

BEYOND EMERGENCY RELIEF: TRACKING AID FOR DISASTER RISK REDUCTION AND MANAGEMENT

Catherine Weaver and Nisha Krishnan

May 2016



ABOUT THE STRAUSS CENTER

The Robert S. Strauss Center for International Security and Law integrates expertise from across the University of Texas at Austin, as well as from the private and public sectors, in pursuit of practical solutions to emerging international challenges.

ABOUT THE CEPESA PROGRAM

The Strauss Center's program on Complex Emergencies and Political Stability in Asia (CEPSA) explores the causes and dynamics of complex emergencies in Asia and potential strategies for response. In doing so, the program investigates the diverse forces that contribute to climate-related disaster vulnerability and complex emergencies in Asia, the implications of such events for local and regional security, and how investments in preparedness can minimize these impacts and build resilience. CEPSA is a multi-year initiative funded by the U.S. Department of Defense's Minerva Initiative, a university-based, social science research program focused on areas of strategic importance to national security policy.

ABOUT THE AUTHORS

Catherine Weaver is an associate professor at the LBJ School of Public Affairs, distinguished scholar at the Robert S. Strauss Center for International Security and Law, and co-director of Innovations for Peace and Development (IPD) at the University of Texas at Austin.

Nisha Krishnan is a graduate research assistant at the Robert S. Strauss Center for International Security and Law.

Special thanks go to Tiffany Wang and Ilse Munoz-Ramirez, research assistants on the CEPSA program and undergraduate affiliates with IPD, who were indispensable in getting this project off the ground - providing invaluable research, coding, and writing support.

ACKNOWLEDGEMENTS

This material is based upon work supported by, or in part by, the U.S. Army Research Laboratory and the U.S. Army Research Office via the U.S. Department of Defense's Minerva Initiative under grant number W911NF-14-1-0528.



TABLE OF CONTENTS

Overview.....1

Framework and
Methodology.....2

Applying the Methodology:
Bangladesh.....3

Next Steps.....6

Overview

The Asia-Pacific region is one of the world's most disaster-prone areas, where over 40% of reported disasters occur each year. Between 2004 and 2013, disasters in the region reportedly inflicted over \$560 billion in economic damages.¹ Natural disasters threaten inclusive and sustainable economic development, disproportionately affecting the poor and contributing to chronic poverty.² While the region has historically experienced recurring climate-related natural hazards,³ climate variability is projected to alter the “frequency, intensity, spatial extent, duration, and timing” of these disasters.⁴ Future disasters may be beyond the scope of current adaptation and coping abilities and cause long-term changes to the productive bases of these societies.⁵ National governments and aid agencies such as the United States Agency for International Development (USAID), the World Bank Group (WBG), and the Asian Development Bank (ADB) have begun to prioritize projects related to both climate change adaptation (CCA) and disaster risk reduction and management (DRRM) in the Asia-Pacific region to address these concerns.

Disaster risk management has traditionally focused on shorter-term emergency responses. More recently, the field has evolved to encompass a broader and more integrated understanding of disasters, expanding to include proactive preventative strategies, addressing underlying vulnerabilities and risk factors, in an effort to build long-term resilience within affected communities. Adaptation to climate change seeks to achieve similar goals of reducing vulnerability and increasing resilience to current and future impacts of climate change.⁶ These two communities of practice are converging in their agendas: addressing similar issues of capacity development and designing and improving building structures, land-use policies, and related activities. However, while there appear to be natural synergies, integration (both financially and practically) has been a challenge. This partially can be attributed to historical differences in their practice: DRRM activities have typically emphasized the response and recovery aspects of this agenda, whereas CCA has focused on medium to longer-term risks. Coordination between CCA and DRRM could reduce redundancy and costs as well as leverage the respective knowledge and strengths

of each field. Successful climate change adaptation helps to decrease disaster risk by reducing weather-related uncertainty, and successful disaster risk management can serve as mechanisms for local adaptation strategies.⁷

While much is known about the practice of these two fields, not much is known about the amount and patterns of funding for these activities. Tracking financing for climate change related activities, particularly for adaptation, has become more imperative after the 2009 United Nations Framework Convention on Climate Change (UNFCCC) annual Conference of the Parties (COP) in Copenhagen. Significant amounts of financial and technical resources were pledged by advanced industrial countries – up to US\$100 billion per year from private and public sources in addition to existing official development assistance (ODA) – to developing countries to aid their efforts to mitigate the causes and adapt to the impacts of climate change.

