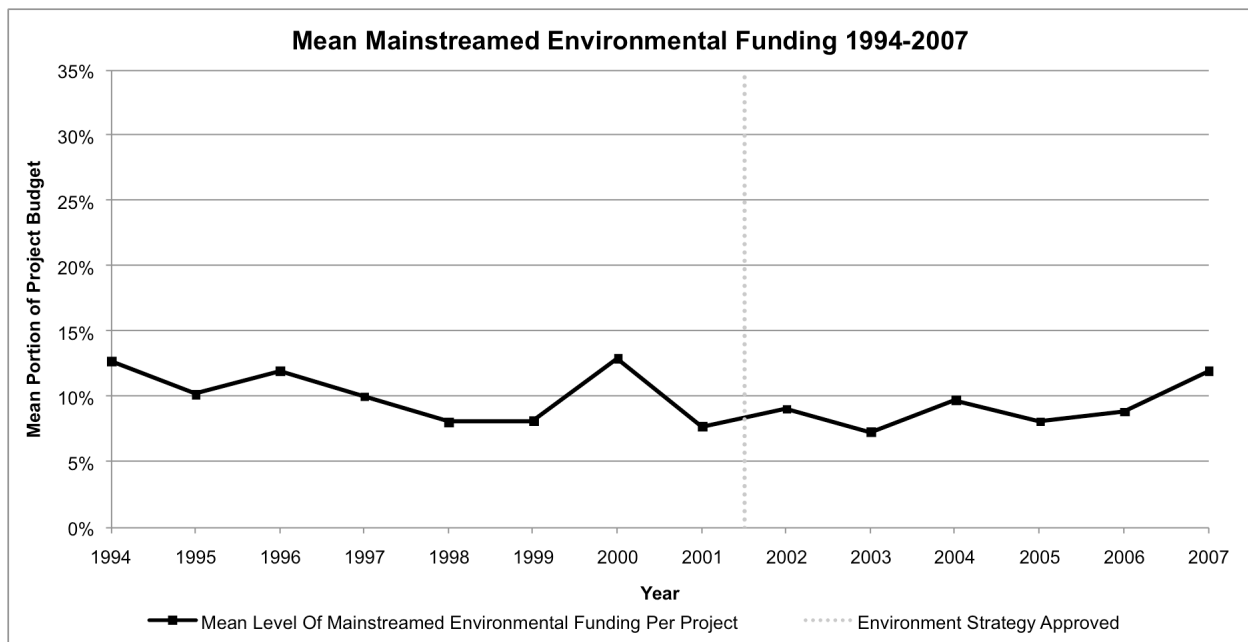


Figure 3: Mean Mainstreamed Environmental Funding Per Project 1994-2007.

During the planning process projects are assigned to one of four environmental categories, based on their expected environmental impacts. The three most frequently used categories range from A to C, with Category A being reserved for “likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented” and C being reserved for projects “likely to have minimal or no adverse environmental impacts.”

Breaking out our mainstreamed environmental funding variable by environmental category shows that in recent years the Bank appears to have made significant progress in mainstreaming environmental funding into projects that are likely to have the greatest negative impacts on the environment. Mainstreamed environmental funding in Category A projects reached its highest level in 2007, with nearly 27% of the average project budget consisting of funding for activities

which are likely to have positive impacts on the environment. A less pronounced, but similar trend is observed in Category B projects (Figure 4).

