Policy Brief

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CLIMATE POLICY LAB
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Nationally Determined Contribution: An Effective Signal for Adaptation Finance?

By Sabrina Rose | *May 2021*

This policy brief from the Climate Policy Lab examines whether countries can attract bilateral adaptation finance by including adaptation in their nationally determined contributions (NDCs) to the Paris Agreement.

Countries are updating their nationally determined contributions (NDCs) ahead of the United Nations Climate Change Conference (COP26) in November. As adaptation becomes more urgent and costly, countries may consider using NDCs strategically to mobilize adaptation finance. This policy brief examines whether countries can attract bilateral adaptation finance (also referred to as adaptation aid) by including adaptation in their NDCs to the Paris Agreement.

KEY MESSAGES

- Based on a difference-in-differences estimation, countries that included adaptation in their first NDC received approximately 59 percent more bilateral adaptation aid compared to countries that did not include adaptation.
- This result, however, is not statistically significant as the model suffers from low statistical power due to the small size of the control group.
- Still, countries may consider designing NDCs that effectively communicate their adaptation ambitions with the additional goal of attracting more adaptation finance.

BACKGROUND

Parties to the Paris Agreement are required to report their climate ambition and efforts towards achieving the goals of the Agreement in their NDCs. NDCs must describe mitigation efforts; a discussion of adaptation is not mandatory (UNFCCC, 2015). Of the 195 countries that submitted their intended or first NDC at the time of this analysis, 148 included adaptation, and most countries that included adaptation were low and middle income countries (Climate Watch, 2020; World Bank, 2021). The number of countries that include adaptation in NDCs will likely increase as countries submit new and updated NDCs ahead of COP26.

By including adaptation in NDCs, policymakers are signifying that: (1) their country is vulnerable to climate change and (2) adaptation is a national priority. Countries discuss a range of adaptation information in their NDCs, such as their climate vulnerability, national climate policies, priority sectors for adaptation action, and funding requirements (UNFCCC, 2016, 2021). Government donors tend to allocate adaptation aid according to recipient need, recipient merit, and foreign economic and/or policy interests (Berthélemy, 2006; Betzold & Weiler, 2018; Scandurra et al., 2020; Weiler et al., 2018). NDCs could signal to donors which countries have the greatest need and capacity for adaptation aid.

NDCs can provide greater visibility into a country's adaptation finance needs, which are currently underfunded. On average over 2017 and 2018, global adaptation finance flows amounted to 30 billion USD per year (Buchner et al., 2019). This amount is less than half of the currently

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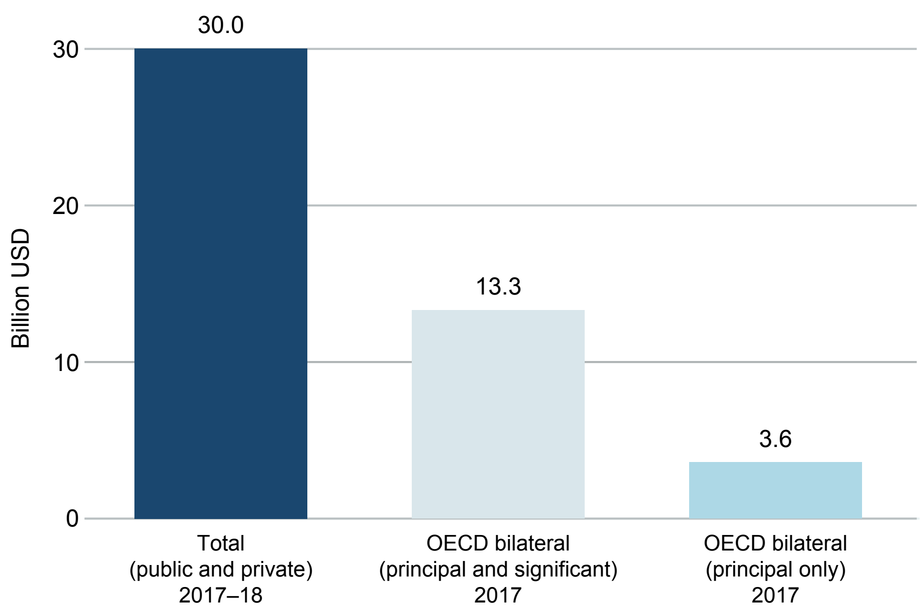
estimated 70 billion USD cost of adaptation per year in developing countries alone and far short of the estimated 140 to 300 billion USD cost of adaptation per year in developing countries by 2030 (UNEP, 2021). Most adaptation finance in 2017-18 was directed towards water and wastewater management; agriculture, forestry, and natural resource management; disaster risk management; and cross-sectoral activities (Buchner et al., 2019).

