

Engaging the private sector in financing adaptation to climate change: Learning from practice

Virginie Fayolle, Caroline Fouvet, Vidya Soundarajan, Vandana Nath, Sunil Acharya, Naman Gupta and Luca Petrarulo



ACT (Action on Climate Today) is an initiative funded with UK aid from the UK government and managed by Oxford Policy Management. ACT brings together two UK Department for International Development programmes: the Climate Proofing Growth and Development Programme and the Climate Change Innovation Programme. The views expressed in this paper do not necessarily reflect the UK government's official policies.

Cover photo: ACT

All other photos: p4: hybridimages / Shutterstock.com; p8, 16, 25: ACT; p11: Rawpixel.com / Shutterstock.com; p21: bodom / Shutterstock.com

Contents

Acknowledgements	ii
Abbreviations and acronyms	ii
Executive summary	1
1. Introduction	3
2. Private sector finance for climate change adaptation	5
2.1 Functions of the private sector in financing climate change adaptation	5
2.2 Drivers for the private sector to invest in climate change adaptation	6
2.3 Barriers to the private sector investing in climate change adaptation in developing countries	10
3. Learning from ACT: Enablers, success factors and challenges in engaging the private sector on climate change adaptation	12
3.1 A framework for private sector financing of adaptation	12
3.2 Enablers for the private sector to invest in climate change adaptation	14
3.3 Emerging lessons from ACT on enabling private sector investment in adaptation	21
4. Steps for engaging the private sector in financing climate change adaptation	24
4.1 Construct a foundation of narratives	24
4.2 Build a shared vision between the public and the private sectors	24
4.3 Build the capacity and expertise of private sector champions to take action	24
4.4 Bridge the gap between the demand and the supply of private finance	24
4.5 Allow adequate time and resources for moving towards shaping the governance and regulatory frameworks	25
5. Conclusion	27
References	28

Acknowledgements

The authors would like to thank the ACT programme team for providing the experience and learning to inform this paper – in particular Rizwan Uz Zaman, Nirmala Sanu, Pankaj Kumar, Arif Pervaiz, Azim Doosti and others for sharing insights and learning from ACT initiatives; Cristina Rumbaitis del Rio, Aditya Vansh Bahadur, Anu Jogesh, Stephanie Allan and John Firth for reviewing drafts; and Elizabeth Gogoi for managing the research and production process.

Abbreviations and acronyms

ACT	Action on Climate Today
CPI	Climate Policy Initiative
FPC	Farmer Producer Company
GDP	Gross Domestic Product
GoM	Government of Maharashtra
IFL	Institutional Financial Lender
LTV	Loan-to-Value
MFI	Microfinance Institution
MoCTCA	Ministry of Culture, Tourism and Civil Aviation of Nepal
MSMEs	Micro, Small and Medium Enterprises
NGO	Non-Governmental Organisation
OECD	Organisation for Economic Co-operation and Development
PoCRA	Project on Climate Resilient Agriculture
PPP	Public-Private Partnership
R&D	Research and Development
SAPCC	State Adaptation Plan on Climate Change
TCFD	Task Force on Climate-related Financial Disclosures
The EIU	The Economist Intelligence Unit
UK	United Kingdom
UNEP	United Nations Environment Programme
VCA	Value Chain Analysis

Executive summary

This paper draws on the experience of the Action on Climate Today (ACT) programme as well as global literature on engaging with the private sector to finance adaptation. It outlines projects undertaken in India and Nepal to identify lessons learnt and key enablers with regard to private sector engagement in adaptation. The private sector is envisaged as a broad and non-homogenous group; and, in this paper, private sector engagement refers to engaging with businesses from the real economy as well as private financiers – including banks, insurance companies and asset managers – to understand physical climate risks to businesses and investments, to unlock finance for private sector resilience.

