

Adaptation or Development? Exploring the distinctions (or lack thereof) through case studies in Bangladesh and Vietnam



ADAPTATION
KNOWLEDGE
PLATFORM



REGIONAL CLIMATE CHANGE
ADAPTATIONKNOWLEDGEPLATFORM for Asia

Suggested citation:

Adaptation Knowledge Platform (2013) Adaptation or Development? Exploring the distinctions (or lack thereof) through case studies in Bangladesh and Vietnam, Stockholm Environment Institute and Regional Climate Change Adaptation Knowledge Platform, Bangkok. Available at <http://www.weADAPT.org> or <http://www.asiapacificadapt.net>.

About the authors

Malin Beckman, Postdoctoral Researcher, Stockholm Environment Institute.

Ngo Cong Chinh, Director, Research Center for Disaster Risk Reduction and Climate Change, Asian Management and Development Institute, Vietnam.

Syeda Sajeda Haider, Senior Research Officer, Bangladesh Centre for Advanced Studies (BCAS).

Golam Rabbani, Research Fellow, Bangladesh Centre for Advanced Studies (BCAS).

Bach Tan Sinh, Director, Department of Science and Technology Human Resources Policy and Organization, National Institute for Science and Technology Policy and Strategic Studies, Vietnam.

Vu Canh Toan, Research Fellow, Department of Science and Technology Human Resources Policy and Organization, National Institute for Science and Technology Policy and Strategic Studies, Vietnam.

Natalie Tostovrsnik, Climate Change Research Officer, Research Center for Disaster Risk Reduction and Climate Change, Asian Management and Development Institute, Vietnam.

Disclaimer

The views or opinions expressed in this document belong to the authors and do not reflect those of AKP, its partners, and donors.

Copyright SEI and AKP 2013

Front Cover:

Photo Credit: Syeda Sajeda Haider

Back Cover:

Photo Credit: [creativecommons](#) | Raul Tejero

How to obtain the digital copy:

This publication can be electronically downloaded from www.weADAPT.org and www.asiapacificadapt.net. This digital publication may be reproduced in whole or in part and in any form for educational or non-profit purposes without special permission from the copyright holder, provided acknowledgement of the source is made. The Regional Climate Change Adaptation Knowledge Platform for Asia would appreciate receiving a copy of any publication that uses this report as a reference.

Contents

List of figures	iii
List of tables	iii
Preface	iv
Synthesis of the case studies	1
Key messages	1
Generating new knowledge	1
Concepts, context and debate	2
Approach	3
Study findings	3
Are the projects actually facilitating adaptation?	5
Use of adaptation labels	5
Reflections on the methodology	6
Conclusions	6
References	7
Case Study 1: Bangladesh	8
Summary	8
Introduction	9
Rationale for the project	9
Methodology	10
Understanding development	11
<i>What is development?</i>	11
<i>Development in Bangladesh</i>	11
<i>Links between climate change and development</i>	12
<i>Climate-development linkages in Bangladesh</i>	12
Addressing climate change in Bangladesh	13
<i>Sixth Five-Year Plan</i>	14
<i>National Adaptation Programme of Action</i>	14
<i>Bangladesh Climate Change Strategy and Action Plan</i>	14
Project findings	15
<i>Project analysis: Distinguishing between adaptation and development</i>	17
<i>Is it useful to distinguish between adaptation and development?</i>	18

Conclusion	19
Acknowledgements	19
References	20
Case Study 2: Vietnam	22
Summary	22
Introduction	23
A critical question	23
Methodology	24
Literature review	24
Findings	26
<i>Views of adaptation and development</i>	26
<i>Use of adaptation labels</i>	28
<i>Challenging nature of adaptation work</i>	28
<i>Mainstreaming</i>	30
<i>Project focus areas</i>	31
<i>Language</i>	32
Discussion	34
<i>How is adaptation understood by those implementing the projects?</i>	34
<i>Are projects being inappropriately labelled as adaptation?</i>	34
<i>What is a useful analytical framework for determining whether a project will facilitate adaptation over the medium to long term?</i>	34
<i>Study challenges</i>	36
Conclusion	36
Acknowledgments	37
References	47
Annex 1: Questionnaire	44
Annex 2: Screening criteria	48
Annex 3: Framework for analysis of language used in project documents	53
Annex 4: Sixth plan benchmark and proposed target programmes	55
Annex 5: Questions to guide semi-structured interviews	58
Annex 6: Analytical framework for review of project documents	59
Annex 7: Framework for analysis of language used in project documents	65

List of figures

Figure 1:	A continuum of adaptation activities: from development to climate change.	2
Figure 2:	Views of respondents in Vietnam on the relationship between adaptation and development	4
Figure 3:	The project methodology	10
Figure 4:	Climate change impacts, vulnerability and development linkages	13
Figure 5:	Answers to the question, 'What are the key elements of a good adaptation project?'	16
Figure 6:	What types of adaptation activities does Bangladesh need most?	16
Figure 7:	Relevance of Adaptation Projects with Government Policies and Strategies	17
Figure 8:	Stakeholder definitions of development.	26
Figure 9:	Stakeholder definitions of adaptation.	26
Figure 10:	Stakeholder comments on the relationship between adaptation and development.	27
Figure 11:	Stakeholder reasoning for the close relationship between adaptation and development.	27
Figure 12:	Challenges of working in adaptation identified by stakeholders.	29
Figure 13:	Data issues associated with adaptation work, as identified by stakeholders.	29
Figure 14:	Lessons for adaptation, as identified by stakeholders.	30
Figure 15:	Stakeholder definitions of mainstreaming.	30
Figure 16:	Core focus areas of reviewed projects	31
Figure 17:	Key methods used in the projects reviewed.	32
Figure 18:	Most frequently used terms in project documents.	33
Figure 19:	Location of climate change terms in project documents.	33
Figure 20:	Location of projects on McGray et al. (2007) adaptation/development continuum.	35

List of tables

Table 1:	Answers to question, 'How do you define adaptation?'	15
----------	--	----

Preface

During the last three years, the Regional Climate Change Adaptation Knowledge Platform (AKP) has worked towards building bridges between existing knowledge on adaptation to climate change and the governments, agencies and communities that need this knowledge to inform their adaptation to the impacts of climate change. AKP's work has been carried out following three key objectives:

1. Promoting dialogue and improving the exchange of knowledge, information and methods within and between countries on climate change adaptation and linking existing and emerging networks and initiatives.
2. Generating new climate change adaptation knowledge, promoting understanding and providing guidance relevant to the development and implementation of national and regional climate change adaptation policy, plans and processes focused on reducing the vulnerability and strengthening the resilience of the poor and women: the most vulnerable segments of society in most Asian countries.
3. Synthesizing existing and new climate change adaptation knowledge and facilitating its application in sustainable development and poverty reduction practices at the local, national and regional levels.

This publication is a result of these objectives. AKP supported thirteen countries in the Asian region to strengthen their capabilities to introduce effective adaptation measures. This includes undertaking activities both at the national level to create an enabling policy, regulatory, planning and budgeting environment for the adoption of adaptation measures, and at a sub-national and local level where most adaptation activities are implemented. In each country, the platform facilitated adaptation action and strengthened adaptive capacity.

AKP is facilitated by the Stockholm Environment Institute (SEI), AIT's Regional Resource Centre for Asia and the Pacific (AIT RRCAP), and the United Nations Environment Program Regional Office for Asia and the Pacific (UNEP ROAP) with funding provided by the Swedish Government through the Royal Swedish Embassy in Bangkok and the Swedish International Development Agency (Sida).

Bangladesh and Vietnam are two of the thirteen countries supported by AKP. This publication highlights the insights gained from the implementation of activities in both countries, and compares the results in a synthesis study. These insights will catalyze further actions to deepen adaptive action in the region. A consolidated initiative, known as the Asia Pacific Adaptation Network (APAN), has been established and will be fully implemented starting in 2013. Its ultimate objective is to assist the region in building the climate resilience of human systems, ecosystems and economies through the mobilization of knowledge and best practices, enhanced institutional capacity and informed decision making processes, and facilitated access to finance and technologies.

The outcomes of AKP have been made possible by the active participation of partners and various stakeholders. SEI acknowledges the editorial assistance provided by Marion Davis, Pin Pravalprukskul and Skye Turner-Walker. SEI also expresses heartfelt thanks to John Soussan, Lailai Li, Kai Kim Chiang, Lisa Schipper, Sabita Thapa, Tatirose Vijitpan, Muanpong Juntopas, Nantiya Tangwisutijit, Chanthay Sam, and Dusita Krawanchid for their contributions to AKP.

Photo Credit: creativecommons | A.K.M Monjurul Hoque Topu



Synthesis of the case studies

Malin Beckman

Key messages

1. Differentiating between adaptation and development may be an artificial exercise. In theory, there is a difference between adaptation and development. In project implementation, that difference is mostly considered insignificant. In practice, the actions taken to achieve adaptation can hardly be distinguished from those required to achieve sustainable development.
2. Development is considered a 'safer' objective than adaptation, due to the lack of tools to assess success in achieving adaptation through projects.
3. The lack of a widely accepted framework for adaptation encourages its conscious use in varied and broad ways in project descriptions. Project managers report that it is easy to relabel or refocus development projects to qualify for adaptation finance, though the two country studies found no evidence of mislabelling.

Generating new knowledge

The Regional Climate Change Adaptation Knowledge Platform for Asia (AKP) has set out to enhance the regional knowledge base on adaptation. A main mechanism for doing this is to bring together different actors to both identify and fill knowledge gaps specific to planning adaptation at the national and sub-national levels. The three knowledge-building projects in the AKP provided not only an opportunity for networking among research institutes within and across countries, but also for collaboration between research institutes, practitioners and decision-makers.

The main emphasis of the three projects was to generate knowledge on the linkages between autonomous and planned adaptation – in other words: trying to understand gaps in adaptive capacity, which gaps could be filled through planning, and how to fill them. The studies focused on both actual knowledge gaps as well as perceived knowledge gaps, because these are equally important in adaptation. The studies explored what conditions are enabling and disabling for strengthening the resilience of local communities and stimulating actions to adapt to existing and likely climate-induced change.



Photo Credit: creativecommons | International Rivers

The studies were all carried out in a collaborative way that allowed for both network- and capacity-building. The aim was to build small teams that represented different types of actors, and interact with as wide a range of stakeholders as possible. The study *Comparing Adaptation and Development* was undertaken in Bangladesh (Case Study 1) and Vietnam (Case Study 2) by the Bangladesh Centre for Advanced Studies (BCAS), the Asian Management and Development Institute (AMD) in Hanoi, and the Vietnam National Institute for Science and Technology Policy and Strategy Studies (NISTPASS). This synthesis report summarizes and discusses the findings of these two case studies.

Concepts, context and debate

Over the past decade, adaptation goals and vocabulary have increasingly been integrated into development projects. Many development projects now contain labels such as 'adaptation', 'risk reduction', 'vulnerability reduction' and 'resilience'. However, whilst adaptation and development are related in many cases, they have different goals. International mechanisms to fund adaptation now frequently require that the funds go to 'additional activities needed for adaptation to climate change', as opposed to 'normal development' activities. This calls for more debate on whether it is meaningful and possible to make such a distinction, and the implications of such an approach.

Development is not necessarily going to lead to adaptation. While many development activities can contribute to reducing vulnerability to climate change, some may also increase it (OECD, 2009). Similarly, most adaptation activities address the impacts of climate change, rather than underlying factors of vulnerability (Schipper, 2007). This suggests that the most common definition of 'adaptation' is as a 'response to the impacts of climate change', and seen as something different from 'vulnerability reduction'. The debate on terminology and their definitions has raged since adaptation to climate change was first used as a concept. Many practitioners and policy-makers consider risk reduction, adaptation, vulnerability reduction and development as interrelated and find it difficult to distinguish between them. However, without distinctions, it is difficult to gauge the effectiveness of policies and projects addressing these different issues.

A useful framework for breaking down the 'either/or' thinking between adaptation and development was set out by McGray et al. (2007), who framed the range of adaptation activities along a continuum: from 'pure' development activities reducing vulnerability (including to climate change) on the one end; through building response capacity to address a wide range of challenges, including climate change; to managing climate risks, such as in the context of disaster response planning and 'climate-proofing' infrastructure; to confronting specific climate change impacts, such as sea-level rise. This suggests that all those activities are 'adaptation', but some focus more on strengthening people's adaptive capacity, while those at the other end of the spectrum deal more directly with climate change. Figure 1 illustrates the continuum.

Figure 1: A continuum of adaptation activities: from development to climate change.



Source: McGray et al. (2007)

But adaptation practitioners cannot just choose to work at any point in the continuum. Basic development needs must be met before more 'pure' adaptation activities can be effective. Hence, the effect of separating adaptation from development may actually be counterproductive to achieving adaptation objectives, if the development foundation is weak.

If we reconsider the Intergovernmental Panel on Climate Change (IPCC, 2007) definition of adaptation, it could be interpreted as broad enough to incorporate the full range of perspectives: 'the adjustment in natural or human systems in response to actual or expected climate stimuli or their effects, which moderates harm or exploits beneficial opportunities'. A new problem arises if there is demand for 'exclusiveness', i.e. if the adjustment made has to be 'exclusively' in response to climate stimuli.

From a household or community perspective, decisions on adaptation to climate change are often not isolated from other decisions taken in the wider socio-cultural-economic-environmental context (see Adger et al., 2005). It can therefore be difficult to distinguish which decisions are taken explicitly in relation to climate change. From a project management perspective, it may be equally difficult to analyse whether or not project support has given rise to adaptation. Also, when a project supports activities that reduce vulnerability to climate change, it is likely to reduce vulnerability more broadly, not only the part that is climate-related.

Approach

Using Bangladesh and Vietnam as ‘adaptation project-dense’ contexts, we sought to explore how adaptation is understood, mainly by practitioners in development projects, but also by government staff, donors, researchers and others who are involved in implementing projects. Key questions asked were: Do projects use the concept of ‘adaptation’ too easily, perhaps for greater ease in access to funding sources, or due to a lack of understanding of what adaptation means? If so, what are the implications of the over-use of the term? What may be the consequences of understanding, defining and using the concepts of ‘climate change adaptation’ and ‘development’ differently? And what would a methodological approach for assessing whether projects really contribute to adaptation look like?

The Bangladesh and Vietnam studies included literature reviews, reviews of project documents, and interviews with project managers, government staff and researchers. The majority of projects studied were managed by non-governmental organizations (NGOs), and all projects were in some way or another working with adaptation.



Photo Credit: Syeda Sajeda Haider

The Bangladesh team interviewed managers and staff of 22 adaptation projects, and the Vietnam team interviewed those of 14 projects. Interviewees were asked to say how they define adaptation and development and how they see the relation between the two. Many answers give a picture of adaptation as development with a risk perspective, or development with a climate change focus.

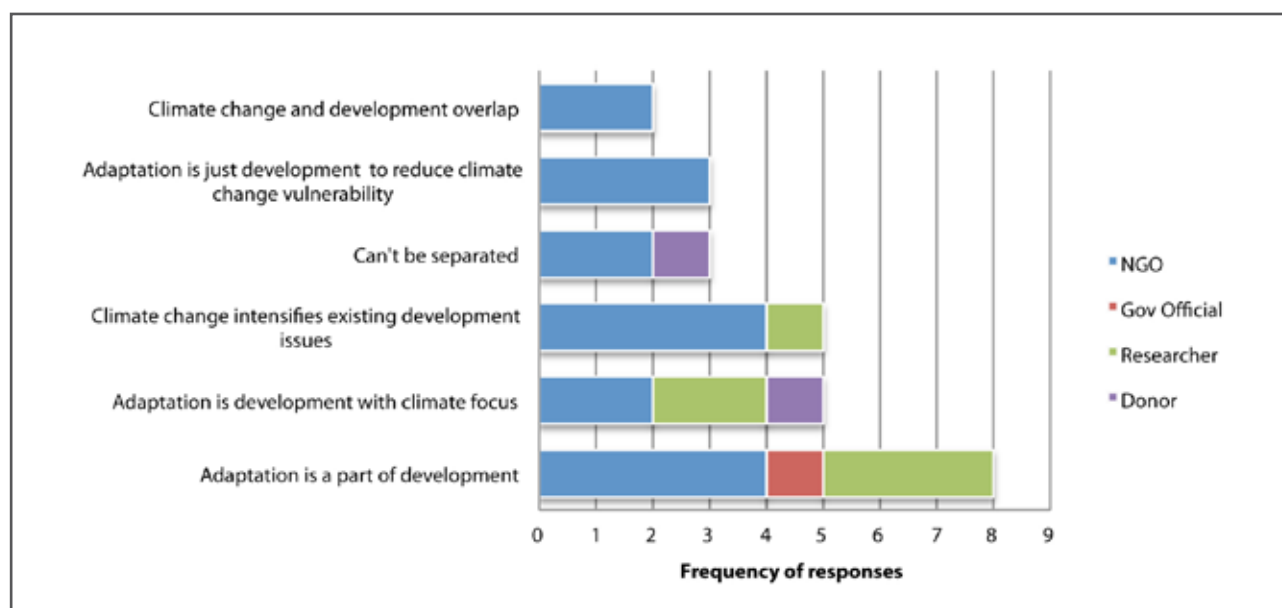
Study findings

In theory, there is a difference between adaptation and development; adaptation is supposed to prepare people for climate change, shocks and stress, while development focuses on improving well-being through economic growth, better health, improved education, expanded entitlements, etc. In practice, however, people see little difference between adaptation and development.

Identifying a difference between adaptation and development may be an artificial exercise. The studies found that in project implementation, the difference is mostly considered insignificant. Projects that achieve positive outcomes, regardless of whether they reduce vulnerability to climate change in the long run or not, are considered successful by the implementer and/or donor. Therefore, projects seeking to achieve adaptation may or may not have long-term goals of sustainability and vulnerability reduction. At the very least, they will improve well-being or provide advantages that are considered to make people more resilient to changes and external pressures – not just to climate change.

The project teams set out to clarify how adaptation is understood and how the difference between adaptation and development is understood. As can be seen in Figure 2, from the Vietnam case, many of the interviewees commented that they felt that adaptation was a component of development and that the two are difficult to separate. One interviewee even stated, ‘There is no such thing as adaptation, just development with a climate change focus.’

Figure 2: Views of respondents in Vietnam on the relationship between adaptation and development



Interview results in Bangladesh showed about half the practitioners thought of adaptation in terms of ‘adjustments to the impacts of climate change’ or ‘the use of innovative technologies to reduce the vulnerability of the affected people’. The latter statement is interesting because it combines ‘technologies’ and ‘vulnerability reduction’. These two concepts are not often considered together. However, it depends on what vulnerability reduction refers to: the capacities of people, or external risk factors. It was also mentioned in many interviews that awareness-raising on climate change, especially at the local level, is crucial in reducing the vulnerabilities of people.

