



ACTION ON CLIMATE TODAY

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# How to Coordinate and Mobilise Climate Adaptation Finance

Technical Submission to the UNFCCC in response to Call for submissions to Parties and other stakeholders on the Adaptation Committee (AC) and Least Developed Countries Expert Group (LEG) mandates stemming from decision 1/CP.21, paragraphs 41, 45(a) and 45(b)

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## Abbreviations and acronyms

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AC	Adaptation Committee
ACT	Action on Climate Today
CC	Climate Change
CC%	Climate Change Relevance
CCID	Climate Change Innovation Programme
CPGD	Climate Proofing Growth and Development
CCFF	Climate Change Financing Framework
CF	Climate Finance
CMA 1	First Conference of the Parties Serving as the Meeting of the Parties to the Paris Agreement
CPEIR	Climate Public Expenditure and Institutional Reviews
DFID	Department for International Development
LEG	Least Developed Countries Expert Group
MDB	Multilateral Development Banks
NABARD	National Bank for Agriculture and Rural Development
NAP	National Adaptation Plan
NAPA	National Adaptation Programme of Action
GCF	Green Climate Fund
MoEFCC	Ministry of Environment, Forestry and Climate Change
NDCs	Nationally Determined Contributions
ODI	Overseas Development Institute
OECD	Organisation for Economic Cooperation and Development
PERs	Public expenditure reviews
PEIRs	Public expenditure and institutional reviews
SAPCC	State Action Plan on Climate Change
SAPFIN	State Action Plan Financing Framework
UNEP	United Nations Environment

## Introduction

This is a submission to the United Nations Framework Convention on Climate Change (UNFCCC) in response to the Call for Submissions to Parties and Non-Party Stakeholders on the Adaptation Committee (AC) and Least Developed Countries Expert Group (LEG) mandates stemming from decision 1/CP.21. Specifically, we provide a response to questions 2 and 3.

**This paper is based on our experience of working with governments to develop Climate Change Financing Frameworks (CCFFs).** CCFFs provide an operational framework for prioritising adaptation actions, mobilising resources for adaptation and monitoring progress over time in a way that is integrated with a government's internal budgetary processes. **Within CCFFs, climate-sensitive appraisal (also known as climate change impact analysis, CCIA) assesses how CC affects the net benefits of a programme.** We hope these methods will be helpful to the AC in developing approaches to review the adequacy and effectiveness of adaptation, and facilitate the mobilisation of support for adaptation in developing countries.



The approach presented here comes from experience by Action on Climate Today (ACT) in working to reduce the effects of climate change (CC) in South Asia. ACT is an initiative funded with UK aid from the UK government and managed by Oxford Policy Management.

ACT brings together two UK Department for International Development programmes: the *Climate Proofing Growth and Development (CPGD) programme* and the *Climate Change Innovation Programme (CCIP)*. The views expressed here do not necessarily reflect UK the UK's government's official policies. Planned to run between 2014 and 2019, it provides technical support to national and subnational governments in four South Asian countries to mainstream CC resilience into sectoral policies, programmes, plans and budgets. The main outcome areas are increased capacity; systems and policy enhancements; knowledge generation; and improved mobilisation of climate finance (both domestic and external).

**ACT's approach consists in building capacity at individual and system levels, generating knowledge and sharing best practice on climate finance among professionals, as well as providing planning and budgeting tools for climate finance.** This submission presents the lessons of the part of the programme focused on climate finance. Note that while ACT has a specific niche among actors in the field of climate finance, the lessons presented here are relevant beyond the programme's scope.

The structure of this reports follows the question stemming from paragraphs 45 (a) and (b) of the Decision 1/CP.21. The chapter [Mobilisation of Support for Adaptation](#) will respond to paragraph 45(a) while the chapter on [Assessment of Adequacy and Effectiveness of Adaptation](#) responds to paragraph 45 (b).

## Question 2 (¶45 a): Mobilisation of Support for Adaptation

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This chapter responds to question 2 related to paragraph 45(a):

2. Decision 1/CP.21, paragraph 45(a): Also requests the AC and the LEG, in collaboration with the Standing Committee on Finance (SCF) and other relevant institutions, to **develop methodologies, and make recommendations** for consideration and adoption by CMA 1<sup>1</sup> on taking the necessary steps to **facilitate the mobilisation of support for adaptation** in developing countries in the context of the limit to global average temperature increase referred to in Article 2 of the Agreement.

1. What experiences, including lessons learned and good practices, do you consider valuable in facilitating the mobilisation of support for adaptation in developing countries?
2. Which steps would be necessary to facilitate the mobilisation of support for adaptation in developing countries in the context of the limit to global average temperature increase referred to in Article 2 of the Agreement?
3. What methodologies can be used to take the above necessary steps?