The rationale for engaging with the private sector is two-fold: on the one hand, the private sector can support governments facing constrained public budgets and rising costs of managing climate change to achieve global climate resilience by leveraging the ingenuity, skills and financial resources of businesses and the larger financial sector. On the other hand, the private sector itself is gradually becoming aware of the physical risks and opportunities arising from a changing climate, and there is nascent awareness of the measures it can take to assess and disclose risk and maintain the profitability of its businesses. Hence, there is growing recognition of the need for the private sector to mainstream climate change adaptation across its activities but also to redirect financial flows to avoid climate-induced economic and financial shocks.

This paper presents a framework for identifying key enabling factors for the private sector to invest in climate change adaptation. This framework offers a comprehensive approach to thinking about how policy-makers, practitioners and donors can engage the private sector in adaptation, including drivers, barriers and enablers.

The work is illustrated by the approach used, and the lessons learnt from the £23 million ACT programme. ACT is a UK government-funded regional programme, working in partnership with national and sub-national governments in Afghanistan, Bangladesh, India, Nepal and Pakistan to integrate climate change adaptation into development planning and delivery, including leveraging of finance. Mobilising private finance is, therefore, an important objective for the programme.

Drivers for the private sector to invest in climate change adaptation

The paper identifies a number of factors that can drive the private sector to invest in climate change adaptation. Climate change poses both risks and opportunities to private actors. Business assets (tangible and intangible), operations, supply chains and markets are at risk from climate change, threatening companies' revenue and costs while also affecting their financial performance and having a ripple effect on their financiers. It also presents opportunities to mitigate existing and emerging climate risks, as well as develop and market new goods and services, that companies and financial institutions' clients will increasingly demand. Those businesses that move first will be able to develop a competitive advantage by responding to changing or new market needs emerging as a result of a changing climate.

Barriers to the private sector investing in climate change adaptation

The paper presents some barriers preventing the private sector from properly tackling the risks and benefiting from the opportunities related to climate change, including financial, institutional, informational, regulatory, technical, cultural and social barriers. These barriers may result from asymmetric or incomplete information, imperfect capital markets or positive externalities not captured by financial metrics, hence not perceived as investments in adaptation.

Enablers for the private sector to invest in climate change adaptation

Aligned with these multiple drivers and barriers, several factors can play a critical role in creating an enabling environment for private sector adaptation:

- **Raising awareness** of the private sector on climate-related risks and associated opportunities, through documentation and dissemination of the business case for climate change adaptation;
- **Enhancing access to technical resources** for the private sector to have the necessary capacity and expertise to address climate risks and seize opportunities by investing in climate change adaptation;

- **Enhancing access to finance** to improve the risk–reward profile of private sector investment in climate change adaptation;
- **Reforming the regulatory framework** to ensure policies, laws, and regulations create an enabling environment for private sector investment in adaptation;
- **Strengthening governance** by bringing together private, public and civil society actors to mainstream climate change adaptation in their decision-making processes and develop partnerships and collaborations.

Lessons learnt on engaging the private sector on adaptation

While it is still early to measure ACT's success in engaging with the private sector on climate change adaptation, practitioners involved in designing and delivering technical assistance programmes can learn from ACT's emerging experience with these enablers. The paper identifies a number of success factors from ACT's interventions:

- Showcasing the impacts of recent and local extreme weather and climate events as an entry-point to spur engagement with the private sector;
- Speaking the right language by framing climate change around profit and loss, revenues and market share, rather than using a sole environmental perspective, when speaking with the private sector;
- Engaging the private sector in the development and implementation of adaptation policies and plans at an early stage to secure their buy-in;
- Promoting dialogue and building a shared vision between the public and the private sector to encourage them to work hand-in-hand with the government;
- Having access to the right network, expertise and resources to support private sector engagement in adaptation.

The programme also faced a number of challenges. First, the private sector actors, from both the corporate and the financial sector, that ACT engaged with had difficulty grasping the concept of adaptation as distinct from business-as-usual development, given the blurred lines and overlaps between the two. Second, they were sometimes grappling with inconsistent public sector engagement. In some cases, businesses had

failed to secure government support over the long term, for instance because of turnover of officials following an election. Finally, time constraints (owing to the finite nature of ACT's interventions) substantially hampered private sector engagement, as continuous engagement is often critical to building long-term buy-in for a programme.

