ACT

ACTION ON CLIMATE TODAY

LEARNING PAPER

Bringing adaptive management to life: Insights from practice

Anmol Arora, Elizabeth Gogoi, Divya Joy, Pankaj Kumar, Rajni Luthra, Uma Pal, Arif Pervaiz and Cristina Rumbaitis del Rio

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Abbreviations and acronyms

ACT	Action on Climate Today
CDB	Cotton Development Board
CRVCA	Climate-Resilient Value Chain Analysis
DFID	UK Department for International Development
EU	European Union
GESI	Gender and Social Inclusion
ICCCAD	International Centre for Climate Change and Development
IIT	Indian Institute of Technology
LUCID	Learning, Uptake, Communication, Influence & Dissemination
MEL	Monitoring, Evaluation and Learning
NGO	Non-Governmental Organisation
OPM	Oxford Policy Management
P&DD	Planning and Development Department
PACT	Punjab Adaptation to Climate Tool
UK	United Kingdom
USAID	United States Agency for International Development

Executive summary

The increasing popularity of adaptive programmes in the development sector in the past decade is partly a response to the complex and interconnected challenges facing many developing countries, including the impacts of climate change. The pathway to adapting to climate change is unknown, and there are many deep-rooted institutional, political, economic and social barriers. Adaptive programmes provide the flexibility to allow those delivering the technical assistance to support governments to experiment with different entry points and to adapt or change course when some are not successful.

The Action on Climate Today (ACT) programme is a five-year adaptive programme that aims to strengthen systems of planning and delivery for adaptation to climate change in South Asia. As the programme draws to a close, this Learning Paper reflects on some of the major lessons learnt on the challenges and opportunities of using an adaptive programme management approach to support governments to adapt to climate change. The authors are members of the ACT implementation team, representing the management, operational and technical teams, from across different locations. The paper therefore reflects their first-hand account of the reality of implementing adaptive programmes.

The paper sets out a framework for the essential ingredients of an adaptive programme management approach. These include a set of essential core principles: an evolving theory of change; a locally led and politically savvy delivery approach; experimentation and learning; and stakeholder alignment. It also includes two sets of essential resources required: management flexibility and adequate financial resources. The paper then provides learning from ACT on how to operationalise these core principles and mobilise the necessary resources. It gives detailed examples of challenges faced by ACT with regard to each component of the framework, and how the programme has overcome them, as well as retrospective reflections of additional actions the programme could have taken. A set of case studies unpacks how adaptive programme management has been operationalised in practice in particular locations.

The authors are confident that the impact ACT has had owes in large part to it being an adaptive programme. The programme's flexibility, decentralised structure and strong emphasis on learning have meant the team has been able to respond to opportunities as they have emerged and to invest time and resources where there was most potential for impact. However, this paper is also honest about the challenges ACT has faced as an adaptively managed programme. The paper therefore concludes with a set of lessons learnt from ACT for the benefit of others designing and delivering adaptive programmes on climate change and other issues.

1. Introduction

Many of the development challenges facing low- and middle-income countries today are commonly termed 'wicked problems', meaning they span scales and disciplines, are culturally and socially complex, are often characterised by large uncertainties and have no simple solution (Commonwealth of Australia, 2007; Meadowcraft, 2009; World Bank, 2010). Examples of wicked problems include climate change, income disparities and sustainable development. To tackle wicked problems, it is necessary to employ a variety of entry points across scales and to find longer-term solutions. It also requires experimentation and rapid learning, as solutions are deployed and evolve quickly to fit the context or are dropped if not successful. Development assistance programmes are increasingly being designed to tackle such wicked problems through adaptive management approaches that provide the flexibility to find a longer-term solution (Shakya et al., 2018).

The Action on Climate Today (ACT) programme is an example of an adaptive programme. It is being implemented by a consortium of organisations managed by Oxford Policy Management (OPM) with the aim of strengthening systems of planning and delivery for adaptation to climate change. The programme was designed by the UK Department for International Development (DFID) to provide technical assistance across 12 national and sub-national governments in Afghanistan, Pakistan, India, Nepal and Bangladesh to mainstream climate change adaptation concerns into governmental policies, programmes and budgets, with the ultimate aim of reducing vulnerability and losses owing to climate impacts. From its inception in 2014, the programme has used an adaptive management approach, characterised by iterative planning, frequent assessments of changes in the local context, decentralised decision-making and continuous engagement with a range of key stakeholders. While it has often been successful in meeting or exceeding its intended outcomes, ACT has confronted numerous challenges, related to working on climate change resilience as an issue, decision-maker engagement, workstream design and implementation, as well as those relevant to programme management and operations that are fairly typical of large and complex development programmes.

In this paper, members of the programme implementation team outline some key lessons learnt from confronting these challenges to illustrate ways to use adaptive programme management principles in practice to tackle fairly common challenges in complex development programmes. It builds on an earlier paper, 'How to set up and manage an adaptive programme', based on ACT's experiences (Cooke, 2017).

First, the paper provides an overview of adaptive programme management principles, drawing on the diverse set of literature on this issue. It then provides an illustration of how to operationalise these principles in practice based on learning from ACT. It focuses on course corrections that the programme made, some of which worked well and some of which did not. It also reflects on approaches the team wished the programme had employed, given the benefit of hindsight. The paper concludes with some general recommendations for others who are designing and implementing climate change programmes as well as those trying to tackle other wicked problems through adaptive management.

2. Adaptive programme management

2.1. Evolution of the concept of adaptive programmes

Traditionally, the aid industry preferred tight control and management of development initiatives, which resulted in largely rigid and linear programme structures (Ramalingam et al., 2014). Working this way involves organisational structures, operating procedures and behavioural incentives that typically favour a logic of bureaucratic control and predictability (Prieto-Martin et al., 2017). In addition, since the economic crisis in 2008, there has been increased emphasis on value for money and the need to generate data to measure economy, efficiency and effectiveness, to make a case for sustained public support (Shutt, 2017). As a result, the management approach to development interventions has increasingly became more controlling, with the focus naturally moving to more quantifiable variables.

However, in recent decades, many funders have recognised that the complexity of problems, the pace of change and the interconnectedness of seemingly disparate variables facing the developing world require a more flexible approach (Fussell et al., 2015). For wicked problems – such as health epidemics, political disruptions, economic upheavals or extreme weather events – programming needs to support governments to take immediate stock of the situation and build their capabilities to adapt and respond effectively. Linear management tools are often not appropriate for navigating the deep uncertainties government face and for complex global problems like climate change (Ramalingam et al., 2014).

At the same time, an alternative approach to development programming is challenging the traditional technical assessment of the problem and prescription of the solution. This comes under various banners, such as 'doing development differently', 'problem-driven iterative adaptation', 'thinking and working politically' and others (Andrews et al., 2012; Gonzalez Asis and Woolcock, 2015; Wild and Andrews, 2016). These conceptualise change as political, non-linear and dependent on local relationships and leadership. They also criticise past management paradigms for being distant from the ground reality and encouraging short-termism over the larger problem (Shutt, 2016). Adaptive programme management lends itself to these new politically minded approaches to development and aid programmes.

The term 'adaptive management' originated three decades ago but has gained wider traction within the development aid community as the limitations of a rigid management approach have become increasingly apparent. The overarching goal of this approach is to reduce uncertainty by incorporating a real-time learning element into programme management:

> *It is an iterative process for continually improving management by learning from how current management affects the system. Adaptive Management is therefore based on monitoring and evaluating past management and devising alternative actions that can be tested against desired objectives* (Bunnefeld et al., 2015).

The benefit of adaptive management is that it enables a development programme to move forward with incomplete and uncertain knowledge (Bunnefeld et al., 2015). It demands that development programmes be informed by changes taking place on the ground, and ideally that these be embedded within the design of the programme (Valters et al., 2016).

Adaptive programme management has been gaining traction among donors (Valters et al., 2016). For instance, DFID has developed the ACT programme and many others under an adaptive management framework, providing the necessary flexibility and nimbleness to implementers to achieve results. The 2018 DFID Smart Rules, which guide programme development and implementation, state that it is important to 'incorporate specific procedures and processes for learning, flexibility and adaptability to facilitate programme adjustments based on learning and changes in context' (DFID, 2018). Other donors, such as the World Bank and USAID are similarly incorporating adaptive management approaches and problem-driven iterative assessment frameworks into their programming (Chattopadhyay, 2016; USAID, 2018).

2.2. An adaptive programme management framework

There are different ways of understanding and implementing adaptive programme management. For example, 'active' adaptive management uses experimental management and perceives interventions as experiments to test alternative hypotheses (Taylor et al., 1997). The 'passive' branch singles down on the most likely method to succeed and uses real-time evaluation to refine, update and change management practice. However, there are common characteristics for all types of approaches to adaptive programme management, and in particular how they embed 'iterative learning' at every stage and step of the project management cycle, thereby allowing the local context and political economy to reflect in programme design and implementation (Hummelbrunner and Jones, 2013; Valters et al., 2016).