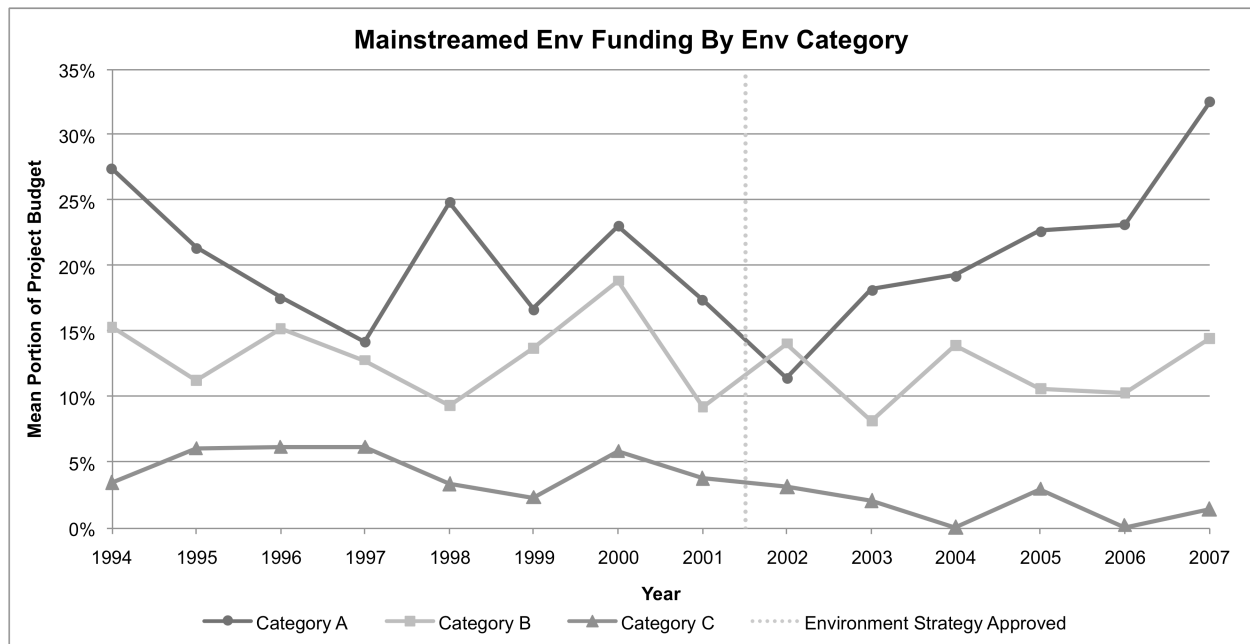


Figure 4: Mainstreamed Environmental Funding By Environmental Category 1994-2007.

While amounts of mainstreamed funding have remained steady overall and increased in those projects expected to be the most environmentally damaging in recent years, the likelihood that a given project will have mainstreamed environmental funding built into its budget has decreased. Indeed, 31.4 percent of projects approved in 1994 contained mainstreamed environmental funding. By 2001, that figure dropped to 18.99 percent. In recent years the portion of new projects with mainstreamed environmental funding has hovered around the same level. If projects are broken out by environmental category, we see a similar trend; however in recent years the proportion of new Category A projects with mainstreamed environmental funding appears to be increasing.

Analytical Results: Is the Bank's Money Going Where its Mouth is?

As we set out above, we attempt to answer the question of whether or not the Bank has fulfilled its stated goal of mainstreaming environmental funding in its lending. Following Nielson and Tierney (2003), we conceptualize the Bank's Executive Board as a collective principle issuing directives on behalf of its member countries. Noting that no agent is perfectly obedient, we aimed to determine whether or not the Bank staff responded to the Executive Board's call in July 2001 to mainstream environmental funding into the general population of World Bank projects. The results of our hypothesis tests are presented below:

H1: The Environment Strategy of 2001 had no effect on the amount of mainstreaming that occurs in the Bank's lending portfolio.