When asked what type of adaptation activities are required in Bangladesh to better address the impacts of climate change, the majority of the interviewees mentioned the ‘development of sustainable technology and agricultural adaptation activities’. The next priorities were infrastructural adaptation and community-based adaptation activities. Natural resource management, use of local adaptation technologies and leadership development in communities were also suggested as important factors in adaptation to climate change.

The focus on technology found in the Bangladesh study warrants more attention. Scientists have advised against reliance on technologies, which have limited ability to adequately address the link between adaptation and trends such as economic growth and development. They caution that maladaptation and inequity are possible outcomes if the focus is only on technology, rather than on changes in institutions, attitudes and policies (Klein et al., 2007). However, the interviewees did appear to see technology in its socio-economic context.

The Vietnam study found that the NGO staff had an in-depth understanding of the socio-economic and development aspects of adaptation, in which they emphasized the importance of focusing on vulnerable people. Interviewees tended to define adaptation to climate change in terms of ‘working with vulnerable people, reducing vulnerability, coping with uncertainty and reducing risk’. In this context, it is not surprising that it was difficult for the interviewees to find differences between adaptation and development. Government stakeholders tended to have a more technical understanding of climate change adaptation issues, with an emphasis on disaster management and reducing exposure to disasters.

According to the Vietnam team, seven of the 12 projects reviewed fell into the ‘building response capacity’ category in the McGray et al. (2007) framework. These include policy and capacity development projects, many of which have a planning or governance focus. Four projects were categorized as ‘managing climate risk’ and mainly focused on disaster management and risk reduction. None of the projects reviewed in this study fit into the ‘confronting climate change’ category. Only one was classified under ‘addressing the drivers of vulnerability’; it focused primarily on poverty reduction and natural resource management. The lack of projects in this category is interesting to note, as most of the NGO staff described this as their goal. Still the ‘building response capacities’ projects could also be categorized as the ‘soft’ and ‘no-regrets’ approaches to adaptation that many of the interviewees advocated (see following section).

Are the projects actually facilitating adaptation?

When this issue was raised with project managers, a lot of the discussion focused on the difficulties in evaluating adaptation and reinforced the argument of how difficult it is to distinguish adaptation from development.

Interviewees in the Vietnam study felt that it is very challenging to work on 'adaptation' due to the lack of existing 'models', difficulties in evaluating impact, the complexity of climate change issues, and the intangible nature of adaptation. They raised the issue of the difficulties in determining the difference between 'regular' development issues and climate change-induced ones. For example, to what extent should more severe floods be attributed to climate change, as opposed to ongoing land use changes or other factors? The answer to that question would determine whether the activities of adaptation to floods would be 'allowed' to be classified as climate change adaptation or not.

Estimating the impact of project activities is almost impossible due to data challenges and the long time frames of climate change. Issues such as the limited amount of specific, local-level climate data, a mismatch between the scale (time and location) of climate information and projects, and varying levels of data uncertainty led some NGO project managers to make a conscious decision to undertake 'soft' and/or 'no-regrets' measures. Interviewees in Vietnam felt that knowledge gaps made it difficult for projects to develop strategies that directly target climate change issues without creating potential maladaptations. They would rather classify such 'no-regrets measures' as 'development projects' that facilitate, or lay the foundation for, adaptation measures, in order to avoid the issue of being challenged for measurable results in relation to climate change.

Other projects are introduced as 'adaptation projects' even though they span a wide range of areas, including poverty reduction, natural resource management, infrastructure, health capacity-building, planning, governance, disaster management, etc. – all of which could easily be classified as development. Yet in some way or another, they can also all be seen as contributing to strengthening resilience to climate change.



Photo Credit: creativecommons | Sk Kabirul Hashan

Use of adaptation labels

Are projects being 'labelled' adaptation without a real understanding what it means, and maybe because it is a good way to get funding?

According to senior officials of the Bangladesh Water Development Board, the concept of climate change adaptation is not clear even among many government ministries and departments. As a result, in many cases, although different climate change or adaptation terminologies appear in the project documents, they are not reflected in the activities.

The Vietnam team found that project managers found it relatively easy to re-label programmes as 'adaptation' to qualify for climate-specific finance. For example, it was suggested that 'the lack of guidelines that determine what adaptation is, makes it easier for many projects to access climate change funds'. However, the assessment of the team was that none of the projects reviewed appeared to have been improperly relabelled. Results suggested instead that projects had increased their emphasis on adaptation over time, with some projects evolving to incorporate specific climate change activities. Two interviewees felt that the evolution of some development projects into adaptation was as a reflection of an increased knowledge of climate risk. 'We did adaptation for many years; we just didn't have a label for it. Now we have the vocabulary and understanding to make what we are doing more obvious.'

Some NGO interviewees, however, were uncomfortable with others labelling their projects as adaptation. They felt that adaptation was too difficult to demonstrate and evaluate, or that the project objectives more belonged to 'development' than to 'adaptation'. One interviewee stated: 'I am not sure that the project would have looked the same if it had been based around detailed climate change objectives and was more informed by climate change data.'

The Vietnam team found that the more the project staff had thought about the distinction between adaptation and development, the less inclined they were to frame their projects as 'climate change adaptation', due to, as they said, the additional level of complexity and accountability that it can bring to the project.

Reflections on the methodology

A large part of this study was the development of the methodological approach to identify how projects used adaptation, and distinguished it from development. The main focus of this was the identification of a working conceptual framework to distinguish adaptation from development. Because this has been attempted by others yet still remains largely unresolved, the McGray et al. (2007) framework was used to help categorize projects.

In the early stages, the project teams were concerned with how to overcome their own identities as NGOs, partners in consortium projects and recipients of donor funds, so that they may analyze objectively the use of the term 'adaptation' in projects. BCAS in particular has long been known internationally for being a champion of climate change adaptation and one of the leading knowledge brokers in Bangladesh and around the world. The concern of the project teams was resolved by being selective in which actors to interview, and acknowledging that there are many different interpretations of adaptation.

The approach developed to interview informants was based also on identifying a common baseline for evaluating what was adaptation and what was development. The teams agreed that certain key elements should be present in projects for them to qualify as adaptation projects, but acknowledged that the definition of adaptation used implied that project impacts could only be judged in a much longer time horizon than what is usual for project evaluation.

The latter choice may have made it difficult to gauge the effectiveness of the projects using this methodology, which was the conclusion of the Bangladesh team. The goal of an adaptation project is to reduce risk and increase adaptive capacity, which is very difficult to evaluate for short-term projects. The team reported receiving mostly 'idealistic'



Photo Credit: creativecommons | Sk Kabirul Hashan

answers as if the projects were long-term, even though the project duration was often two to three years and there was no mention of proper monitoring, evaluation or follow-up activities. For example, the Bangladesh Water Development Board currently has fifteen projects under the Bangladesh Climate Change Trust Fund. Some of these are short-term and do not necessarily contribute to the increase of long-term adaptive capacity. Senior officials of the Bangladesh Water Development Board said that long-term projects are necessary in ensuring sustainability.

Conclusions

The case studies in Bangladesh and Vietnam show that the separation of adaptation from development is somewhat artificial, as climate change will affect many developmental issues. Furthermore, the response to both experienced and expected climate change will comprise a myriad of actions, ranging from policy and institutional changes to cultural and attitudinal shifts. Implementing adaptation activities without ensuring basic development needs and institutional and individual capacities is unlikely to result in increased resilience to climate change. There must be a certain level of development to even achieve resilience. Adaptation and development activities are thus interlinked and interdependent.

Another way of thinking about this is to recognise that vulnerability to climate change is driven by failures of development including inequality, racism, lack of entitlements, dysfunctional institutions, corruption and a host of other crucial requirements for sustainable development (Schipper, 2007). If the underlying drivers of vulnerability are not addressed, then people are not likely to be able to adapt to climate change anyway. Adaptation cannot be seen separately from development. This calls for a development paradigm that is guided by awareness of environmental, social and economic risk.

The projects studied in Vietnam and Bangladesh have all been cases in which there has been no apparent tension between development objectives and adaptation objectives. However, both studies caution about the need to ensure that development activities do not increase the vulnerability of people. This issue did not emerge in interviews, possibly due to the nature of the specific projects studied, and would require further exploration.

The studies focused on the sector of 'development' that works with the poor and vulnerable people. A discussion of adaptation to climate change in relation to development at other levels – e.g. building hydropower dams on the rivers, forest protection, free-trade agreements on agricultural products, biofuel crop plantations, contract farming – would have produced different results. There is continued need for the development of tools to assess the effectiveness of projects in decreasing vulnerability and increasing adaptive capacity in relation to climate change.

References

Adger, W. N., Arnell, N. W. and Tompkins, E. L. (2005) 'Successful adaptation to climate change across scales'. *Global Environmental Change*, 15(2). 77–86. doi:10.1016/j.gloenvcha.2004.12.005.

Intergovernmental Panel on Climate Change (2007) *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. M. L. Parry, O. F. Canziani, J. P. Palutikof, P. J. van der Linden, and C. E. Hanson (eds.). Cambridge University Press, Cambridge, UK. 7–22.

Klein, R. J. T., Eriksen, S. E. H., Naess, L. O., Hammill, A., Tanner, T. M., Robledo, C. and O'Brien, K. L. (2007) *Portfolio Screening to Support the Mainstreaming of Adaptation to Climate Change into Development Assistance*. Working Paper 102. Tyndall Centre for Climate Change, Norwich, UK. <http://tyndall.uea.ac.uk/content/portfolio-screening-support-mainstreaming-adaptation-climate-change-development-assistance>.

McGray, H., Hammill, A., Bradley, R., Schipper, E. L. F. and Parry, J.-E. (2007) *Weathering the Storm: Options for Framing Adaptation and Development*. World Resources Institute, Washington, DC. <http://www.wri.org/publication/weathering-the-storm>.

Organisation for Economic Co-operation and Development (2009) *Integrating Climate Change Adaptation into Development Co-operation: Policy Guidance*. Paris. <http://www.oecd.org/env/cc/adaptation/guidance>.

Schipper, E. L. F. (2007) *Climate Change Adaptation and Development: Exploring the Linkages*. Working Paper 107. Tyndall Centre for Climate Change Research, UK, Norwich, UK. <http://tyndall.uea.ac.uk/content/climate-change-adaptation-and-development-exploring-linkages>.



Photo Credit: Syeda Sajeda Haider



Photo Credit: creativecommons | Ashwin Kumar

Case Study 1 Bangladesh

Syeda Sajeda Haider
Golam Rabbani

Summary

Climate change is increasing the impacts of droughts, floods, extreme weather events and sea level rise, which are contributing to food shortages, infrastructure damage and the degradation of natural resources upon which livelihoods are based. This may also jeopardize gains from development and make it more difficult to achieve the Millennium Development Goals. It is therefore critical to reduce the vulnerability of communities to climate change impacts, both through direct adaptation activities and by integrating climate change issues into development planning. It is also important to understand how development affects vulnerability; some development activities can reduce vulnerability, but others may increase it. At the same time, from a financial perspective, practitioners need to be able to distinguish between adaptation and development; otherwise, they may not be able to gain access to climate financial resources such as the Adaptation Fund. Given the close connections between adaptation and development, making this distinction is often difficult as there is a great deal of confusion involved. This study tries to assess the understanding of adaptation among practitioners in Bangladesh through interviews as well as reviews of ongoing projects. It finds that there are strong linkages between adaptation and development, and that development is a prerequisite for successful adaptation. However, adaptation projects explicitly seek to reduce vulnerability to climate change, while development does not necessarily have the same focus.

Introduction

Climate variability and extreme events affect natural resources, ecosystems, human systems and social systems, and can hinder development and disrupt livelihoods. For Bangladesh, these threats are already visible. Global economic forces, combined with natural disasters, have caused a silent famine. In 2007, for example, Cyclone Sidr¹ and frequent and prolonged floods damaged 30 to 40% of the crops. Food insecurity is on the rise across Bangladesh (Rahman, 2008).

The United Nations *Human Development Report 2010* (UNDP 2010) warns that climate change could impede the continuing progress in human development, and argues that addressing environmental risks – through adaptation and low-carbon development – should be ‘integral’ to policy choices. Climate change will have a direct impact on development in relation to climate-sensitive activities such as agriculture, and indirect consequences on social issues such as poverty and education. Furthermore, climate change is likely to exacerbate inequalities due to the uneven distribution of the costs of damage, and adaptation and mitigation efforts.

Yet until recently, climate change was viewed largely as an environmental concern with little relevance to development policy-makers and practitioners. Likewise, development approaches had been given relatively little attention within the climate change community. The links are vital, however: climate change will disproportionately affect the poor, making development essential to reducing vulnerability. Conversely, without addressing climate change issues, much development policy and practice will be wasted. The growing recognition of these linkages has led to discussions about the similarities and differences between adaptation and development projects. Although the activities may be similar, the goals are not the same; adaptation aims specifically to reduce risks from climate change. Also, while many development projects support adaptation, some actually increase vulnerability to climate change. This study examines adaptation activities in Bangladesh to understand the core similarities and differences between adaptation and development, and to have a clearer idea of how adaptation is perceived by adaptation practitioners.

Rationale for the project

If adaptation projects are no different from development projects, what would be the purpose of creating separate adaptation units, as is being done in development assistance organizations around the world? Clearly, the international development and donor communities have embraced the idea that adaptation places additional requirements on development projects. Nevertheless, much of what is labelled adaptation appears to take a short-term perspective with a selective definition of adaptation. In order to gain a better understanding of what characterizes ‘adaptation’ activities, how they relate to development activities, and how actors think about the difference, it is necessary to examine project portfolios in different countries. This study therefore looks at projects in Bangladesh that claim to be about adaptation to climate change (using any of the related terms), in order to examine the perspectives and understanding of adaptation practitioners, including their definitions of climate change adaptation and what they believe to be the main characteristics of adaptation projects in Bangladesh.

The goal of this study is to understand *what adaptation actually is; the distinction between adaptation and development; and differing perspectives on what qualifies as good adaptation*. To approach these issues, the report is structured to address three key questions:

- What is climate change adaptation according to practitioners in Bangladesh?
- What are the main elements of climate change adaptation projects in Bangladesh?
- What kind of adaptation activities are required to best address the climate change impacts Bangladesh is facing?

¹ Cyclone Sidr, a Category 4 cyclone, hit Bangladesh’s south-western coast in 2007. It was the strongest named cyclone ever recorded in the Bay of Bengal; it killed more than 3,000 people and left millions homeless.

Methodology

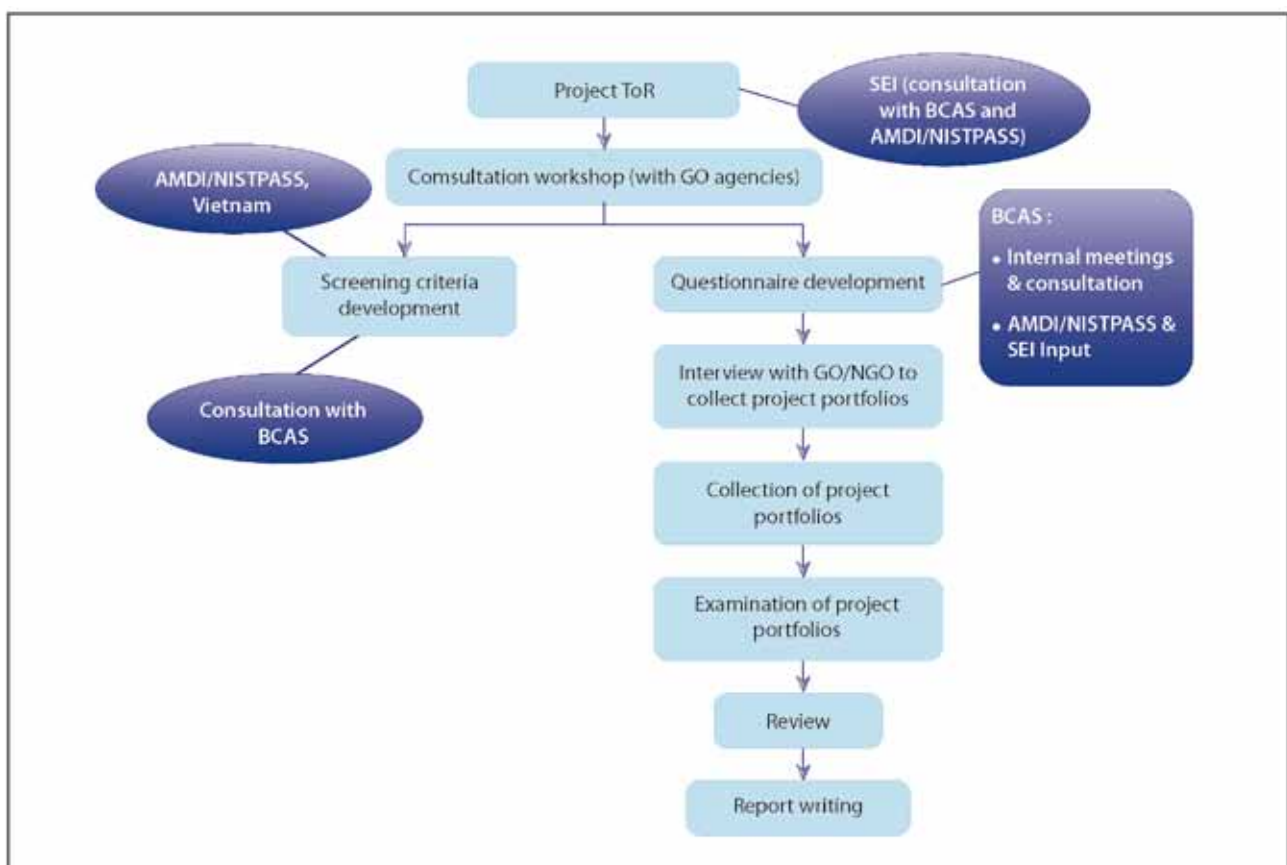
This study involved a literature review, the development and deployment of a questionnaire, and the development and deployment of screening criteria to evaluate projects on a qualitative basis. Portfolio screening was used to examine whether adaptation projects really focused on climate change, whether the activities reduced vulnerability, and the projects' long-term sustainability. The same questionnaire and screening criteria were used in the Vietnam study; the two teams developed the materials together (Annexes 1, 2, 5 and 6).

The adaptation projects were identified by contacting 22 government departments/agencies, domestic non-governmental organizations (NGOs) and international NGOs (INGOs) listed in a database. For government contacts, the team tried to contact all relevant agencies and departments directly or indirectly involved with climate change activities.

Thirteen adaptation project portfolios were analyzed using the screening criteria. Project portfolios were collected from four government ministries/departments, five NGOs, and four INGOs. During the interviews, the team filled out the questionnaire and requested documents for the project, which were reviewed according to the screening criteria.

It should be noted that although this was the agreed-upon methodology, the Bangladesh team found it very difficult to evaluate the projects on the basis of the documents. In many cases there was a huge difference between project plans in Bangladesh and the actual implementation of the projects. Also, the understanding of adaptation is different between these two levels. This may limit the scope and usefulness of the findings.

