

Codebook and Users Guide to Project Level Aid Database (PLAID) Versions 1.0 and 1.1

Last Updated: August 21, 2005

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Introduction

The aim of the PLAID (Project-Level Aid) database is to collect and standardize data on every individual development assistance project committed since 1970. The *Codebook and Users Guide to PLAID* describes the procedures used in the data collection, standardization, and coding of projects within the PLAID database. In addition, it provides brief analysis to distinguish our contribution from previous work and to assist researchers in the use of our data. The database provides the most extensive coverage to date on the total universe of development projects. The primary variables in the PLAID database are compiled from a range of official sources, including the OECD CRS database, donor annual reports, and project documents from both bilateral and multilateral aid agencies. Additional variables have been created specifically for the PLAID database in an effort to standardize traditionally problematic fields in previous diverse data collections (such as country names and dollar amounts). To enable future research, all individual projects have been coded for their contribution to various substantive sectors, for example environmental impact. Our purpose is to provide both scholars and policy makers with a comprehensive tool to test hypothesis and understand trends in overall and purpose-specific development assistance both across countries and over time.

Section I: About PLAID Data

Data Sources

The majority of the PLAID data were obtained from the Organization for Economic Cooperation and Development's (OECD) Creditor Reporting System (CRS). The CRS data² are the original source for 76.7% of the project records in PLAID, covering the years 1973–2001. The vast majority of the data taken from the CRS are bilateral aid projects, although a small portion of the multilateral aid data are also from OECD sources. The CRS data rely on the information that donor governments and multilateral organizations submit through the CRS system about their aid projects each year. This reliance on donor reporting causes the OECD database alone to be incomplete, in particular for the early years of the CRS system.³ The remaining 100,054 thousand records included in the PLAID database were gathered directly from donor organizations.

A significant portion of foreign aid comes from many multilateral organizations that are not covered or covered incompletely in the CRS data. To fill these gaps, we collected project-level data from many multilateral organizations directly, including those already reporting using the CRS system for increased accuracy. The following is a complete list of independently collected multilateral donors as of January 2005:

- African Development Bank (AFDB)
- Asian Development Bank (ASDB)
- Carbon Offset (World Bank Group)
- Caribbean Development Bank (CDB)
- Council of Europe Development Bank (COEB)

² These data are available both online at www.OECD.org and from the OECD CD-ROM (2002).

³ For a list of the specific gaps in coverage see the Appendix. These data were provided by OECD staff in July of 2003.

European Bank for Reconstruction and Development (EBRD)
European Investment Bank (EIB)
European Union (EU)
Global Environmental Facility (GEF)
Inter-American Development Bank (IADB)
Inter-American Investment Corporation- IADB Group (IIC)
International Bank for Reconstruction and Development- World Bank Group (IBRD)
International Development Association- World Bank Group (IDA)
International Finance Corporation- World Bank Group (IFC)
Islamic Development Bank (ISDB)
Montreal Protocol Fund (MPF)
Multilateral Investment Fund- IADB Group (MIF)
Multilateral Investment Guarantee Association-World Bank Group (MIGA)
Nordic Development Fund (NDF)
Nordic Investment Bank (NIB)
North American Development Bank (NADB)
OPEC Fund for International Development
Rainforest Trust (World Bank Group)
United Nations Children's Fund (UNICEF)
United Nations Development Programme (UNDP)
United Nations Population Fund (UNFPA)

As PLAID expands, more multilateral donors will be added to the database as well as increased coverage from directly contacted bilateral donors. The reason we prefer to contact bilateral donors directly is that for many years particular donors did not send their surveys to the OECD. In addition, there are some PLAID variables that can only be coded by directly studying annual reports and project documents. To increase coverage on these variables, PLAID will continue to collect information that is not provided in the CRS survey.

Types of Aid Included in PLAID

The PLAID database covers approximately 90% of commitments to development assistance projects from 1970-2000. We define development assistance as loans or grants from governments, official government aid agencies, and inter-governmental organizations (IGOs) with the promotion of the economic development and welfare of developing countries as its main objective. With the exception of certain debt reorganization commitments, at least 25% of a loan must consist of a grant in order to be considered official development assistance (ODA). However, PLAID also includes loans at market rates if these loans are designed for the broad purpose of fostering international development. Our data therefore includes commitments that offer finance to developing countries in the form of:

- grants
- mixed loans and grants
- loans at discretionary rates from multilateral agencies
- loans/loan guarantees at market rates
- technical assistance
- sector program aid transfers in cash or in kind

Where the loan terms were available, PLAID includes data on interest rate, re-payment period, and co-financiers of the loan. For many projects it is possible to restrict the data selection criteria within the database to differentiate among project financing types using either the *flowcode* or *grantelement* variables. For donors where it is unclear whether an amount is a loan or a grant, PLAID provides no information in these fields.

The PLAID database does not include data from non-governmental organizations (NGOs) or contributions from private investors, banks, or foundations. The development assistance information in PLAID also does not currently include military aid from either bilateral or multilateral donors. The following is a list of the types of financing which PLAID does not currently include:

- Military equipment and services
- Military stock of debt
- Aid flows from non-governmental organizations⁴
- Private long-term capital
- Grants by private voluntary agencies
- Member's contributions to multilateral agencies
- Loans made out of funds held in the recipient country
- Foreign direct investment (FDI), unguaranteed bank lending, portfolio investment

For a complete list of PLAID variables and variable descriptions, see Section II.