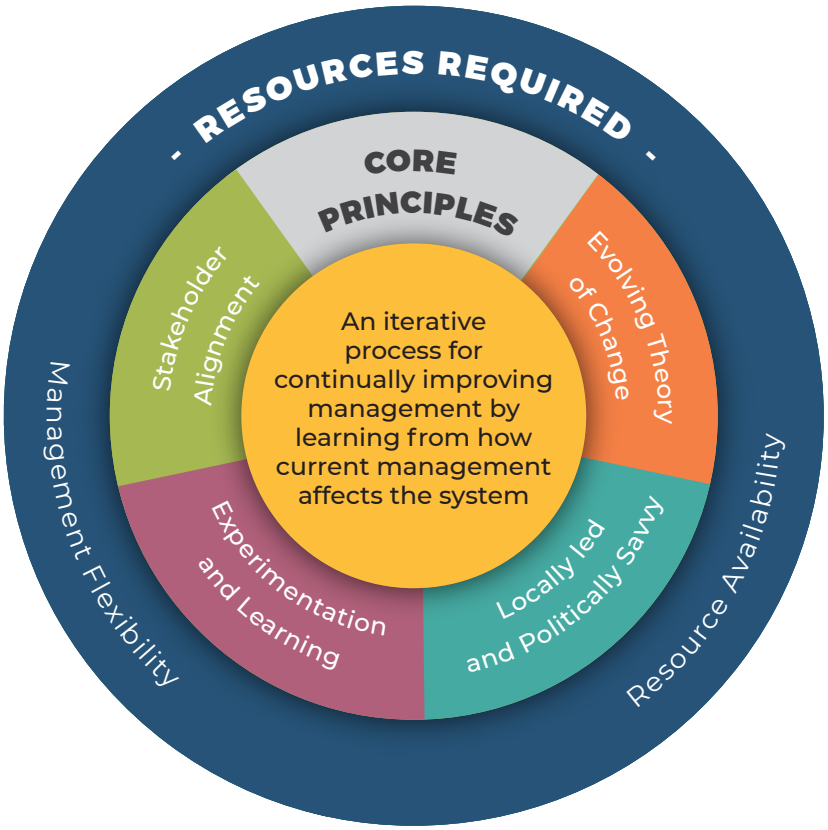
Based on learning from the programme, and the latest literature, ACT has developed a framework for defining the core principles of adaptive programme management, and the resources required (Figure 1).

The core principles of adaptive programme management are as follows.

Evolving theory of change: Adaptive management considers a theory of change to be something that can evolve. Its validity, and the assumptions on which it is based, are constantly being tested through interaction with the real world. Thus, monitoring the theory of change becomes an essential part of adaptive programme management. The continuous measurement, assessment and interpretation of an intervention form the foundation of course correction in adaptive management.

Stakeholder alignment: Adaptive management demands strong alignment with and cooperation between stakeholders, particularly the primary intended beneficiaries. For example, if a programme suddenly changes the design of an intervention or continues with an intervention despite unfavourable circumstances, this will likely lead to friction with the local stakeholders, unless there is prior understanding and trusted relationships between the programme team and relevant stakeholders.

Figure 1: ACT's framework for adaptive programme management



Experimentation and learning: Adaptive management recognises that, while the overall objective of a complex intervention may be clear, often the route to achieving it is shrouded in mystery. Therefore, it allows a programme the flexibility to experiment to discover the right solution as opposed to remaining fixated on a potentially wrong or untimely one. Learning mechanisms need to be embedded across the length and breadth of the programme cycle, to facilitate contextual and timely decision-making.

Locally led and politically savvy: Adaptive management follows a collaborative approach whereby decision-making authority is delegated to the field level. This means the management team does not perceive team members working daily with government partners and others as merely implementers of prescribed solutions but as active decision-makers. They have a bigger say in the design of interventions and resource allocation. This ensures programmes integrate local considerations and a strong understanding of the context into their decision-making process; utilise opportunities as and when they emerge; and avoid pitfalls.

For adaptive programme management to be feasible, the programme itself must be set up to allow it. In particular, for it to function appropriately, there must be adequate resource availability and management flexibility (Bunnefeld et al., 2015):

Resource availability: Adaptive management is a resource-intensive exercise. It requires the availability of adequate finance and time to carry out experiments, conduct analysis and make course corrections. A programme needs to examine at the outset the availability and appetite for these functions through its duration. In particular, there must be sufficient resources to cover the close and regular engagement and interaction by the core delivery team with government partners and other stakeholders. There is a risk that the funder will see this as an overhead, whereas actually this time is critical to ensure the effectiveness of the programme and its frontline activities.

Management flexibility: Adaptive management requires stakeholder commitment and understanding of its value proposition. The management structure of the programme, stakeholder relationships, institutional design and decision-making processes must all be aligned and flexible enough to accommodate an adaptive management approach. The management needs to assess the appetite for adaptive management from donors, key stakeholders, staff/teams and all those with oversight responsibility before embarking on this approach.

2.3. Adaptive versus traditional management: The right approach for the right problem

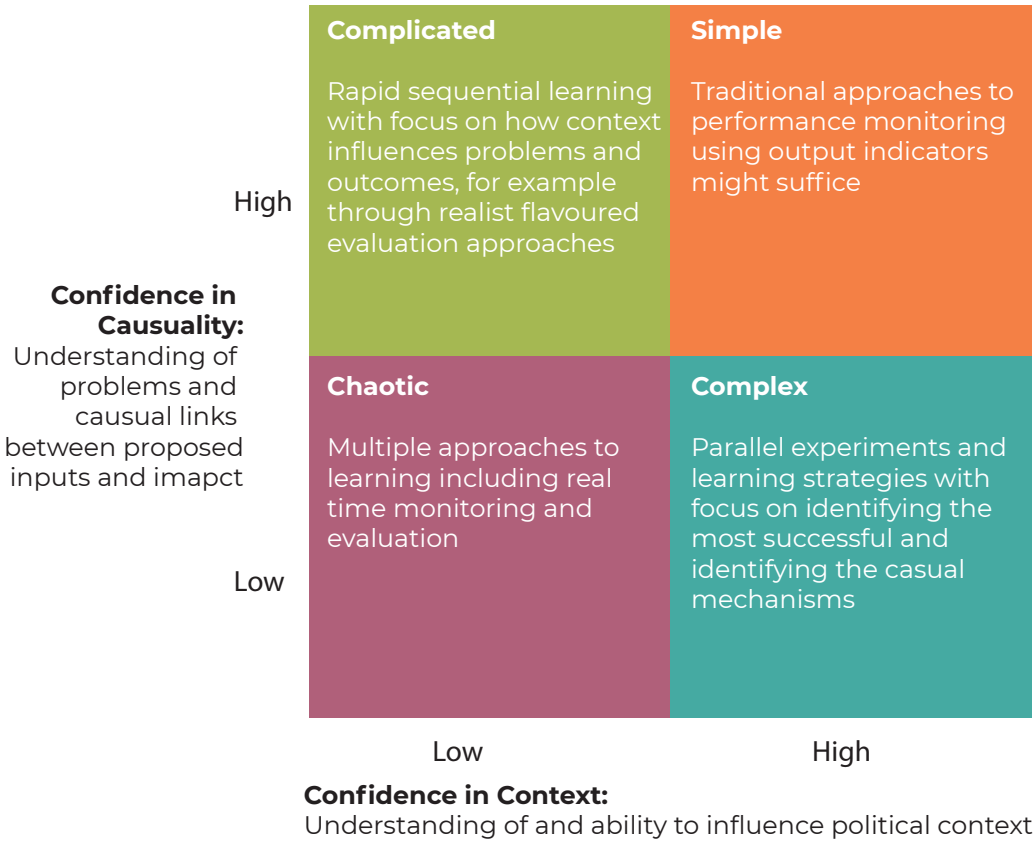
Not every donor-funded development programme requires a full-scale adaptive management approach. Some interventions can achieve the desired results by applying best practices from more traditional management models. However, when a programme or intervention faces the twin obstacles of incomplete understanding and changing systems, it is likely to be best served by adaptive management. Programmes that aim to strengthen adaptation to climate change tend to fit this category, given they usually face a context of a complex and poorly understood operating ecosystem; gaps in data; unseen and unforeseeable changes taking place; and an absence of a manual of best practice.

The approach best suited to a programme or intervention depends on the context in which it is based and what it is trying to achieve. Ramalingham et al. (2014), Hummelbrunner and Jones (2013) and others have developed a matrix for assessing the appropriateness of different models of programme management and evaluation. One axis is the 'confidence in causality' – that is, the level of confidence in the links between inputs, outputs, outcomes and impacts. The second axis relates to the context and confidence in the ability to influence the political dimensions of the context. Figure 2 illustrates the four broad categories that the matrix yields.

In the 'simple' quadrant, the relationship between cause and effect is strong and predictable; traditional management is well suited for such interventions. For example, a programme focused on the number of children vaccinated for a particular disease is fairly straightforward and can rely on a quantitative assessment of the number of children vaccinated as its outcome measure.

The 'chaotic' quadrant is where aid programmes enter unknown territory, and there are deep uncertainties on what the outcome should look like.

Figure 2: Learning to adapt: Exploring knowledge, information and data for adaptive programmes and policies



Note: This figure is adapted from proceedings of a workshop organised by the United States Agency for International Development's Innovation Lab, the Institute of Development Studies, MStar and FHI 360, and held at Nesta London in October 2015 (Learning to Adapt: Exploring Knowledge, Information and Data for Adaptive Programmes and Policies) as well as subsequent work by DFID and ODI on guidance for adaptive programming (DFID, 2016; Valters et al., 2016).

Source: Shutt (2016).

Traditional management may be too slow to respond to the rapidly changing situation. A programme working on resettling climate refugees may present such a case. The political and legal fluidity in such scenarios demands adaptive management to reconcile many different interests and a rapidly changing situation.

The other two quadrants require traditional and adaptive management in different measures. Identifying the right requirement is the first step to designing the right response.

2.4. Challenges for adaptive management

An increasing number of programmes now attempt to follow the practice of adaptive management. However, there is limited evidence on how faithfully its principles have been adhered to, and what success they have yielded. From the literature, as well as ACT's experience, there are four main challenges to effectively using an adaptive programme management approach.