In the interests of understanding the evolving nature of foreign aid and accountability, several adaptation finance-tracking efforts were designed (e.g., Climate Finance Tracker,⁸ the Organization for Economic Cooperation and Development (OECD) Rio Conventions, and the Climate Change and African Political Stability (CCAPS) climate and tracking method⁹). As climate-related hazards more frequently result in disaster situations, similar attention is now being paid to the adequacy of DRRM financing, its integration with CCA, and how best to address the changing challenge of increasing resilience. Ultimately, understanding the nuances of who provides support, for what purposes (such as proactive versus reactionary, or specific activities), and how much for DRRM and CCA-related activities will help inform the prioritization for future plans by both national and international actors.

Building on previous efforts to track climate change adaptation aid under the CCAPS program, the Complex Emergencies and Political Stability in Asia (CEPSA) extends a similar analysis to 11 countries in South and Southeast Asia.¹⁰ This effort focuses on understanding the patterns in financing for climate-related disaster events, including their purpose, the extent to which projects are climate focused, and the major donors and actors involved. This research brief outlines our conceptual framework, methodology

and a coding framework, and an explanation of our approach for Bangladesh, one of our focus countries. While we have preliminarily identified and narrowed our study focus, we have yet to complete the coding process. Consequently, results will not be discussed in this brief. We conclude with a framework for the next steps in our analysis, which will be subsequently expanded beyond Bangladesh into the other countries under study on the CEPESA program.