Recommendations for engaging the private sector on adaptation

Based on these lessons learnt, this paper concludes by identifying a set of cross-cutting recommendations from ACT's work to engage companies and financial institutions:

- **Construct a foundation of narratives**, using the private sector's experience with a recent and local extreme climate event as a starting point and applying language tailored to businesses for them to relate to these events' impacts on their activities;
- **Build a shared vision between the public and private sector** by identifying overlaps between the government's priorities and private sector interests. Start with what matters to the government in terms of delivery of policy results and focus on priority sectors that are climate-sensitive and where there is a significant role for the private sector;
- **Build the capacity of private champions** by providing them with decision support tools to help them understand and assess risks and opportunities and/or identify potential adaptation measures. This will help them make more informed decisions to manage and minimise existing or emerging risks while taking advantage of investment opportunities emerging from a changing climate;
- **Bridge the gap between the demand and the supply of private finance** by bringing together corporations that require lending to invest in the real economy and those that can provide finance (including large corporates, commercial banks, private financiers, the public sector and national/international climate funds);
- **Allow adequate time and resources for shaping governance and regulatory frameworks** to provide an enabling environment for private sector investment in climate change adaptation and improve the risk–reward profile of these investments.

1. Introduction

The concept of 'private sector engagement' is gaining increased traction in the climate adaptation space. This paper categorises private sector actors as businesses from the real economy, as well as private financiers.

The rationale for bringing the private sector on board is two-fold. On the one hand, businesses – with their track record of innovation, speed of delivery and financial resources – can support governments facing constrained public budgets and the rising costs of managing climate change to achieve global climate resilience.

One study estimates that the costs of adaptation to climate change in developing countries lie between \$70 billion and \$100 billion per year for the period 2010–2050 (UNEP, 2016a). The chronic and acute effects of a changing climate are already affecting people in South Asia. It is estimated that, by 2050, climate change could lead to a 50% drop in the region's gross domestic product (GDP) (Ahmed and Suphachalasai, 2014).

However, international finance flows to adaptation are falling short. Adaptation, despite international pronouncements, is viewed as the 'forgotten child' of climate finance (Huq, 2016). Adaptation finance represents only around a quarter of currently tracked public climate finance flows.^{1,2} Over 2015–2016, global public and private climate finance flows reached an average of \$463 billion, according to the Global Landscape of Climate Finance by the Climate Policy Initiative (CPI), out of which 4.8% was allocated to adaptation (Oliver et al., 2018).

On the other hand, the private sector itself is gradually understanding the physical risks and opportunities arising from a changing climate, and there is nascent awareness of the measures it can implement to maintain the profitability of its activities. The 2017 recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), led by the Financial Stability Board (an international body monitoring and making recommendations on the global financial system),

have sparked a worldwide dialogue between corporates and financial institutions on what climate change means to their business models and activities, and how to adapt to it. Although there is currently no definitive characterisation of what a resilient business is, climate-related disclosures on physical impacts and opportunities provide a lens for private sector actors to understand their adaptation needs. Hence, engaging the private sector in considering such risks and opportunities and in investing in adaptation-related measures also constitutes a key element in avoiding climate-induced economic and financial shocks.

Policy-makers and the international development community are therefore increasingly interested in how to leverage private sector finance for adaptation. However, the practicalities of how to do this are not well understood – not only in terms of what private sector financing of adaptation actually entails but also in relation to how to go about engaging the private sector and the role of different actors in doing this.