Figure 3: The project methodology



The following section focuses on development theory. In a later section, we review the relevant government policies and plans addressing climate change issues in Bangladesh. That section also mentions the key institutions involved in the climate change sector. Afterward, the project findings are presented, followed by a summary and analysis and a look at some of the most promising approaches which could inform and contribute to planning future adaptation projects.

Understanding development

What is development?

Michael P. Todaro (2000) defined development as 'a process of improving the quality of all human lives, which consists of three equally important aspects: raising people's living standards in terms of their incomes and consumption levels; creating conditions conducive to the growth of people's self-esteem through the establishment of social, political, and economic systems/institutions; increasing people's freedom to make their choices in terms of consumer goods and services'.

Amartya Sen (1999), meanwhile, stressed the importance of freedom of choice. According to Sen, development involves reducing deprivation or broadening choice. Deprivation represents a multidimensional view of poverty that includes hunger, illiteracy, illness and poor health, powerlessness, voicelessness, insecurity, humiliation and lack of basic infrastructure.

Development has long been measured in terms of growth in GDP per capita, but this view is now increasingly challenged as contemporary political philosophy and welfare economics have been brought to bear on the analysis of development (see, for example, Roemer, 2006). Building on Sen's analysis of functioning and capability (Sen, 1979; 1985), the United Nations Development Programme created a 'human development index' (HDI) that combines GDP per capita with measures of education and health.² In 2006, the World Bank further advanced discussion of these issues with its *World Development Report 2006: Equity and Development* (The World Bank, 2006), which argued that equity is a fundamental complement to the pursuit of long-term prosperity:

Institutions and policies that promote a level playing field – where all members of society have similar chances to become socially active, politically influential, and economically productive – contribute to sustainable growth and development. Greater equity is thus doubly good for poverty reduction: through potential beneficial effects on aggregate long-run development and through greater opportunities for poorer groups within any society. (p.2)

The concept of 'sustainable development' is also useful here. Several definitions exist, but the most frequently quoted is from *Our Common Future*, also known as the Brundtland Report, as development that 'meets the needs of the present without compromising the ability of future generations to meet their own needs' (World Commission on Environment and Development, 1987 §27).

Development in Bangladesh

One of the Bangladesh Government's first actions after independence was to prepare short-, middle- and long-term development plans. The First Five-Year Plan, issued in 1973, focused on rebuilding the war-ravaged economy. Since then, officials have issued several more five- and two-year plans, addressing rural development, poverty alleviation and economic growth, among other goals. The plans have all aimed to increase GDP by at least 5% per year, in which there has been significant progress; however, an estimated 53 million Bangladeshis – one-third of the population – still live in poverty.³



Photo Credit: Syeda Sajeda Haider

² For a detailed description and recent data, see <http://hdr.undp.org/en/statistics/hdi/>.

³ The World Bank (2011) 'Bangladesh: Bolstering Economic Growth to Reduce Poverty'. April. <http://go.worldbank.org/ATU6AR45P0>.

The Sixth Five-Year Plan, which went into effect in the 2011 fiscal year, makes adaptation to climate change a national priority. It says immediate actions are needed to protect vulnerable areas, and it makes adaptation in agriculture a particular priority for protection against food insecurity. The plan also aims to significantly strengthen social protection programmes to reduce the vulnerability of poor people, with several new initiatives.

Links between climate change and development

Climate change and development have long been viewed as separate issues, but the connections between them are now increasingly recognized and understood. It is clear that the world's poorest people will be disproportionately affected by climate change; likewise, climate change could undermine and even reverse the progress achieved through development (Huq et al., 2006). Rising temperatures, increasing weather variability, and more frequent heat waves, droughts and extreme precipitation all threaten agriculture, food security and human health and livelihoods. For example, an increase in floods, landslides and other disasters could devastate dwellings and infrastructure (IPCC, 2007; 2012). Thus, from a development perspective, there is a strong need to understand and adapt to climate change.

From a climate change perspective, meanwhile, development is now widely seen as a crucial factor in determining vulnerability to climate impacts. This is because vulnerability depends not only on exposure to climate-related hazards, but also on people's and systems' abilities to adapt (Smit and Pilifosova, 2001). One way to increase adaptive capacity, many argue, is to ensure equitable access to crucial resources (see, e.g., Ribot et al., 1996). Thus, adaptive capacity can be improved through initiatives that promote the welfare of the poorest members of society – for example, by improving food security, facilitating access to safe water and health care, and providing shelter and access to other resources.

It is important to note in this context that development does not *necessarily* build adaptive capacity, and in many cases, can even increase vulnerability – particularly when plans do not take climate risks into account (Smit and Pilifosova, 2001). Thus, it is crucial to continue to explore linkages between climate and development, and ensure that the two work in concert, not at cross-purposes.



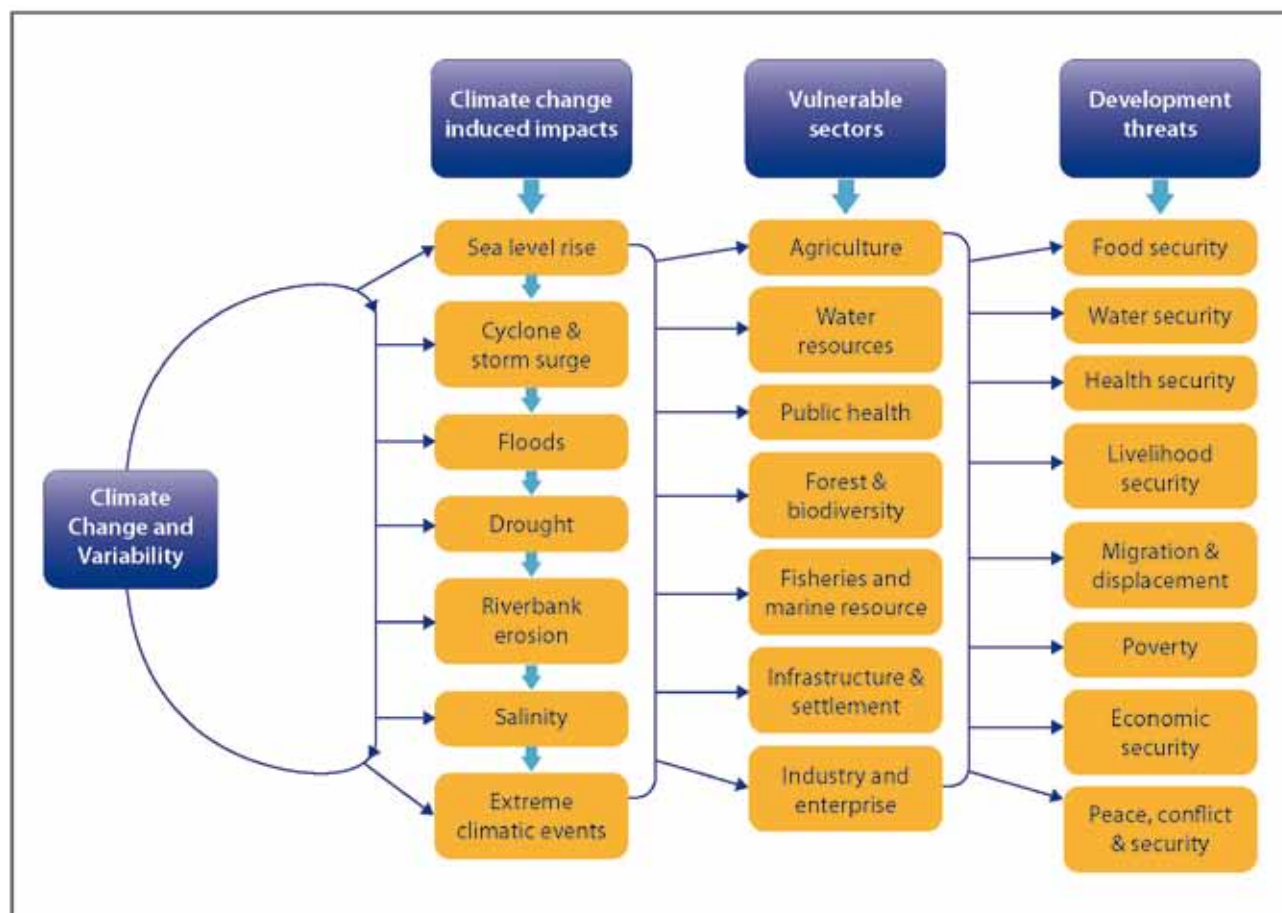
Photo Credit: creativecommons | Bread for the World

Climate-development linkages in Bangladesh

Bangladesh is considered particularly vulnerable to climate change due to a combination of geographic and socioeconomic factors. As previously noted, poverty is widespread. In addition, much of the economy depends on agriculture and natural resources that are highly sensitive to climatic variations, especially the 28% of the population living in coastal areas (Khan et al., 2011). The country is already very exposed to flooding, and sea-level rise is expected to increase the frequency and severity of storm surges (ibid.).

Almost all aspects of development in Bangladesh could be affected by climate change. The Government has raised particular concerns about the vulnerability of agriculture, water resources, health, forests, fisheries, livestock, infrastructure and settlements (Government of Bangladesh, 2010). It is anticipated that there will be huge macroeconomic impacts on, for example, growth, employment, trade, inflation and balance of payments, which need to be further investigated. Figure 4 summarizes the Government's assessment.

Figure 4: Climate change impacts, vulnerability and development linkages



Source: Government of Bangladesh (2010).

Addressing climate change in Bangladesh

The Government of Bangladesh has designated its Ministry of Environment and Forests as the climate change focal point for the United Nations Framework Convention on Climate Change (UNFCCC). This entails preparing national communications, formulating a National Adaptation Programme of Action (NAPA), approving Clean Development Mechanism (CDM) projects, attending international negotiations, and facilitating 'mainstreaming' of climate change at the sectoral level.



Photo Credit: Syeda Sajeda Haider

Several other government agencies also play important roles in Bangladesh's climate response. For example, the Ministry of Finance is responsible for allocating funds for climate change programmes. The Ministry of Planning supports sectoral planning and provides guidance; the General Economic Division of the Planning Commission, under the Ministry, is also working to build institutional capacity to address climate issues in planning. The Economic Relations Department is setting up a multi-donor trust fund to deal with climate change.

The Ministry of Food and Disaster Management identifies disaster-prone areas, ensures disaster preparedness, and works to protect the food supply. Other individual agencies address climate risks within the sectors they oversee – for example, by protecting water supply, helping farmers adapt to new climate patterns, and educating people about health risks.

Underlying this work are several major policy documents, such as the following:

Sixth Five-Year Plan

The Sixth Five-Year Plan acknowledges that it is essential for Bangladesh to prepare for climate change adaptation, and prioritizes several urgent tasks that are to be completed between the 2011 and 2015 fiscal years, in accordance with the Bangladesh Climate Change Strategy and Action Plan (see Annex 4). More broadly, the Government's vision is to eradicate poverty and achieve economic and social well-being of the people. The challenge for Bangladesh is to scale up investments to create an environment suitable for the economic and social development of the country, and to secure the well-being of the people, especially the poorest and most vulnerable groups.

National Adaptation Programme of Action

Bangladesh's NAPA was prepared in 2005 and updated in 2009. It is based on discussions with stakeholders in sub-national and national workshops, and on background papers prepared by six sector-specific working groups on (a) agriculture, fisheries and livestock, coordinated by the Bangladesh Agricultural Research Council; (b) forestry, biodiversity and land use, coordinated by the International Union for Conservation of Nature (IUCN) Bangladesh; (c) water, coastal zones, natural disasters and health, coordinated by the Water Resources Planning Organization; (d) livelihoods, gender, local governance and food security, coordinated by the Bangladesh Institute for Development Studies; (e) industry and infrastructure, coordinated by the Department of Environment; and (f) policies and institutes, coordinated by the Bangladesh Centre for Advanced Studies. The original NAPA in 2005 identified 15 priority activities, including general awareness raising, capacity-building, and project implementation in vulnerable regions, with a special focus on agriculture and water resources. The 2009 update identified 45 adaptation measures, including 18 immediate and medium-term measures.

Bangladesh Climate Change Strategy and Action Plan

The Government of Bangladesh also issued the Bangladesh Climate Change Strategy and Action Plan in 2008, and revised it in 2009. This is a comprehensive strategy and expansion of the NAPA to address climate change, with six thematic areas: (a) food security, social protection and health; (b) comprehensive disaster management; (c) infrastructure development; (d) research and knowledge management; (e) mitigation and low-carbon development; and (f) capacity building and institutional strengthening. Forty-four programmes have been identified within these six thematic areas.



Photo Credit: creativecommons | CGIAR Climate

In addition to these major policy documents, the Government of Bangladesh has led several assessments and planning processes related to climate change. The National Capacity Self-Assessment for implementing the provisions of multilateral agreements, including the UNFCCC and UN Convention to Combat Desertification (UNCCD), launched in 2007, gave capacity-building for climate change a high priority. The assessment's Capacity Development Action Plan identified a package of 15 climate-related actions. Given Bangladesh's vulnerability to frequent natural disasters, the government has also made significant efforts and investments to reduce disaster risk. It drafted the National Plan for Disaster Management (2008-2015) to address disaster risk reduction and adaptation comprehensively. The Government has made significant progress in shifting its focus from traditional 'relief and rehabilitation' to a

disaster risk reduction approach that emphasizes cost-effectiveness. In addition, in 2006, it formulated a Country Framework to mainstream climate risk management and adaptation. The objective of the framework is to establish a mechanism that facilitates the systematic integration of climate change adaptation and risk management into national development planning and implementation over time.

Project findings

Using the project questionnaire, the research team interviewed representatives of 19 organizations in Bangladesh – seven government agencies, six local NGOs and six INGOs – who are either directly or indirectly involved with adaptation activities. In addition, the documents for projects managed by these organizations were analyzed using the portfolio screening criteria.

In the interviews, the single most common response to the question, ‘How do you define adaptation?’ was that it is an adjustment to the impacts of climate change. The second most common response types involved the use of innovative technology to reduce vulnerability. Also noted was that adaptation is an essential part of development, which it is a long-term process, and that it involves reducing vulnerability. Table 1 shows the full range of answers and their corresponding shares of responses.

Table 1: Answers to question, ‘How do you define adaptation? (multiple response)’

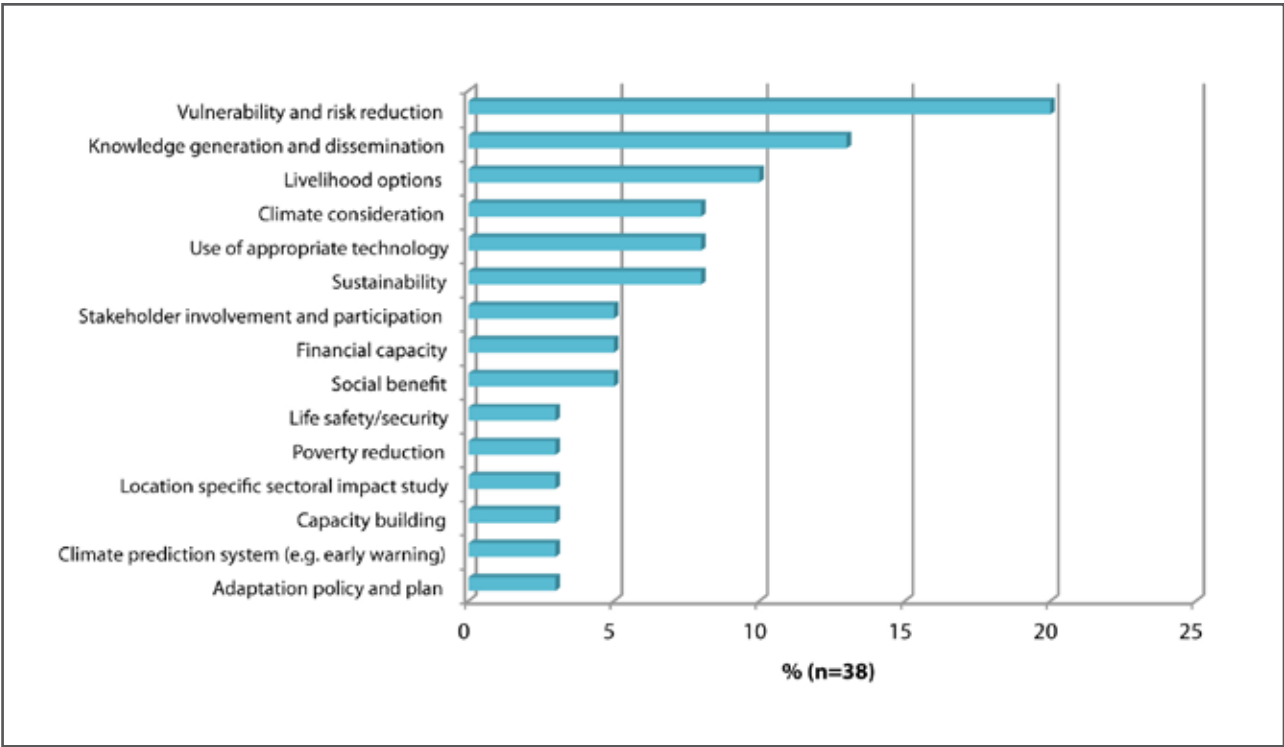
Definition of adaptation	No. of Responses	%
Adjustment to impacts of climate change	8	27.6
Use of innovative technology to reduce vulnerability	6	20.7
Long-term process	3	10.3
Making development climate resilient/smart	3	10.3
Continuous process	2	6.9
Reduction of climate change vulnerabilities	2	6.9
Understanding about climate change	2	6.9
Adaptation policy and plan	1	3.4
Development targeted to cope with climate change	1	3.4
Use of local knowledge	1	3.4
Total	29	100.0

The project team also asked about the key elements of a good adaptation project. The answers were very diverse; the most common response was that vulnerability and risk reduction should be the top priority. Several respondents spoke of the need to generate and share knowledge about climate change in Bangladesh. Figure 5 shows the full range of responses and their frequencies.