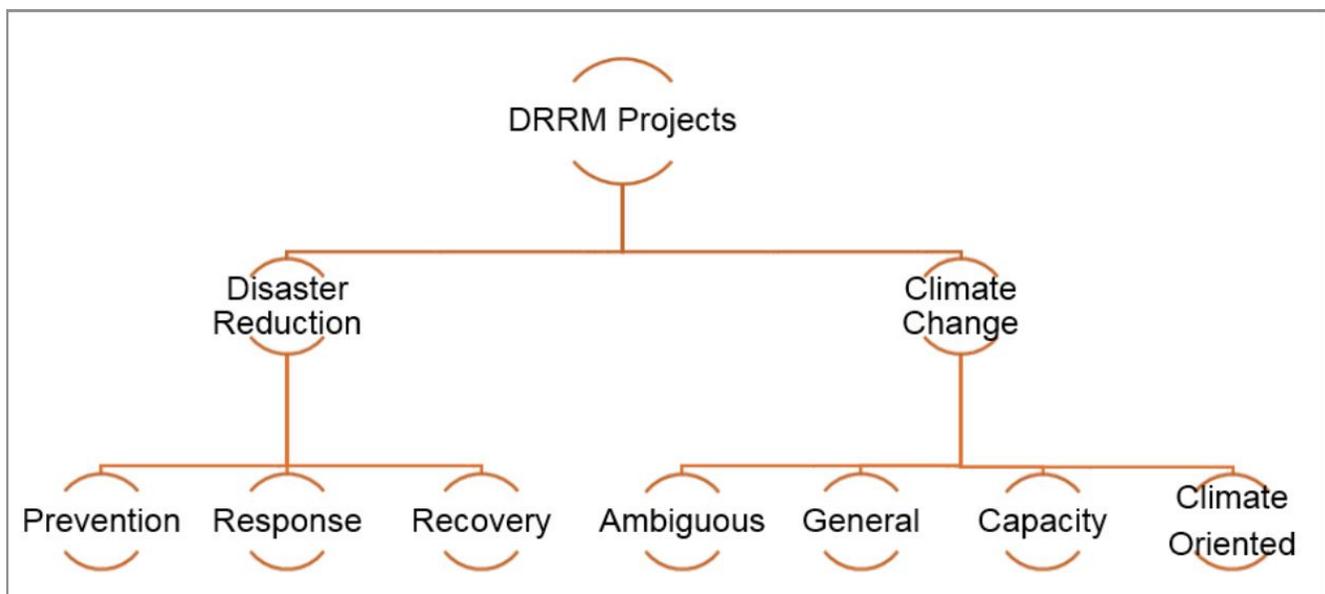
Framework and Methodology

Recent analyses have indicated that DRRM activities are woefully under resourced in comparison to the extent of damages. A review of the last 20 years (1991-2010) of ODA, leveraging the Disaster Aid Tracking database,¹¹ indicates that \$106.7 billion was devoted to disasters and, of that, the majority was directed at emergency response (\$69.9 billion, or ~66%) and reconstruction and rehabilitation (\$23.3 billion, or ~22%), with the remaining spent on preparedness (\$13.5 billion, or ~12%).¹² A similar analysis undertaken by Global Humanitarian Assistance on the spending for disaster risk reduction and management (for 2000–2009) found that in 2009, 68% of DRRM funding came from humanitarian funds rather than general ODA,¹³ indicating that the majority of support was directed at emergency response activities versus preparedness activities. Given expectations of more frequent and intense

climate-related hazards, preparing for and ‘protecting’ development gains is becoming a greater priority. The overlap between CCA and DRRM agendas also make it more difficult to clearly understand how patterns in practice and funding are changing without further in-depth analysis of donors’ and national governments’ activities in this space. By explicitly trying to quantify aid for disaster risk management, we can better understand its overlap with climate change adaptation, the general characteristics of climate-oriented disaster risk management, and whether aid is spent on the expressed DRRM and CCA priorities of recipient governments.

Relying on the extensive collection of foreign aid projects housed in AidData,¹⁴ we aim to examine all projects that have been (donor) classified as disaster risk related projects (prevention, emergency response, and recovery and rehabilitation). As DRRM activities are often integrated into other traditional sectors and are sometimes not explicitly defined or categorized, this effort casts a wider net to understand the patterns of activity and financing when DRRM efforts might be integrated. We thus build on other analyses¹⁵ and expand their definitions to include activities like flood and desertification prevention and control. For a comparison of the classifications used in past literature and our proposed method, please refer to Table 1. With the wider net cast, we significantly expand the scope of activities considered to be DRRM and/or CCA related. These projects will be analyzed using

Figure 1: Climate and DRRM Coding Spectrum



(1) the well-established CCAPS climate coding methodology and (2) DRRM-related purpose coding. The methodology will leverage the availability of project documents, coding at the activity level (where possible), and follow a double-blind coding process. While the AidData dashboard provides sectors, purposes, and activities for most projects, on occasions activity data may be missing. Coders will note these missing activities identified from source documents and will include these in their subsequent analyses.

The projects' activities will be evaluated on a spectrum that encapsulates the variety of purposes that a typical development project may have, but also includes more explicit categories that address climate-related factors. The climate categories code development project activities on a spectrum that ranges from those ambiguously related to climate adaptation to those that are expressly climate-oriented. 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. Projects can receive anywhere from a 0 to 2 for their climate relevance.¹⁶ Activities are simultaneously examined to understand the type and purpose of the DRRM activity. For example, are the activities more focused on prevention 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 relationships exist. For example, if activities are oriented toward preparedness, do they also tend to be capacity building (under our climate codes)? Do general or ambiguous development activities under our climate codes tend to be related more to disaster response activities?

With the results of the aforementioned analysis, we hope to answer the following questions:

(1) To what extents are the DRRM projects examined also climate oriented? This helps us understand the underlying motivations for DRRM projects and the extent to which there are overlaps in the conceptualizations of DRRM and CCA over time.

(2) What are the significant trends in DRRM projects across time and donors with respect to prevention, response, or recovery?

(3) How synergistic are the projects examined with the expressed priorities and strategies of recipient governments and donors? This component will be addressed in the next phase of our work.