Economic and resource constraints: Even when there is a strong and clear need, reasons of economic viability mean it can be difficult to implement adaptive management. The management team of a programme must recognise the value of adaptive management and accept that time and resources will be foregone in search of insights and learnings (Derbyshire and Donovan, 2016). It is undoubtedly cost-intensive to design, implement and monitor experiments through which learning occurs, and the benefits of the same are

delayed while the costs are borne upfront. Another challenge is to ensure the benefits clearly outweigh the costs. For example, ACT commits resources to bringing together all location teams every quarter, to share learning, take stock of progress and collectively agree any change in approach. This is essential to ensure the programme adapts from learning in real time, but it is difficult to quantify this benefit.

This challenge can be aided by avoiding elaborate monitoring strategies and focusing on a cost-effective, concise and reliable set of monitoring indicators that are focused on outcomes, not outputs. For ACT, it has been useful to focus on partner governments' progress towards adopting and implementing improved policies and systems for tackling climate change. There are also low-cost ways of discussing progress, learning and the need to adapt. For example, the ACT Team Leaders from within each country have held weekly phone calls with the management team and each other, and there is a WhatsApp group to share experiences informally.

Institutional acceptance: Lack of willingness of the funder and/or delivery partner to adopt adaptive management practices is arguably the most significant barrier to implementation of the approach (Booth and Unsworth, 2014; Bain, 2016). Many organisations have a set of entrenched values and protocols that have brought desired outcomes in the past. Adaptive management may therefore require an organisation to re-examine its operations and administrative management and systems, including financial management systems, the definition and measurement of milestones, targets and value for money, systems for delivering accountability, stakeholder relationships and others (Bryan and Carter, 2016; Derbyshire and Donovan, 2016). These may be difficult changes for an organisation to accept and implement. In addition, even if an institution as a whole accepts the need for adaptative management, the individuals involved in managing or overseeing the programme need to have the confidence and experience to see its value.

Adaptive management may need to be applied not just to the programme being delivered but also to the organisation delivering it. In particular, organisations may need to find ways to promote flexibility, cooperative management and long-term outlook within their internal culture and systems (Bain, 2016). For example, for OPM, ACT is one of many adaptive programmes it is implementing on a number of different development issues. As a result, the organisation has developed a flexible working culture that makes it possible to bring in staff and external consultants to work on a project when required but does not require their time to be committed for the duration of the project. In addition, the Senior Responsible Officers in DFID were able to draw confidence from the Department's well-developed policy and protocols that support adaptive management but it still took time for them to have full trust and confidence in the leadership team of the programme to allow them to take a hands-off approach.

Knowledge and capacity constraints: Adaptive management involves responding quickly to changes in the context and demand and new opportunities within a development programme. It may mean that team members recruited to do a particular job are asked to adapt and deliver a different scope of work. In adaptive management, team members are often pushed outside their comfort zone and asked to innovate. This may lead to discomfort, disillusionment or loss of morale, although for others it provides the space to grow and develop new skills. It can also sometimes be difficult to find the resources and individuals to fill any knowledge and skills gaps. In addition, the management team may struggle to undertake experiments and learning processes or develop monitoring strategies that go beyond the accountability asks of donors.

Personnel management is particularly important in this regard. Senior management needs to be open and responsive to staff and stakeholder concerns. A decentralised decision-making process also helps ensure staff have ownership over key decisions to adapt and change the scope of work. ACT also found that having a set of regional and international technical advisors on specific themes and skills (e.g. climate-smart agriculture, finance, governance) meant the programme was able to support and build the skills of the programme staff, as and when required.

Flexibility vs. accountability: There is a risk that adaptive management will be used as an excuse to renege from commitments made to donors and dilute the accountability of the delivery partner to produce results. As the Center for Progressive Reforms states, 'In many cases the term adaptive management, has become uninformative and at worst a smokescreen for unbounded

agency discretion and a wobbly commitment to programme activities' (Center for Progressive Reforms, 2011).

Adaptive programmes need to put in place robust and transparent processes so they can be held accountable for decisions made. After the initial year, ACT transitioned from monthly reports to DFID that provided progress status against outputs, to quarterly reports focusing more on progress against outcomes. The monthly reporting and target-setting risked short-term thinking and missing out on new opportunities. For the quarterly reports, ACT was able to set targets designed to focus on the outcome desired, rather than the output. Innovative monitoring measures such as stories of change, documenting most significant failures, etc., also encouraged big picture thinking and team reflection.

In sum, adaptive management approaches were developed to cope with complex, uncertain, rapidly changing and highly political and contextualised challenges, such as climate change. This management approach is underpinned by the tenants of experimentation and learning, evolving a theory of change, engaging a diverse set of stakeholders in a politically informed way and using decentralised decision-making. Implementing an adaptive approach requires highly flexible systems, buy-in from key stakeholders and sufficient time and financial resources. In the next section, learning from the ACT programme is used to develop further insights on the reality, including the challenges, in implementing an adaptive programme management approach in practice.

ACT's work on analysing and strengthening value chains for climate resilient crops cut across locations, facilitating learning across locations

3. Learning from ACT on using an adaptive programme management approach

ACT is a £23 million, DFID- funded technical assistance programme designed to support countries in South Asia to mainstream climate change resilience concerns into their policies, programmes and budgets. It started in 2014 with a brief inception period and has been implemented from January 2015 to March 2019. The programme is managed by OPM and implemented with a consortium of partners. The programme operates in 12 different locations across 5 countries – Afghanistan, Bangladesh, India (at the central level and at the state level in Assam, Bihar, Chhattisgarh, Kerala, Maharashtra and Odisha), Nepal and Pakistan (at the federal level and provincial level in Punjab).

ACT was designed at the start, by DFID, as an adaptive programme. The logic was that, given the complexity of mainstreaming climate change, and the fact that there was no clear pathway or route to achieving this outcome, the programme needed to be flexible enough to experiment with different strategies and entry points. ACT's adaptive programme management approach has delivered results, but this has not been without challenges. The programme structure is inherently complex, with over 170 different workstreams in total, spread over 12 different geographies, 50 full-time and over 300 part-time team members and many different technical domains, cultures, governance systems and legal systems. Moreover, there is a variety of consortium partners involved, and consequently a diversity of preferred ways of working. It has been a challenge to manage both strategically and operationally, and has required significant flexibility, customised management styles and iterative planning and learning.

Nonetheless, the programme has been highly successful in meeting or exceeding its targets. It has leveraged over £1 billion, climate-proofed over 80 policies, programmes and strategies and supported the establishment or strengthening of governance systems for climate resilience across locations. It has been specifically lauded for maintaining a focus on results (outcomes and impact) rather than outputs; listening to government to co-develop programmes of work, rather than telling government what it should do; decentralising decision-making to local Team Leaders and providing them with the support needed to be effective; creating a strong identity; and reaching global influence for a relatively small regional programme. An independent evaluation found that,

> *The programme has been particularly strong in enabling mainstreaming climate change adaptation in the partner governments' and States' policies and strategies... and successfully influencing the design, development and adoption of formal policy documents, and facilitating interest and action at times in areas which had not been given priority in previous plans [as well as] effective in strengthening institutional mechanisms, capacities and government systems, and in enhancing the skills and building the capacity of government officials to understand and act to reduce the impacts of climate change* (IPE Global, 2018).

Moreover, the programme has been able to logistically and strategically manage over 170 different workstreams, recruit and retain the programme team with very few departures over a four-year period and attract and motivate a number of young professionals who will continue their careers in the field of climate change adaptation. Through its work, the programme has been able to seed a number of different innovative projects and institutions that will continue beyond its lifetime.

The rest of this section outlines how ACT has used an adaptive programme management approach to deliver these results. It provides first-hand insights on how to operationalise and deliver the core principles of the adaptive management framework in Figure 1 and mobilise the necessary resources.

3.1. An evolving theory of change

The overall programme theory of change, and the other associated programme- and location-specific strategies, results framework and monitoring indicators, have evolved over the duration of ACT. The initial logframe set by DFID was designed in such a way that outputs were flexibly defined to allow the programme to

meet the demands of government partners but outcomes were clear in terms of climate-proofing policies and programmes, building the adaptive capacity of governance systems and mobilising resources for climate adaptation.

The flexibility in the logframe was critical to allow the programme's theory of change to be flexible and evolve; however, the lack of definition in the programme design also presented some challenges. The inception period was too short (just three months) for the team to fully design the full scope of the programme. The planning process therefore continued into the implementation period, which reduced the amount of time available for technical assistance. At the same time, there was pressure from DFID to show fast results, even though the programme was still building the necessary relationships with government. It took some time to downscale the broad set of ambitious outcomes into interventions and workstreams that could be implemented. In addition, monitoring and reporting on the aggregate results from these workstreams towards the programme-level set of outcomes proved conceptually and practically difficult. Lastly, when the programme did adjust its strategy and approach within a location, there were risks to manage, in particular relationships with stakeholders and delivery partners who were not always in agreement with the changes in focus and direction.