Interpreting Project-Level Data

To use PLAID it is necessary to understand the unit of observation of the data. The data contain observations of money flows from donor entities to recipient countries for specific purposes. In the majority of cases this means that a row of our data corresponds to a donor giving a recipient money in a particular year for a specific project, or one row of data per project. Under two conditions it is possible that a single project may appear multiple times in our data: when multiple donors give to the same project, or when a single donor commits new money to the same project in more than one year. If the original project was scheduled to be disbursed in yearly increments or periodic tranches over multiples years, this is captured on a single project line. However, on some occasions donors commit additional funds to existing projects. As these represent new funding commitments and separate funding decisions they are listed as distinct projects. For researchers, this means the following:

- Assuming that each row in PLAID is a unique project will lead to an overestimate of the number of development projects.
- In some instances, PLAID allows users to track projects having multiple donors. In these instances it is possible to construct data queries that collapse the data by project in order to obtain more accurate project counts.

⁴ PLAID excludes projects that originate from NGOs. However, projects from bilateral and multilateral donors that are implemented by NGOs are included. Implementing agents, NGO or otherwise, are captured in the *beneficiary* field or may also be identified in the project description.

- For the large majority of our data, there is no project identifier, so it is impossible to know if each row is indeed a unique project. This drawback is characteristic of all large multi-donor databases currently in existence.
- Assuming redundant projects are coded into sectors consistently, summing commitment dollar amounts across donor, recipient, year will lead to a good measure of a donor's commitments to particular recipients for a given year.

Section II: Variable Names and Descriptions

This section contains descriptions of every variable available in the PLAID database. Wherever possible, descriptions of variables taken directly from the CRS database were given descriptions identical to that of the OECD.⁵ The Quick Variable Reference is a list of all existing PLAID variables and a brief description of each. The Detailed Variable Descriptions contains additional information on the formation and interpretation of those variables whose definitions needed further explanation, as well as methodological information on all variables created specifically for PLAID.

Quick Variable Reference:

The following is a list and brief descriptions of the variables in PLAID. All variables are entered in the exact form received from the CRS or donor organization unless otherwise indicated.

^(a) Indicates a variable unique to or modified by PLAID.

^(b) Indicates a more detailed description of the creation or use of the variable is available in Additional Variable Descriptions.

Year: year the transaction was committed.

Donorcode: CRS code of the country or multilateral agency reporting the transaction.

Donor_Plaid_code^(b): PLAID code of the country or multilateral agency reporting the transaction.

Donorname_e: name of the donor country or multilateral agency.

Donorname^(a): standardized name of the country or multilateral agency reporting the transaction.

Donor_Umbrella^{(a)(b)}: name of the umbrella multilateral donor organization.

Agencyname_e: institution undertaking or administering the transaction.

transact_num^(b): CRS identification number allocated to the commitment.

⁵ "Creditor Reporting System Aid Activities 1973-2001" OECD/DAC International Development Statistics CD-ROM, 2003 Edition. More complete information on all CRS variables is available from this source.

Recipientname_e: name of the recipient country.

Beneficiary^(b): beneficiary institution as reported by the donor country or multilateral agency.

Cofinancer^(a): the name of the co financier.

Commitmentdate: date the project was signed on.

Flowcode^{(a) (b)}: code of the flow:

11=ODA/OA grant;

12= ODA/OA grant-like;

13 = Loan;

14 = ODA/OA equity investment;

Flowname_e^{(a) (b)}: name of the flow.

Purposeprefix: the nature or the type of aid as identified by the OECD:

1 = investment project;

2 = other resource provision including commodities and supplies;

3 = technical cooperation;

4 = program aid/cash.

CRS_code: five-digit numerical code placing each project in an OECD-defined aid sector or sub sector.

Purposename_e^(b): name of the CRS sector code.

Shortdescription: brief description of the project, program, or supplies as specified by the donor.

Longdescription: description of the project as specified by the donor.

Longdescription_plaid^{(a)(b)}: supplementary description of the project.

Projecttitle: official title of the project as specified by the donor.

Donor_id^(a): project identifier assigned by the donor.

Env_Impact^{(a) (b)}: environmental impact code:

ESD = environmental strictly defined;

EBD = environmental broadly defined;

N = neutral;

DBD = dirty broadly defined;

DSD = dirty strictly defined.

Env_Aid_Type^{(a) (b)}: type of environmental aid.

Secondary_purpose^(a): the secondary purpose of the project, as identified in the short or long description.

Grantelement: grant element at a discount rate of 10% expressed as a percentage of the face value of the loan or credit. 100% identifies ODA grants, 25%-99% identifies ODA loans. Certain debt reorganization commitments may have a grant element of less than 25%.

Original_Currency^(a): the currency in which the project amount was originally reported.

Original_Amount^{(a)(b)}: the total amount of the project loan.

Usd_amount: total amount of the project loan in US dollars.

Usd_amounttied: amount tied, US dollars.

Usd_amountuntied: amount untied, US dollars.

Usd_amountpartialtied: amount partially tied, US dollars.

Usd_localcost: amount committed by local government, US dollars.

Usd_techcoop: technical cooperation amount, US dollars.

Usd_cofinancing_amt^(a): amount committed by co financiers, US dollars.

Usd_totalcost^{(a)(b)}: total cost of the project, US dollars.

Typerepayment: type of loan repayment:
1 = equal principal payment (EPP);
2 = annuity;
3 = lump sum;
5 = other.

Numberrepayment: number of repayments per year.

Repaydate1: first repayment date.

Repaydate2: last repayment date.

Interest1: interest rate: e.g. 11000 = 11%
3000 = 3%
150 = 0.15%.

Gender: gender equality incorporating Women in Development (WID) marker
0 = not targeted;
1 = significant objective;

2 = principal objective.

EIA: environmental impact assessment carried out

0 = no

1 = yes.