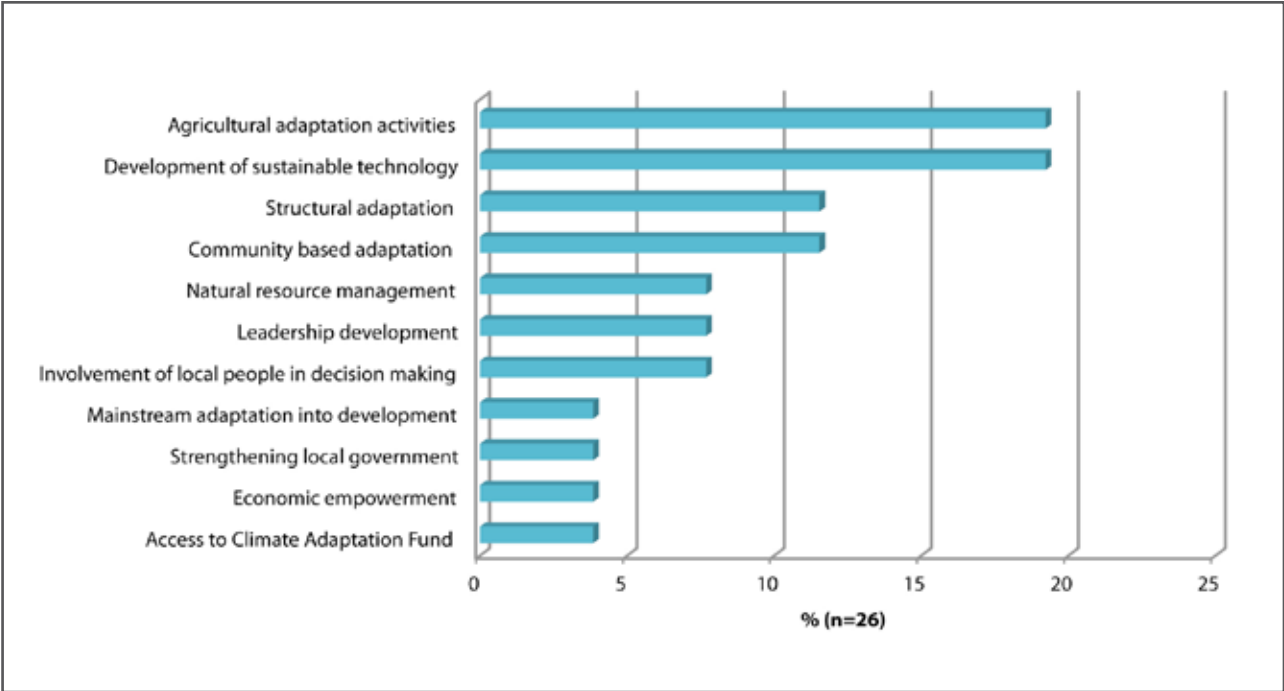
Photo Credit: creativecommons | Matt Freer

Figure 5: Answers to the question, 'What are the key elements of a good adaptation project? (multiple response)'



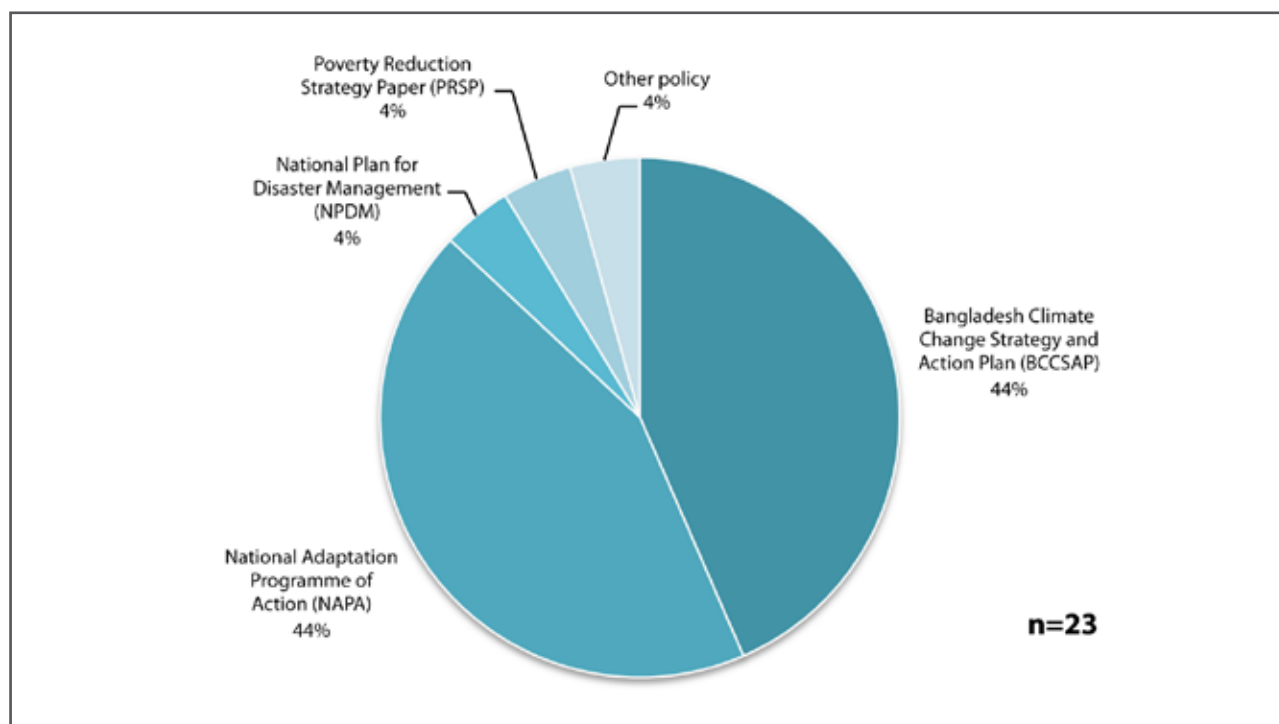
When the team asked about the type of adaptation activities required in Bangladesh to better address the impacts of climate change, the top response was development of sustainable technology and agricultural adaptation activities. The second most-cited priority was to have infrastructure-related adaptation and community-based adaptation activities. Natural resource management, the use of local adaptation technologies and leadership development at the community level were also mentioned. Figure 6 shows the full range of responses.

Figure 6: What types of adaptation activities does Bangladesh need most? (multiple response)



Interview responses indicate that a majority of the climate change adaptation projects are following either the BCCSAP or NAPA for their project planning (Figure 7).

Figure 7: Relevance of Adaptation Projects with Government Policies and Strategies (multiple response)



Project analysis: Distinguishing between adaptation and development

Research on adaptation and development indicates that there is significant overlap between the two, but that there are also activities that lean more toward ‘pure development’ or ‘pure adaptation’. One helpful way to look at this is the framework developed by McGray et al. (2007), which classifies adaptation activities into four categories along a continuum. At one end are projects that ‘address the drivers of vulnerability’, which are very similar to traditional development practices; at the other end are projects that ‘confront climate change’, directly addressing specific climate impacts, such as accelerated sea-level rise.

Other analyses use terms such as ‘adaptation plus development’, where development is ‘climate-proof’, and ‘adaptation as development’, where development is the basis for, and in some cases synonymous with, adaptation, as is the case with much of the work described as community-based adaptation (Ayers and Dodman, 2010). Our review of projects in Bangladesh showed that they can be roughly divided into four thematic areas:

1. **Disaster risk reduction** activities undertaken to reduce communities’ vulnerability to disasters. They include infrastructure-related projects, such as construction of polders, shelters and more climate-resilient homes; as well as non-infrastructure activities, mainly awareness building through early warning systems, billboards, posters, and leaflets with climate messages.
2. **Food security** activities addressing threats to food security due to rising or extreme temperatures, floods, droughts, salination of aquifers, etc. Some examples of these types of activities are increasing agricultural and fisheries production by introducing flood- and saline-tolerant rice varieties, integration of non-rice crops with lower water requirements, and introduction of higher-quality seeds.
3. **Livelihood** activities mainly aimed at diversifying people’s livelihood options and improving their livelihood. This is done mainly by protecting lives, safeguarding assets and ensuring livelihoods during and after disasters. Examples of such activities include homestead gardening and livestock distribution.

4. **Natural resource management** activities, integrating nature conservation and climate change adaptation objectives. The goal is to reduce vulnerability to stresses caused by cyclones, floods, flash floods, water scarcity, food insecurity and waterborne diseases. Examples include mangrove planting, protection of biodiversity, and improving ecosystem productivity.

Most adaptation activities in Bangladesh combine two or more of these themes, which are interrelated. For example, a project working with vulnerable communities that depend on natural resources might combine disaster risk reduction with livelihoods diversification.

Is it useful to distinguish between adaptation and development?

It is clearly important to understand the linkages between climate change and development. Sustainable development can reduce vulnerability to climate change because several factors related to development affect vulnerability, including access to economic, ecological, social and human resources, and the adequacy of institutions, governance and infrastructure (Ayers and Huq, 2009; Dodman et al., 2009; Klein et al., 2007; Huq et al., 2006). No adaptation activity will succeed if people's basic needs are not met first. At the same time, climate change impacts can impede development and threaten the efficacy and sustainability of development investments (Burton and van Aalst, 2004; Klein et al., 2007).

Because of these linkages, it can be very difficult to distinguish between adaptation and development projects. However, they do differ in one fundamental aspect: their ultimate goals. Adaptation aims specifically to reduce vulnerability to climate change, while development works to reduce poverty and improve human well-being. Although optimally, the two goals can be achieved together, there are many examples of the opposite. For example, the introduction of large-scale shrimp farming in the Chokoria Sunderban has brought a significant new income source to local communities, but it has also destroyed 8,500 hectares of mangroves so far. Because mangroves provide important protection from storm surges and coastal flooding, this has exacerbated disaster risks for coastal communities.⁴ Given the risks of working at cross-purposes, we believe that rather than trying to separate adaptation and development, we should focus on creating synergies.



Photo Credit: creativecommons | Aftab Uzzaman

Failing to understand the differences, however, also carries risks. The findings of this study suggest that there is much confusion among practitioners about the relationships and differences between adaptation and development. This not only hinders adaptation project design, but could also create potential problems in securing financing from climate-focused sources such as the Adaptation Fund.

We also found other areas of confusion, most notably gaps between policies and plans, and their implementation. There is a need for more coherence in terms of priorities (places, sectors, strategies), the evaluation of vulnerability and adaptation options for specific communities and systems, and preferred approaches (e.g. disaster risk reduction vs. focus on livelihoods). Our interviews suggest that within the government, there is a need for more collaboration and communication, without

which there can be serious delays in project approval that affect implementation and resource utilization. There is a need for responses coordinated across ministries and agencies. The capacity of line ministries, particularly of the planning wing, needs to be strengthened with enhanced ministerial authority. Decision-making authority related to project approval, revision and extension has to be decentralized. The planning wings of the line ministries have to be empowered to finalize decisions on fund release and recruitment of project staff and procurement. Additionally, staff skills need to be enhanced, and appropriately trained staff need to be kept in their posts for longer periods.

⁴ Gain, P. (2010) 'Monoculture destroys coast and forests'. The Daily Star, 24 February. Dhaka. <http://www.thedailystar.net/suppliments/2010/02/ds19/segment2/forests.html>.

In addition, NGOs and community-based organizations could play more significant roles. As Wiggins (2011) argues, the more they can be involved in the design, planning and implementation of adaptation programmes, the more sustainable those programmes will be in the medium and longer terms.

Conclusion

The project results show that the separation of adaptation from development is somewhat artificial, as climate change is a cross-sectoral issue. Adaptation and development activities are interlinked and, to some extent, even interdependent. Hence, trying to address adaptation without covering basic development needs and building institutional and individual capacities is unlikely to have the desired effect.

Adaptation activities are still in their very early stages in Bangladesh. We have a long way to go before we can evaluate adaptation projects and decide how to define adaptation and its key elements in Bangladesh. This project was an idea-sharing experience; next, we need to engage in a more in-depth exercise with a more practical focus, which starts by acknowledging just how closely adaptation and development are interlinked.

Acknowledgements

BCAS acknowledges the support provided by the Royal Swedish Government through the Swedish International Development Cooperation Agency (Sida) to the Stockholm Environment Institute (SEI) and the Adaptation Knowledge Platform (AKP) for this study. BCAS also extends sincere gratitude to the National Institute for Science and Technology Policy and Strategy Studies (NISTPASS) and to the Asian Management and Development Institute (AMDI) - Vietnam for sharing their ideas. BCAS is thankful to its senior officials for giving their valuable time and input for this project. Sincere appreciation also goes to the Government of Bangladesh and all other interviewees for sharing their views and critical discussions in the field of climate change adaptation and development.

Photo Credit: creativecommons | Sk Kabirul Hashan



References

- Ayers, J. and Dodman, D. (2010) 'Climate change adaptation and development I: The state of the debate'. *Progress in Development Studies*, 10(2). 161–68. doi:10.1177/146499340901000205.
- Ayers, J. M. and Huq, S. (2009) 'Supporting Adaptation to Climate Change: What Role for Official Development Assistance?' *Development Policy Review*, 27(6). 675–92. doi:10.1111/j.1467-7679.2009.00465.x.
- Burton, I. and van Aalst, M. K. (2004) *Look Before You Leap: A Risk Management Approach for Incorporating Climate Change Adaptation in World Bank Operations*. The World Bank, Washington, DC. <http://documents.worldbank.org/curated/en/2004/02/5164412/look-before-leap-risk-management-approach-incorporating-climate-change-adaptation-world-bank-operations>.
- Dodman, D., Ayers, J. and Huq, S. (2009) 'Building Resilience'. 2009 State of the World: Into a Warming World Worldwatch Institute, New York. 151–68.
- Government of Bangladesh (2010) *Bangladesh: Strategic Program for Climate Resilience*. Prepared for the Pilot Program for Climate Resilience. Dhaka. <http://www.climateinvestmentfunds.org/cif/sites/climateinvestmentfunds.org/files/PPCR%205%20SPCR%20Bangladesh%20nov2010.pdf>.
- Huq, S., Reid, H. and Murray, L. A. (2006) *Climate Change and Development Links*. Gatekeeper 123. International Institute for Environment and Development, London. <http://pubs.iied.org/14516IIED.html>.
- Intergovernmental Panel on Climate Change (2012) *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation*. A Special Report of IPCC Working Groups I and II (Field, C.B., 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, eds.). Cambridge University Press, Cambridge, UK, and New York. <http://ipcc-wg2.gov/SREX/>.
- Intergovernmental Panel on Climate Change (2007) *Climate Change 2007: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. M. L. Parry, O. F. Canziani, J. P. Palutikof, P. J. van der Linden, and C. E. Hanson (eds.). Cambridge University Press, Cambridge, UK.
- Khan, A. E., Xun, W. W., Ahsan, H. and Vineis, P. (2011) 'Climate Change, Sea-Level Rise, & Health Impacts in Bangladesh'. *Environment: Science and Policy for Sustainable Development*, 53(5). 18–33. doi:10.1080/00139157.2011.604008.
- Klein, R. J. T., Eriksen, S. E. H., Naess, L. O., Hammill, A., Tanner, T. M., Robledo, C. and O'Brien, K. L. (2007) *Portfolio Screening to Support the Mainstreaming of Adaptation to Climate Change into Development Assistance*. Working Paper 102. Tyndall Centre for Climate Change, Norwich, UK. <http://tyndall.uea.ac.uk/content/portfolio-screening-support-mainstreaming-adaptation-climate-change-development-assistance>.
- McGray, H., Hammill, A., Bradley, R., Schipper, E. L. F. and Parry, J.-E. (2007) *Weathering the Storm: Options for Framing Adaptation and Development*. World Resources Institute, Washington, DC. <http://www.wri.org/publication/weathering-the-storm>.
- Ribot, J. C., Najam, A. and Watson, G. (1996) 'Climate variation, vulnerability and sustainable development in the semi-arid tropics'. *Climate Variability, Climate Change And Social Vulnerability in the Semi-Arid Tropics*, J. C. Ribot, A. Rocha Magalhães, and S. Panagides (eds.). Cambridge University Press, Cambridge, UK, and New York.
- Roemer, J. (2006) 'Review essay, "The 2006 world development report: Equity and development"'. *Journal of Economic Inequality*, 4(2). 233–44. doi:10.1007/s10888-006-9023-y.
- Sen, A. (1999) *Development as Freedom*. Knopf, New York.
- Sen, A. (1985) *Commodities and Capabilities*. North-Holland, Amsterdam and New York.

Sen, A. (1979) 'Equality of What?' Presented at the The Tanner Lecture on Human Values, Stanford University, May 22, 1979, Stanford, CA, US. <http://tannerlectures.utah.edu/lectures/documents/sen80.pdf>.

Smit, B. and Pilifosova, O. (2001) 'Adaptation to climate change in the context of sustainable development and equity'. Climate Change 2001: Impacts, Adaptation and Vulnerability: Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change, J. . J. McCarthy, O. F. Canziani, N. Leary, D. . J. Dokken, and K. S. White (eds.). Cambridge University Press, Cambridge, UK. 877–912.

The World Bank (2006) World Development Report 2006: Equity and Development. Washington, DC. <http://go.worldbank.org/S6I5RIYIJ0>.

Todaro, M. P. (2000) Economic Development. 7th ed. Addison-Wesley, Boston.

United Nations Development Programme (2010) The Real Wealth of Nations: Pathways to Human Development. Human Development Report 2010 – 20th Anniversary Edition. New York. <http://hdr.undp.org/en/reports/global/hdr2010/>.

Wiggins, S. (2011) Adaptation United: Building Blocks from Developing Countries on Integrated Adaptation. Tearfund, Teddington, UK. http://tilz.tearfund.org/webdocs/Tilz/Research/Adaptation_United_web.pdf.

World Commission on Environment and Development (1987) Our Common Future. United Nations, New York. <http://www.un-documents.net/wced-ocf.htm>.



Photo Credit: Syeda Sajeda Haider



Photo Credit: creativecommons | Greg Walters

Case Study 2 Vietnam

Natalie Tostovrsnik
Ngo Cong Chinh
Bach Tan Sinh
Vu Canh Toan

Summary

How can we determine the difference between climate change adaptation and traditional development? This question has challenged donors invested in these issues for over a decade. To inform this debate, this study conducted interviews with 14 project managers in government and non-government organizations and reviewed their project documentation to better understand: (1) how adaptation is understood by government agencies, donors and others who are implementing projects in Vietnam; (2) what is a useful analytical framework for determining whether a project will facilitate adaptation over the medium to long term; and (3) how adaptation projects in Vietnam use adaptation labels.

The study found that adaptation practitioners could readily identify a range of similarities between adaptation and development, but found it harder to identify the differences. In general, government stakeholders tended to have a more technical understanding of adaptation issues, with an emphasis on disaster management and less of an understanding of developmental links and other social elements. Non-government stakeholders tended to prefer development tools and had a better understanding of the issues and challenges associated with distinguishing between adaptation and development. Researchers working in government institutes identified stakeholder coordination as one of the most important aspects for adaptation in Vietnam.

An analysis of project documentation found that government-led adaptation projects are increasingly focusing on integration and capacity-building. In general, most projects, particularly non-government ones, tended to focus on multiple interrelated issues and use several tools simultaneously. They also tended to use 'soft options' due to gaps in climate change knowledge. A growing emphasis on 'mainstreaming' adaptation was also identified, with a number of interviewees saying it was a more effective, low-risk and holistic way of addressing climate change issues.

The ability to distinguish between adaptation and development requires further consideration, particularly as it is anticipated that climate change will increasingly become integrated into development and other areas. Thinking in terms of an adaptation-development continuum can help in understanding and categorizing climate change adaptation investment. The application of that approach in this study found that over half of the projects reviewed are 'building response capacity' to develop the foundations for climate change action.

Introduction

Climate change adaptation is a broad term used to describe adjustments in natural or human systems in response to actual or expected climate change, with the purpose of reducing or avoiding negative impacts and/or exploiting new opportunities. Adaptation is a process, not an outcome (IPCC, 2007).