The submission is structured around the three sub-questions, although note that we have reordered them (2, 3, 1) in order to facilitate the flow of the argument.

### Which steps would be necessary to facilitate the mobilisation of support for adaptation in developing countries in the context of the limit to global average temperature increase referred to in Article 2 of the Agreement?

Efforts to mobilise adaptation support (including domestic and external financing) have been hampered by the challenges around demonstrating the effectiveness of actions and the ability to then prioritise accordingly. **CCIA is a methodology for assessing the effectiveness of proposed expenditures.** They are part of a CCFF and can also be used independently. Other parts include computing the gap between adaptation needs (total adaptation spending required to avoid CC losses and damages) and the adaptation supply (the actual or planned adaptation spending), prioritising adaptation actions and mobilizing additional resources for adaptation funding.

**CCIA provides robust evidence on the effectiveness of proposed expenditure, so that funding applications (to domestic budgets, donors, lenders or funds) are more reliably assessed and approval is more predictable.** This response focuses on the use of CCIA, drawing from the experience of the ACT programme.

**CCIA is a method of providing systematic appraisal of the implications of CC for the performance of programmes.** It compares the net benefits of a programme without taking CC into account with the net benefits when CC is considered. The difference between the two comes either from adaptation or mitigation benefits. When used in the design, appraisal or evaluation of programmes CCIA helps identify and refine the CC adaptation and mitigation element of the programme. This helps managers make the case for financing a programme, either in the budget or through climate funds. It can also be used to review and classify the relative importance of development and CC benefits to a range of programmes and hence to estimate the total expenditure on CC.

**CCIA assesses the relative importance of CC benefits** (i.e. adaptation and mitigation), compared with other, routine sustainable development (SD) benefits (i.e. economic growth, social development and environmental protection/improvement) to arrive at a score for CC relevance (or CC%), in the manner described in Box 1. A high CC% does not, in itself, justify funding; however, it does indicate that the programme should be given higher priority because of CC.

### Box 1: Calculating CC%

A CC% can be used to weight expenditure programmes to estimate what the portion of the programme is related to CC adaptation/mitigation.

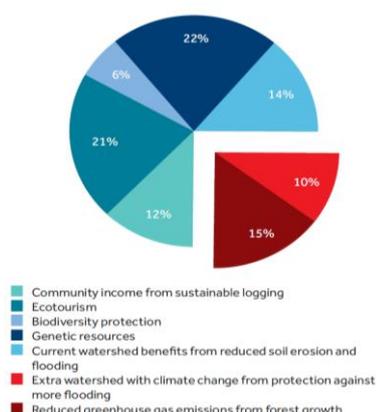
There are different methods for calculating CC% scores. An objectives-based approach, which is commonly used in Climate Public Expenditure and Institutional Reviews, defines CC% according to the extent to which CC features in the programme’s objectives. However, this is subjective and vulnerable to greenwashing (that is, overstating adaptation benefits in an attempt to secure additional financing).

ACT, together with the United Nations Development Programme, has pioneered a more robust benefits-based approach, where CC% is a calculation of the marginal changes in performance of a programme caused by climate change, or the proportion of total benefits from the programme that are associated with adaptation/mitigation. Where A is benefits when CC is not taken into account, and B is benefits with CC taken into account, then  $CC\% = (B - A)/B$ . The result normally varies between 0% and 30%, although it can be up to 100% for dedicated programmes and is negative for maladaptation.

For example, consider a project that promotes community forestry and forest conservation. There are numerous benefits provided – income from sustainable logging, ecotourism, biodiversity protection, conservation of genetic resources, and reduced soil erosion and flooding from protecting certain areas under forest cover. When you consider CC, there are additional benefits derived from the carbon sequestered in growing trees, and from the reduction in flooding that occurs as extreme storms become more frequent. The table below presents the net present value of the benefit estimates. The CC% of 25% is illustrated below as the extracted portions of the pie chart.

#### CC% score for a community forestry project:

Type of benefit	\$/ha
Community income from sustainable logging	400
Ecotourism	723
Biodiversity protection	202
Genetic resources	746
Current watershed benefits from reduced soil erosion and flooding	485
Extra watershed with climate change from protection against more flooding	351
Reduced greenhouse gas emissions from forest growth	501
<b>Total</b>	<b>3408</b>



## When to Use CCIA

**CCIA is mostly done for programmes that become more beneficial when adaptation (i.e. reducing the loss and damage (L&D) arising from CC) and mitigation (i.e. reducing greenhouse gas (GHG) emissions to contribute to the global efforts to stop CC itself). are taken into consideration.** For such programmes, CCIA improves the chance of obtaining funds in the budget or from other sources.