Environment: aid to environment marker

0 = not targeted;

1 = significant objective;

2 = principal objective.

Projectnumber: number or identifier of the project as given by the donor.

Part: country on the DAC list of Aid Recipients

1 = part 1 (developing countries);

2 = part 2 (countries in transition).

Donor_Type^{(a)(b)}: type of donor organization

M = multilateral;

B = bilateral.

USD_AMT_2000^{(a)(b)}: USD_amount in year 2000 US dollars.

USD_TIED_2000^{(a)(b)}: USD_amount_tied in year 2000 US dollars.

USD_UNTIED_2000^{(a)(b)}: USD_amount_untied in year 2000 US dollars.

USD_PARTIALTIED_2000^{(a)(b)}: USD_amountpartialtied in year 2000 US dollars.

USD_LOCALCOST_2000^{(a)(b)}: USD_localcost in year 2000 US dollars.

USD_TECHCOOP_2000^{(a)(b)}: USD_techcoop in year 2000 US dollars.

USD_COFINANCING_2000^{(a)(b)}: amount committed by co financiers, US dollars.

USD_TOTALCOST_2000^{(a)(b)}: total cost of the project, US dollars.

Table_name^(a): name of the table from which the raw data originated.

Disbursements^(b): amount of loan disbursed in US dollars.

Disbursements_USD_2000^{(a)(b)}: amount of loan disbursed in 2000 US dollars.

Recipientcode^(b): code of the recipient country.

Recipient_Plaid_name^{(a)(b)}: standardized name of the recipient country.

Recipient_Plaid_Code^{(a) (b)}: PLAID code of the recipient country.

Document_source^(a): the source document from which the information regarding the project originates.

Detailed Variable Descriptions:

This section contains more comprehensive descriptions of variables we believe warrant further explanation. It also includes any lookup tables associated with code variables not included in the Quick Variable Reference part of Section II.

Donorname

- Since PLAID data comes from a wide variety of sources, *Donorname* is used to standardize the spelling of bilateral or multilateral donors whose name may appear differently based on the original data source. Donor countries whose names were changed were given the current name of the country as the *Donorname*.⁶
- For bilateral donors, PLAID only includes the donor country name and not the specific aid agency for this variable. For example, USAID projects for this field read “United States.”
- The “_OECD” suffix in this field indicates CRS source data; all other data was collected directly from the donor.

Donor_Umbrella

- Some donors have multiple independent sub-agencies through which they distribute aid. This variable groups any affiliated sub-agencies that appear as separate entities in *Donorname_e* and *Donorname* under the name of their parent organization.

Agencyname_e

- Since many bilateral donor governments have multiple aid agencies in their country, this variable records which specific agency implemented the project. This variable is the implementing agency within the donor government or organization.
- The “_OECD” suffix in this field indicates CRS data; all other data was collected directly from the donor.

Donor_type

- All bilateral donors in this database are sovereign governments. All multilateral donors are International Governmental Organizations (IGOs).

Recipient_name

- Since PLAID data comes from a wide variety of sources, *Recipient_name* is used to standardize the spelling of countries whose name may appear different based on the original

⁶ The one exception to this rule is Germany, which after reunification in 1989 was titled “West Germany” in order to link it for statistical analysis with the donor activities of West Germany in previous years.

data source, or whose names have changed over time. Recipient countries whose names were changed but retained the same geographical borders were given the current name of the country as the *Recipient_name*. Recipient countries that changed both name and geographical borders were assigned a new *Recipient_name* for projects they received in all years subsequent to the change.

- Many projects went to entire regions. In these cases, the *Recipient_name* given is the standardized name of the region.
- In other instances, projects were given to individual companies, sub-national governments, or agencies within an unspecified country. In these cases, the *Recipient_name* is “unallocable.” Whenever possible, unallocable recipients were investigated and assigned a country name. However, it is important to note that not all projects that are committed to recipient countries are projects directed to the government of that country.

Donor_Plaid_code and Recipient_Plaid_code

- These unique codes were created by the PLAID research team as a numeric way of identifying each country or organization in the database. It is important to note that both *Donor_plaid_code* and *Recipient_code* are part of the same larger series of PLAID Codes. Therefore countries that changed from being recipients to being donors retain their original numeric code.

Beneficiary

- Indicates the particular branch of government, NGO, or multilateral organization within the recipient country receiving the loan.
- Information on the beneficiary organization was not available for many projects. A missing value in this column therefore may indicate either no beneficiary (a direct government loan), no beneficiary reported by the donor (for CRS data), or no beneficiary information available (independently collected data).

Flowcode and flowname_e

- Identifies and categorizes projects (by number for flowcode and by name for flowname_e) according by type of monetary flow.
- A code 11 (ODA/OA grant), indicate a transfer made in cash, goods or services for which no repayment is required.
- A code 12 (ODA/OA grant-like), indicates a transaction in which the donor country retains formal title to repayment but has expressed its intention in the commitment to hold the proceeds of repayment in the borrowing country.
- A code 13 (loan) indicates a transfer for which repayment is required. Unlike the CRS, PLAID includes loans at market rates in this category as well in addition to those that qualify as ODA (25% grant element).
- A code 19 (ODA/OA equity investment) indicates equity investments in productive capital projects on below-market terms.

Longdescription_plaid

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- In order to differentiate between the long descriptions given in the CRS data and those independently collected from donors and annual reports, a separate field was needed. *Longdescription_plaid* records any supplementary project descriptions collected by the PLAID research team from these non-OECD sources.

Usd_totalcost

- This field reflects the total cost of the entire project as the sum of the loan amount, contributions by local government, and any amount committed by co-financers.
- *Usd_totalcost* is calculated by summing *usd_amt*, *usd_localcost*, and *usd_cofinancing_amt*.