Applying the Methodology: Bangladesh

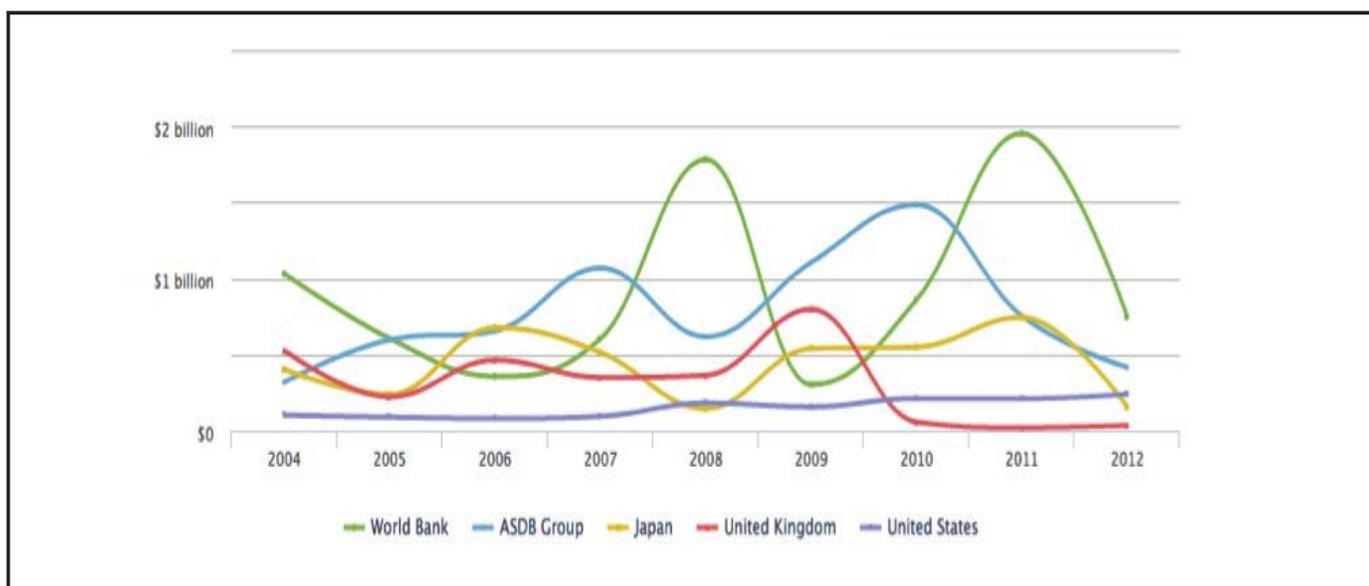
The proposed methodology is being piloted in Bangladesh, one of the 11 countries under study on the CEPESA program. The findings will subsequently be validated through key stakeholder and expert interviews from a range of organizations, including donor agencies, implementing partners and government officials. Bangladesh provides an excellent case study for analyzing the intersection between disaster risk management and climate change adaptation. With a long and turbulent history of natural disasters, the country has experienced over 219 natural disasters between 1980 and 2008, causing over US\$16 billion in total damage.¹⁷ Warmer temperatures are projected to exacerbate cyclones in the Bay of Bengal while rapid snowmelt from the Himalayas is projected to result in flooding.¹⁸ The confluence of longer-term, chronic climatic change and impacts and shorter-term acute shocks (in the form of extreme events) highlights the extenuating circumstances that the country faces and the need for both CCA and DRRM activities. The national government continually emphasizes these types of programs, with the government explicitly stating their intentions to holistically address disaster risk reduction by implementing climate change adaptation activities, improving food security, and implementing proactive risk reduction efforts in their National Plan for Disaster Management.¹⁹

Over the 2004–2013 period, Bangladesh received US\$37 billion in ODA from 47 funding organizations for 12,575 programs and projects.²⁰ Of these, we identified the efforts that were in our categories of expanded DRRM activities (outlined in Table 1). These projects' activity classifications were assigned based on donors' original project documentation and are

Table 1: Comparison of AidData and Activity Codes Used in this Study

GFDRR/ODI (DRRM)	Kellet and Sparks (DRRM+)	CEPSA Classifications (Expanded DRRM)
Disaster Preparedness and Prevention	Disaster Preparedness and Prevention	River Flow Control
Emergency Response	Emergency Response	Desertification Control
Reconstruction and Rehabilitation	Reconstruction and Rehabilitation	Erosion Control
	Flood Prevention and Control	General Environmental Protection
		Flood Prevention and Control
		Multi-sector Education and Training
		Emergency Assistance and Reconstruction
		Material Relief Assistance and Services
		Relief Coordination
		Recovery and Reconstruction
		Disaster Preparedness and Prevention
		Reconstruction and Rehabilitation

Figure 2: Top 5 Donors for Bangladesh 2004 - 2013



Source: AidData 2015

included in AidData’s database. For the purposes of our analysis, we have exclusively focused on the top five donors over the 2004-13 period. These are the WBG, the ADB, USAID, the United Kingdom Department for International Development (DfID), and the Japan International Cooperation Agency (JICA).