**The methodology can be applied to programmes that are justified primarily by adaptation and mitigation as well as to programmes that are justified primarily by SD benefits but which have secondary CC benefits.** Examples of different combinations of CC and SD benefits are shown in the table below.

**Table 1: Example adaptation and mitigation programmes and level of CC benefits**

Type	Adaptation programmes	Mitigation programmes
<b>High CC benefits</b>	<ul style="list-style-type: none"> <li>• Vulnerability analysis</li> <li>• Local/city/state/national resilience planning</li> <li>• Protection: flood, drought, heat, sea level rise</li> <li>• Drought-resilient crop varieties, soil management and farming practices</li> <li>• Flood-proofing roads, irrigation, etc.</li> <li>• Weather information services</li> </ul>	<ul style="list-style-type: none"> <li>• Research on cost-effectiveness of reducing GHG emissions</li> <li>• Studies on social cost of carbon and its use in valuing GHG emissions</li> <li>• Public awareness of GHG emissions</li> </ul>
<b>Mixed CC and SD benefits</b>	<ul style="list-style-type: none"> <li>• Biodiversity corridors</li> <li>• Irrigation schemes</li> <li>• Forestry livelihoods</li> <li>• Watershed management</li> <li>• Untargeted water/sanitation</li> <li>• Urban plans to reduce vulnerability</li> <li>• Forward planning for CC-sensitive diseases</li> <li>• Livelihoods for CC-vulnerable people</li> <li>• Social welfare/safety nets for CC-vulnerable people</li> </ul>	<ul style="list-style-type: none"> <li>• Renewable energy</li> <li>• Reforestation</li> <li>• Energy efficiency</li> <li>• Public transport</li> <li>• Reducing GHG emissions from waste</li> </ul>
<b>Negative CC benefits*</b>	<ul style="list-style-type: none"> <li>• Unplanned groundwater use</li> <li>• Promoting water-intensive crops</li> </ul>	<ul style="list-style-type: none"> <li>• Roads that increase deforestation</li> <li>• Fossil fuel subsidies</li> </ul>

\* Negative CC benefits occur if CC reduces the performance of programmes, either because of higher L&D (i.e. maladaptation) or because GHG emissions are high. Such programmes should normally be generating high SD benefits, since they would otherwise not be considered for funding.

## What methodologies can be used to take the above necessary steps?

### Basic principles of CCIA

**CCIA assesses the full costs of a programme and shows how the programme improves the state of the beneficiaries,** which are typically people and/or environments. Thus, it compares the situations with and without the programme and the difference defines the performance of the programme. It then repeats this with and without CC to show how CC affects performance.

**Because CC happens gradually, the analysis needs to cover a period that is longer than would normally be covered in economic analysis.** The best period is often to 2050, since this is long enough to pick up serious CC and is also the date often used for CC projections. This is

important for long-term programmes (e.g. infrastructure, institutional development and research), but less important for programmes that do not expect to have long-term impact.

#### Level of detail used in CCIA analysis

**CCIA is an additional tool in the range of techniques available for impact analysis** and if adopted as part of government requirements for appraisal it becomes part of a government's regular impact analysis system. In theory, in such cases CCIA should be a rapid exercise adding only a few hours to whatever impact analysis is already undertaken. In practice, CCIA is often done when the existing impact analysis is insufficient and therefore requires a more significant effort.

**In most cases, a rapid CCIA is sufficient,** capturing and communicating the evidence that is easily available and supplementing this with expert opinion. For large programmes, it may be justified to invest in more detailed cost–benefit analysis-type exercise. For programmes that rely on community participation, some participatory assessment may be added. Considerations for both rapid and valuation approaches to CCIA are detailed below.

#### Rapid CCIA

For most programmes, CCIA will be a rapid exercise and the resources and time available may be no more than a few hours. This applies particularly when CCIA is being done across a number of different actions (e.g. to classify all the actions in a National Adaptation Plan (NAP)/National Adaptation Programme of Action (NAPA)).

There will usually be **a variety of sources of evidence, and there are likely to be some gaps.** Analysts will typically compile the easily available evidence, which may come from case studies, existing surveys and other research. They may adjust this evidence for local circumstances and fill gaps with their own assessments.<sup>1</sup> Experts will often include beneficiaries, especially when communities are involved in the delivery of the programme.