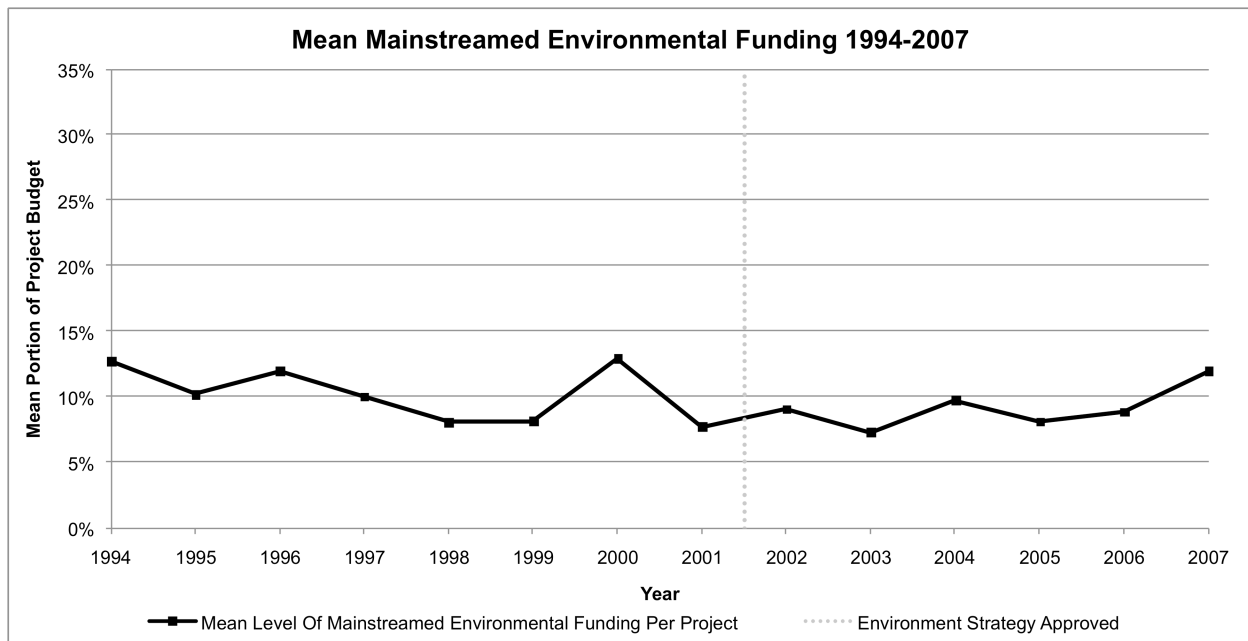


Figure 5: Mainstreamed Environmental Funding 1994-2007 (As Percentage Of Average Project Budget By Year).

To test *H1* we use a simple difference of means test to compare average mainstreamed environmental funding before the Environment Strategy's approval to average mainstreamed environmental funding per project after the Environment Strategy's approval. We break out this average by environmental category in an attempt to ensure that trends in mainstreaming in

Category A and B projects are not masked by trends in Category C projects.⁵³ As Table 3 shows, we find that overall mainstreamed funding over the period January 1994 to July 2001 was actually higher prior, constituting 10.3 percent of the average project budget approved in that time period. By contrast, over the period July 2001 to December 2007, 9.06 percent of the average project budget was mainstreamed environmental funding. This decline, however slight, is significant at the .90 level. Mainstreamed funding appears to subtly decline in all three environmental categories, but the only statistically significant decline is in Category C projects which are expected by the Bank to have little in the way of negative environmental impacts.

Despite the fact that overall mainstreaming in the post-strategy period was subtly lower than mainstreaming in the pre-strategy period, there is some evidence to suggest that mainstreaming has trended positively in the Bank's most environmentally risky projects since the approval of the environment strategy. By breaking the post-strategy approval period into two halves we find that from July 2001 to September 2004, new Category A project budgets were on average 16 percent mainstreamed environmental funding. By contrast, from September 2004 to December 2007, Category A project budgets were on average 26 percent mainstreamed environmental funding. This is a statistically significant increase at the .95 level. Thus, while we could not falsify *H1* using overall mainstreaming levels at the Bank, there is evidence to suggest that in the wake of the environment strategy's approval mainstreamed funding did trend positively in the Bank's most environmentally risky projects.

⁵³ Recall that Category C projects include both projects that are principally environmental (e.g. reforestation or environmental remediation projects) in nature as well as other projects that have no direct impact on the environment at all (finance, health, or education projects).

