Greening Aid? Understanding the Environmental Impact of Development Assistance

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Edited Transcript – Bradley C. Parks

So we're actually going to skip over research question three because there's just too much dense material, and we'd encourage you to buy the book and read that -- those two chapters. I just don't have enough time to cover them.

So we're going to skip right to what Mike said you know, we think of as one of the more interesting chapters from the book. And the research question is, which countries receive the most environmental aid and why? And so as you can see on this slide, some of the largest recipients of environmental aid are really not that surprising. You've got China, India, Brazil, Indonesia, so some of these countries have large stocks in natural capital. Think of you know, the Amazon Rain Forest in Brazil, other countries have you know, huge populations or they're huge economies that are contributing to global environmental problems, so think of China or India.

But there's also some unusual entries on this top ten list of environmental aid recipients during the 1990s. So for example at first blush, it's not entirely clear why Turkey and Egypt would be getting over two billion dollars in environmental aid. And it's also just worth pointing out, we sort of have the green brown coloration here to show you how much they're getting of each type. And if you look at Egypt, Argentina, Turkey, these unusual entries on the top ten list, they, these are more geo-strategic countries and as you can see, they tend to get more brown aid then they do green aid.

And then at the very bottom of this graph you see least developed countries, so this is I think a group of 49 or so, the poorest countries in the world and the opposite is true in their case. They're getting a very small sliver of brown aid and the lion's share of the funding is green aid. And we think this raises lots of very interesting questions about leverage between and the bargaining process between donor and recipient countries.

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So these descriptive statistics obviously beg some deeper questions about donor motivations and one of the main questions that we had when we were going into this project was, is environmental aid allocated in the same way that all other types of foreign aid are allocated? Or is there something; are there unique properties to environmental aid? Our donors, do they operate differently when they're allocating this type of assistance?

So in other words, we're trying to figure out, are donors when they're allocating environmental aid, are they being what we call eco-functional? So are they trying to maximize the environmental rate of return on their environmental aid investment or is the decision making calculus being driven by political and, you know, geo-strategic commercial issues that others have identified you know, as drivers of foreign aid allocation more broadly? And so like in the other chapters, we try and study this issue both econometrically and then I think with five case studies. Okay.

So as you can see from this list, some of the hypotheses that we tested really had not very much to do with the environment, but some of these factors do have to do with broader determinants of foreign aid allocation. So you see things on this list like, does the recipient country have an existing commercial relationship? Is it a big trading partner? Does it vote in the U.N. consistently with the particular donor country? Is it a -- does it have a former colonial relationship with the donor country?

But then we also tested for some factors that we think could be, hopefully, that are specific to environmental aid. The sort of eco-functional factors, and so we looked at whether donors screened recipients based on things like their global or regional environmental significance, the strength of their environmental policies and public institutions, their willingness to participate in international environmental treaties, and also the severity of local environmental damage in that country.

And what we found is that there is some evidence that environmental aid is being allocated according to eco-functional criteria. That is, some donors are targeting countries where they think their environmental aid may actually make a difference. It may ameliorate environmental problems. But at the same time, many of these same factors that plague or that drive other types of foreign aid, you know, the U.N. voting patterns, the political loyalty, the commercial relationships, they also loom very, very large in the environmental aid allocation process.

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So just very quickly, what did we find in specific terms? First of all we found that in general, bilateral and multilateral donors do target countries with a potential to deliver global environmental benefits. So think of you know, reducing carbon emissions in China. We also found some evidence that donors target countries in their neighborhood that may be big contributors to regional environmental problems. So you may think of the acid rain coming from China over to Japan, there was a fairly robust response. Japan started putting, you know, scrubbers on some of these factories.

So this regional effect that showed up was not only observed with respect to environmental aid, we also tested it for dirty aid and neutral aid, but it was stronger for environmental aid. The effect was, so that made us think maybe there's something going on here in terms of donor's responsiveness to a regional environmental problem that really touches, touches them directly.