**The benefits with and without CC can be estimated in monetary terms.** If there is little objective evidence, then benefits may also be estimated more subjectively as a form of multi-criteria analysis (MCA), where participants are required to award scores to identified costs

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<sup>1</sup> Examples of analysis based on expert opinion include if official crop data is not available, or if it comes from sources that are considered weak, then agronomists will often be able to provide guestimates for key parameters (e.g. change in yields, soil water balance, change in disease risk). Or, for health programmes, it will usually be possible to find doctors who have sufficient experience to estimate the increased threat of climate-sensitive diseases.

and benefits. Some general principles for use of participatory MCA in CCIA are presented in Box 2.

### Box 2: Participatory CCIA using MCA

- Ensure participants understand the scientific evidence on CC and biophysical sensitivity.
- Clarify the difference between CC and current climate variability.
- Ask participants to comment on changes in climate over the last few decades and on whether these changes are consistent with future projections.
- Ask participants to explain how past changes in climate have affected their livelihoods.
- Ask participants to define how CC affects the various benefits of a programme.
- Ask participants to score the relative importance of each benefit without CC.
- For each benefit, ask participants to score how much they expect this to change with CC.
- Estimate the CC% and discuss with participants whether this is consistent with their more intuitive and subjective views about priorities.
- Discuss the implications for any CC policies (e.g. community-based programmes or Local Adaptation Programmes of Action (LAPAs)).
- Review the key features of vulnerability and whether the participatory CCIA addresses these and, if not, how to improve it.
- Discuss whether there should be any changes in systems to manage climate programmes.

CCIA based on valuation (cost–benefit analysis)

**For larger programmes that are potentially strongly affected by CC, it may be justifiable to devote additional resources to CCIA.** Such analysis requires a clear presentation on the assumptions relating to key physical parameters (e.g. crop yields obtained from inputs, emissions generated from fuel consumed, water supplied by infrastructure built, hectares of forest protected, flood damage caused by rainfall, GHG emissions created by energy consumed, etc.) and behavioural parameters (e.g. farmers’ choices or enterprise behaviour). It also requires a ‘model’ of the way in which inputs lead to outputs. For the largest and most complex CCIA, it may be necessary to use more formal models, such as Integrated Assessment Models, which combine biophysical modelling (e.g. hydrological models) with economic behaviour (e.g. computable general equilibrium models).

**CCIA often has to accommodate unpredictable events.** It may be possible to estimate a weighted average of different outcomes, taking account of the probabilities of each outcome. But, in most cases, uncertainty is best dealt with using scenarios. Scenarios need to be used sparingly and it may be best to package the CC scenarios with scenarios on other variations (e.g. yields or energy performance) into only two or three scenarios (e.g. one headline scenario, with a low and a high scenario), to avoid overloading policy-makers.

**What experiences, including lessons learned and good practices, do you consider valuable in facilitating the mobilisation of support for adaptation in developing countries?**

The following lessons relate to ACT’s experience of introducing CCIA-type analysis for the management and mobilisation of climate financing.

**Build on existing capacity at system and skill levels within government**

Given the primacy of public financing for adaptation, **ACT focuses on building domestic capacity to integrate CC into development processes.** In addition to building CCIA capacity,

ACT has worked to strengthen the capacities of national institutions to plan, budget, track and monitor climate finance. A critical feature of success is the need to build on existing systems and skills, and avoid imposing new practices. For instance, wherever possible, CCIA should build on existing impact analysis procedures already in place within a government. This can range from full valuation CCIA when new programmes are being designed, to introducing a rapid CC% calculation into the budget form.

Find entry points to decision-makers to mobilise support

**Institutionalising the management and appraisal of adaptation finance requires the identification of appropriate entry points.** Understanding government's development priorities, linking climate impacts with these priorities and then identifying targeted climate funds/budgets to finance these activities has acted as an essential entry point. In Afghanistan, ACT first engaged with the government to establish the interlinkages between CC and poverty, natural resources, livelihoods, GDP and, hence, security. In Odisha, linking the impacts of CC on agricultural production and agriculture value chain development created the inroads for engaging government stakeholders on the issue. In Pakistan, policy-makers now view the national and provincial development priorities through a climate lens and are in the process of developing a project pipeline for accessing the Green Climate Fund and thereby opening access to increased financial resources.

Prioritising the mobilisation of domestic financing



**Government financing from the national/state budget is likely to be the primary source of adaptation funds in many developing countries.** The most effective way of mobilising public resources is to ensure that CC is integrated into the design and management of existing expenditure by making

CCIA a standard part of ongoing budgetary impact analysis. It may also be appropriate for budget allocation criteria to favour or prioritise programmes that address CC most directly (i.e. those with higher CC% scores).

**This is not to understate the potential importance of external financing** and, of course, more robust appraisal from a CC perspective can significantly strengthen funding proposals for donors and climate funds, increasing their chances of success. From the perspective of the funder, it introduces more rationality into the funding decisions.