This brief evaluates the effect of including adaptation in NDCs on the subset of adaptation finance classified as principal bilateral adaptation aid. In 2017, Organization for Economic Cooperation and Development (OECD) countries provided approximately 3.6 billion USD in principal bilateral adaptation aid (in constant 2018 dollars), i.e., 12 percent of total adaptation finance in 2017–18 (30 billion USD) (see Figure 1) (OECD, 2020).

Figure 1: Adaptation Finance in 2017 (Buchner et al., 2019; OECD, 2020)



Principal bilateral adaptation aid from OECD countries is defined as official development assistance (ODA) where adaptation is the primary motivation for the activity, and the activity would not have been funded if not for its objective to facilitate adaptation (OECD, n.d.). Significant adaptation aid implies the project mentions adaptation, but adaptation is not the primary motivation for the project. A report by AdaptationWatch found the OECD over-reported adaptation aid, so this study conservatively evaluates principal adaptation aid only (AdaptationWatch, 2015). Climate finance from multilateral funds and multilateral development banks are excluded from this analysis.

METHODOLOGY

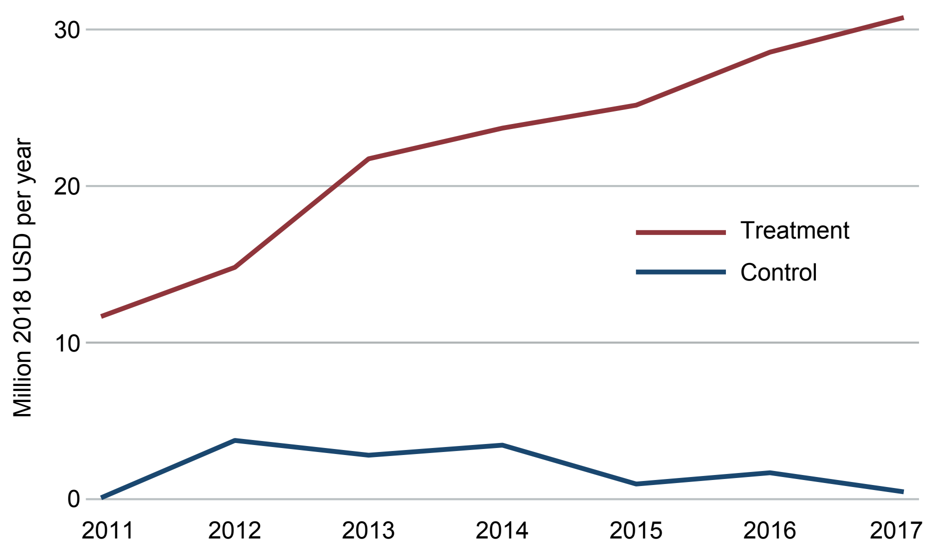
The effect of including adaptation in NDCs on bilateral adaptation finance is estimated using a difference-in-differences model with country and year fixed effects. This analysis uses data on NDC content from Climate Watch (Climate Watch, 2020), principal bilateral adaptation aid from the OECD Creditor Reporting System (CRS) (OECD, 2020), as well as gross domestic product per capita from the World Bank's World Development Indicators database (World Bank, 2020). This analysis only considers the first round of NDC submissions, as the second round is still ongoing. The dataset for this analysis contains 139 countries that received bilateral adaptation aid over seven years for a total of 973 observations. Only 10 of these countries that received adaptation finance did not include adaptation in their NDCs.[1]

1 Albania, Bosnia and Herzegovina, Kazakhstan, Libya, Micronesia, Montenegro, Palau, Panama, Turkey, and Tuvalu. Libya did not submit an NDC.

INITIAL FINDINGS

Countries that included adaptation in their NDCs receive more bilateral adaptation aid, are more likely to be Least Developed Countries (LDCs), less likely to be Small Island Developing States (SIDS), have larger populations, receive more ODA, and are more vulnerable to climate change according to the Notre Dame Global Adaptation Initiative (ND-GAIN) climate vulnerability score. Countries that did not include adaptation in NDCs have higher GDP per capita on average and a greater capacity to absorb climate finance according to the ND-GAIN readiness score.[2] Trends in average adaptation aid for countries that included adaptation in NDCs (treatment countries) compared to those that did not include adaptation (control countries) are presented in Figure 2.