We also tried to look at local environmental issues. How severe is local environmental degradation? And this factor did not seem to have an effect on environmental aid allocation but we have to say we ended up – we had endless discussions about, about how to go about measuring that – and we ended up settling on a water quality index that has some serious problems and so you should probably take, we certainly did, took this finding, or non-finding, with a grain of salt.

And then we also tested for factors that a donor might expect to influence this environmental rate of return like does it, that may not be an explicitly environmental issue but may impinge upon whether that environmental aid investment is going to be effective. So does the country have a reasonably meritocratic civil service? Do they have sound economic policies that encourage entrepreneurship and innovation? Do they have relatively strong environmental policies?

And so what we found was pretty interesting. We modeled, as Timmons alluded to, we modeled this process as the allocation process in two stages. First stage is what we call the gate keeping stage. Are we even going to sign an aid contract with you? So are we giving you any money or not?

And then the second stage is the amount sage. Okay, you're in the club. We're going to give you a contract, an aid contract. Now we have to determine how much to give to you. And we found is that at that first gate keeping stage, these sort of eco-functional criteria seem to

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play a bigger role than at the amount stage. And in some ways, at least to me, this wasn't that surprising. You know, I work for the Millennium Challenge Corporation and we have this elaborate system for determining whether countries will receive assistance or not receive assistance. So that's a great example of the gate keeping stage. But we don't use the same set of policy and institutional criteria to determine how much a country gets. So that's what we found on the eco-functional variables.

Okay, now for the bad news. In the grand scheme of things, we found that the impact of these eco-functional variables is small when compared with some of the more traditional determinates of foreign aid allocation, the geo-strategic commercial colonial legacy issues. And this point is really important. I just want to emphasize that you know, Mike alluded to the fact that we're studying allocation, but this research project also has, speaks to the effectiveness question. There's a -- as many of you probably know there's a growing consensus that aid is allocated along political lines, it probably has lower likelihood of improving development outcomes or environment outcomes than otherwise. So the fact that these sort of commercial geo-strategic issues are having such a huge impact, we would think is not great news for actually addressing environmental problems.

Okay so now I'd just like to step back and kind of return to the big picture on what's happening at the global landscape of greening, the greening of aid. What can we say with confidence based on the data that we've been working with? A couple of things. The first thing is that bilateral environmental aid has increased very substantially, by about 370 percent over the 1990s; 1980s and 1990s.

Multilateral environmental aid has also more than doubled; 140 percent, but not nearly as much as bilateral. But at the same time we see that environmental aid as a total fraction, as a percentage of total aid still is fairly low. It's 10 percent and roughly at about $10 billion. And we also picked up on this very discernable trend with dirty aid. As a fraction of total aid, it's coming down from about 55 percent in the '70s to roughly about 30 percent and then of course a big part of the story over the last few decades is the skyrocketing of neutral aid. And then of course there's tremendous variation once you start looking at specific donors. You know some, this is happening in Denmark more quickly. The greening process happened more quickly and more extensively than, than for some of it peers.

All right, I would like to talk a little bit about the limitations of our study. We tried to do a lot, but we couldn't do everything. And so we tried to take stock in the conclusion of the

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book of what can we not answer, what are future research directions that we or others might take to try to wrap our hands around some of these big issues?

So the first limitation is that we set out to study aid allocation patterns across countries. But aid is also allocated across regions and districts within countries. And there's probably a lot of interesting variation within recipient countries that we're not picking up here. And while we're not there yet, at some point we do hope that PLAID Data, just because of the nature of the way that the data is organized, that it will enable researchers to do this type of analysis.

A second type, a second limitation is that our models assume -- these econometric models that we use -- they assume that allocation decisions in one sector, let's say the environment sector, do not influence allocation decisions in another sector. Now in reality we know that this assumption probably fails to consider a complex dimension of aid contracts between donors and recipients. For example it's possible that recipients will only accept environmental aid if it's sort of bundled with other types of more highly valued aid. You know a lot recipient countries would much prefer to have a productive sector grant or loan than have a green grant or loan that northern country wants to provide. So that's a limitation.