The programme has managed these challenges to operationalising the principle of an evolving theory of change through the following:

- The planning period extended from the inception period to the first year of implementation. During this process, ACT undertook initial research projects identified by government partners, while in parallel working to better understand the local political economy and identify longer-term opportunities. These initial research projects were defined in a bounded way so they could be delivered quickly (within approximately six months), to build trust with government counterparts and demonstrate that the programme was responsive to their needs. Many, but not all, of these workstreams were later developed further into longer-term work programmes.
- A long-range planning exercise was then used, in which consultations with a variety of government and non-governmental partners informed the selection of focal sectors in each location, as well as a set of workstreams. Each of the workstreams focused on outcomes related to building institutional capacity; climate-proofing governance systems as well as sectoral policies and programmes; and accessing additional resources for climate-related pilot testing and programming.
- Location-specific strategies stopped the programme from becoming just a collection of 50-plus individual workstreams. These articulated how the workstreams could be coherent and mutually reinforcing and build off one another. For example, in Odisha, workstreams on water resources planning and climate-resilient agriculture were brought together through work on integrated water and agriculture planning in light of climate change. The location strategies essentially articulated the theory of change for each location, as well as an analysis of risks and key decision points.
- These location strategies were continually re-evaluated and, if necessary, adjusted, based on a real-time monitoring of the local political economy and new opportunities and constraints by the Team Leaders. Workstreams that were not getting traction and could not be adjusted were dropped. For instance, using a social safety net programme in Pakistan as an entry point for building climate resilience was dropped after it was found to be too politically and operationally challenging.
- A formal annual governance of climate change assessment, involving focus group discussions with local stakeholders, documented changes on a whole range of indicators related to the local enabling environment, including strength of the evidence base and policy frameworks; level of awareness and understanding and political commitment of stakeholders; institutional capacity; financial resources; and others (Gogoi and Bisht, 2018). This was a critical entry-point into the evolution of the strategy.
- Unanticipated requests from government, but with high relevance for the programme, have been resourced through a flexible rapid response mechanism. Support provided in this way included bringing in relevant experts; convening officials from different locations to share their experiences; high-profile events to give visibility and political momentum to the programme's workstreams; and rapid proposals to leverage funds or influence the development of larger projects.
- A sustainability planning exercise was carried out in the last two years to identify elements introduced by the programme that needed to be

sustained, as well as legacy institutions to carry forward ACT's mandate after the programme ends. Sustainability planning involved looking at the strength of political leadership, resourcing, capacity, mandate and accountability mechanisms and incentives needed to sustain reforms introduced by the programme (see Annex 1) and identified specific measures that needed to be taken in the final two years of the programme to increase the likelihood of long-term impact. The sustainability plans significantly altered planned work in each location and became the focus of location strategies for the final year of the programme.

3.2 Alignment with the priorities of key stakeholders

ACT was designed as a demand-led technical assistance programme with the expected outcome of enhanced mainstreaming of climate change in government partners' development programmes, policies and budgets. Therefore, the principle of aligning with the interests of stakeholders was built into the programme. However, operationalising this key element of adaptive programme management has raised some crucial challenges throughout the duration of the programme.

First, there have been challenges related to being demand-led while keeping a clear focus on climate change adaptation. There has been limited understanding among government partners of climate change, and a tendency to confound climate change with broader environmental challenges, rather than seeing it as a core development challenge. Even when officials have been aware of climate change, it has often been seen as a long-term and international issue, and less of an immediate priority, given limited resources, staff time and political attention. Moreover, the uncertain nature of climate change impacts means that political and administrative pressure on government functionaries is invariably on addressing the pressing problems of the day – of which there are many in South Asia. And where there has been strong interest in taking action, there has been little knowledge of what kind of action to take to prepare for the impacts of climate change, or an inability to 'sell' the initiative to decision-makers. As a result, the programme initially faced limited requests from government partners for relevant and substantial support, and in some cases there was limited interest in engaging with the topic in general.

ACT organised site visits with experts to ACT location for the British High Commission.

The programme has confronted this challenge by experimenting with different approaches to garner interest in adaptation itself, and the support ACT could provide, including by:

- Framing climate change in terms of the challenges being faced today by government and connecting climate change to its top priorities. In some cases, this has meant not even mentioning the words 'climate change' until buy-in has been secured;
- Providing evidence of the impact of climate change on issues of economic growth and development and bringing in new evidence on sectoral impacts and opportunities;
- Using the lens of countries' obligation to meet the commitments governments have made under the Paris Accord, as well as national policy commitments. In India in particular, the entry point was through the State Action Plans on Climate Change that the central Ministry of Environment, Forestry and Climate Change had instructed every state to prepare;
- Informing government officials of the financing available domestically and internationally for climate action and offering support to access those resources. In every location, a number of different entry points (Gogoi et al., 2017) and influencing strategies (Tanner et al., 2018) have been explored to gain government buy-in for work on climate change.

Every time an administration has changed, or a focal point has been reassigned, ACT has employed a new suite of these strategies to garner interest in climate change with the successor in an iterative fashion. Two prior papers discuss the different strategies used in detail (Gogoi et al., 2017; Tanner et al., 2018).

ACT has faced a common challenge for development programmes – that is, frequent rotation of government officials to different postings, which has meant that in most locations there has been little continuity in terms of key governmental focal points. Frequent changes of officials hinder the pace of work, limit institutional memory and ownership of activities and threaten future sustainability. In one location, ACT saw over 15 different focal points in a four and a half year period. Government departments, especially those charged with climate change as a mandate, tend to be understaffed, to lack technical and financial resources and to have marginal influence over policy and decision-making processes. Finally, officials often expect external development programmes to provide capital resources and help fund pilot projects and are less interested in technical assistance.

Several challenges have also emerged with respect to working with governments in South Asia. This partly relates to the cumbersome bureaucratic processes within all the governments, usually leading to long or uncertain timelines for making decisions, even on simple things like when to host a workshop. Even when there has been strong interest and commitment by the particular official working with ACT, the bureaucratic process has been uncertain and prone to being stopped or delayed at any point of the hierarchy. In addition, bureaucratic norms tend to define climate change as coming under the jurisdiction of environment departments, and thus other line departments, such as water resources or agriculture, which have been the focus of the mainstreaming agenda of the programme, have often been reticent to engage as climate change is not their responsibility. When they have engaged, there have been sensitivities regarding respective 'turf' that it has been necessary to manage throughout.

To overcome these challenges related to aligning the technical assistance ACT could offer with what was being requested by the government, ACT has deployed the following strategies:

- ACT realised early on that it had to devote more resources to engaging officials (both nodal departments and sectoral/line departments). Local teams have also had to spend a significant amount of time managing expectations on what ACT can and cannot provide as a technical assistance programme and finding creative ways to align government interests with the resources and mandate of the programme.
- Two full-time team members were deployed in each location to continuously engage with the government. In some cases, team members are embedded in government offices to support, follow and unblock the requisite bureaucratic processes. Team Leaders for each location have become the institutional memory for the government when transfers occur.
- ACT has focused on developing networks and relationships beyond the focal agency for climate change, which has helped develop cross-sectoral, cross-departmental relationships in government to mainstream climate concerns.
- ACT has used a long-range planning exercise to identify concrete demands from government and to document implementation agreements. This

documentation has been critical as turnover is so high within government.
- The rapid response funding has been a useful means to accommodate demands from government that have fallen outside of the scope and mandate of the programme.
- Throughout the programme, ACT has found opportunities to give a visible platform for officials to talk about their work with the programme with the public, key stakeholders and/or the media. This has not only provided visibility and political mileage to political leaders but also established the credibility of the programme as a valuable partner.

In retrospect, the programme should have done a more thorough job of stakeholder mapping in the inception phase to identify potential partners and coalitions to develop to advance common causes related to climate change, rather than forming partnerships in an *ad hoc* and evolving way. Partnering with a broader set of non-governmental organisations (NGOs) and others who do not currently work on climate issues could have helped generate greater political pressure and attention to climate issues and build momentum and leverage limited resources to continue the mainstreaming agenda beyond ACT. However, in some locations, the government views NGOs as oppositional, and it has been important for the programme to seem neutral and more aligned with the government interests rather than championing a specific third-party agenda.

3.3 Locally led and politically savvy team

The programme understood from the beginning that a decentralised structure, with team members located primarily in each location, would be the most effective way to deliver an adaptive programme management approach. However, the exact balance of staff resources between the local and the regional levels, and how to empower the local teams, has had to evolve over time.

In each location, there is a Team Leader charged with interfacing with government counterparts to identify, develop and deliver technical assistance, as well as a junior technical expert, who often supports the day-to-day work of climate change centres or cells in government. It took time to find the right people to fill these roles, and in particular to play the crucial 'policy entrepreneur' function of the Team Leaders (Tanner et al., 2018). There is also a team of international and regional advisors, with expertise in agriculture, water management, gender and social inclusion, governance and climate finance, who support the design and delivery of technical assistance across the programme. The advisors who have been most useful to programme delivery are those who have been involved from the beginning and understand the full scope of the programme (rather than a single workstream) and have been flexible enough to be able to provide support as and when required, whether by Skype or in reviewing technical reports by writing, or to travel to engage with government counterparts in person.

The initial design of the programme put a great deal of emphasis on a set of national delivery partners. However, once the location strategies and workstreams had been defined, this list of partners was no longer completely relevant. It was therefore a challenge to manage the expectations of the consortium, and to build more flexibility into the internal procurement process to allow ACT to access the best expertise wherever it was located. This caused significant friction with consortium partners, who were expecting a certain quantum of work, and therefore revenue. In addition, throughout the programme, it has remained a challenge to mobilise at short notice technical expertise to provide short- and long-term support for particular workstreams. As a result, some work has been delayed, extra management and advisors' time has sometimes been spent improving work quality and, owing to lack of available expertise, it has not been possible to carry out a few pieces of work, which has had to be restructured.

To overcome some of these challenges in building a locally led and politically savvy team, ACT has experimented with the following strategies:

- The programme made adjustments to its decision-making structures, to make it clear that the local Team Leaders had full accountability in delivering their location strategy, and also the quality of the work for each workstream. This added significant management responsibilities to the Team Leaders, and in some locations additional more junior staff were brought in to support them.
- The management team at the regional level started to engage more directly with locations where progress was slow, or where there were capacity constraints in the programme's team in that location. To facilitate this, a group of project managers at the regional level was recruited to help with the management team's expanded workload.

- The Team Leaders from each location have developed strong relationships with each other, and regularly interact in person (e.g. at the quarterly team meetings) as well as informally (e.g. through a WhatsApp group) to help each other manage and overcome any difficulties they are facing.
- The programme has invested in filling capacity gaps within both the core team of Team Leaders and the wider group of partners and consultants delivering technical work. This includes through trainings, e-learning platforms, writeshops, regional dialogues and mentoring of senior experts. Team Leaders in particular have been carefully guided and supported by the management team to take on the additional responsibilities demanded from a decentralised programme.

