

# Codebook and Methodology: Tracking Climate Change and Disaster Risk Reduction Aid in Bangladesh

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ROBERT STRAUSS CENTER  
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COMPLEX EMERGENCIES  
AND POLITICAL STABILITY  
IN ASIA

Bangladesh Aid  
Codebook and Methodology



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## Introduction

This dataset investigates how climate relevant aid to Bangladesh integrates considerations of disaster risk reduction (DRR). We expand on our motivations and pilot methodology in a [policy brief](#).<sup>1</sup> We downloaded project level data on climate related projects from 2004 - 2014 from AidData<sup>2</sup> for the top five donors in Bangladesh. These include the Asian Development Bank (ADB), U.K. Department for International Development (DFID), Japanese International Cooperation Agency (JICA), United States Agency for International Development (USAID), and the World Bank (WB). Using unique project identifiers (e.g., project numbers or combinations of titles, years, and donors), we searched for and found relevant project documents. These documents were subsequently analyzed for their relevance to climate change (CC) activities and DRR. We evaluated 327 projects, which represent only 42% of the projects downloaded from the AidData database. We were not able to find accompanying project documentation for the other 58% of relevant projects, despite extensive searches on donor or partner websites and through search engines. This note highlights the important methodological details, high level results, and changes that were made to the methodology due to difficulties finding project documentation.

## Coverage

Years	2004 - 2014
Donors	5
Projects	327
Activity Locations (rows)	1,741

## Glossary

ADB	Asian Development Bank
CCA	Climate Change Adaptation
CC	Climate Change
CCAPS	Climate Change and African Political Stability
DFID	UK Department for International Development
DRR	Disaster Risk Reduction
DRRM	Disaster Risk Reduction and Management
IATI	International Aid Transparency Initiative
JICA	Japanese International Cooperation Agency
MOFA	Ministry of Foreign Affairs Japan
PAD	Project Appraisal Document
PID	Project Information Document
USAID	United States Agency for International Development
WGS84	World Geodetic System 1984, a coordinate reference system for global spatial data





## Methodology Overview

The data were downloaded from AidData in February 2016. We used 128 sector and purpose codes<sup>3</sup> to filter for climate change relevant projects. Generally, these codes fell under river and desertification control, erosion, disaster prevention and response, and general environmental protection. This dataset contained 801 relevant projects from 2004 – 2014.

We reviewed each project's associated documentation and evaluated its relevance to climate change and disaster risk reduction themes. The methodology leveraged detailed project document availability, particularly from the Asian Development Bank, the World Bank, and the U.K.'s Department for International Development. The other two donors, JICA and USAID, did not often have available accompanying project documentation, as Table 1 indicates. The resulting database has 327 projects coded in this manner. Where possible, we coded projects at the activity level, evaluating each activity's relevance to CC and DRR objectives. For example, a project can contain anywhere from one to over 35 activities, each addressing a specific intervention. Every project with available documentation was coded twice (blindly) and an arbitrator addressed any discrepancies in coding.

**Table 1: Projects Coded by Donor**

Donor	Number of Projects (in AidData)	Documents Available (and Coded)	Percentage Coded
ADB	29	27	93%
DFID	99	17	17%
Japan	147	19	12%
USAID	442	181	40%
World Bank	84	83	99%
<b>Total</b>	<b>801</b>	<b>327</b>	<b>41%</b>

Table 2 lists the primary sources of donor documentation. If documentation was not available for the project at these sites, we used Google as our primary search engine. Search terms relied on a combination of the donor, year, title, project id (if provided and unique), and country (i.e., Bangladesh). These searches for project information did not always result in useful documents. In case of the ADB and WB, we used the original project appraisal document (PAD) or project information document (PID). Where these were not available, the information safeguards datasheets (ISDS) or environmental assessments were used as substitutes.