Env_Impact

- This variable captures the projected environmental impact of each project. It has five possible values:
 - *ESD (Environmental Strictly Defined)*—projects which have an immediate, positive impact on the environment. Such projects usually have clear, measurable criteria for success.
 - *EBD (Environmental Broadly Defined)*—projects which either have longer range positive environmental impacts or are preventative in nature.
 - *N (Neutral)*—projects which have no obvious and immediate impact on the environment
 - *DBD (dirty broadly defined)*—projects which have a moderate or potential long-term negative impact on the environment
 - *DSD (dirty strictly defined)*—projects with a severe, negative impact on the environment
- For a more detailed discussion of our coding criteria, see Section III below.

Env_Aid_Type

- This variable captures the type of projected positive environmental impact for each project. It has two possible values:
 - *Green*—projects that benefit the environment on a global or regional scale.
 - *Brown*—projects that primarily benefit the local environment.
- This variable, because it describes the type of environmental aid, is only given a value for projects where *Env_Impact* is either ESD or EBD. All other *Env_Impact* values receive a blank in this field.
- For a more detailed discussion of our coding criteria, see Section III below.

Original_Amount

- If the original cost of the project is reported in US dollars, this field will be identical to the field *usd_amt*.

Transact_num

- Transaction numbers were assigned by donors in the OECD CRS database.
- Donors are to start every X digit transaction number with a two digit year and then a counter series of numbers for every project committed by that donor in that year. There-

fore the first project in 19YY from an individual donor would have a *transact_num* of YY00001. *Transact_num* is a unique project identifier within donor and year, but not across donors.

- PLAID reports transaction numbers for projects collected from the OECD CRS. Therefore only bilateral projects⁷ and small number of multilateral projects in the database have transaction numbers.

CRS_Purpose_Code

- This five-digit numerical code places each project in an OECD-defined aid sector. For a more detailed discussion of the CRS purpose codes, see section III below.

USD_AMT_2000, USD_TIED_2000, USD_UNTIED_2000, USD_PARTIALTIED_2000, USD_LOCALCOST_2000, USD_TECHCOOP_2000, USD_COFINANCING_2000, USD_TOTALCOST_2000, and Disbursements_USD_2000

- For projects reported in dollar amounts, these variables were constructed by inflating or deflating the face value of the original amount into year 2000 US dollars (PPP).
- For projects reported in SDR, Units of Account, or currencies other than the US dollar, amounts were first converted into dollars using standard exchange rates and then inflated or deflated to year 2000 US dollars (PPP).

Section III: Sector Coding

Environment

After collecting all of the data, each project was coded for its effect on the environment according to strict criteria developed by the PLAID research team.⁸ The *Env_Impact* variable was coded as one of five values on an ordinal scale designed to measure both the general effect and immediacy of each project's environmental impact. These values range from the most eco-friendly to the most harmful. The scale is as follows: environmental strictly-defined (ESD), environmental broadly-defined (EBD), environmentally neutral (N), dirty broadly-defined (DBD), and dirty strictly-defined (DSD). For those projects with either an ESD or EBD designation, we then coded our *Env_Aid_Type* variable to provide information on the intended scope of the environmental problem targeted by the project. This variable has two values, green or brown, where green designates environmental aid for international public goods projects while brown environmental projects have more localized impacts.

Broad Guidelines

There were three broad guidelines taken into consideration when coding for the environmental sector. First, our coding rules disregard the positive intentions and/or humanitarian dimensions for many types of projects. A project's potentially positive overall impact on a recipient's population is analytically distinct from a project's environmental impact. For instance, ag-

⁷ We have coverage for every bilateral project except those from two US agencies where we collected the data directly: the Export-Import Bank of the United States (EXIM) and the Overseas Private Investment Corporation (OPIC).

⁸ Undergraduate research assistants at the College of William and Mary coded the majority of these projects. See the Coding Methodology section for more details.

ricultural projects are coded as DBD. While agriculture projects may indeed benefit citizens within the recipient country by raising incomes or providing sustenance, on average they negatively impact the country's environment through habitat "conversion," increased erosion from tilling, synthetic fertilizer and pesticide use, etc.; thus, they are classified as dirty. Not all "good" development projects are good for the natural environment. The reverse is also true. For this variable we stay focused on likely environmental impact, rather than other positive or negative effects on the recipient country.

The second guideline addresses the issue of multi-sector projects. Many development projects address multiple purposes and thus cover multiple sectors (e.g. a project with one component helping the environment and another harming it). For multi-sector projects, the code of the project is the value falling between the values we would normally assign to each sector. For instance, a rural education project that included the construction of schools and the financing of teacher education (N) but that contained a bridge-building component (DSD) designed to enable the transportation of school children from outlying areas would be coded as DBD, since DBD falls between DSD and N on the ordinal scale. However, multi-sector projects with adjacent codes, such as projects with split DBD and DSD components, were given the dirtier code, in this case DSD, in the interest of reporting a conservative estimate of environmental aid.

Our final guideline concerned the intentions of the donor countries or organizations. Intentions behind a project were ignored; instead, values were assigned based on the expected environmental impact of the project as described.⁹ Although information on donor intent is available in some instances and would undoubtedly be of use in ambiguous cases, the lack of donor intentions for the vast majority of projects leads us to completely exclude this information while coding for the environmental sector. Instead, we attempt to capture the likely impact of the project if it is implemented as described in the project documents.

Env_Impact Codes

The *Env_Impact* variable has five possible values on a scale from the most environmentally beneficial to the least: ESD, EBD, N, DBD, and DSD.¹⁰ We discuss each value below. For a full listing of specific criteria, see The Appendix.