## Question 3 (¶45 b): Assessment of adequacy and effectiveness of adaptation

The following chapter constitutes the technical submission from the DFID-supported ACT programme (see [Introduction](#)) in response to question 3:

3. Decision 1/CP.21, paragraph 45(b): Also requests the AC and the LEG, in collaboration with the SCF and other relevant institutions, to **develop methodologies**, and make recommendations for consideration and adoption by CMA 1 **on reviewing the adequacy and effectiveness of adaptation** and support referred to in Article 7, paragraph 14(c), of the Agreement.

1. What information/data or metrics are needed for the review of adequacy and effectiveness of adaptation and support for adaptation?

2. Which lessons learned, good practices, challenges and barriers have been encountered in such reviews?

3. What methods can be used to review the adequacy and effectiveness of adaptation and support for adaptation?

The submission is structured around the three sub-questions; once again, these have been reordered (3, 1, 2) to facilitate the flow of our argument.

### What methods can be used to review the adequacy and effectiveness of adaptation and support for adaptation?

Many governments have now completed their NAPAs, NAPs and Nationally Determined Contributions (NDCs), and are turning their attention toward their implementation and, in particular, to how to finance priority adaptation actions. To this end, the ACT programme is working with several governments in South and South East Asia<sup>2</sup> to develop CCFFs. CCFFs aim to facilitate the integration of CC into standard techniques of planning and budgeting, in order to enable governments to assess the expected adaptation benefits of adaptation spending and prioritise budget resources for CC ends.

CCFFs have taken different shapes in different contexts but there are a number of common components. In particular, **the assessment of the adaptation gap is the culmination of CCFF analysis, and offers a logical approach for quantifying the adequacy and effectiveness of the adaptation effort in a particular country or state.**

ACT has been working with partner governments to assess the adaptation gap in each country/state, and has honed a methodology that is both practicable and rigorous. The adaptation gap is calculated as **the share of total CC damage not addressed by current and projected levels of adaptation.**<sup>3</sup> This is measured by projecting GDP up to 2050 for a country or state under a number of scenarios:

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<sup>2</sup> Specifically, the governments of Afghanistan, Pakistan and Nepal, and the state governments of Assam, Bihar, Chhattisgarh, Kerala and Maharashtra.

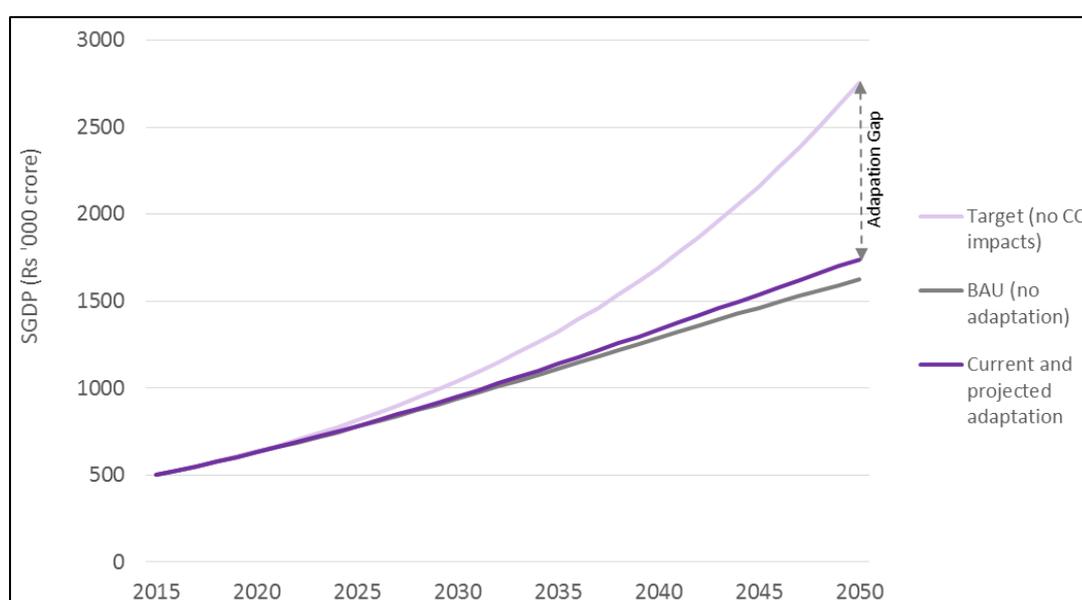
<sup>3</sup> There is a subtle distinction here with the United Nations Environment Programme definition of the adaptation gap, which is 'the difference between the level of adaptation actually implemented and a societally set target or

- GDP without CC impacts (this is a target amount, assuming all CC impacts can be avoided)
- GDP with current and projected levels of adaptation (as defined in financing scenarios for the adaptation plan)
- GDP with no adaptation and full CC impacts (a 'business as usual' scenario).