**Table 2: Data Sources**

Donor	Description	Website Addresses
ADB	Official Project Database, filtered for Bangladesh projects	<a href="http://www.adb.org/projects/documents/search/country/ban.">http://www.adb.org/projects/documents/search/country/ban.</a>
DFID	Official Project Database (DevTracker), filtered for Bangladesh projects	<a href="http://devtracker.dfid.gov.uk/countries/BD/projects/">http://devtracker.dfid.gov.uk/countries/BD/projects/</a>
JICA	JICA's ODA project database, filtered for year range (2004 – 14) and for country.  The second website looks at the Ministry of Foreign Affairs' direct giving to the country (which sometimes is not listed in JICA's database).	<a href="http://www2.jica.go.jp/en/yen_loan/index.php/module/search?anken_name=&amp;area1=0&amp;area2=0&amp;area3=0&amp;country1=70&amp;country2=0&amp;country3=0&amp;section1=0&amp;section2=0&amp;section3=0&amp;industry1=0&amp;industry2=0&amp;industry3=0&amp;chotatsu_kubun=0&amp;from_year=2004&amp;to_year=2015&amp;offset=">http://www2.jica.go.jp/en/yen_loan/index.php/module/search?anken_name=&amp;area1=0&amp;area2=0&amp;area3=0&amp;country1=70&amp;country2=0&amp;country3=0&amp;section1=0&amp;section2=0&amp;section3=0&amp;industry1=0&amp;industry2=0&amp;industry3=0&amp;chotatsu_kubun=0&amp;from_year=2004&amp;to_year=2015&amp;offset=</a>  AND <a href="http://www3.mofa.go.jp/mofaj/gaiko/oda/display.php">http://www3.mofa.go.jp/mofaj/gaiko/oda/display.php</a>
USAID	USAID's "Where We Work" interactive map and the Foreign Aid Explorer	<a href="http://map.usaid.gov/?l=local&amp;w=BD">http://map.usaid.gov/?l=local&amp;w=BD</a>  AND <a href="https://explorer.usaid.gov/">https://explorer.usaid.gov/</a>
World Bank	Official Project Database	<a href="http://www.worldbank.org/projects">http://www.worldbank.org/projects</a>

## Climate Change and Disaster Risk Management Coding

We leveraged previous work on tracking climate change-related adaptation aid under the Climate Change and African Political Stability (CCAPS) program,<sup>4</sup> and applied the same methodology to these data. The spectrum helps move the analysis away from a simple binary yes/no assessment of climate orientation of projects and activities, thus allowing for nuances. In addition, we simultaneously examined these activities to understand the type and purpose of the DRRM activity. For example, are the activities/projects more focused on prevention and preparedness or response and recovery? This is particularly important in trying to understand the patterns of projects implemented – and how these may be changing over time as more attention is paid to CCA and the risk management component of DRRM. These two sets of categorizations are brought together, allowing us to understand what sorts of relationships exist.

Figure 1 below schematically describes the CCA and DRRM coding methodology. The climate change spectrum and DRR designations and definitions are described below. Climate change relevance are denoted in the four following categories:<sup>5</sup>

- Ambiguous Development- An activity that has an indeterminate effect on the vulnerability of human or natural systems to the impacts of climate change and climate-related risks.
- General Development - An activity that reduces the vulnerability of human or natural systems to the impacts of climate change and climate-related risks, by increasing the general well being of these systems.