Table 3: Difference Of Means – Mainstreamed Environmental Funding Pre/Post Environment Strategy. Table shows mean amount of mainstreamed environmental funding per project in each period.

	Pre Environment Strategy January 1994-July 2001	Post Environment Strategy August 2001 – December 2001	Change
All	10.34 (.07)	9.06 (.07)	-1.28 (.01)*
Category A	18.48 (.02)	18.19 (.02)	-0.30 (.03)
Category B	13.47 (.01)	11.86 (.01)	-01.61 (.015)
Category C	4.73 (.007)	1.61 (.005)	-03.12 (.01)**

* $p < .10$; ** $p < .05$

H2: Increases in environmental rhetoric at the institution level after the approval of the environment strategy are unrelated to the amount of mainstreaming that occurs in the Bank's lending portfolio.

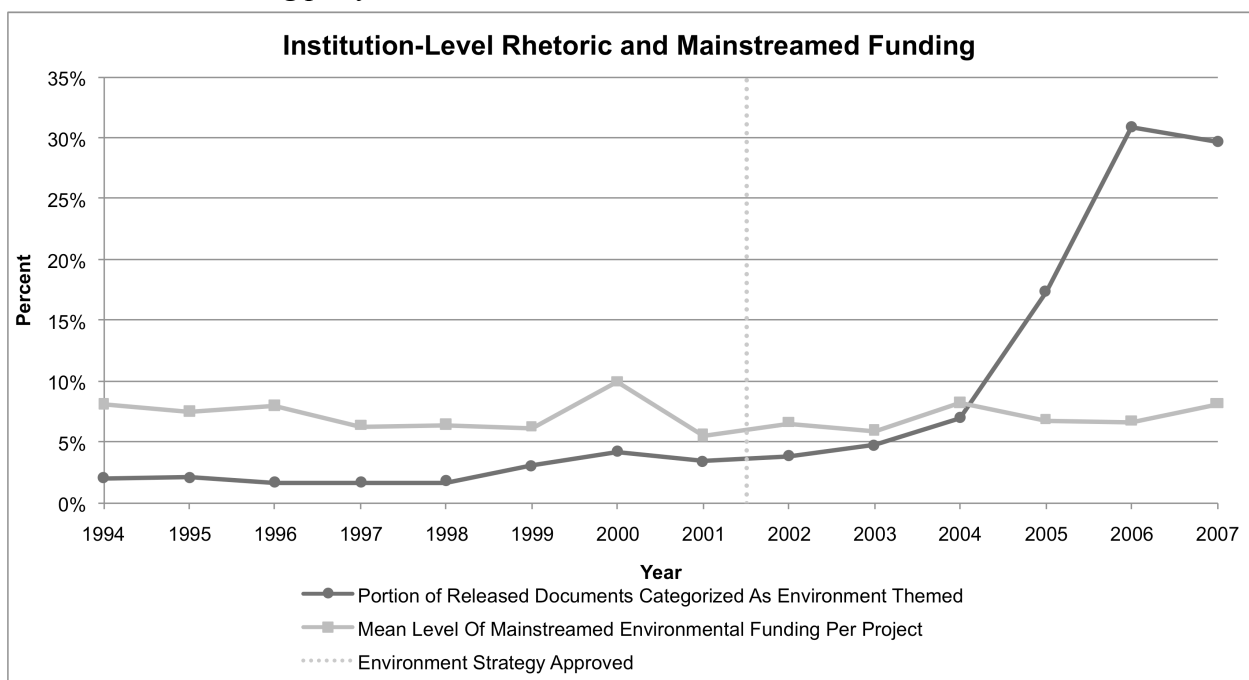


Figure 6: Institution-Level Rhetoric vs. Mainstreamed Environmental Funding 1994-2007.