**The adaptation gap is the amount of CC damage not addressed by current and projected levels of adaptation (a-b), expressed as a percentage of total CC potential damage (a-c).**

The example below is the projected adaptation gap in Kerala State, India. It indicates that current budget expenditure, plus planned activities set out in the State Action Plan on Climate Change, will address 10% to 15% of the adaptation needs. Therefore, the adaptation gap is projected to be in the range of 85%, unless more active steps are taken.

**Figure 1: The adaptation gap, Kerala**



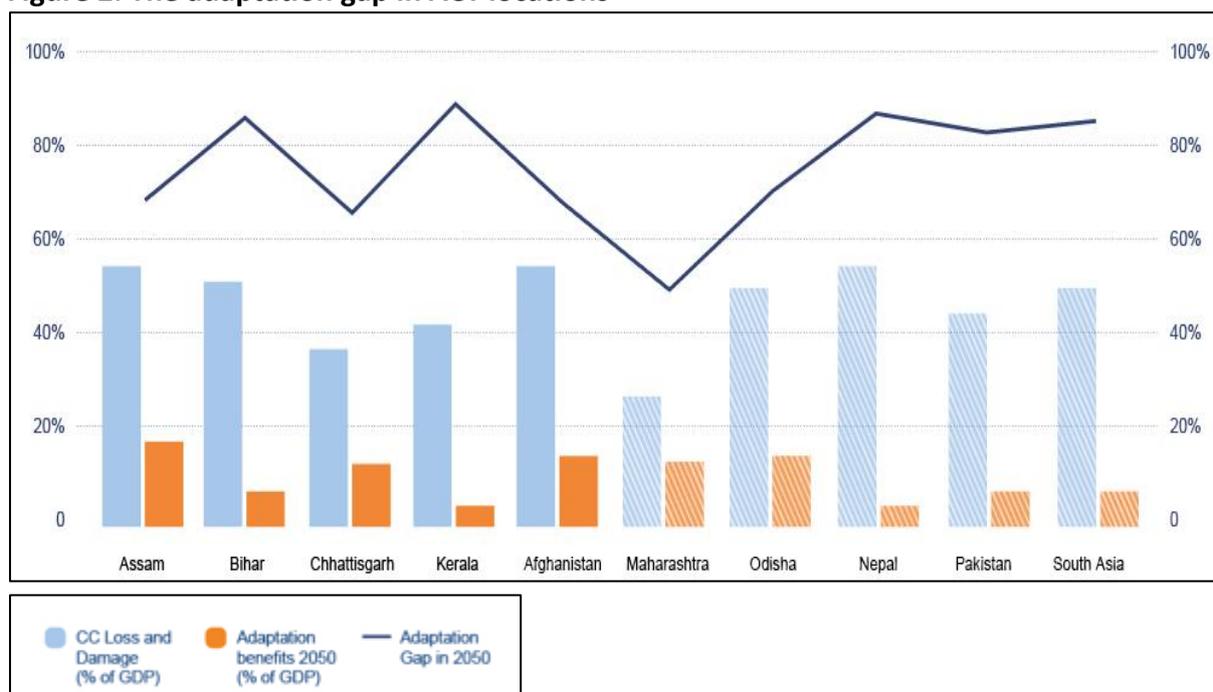
Source: Kerala State Action Plan on Climate Change Financial Framework.

**This approach to calculating the adaptation gap can be applied across countries and states to provide an assessment of the adequacy of the adaptation effort in those locations.** This application is not purely theoretical; Figure 2 presents a synthesis of detailed work to calculate the adaptation gaps in four Indian states and Afghanistan, alongside the economic cost and projected adaptation benefits. For the other locations – i.e. Nepal, Pakistan and an average of South Asian countries subjected to ACT analysis – the results are based on a preliminary analysis based on the standardised analysis using indices for vulnerability and broad sectoral expenditure patterns, which will be subject to refinement.

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goal' (UNEP, 2016 Adaptation Report). Under this definition, it is recognised that some impacts may be too costly or impossible to avoid. This concept of 'residual damage', while intuitively sound, is difficult to quantify and there are currently no evidence-based estimates for the scale of residual damage in the South/South East Asia context. Therefore, ACT's approach has been to conceptualise the adaptation needs as the total adaptation spending required to avoid all CC impacts. In practice, the two approaches are compatible and could be fully aligned once country/regional estimates of residual impact are available.