The £23 million UK-funded Action on Climate Today (ACT) programme has been working in Afghanistan, Bangladesh, India, Nepal, and Pakistan over the past five years to strengthen climate resilience by mainstreaming climate change considerations into policy, planning and investment environments (Shakya et al., 2018). ACT is relatively unique in having experimented with different ways to engage the private sector (both private investors and businesses in the real economy) in different locations in South Asia (in varying contexts). As such, the programme can make an important contribution in a relatively limited field of literature on the practical realities, challenges and opportunities for engaging the private sector on adaptation.

In light of this, this paper aims to inform practitioners involved in designing and delivering technical assistance programmes about engaging with the private sector to finance climate change adaptation. The work aggregates best practices

1 Estimates show that adaptation has received only a small share of public climate finance, corresponding to an average of 16% for 2015/16 (Oliver et al., 2018).

2 Among the sectors targeted by adaptation finance, water and wastewater management captured the biggest share – 51% of public finance, on average, during 2015/16. Land use adaptation, including agriculture and forest management, received 19% and disaster risk management interventions only 11% (Buchner et al., 2017).

rooted in global literature, and, significantly, ACT's empirical work thus far.

The rest of this paper is structured as follows:

- Section 2 starts with defining the private sector and then identifies the drivers and barriers influencing private sector adaptation.
 - Section 3 describes the elements of the framework by presenting the potential enablers for private sector investment in on adaptation,
- illustrated by ACT's approach and lessons learnt from the programme, including on potential challenges and success factors.
 - Section 4 presents a set of concrete steps for engaging the private sector in financing climate change adaptation.
 - Section 5 concludes the paper by presenting key recommendations for other technical assistance programmes to implement these concrete steps to facilitating private sector investment in adaptation.

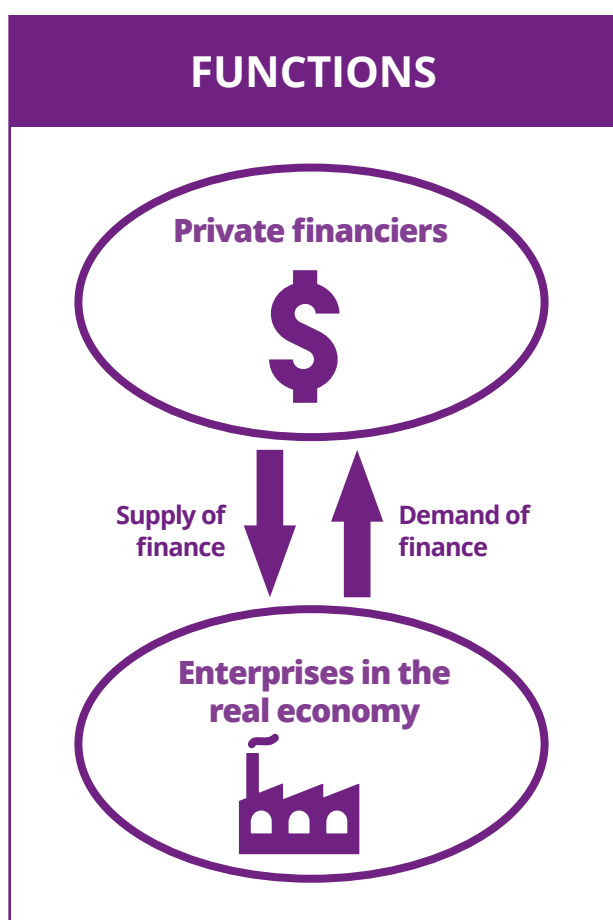


Farmers are a critical private sector actor for the local economy and highly vulnerable to the impacts of climate change.

2. Private sector finance for climate change adaptation

This section first defines what the private sector is and then describes two key elements that influence it to take action on climate change adaptation – namely, the drivers that motivate investment by businesses and financial institutions and the barriers that constrain it. These are distilled to arrive at the potential enabling factors that influence the private sector to act (or scale up existing action) as presented in the framework in Section 3 of this paper.