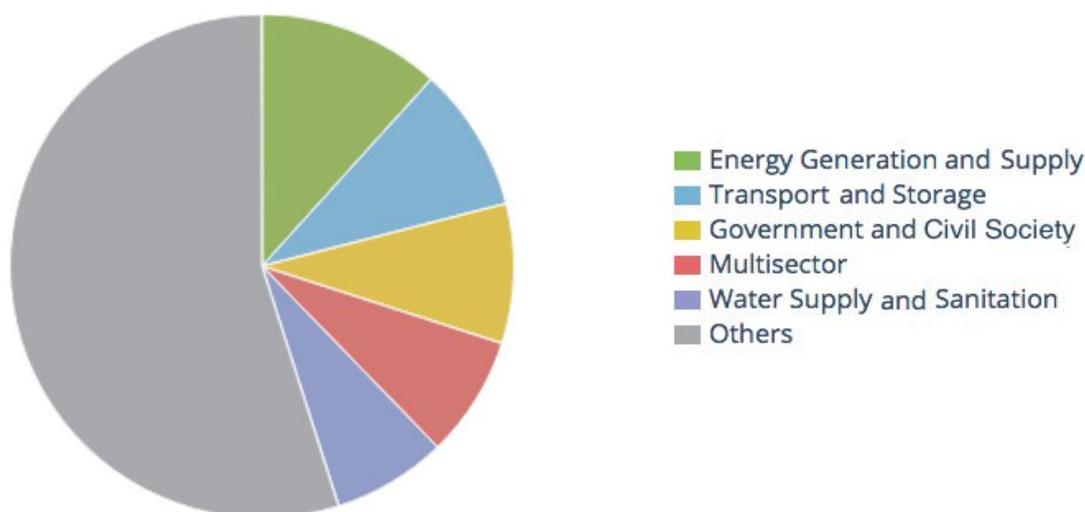
Table 2 highlights the differences in the numbers of projects to be considered (and related amounts of funding) between our and previous methods. Using the CEPSA DRRM classifications, all donors to Bangladesh provided roughly \$2.2 billion in funding towards such activities, split over 1,644 projects. Looking at the top five donors, their contributions amount to \$1.6 billion across 462 projects (see Figure 2). This may also indicate the relatively large footprint that these five donors have in shaping the

DRRM landscape in Bangladesh as they provided approximately 73% of DRRM-related funding. Roughly 4.3% of the received funds went towards projects meeting our expanded definition of DRRM activities. The identified projects will be evaluated for their relevance to climate change (using the aforementioned CCAPS spectrum) and DRRM activities. By doing so, we will find the extent to which disaster risk management projects are addressed by climate change or vice versa, ultimately understanding the overlaps and divergence in activities. We expect that there will be a) some projects that are both climate and DRRM related, b) some that are only climate related and not linked to DRRM, and c) some that are only DRRM related but not climate related (see Figure 4). In addition, we expect that some of the projects analyzed may not have relevance to either of these

Table 2: Comparisons of DRRM-Related Aid Received

Category	GFDRR/ODI	CEPSA	CEPSA
Donors	All Donors	All Donors	Top 5 (WBG, ADB, JICA, DfID, USAID)
Years Considered	1991 - 2010	2004 - 2013	2204 - 2013
Number of Projects	492	1,644	462
Amount	\$825 million	\$2.2 billion	\$1.6 billion
Percentage of Total ODA	~2.2%	~6%	~4.3%

Figure 3: Sector Distribution of All ODA Received in Bangladesh (2004 - 2013)



concepts as we use an expanded set of activity categorizations to have the widest set of projects to analyze. In some cases, we also expect that we may be unable to climate- or disaster risk code projects due to the unavailability of project documentation – whether original planning documents, press releases, or other substantial and relevant sources of information. Many of these projects are also spatially disaggregated, potentially allowing us to investigate any patterns in DRRM and CCA funding is directed and the extent to which such activities align with areas known to be vulnerable to disasters and climate change.