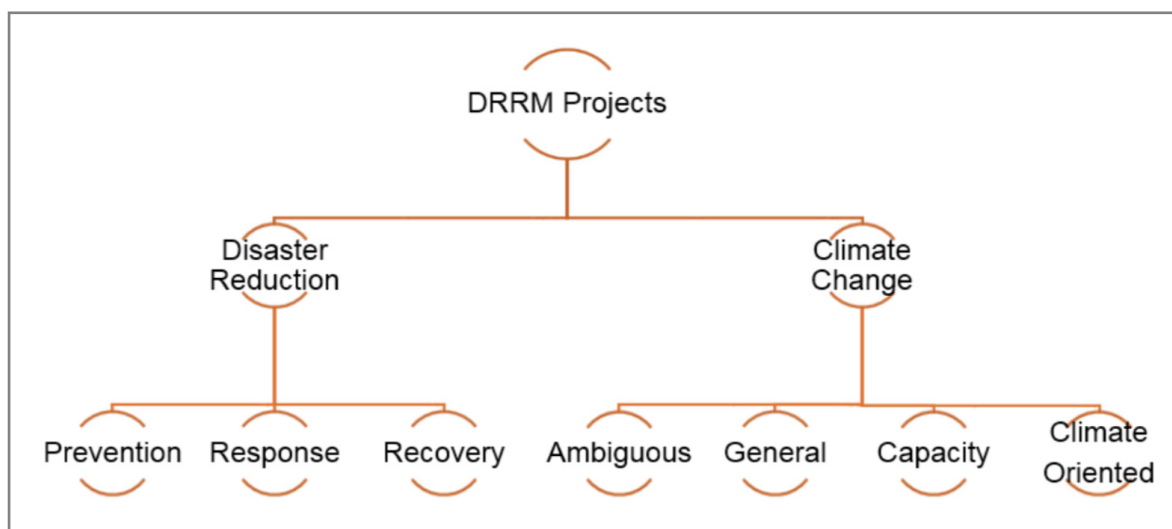


- Capacity Development - An activity that reduces the vulnerability of human or natural systems to the impacts of climate change and climate-related risks, by increasing the resilience of these systems to actual or anticipated effects of climate change.
- Climate Oriented Development - An activity that intends to reduce the vulnerability of human or natural systems to the impacts of climate change and climate-related risks, by targeting enhanced adaptive capacity of these systems to actual or anticipated effects of climate change or responding to negative climate effects.

For disaster risk reduction, projects and activities were evaluated against these following definitions:

- Preparedness - The knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions.
- Prevention and mitigation - The outright avoidance of adverse impacts of hazards and related disasters.
- Response - The provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected.
- Recovery and Rehabilitation - The restoration, and improvement where appropriate, of facilities, livelihoods and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors.
- Resilience - The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions. Resilience, unlike the other measures was determined by whether or not the project documentation mentioned the word resilience and not whether the project generally was about building resilience.

**Figure 1: Spectrum of DRRM and CCA codes**







## Geocoding

We geo-located each activity, where possible. Using geographic indicators in project documentation, like district or town names, we used [geonames.org](https://www.geonames.org/)<sup>6</sup> to find the latitude and longitude for each location mentioned. A project could have more than one activity location; in these cases, all activity locations were coded. This resulted in 1,741 activity locations from 327 projects. Unfortunately, documents are not specific as to which activities are happening in specific areas. Thus, our activity climate coding and activity geocoding are not directly comparable. For example, we cannot exactly stipulate that climate oriented and disaster risk reduction activities under a certain project are located in Khulna, as these types of activities may be taking place in another project location.

If coders were unable to find specific coordinates for stated location name (e.g., a small village or town), we would then use the next available administrative division. For example, if the village name's coordinates were not available in the database, but coders were able to deduce the union or upazila (Bangladesh's fourth and third administrative levels), then the coordinates for the relevant administrative division was used instead. In cases where no specific locations are mentioned and the only indication is that the money goes to the country, coders used the coordinates for the country.

## Results

Despite significant policy attention to climate change adaptation and disaster risk reduction issues, we find that donors have predominantly supported general development programs over the 2004 – 14 period. However, donors are also supporting climate-related capacity building programs, which helps lay the foundation for future climate oriented programs and helps develop the recipients' capacities for addressing climate related issues (see Table 4). We find that despite the high-level policy direction to integrate CC and DRR activities, there are few projects that operationalize this directive. Most projects still maintain strictly sectoral approaches. This finding might reflect the practical difficulties in integrating DRR and CC activities, given that sectoral silos are difficult to overcome. These issues are further explored through semi-structured interviews in Bangladesh and Nepal. The results of those interviews are elucidated in another CEPsA brief.<sup>7</sup>