Vietnam is widely recognized as very vulnerable to climate impacts and very much in need of international support for adaptation. This is due to factors such as the country's already strained natural resources, the nature of its population distribution, poverty, and high exposure to sea-level rise and disasters.

In response, a growing number of adaptation projects have been launched in Vietnam. The largest is the National Target Programme in Response to Climate Change, which began in 2008 and focuses on mitigation, adaptation and cross-cutting issues. In addition, the well-established NGO community is increasingly undertaking adaptation projects, with an emphasis on mitigating impacts for the most vulnerable people.

A critical question

As adaptation projects have begun to proliferate, there has been extensive discussion about what adaptation is and how it differs from traditional development. There is no simple answer, as the two are closely related, and adaptation spans a broad range of activities. However, the stakes of understanding the difference are high. Under the United Nations Framework Convention on Climate Change (UNFCCC), developed countries have agreed to provide financing for adaptation to developing countries above and beyond official development assistance (ODA), but they want to ensure that the additional funds are used specifically to reduce vulnerability to climate change, and not just for general development (Fankhauser and Burton, 2011). Although the wisdom of such strict differentiation has been questioned (*ibid.*), the lack of a clear distinction has been identified as one of the reasons why adaptation resources have grown far too slowly to meet adaptation needs (McGray et al., 2007).

This study explores how adaptation is understood by governments, donors, non-governmental agencies (NGO), and others who are implementing adaptation projects, and assesses whether those projects are actually contributing to building adaptive capacity over the medium to long term, or whether they are mislabelled either to secure funding or due to a lack of understanding of what adaptation means. A similar study has been conducted in Bangladesh as part of this project. Both studies are compared in the synthesis report earlier in this publication.

The study asks three specific questions:

1. Are development projects being improperly labelled as adaptation projects?
2. Does the language used by project managers reflect a greater understanding of what is required to reduce risk and facilitate long-term adaptation?
3. What is a useful analytical framework for determining whether a project will facilitate adaptation over the medium to long term?

Methodology

The project began with a literature review to understand the development/adaptation debate, including a review of theory as well as reviews of adaptation activities. Two learning sessions were held with the research team to establish a shared understanding of key topics and develop a common list of definitions to use as a basis for the study.

The study aimed to capture the diversity of projects and organizations working on adaptation in Vietnam. This was mostly achieved in the interviews with NGOs, but obtaining interviews with the government, research institutes and donors was more difficult. Altogether, 14 managers of adaptation projects were interviewed: seven from international NGOs, one from a Vietnamese NGO, three from government research institutes, two from national government agencies and one from an international donor. The interviews were conducted in November 2011. To facilitate open discussion, interviewees were assured of confidentiality; thus, they are not identified here.

To ensure consistency with the Bangladesh study, researchers in both projects used the same list of questions developed to guide semi-structured interviews with stakeholders. The topics included defining key terms, adaptation and development similarities and differences, and challenges associated with conducting adaptation projects and mainstreaming (see Annex 5 for the full list of questions).



Photo Credit: creativecommons | Gary Cycles

Interviews were complemented by a review of the documents for 12 of the interviewees' projects (documents for two of the research institute projects could not be obtained). This involved documenting information such as key project areas, objectives, methods and activities, and analyzing them based on themes and key areas of work (see Annex 6 for the full analytical framework). In addition, an analysis was conducted on how key terminology was used in project documents, with the aim of determining organizational use and understanding of adaptation concepts (see Annex 7 for the analytical framework). Project documentation ranged from traditional project documentation to conference abstracts and reports. Hence, the quality, length and relevance of the documents varied. This made the analysis of language and project contribution to medium- and long-term adaptation difficult. It should also be noted that the small sample size, combined with the difficulties in accessing government officials and researchers, limits the ability of this study to draw strong conclusions.

Literature review

There are multiple definitions of adaptation, which are used in different ways to serve the purposes of different actors involved in climate change (Sterrett, 2011). The IPCC (2007) defines adaptation as 'adjustment in natural or human systems in response to actual or expected climate stimuli or their effects, which moderates harm or exploits beneficial opportunities. Adaptation is a process, not an outcome.' Adger et al. (2005) list three cornerstones of adaptation: 'Reduce the sensitivity of the system to climate change; alter the exposure of the system to climate change; and increase the resilience of the system to cope with changes.'

Adaptation has traditionally been viewed as a task for governments, involving technological measures such as dams, dykes and early warning systems (McGray et al., 2007). These 'hard' adaptations have often been preferred over 'soft' behavioural, institutional or regulatory measures, as 'hard' adaptations are more visible, identifiable, and easier to appraise, and often have lower transaction costs (Fankhauser and Burton, 2011).

To be effective, adaptation measures need to suit local conditions and address non-climate factors that also contribute to climate change vulnerabilities. This can be challenging, as there are high levels of uncertainty in specific local-level predictions, which can be amplified when integrating solutions across spatial and temporal scales (Ranger et al., 2010; Klein et al., 2007). One of the major criticisms of technological approaches to adaptation is that they do not address the intricate links between adaptation and other socio-economic factors such as economic growth and development. Without consideration of these relevant social or environmental processes, adaptation projects can become maladaptive and/or cause inequities (Klein et al., 2007).

Todaro (2000) defines development as ‘the process of improving the quality of all human lives which consists of three equally important aspects: raising people’s living standards in terms of their incomes and consumption levels; creating conditions conducive to the growth of people’s self-esteem through the establishment of social, political, and economic systems/institutions; increasing people’s freedom to make their choices in terms of consumer goods and services’.

While some losses to climate change are due to calculated risk, residual risks and maladaptation, many are caused by under-development and the deficiency of choice. This is why the poorest people are often the most severely affected by climate change, and why the economic growth of developing countries is more severely affected by annual temperature spikes than that of developed nations. Much remains to be learned about how development factors combine to affect vulnerability (Burton, 2009; Fankhauser and Burton, 2011), and what kinds of development are the most effective at reducing it. This is a notable gap, as some economic development activities clearly can actually increase vulnerability, such as accelerating development in high-risk areas (e.g. flood zones) or tying livelihoods to climate-vulnerable products such as water-intensive crops (Bowen et al., 2011). Tools such as ‘mainstreaming’ aim to prevent these perverse outcomes.

Mainstreaming refers to the integration of adaptation objectives, strategies, policies, measures or operations such that they become part of national and regional development policies, processes and budgets at all levels and stages (UNDP, 2005). Generally, mainstreaming can be designed to achieve two things: (1) ‘climate-proof’ existing projects and assets to reduce their exposure to climate change, and ensure they do not contribute to vulnerabilities; or (2) ensure that future projects and strategies are consciously aimed at reducing vulnerability by including priorities that are critical to successful adaptation (Klein et al., 2007).

Although there is increasing support for mainstreaming, there are still challenges. Mainstreaming at a local level requires a high level of understanding of the social and environment context that contributes to poverty, and how conflicts can arise in situations where poverty reduction will not clearly lead to vulnerability reduction (Klein et al., 2007).

Photo Credit: creativecommons | Swedish International Development Cooperation Agency

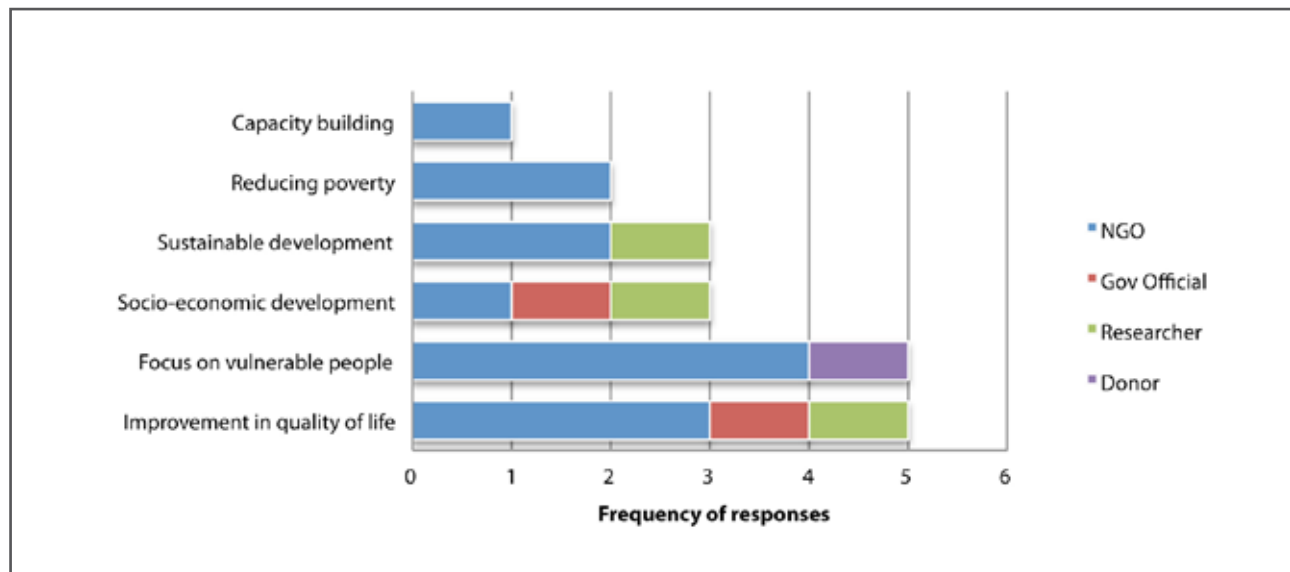


Findings

Views of adaptation and development

When interviewees were asked how they defined development, most provided quite general responses: 26% (5 respondents) felt that development was the improvement in people's quality of life. NGOs had the most in-depth understanding of development and emphasized the importance of focusing on vulnerable people. Government officials had more difficulty discussing the topic, as they tended to be from technical disciplines. Figure 8 shows common themes in stakeholder definitions of development.

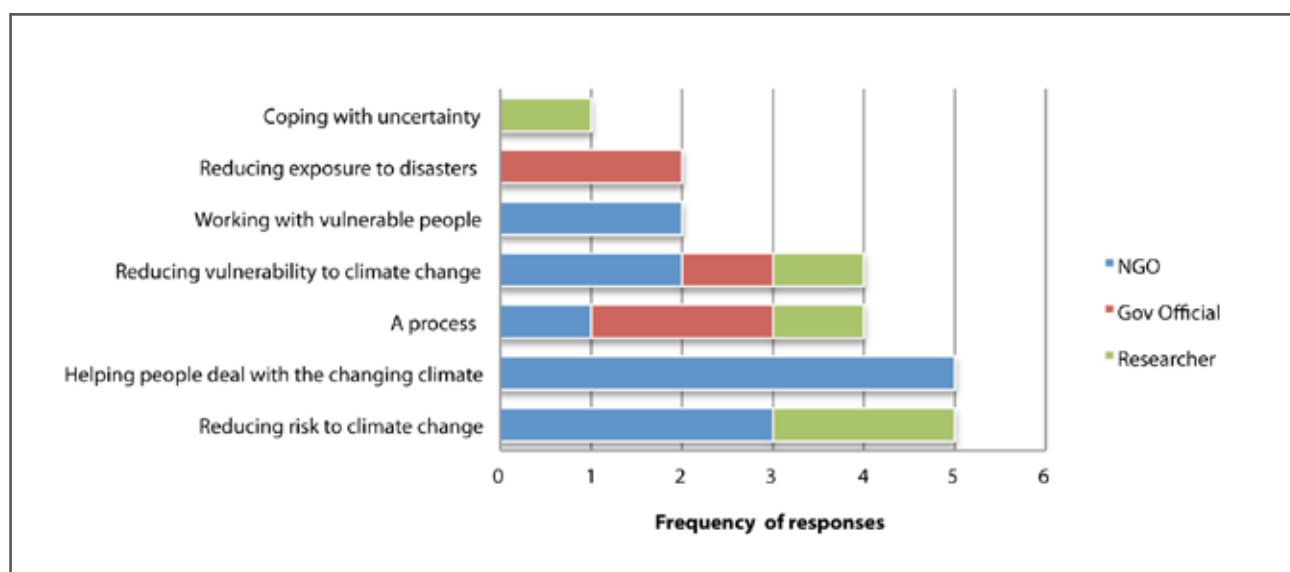
Figure 8: Stakeholder definitions of development.



When interviewees were asked to define adaptation, 60% of researchers (5) and 15% of NGO staff (2) said something to the effect of, 'It reduces the risk to climate change'. Half of the NGO staff, and the donor, commented that adaptation focuses on vulnerable people.

The two government officials made very close linkages between adaptation and disaster management. Common themes in the definitions of adaptation are shown in Figure 9.

Figure 9: Stakeholder definitions of adaptation.



Most of the project documents, meanwhile, described activities commonly associated with adaptation, but did not explain what adaptation is or how the activities specifically contributed to reducing the risk to climate change.

When questioned about the similarities and differences between development and adaptation, interviewees found similarities much easier to identify than differences. As shown in Figure 10, some stakeholders said they felt that adaptation was a component of development (31%, 8 respondents) while others failed to see any difference (12%, 3). One interviewee stated,

‘There is no such thing as adaptation, just development with a climate change focus.’

Figure 10: Stakeholder comments on the relationship between adaptation and development.

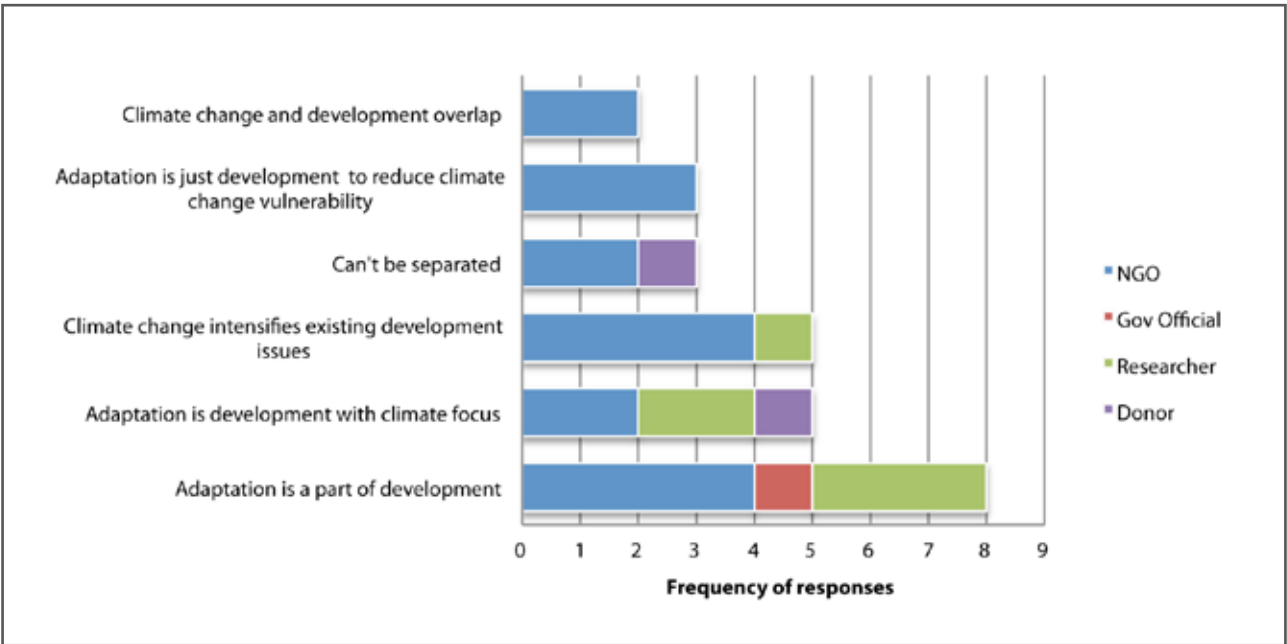
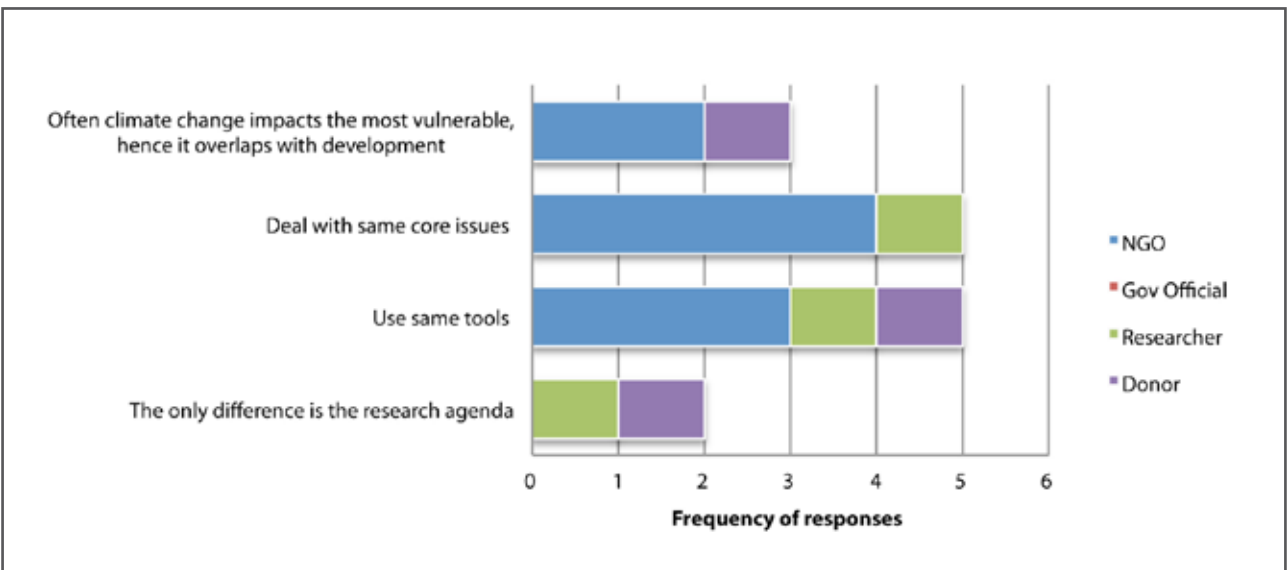


Figure 11 demonstrates why people felt there was a strong relationship between the two areas. Several stakeholders noted that they use the same tools (33%, 5) and address the same core issues (33%, 5) while some focused on the close link between adaptation and vulnerable people – who are usually the target of development work (20%, 3).

Figure 11: Stakeholder reasoning for the close relationship between adaptation and development.



The most well-considered responses regarding the relationship between adaptation and development came from stakeholders in NGOs, whose organizations had prepared documents exploring what constitutes adaptation and how it aligns with development work (some more in-depth than others). While this depth of organizational understanding was reflected in interviews, however, it was less obvious in the project documentation.

The researchers in government institutes were also able to engage in the debate and provide well-thought-out ideas about adaptation versus development. Government officials tended to have less developed ideas, particularly with regard to development.