Next Steps

This pilot in Bangladesh will be a proof of concept, especially for the DRRM components of our methodology. While the climate coding methodology has been piloted and applied extensively in the Sub-Saharan African context,²¹ the DRRM component of our methodology has yet to be tested. Lessons learned from this combined effort will be used to modify the methodology, as necessary, and then will be extended to the other 10 countries in our study area. Subsequently, these data, combined with publicly available strategy documents from donors and recipient governments, will be used to understand the extent to which external support coincides with the documented priorities. This exercise will provide an overview of the trends in

financing for DRRM and CCA across time, donors, and purposes. As one of the first efforts in understanding how the DRRM and CCA fields are interacting and evolving fiscally, findings from this pilot and subsequent analyses for the region will provide valuable insights into how the landscape is changing. The effort will also provide a tried and tested methodology with which similar data on ODA or other expenditures could be analyzed for relevance to DRRM and CCA. Findings could help shape future donor and recipient policies on further integration of DRRM and CCA agendas. Additionally, in cases where these data can be spatially located, they will be overlaid on other geographically specific data on climate and disaster vulnerabilities to understand the extent to which there may be unfulfilled needs and where priorities for future action may be.

Deciphering the increasingly complex relationship between DRRM, CCA, and development poses challenges -- theoretically, practically, and financially. The continuous rethinking and reframing of development to include these additional considerations has only heightened the need to understand how these three processes interact. With increasing attention being paid to climate and disaster risks, from international processes under the UNFCCC to domestic efforts to address current and future impacts, our effort to robustly distinguish and grasp the realities of DRRM and CCA aid could be indispensable.

Figure 4: Explaining the Relationship Between ODA, DRRM, and Climate Change Activities



All CCA and DRRM projects are ODA funded (thus the all encompassing circle). However, not all CCA projects would be DRRM related or vice versa. For example, a renewable energy project that focused on reducing greenhouse gas emissions would be climate change related but would not be considered to be DRRM related. Similarly, a program that promotes the use of drought-resistant seeds is, again, climate change related but not related to DRRM. However, a project that addresses flood preparedness (e.g., emergency shelters) could be considered to be both DRRM and climate change related. Lastly, efforts focusing on reducing impacts from non-climate related disasters, like earthquakes, would be considered to be DRRM only but not climate change related.

Appendix: Working Definitions of Key Terms

Overall Concepts	
Vulnerability	“The characteristics and circumstances of a community, system, or asset that make it susceptible to the damaging effects of a hazard. There are many aspects of vulnerability arising from physical, social, economic, and environmental 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.”
Climate Change Adaption	The adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.
Disaster Risk Management/Disaster Risk Reduction Management	“The systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies, and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster.”
Disaster Related Definitions	
Prevention	“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	“The restoration, and improvement where appropriate, of facilities, livelihoods, and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors.”
Climate Coding Related Definitions	
Ambiguous Development	“An activity that has an indeterminate effect on human or natural systems’ vulnerability to the impacts of climate change and climate-related risks.”
General Development	“An activity that reduces human or natural systems’ vulnerability 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 human or natural systems’ vulnerability 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 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.”

Source: United Nations International Strategy for Disaster Reduction, 2009

Endnotes

¹ *Statistical Yearbook for Asia and the Pacific 2014*. Bangkok: United Nations Publications, 2014. Available at: www.unescap.org/sites/default/files/ESCAP-SYB2014_0.pdf.

² *Operational Plan for Integrated Disaster Risk Management 2014 - 2020*. Manila: Asian Development Bank, April 2014. Available at: www.adb.org/sites/default/files/institutional-document/42764/files/integrated-disaster-risk-management-operational-plan.pdf.

³ *Climate Funds Update*. London: Heinrich Böll Stiftung and Overseas Development Institute, September 2015. Available at: www.climatefundsupdate.org.

⁴ Intergovernmental Panel on Climate Change, *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation: A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change*. Edited by C.B. Field, V. Barros, T.F. Stocker, D. Qin, D.J. Dokken, K.L. Ebi, M.D. Mastrandrea, K.J. Mach, G.K. Plattner, S.K. Allen, M. Tignor, and P.M. Midgley. New York: Cambridge University Press, 2012.

⁵ Schipper, Lisa, and Mark Pelling, “Disaster Risk, Climate Change and International Development: Scope For, and Challenges To, Integration.” *Disasters* 30, 1 (2006): 19-38.

⁶ Working definitions for these terms and others can be found in the Appendix of this brief. We use the United Nations International Strategy for Disaster Reduction (UNISDR)’s definitions to guide our work.