In retrospect, the team management approach at the start of the programme was not sufficiently aligned with the principles of adaptive programme management. For example, additional management capacity at the local level should have been considered from the outset. Despite this, the team structure and culture has emerged one of the greatest strengths of the programme.

3.4. Adaptation through experimentation and learning

While the programme had the basic architecture in place for monitoring, evaluation and learning (MEL) from the start, it was only mid-way through that these functions were fully developed and fit for purpose for an adaptive programme. This made it simpler to design MEL tools that were aligned with what the programme was actually implementing (e.g. innovative new tools were developed relating to monitoring changes in governance systems in line with the reforms developed through ACT), but introducing a new system mid-way through the programme met frustration and resistance from the team as it was seen as an unnecessary complication. It took a lot of time to socialise the new protocols, as well as securing additional MEL capacity to implement and quality assure the new system. It has also been a challenge to monitor and report on the soft side of policy-influencing, for example when Team Leaders have influenced a government partner to reverse, or not take, a decision that would lead to mal-adaptation, or to capture informal influence not tied to specific workstreams.

ACT's Regional Programme Manager, Cristina Rumbaitis del Rio, presents learning from the programme to an international audience

Similarly, initial learning systems put in place at inception have proved inadequate, given the learning requirements of an adaptive programme. Reflective and cross-learning within the team have been slow to emerge and took place only informally in the early stages. As workstreams developed, it became apparent that there were several workstreams across locations that had commonalities yet were not informing one another. Providing location teams with a high level of autonomy has led to a certain amount of silo-ing and a lack of real-time cross-location learning.

To deal with these challenges in embedding experimentation and learning in the heart of the programme, ACT has adopted the following strategies:

- ACT has used quarterly core team meetings as an opportunity to foster cross-location discussions and learning. This has led to the development of common approaches towards conducting value chain analysis of climate-resilient crops, preparing monitoring and reporting frameworks for government and other common focus areas.
- A number of technical dialogues, regional dialogues and learning events have been convened at which multiple locations have been able to present their learnings and identify common standards of work, in partnership with other important actors in the field. This has helped develop a shared language and understanding within the programme, and avoid common pitfalls, improve the quality of deliverables through peer input and peer reviews and build partnerships with other actors and programmes.
- Over time, ACT's ambitions with regard to learning have expanded from sharing learning within the programme to also sharing externally. ACT has invested significant resources in a focused learning initiative – the Learning, Uptake, Communication, Influence & Dissemination (LUCID) initiative – in which ACT team members have worked with external experts to actively reflect what is being learnt, to capture it in the form of detailed Learning Papers and to disseminate these to a broader community of practice through a range of communication products, including papers, policy briefs, conference presentations, podcasts and tweets.

3.5 The requirements of financial resources and management flexibility

ACT has dealt with the twin requirements of having access to sufficient financial resources and having a flexible management structure with different degrees of ease.

The programme's £23 million budget appears generous and sufficient. However, divided between 12 locations over a a four and half-year implementation period, the actual amount of resources available for technical assistance has been relatively limited. In most cases, budget availability has not been a constraint to the intended outcomes, with the exception of this final year, when the programme budget and especially time constraints have limited the ability to take forward some workstreams.

The requirement of a flexible management structure has been more challenging. The ACT programme is inherently complex – working across many locations, cultures and governance systems to deliver a substantial change in mainstreaming of climate change adaptation in 12 locations, in a four and a half-year period. The programme also has a regional mandate to facilitate knowledge exchange, which is made difficult by the political dynamics across the region, meaning staff from certain countries have found it difficult to travel and meet each other. ACT also operates in various high-risk areas, and managing travel and security has taken significant management time. In addition, the programme has a number of different consortium partners, each with different incentives and objectives, 50 full-time staff and over 300 part-time technical experts spread across the locations, as well as oversight by both OPM's senior management and DFID as the donor. There have been significant operational challenges, given the costs at multiple levels, multiple payment points within different locations and by different partners and the need for a standard and transparent procurement and contracting process despite varied local contexts and legal systems. Finally, external and political events such as Brexit, implementation of a new Goods and Services Tax by the Government of India and the EU General Data Protection Regulation have posed additional unexpected challenges. All of these factors have sometimes

made the principle of a flexible management structure – a key requirement of an adaptive programme – difficult to operationalise.

To overcome these challenges and put in place the requirements of available resources and flexible management, ACT has used the following strategies:

- Budget flexibility has been an essential factor to ensure resources have been available where and when required. Each year, the programme has agreed an annual budget with DFID, but without locking in the exact spend across locations and workstreams.
- A common understanding emerged between ACT and DFID that the programme was essentially supporting experimentation, and therefore DFID gave the programme the space and flexibility to try different solutions in different places. It also thus accepted and welcomed discussions on what did not work, or where outputs produced did not lead to outcomes.
- Early on in the implementation of the programme it was clear that the operational functions needed more investment and attention, in particular establishing both bottom-up and centralised systems for budgeting, expenditure, managing costs and contracting. Additional team members were recruited, programme systems were more clearly defined, a Management Information System was established and all team members received training and guidance on the new protocols. Therefore, somewhat conversely, a much more robust and rules-based operations system helped facilitate the flexible management and delivery style the programme required.
- The programme stress-tested its management and operational systems by conducting internal audits and tests to the knowledge management system to identify weak points and redress them. For example, as a result, local security managers were brought in to provide much more detailed and contextualised advice on operations and travel to high-risk areas, and programme-specific travel and procurement policies, and other mitigating measures, were developed.

In summary, the programme has been committed to the key principles of an adaptive programme management approach but faced some challenges in operationalising these. However, through experimentation and innovation, the team in most cases has found practical ways to put in place the key tenets of an adaptive programme. Table 1 summarises the challenges and innovations ACT has adopted.

Table 1. Examples of challenges and mitigating actions taken by ACT to operationalise the adaptive management framework

Principles and requirements	Challenges facing ACT	Examples of mitigating actions taken by ACT
An evolving theory of change	• Inception period too short to develop programme strategy and scope • Conceptual challenge of downscaling broad theory of change to design of individual workstreams • Risks associated with changes in theory of change during implementation	• Planning extended into implementation period (alongside delivery of initial technical work) • Location-specific strategies connecting workstreams to programme theory of change • Continuous re-evaluation of local strategies, including through annual governance assessment • A rapid response mechanism to deal with unanticipated requests from government • Sustainability planning exercise to ensure legacy

Principles and requirements	Challenges facing ACT	Examples of mitigating actions taken by ACT
Alignment with priorities of key stakeholders	• Limited interest and demand from government partners for adaptation to climate change • Limited demand and entry points for technical assistance with relevant agencies • Governance and bureaucratic challenges risking uptake of technical assistance	• Linking climate change to issues of particular political salience, including economics and governments' international obligations • Using climate finance as a carrot to attract interest in the issue and programme • Engaging with government, including through a decentralised team and embedded experts • Formalising partnerships with government to manage the high rate of turnover • Using a rapid response mechanism to respond to *ad hoc* requests from government
Locally led and politically savvy team	• Finding the right people (and building their skills) to act as 'policy entrepreneurs' • Need for flexibility and speed in mobilising the best technical experts	• Empowering and resourcing local teams for decision-making and accountability • Additional management support and attention to local teams struggling to deliver • Formal and informal lessons-sharing among local teams • Regular capacity-building activities of local teams
Experimentation and learning	• Developing and rolling out MEL tools in parallel to delivery of programme • How to facilitate learning and collaboration across location teams	• Quarterly core team meetings, and other in-person opportunities for dialogue, to foster learning and discussion on adaptation required • Invested in documenting and sharing learning with external audiences through partnerships
Financial resources and management flexibility	• Complexity of operations and management of programme • Size and spread of the team	• Budget flexibility within an annual budget ceiling • Enhanced and rules-based operations system to ensure consistency • Internal audits to stress-test ACT's systems

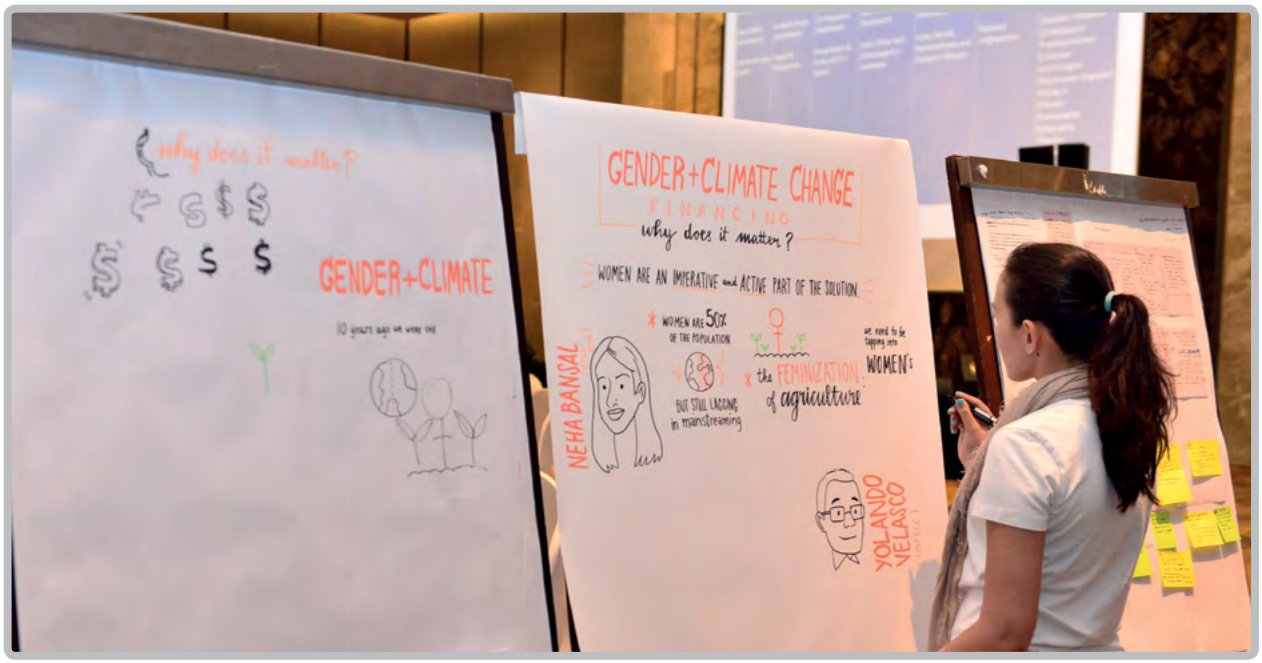
3.6. Reflections on additional actions the programme could have taken

In the course of writing this paper, the programme team identified some areas that could have further improved ACT's adaptive programme management. Most of these were known and regularly discussed during the course of the programme, but there were reasons why they could not be implemented. Some of the areas that in retrospect the programme could have improved include the following.