As noted above, we operationalize the Bank's institution-level rhetoric as all the documents that it publically releases in their online documents database. We measure environmental rhetoric per year as the proportion of total documents released per year that are categorized by the bank as "environment" themed. We gather data on this variable for each year in our study frame and compare our institution-level environmental rhetoric score to mainstreamed funding trends per year. While we do not have enough observations in our period of study to test for a statistically significant relationship, Figure 6 shows that the trends appear to

be entirely uncorrelated. As described above, overall mainstreamed environmental funding trends hovered around 7 percent of the average project budget for the entire period of study, the Bank rapidly and significantly ramped up the publication of environment themed documents. In 2001, the Bank released just 96 reports or publications related to the environment, a figure which represented just over 3.3 percent of all documents released by the Bank in that year. By 2007, that environment-themed documents ballooned to 1,874 of the documents released by the Bank in that year, a figure which represents 30.9 percent of all World Bank documents and reports released in that year. We do not have sufficient evidence to reject this form of the greenwashing hypothesis – the Bank’s institution level rhetoric does not appear to be related to the amount of mainstreaming funding that occurs at the project level.

H3: Increases in environmental rhetoric at the project level are unrelated to the amount of mainstreaming that occurs at the project level.

To test whether project-level environmental rhetoric is significantly related to project-level environmental funding, we employ a Tobit regression censored at 0 with robust standard errors. We control for a project’s size, environment category, the project’s sector, and whether or not the Bank coded the project as environment-themed. The results of this model are presented below in Table 4. These results show that increases in project-level environmental rhetoric have a positive and statistically significant affect on the level of environmental funding in a given project.⁵⁴ Notably, while the Bank’s environment-themed projects, as explained above, do often contain no environmental funding, those projects coded as “environment themed” by the Bank, are more likely to include mainstreamed environmental funding. The only sector boards to have positive and significant effects on environmental funding were Environment, Urban

⁵⁴ We ran this regression as an OLS as well. In that case, the results were still significant but with smaller coefficients.

Development, and Water. Nearly every other sector – except Health and Energy – had negative and significant effects on environmental funding levels. Project size does not appear to affect the amount of environmental funding in projects. As such, we reject the project-level greenwashing hypothesis – the Bank does not appear to greenwash at the project-level. Figure 7 shows how project-level environmental rhetoric and environmental funding vary over time.

Our test of H3 should provide significant evidence for at least one group of critics. Indeed, in presenting our preliminary results to both Bank observers and Bank staff, a common critique emerged: that measuring mainstreamed environmental funding at the budget level might not be an accurate measure of mainstreaming at the institution level because “true mainstreaming” of environmental norms would not be visible as individual budget lines. Rather, consideration for the environment would be integrated into each portion of the budget.

Our test of H3, however, suggests that this is not true. Indeed, even if funding for environmental priorities were truly mainstreamed into each budget line item, we’d expect to see increased discussion of the environment at the project level even as environmental funding remained constant or declined. But as Table 4 and Figure 7 show, environmental discussion and environmental funding are highly correlated, suggesting that when the Bank talks more about the environment within operations documents, they follow that talk with environmental dollars.

Table 4: Tobit Regression Results. Independent Variable: Env_Pct (Proportion of a given project budget that is environmental).

	Variable	Coefficient (Std. Error)
	Project-Level Environmental Rhetoric (Measured as a percentage of PAD)	102.17*** (8.96)
	Environment-Themed By Bank (Dummy)	0.31*** (0.04)
	Project Size (in \$)	0.00*** (0.00)
Environment Category Dummy Variables	Category A	(Dropped)
	Category B	-0.09** (0.04)
	Category C	-0.15*** (0.06)
Sector Board Dummy Variables	Agriculture and Rural Development	(Dropped)
	Education	-0.38*** (0.10)
	Energy, Mining, and Telecom	0.05 (0.05)
	Environment	0.24*** (0.07)
	Economic Policy	-1.74*** (0.09)
	Finance	-0.20** (0.08)
	IT/Communications	-1.80*** (0.09)
	Health	0.00 (0.06)
	Poverty	-1.75*** (0.11)
	Public Sector	-0.34*** (0.11)
	Social Development	-0.28*** (0.11)
	Social Protection	-0.19** (0.08)
	Transportation	-0.17*** (0.05)
	Urban Development	0.14** (0.06)
	Water	0.58*** (0.05)
		Constant
	Pseudo R²	.426