Environmental Strictly Defined (ESD)—Projects that have an immediate positive impact on the environment. Such projects usually have clear, measurable goals and criteria for success with immediate environmental impacts. We consider these projects to be the most beneficial to the environment.

⁹ Since we accept that knowledge can't directly impact the environment, we conceivably should consider any research as neutral. However, we believe that most research informing a particular sector probably supports that sector. Further, typically research aimed at improving the environment is described as such in project descriptions. Therefore all research was coded with the sector it informed. The same was done for investment, education, construction, and administration projects, which when specified as belonging to a particular project type were coded with the sector they contributed to (e.g. mining education was considered mining, DSD).

¹⁰ Some projects could not be coded due to missing or unintelligible descriptions. In this case, we left the *Env_Impact* value blank. Depending on the research question, one may or may not want to include these "blank" projects in the denominator when calculating percentages or running models.

Environmental Broadly Defined (EBD)—Projects that have either have less definable, longer range environmental effects than ESD projects or are preventative in nature. Such projects do not have an immediate or direct positive impact on the environment, but tend to be environmentally friendly over a longer time period.

Neutral (N)—Projects which have no immediate impact on the environment. Generally neutral projects come in one of four forms.¹¹ First, many neutral projects were economic in nature—promoting free trade, providing balance of payments support, helping small and medium enterprises, or promoting exports. Second, neutral projects helped the education sector, either by building schools or promoting education. Third, a large number of neutral projects financed telecommunications and telecommunications infrastructure. Finally, many neutral projects provide emergency aid for disasters such as floods, earthquakes, and droughts. Such projects have negligible environmental impacts and are therefore neither beneficial nor harmful.

Dirty Broadly Defined (DBD)—Projects which have a moderate or longer-term negative impact on the environment. Overwhelmingly, these projects finance the agricultural sector. We recognize that different crops can have very different environmental impacts. However, information on the specific type of agriculture being financed was unavailable for the majority of the projects. Since most agricultural projects have only a moderate negative effect on the environment, at least compared to the projects in the DSD section, we coded all agricultural projects as DBD.

Dirty Strictly Defined (DSD)—we code projects that severely harm the environment as DSD. These projects may strip the environment of irreplaceable natural resources, as in the case of extractive industries (i.e. mining or logging). Projects which also severely pollute/degrade the environment, with immediate measurable implications, count as DSD; examples include road and air transport as well as heavy industry (such as fertilizer, tire, and brick-making factories).

Env_Aid_Type Codes

Environmentally friendly projects—those which received an ESD or EBD for *Env_Impact*—were further coded into one of two *Env_Aid_Type* categories designed to indicate the scope of the project. A Green code designates projects that address global or regional environmental problems, while a Brown code indicates projects that focus primarily on local environmental issues. For a full list of specific criteria, see the Appendix.

Green—Projects which positively impact environmental outcomes outside the recipient country. They either enhance or preserve global environmental resources and include projects that address climate change, CFC emissions, and biodiversity, or address more regional issues such as sustainable development, family planning, deforestation, desertification, and renewable energy.

Brown—Projects which enhance environmental outcomes or remedy environmental degradation in a specific country or locality. These most often include drinking water treatment, soil erosion,

¹¹ For many of these projects we debated if they really had a neutral environmental impact. For instance, many telecommunications projects undoubtedly include planting telephone poles in the ground. However, we feel that the environmental impact from these projects is so small, inconsistent, and often indirect that they do not belong in the same class as truly dirty projects.

and sewerage projects. By a significant margin, the most common types of Brown projects deal with sanitation issues.

Coding Methodology for PLAID Version 1

The database consists of approximately 430,000 rows of foreign aid projects. Projects collected separately from the OECD were coded line-by-line using the descriptions given above and an exhaustive list of categorized examples. However, for a portion of the data obtained from the OECD CRS database we were able to use sector codes to code like projects as a group. Some of these sectors are explicitly composed of environmental (or dirty) projects, such as Water Supply/Sanitation, which we could quickly and accurately code as a group. However, numerous sectors include both dirty projects and environmental projects. These sectors required disaggregating and individual coding. Through this method, we eliminated many problems that arise from simply coding by sector.¹²

To enhance the validity of our codes, we randomly sampled 100 projects from every ambiguous sector and coded these projects individually. If we found that five or more of the 100 projects differed from the sector's overall code, we then coded all projects within that sector line-by-line. If fewer than five projects differed from the sector's code, we coded all projects within that sector identically. While this process does mean that we likely mis-coded some projects, the resulting data offer a significant improvement in measurement validity over previous research using OECD data.

Projects obtained from sources outside the CRS system or which belonged to sectors that did not meet the 95% confidence test for blanket coding were coded individually by the PLAID research team. Researchers were trained on a set of practice projects using our rigorous coding criteria, available in the Appendix, and were only able to begin coding after they reached an 85% accuracy threshold. Each project was then coded at least twice by separate researchers to establish inter-coder reliability. Projects which did not receive matching codes were referred to a senior researcher for a final decision before being added to the master database.

Coding Methodology for PLAID 1.1

The database consists of approximately 430,000 rows of foreign aid projects. Projects coded line-by-line using the descriptions given above and an exhaustive list of categorized examples. Previous studies have often relied on OECD sector codes to categorize different types of aid projects. However, many OECD sectors include some projects that are environmentally friendly and others that are environmentally damaging. Therefore, in PLAID 1.1 we disaggregated every sector and separately coded every single project before entering an environmental impact code into the PLAID database.