Use of adaptation labels



Photo Credit: creativecommons | Simon & Vicki

When asked about the eligibility of projects for climate change adaptation funding, three NGO project managers felt that it would be easy to reframe development projects to emphasize climate change elements. For example, they said:

'It is pointless saying adaptation or development; it is just a way of getting funds. If you twist most development projects, you can make them into climate change.'

'A lack of guidelines that determine what adaptation is makes it easier for many projects to access climate change funds.'

Two NGO interviewees felt that the evolution of some development projects into adaptation was a reflection of an increased knowledge of climate risk.

'We did adaptation for many years; we just didn't have a label for it. Now we have the vocabulary and understanding to make what we are doing more obvious.'

Some NGO interviewees were uncomfortable with others labelling their project as adaptation, as they felt adaptation was too difficult to demonstrate/evaluate or because the original objectives were development-based. For example, one said:

'I am not sure that the project would have looked the same if it had been based on detailed climate change objectives and was more informed by climate change data.'

Challenging nature of adaptation work

To delve deeper into the perceived differences between adaptation and development, interviewees were asked about what made adaptation more challenging than 'standard development'.

As shown in Figure 12, some interviewees felt that adaptation was challenging due to a lack of existing models (12%, 4), difficulties in evaluating impact (9%, 3) and the complexity of climate change topics (9%, 3). They also cited the intangible nature of adaptation; the long time-frame for climate change; difficulties in distinguishing climate impacts from unrelated development problems (e.g. the extent to which worsening floods are due to climate change and not land-use changes or disasters from 'normal' weather variability); and most of all, issues with climate change data – which half of the interviewees cited as a problem. Researchers said that the poor coordination of government ministries responsible for adaptation was their greatest challenge.

Figure 12: Challenges of working in adaptation identified by stakeholders.

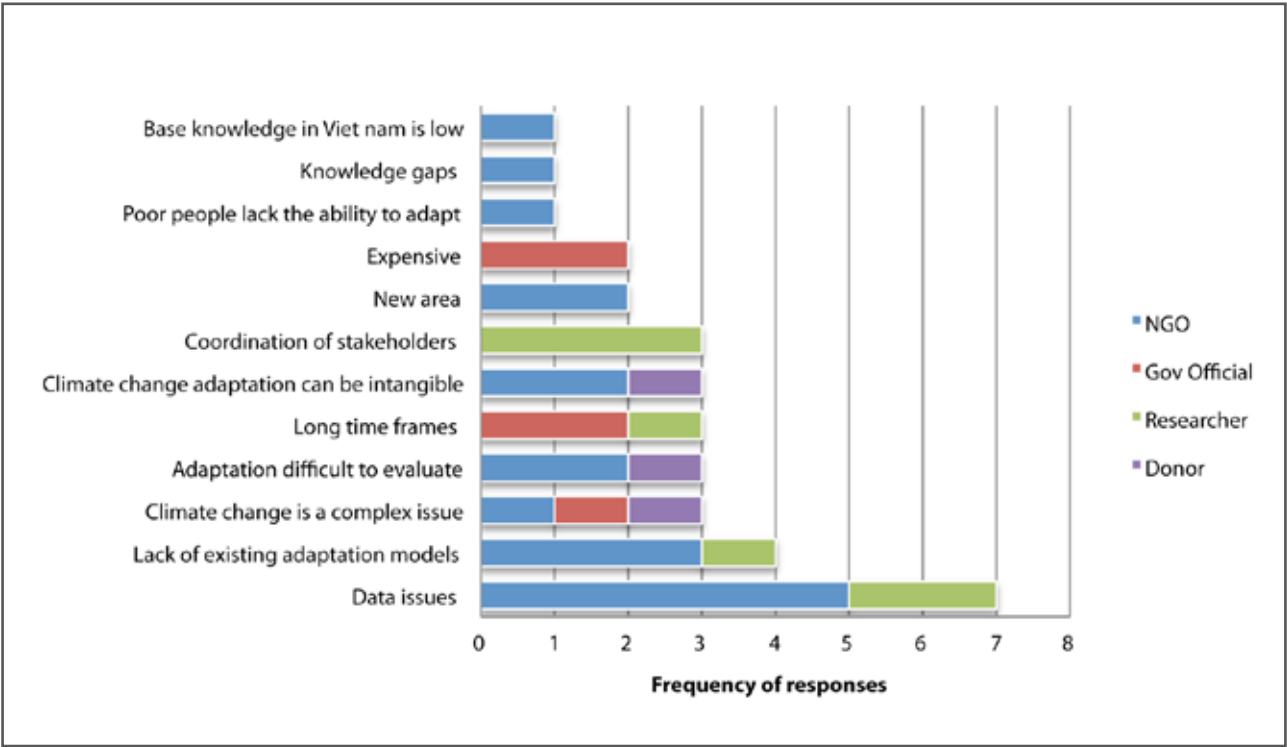
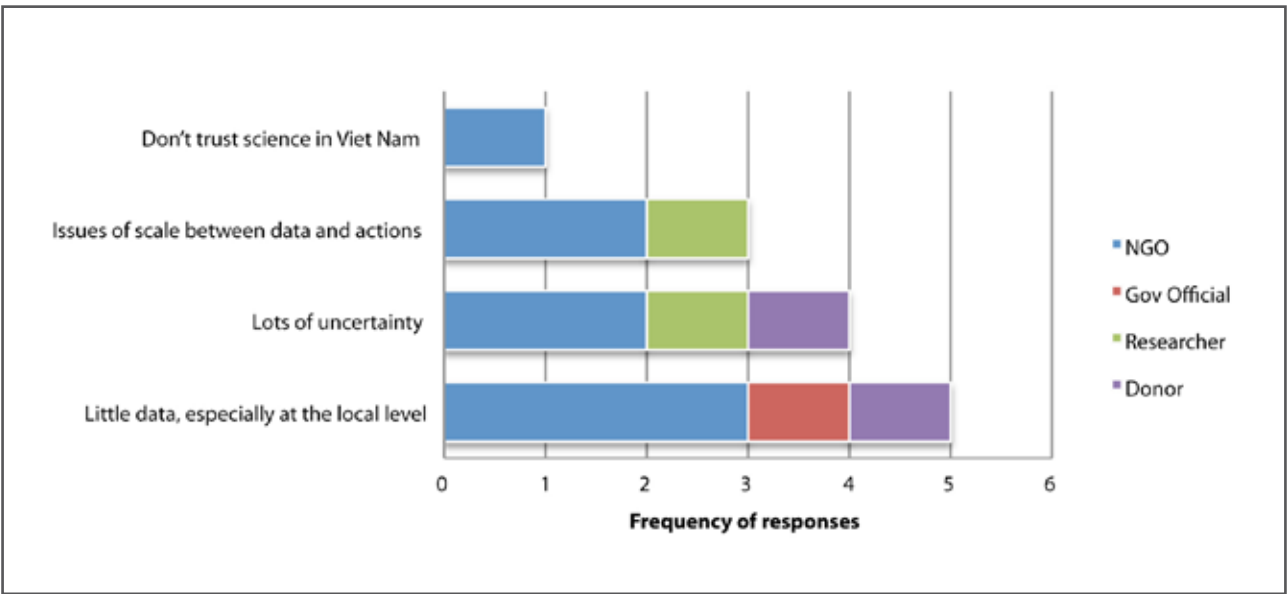


Figure 13 delves deeper into the data challenges identified by the interviewees. The most widely cited problem was the limited amount of specific, local-level climate data (38%, 5). Three of the NGO project managers said these data issues had led them to opt for ‘soft’ and/or ‘no-regrets’ measures, as they felt that knowledge gaps made it difficult to develop strategies to directly target climate change issues without the risk of maladaptation.

Figure 13: Data issues associated with adaptation work, as identified by stakeholders.



Stakeholders were also asked what they considered as their lessons for adaptation; the top responses are shown in Figure 14.

Figure 14: Lessons for adaptation, as identified by stakeholders.

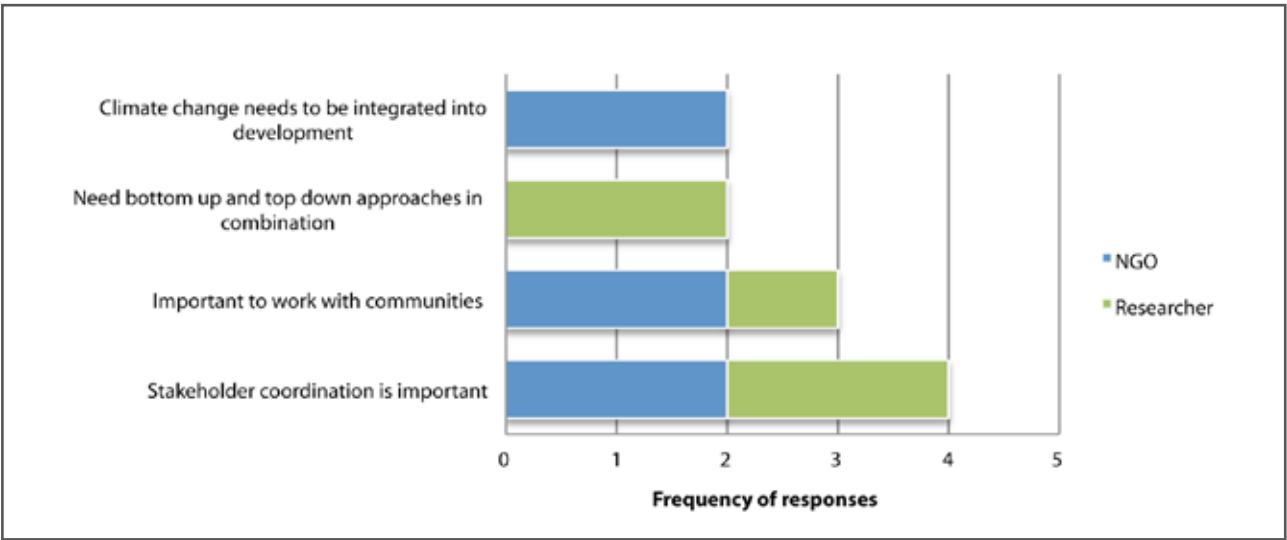


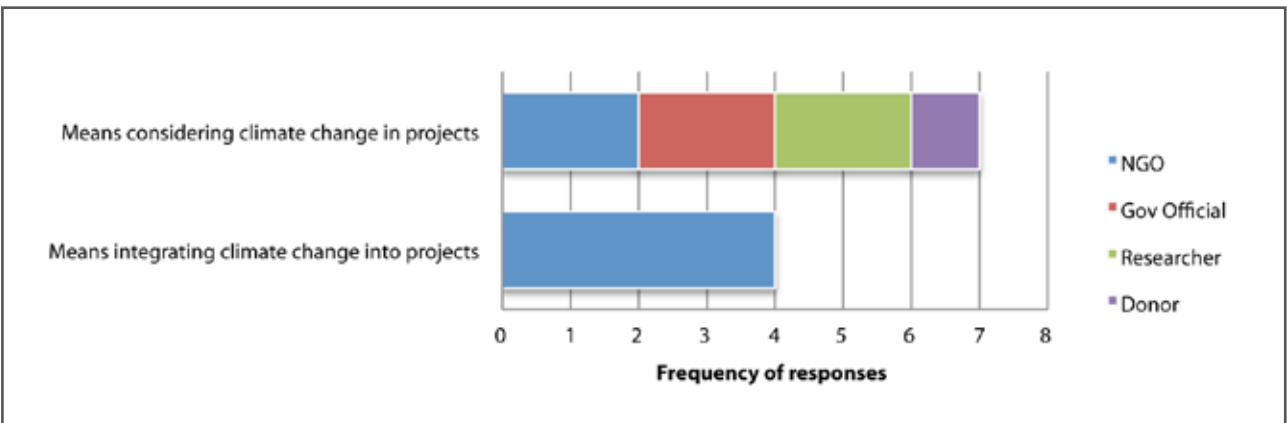
Photo Credit: creativecommons | Jectre

Mainstreaming

To address some of the data issues associated with adaptation, eight interviewees said they had integrated or 'mainstreamed' climate change into existing programmes rather than have it as a stand-alone activity, while two others opted for climate-proofing.

Interviewees tended to define mainstreaming as the 'consideration of climate change factors in projects' (64%, 7). Climate-proofing was either viewed as the same as mainstreaming, or as the 'integration of climate change factors into projects'. The term mainstreaming was much more commonly used and understood compared with climate-proofing.

Figure 15: Stakeholder definitions of mainstreaming.

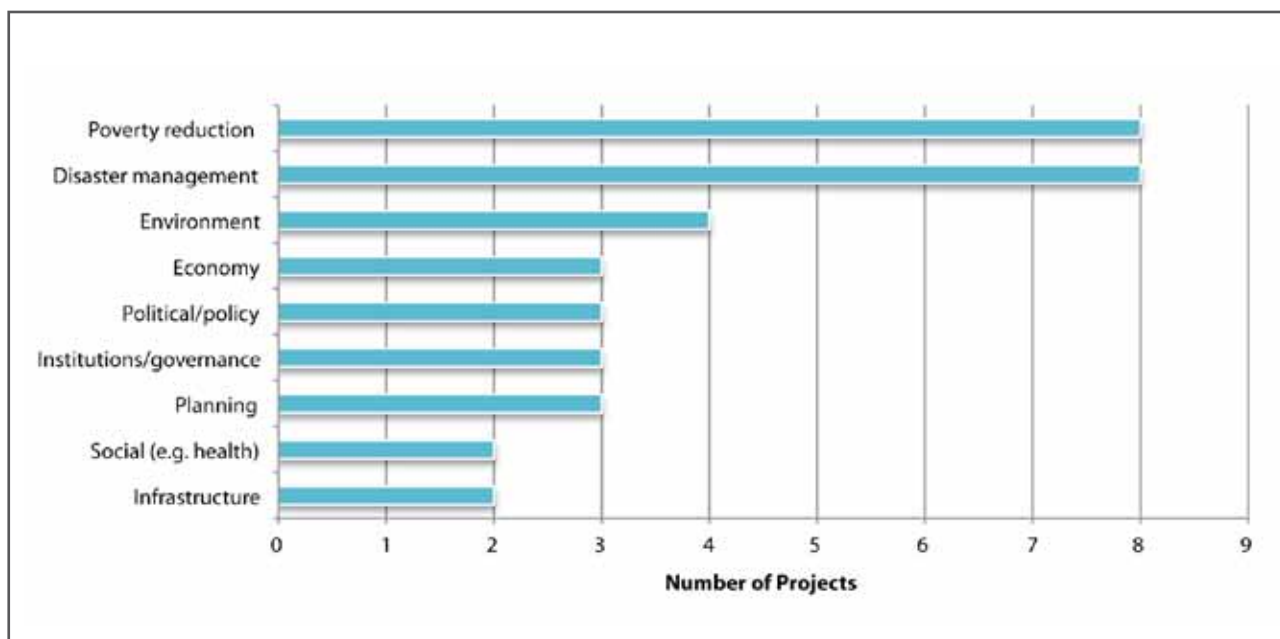


Project focus areas

Along with adaptation, the main focus areas of the projects reviewed in Vietnam were:

- *Poverty reduction* (22%, 8), with climate change viewed as a contributing factor to poverty issues such as threatened livelihoods;
- *Disaster risk management* (22%, 8), with the main focus on vulnerable people's exposure to water-based disasters, which are becoming more intense and frequent as a result of climate change; and,
- *Environmental management* (11%, 4), with the main focus on protecting valued natural resources and biodiversity, which are increasingly under threat from climate change.

Figure 16: Core focus areas of reviewed projects

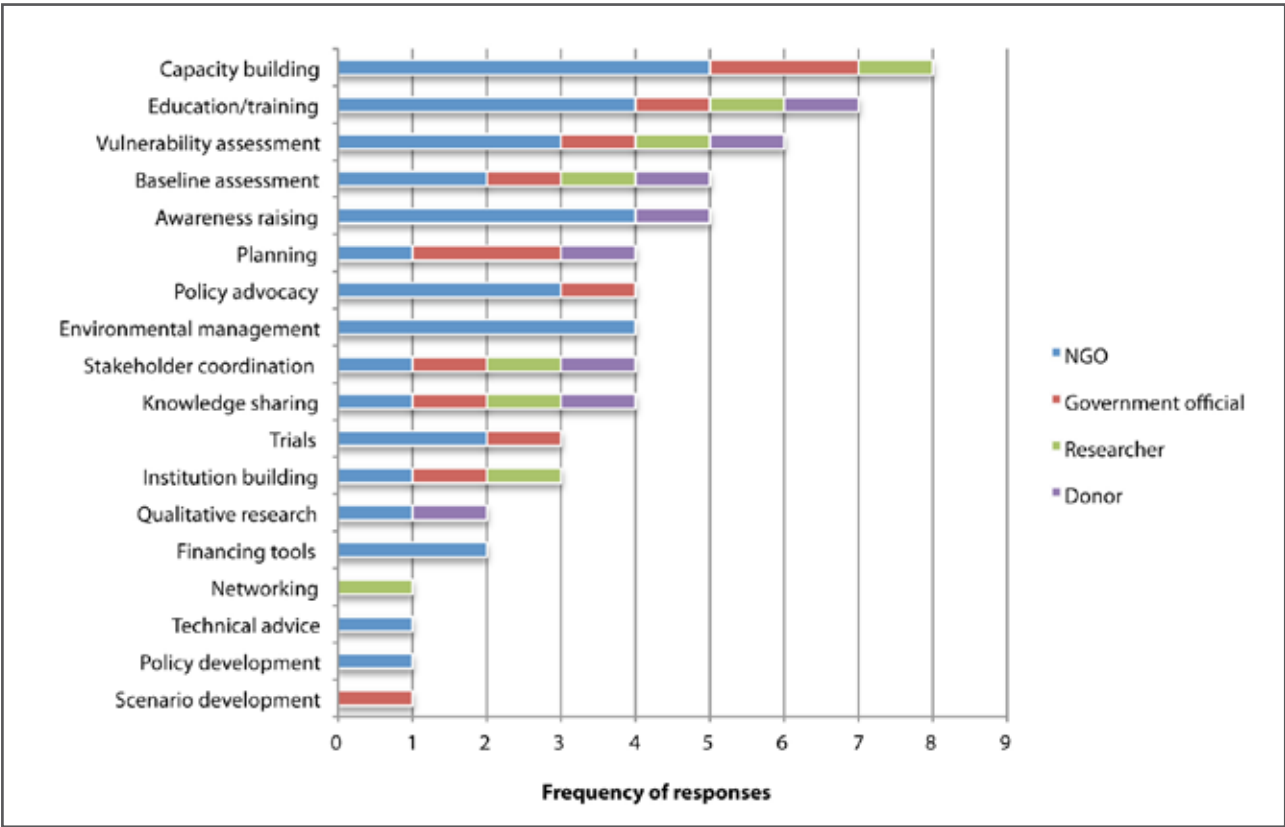


All but one of the NGO project managers and all of the government institute researchers emphasized the importance of community action and engagement. Researchers also emphasized the importance of stakeholder coordination, particularly across ministries. Figure 17 shows the key methods used in the projects; most projects used a range of methods.