Note: Tobit regression censored at 0. Censored observations: 1,903, uncensored observations: 538, missing values: 987. Estimated coefficients are given with standard

errors in parentheses underneath. * $p < .05$, ** $p < .01$, *** $p < .001$

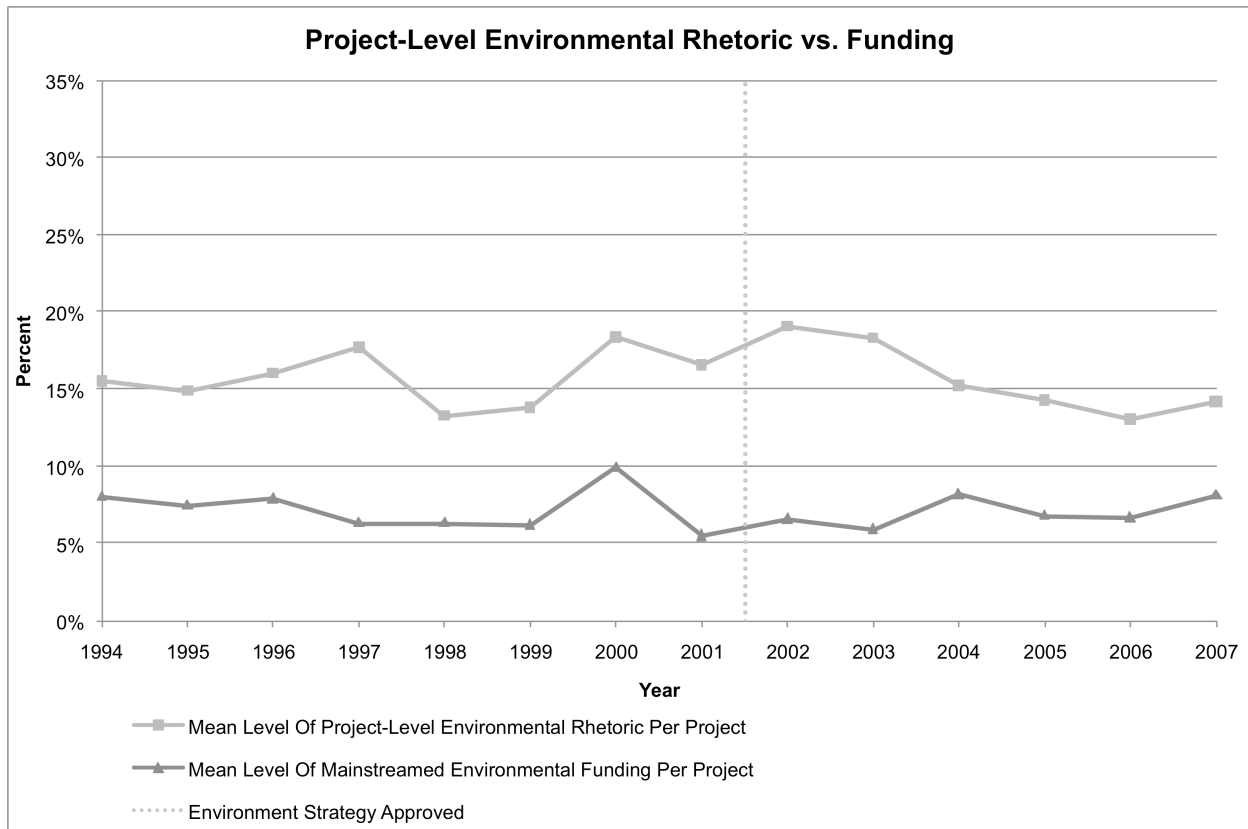


Figure 7: Project-Level Environmental Rhetoric vs. Funding 1994-2007.