ACT's approach to knowledge management: The knowledge management function could have been more dynamic from the outset and made better use of the programme's advisory board and other technical experts for sharing ACT products and outputs through their networks. Over time, the programme has learnt important lessons about tailoring its messages and packaging information in the format best suited to key audiences. ACT's messaging has shifted from sharing long-form (100+ page) reports to producing shorter policy briefs, handbooks and videos, and ACT has begun to use the media to distil lessons into op-ed pieces. However, with more time and resources, further effort could have helped ensure both dissemination and uptake of ACT's knowledge and learning.

Engaging with DFID at different levels: ACT has enjoyed a close and constructive working relationship with the programme's focal persons in the South Asia regional climate change team. The trust generated has been crucial to allow ACT to operate as an adaptive programme. However, there are a few ways this could have been strengthened for both parties. First, involving DFID in initial conversations with government partners and key stakeholders during the inception period would have helped secure early buy-in. In addition, a mid-term evaluation of ACT by DFID would have been helpful to have a clearer picture on performance and give enough time to allow for course corrections. Lastly, it would have been helpful to engage with the wider global team of DFID advisors. This would have helped ACT showcase and share learning from the programme and identify opportunities for follow-up to the programme.

Integrating Gender and Social Inclusion (GESI): The programme team, and DFID, was clear from the beginning that a central tenet of adaptive programme management should be a strong consideration of GESI, in terms of both what the programme is working on (and how) but also how the programme is being managed. It has taken some time for the programme to integrate GESI within its workstreams, and this has not been done as systematically as it could have been. More consideration could have been given to GESI considerations internally within the programme. It would have been helpful to have a dedicated member of the management team responsible for GESI from the start, rather than distributing responsibilities among a team.



Learning processes were used to ensure ACT captured and learnt from both successes and failures

4. Case studies from ACT on adaptive programme management in reality

The previous section outlined how ACT has put in place an adaptive management approach at the programme level, and the challenges to doing this. However, the value of adaptive programmes, and the reality of how to deliver them, is more easily illustrated for specific locations, themes and workstreams. This section therefore provides a series of case studies to explain why and how ACT has used adaptive programme management principles to deliver significant impact.

4.1 Adapting ACT's thematic focus on climate budgeting

The scale of climate change is such that measures to abate its impacts cannot be funded through dedicated climate finance, or any single source. Governments must mainstream climate change across their entire development budget, to maximise the finance available for adaptation. ACT has been helping government partners identify the climate relevance of their development interventions, prioritise those that address climate adaptation and ensure deliberate allocation of domestic finance to enable the same.

However, ACT's support to governments for climate budgeting has faced a number of significant challenges. First, there was limited interest among departments of finance to work with ACT on this issue, partly because of a lack of understanding of and capacity to deal with adaptation issues, as well as a mindset that it is not their department's responsibility. The process of carrying out a detailed climate budgeting exercise is time- and resource-intensive, and initially there was not enough commitment by government partners. Lastly, even if there was interest and commitment to this work, the institutional structures and systems related to preparing the government budget tend to be rigid and difficult to modify. At the end of the first year, the management team considered dropping this as one of the focus areas of the programme because of the lack of traction.

However, before dropping the work altogether, the management team decided to try a change of approach. The team switched to focusing on building the foundations for this work, and in particular enhancing understanding in the finance and sectoral departments on what mainstreaming adaptation means in practice and how it is different (and therefore an additional cost) to existing development programmes. This was done by first simplifying the methodology used to scrutinise programmes and budget lines for their climate relevance, to make them user-friendlier for officials so they could eventually implement them themselves. The methodology was modified to also look at climate sensitivities, which officials appreciated, as this was their primary concern. Second, work was carried out in a participatory process rather than done by experts, and then submitted to government for adoption, which significantly improved uptake. For example, in Afghanistan, a consultative approach has helped gain valuable buy-in from the Ministry of Finance, which has proposed including this as a part of its annual budgeting process. In Chhattisgarh, the programme has now been able to take the next step after identifying climate-relevant and sensitive actions in key sectors to engaging sectoral experts to suggest requisite measures to climate-proof them.

This case study clearly shows how adaptive management allows experimentation where the intended outcomes are clear but the pathway to achieving them is unknown. ACT tried multiple approaches and accepted that some were not working before finding an approach that worked for different locations.

4.2 Adapting the design of an intervention in Punjab, Pakistan

A ruling by the Chief Justice of the Lahore High Court in 2016 mandated the Government of Punjab in Pakistan to prepare regular progress reports on how it was managing the impacts of climate change and implementing the National Climate Change Policy. This triggered responses from various departments, ranging from the creation of departmental policy positions on climate change to the creation of new units and staff positions focused on climate change. Recognising this as an opportunity to strengthen the government's capacity for climate change adaptation, ACT fielded a team mission in April 2017, which met senior officials of the Planning and Development Department (P&DD) and the agriculture and energy departments, as well

ACT's Team Leader in Assam, Rizwan Uz Zaman, explaining how erratic rainfall and flooding is impacting farmers

as other stakeholders. The government then requested that ACT craft a capacity-building programme focused on effecting changes in the way public sector projects were planned, executed and monitored. Through further consultation, ACT developed a workstream focused on supporting the agriculture, energy and irrigation departments and P&DD to mainstream adaptation within planning decisions.

ACT had identified a climate risk-screening tool, which was being widely used by international financial institutions and other related organisations to gauge the 'climate worthiness' of water-related projects. The team assumed that a widely used screening tool that had been applied to different types of water projects in multiple locations around the world would be equally well suited to the Punjab context. However, the reaction of department officials was lukewarm, primarily because the tool required prior understanding of climate change issues and existing data related to downscaled impacts. In addition, the outcome of the screening process was not practical in terms of how to use it to improve project design.

ACT recognised that the off-the-shelf tool would not work in Punjab. As such, when the consultant leading on this exercise had to withdraw from the initiative for personal reasons, the ACT team identified in this 'setback' an opportunity to go back to the drawing board and try to devise a 'bespoke' screening tool that would be relevant to the context and needs of the departments in question. After much discussion and outreach, the team identified and put together a team of international and national experts with a background in climate resilience and web design.

After a series of consultations with the departments, the team of experts developed a bespoke Excel-based risk-screening tool: the Punjab Adaptation to Climate Tool (PACT). This easy-to-use tool adopts a systematic approach to screening water-related projects by asking a series of questions (with options given in drop-down answers) and generates a results page that provides users with a list of actions they can take to address areas of vulnerability in the design of the project. The tool was developed collaboratively with users – with users feeding back continuously into several subsequent revisions – and thus responds to the specific needs of each department. PACT will now be hosted on the P&DD website, where it will be accessible for all departments to use as part of their project development process.

There are several lessons from this case study, including a reminder that, no matter how well established an intervention's process or design, unless it meets the needs of the user in question and is relevant to the context, it will not provide the desired results. In addition, an ostensibly negative development – the withdrawal of the main expert tasked with introducing a screening tool – can be turned into an opportunity, if the situation allows for risk-taking. As a result, the final product developed proved to be much more user-friendly and relevant for screening purposes than if the original design had proceeded as planned.

4.3 Aligning with the interests of the government in Bihar

At the very inception of the programme, climate change was not widely discussed, understood or even acknowledged by the political leadership and bureaucracy in Bihar in general. There was little interest among key stakeholders in taking concrete steps to mainstream climate change issues into planning and policy processes. The first year of the programme in Bihar was marred by minimal engagement by government and frequent changes in leadership structure. The management team even contemplated dropping Bihar as one of the programme's target locations.

Instead, ACT adopted a new approach that was more explicitly aligned with government demand. The Bihar team was reorganised, a new Team Leader was appointed and a new long-range planning exercise was concluded. The Team Leader made a strategic decision to focus on two major economic and political issues for the state and the ways in which climate change was affecting them – namely the availability of water resources and the productivity of the agriculture sector.

The programme team also refocused on opportunities to support the government in taking proactive action on the challenges it faced, as and when they emerged. For example, the government was concerned about the unpredictable nature and frequent flooding of the Kosi River in north Bihar over the previous several decades. Research has clearly established that these conditions have been aggravated in recent years as a result of various factors, including climate change. However, the government's response to this crisis was to deal with the issue of excessive siltation forming in the river, which in reality was more a consequence than a driving factor.

ACT decided to support the government in this work and respond to a specific request from the Agriculture Production Commissioner, despite lack of strong direct evidence of a link between siltation and climate change. ACT and a well-respected national academic carried out a detailed technical assessment of the level and nature of the siltation and the implications for river processes and associated hazards. This study provided a basis for further engagement with the water and agriculture departments and a decision was taken to develop a sediment management plan along with a comprehensive framework defining environmentally viable extraction and commercial usages of the silt to manage the flood and drought situation in the state.