¹² Our method of line-by-line coding based on the long project descriptions distinguishes, for example, typical energy-sector projects from energy-conservation projects. Furthermore, the sampling we did of projects within individual CRS sector codes revealed whether we needed to go through individual projects to determine whether we would be missing environmental or dirty aid. As a result of our sampling, we actually did end up coding all energy projects and all forestry projects on a line-by-line basis. These were two areas where projects certainly can run the gamut from environmental (energy conservation and deforestation prevention) to extremely dirty (greenfields, fossil-fuel plants, and logging); they are also two of the sectors that critics use to illustrate potential problems with measurement error.

Every coded row in the PLAID database was coded individually for our environmental variables by at least two members of the research team. Researchers were trained on a set of practice projects using our rigorous coding criteria, available in the Appendix, and were only able to begin coding after they reached an 85% accuracy threshold. Subsequent tests for PLAID 1.1 put coder accuracy at above 95% for every single coder. Each project was then coded at least twice by separate researchers to establish inter-coder reliability. Projects which did not receive matching codes were referred to a senior researcher for a final decision before being added to the master database.

However, many projects in the database contain only very brief and generic descriptions, and a few contain no description at all. Projects with short descriptions or which included only project titles were coded based on this limited information, while projects with no descriptive information received no code for our environmental variables. This decision makes our estimate of environmental aid very conservative, since a project description must specifically indicate that a project is environmental for us to code it as such—information which is not often included in short or incomplete project descriptions. If one calculates the total number or the percentage of environmental projects (or project dollars) with the total number of development projects in the denominator, then one undercounts the number of projects and the dollars spent on environmental foreign aid. However, since projects with no descriptions tend to fall early in the time series when there were fewer environmental projects being committed, we expect that excluding blanks from the denominator will over-estimate the number of environmental projects and project dollars.

Appendix for PLAID Version 1.0 and 1.1

Table 1: OECD CRS Sector Codes with Blanket Coding

CRS Code	Blanket Env Code	Sector Code Description
10000	N	Infrastructure & social services, general
11000	N	Education, general
11100	N	Education - level unspecified
11110	N	Education policy & admin. management
11120	N	Education facilities and training
11130	N	Teacher training
11181	N	Educational research
11200	N	Basic education, general
11220	N	Primary education
11230	N	Basic life skills for youth & adults
11240	N	Early childhood education
11300	N	Secondary education, general
11320	N	Secondary education
11330	N	Vocational training
11400	N	Post-secondary education, general
11420	N	Higher education
11430	N	Advanced tech. & managerial training
12000	N	Health (unspecified)
12100	N	Health - general
12110	N	Health policy & admin. management
12181	N	Medical education/training
12182	N	Medical research
12191	N	Medical services
12200	N	Basic health, general
12220	N	Basic health care
12230	N	Basic health infrastructure
12240	N	Basic nutrition
12250	N	Infectious disease control
12281	N	Health education
12282	N	Health personnel development
13000	EBD	Population policies/programmes & reproductive health
13010	EBD	Population policy and admin. mgmt
13020	N	Reproductive health care
13030	EBD	Family planning
13040	N	Std control including HIV/aids
13081	N	Personnel dvpt: pop. & repro health
14000	ESD	Water supply and sanitation, general
14010	ESD	Water resources policy/admin. mgmt
14015	ESD	Water resources protection
14020	Coded	Water supply & sanit. - large syst.
14030	ESD	Water supply & sanit. - small syst.
14040	DSD	River development
14050	ESD	Waste management/disposal
14081	ESD	Educ./trng:water supply & sanitation

15000	N	Government and civil society, general
15010	N	Economic & dvpt policy/planning
15020	N	Public sector financial management
15030	N	Legal and judicial development
15040	N	Government administration
15050	N	Strengthening civil society
15061	N	Post-conflict peace-building (un)
15062	N	Elections
15063	N	Human rights
15064	N	Demobilisation
15065	N	Free flow of information
15066	N	Land mine clearance
16000	N	Other social infrastructure & services, general
16100	N	Employment, general
16110	N	Employment policy and admin. mgmt.
16200	N	Housing, general
16210	N	Housing policy and admin. management
16220	N	Low-cost housing
16300	N	Other social services, general
16310	N	Social/welfare services
16320	N	General government services
16330	N	Settlement
16340	N	Reconstruction relief
16350	N	Culture and recreation
16361	N	Narcotics control
16362	N	Statistical capacity building
16381	N	Research/scientific institutions
20000	DBD	Economic infrastructure and services, general
21000	DBD	Transport and storage, general
21010	DBD	Transport policy & admin. management
21020	DSD	Road transport
21030	DBD	Rail transport
21040	DBD	Water transport
21050	DSD	Air transport
21061	Coded	Storage
21081	N	Educ./trng in transport & storage
22000	N	Communications, general
22010	N	Communications policy & admin. mgmt
22020	N	Telecommunications
22030	N	Radio/television/print media
23000	DSD	Energy generation and supply, general
23010	Coded	Energy policy and admin. management
23020	DSD	Power generat./non-renewable sources
23030	ESD	Power generation/renewable sources
23040	DBD	Electrical transmission/distribution
23050	DSD	Gas distribution
23061	DSD	Oil-fired power plants
23062	DSD	Gas-fired power plants
23063	DSD	Coal-fired power plants
23064	Coded	Nuclear power plants