Another limitation that we acknowledge in the book is that we conflate grants and loans. And now this is not so problematic for the econometric models because we're looking at the share of total aid going to the environment sector or the share of total aid going to the dirty sector. And so since, if a donor gives mostly loans, like the World Bank, loans are in the numerator and the denominator so the ration is still going to be pretty comparable across donors. It's more problematic for the descriptive statistics that we've presented because some, some of these loans in here are, have a concessional rate but you know, they're not, $100 million grant is not the same as getting a loan from the World Bank for $100 million.

I should say though, that one of the neat aspects of this PLAID Database that we've created is that there's a grant element variable in the database. So we hope that other researchers will go if they so desire and reanalyze some of the claims that we've made by exploiting that information.

Another limitation that we are painfully aware of is that a lot of people talk about this process of marbling or mainstreaming, this phenomenon of marbling or mainstreaming environmentalist assistance into larger projects. And we know that at least one study, Mike was one of the authors of this study back in 2003, that found that marbled environmental

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assistance at the World Bank was a significant percentage of total environmental assistance. So we are not capturing that in the database right now and so that could be potentially problematic.

And we've heard lots of anecdotal accounts of more infrastructure projects including these environmental components, but figuring out just how much of this marbled environmental aid is in these otherwise non-environmental projects is not so easy to figure out. You have to drill down and look at the actual budgets of individual projects.

And Ryan Powers, a student from William and Mary who's with us today, is doing some excellent research in this area and his initial results, using the same sort of data that we're working with, are that mainstreamed environmental funding at the World Bank after the period that we study, from 2001 to 2006, has actually gone down significantly.

But there's this very curious pattern and we've got, we can come back to this during the Q and A. We have it in an extra slide where, as mainstream environmental aid is going down from 2001 to 2006, the percentage of World Bank publications that have an environment theme went from five percent to 33 percent. So that's a pretty big jump, and I think it raises lots of questions that we may, we may be discussing in just a bit.

We're also aware of this criticism that some of the dirty projects, you know, we showed this decline in the dirty environmental ratio, may be migrating to export promotion agencies or political risk insurance agencies like XM or OPIC or private banks where there's lower levels of transparency and oversight. And we've done some preliminary environmental coding of XM and OPIC, but there's a lot of work that needs to be done in this area.

And finally this point was kind of made before but I will make it again. And that is our environmental coding scheme here is designed to capture the expected environmental impact of projects, in other words, donor intentions or donor motivations, not the actual environmental impact. And we understand that some "environmental projects" may not end up delivering significant environmental benefits. And in some cases environmental projects may actually damage the environment. We also understand that donors can make course corrections during implementation and a project that initially you might think was dirty or neutral may be modified in a way that it ends up yielding some significant environmental benefits. But for us, this concept of actual environmental impact is very different from donor intentions and motivations and that's what we set out to do with this research project.

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All right, I'll be very quick here. We, one of the benefits of PLAID that we want to bring to people's attention is that donors make a lot of claims about how much they are funding environmental projects. And a lot of donors are under a lot of public pressure to show that they are greener than their peers. And so there are strong incentives to over-report your commitment.

And so we did a nice little test in the book because DFID, the U.K.'s primary aid agency, they have their own sort of project level database and they assign an environmental marker to projects and they claim that during the 1990s about 25 percent of their projects were environmental. So we took that same sample of projects and took the criteria that we've established for what's environmental, what's not and we came up with an estimate of 10 percent of their projects were environmental. So it's a pretty big difference, and I think it speaks to this issue of how do we hold donors accountable? Well, there needs to be some sort of independent evaluation of what's going on.

Just very briefly, and we can talk about this more during the Q and A. We talk in the conclusion a bit about what is environmental aid going to look like in 10 years or 20 years? And this probably doesn't come as a major surprise to most of you, but we do think that climate change is going to have a huge impact on what donors choose to fund and what they don't chose to fund in the future.

The latest estimates from the UNFCCC is that by 2030, $100 billion a year will be needed to finance mitigation activities just in the developing world. And then on the adaptation side the estimates are -- there's a wide ban from $28 to $67 billion a year. And so on the mitigation side, think of projects like defusing cleaner, energy efficient technologies, reducing deforestation, perhaps increasing carbon sequestration.