**Figure 2: The adaptation gap in ACT locations**



Source: ACT (2016) *Progress with Climate Change Financing Frameworks in selected South Asian countries*

In all locations, the adaptation gap is estimated to be over 50%, indicating that adaptation spending is falling far short of requirements. However, this analysis is designed to be practicable and the model used to calculate the adaptation gap can be used to simulate parameter changes that inform a range of policy options for governments looking to close their adaptation gaps. For example, the impact of fiscal expansion on the adaptation gap can be assessed, as can the impact of increasing the CC relevance of expenditures, or leveraging greater private sector adaptation through policy instruments such as incentives and regulations.

### What are the associated information and data requirements?

The assessment of the adaptation gap is often the last stage in CCFF analysis, as it forms the culmination of the other components of the framework. Specifically, estimating the adaptation requires an understanding of:

- **Potential impact of CC on GDP between now and 2050.** To be informative for budgeting purposes, these forecasts need to be location specific and disaggregated by sector. Such estimates are sourced via the triangulation of all easily available evidence. Typically, this will involve using global or regional evidence, adjusted based on vulnerability and composition of the economy.
- **Current and projected levels of adaptation spending, presented in the form of financing scenarios.** This includes financing generated from national and/or international sources, encompassing:
  - Projections for domestic public expenditure, which are informed by the medium-term expenditure framework (or equivalent) for the whole government budget.
  - International funding, including development partner financing and climate funds, based on disbursement and commitment plans. Recent analysis shows

that the increase in these funds could be substantial in the near future. However, adaptation funding that is integrated into development funding is still much larger than dedicated adaptation funding, and is likely to remain larger as most large adaptation actions are primarily development actions.

- Private sector funding. The literature has highlighted additional financing, leverage ratios and promotion of auto-adaptation as potentially effective means for increasing financing toward CC.

Crucially, it is essential to apply CC-relevance weights to expenditure projections, in recognition of the fact that adaptation measures are usually part and parcel of broader programmes that promote SD, and as such there is a need to ‘untangle’ the portion of funding that is specifically for adaptation. ACT has pioneered a robust approach to calculating CC relevance that is based on an assessment of the share of benefits that are associated with CC adaptation or mitigation, as explained in the response to the previous question in Box 1.

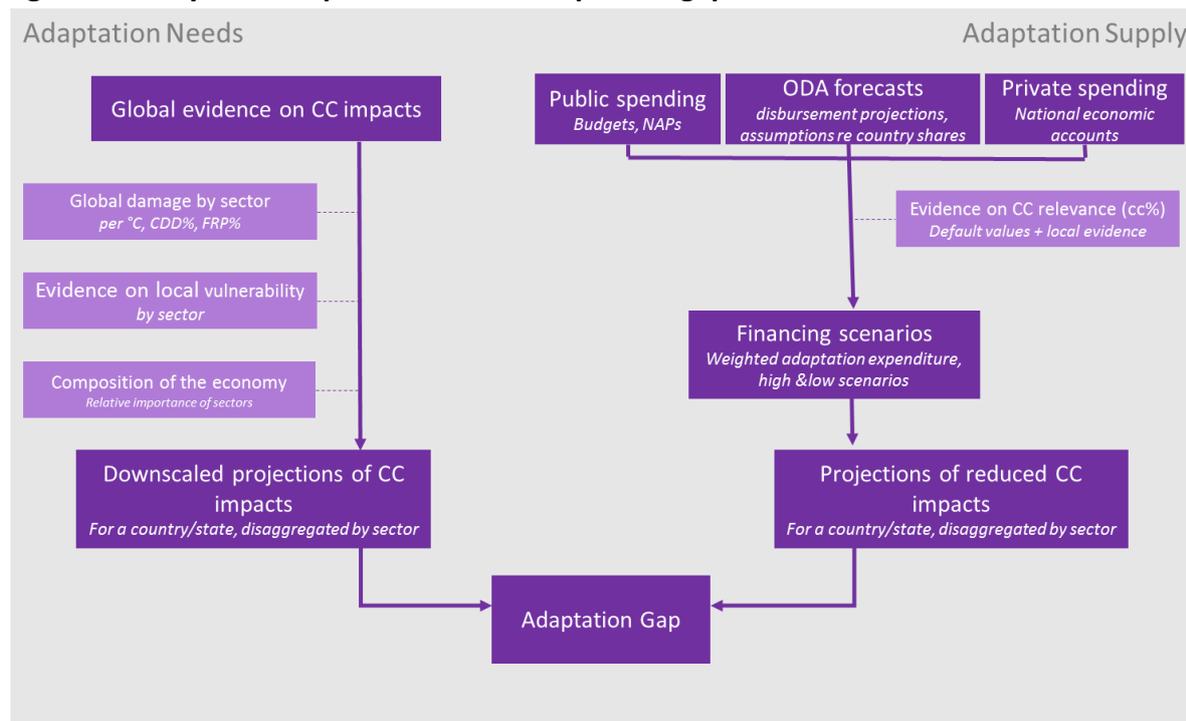
There is a degree of uncertainty in assumptions for each of these financing streams, so they are best presented as high/low scenarios. **Low scenarios** are based roughly on CC expenditure receiving a constant share of public expenditure and ‘reasonable’