23065	DBD	Hydro-electric power plants
23066	ESD	Geothermal energy
23067	ESD	Solar energy
23068	ESD	Wind power
23069	ESD	Ocean power
23070	ESD	Biomass
23081	Coded	Energy education/training
23082	Coded	Energy research
24000	N	Banking & financial services, general
24010	N	Financial policy & admin. management
24020	N	Monetary institutions
24030	N	Formal sector financ. intermediaries
24040	N	Informal/semi-formal fin. intermed.
24081	N	Education/trng in banking & fin. services
25000	N	Business and other services, general
25010	N	Business services
25020	N	Privatization
30000	N	Production, general
31000	DBD	Agriculture - forestry & fishing, general
31100	DBD	Agriculture, general
31110	DBD	Agricultural policy & admin. mgmt
31120	DBD	Agricultural development
31130	Coded	Agricultural land resources
31140	DBD	Agricultural water resources
31150	DBD	Agricultural inputs
31161	DBD	Food crop production
31162	DBD	Industrial crops/export crops
31163	DBD	Livestock
31164	DBD	Agrarian reform
31165	DBD	Agricultural alternative development
31181	DBD	Agricultural education/training
31182	DBD	Agricultural extension
31183	DBD	Agricultural research
31184	DBD	Livestock research
31191	DBD	Agricultural services
31192	DBD	Plant/post-harvest prot. & pest ctrl
31193	DBD	Agricultural financial services
31194	DBD	Agricultural co-operatives
31195	DBD	Livestock/veterinary services
31200	DBD	Forestry, general
31210	Coded	Forestry policy & admin. management
31220	Coded	Forestry development
31261	DSD	Fuelwood/charcoal
31281	Coded	Forestry education/training
31282	Coded	Forestry research
31291	Coded	Forestry services
31300	DBD	Fishing, general
31310	DBD	Fishing policy and admin. management
31320	DBD	Fishery development
31381	DBD	Fishery education/training

31382	Coded	Fishery research
31391	DBD	Fishery services
32000	DBD	Industry - mining & construction, general
32100	DBD	Industry, general
32110	DBD	Industrial policy & admin. mgmt
32120	DBD	Industrial development
32130	N	Sme development
32140	N	Cottage industries & handicraft
32161	DBD	Agro-industries
32162	Coded	Forest industries
32163	DBD	Textiles - leather & substitutes
32164	DSD	Chemicals
32165	DSD	Fertilizer plants
32166	DSD	Cement/lime/plaster
32167	DSD	Energy manufacturing
32168	DBD	Pharmaceutical production
32169	DSD	Basic metal industries
32170	DSD	Non-ferrous metal industries
32171	DBD	Engineering
32172	DBD	Transport equipment industry
32181	N	Technological research & development
32200	DSD	Mineral resources and mining, general
32210	DSD	Mineral/mining policy & admin. mgmt
32220	DSD	Mineral prospecting and exploration
32261	DSD	Coal
32262	DSD	Oil and gas
32263	DSD	Ferrous metals
32264	DSD	Non-ferrous metals
32265	DSD	Precious metals/materials
32266	DSD	Industrial minerals
32267	DSD	Fertilizer minerals
32268	DSD	Off-shore minerals
32300	DBD	Construction, general
32310	DBD	Construction policy and admin. mgmt
33000	N	Trade and tourism, general
33100	N	Trade, general
33110	N	Trade policy and admin. management
33120	N	Wholesale/retail trade
33130	N	Export promotion
33200	N	Tourism, general
33210	N	Tourism policy and admin. management
40000	N	Multi-sector/cross-cutting, general
41000	ESD	General environmental protection
41010	ESD	Environmental policy and admin. mgmt
41020	ESD	Biosphere protection
41030	ESD	Bio-diversity
41040	ESD	Site preservation
41050	DBD	Flood prevention/control
41081	ESD	Environmental education/training
41082	ESD	Environmental research

42000	N	Women in development (sector unspecified)
42010	N	Women in development (including multisector). WID proj. & programmes)
43000	N	Other multisector, general
43010	N	Multisector aid
43020	N	Multisector aid for basic soc. serv.
43030	Coded	Urban development and management
43040	Coded	Rural development
43050	N	Non-agricultural alternative dvpt
43081	N	Multisector education/training
50000	N	Commodity aid and general programme assistance
51000	N	Structural adjustment assistance with wb/imf
51010	N	Structural adjustment
52000	N	Developmental food aid/food security assistance
52010	N	Food security programmes/food aid
53000	N	Other general programme and commodity assistance
53010	N	Balance-of-payments support
53020	N	Budget support
53030	N	Import support (capital goods)
53040	N	Import support (commodities)
60000	N	Action relating to debt, general
60010	N	Action relating to debt
60020	N	Debt forgiveness
60030	N	Relief of multilateral debt
60040	N	Rescheduling and refinancing
60050	N	Refinancing
60061	Coded	Debt for development swap
60062	N	Other debt swap
60063	N	Debt buy-back
70000	N	Emergency assistance, general
71000	N	Emergency food aid, general
71010	N	Emergency food aid
72000	N	Other emergency and distress relief
72010	N	Emergency/distress relief
72020	N	Aid to refugees (in donor country)
72030	N	Aid to refugees (in recip. country)
91000	N	Administrative costs of donors
91010	N	Administrative costs
92000	Coded	Support to non-governmental organisations
92010	Coded	Support to national NGOs
92020	Coded	Support to international NGOs
92030	Coded	Support to local and regional NGOs
99800	N	Unallocated/unspecified
99810	N	Sectors not specified
99820	N	Promotion of development awareness