Summary and Conclusions

We began this study attempting to answer the question, “Is the Bank’s money going where its mouth is?” That is to say, does the Bank fund development activities that either improve or protect the natural environment to the extent that it claims? To answer this question, we first provide a narrative history of the “greening” debate within the Bank and among its critics by using published accounts. We add new details to this story by drawing upon both primary bank documents and a dozen interviews with current and former officials at the World Bank, the Global Environment Facility, and members of the NGO community. Noting the current lack of reliable data on project-level environmental funding, we constructed a new

dataset of over 3,800 projects spanning the period 1994-2007. Using our new measure of mainstreamed environmental funding, we draw five separate and significant conclusions about mainstreamed environmental funding at the World Bank.

First, policy makers and scholars should be extremely cautious when using the Bank's thematic-sector coding system to measure the Bank's environmental commitments. As outlined above, a significant number of projects that the Bank counts as environment-themed contain no environmental funding. Additionally, we found that a small minority of projects that the Bank has not coded as environment-themed do, in fact, contain substantial amounts of environmental funding.

Second, we found that overall mainstreamed environmental funding remained fairly constant over our period of study, despite the fact that the Executive Board attempted to increase its mainstreamed funding levels by approving the Bank's first environment strategy document in July 2001. This could reflect agent shirking, or, if the proportion of dirty projects was declining after 2001 while the amount of mainstreamed environmental spending remained constant, then this pattern represents a net increase of "environmental protection" dollars.

Third, we found that environmental funding increased significantly after 2001 in those projects that the Bank considers the most environmentally risky. Hence, at minimum, it appears that the Bank has increased the amount of environmental remediation funds that it mainstreams in to traditionally "dirty" projects – and this was the central purpose of "mainstreaming" as originally articulated in the debates from the 1990s.

Fourth, and most directly related to claims of greenwashing at the Bank, we found that the Bank's environmental rhetoric at the institution-level is unrelated to levels of mainstreamed environmental funding. This suggests a strong disconnect between the project implementation

arm of the bank and the various departments that produce publications. This is classic greenwashing – high-visibility PR departments and/or research departments painting a picture that diverges from actual organizational operations – “painting dirty or neutral operations green.”

Fifth, we found that at the project-level environmental rhetoric is significantly related to mainstreamed environmental funding levels – that is to say that when operations-level Bank staff talk more about the environment in project documents, they also spend more money on the environment. At the project level, we find no evidence to support claims of systematic greenwashing at the World Bank. However the number of outsiders reading project documents is smaller than those reading annual reports, research reports, glossy brochures, or PR prose on the Bank website; so one would expect the incentives to “green” such operational documents to be lower.

Our analysis of heretofore-unobservable data clearly indicates the importance of analyzing development aid at the project and budget level. Indeed, while we found that the Bank tends to overstate the number of projects that include environmental funding, we also found that claims of greenwashing at the Bank based on high-profile, environmentally-disastrous development projects are not entirely merited. The granularity provided by project-level data allows scholars and policy makers to find more nuanced (and accurate) answers to complex questions. Still, the significant amount of missing data we encountered at an institution as large and as well-funded as the World Bank demonstrates how far development institutions have to go in tracking and disclosing details about their development activities.

Of interest to principal-agent theorists should be the seemingly conflicting results to our tests of the two forms of greenwashing hypothesis. As we explain in the theory section, the notion of greenwashing is really one of shirking. We found that the Bank’s institution-level

environmental rhetoric increased significantly after the approval of the Environment Strategy, but was unrelated to actual levels of environmental funding at the Bank. At the same time, we found that at the project-level, when the Bank talks more about the environment, it spends more as well. This suggests that agent responses to principal directives are not monolithic. Rather, when agents are ordered to modify their behavior, they may modify their behavior most dramatically in areas of operation that are the most visible and least resistant (and often least expensive) to change.

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