expectations for climate funds. **High scenarios** assume CC expenditure grows faster than average public expenditure and that climate funds disburse more quickly. For both high and low scenarios, the resulting level of CC impacts can be assessed. The adaptation gap is the amount of CC damage not addressed by current and projected levels of adaptation, expressed as a percentage of total CC potential damage. Because the CC% for each action is a measure of the *relative* importance of reduced L&D compared with development benefits, the total reduction in L&D is the sum for all actions of the expenditure, multiplied by the overall benefit–cost ratio, multiplied by the CC%.

Figure 3 is a graphical representation of the analysis that feeds into the calculation of the adaptation gap.

**Figure 3: Analytical components of the adaptation gap**



Notes: CDD% = % change in consecutive dry days, as a measure of the change in drought; FRP% = % change in Flood Return Period, as a measure of change in flooding

### Which lessons learned, good practices, challenges and barriers have been encountered in such reviews?

The adaptation gap is an intuitive and pragmatic approach for assessing the adequacy of adaptation efforts and for generating actionable recommendations that can further the implementation of adaptation plans. Its application in several South and South East Asian countries has generated some valuable learning, which we summarise below.<sup>4</sup>

**Initial analysis reveals that adaptation requirements are high and that funding is going to be a stumbling block in realising national adaptation goals.** What the CCFFs undertaken in the localities reviewed demonstrate is the need for large amounts of funding beyond existing sources to address adaptation gaps in the order of magnitude of 50–85%. Thus, it is vital to identify various funding sources and start developing strategies to target them based on region-specific needs at a very early stage. Different sources fund different kinds of activities, and it is worthwhile examining which programmes in CC action plans should be funded with which resources.

**Some CCFFs have included general guidance on the comparative advantage of different sources.** For example, government resources should be dedicated to programmes that fund broader development goals for the region in addition to CC adaptation and mitigation goals, or those with significant recurrent cost implications. Public funds can also be used to finance assessments, feasibility studies and demonstration projects that are required to leverage

<sup>4</sup> These points are further developed in ACT (2016) *Progress with Climate Change Financing Frameworks in selected South Asian countries*, which is available at: [www.actiononclimate.today/wp-content/uploads/2016/09/ACT-Progress-with-CCFFs-in-selected-South-Asian-countries.pdf](http://www.actiononclimate.today/wp-content/uploads/2016/09/ACT-Progress-with-CCFFs-in-selected-South-Asian-countries.pdf)

private sector investments. Private sector financing is likely to focus on proven and profitable technology investments, while international climate funds might be available for preparatory and capacity development activities. Importantly, this sort of financial planning helps target efforts toward international funds and the private sector more appropriately – improving the likelihood of attracting necessary financing for adaptation.

**There is often a remarkable lack of alignment between the sectoral distribution of CC impacts and the sectoral distribution of planned adaptation spending.** Take, for example, the case of Bihar. Our adaptation gap analysis suggests that the sector driving most CC losses will be agriculture, which is projected to account for a 1.9% reduction in GDP growth rates by 2050 (nearly half of all CC-related economic impacts). However, the state’s Action Plan on Climate Change only allocates 7% of its resources to the agricultural sector. By contrast, nearly a third of plan resources are allocated to forestry, even though that sector is projected to contribute less than 1% of total CC losses. This apparent mismatch between resources and needs is evident in many of the locations ACT where is working, and highlights the need to use evidence and, in particular, *localised* evidence of CC impacts, when prioritising adaptation response.

**CC impacts – whether in the form of immediate weather variability or long-term degradation of resources – are more easily understood when translated into economic cost.** CCFFs, and the computation of the adaptation gap, present this as potential foregone economic growth in every year. Disaggregating this by sector makes it easily translatable into budgets – and into appraisals of new competing adaptation spending options. Beyond the projection of growth trajectory, the economic cost of CC can also be put in terms of fiscal space or discretionary budget that would be tied up rather than available for other purposes.

**Although the CCFF is conceptually intuitive and simply introduces CC into the key elements of routine development planning, the practical application can be challenging.** To minimise the challenge, especially in countries and subnational authorities that have limited capacity for routine development planning, ACT has been pioneering the methods discussed above of assessing effectiveness and CC% that involve a hybrid mix of economic analysis, when this is possible, and more qualitative scoring methods.





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