**Table 3: Climate Change Relevance of Programs**

Donor	Climate Oriented	Capacity Building	General
ADB	7	8	12
DFID	1	9	8
Japan	-	9	9
USAID	-	38	143
World Bank	3	16	64
<b>Total</b>	<b>11</b>	<b>80</b>	<b>236</b>

We found it difficult to scale this methodology to other countries in our study region. Our methodology relies upon project document availability. As we found for Bangladesh, documents are not easily available, hindering the application of our methodology. Only 42% of projects in our original dataset had sufficient project



documentation to be coded. While donors attest to the importance of aid transparency, many have yet to make such documentation regularly available and accessible to interested parties. As a follow-on project, we explore the availability, accessibility, and pertinence of donor documentation for our methodology.<sup>8</sup>

## Appendix - Database Structure

Table 4 below displays the metadata associated with each project. Each row in the database corresponds with a project activity. As projects can have multiple activities and/or locations, each row is identified with the relevant unique project ID. We recommend that database users filter to unique project IDs to conduct project level analysis. We also specify whether information is at the activity or project level. Location level information is marked with an “L” while project level information is marked with a “P”.

**Table 4: Database Structure**

Column	Level	Source	Description
Project ID	P	AidData	Donor provided unique identifier from AidData database
Title	P	AidData/Donor	Project title
Donor	P	AidData	Donor organization
Donor Provided Description	P	AidData/Donor	Description of the project provided by the donor
Funding Amount	P	AidData/Donor	Total amount of funding from the donor
Activity Descriptions	L	AidData/Donor	Description of the activities that are associated with the project
Climate Code	L	CEPSA	Climate code on aforementioned scale for the activities and the project as a whole.
Preparedness	L	CEPSA	Focus on disaster preparedness in the activity/project - Yes or no
Prevention	L	CEPSA	Focus on disaster prevention in the activity/project - Yes or no
Response	L	CEPSA	Focus on disaster Response in the activity/project - Yes or no
Recovery	L	CEPSA	Focus on disaster recovery in the activity/project - Yes or no
Mentions Resilience	P	CEPSA	Was resilience mentioned in the document
Latitude	L	GeoNames	Decimal degrees (WGS84)
Longitude	L	GeoNames	Decimal degrees (WGS84)
Location Name	L	GeoNames	Activity's Location
Country	L	GeoNames	Activity country location (i.e., Bangladesh)
Source	P	CEPSA	Source document address



## Endnotes

<sup>1</sup> Weaver, Catherine E., and Nisha Krishnan. 2016. “Beyond Emergency Relief: Tracking International Aid for Disaster Risk Reduction and Management.” CEPSEA Brief No. 1.

<sup>2</sup> Aid Data. Available at: <http://aiddata.org/dashboard#/advanced/project-list>

<sup>3</sup> AidData has over 800 sector and purpose codes that help categorize each activity’s purpose (e.g., fiscal management, planning) and sector (e.g., industrial development, education). More information can be found at <http://aiddata.org/aiddata-activity-coding>

<sup>4</sup> Peratsakis, Christian, Justin Baker, and Catherine E. Weaver. 2012. Tracking climate adaptation aid: Methodology. Climate Change and African Political Stability Research Brief No. 5. <https://strausscenter.org/codebooks/ClimateAidCodebook.pdf>

<sup>5</sup> Weaver, Catherine E., and Nisha Krishnan. 2016. “Beyond Emergency Relief: Tracking International Aid for Disaster Risk Reduction and Management.” CEPSEA Brief No. 1.

<sup>6</sup> Geonames. Available at <http://www.geonames.org/>

<sup>7</sup> Nisha Krishnan, Caleb Rudow, and Catherine E. Weaver. “Policy Architectures for Disaster Risk Reduction and Climate Change Adaptation in South and South East Asia: Evidence from Bangladesh and Nepal.” CEPSEA Brief No. 6. May 2017. <https://www.strausscenter.org/cepsa-research-briefs?download=644:disaster-risk-reduction-and-climate-change-adaptation>

<sup>8</sup> <https://www.strausscenter.org/cepsa-research-briefs>



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