Figure 2: Average Bilateral Adaptation Aid by Year, 2011 to 2017 (OECD, 2020)



RESULTS

Based on a difference-in-differences estimation, countries that included adaptation in NDCs received approximately 59 percent more bilateral adaptation aid compared to countries that did not include adaptation in NDCs, although this result was not statistically significant. The model has low statistical power due to the small size of the control group, which led to large standard errors that weakened the statistical significance of the results. Other potential considerations that may affect the statistical significance of the results include bias from omitted variables (e.g., changes in climate vulnerability over time), an invalid control group, simultaneity, reverse causality, or measurement error in bilateral aid data.

CASE STUDIES

An analysis of NDCs from Bangladesh and Tuvalu, two countries that are extremely vulnerable to climate change, suggests national policies and existing aid relationships may be more direct drivers of adaptation aid than NDCs.

Bangladesh included detailed information about adaptation in its NDC, describing its vulnerabilities, priority adaptation actions, and estimated costs (Government of the People's Republic of Bangladesh, 2015). Bangladesh is often viewed as a leader in climate adaptation and disaster management, particularly due to its climate policies and national climate funds (Bangladesh Climate Change Resilience Fund and Bangladesh Climate Change Trust Fund). The majority (77 percent) of

2 The ND-GAIN Country Index ranks countries according to their climate vulnerability by year, as well as their climate readiness to effectively use investments by year (Chen et al., 2015).

Bangladesh's climate expenditures were sourced domestically, according to data from 2009 to 2012 (Government of the People's Republic of Bangladesh, 2018). Government officials believed contributing their own resources to a national climate fund would help to attract donors (Bhandary, 2020). This sends a strong signal to the international community that adaptation is a national priority for Bangladesh. Thus, Bangladesh's domestic mobilization of climate finance may be a more direct cause of its adaptation aid than its NDC content.

Conversely, Tuvalu focused solely on mitigation in its NDC and pointed readers to its National Adaptation Programme of Action (NAPA) (2007), National Communications, and other domestic climate policies (Government of Tuvalu, 2015). New Zealand, Japan, and Australia provided almost all of Tuvalu's bilateral adaptation aid between 2011 and 2017 (99 percent) (OECD, 2020). Tuvalu's adaptation aid appears to be influenced more by relations with neighboring donors in East Asia and Oceania, as well as by vulnerability, than by its NDC. This is consistent with Robertsen, Francken, & Molenaers' findings that proximity (indicated by an existing aid relationship) increases adaptation aid (Robertsen et al., 2015).

These country examples demonstrate that donors consider many factors when providing adaptation aid. The influence that NDCs have on adaptation finance may be capturing the effect of another factor, such as domestic climate funds. Moreover, NDCs typically do not reflect domestic and regional politics, conflicts, and trade relations, which are additional factors in aid allocation. Nevertheless, countries can benefit from using NDCs to complement their existing approaches to scaling up adaptation finance, such as strong national climate policies that demonstrate commitment to adaptation.

POLICY IMPLICATIONS

Countries should use NDCs strategically to communicate their needs for adaptation finance and capacity to effectively manage adaptation finance. NDCs are highly visible policies that receive international attention. Countries should leverage the visibility associated with NDCs by including key adaptation priorities and funding needs in their NDCs.

Some countries are strengthening the adaptation component of their NDC by aligning the NDC with their National Adaptation Plan (NAP) process (Terton et al., 2019). This alignment could improve the quality of information in adaptation components of NDCs (Terton et al., 2019). Higher quality information on adaptation costs in NDCs could drive donors to act.

These policy implications are timely, because countries are preparing to submit their revised NDCs with increased ambition that will likely require increased finance. Countries can use this insight to design NDCs that effectively communicate their climate mitigation and adaptation ambitions with the additional goal of attracting more adaptation finance.

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THE CENTER FOR INTERNATIONAL ENVIRONMENT & RESOURCE POLICY

Climate Policy Lab
Center for International Environment and Resource Policy (CIERP)

The Fletcher School
Tufts University
Cabot Intercultural Center, Suite 509
160 Packard Avenue, Medford, MA 02155
sites.tufts.edu/cierp

CLIMATE POLICY LAB