21 Individually Coded

22 Environmental

72 Dirty

123 Neutral

Table 2: Coverage Gaps in OECD Data¹³

Donor Country	CRS Coverage Gaps
Austria	—Reported only loans except in 1991 and from 1996-2001 —Incomplete data for 1998
Belgium	— Reported only loans prior to 1994
France	—Technical cooperation not covered except partially from 1994 —Up until 1998 reporting covered the Ministry of Foreign Affairs and the former Ministry of Co-operation; from 1999 onwards data also include the Ministry of Education
Germany	—Until 1998, technical cooperation not covered, except partially in 1997-1998 —Full coverage since 1999
Greece	—No CRS reporting
Ireland	—Only began reporting in 2000
Japan	—Technical cooperation not reported
Luxembourg	—No CRS reporting
New Zealand	—No CRS reporting
Portugal	—Until 1998, only reported loans —Technical cooperation not covered —Full coverage since 1999
Spain	— Reported only loans prior to 1996 —Technical cooperation not covered —Full coverage since 1997
United Kingdom	—Started reporting technical cooperation in 1996 —Provided data retroactively (excluding scholarships) for 1989-1995
United States	—Until 1998, only reported USAID projects —Full coverage since 1999
European Commission (EC)	—The data cover grant commitments by the European Development Fund, but are missing for grants financed from the European Commission budget —Loans by the European Investment Bank (EIB) are covered only since 2001

Environmental Coding Criteria:

Environmental Strictly Defined (ESD) Projects:

Access to clean water (not wells)

Acid Rain Prevention

Air Pollution

Biodiversity

Carbon Dioxide Reduction

¹³ These data were obtained through repeated email correspondence with OECD staff.

CFC Reduction
Debt for Env/Nature
Drainage (for sanitation)
Ecosystems
Eco-tourism
Energy Conservation
Forest Fire Control
Forestation
Forestation/Reforestation (non-industrial)
General Environmental
Multi-sector Environmental
National Park Protection
Ocean/Int'l Waterways Protection
Rainwater Harvesting
Recycling
Reducing Desertification
Renewable Energy (geothermal, wind, solar, biomass, photovoltaic)
Site Preservation (unless specified archeological)
Soil Conservation
Solid Waste Treatment, including commercial
Wastewater/sewage Treatment
Water Conservation/Supply/Infrastructure
Watershed Protection

Environmental Broadly Defined (EBD) Projects:

Agenda 21
Desalination
Drought Control
Energy Efficiency
Env Health Hazards
Env. Improvements to Existing Dirty
Erosion Control
Genetic Diversity (non-agricultural)
Industrial Reforestation
Multi-sector Env and Neutral
Natural Resource Mgmt
Nuclear Safety
Population/Family Planning
Safe Handling of Toxics
Soil Fertility
Sustainable Development
Tree Health

Neutral (N) Projects:

AIDS/STDs
Archeological site preservation

Banking/Finance
Business Services
Cottage Industries/Handicrafts
Debt for Development
Disaster Relief/Prevention
Education
Export Promotion
Food Safety/Quality
Food Security/Food Aid
Govt Reform
Governance/Civil Society
Health
Hotel Construction
Housing
Humanitarian Aid
Illegal Drug Policy
Infectious Disease Control
Media (Radio/Newspaper)
Multisector unspecified
Multisector: Env & Dirty
Privatization
Remote Sensing
Research (Unspecified)
Rural Development (general)
SMEs (unspecified)
Social Welfare Programs
Storage (general)
Telecommunications (general)
Tourism
Trade Policy
Urban Development (general)

Dirty Broadly Defined (DBD) Projects:

Agricultural credits/financing
Agricultural Inputs
Agricultural Research
Agriculture (general)
Agro-industries
Aqueducts
Automotive parts
Biotechnology
Cold Storage/refrigeration
Construction/Commercial Development (general)
Electricity Transmission
Engineering
Farmer Cooperatives

Fisheries
Flood Control/Prevention
Food Crops
Food processing
Forest Development
Forestry (general)
Halieutics (fishing) and Halieutics Research
Hydroelectric Power
Industrial Credit/Exports
Industrial Crops/Ag (sugar; coffee; tea; cocoa; oil seeds; nuts; kernels; fibre crops; tobacco; rubber)
Industry (general)
Irrigation
Livestock
Manufacturing Electronics
Mass Transport
Methanol
Multi-sector: Dirty & Neutral
Multi-sector: DSD & Env
Nuclear Power
Pest Control
Pharmaceuticals
Rail Transport
Rural Electrification
Textiles/Weaving
Transport
Unspecified Energy
Water Transport

Dirty Strictly Defined (DSD) Projects:

Air Transport
All metals
Chemicals
Dams
Dredging
Industries: Brickmaking, plaster, tanneries and leather, fertilizer, rubber
Logging
Minerals: baryte, limestone, feldspar, kaolin, sand, gypsum, gravel, ornamental stones, salt
Mining (general)
Multi-sector: DBD & DSD
Natural Gas
Oil and Coal
Power Generation (unspecified)
Raw Material Extraction
Road Transport

Specific Industries: cement, paper, lime
Thermal Power
Wells and Groundwater Removal

Green Projects:

Acid Rain
Afforestation/Reforestation
Agenda 21
Carbon dioxide emissions
CFC Reduction
Desertification
Eco Tourism
Ecosystem aid/preservation
Energy Conservation
Energy Efficiency
Environment & Energy Programs
Environment Films
Environment unspecified
Environmental Education
Forest Fire/Wildfire Protection
Nuclear Safety
Population/ Family Planning
Protected Areas
Recycling
Renewable Energy
Site Preservation (non-archeological)
Sustainable Development- Energy
Water Conservation
Watershed Protection

Brown Projects:

Air pollution (not GW or acid rain)
Clean water (sanitation generally)
Coastal Management
Desalination
Drainage
Drought control
Environmental Health Hazards (local)
Erosion control
General environment/ag. Sector
General local environmental aid
Land Reclamation
Localized Natural Resource Mgmt
Safe handling of toxic materials

Sewage/Wastewater Treatment
Soil Fertility
Soil protection/conservation
Solid Waste Treatment
Urban environmental issues

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