Photo Credit: creativecommons | EU Humanitarian Aid and Civil Protection

Figure 17: Key methods used in the projects reviewed.



Language

The review of the language used in project documentation found that very few explained the concepts they were using: climate change, adaptation, vulnerable/vulnerability, development, resilience, poverty, etc. Government project documents tended to explain terms and topics in more detail than non-government documents. However, as previously noted, the documents did not reflect the level understanding of those terms that was evident in the interviews with stakeholders. Figure 18 shows the most frequently used terms in project documents.



Photo Credit: creativecommons | EU Humanitarian Aid and Civil Protection

Figure 18: Most frequently used terms in project documents.

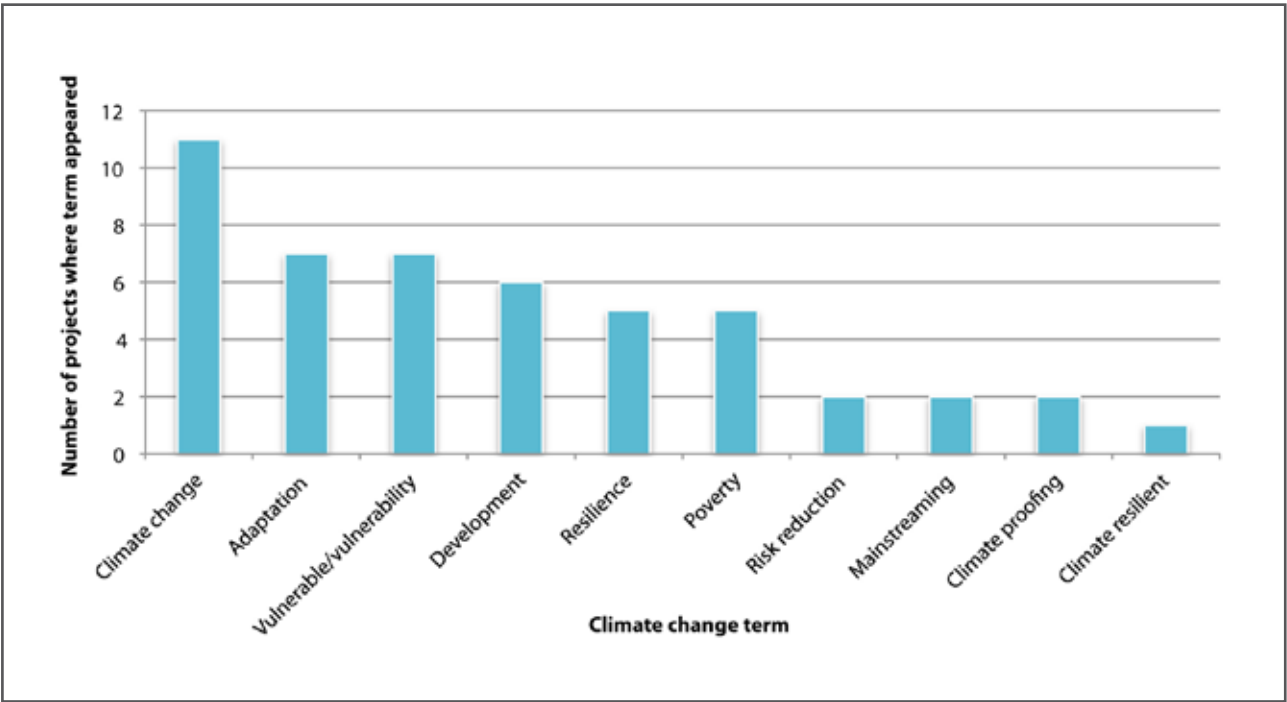
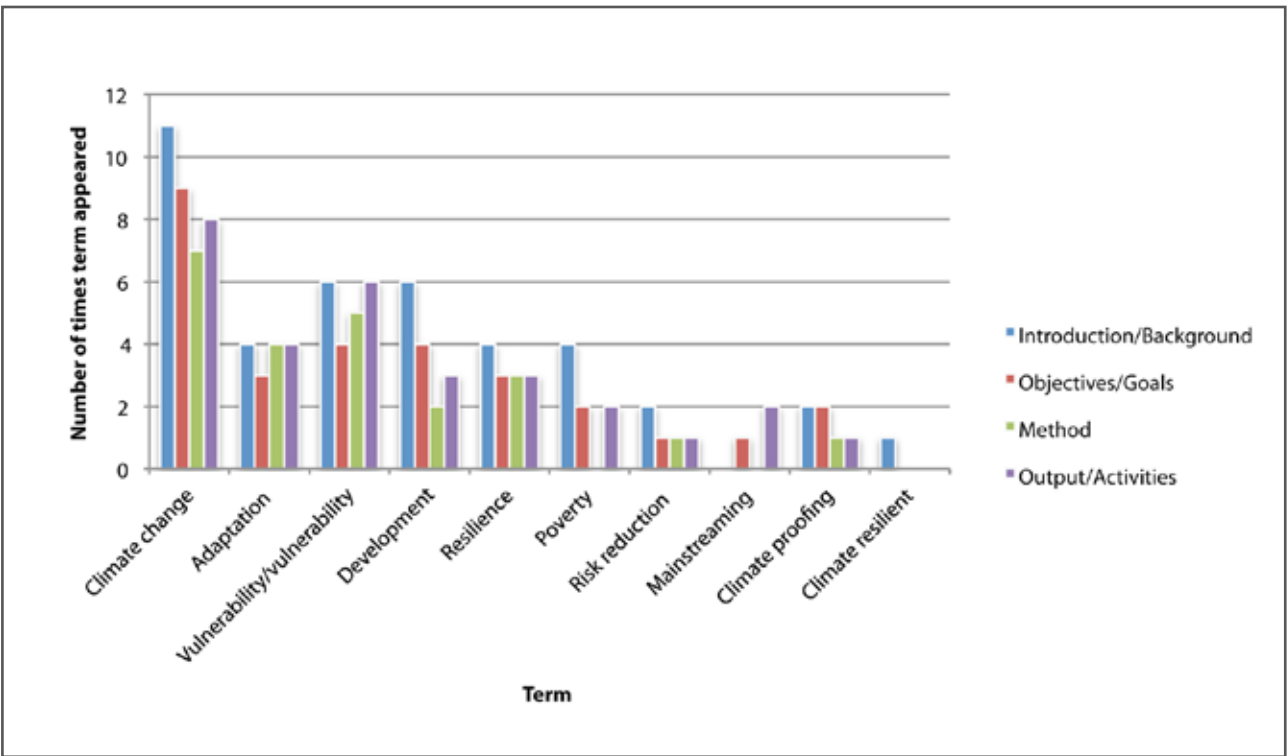


Figure 19 shows the locations in the project documents in which the relevant terms were found; climate change terminology was primarily found in the introductions and background sections.

Figure 19: Location of climate change terms in project documents.



Discussion

How is adaptation understood by those implementing the projects?

Although our sample was small, we found distinct patterns in how project managers understood adaptation and development. Government stakeholders – and their project documents – emphasized technical solutions to adaptation. This is consistent with what Resurreccion et al. (2008) note about Southeast Asia:

'Adaptation is understood as primarily a technical means with which to reduce and minimize the impact of climate change rather than as a complex set of responses to existing climatic and non-climatic factors that contribute to people's vulnerability.'

NGOs tended to emphasize vulnerable people and 'soft' approaches in their understanding of adaptation. This was also reflected in the analysis of project documentation, with 7 of the 8 NGO projects having least one poverty alleviation component. This fits with Fankhauser and Burton's (2011, p.15) finding:

'Institutions specializing on capacity building or community-based adaptation, such as NGOs, are more likely to emphasize softer and often more cost-effective adaptation.'

Two of the three government researchers noted that adaptation required improved coordination and governance, particularly considering the lack of clear responsibility across ministries and the use of top-down and bottom-up approaches together.

Overall, interviewees were able to identify similarities between adaptation and development, but found it much more challenging to name differences. Some commented that the two areas should not be distinguished, but rather integrated, and that this was being reflected in their organizations' use of mainstreaming techniques. As previously noted, several NGO staff said a lack of reliable climate data had led them to focus on 'soft' and no-regrets activities. Several also said they had difficulties evaluating the impacts of adaptation projects.



Photo Credit: creativecommons | Christopher Schoenbohm

Are projects being inappropriately labelled as adaptation?

Re-labelling programs as adaptation for fund eligibility was identified as being relatively simple. However, none of the projects reviewed seemed to be using adaptation funds for non-adaptation activities, even though their emphasis on adaptation had increased over time. In some NGO cases, projects had evolved to incorporate specific climate change activities. Some projects preferred that the project not be identified as a climate change or adaptation project, due to challenges associated with evaluation, or because adaptation was not the original objective of the project.

As there is currently no analytical tool to determine the extent to which a project is contributing to adaptation versus development, these comments are based on subjective analysis. This task is challenging, as it can therefore be difficult to separate adaptation decisions or actions from actions triggered by other social or economic events (Adger, 2005). More information on the challenges of this task is provided in the section on study challenges.

What is a useful analytical framework for determining whether a project will facilitate adaptation over the medium to long term?

To assist in understanding the adaptation projects underway in Vietnam, a framework developed by McGray et al. (2007) has been applied to the projects reviewed in this study. In this framework, adaptation is seen as a continuum that can be roughly divided into four types of adaptation efforts, ranging from “pure” development activities to explicit adaptation measures. This tool can be useful in assisting donors in categorizing projects and making informed investment decisions.

McGray et al. (2007) identify adaptation as a spectrum ranging from projects which:

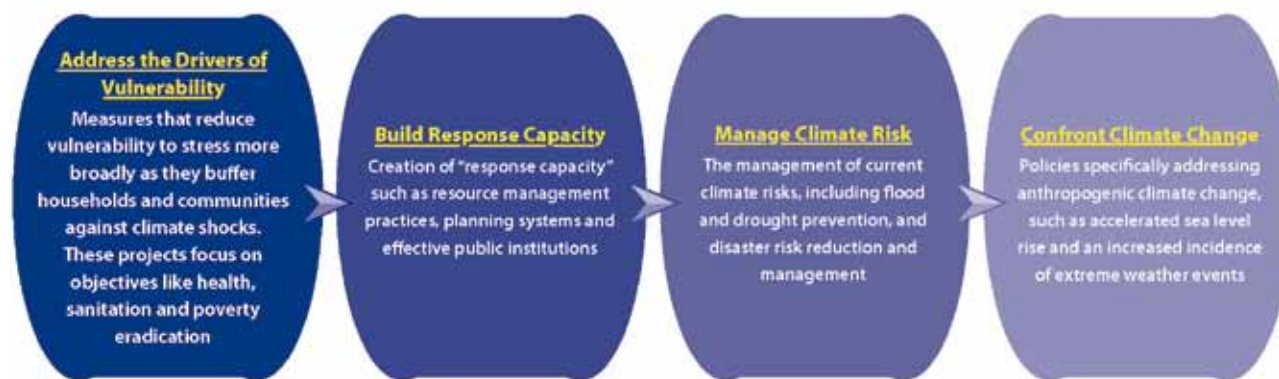
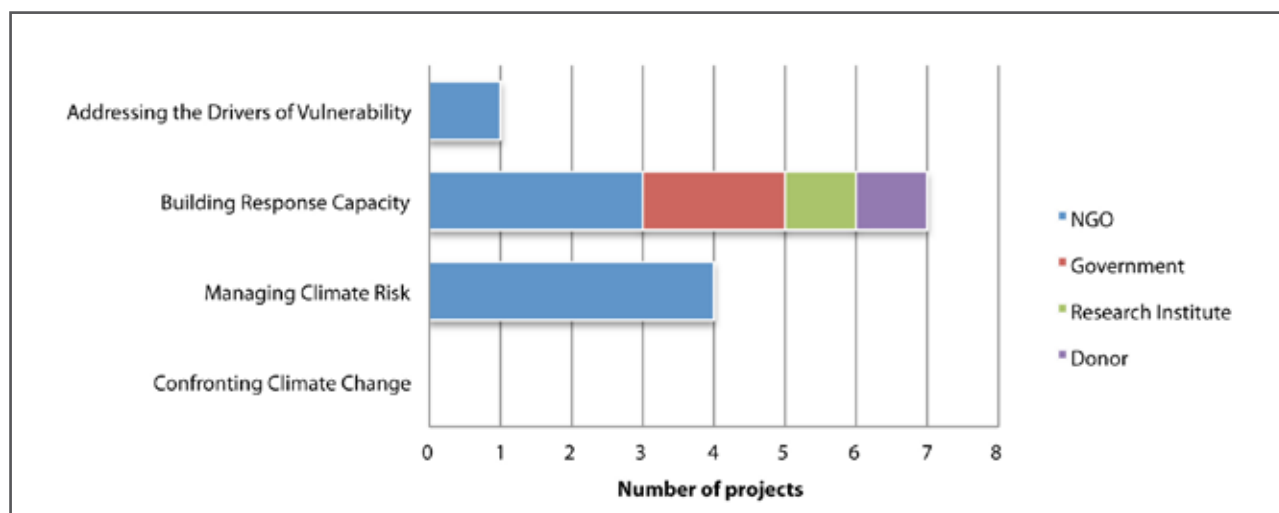


Figure 20 shows where the projects reviewed in this study sit on McGray et al.'s (2007) continuum.

Figure 20: Location of projects on McGray et al. (2007) adaptation/development continuum.



Work on “addressing the drivers of vulnerability” – the area that overlaps most with development – focused primarily on poverty reduction and natural resource management; projects in the “building response capacity” category (the largest, with 7 out of 12 projects) mainly included policy and capacity development projects, many with a planning or governance focus. Projects categorized as “managing climate risk” mainly focused on disaster management and risk reduction. None of the projects reviewed in this study fit into the “confronting climate change” category, which is not surprising as this category describes projects that can demonstrate a narrow focus on issues caused by anthropogenic climate change.

One of the insights from McGray et al. (2007) is the need for a strong foundation of development before more ‘pure’ adaptation activities can be effective. Hence, separating adaptation from development may actually be counterproductive. This kind of analysis could help those investing in adaptation projects to categorize their investment and show how various investments contribute to adaptation in different ways. As Fankhauser and Burton (2011) explain:

‘The concept of adaptation covers many things, and the limitation of adaptation only to climate change does not in practice reduce the scope very much.’

Study challenges

Another key question we had wished to answer was: *What is a useful analytical framework for determining whether a project will facilitate adaptation over the medium to long term?* We found a potentially useful tool to do this, from Adger et al. (2005), who assert that adaptation can be evaluated through 'generic principles of policy appraisal seeking to promote equitable, effective, efficient and legitimate action harmonious with wider sustainability' (p.80). However, applying the framework in this study proved challenging, as it would have required more in-depth analysis than was feasible given several constraints including time, funding and access to respondents.

It is also challenging to determine what the right analytical framework would be, for several reasons:

- a) Difficulties in objectively evaluating the extent to which adaptation strategies, particularly 'soft' ones such as education and capacity-building, would facilitate adaptation, and over what time scale;
- b) Challenges in evaluating how projects occurring now will facilitate adaptation in an uncertain medium- to long-term future;
- c) Lack of information: Project documentation quality varied significantly and only demonstrated project intent, not actual achievements or effectiveness. This is compounded by the fact that there is no recognized monitoring and evaluation framework that looks specifically at adaptation. As Sterrett (2011, p.7) notes, 'Without such a framework it is impossible to measure progress against goals and ascertain what succeeds or what fails amid a changing climate'; and,
- d) The number of issues simultaneously being addressed in projects. In many cases different project areas have differing relationships with adaptation. Many interviewees themselves found it difficult to determine whether their projects had a short-, medium- or long-term focus.

Conclusion

Perceptions of what constitutes adaptation and development varied across stakeholders in Vietnam. The historical focus of organizations tended to be reflected in projects and in their perceptions of what constitutes 'good' adaptation. In general, government stakeholders tended to have a more technical and disaster-focused understanding of climate change adaptation issues, with less knowledge of development links. Non-government stakeholders tended to use more development tools and had a better understanding of the issues and challenges associated with differentiating between adaptation and development. Researchers working in government institutes emphasized stakeholder coordination as one of the most important aspects for adaptation in Vietnam. It is important to foster a shared understanding of these issues among the different stakeholders, to facilitate dialogue.

In discussions regarding the similarities and differences between adaptation and development, project managers could readily identify a range of similarities, but found differences much more challenging to distinguish. Challenges such as knowledge gaps and uncertainty in local level climate data were identified as key limiting factors in the ability of projects to conduct 'pure' adaptation. Evaluating adaptation and a lack of accepted adaptation models also make working in this area particularly difficult.

An analysis of project documentation found that the government projects were increasingly focusing on integration and capacity building. Most projects, particularly non-government ones, tended to focus on a number of interrelated topics, use a range of tools simultaneously and use 'soft options' due to gaps in climate change knowledge. A growing emphasis on 'mainstreaming' was also identified, with a number of interviewees identifying that it was a more effective, low risk and holistic way of addressing climate change issues.

Overall, the projects reviewed in this study were appropriately labelled as adaptation. Many projects had evolved from non-adaptation areas or were mainstreaming adaptation into existing activities. These strategies have the benefit of being efficient and holistic. They tended to 'build response capacity' or 'manage climate risk'. However, gaps were also identified. There appears to be a lack of large, long-term adaptation projects that include the in-depth analysis necessary for projects in Vietnam to more directly address climate risks and some of the more complex and technical areas of adaptation. Such projects could develop crucial information and models that would be useful for mainstreaming and informing emerging projects.

Acknowledgments

The authors would like to thank all of the project managers who were interviewed and who provided information for the purpose of this research. Appreciation is also extended to Syeda Sajeda Haider from the Bangladesh Centre for Advanced Studies and to researchers and managers from the Stockholm Environment Institute for their contributions. This project was funded by the Swedish Government through the Swedish International Development Agency (Sida).