ACT focused on the issue of siltation of the Kosi river in Bihar to nurture the government's leadership on the issue

ACT organised a series of focus group discussions with cotton farmers in Bangladesh as part of the value chain analysis

Using a responsive approach to the government's interests, ACT has managed to foster interest and ensure engagement in the programme in general and the issue of climate change in particular. This has resulted in significant action on not just siltation but also adaptation more widely. For example, ACT was invited to present at the International Conference on Siltation in the Ganges by the Bihar Department of Water Resources. This triggered a similar study for the River Ganges in Bihar, and the Indian Institute of Technology (IIT)-Kanpur is carrying out this work using the same methodology and tools. Bihar's political leadership has greatly appreciated the sediment management plan and the Speaker of the Legislative Assembly has also assured full support to the executive body in its implementation. The Deputy Chief Minister personally launched the plan on the occasion of World Water Day (22 March 2018) and this has led to increased funds to deal with siltation in the rivers of Bihar.

4.4 Learning in Bangladesh from work done in other countries

Replication through learning has been a characteristic of ACT's flexible approach to designing and implementing interventions. Running similar and parallel workstreams across locations has allowed the programme to iteratively identify optimal approaches and modify workstreams based on its learnings and experiences. ACT's strategy in Bangladesh, where it began engaging with the government in 2017, has been to replicate and complement work undertaken in other parts of the region.

In 2015, as a result of several existing climate change programmes, DFID advised ACT not to pursue work in Bangladesh. However, in 2017, ACT was asked to re-examine opportunities to support the government of Bangladesh. The programme looked specifically for opportunities that would replicate ACT's work and be feasible to implement in a short timeframe, given the programme's closure in March 2019.

ACT had learnt from other locations that having a champion within the government, and getting their buy-in at every stage, was crucial to delivering impact in Bangladesh, especially given the short timeframe available. ACT therefore designed a workstream around the needs and interests of the Cotton Development Board (CDB), a committee within the Ministry of Agriculture that was very interested in and committed to working with ACT

to understand the impacts of climate change on the entire production process of cotton. Climate-resilient value chain analysis (CRVCA) of the cotton crop is a section of a much larger body of work by ACT on identifying climate-compatible crops and the vulnerability of their value chains to climate change in six other locations.

The work in Bangladesh thus built off of the tools, learnings and recommendations of prior work on climate-resilient value chains conducted in four states of India – Assam, Bihar, Maharashtra and Odisha – and in the provinces of Punjab and Sindh, Pakistan. Rather than starting from scratch, the analysis in Bangladesh synthesised methodologies and tools from different locations, especially Assam and Odisha in India, which have similar geophysical characteristics, and improved on them through piloting and consultations with the government. In addition, ACT learnt from the other locations, particularly Bihar, on the need to allow local experts and organisations to take the lead in carrying out the analysis, to embed and sustain these skills locally. As a result, ACT partnered with the International Centre for Climate Change and Development (ICCCAD) and also benefited from its strong ties with government.

Another important learning that emerged from other locations was the need to align the economic viability of growing specific crops with their degree of resilience to climate change. This finding was one of the primary reasons why ACT decided to conduct a CRVCA of cotton in Bangladesh. The country is the second largest readymade garments exporter in the world and one of the biggest importers of cotton. Current domestic production of cotton meets only 5% of the industry's demand (CDB Five Year Plan 2017–2022). CDB also mentioned that cotton was a relatively better option in the drier highlands, where rice, the staple crop of the country, cannot be grown or has poor yields. This presented an opportunity to explore the crop's value chain to identify its sensitivity to climate variability and general bottlenecks.

This case study shows the opportunities that can come from embedding learning within an adaptive programme. The study in Bangladesh was conducted in roughly half the time required in the other locations, as it could borrow heavily from them and contextualise relevant processes and recommendations. Multiple studies across locations lent robustness to the methodology such that ACT could take a step further, sharing a detailed toolkit on CRVCA with illustrations from different locations with CDB and building its capacity on conducting the same process in all of its cotton-growing areas.

ACT's results framework was focused on outcomes related to improving the resilience of vulnerable people, rather than outputs

5. Conclusion: Key lessons for other adaptive programmes

Over the course of the past four years, the ACT programme has evolved an efficient and effective approach to adaptive programme management. The final external evaluation of the programme recognises the importance of the programme's flexibility and responsiveness to the results ACT has produced. However, operationalising the principles of an adaptive programme has not been straightforward, and the programme's own systems have had to be improved, strengthened and adapted on an ongoing basis.

The following set of recommendations for others designing and delivering adaptive programmes distil some of the cross-cutting lessons from ACT outlined in Sections 3 and 4 of this paper. These are further explained in the paper on 'How to set up and manage an adaptive programme: Lessons from the ACT programme' (Cooke, 2017).

Structure a programme around political decision-making structures: Unlike programmes that are organised around themes (e.g. climate-resilient agriculture) or bureaucratic entities, ACT has focused clearly on supporting national and state governments as political entities to take action on climate change. This means that a core consideration of the design and delivery of the programme has been the local political economy, which has been discussed and assessed regularly.

Allow enough time for planning: ACT's three-month inception period was insufficient to translate the broad initial theory of change and logframe for the programme into a detailed set of programme and location strategies and specific workstreams. The design of these strategies, and the intensive consultations that were required, took nearly a year more. This time investment was essential as it meant the technical assistance was focused on the right entry points in each location and reflected the wider enabling environment. However, ACT was able to justify the time it took only by carrying out limited pieces of technical and research support to the government in parallel. This dual approach was also helpful in building strong relationships and trust with the government.

Decentralised decision-making, as well as accountability for delivery: ACT was always designed to be implemented through a local Team Leader in each location, to manage relationships with the government. It became evident that the programme needed to empower these individuals with decision-making power and accountability. The emphasis on accountability has grown over the course of the programme, with Team Leaders increasingly taking on a hands-on role of management of the work of experts and consultants in their location and ensuring high quality.

Invest in the delivery team: As an adaptive programme, ACT has made heavy demands on the local Team Leaders, and it was necessary to provide capacity support. This meant providing additional local team members to support their work, but also offering training, mentoring from regional and international advisors and opportunities for the Team Leaders to learn from each other and others (such as through participation in global external events).

Decentralising responsibility to the local level did not always lessen the management burden of the regional team, and in fact it perhaps increased, as the management team had to provide intense support in some locations where progress was lacking. At all levels, additional management capacity was brought in mid-way through the programme, which made an important difference to the efficiency and impact of ACT.

Relationship with the funder: An adaptive programme management approach is not possible without a willing funder and a strong open relationship between funder and delivery partner. The trust that DFID had in OPM's management of the programme grew over time, to the point whereby DFID let the programme team take major decisions autonomously. It was also essential that DFID did not require any locked in location- or activity-wise budgets, and the programme was free to reallocate budget lines within an annual budget ceiling. The strong relationship with DFID was helped by the fact that the management team was located in New Delhi and able to meet with the responsible DFID officers at short notice, and that the programme was responsive to DFID's needs, such as providing updates and documentation on demand and at short notice and organising programme visits for visiting UK officials.

Use real-time political economy analysis: An adaptive programme needs to be continuously aligned with and responsive to the situation on the ground and changes in the context. The wider team regularly formally and informally updated local Team Leaders on changes in the interests and demands of government partners and on wider political, institutional and other news. It was not formalised as such, but this was the provision of real-time political economy analysis, which immediately informed the decisions being taken. However, it was also useful to carry out a formal assessment of the context in that location and get the inputs of local stakeholders, to validate the Team Leaders' perceptions and formally document the changes underway.

Strongest possible operations and management systems: ACT quickly learnt that adaptive programmes demand a strong set of systems, protocols and practices for operations and logistics, finance and administration. As the programme increasingly decentralised, these systems needed to be enhanced at the central level. Having a standard set of strict rules for operations, which they did not have to reinvent (e.g. travel and security protocols and systems for consultants working in their location), appeared to ease the burden on Team Leaders. It was also essential for the programme to meet the highest standards of transparency.

Invest in, and budget for, team work: With a team of 50 full-time team members spread across 13 locations, plus a regional team in New Delhi, ACT initially struggled to promote a sense of a single programme team. Each of the locations had a different area of focus and individual workstreams, and there were few overlaps. Over time this has improved significantly, and by the end of the programme the working relationships (and friendships) across locations represent one of the greatest strengths of ACT. This has been helped by investing in bringing together the team in-person every quarter, establishing weekly calls between different teams in the same country and using the learning initiative to allow teams to reflect on successes and challenges across the programme as a whole.

While every adaptive programme is different, it is hoped that these recommendations will be useful to those designing and delivering programmes that aim to be flexible and responsive.

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Annex 1. ACT's sustainability assessment process

Purpose and process

The purpose of the sustainability planning was to review ongoing workstreams in locations as well as at the regional level and ensure that the programme's final 21 months were efficiently focused on activities that had the highest propensity to leave sustainable impact. In some instances, this involved planning additional activities and assigning resources; in others it required refocusing existing work or dropping workstreams in order to concentrate on more sustainable outcomes.

Sustainability planning is about ensuring work leads to lasting change. Thus, the task at the time (21–18 months ahead of programme end) was to assess the following:

- Where are we today, with 21 months to go in the project, in terms of sustainable implementation (i.e. what are we doing that will stay in place if all of our support disappeared today?)
- What more must we do to build sustainability into the programme so that when our support isn't there the activities will continue/reforms introduced continue to be implemented?