⁷ Schipper, Lisa, and Mark Pelling, “Disaster Risk, Climate Change and International Development: Scope For, and Challenges To, Integration.” *Disasters* 30, 1 (2006): 19-38.

⁸ This is an initiative spearheaded and supported by the Heinrich Böll Stiftung and the Overseas Development Institute. See www.climatefundsupdate.org.

⁹ This was developed under the auspices of the Climate Change and African Political Stability (CCAPS) Program at the Robert S. Strauss Center for International Security and Law. See www.strausscenter.org/ccaps/research/about-adaptation-aid.html.

¹⁰ These are Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka in South Asia and Cambodia, Laos, Myanmar, Thailand, and Vietnam in Southeast Asia.

¹¹ See <https://gfdrr.aiddata.org>.

¹² Kellet, Jan, and Alice Caravani, *Financing Disaster Risk Reduction: A 20- Year Story of International Aid*. London: Overseas Development Institute and Global Facility for Disaster Risk Reduction, September 2013. Available at: www.gfdrr.org/sites/gfdrr/files/publication/Financing-DRR_Publication_0.pdf.

¹³ Kellet, Jan and Dan Sparks, *Disaster Risk Reduction: Spending where it should count*. Briefing Paper. Somerset: Global Humanitarian Assistance of Development Initiatives, March 2012. Available at: www.globalhumanitarianassistance.org/wp-content/uploads/2012/03/GHA-Disaster-Risk-Report.pdf.

¹⁴ AidData is the premier source of funding data for development. It tracks over \$40 trillion from over 90 funding agencies, often providing both geographic and sub-project (i.e., activity) level codes. The database, which is continually updated, can be found at www.aiddata.org.

¹⁵ Kellet, Jan, and Alice Caravani, *Financing Disaster Risk Reduction: A 20- Year Story of International Aid*. London: Overseas Development Institute and Global Facility for Disaster Risk Reduction, September 2013. Available at: www.gfdrr.org/sites/gfdrr/files/publication/Financing-DRR_Publication_0.pdf; Kellet, Jan and Dan Sparks, *Disaster Risk Reduction: Spending where it should count*. Briefing Paper. Somerset: Global Humanitarian Assistance of Development Initiatives, March 2012. Available at: www.globalhumanitarianassistance.org/wp-content/uploads/2012/03/GHA-Disaster-Risk-Report.pdf.

¹⁶ See www.strausscenter.org/aid.html for a detailed description of the spectrum and coding methodology.

¹⁷ *Bangladesh: Disaster Risk Reduction as Development*. Dhaka: United Nations Development Programme, 2011. Available at: www.undp.org/content/undp/en/home/ourwork/crisispreventionandrecovery/projects_initiatives/Bangladesh-drr-casestudy-transformational-change.html.

¹⁸ Global Facility for Disaster Reduction and Recovery. *Disaster Risk Management in South Asia: A Regional Overview*. Washington: The World Bank, December 2012. Available at: <http://reliefweb.int/sites/reliefweb.int/files/resources/Disaster%20Risk%20Management%20in%20South%20Asia%20-%20A%20Regional%20Overview.pdf>.

¹⁹ *National Plan for Disaster Management 2008 – 2015*. Dhaka: Government of Bangladesh, May 2008. Available at: www.preventionweb.net/files/9472_NationalPlanforDisastermanagement.pdf.

²⁰ AidData. Available at: www.aiddata.org.

²¹ Baker, Justin, Emmy Griffin, Krista Rasmussen and Catherine E. Weaver, *Tracking Climate Aid in Africa: The Case of the World Bank*. Austin: Robert S. Strauss Center for International Security and Law, April 2015. Available at: www.strausscenter.org/ccaps/adaptation-aid-publications.html?download=551.

ROBERT STRAUSS CENTER

FOR INTERNATIONAL SECURITY AND LAW



COMPLEX EMERGENCIES
AND POLITICAL STABILITY
IN ASIA

THE UNIVERSITY OF TEXAS AT AUSTIN

2315 RED RIVER STREET
AUSTIN, TEXAS 78712

PHONE: 512-471-6267
INFO@STRAUSSCENTER.ORG

STRAUSSCENTER.ORG/CEPSA

This material is based upon work supported by, or in part by, the U.S. Army Research Laboratory and the U. S. Army Research Office via the U.S. Department of Defense's Minerva Initiative under grant number W911NF-14-1-0528.