And on the adaptation side you know we might expect to see more funding for early warning systems that prevent the worst effects of heat waves, floods, and draughts. We may see construction of more seawalls, more climate-proofing of ag projects or irrigation projects. But it's worth noting that not all of this will necessarily be foreign aid in the traditional sense. Much of it could end up coming from what's being called carbon finance, for example, through the clean development mechanism, which is basically a market based mechanism that allows industrialized companies or carbon-intensive, industrialized countries or carbon-intensive companies to earn emissions credits through investments in projects that reduce

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greenhouse gas emissions, many times overseas. So that's one major area where we see things heading.

Okay, future directions, this is more broadly about the project level aid database not as much about environmental aid. Next step in this research project is that we would like to transition towards making this database an easy to use, timely, comprehensive database on international development finance for NGOs, for activists and for researchers. We think this could be a huge tool, not just for research purposes but also for donors that are trying to coordinate their efforts and for NGOs and activists that want to, that want or need a tool to monitor donor commitments. Because as Timmons or Mike mentioned, at all these conferences, Rio in '92, Jo'burg in 2002, Gleneagles in 2005, donors make you know, very large commitments.

We're going to ramp up environmental spending by you know, X amount, and there's rarely a follow up on how much is actually being spent on the environment so, or any other sector for that matter, so PLAID may be a great tool for increasing accountability in that area. We have received very generous support from the National Science Foundation and now the Hewlett Foundation going forward, and we're expecting that another major foundation may be providing support very soon. So this task that we have ahead of us is a major one, and we appreciate the support that we've received from some of these private foundations.

Now, what are we going to do with that support? We want to update the database by the end of 2008 through 2006 because there is a lag with the reporting. We want to reduce that lag. We also want to expand to other countries: emerging donors like China, Venezuela, Poland. So that's going to be a major focus. And then, finally, I just want to say a few words about the potential that the database offers in terms of doing sector specific and sub sector specific aid effectiveness research.

This next slide is a nice visual representation of the existing macroeconomic literature on aid effectiveness. Basically, the literature tries to evaluate the effect that total aid flows have on development outcomes like economic growth or infant mortality. The problem is that this type of research design conflates very different types of aid. So for example when you evaluate the impact that total aid flows have on economic growth, which has been done quite a bit, you're forced to combine productive sector funding for things like infrastructure or agricultural productivity with support for peacekeeping operations, landmine clearance, free and fair elections, HIV/AIDS assistance, drug trafficking, you name it.

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As you can imagine, this is seriously problematic, because many of these types of aid are not designed to increase economic growth but are designed to do things like support refugees or strengthen civil society or protect biodiversity. And so in some ways the existing macroeconomic aid effectiveness literature may end up obscuring more than it reveals or sheds light on. And so one of the major advantages of PLAID is that it allows you to un-bundle aid into its constituent parts, not just environmentally but all different types of aid.

So you can answer questions or try to answer questions like, what kind of impact does biodiversity have on species loss and vegetation density? How does education aid impact enrollment rates and literacy rates? Is HIV/ AIDS assistance reducing prevalence rates or increasing access to anti retroviral drugs? And this is, we hope, the next generation of macro aid effectiveness of literature. And basically the idea [low audio] the impact of specific types of aid on specific development outcomes.

And then finally I'd just like to conclude by highlighting the very practical potential that the PLAID database hopefully will offer in terms of donor coordination. As many of you know, in most developing countries there is usually not a central repository where you could find all bilateral and multilateral projects in the human sector or sub sector. But having this information is invaluable. It can go a very long ways towards minimizing overlap and reducing projects that work at cross-purposes. Bill Easterly and others have written a lot about some of the more egregious cases that have led to huge efficiency losses. And so one of our next steps is to work with our funders and to make PLAID searchable and easy to use for people in the field or elsewhere so they can access this information where they are and use it to do their work better.

So I think I'll stop there and maybe we'll turn it over to Rob. Oh, yes.

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