The programme developed a sustainability framework to assess progress towards sustainability. This was a modified version of the Star Model developed by Jay Galbraith, relating to organisational design.[1]

1 See http://www.jaygalbraith.com/images/pdfs/StarModel.pdf for more information on the Galbraith Star Model.

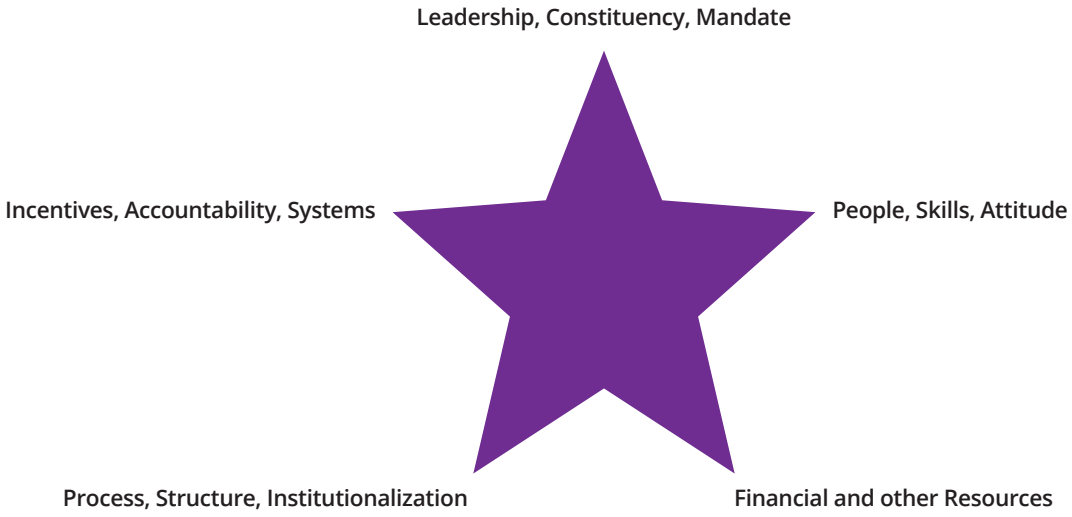

Figure 1: Elements of sustainability

The process followed for sustainability planning was:

1. Each location conducts a **sustainability assessment** on each of its workstreams. Assessment questions are included below. Answers are scored from 1 (lowest/least certain) to 5 (highest/most certain).
2. **Review results:** Results are reviewed with each Team Leader and each technical lead and management of the programme, as well as with peers, in order to identify specific measures needed to address gaps in sustainability.
3. **Prioritisation exercise:** Identified measures are prioritised based on their contribution to long-term sustainability and their ability to contribute ultimate impact in each location.
4. Finally, a **sustainability work plan is developed** incorporating the prioritised measures and allocating financial and technical resources needed to implement these.

Sustainability assessment questions

A. Describe the workstream
B. Describe the specific reforms introduced by ACT
C. Describe the elements to be sustained post-ACT. (What will be the leave-behind?)?
D. Answer the questions below

1. Leadership, constituency, mandate, strategy
1.1 Will these workstream activities guide strategic planning in the future, after 2019?
1.2 Has the government designated responsibility for specific goals to individuals? How strong, consistent, and influential is their leadership?
1.3 What formal or informal **mandate** exists for this work? How strong is the mandate?
1.4. How broad is the **constituency for change**? How aligned are their interests with our objectives? How strong and consistent is their engagement, capacity, and influence? What new partnerships will need to be established, if any?
1.5 Are the changes and reforms introduced through the work stream well understood and supported?

2. People, skills, attitudes
2.1 What are the individual **skills, knowledge, attitudes and competencies** required for successful utilisation/ application of introduced reforms? How embedded are these skills, knowledge and competencies within government and other key stakeholders?
2.2 Are the recipients using the **skills/knowledge** acquired from ACT's capacity- building activities? Do they perceive it as useful? Are new skills being used day -to -day? Has the individual capacity- building been documented and its effectiveness objectively assessed? Is it likely to be perpetuated?
2.3 Are there any **incentives or incentive mechanisms** to facilitate skills and knowledge retention and transfer within organisations / departments or among individuals? For instance, are skills considered as a part of individual promotion or retention policies? Are these skills in demand and rewarded accordingly?
2.4 Are there any plans and resources for **maintaining and updating skills/knowledge** over time? How robust is institutional capacity given routine routing staff relocation?

3. Financial and other resources

3.1 Is there sufficient **commitment of resources** (people, infrastructure, budget, governance) directed specifically to allow the planned programme to be carried out over time? How adequate is the planned level of resourcing?

3.2 Are **national or international funds and programmes** a potential resource? If so, have those avenues been explored? How likely are they to meet resourcing requirements in the amount, time frame, and modalities / flexibility required to continue implementation of reforms /scaling of pilots?

3.3 Is there a **potential for return on investment** if a private enterprise took it on? Or have potential cost savings models been explored with government? Is there support for these models? How robust are assumptions on return on investment?

4.Processes, structures, institutionalisation

4.1 What has been the **uptake** of decision-making tools, system enhancements and policy options developed through ACT? To what extent have they been circulated, approved, sanctioned, promoted? If not, why not?

4.2 Are structures and processes introduced by ACT **integrated and utilised** in the daily workflows? If not, why not?

4.3 What strategies are there to **manage objections** (including anticipated or future objections) and opponents to institutionalization institutionalisation mechanisms for introduced reforms? Are these sufficient?

4.4 To what extent do people's skills and organisational structures and processes **support or undermine** the utilisation of new policies, plans or laws?

4.5 To what extent are structures and processes **regularly updated** and is adequate resourcing continued (e.g. regarding operation and maintenance)?

5. Incentives and accountability mechanisms

5.1 Is there a formal **monitoring and evaluation/accountability system** to track implementation of introduced reforms? If so, is it used to track progress or also to guide strategic planning?

5.2. Who are direct and indirect beneficiaries of ACT reforms? Do direct and indirect beneficiaries **perceive a need** for this work? Is there a mechanism through which they are consulted on an on-going basis?

5.3 Are there **other mechanisms** or processes underway that could be used to reinforce introduced reforms (e.g. Sustainable Development Goal reporting requirements, etc.)?

5.4 Do **behavioural and social norms** in government/society support or undermine the utilisation of new policies, plans or laws? Or do they reinforce it?

Additional questions
For questions where you answered 'not applicable', 'not relevant ' or 'too soon to comment', please indicate potential plans and a possible cut-off date for decisions on them.
Besides the existing location strategy and its work streams, are there additional activities worth exploring from a sustainability perspective?
Following up on the previous questions, are these activities ours to undertake or within ACT's area of influence? Would partnerships be required?

ACT Team Leader biographies

This Learning Paper is based on the experience and inputs of the following ACT Team Leaders.

Sunil Acharya (Nepal)

Sunil has significant experience in Nepal of research, policy analysis and practice of climate change adaptation, climate finance and governance, the political economy of low-carbon and climate-resilience development, international climate change negotiations, and renewable energy policy. He previously led civil society's engagement in influencing climate change policy formulation in Nepal.

sunil.acharaya@actiononclimate.today

Soumik Biswas (Odisha, Chhattisgarh)

Soumik has more than 12 years of experience in the field of sustainability, climate change, carbon and energy management, and low-carbon strategy formulation. He has been involved in over 200 projects worldwide, for the World Bank, KfW, DFID and others, in project execution, due diligence, training and management.

Soumik.biswas@actiononclimate.today

Naman Gupta (Maharashtra)

Naman specializes in public and private sector engagement and capacity building for climate change planning and delivery. She has previously worked for the British High Commission, GIZ, E&Y and others, and received an Award for 'Women Empowerment and Climate Change' during the 2017 Global Economic Summit.

naman.gupta@actiononclimate.today

Masoom Hamdard (Afghanistan)

Masoom is a technical expert on policy and planning for integrated water resource management with significant programme management experience with JICA, World Bank, UN and others. He was previously a lecturer of Environmental Policy Making, and researcher at the UNESCO-IHE Institute for Water Education in the Netherlands.

masoom.hamdard@actiononclimate.today

Pankaj Kumar (Bihar)

Pankaj is an expert on mainstreaming environment concerns within development infrastructure as well as carbon and energy management. He previously worked with Carbon Check, IL&FS Infrastructure Development Corporation, Government of Bihar and others. He was the Team Leader for validation, verification of around 150 greenhouse gas projects globally including CDM, VCS, SCS and the Gold Standard.

pankaj.kumar@actiononclimate.today

Dr Md. Nadiruzzaman (Bangladesh)

Nadir is an Assistant Professor of Environmental Management at the Independent University, Bangladesh (IUB) and an affiliate at the International Centre for Climate Change and Development (ICCCAD). His research focus includes climate change, disasters and ecosystems, and he has worked with a number of IPCC Coordinating Lead Authors.

md.nadiruzzaman@actiononclimate.today

Arif Pervaiz (Pakistan)

Arif is a technical expert in urban climate resilience, water and sanitation, urban mobility, and environmental protection with extensive experience supporting government partners. He has previously worked for the Government of Pakistan, ADB, USAID, IUCN, IIED and others.

arif.pervaiz@actiononclimate.today

Mariamma 'Nirmala' Sanu George (Kerala)

Nirmala is trained in applied economics with more than 25 years of experience in research and project management related to sustainable development including climate change and gender. She has previously worked with SDC, World Bank, ADB, UNDP and various national and state government agencies.

Nirmala.sanu@actiononclimate.today

Rizwan Uz Zaman (Assam)

Rizwan has over 15 years of experience of supporting public policy processes for climate change and natural resource management, as well as private sector action. He has previously worked with national and state governments in India, as well as Development Alternatives and international organisations.

rizwan.zaman@actiononclimate.today

E: elizabeth.gogoi@opml.co.uk
W: actiononclimate.today
@act_climate
www.facebook.com/ActionOnClimate

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