References

- ADB (2005) Climate Proofing - A Risk-based Approach to adaptation. Pacific Studies Series, ADB, Philippines
- Adger, W. N., Arnell, N. W. and Tompkins, E. L. (2005) 'Successful adaptation to climate change across scales'. *Global Environmental Change*, 15(2). 77–86. doi:10.1016/j.gloenvcha.2004.12.005.
- Bowen, A., Cochrane, S. and Fankhauser, S. (2011) 'Climate change, adaptation and economic growth'. *Climatic Change*, online first. doi:10.1007/s10584-011-0346-8.
- Burton, I. (2009) 'Climate Change and the Adaptation Deficit'. In: E.L.F. Schipper and I. Burton, eds. *The Earthscan Reader on Adaptation to Climate Change*. London: Earthscan for the UK Department of International Development, July
- Fankhauser, S. and Burton, I. (2011) 'Spending adaptation money wisely'. *Climate Policy*, 11(3). 1037–49. doi:10.1080/14693062.2011.582389.
- Intergovernmental Panel on Climate Change (2001). *Climate change 2001: Impacts, Adaptation, and Vulnerability*. In: McCarthy, D., Canziani, O.F., Leary, N.A., Dokken, D.J., White, K.S. (Eds.), *Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press, Cambridge, UK.
- Intergovernmental Panel on Climate Change (2007) *Climate Change 2007: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. M. L. Parry, O. F. Canziani, J. P. Palutikof, P. J. van der Linden, and C. E. Hanson (eds.). Cambridge University Press, Cambridge, UK.
- Klein, R., Erikson, S.E.H., Naess, L.O., Hammill, A., Tanner, T.M., Robledo, C. and O'Brien, K. (2007) *Portfolio screening to support the mainstreaming of adaptation to climate change into development assistance*. Working Paper 102. Tyndall Centre for Climate Change Research, UK
- McElwee, P. (2010) 'The Social Dimensions of Adaptation to Climate Change in Vietnam'. *Economics of Adaptation to Climate Change study*. Discussion Paper Number 12. The World Bank, Washington, DC. <http://climatechange.worldbank.org/content/social-dimensions-adaptation-climate-change>.
- McGray, H., Hammil, A., Bradley, R., Schipper, L. and Parry, J. (2007) *Weathering the Storm Options for Framing adaptation and Development*, World Resources Institute
- Ranger, N., A. Milner, S. Dietz, S. Fankhauser, A. Lopez and G. Ruta (2010). *Adaptation in the UK: A Decision Making Process*. Grantham Research Institute on Climate Change and Centre for Climate Change Economics and Policy, London School of Economics
- Resurreccion, B. P., Sajor, E. E. and Fajber, E. (2008) *Climate Adaptation in Asia: Knowledge Gaps and Research Issues in South Asia*. Full report of South East Asia Team. Institute for Social and Environmental Transition (ISET International and ISET Nepal), Kathmandu, Nepal. <http://www.i-s-e-t.org/publications/reports/31-reportcategory/64-climateadaptationasia2article>.
- Sterrett, C. (2011) *Review of Climate Change Adaptation Practices in South Asia*. Oxfam, Melbourne, Australia.
- Todaro, M. P. (2000): *Economic Development*. Addison-Wesley, New York
- UNISDR, 2009. *Terminology: Basic terms of disaster risk reduction*. UNISDR
- The World Bank (2009) *World Development Report 2010: Development and Climate Change*. Washington, DC. <http://go.worldbank.org/UVZ0HYFGG0>.

Annex 1: Questionnaire

Comparing Adaptation and Development
project under
Regional Climate Change Adaptation Knowledge Platform for Asia
by BCAS

a. Name of your organization:

b. Type of your organization: (please put ✓ mark in the appropriate box)

Government/ Semi- government Organization	Non- Governmental Organization	Research Organization	Academic institution	Development partner/Private Organization	Other (please specify)

c. How would you define 'development'? (according to you)

d. How do you define 'adaptation'? (according to you)

e. What criteria do you use to determine whether a project is an 'adaptation project'? (according to your project/organization)

f. What do you think are the similarities between adaptation and development? (according to your opinion)

Adaptation	Development
1.	1.
2.	2.
3.	3.
4.	4.

g. Type of completed and on-going adaptation project/programme: (please put ✓ mark in the appropriate box)

Adaptation			
Research/Project	Project/Programme implementation	Networking	Training/Awareness/ Advocacy

h. In your opinion what are the key adaptation activities in building resilience to climate change?

SL	Adaptive measures
1	
2	
3	
4	

(please use additional page if needed)

i. Detail of on-going climate change adaptation projects undertaken by your organization:

I. What are the objectives of the project?

II. Which government policy is followed for this project?

III. Which element of climate change and variability (e.g. temperature, precipitation) is being considered in the project?

IV. Do you use climate information (e.g. scenarios, vulnerability assessment, climate perceptions) in this project?

V. Are the project objectives short (5 years), medium (5-10 years) or long term (+10 years)?

VI. How do they reduce the risk?

VII. Does the adaptation measure require financial support to continue? Are there local resources available to sustain adaptation beyond the life of the project?

VIII. How are you addressing gender in your project/programme?

IX. Any new kind of technology introduced by your project? How will this be maintained? Who is trained in maintaining the technology?

X. Which obstacles were met during the planning or implementation process?

XI. After completion of the project, how will changes in adaptive capacity be measured?

XII. Does the project contribute to poverty reduction directly or indirectly?

XIII. Does the project have additional development objectives or relation with MDGs? If so, what are they?

j. Do you mainstream adaptation into development projects? (please put ✓ mark in the appropriate box) If yes, how do you do that?

Yes		No	
-----	--	----	--

k. What are the lessons learnt from your completed/on-going projects/programmes in terms of adaptation?

SL	Adaptive measures
1	
2	
3	
4	
5	

l. Your projects are mainly funded by (please put ✓ mark in the appropriate box.):

Government of Bangladesh	GEF	Others (please specify)

m. Was the fund conditional on the focus of the project being climate change?

n. How did you decide to undertake this project?

27. Could you suggest any further research regarding adaptation particular to your project (s)?

Annex 2: Screening Criteria

	No.	QUESTION	INSTRUCTIONS	PROJECT
Summary information	1	Project name		
	2	Project owner (organisation)		
	3	Is the owner a local or international organisation?	1 = local, 2 = international	
	4	Implementation period		
	5	Is this a recent or older project/policy?	0 = 2000-2005, 1 = 2009-2011	
	6	Fund source/s	Include % if more than one	
	7	Project/policy country	1 = Vietnam, 0 = Bangladesh	
	8	Does this project/policy focus on the national, sub-national, provincial or commune level?	1 = National, 2 = District, 3 = Upazilla or sub-district and 4 = local or community level	
	9	In 35 words or less describe what is this project about?	e.g. Developing strategies for rice production under climate change	
	10	Is this a research, policy or community-based level project/policy?	1 = research and project	1 = directly, and 0 = indirectly
			2 = project implementation	
			3 = networking	
			4 = training/awareness/advocacy	
			Other	
	11	a What is/are the project/policy's core focus areas?	1 = is a core focus area, 0 = is not a core focus area (can have more than one focus area)	social (e.g. health, poverty)
		b		economic
		c		environment
		d		political
		e		culture
		f		institutional
		g		infrastructure (physical)
		h		climate change
	12	Is the core focus on reducing climate risk?	3 = core, 2 = somewhat important, 1 = not important	
	13	a Who is the beneficiary of this work?	Other people/organisations working in the field or similar	1 = yes, 0 = no
		b	Local communities	
		c	Government	
Objectives	14	a Briefly describe the project/policy's objectives	15 words or less each	Obj 1
		b		Obj 2
		c		Obj 3
		d		Obj 4
		e		Obj 5

	No.	QUESTION	INSTRUCTIONS	PROJECT
Objectives	15	a Are the objectives short, medium or long term in nature?	3 = long term (+10 yrs), 2 = medium term (5-10 yrs), 1 = short term (5 yrs)	Obj 1
		b		Obj 2
		c		Obj 3
		d		Obj 4
		e		Obj 5
	16	a What millennium development goals does the project/policy directly contribute to?	Eradicate extreme poverty and hunger	1 = directly, and 0 = indirectly
		b	Achieve universal primary education	
		c	Promote gender equality and empower women	
		d	Reduce child mortality	
		e	Improve maternal health	
		f	Combat HIV / AIDS, malaria and other diseases	
		g	Ensure environmental sustainability	
		h	Develop a global partnership for development	
	17	a What risks does this project/policy aim to address?	1 = aims to address, 2 = does not aim to address	social
		b		economic
		c		environment
	18	a For each of the objectives rate where you feel they sit on the CCA / development spectrum?	3 = mostly CCA, 2 = a mix of both, 1 = mostly development	Obj 1
		b		Obj 2
		c		Obj 3
		d		Obj 4
		e		Obj 5
Method	19	a What are the methodological approaches used by the project?	10 words or less each (e.g. impact or vulnerability assessment, qualitative survey)	1
		b		2
		c		3
		d		4
		e		5
	20	To what extent are the assumptions made by the project /policy well founded?	3 = very well founded, 2 = somewhat well founded, 1 = not well founded	
	21	To what extent does the project use climate information to inform activities?	3 = uses a lot, 2 = uses some, 1 = uses none	e.g. CC scenario's, vulnerability assessment, climate perceptions
	22	If yes, what data does it use, and where is it sourced from?		

	No.	QUESTION	INSTRUCTIONS	PROJECT
Method	23	Does this project add-on tasks to make it climate-smart, climate climate-proof, climate resilient? (e.g. designed as a regular project, but then adds something that makes it qualify as a 'climate-proof' project)	1 = yes, 0 = no	
	24	If so, what are these tasks?		
Objectives	25	a What are the project's 2-4 key project activities?	8 words or less for each	1
		b		2
		c		3
		d		4
	26	a To what extent are these project activities linked with climate change adaptation (CCA)?	3 = significantly, 2 = somewhat, 1 = not much	1
		b		2
		c		3
		d		4
	27	a To what extent are these project activities linked with development?	3 = significantly, 2 = somewhat, 1 = not much	1
		b		2
		c		3
		d		4
	28	a For each of the activities, rate where you feel they sit on the CCA / development spectrum	3 = mostly CCA, 2 = a mix of both, 1 = mostly development	1
		b		2
		c		3
		d		4
Policy	29	Does this project directly and explicitly link to any other government policy or strategy?	1=directly, 0=indirectly	BCCSAP
				NAPA
				CDMP
				6th Five-Year Plan
				Other
Other	30	Full name of person conducting review		
	31	Contact details (email and phone number)		
	32	Organisation of person conducting the review		

[illegible]

Annex 4: Sixth plan benchmark and proposed target programmes

Theme	Program	Benchmark	Target
Food security, social protection and health	Institutional capacity for research on climate resilient cultivars and dissemination	Capacity exists; certain	Extension service to be geared up
	Adaptation against drought, salinity resistance and heat	Very limited experience	To be started
	Adaptation in fisheries sector	Very limited experience	Initial studies for ideas on adaptation
	Adaptation in livestock sector	Very limited experience	Initial studies for ideas on adaptation
	Adaptation in health sector	Very limited experience	Initial studies for ideas on adaptation
	Water and sanitation programs for climate- vulnerable areas	Limited experience	Immediate actions needed
	Livelihood protection in ecologically fragile areas	Little experience	Initial interventions to be made
	Livelihood protection of vulnerable socioeconomic groups	Major experience	To be made immediately
Food security, social protection and health	Improvement of cyclone and storm surge warning	Limited experience	Needs review for improvement
	Awareness raising and public dissemination	Some experience	Needs review for improvement
	Risk management against loss of income and property	Limited experience	Needs review and pilot intervention
Infrastructure	Repair and maintenance of existing flood embankments	Limited activity	To be Taken up immediately
	Repair and maintenance of existing cyclone shelters	Limited activity	To be Taken up immediately
	Repair and maintenance of existing coastal polders	Limited activity	To prioritize and taken up immediately
	Urban drainage needs assessment	Limited activity	To prioritize and taken up immediately
	Adaptation against floods and constructing new embankments and flood shelters	Limited activity	Needs review for improvement & construction
	Adaptation against tropical cyclones and storm surges through land use planning	Limited activity	To be taken up immediately
	Planning & design of river training and bank erosion mitigation works	Major experience with limited success	Needs review for significant improvement
	Resuscitation of rivers and khals through dredging	Limited activity	To prioritize and taken up immediately
Research and knowledge management	Earthquake resilient structure and land slide protected structure have to be constructed and retrofitted	Limited activity	To prioritize and taken up immediately
	National Centre for research, knowledge management and training on disaster and climate change	Limited activity	Scope to be extended immediately
	Climate change modeling and their impacts	Limited human and institutional capacity	Training to be arranged for imparting skill
	Preparatory studies for adaptation against SLR	Capacity exists; limited experience of adaptation	To be initiated and continued
Low carbon development	Research on the climate change adaptation for knowledge and technology generation	Capacity exists, some technologies are in use	To be expanded: scope and ongoing effort
	Renewable energy development	Limited experience	To be expanded
	Management of urban waste	Limited experience	To be taken up immediately
	Aforestation and reforestation	Some experience	To be taken up immediately
	Rapid expansion of energy saving devices	Some experience	To be taken up immediately
Capacity building	Improving energy efficiency in transport sector	Limited experience	To be introduced in phases
	Revision of sectoral policies for climate resilience	-	Immediate need
	Mainstreaming CC in national, sectoral and spatial development programs and policies	-	Immediate need; BCCSAP to be part of National Plan
	Strengthening human resource capacity	Limited capacity	To be started
	Gender considerations in CC	-	To be started
	Strengthening institutional capacity	Limited capacity	To be started
	Mainstreaming CC in media	Limited experience	To be started

Annex 5: Questions to guide semi-structured interviews

Organization

1. Name of organization
2. In your own words, can you tell me a little about your organization?
3. What is your organization's role in adaptation?
4. In what area of climate change adaptation does your organization specialize?

Projects

5. What are some of the main adaptation projects your organization currently has under way?
6. How does the project specifically contribute to adaptation?
7. How does it do this? What methods does it use?
8. Does the project incorporate climate data/scenarios/predictions? If yes,
 - a. Is it based on more scientific data or general information/ knowledge? If scientific,
 - a. What types of climate factors are considered?
 - b. Where does this information come from?
 - c. Does it focus on adaptation in the short, medium or long term?
 - d. Does it use it local, regional or country-level data?
9. How does it prevent/avoid mal-adaptation?
10. Does this project contribute to development outcomes (e.g. poverty reduction?) If so, how?
11. Is gender a part of this project? If so, how?

Adaptation and development

12. In your words, what is 'climate change adaptation'?
13. What are the key activities needed to reduce the risk to climate change?
14. How do you describe 'development'?
15. How are development and adaptation similar?
16. How are climate change adaptation and development different?
17. What makes a project adaptation?
18. How do you determine if something is development or adaptation work?
19. Do you think that NGOs define development and adaptation differently than you do?
20. Do you think that donors define development and adaptation differently than you do?

Lessons

21. What have some of the challenges been in the planning and implementation of this or other adaptation projects in Vietnam?
22. What are some important lessons you have learnt about doing climate change adaptation work?

Mainstreaming

23. What does mainstreaming climate change mean to you?
24. What does climate-proofing mean to you?
25. Does your organisation mainstream adaptation or climate-proof other programmes? If so, how?

Annex 6: Analytical framework for review of project documents

Question	Instructions	
Interviewee		
Interviewee code	101,102, etc.	
Issue group		
Project owner (organisation)		
Is the owner a local or international organization?	1=local, 2=international	
Implementation period	Start - mm/yyyy End - mm/yyyy	
Is this a recent or older project/policy?	0 = 2000-2005, 1 = 2009-2011	
Fund source/s	Include % if more than one	
Project/policy country	1 = Vietnam, 0 = Bangladesh	
Does this project/policy focus on the national, sub-national, provincial or commune level?	1) National, 2) District, 3) Upazilla or sub-district, 4) Local or community level	
In 35 words or less, what is this project about?	e.g. Developing strategies for rice production under climate change	
What is/are the project/policy's core focus areas?	1) core focus area, 0) not a core focus area (can have more than one focus area)	<div>social (e.g. health)</div> <div>economic</div> <div>environment</div> <div>political / policy</div> <div>culture</div> <div>institutional</div> <div>infrastructure (physical)</div> <div>climate change</div> <div>poverty reduction</div> <div>disaster management</div> <div>planning</div>
Is the core focus on reducing climate risk?	3 = core, 2 = somewhat important, 1 = not important	
Who is the beneficiary of this work?	1= yes, 0=no	<div>Other organizations working in the field</div> <div>Local communities</div> <div>Government</div> <div>Other (specify)</div>
Briefly describe the project/policy's objectives	15 words or less each	<div>Obj 1</div> <div>Obj 2</div> <div>Obj 3</div> <div>Obj 4</div> <div>Obj 5</div>
For each of the objectives rate where you feel they sit on the CCA / development spectrum?	3 = mostly CCA, 2 = a mix of both, 1 = mostly development	<div>Obj 1</div> <div>Obj 2</div> <div>Obj 3</div> <div>Obj 4</div> <div>Obj 5</div>
What are the methodological approaches used by the project?	10 words or less each (e.g. impact or vulnerability assessment, qualitative survey)	
To what extent are the assumptions made by the project /policy well founded?	3= very well founded, 2=somewhat well founded, 1= not well founded	
To what extent does the project use climate information to inform activities?	3 = uses a lot, 2 = uses some, 1 = uses none	e.g. CC scenario's, vulnerability assessment, climate perceptions

Question	Instructions	
If yes, what data does it use, and where is it sourced from?		
Does this project add-on tasks to make it climate-smart, climate -proof, climate resilient? (e.g. designed as a regular project, but then adds something that makes it qualify as a 'climate-proof' project)	1 = yes, 0 = no	
If so, what are these tasks?		
What are the projects 2-4 key project activities?	8 words or less for each	1
		2
		3
		4
		5
How much do these project activities link with climate change adaptation (CCA)?	3 = significantly, 2 = somewhat, 1 = not much	1
		2
		3
		4
		5
	total	
How much do these project activities link with development?	3 = significantly, 2 = somewhat, 1 = not much	1
		2
		3
		4
		5
	total	
For each of the activities, rate where you feel they sit on the CCA / development spectrum	3 = mostly CCA, 2 = a mix of both, 1 = mostly development	1
		2
		3
		4
		5
	total	
To what extent do you think the project will be able to reduce climate change risk?	Less than 100 words	
Briefly explain why you rated it the way you did		
Does this project directly and explicitly link to any other government climate change policy or strategy? (yes=1, no=0)	NTP	BCCSAP
	REDD	NAPA
	other (specify)	6th Five-Year Plan
	SEDP	CDMP
Notes		
Full name of person conducting review		

Annex 7: Framework for analysis of language used in project documents

			adaptation	resilience	risk reduction	climate change	vulnerability	mainstreaming	poverty reduction	climate-proofing	climate smart	climate resilient	Climate variability	climate tolerant
Q1	Which of the terms listed appear in the project documentation?													
Q2a	Where in the project documentation does the term appear?	Introduction / background												
Q2b		Objective / Goal												
Q2c		Method / Activities												
Q2d		Outputs												
Q2f		Other												
		If other, explain												
Q3a	Does the project attempt to clarify what the term means?	e.g. IPCC, UNFCCC, Jones (2009)												
Q3b	If yes, does the project use an established definition?													
Q3bi	If yes, where does the project source its definitions?													
Q3bii	If no, briefly describe the definition or description they use?													
Q4	Are the use of these terms essential in describing the project?													
Q5	Additional comments													



Stockholm Environment Institute, Asia Centre
15th Floor, Witthyakit Building,
254 Chulalongkorn University,
Chulalongkorn Soi 64,
Phyathai Road, Pathumwan,
Bangkok, 10330 Thailand
Tel: +66 225 144 15
Website: <http://www.sei-international.org>