2.1 Functions of the private sector in financing climate change adaptation



The private sector is very diverse and encompasses a wide range of actors. Defining it is necessary to understand the context in which these actors operate, and their specific needs and goals. This paper divides the private sector into two categories:

- **Enterprises in the real economy** that produce market goods and/or non-financial services (OECD, 2001). This category comprises private enterprises, including micro, small and medium enterprises (MSMEs), as well as large corporations.
- **Private financiers.**³ Commercial banks, microfinance institutions (MFIs) and institutional investors (insurance companies, pension funds, private equity funds, hedge funds) come under this umbrella.

While these two categories fill complementary roles, through demand for finance from the real economy and supply from private financiers, they also can interact with the public sector in offering or receiving finance and creating the enabling environment for the private sector to invest in climate change adaptation.

Private sector adaptation, and finance for it, is a nascent area of study and, as private sector awareness of physical climate change risks and opportunities gradually increases, so can its adaptation finance demand and supply. On the one hand, real economy actors will become keen to reduce risks and realise business opportunities, and will need to borrow for climate change adaptation purposes. On the other hand, private financiers can respond to these new financing needs by providing new financial or risk management products for businesses in the real economy. The financial sector is gradually recognising it has much to lose if businesses falter and default on their investments as a result of unforeseen climate impacts. Beyond the provision of new financial products aligned to climate change adaptation, financiers' awareness of changes that are affecting their clients can ensure

³ Note that this paper does not include in this category public finance providers, such as national, bilateral and multilateral banks and funds, that aim to leverage private sector finance. Publicly, or even privately, funded adaptation projects such as climate-resilient roads and flood protection barriers frequently require implementation and co-financing by the private sector. However, these are beyond the scope of this paper.

DRIVERS



Risks

- Physical risks
- Reduced operational performance
- Disruption of supply chain
- Contractual risks
- Changing market demand
- Reputational risks
- Changing market demand
- Reputational risks
- Reduced financial performance
- Regulatory and legal risks



Opportunities

- Development of new products and services
- New or expanded markets for products and services
- Securing supply chains
- Improved financial performance
- Reputation and brand value

their existing lending and investment practices are consistent with the needs of the real economy.

2.2 Drivers for the private sector to invest in climate change adaptation

To better understand how to engage the private sector on adaptation, it is important to identify how private investments in adaptation are beginning to occur and be financed. A private company will typically invest in adaptation to reduce physical climate risks on its business assets, operations and supply chains; or it can capitalise on a new business opportunity to develop and market new goods and services, increase efficiencies, protect supply chains and gain reputational benefits. Financiers, in turn, will want to lend money to companies whose financial health is not affected by climate change, along with investing in climate-resilient sectors and assets. Climate change, therefore, presents direct and indirect risks and opportunities to the private sector.

On the risk side of the equation, several elements threaten companies' operations, which eventually affect their financial performance, in turn having an impact on financiers' lending and investing

activities. This provides a rationale for both types of private sector actors to identify and address such risks through the implementation of adaptation measures. Five broad types of risk can be identified:

1. **Physical damages on assets and infrastructure:** Climate change leads to changes such as temperature increases and acute impacts, including extreme events, which can damage a company's assets and the infrastructure on which its operations depend (e.g. roads, bridges, electricity, water). This can affect site location and ground conditions – asset design, performance and integrity (Acclimatise and Four Twenty Seven, 2018).
2. **Disruption of value chains:** Climate change can disrupt value chains by affecting the availability, quality and yield of natural resources, raw materials and components; the reliability of transport links, manufacturing and processing operations; and distribution to markets (Acclimatise et al., 2018).
3. **Changing downstream market conditions:** Climate-induced events and their impacts can affect the demand for a business' products and services, with new competition emerging to meet new market needs and/or through damages to its reputation/brand position. This will, in turn, have impacts on its competitive advantage within the relevant market segments.
4. **Regulatory and policy risks:** To mitigate physical climate risks on the economy and society, governments at the local and national level may implement new regulations, laws or policies that affect businesses and their operations. Such regulations may also be created to require businesses to undertake actions, or to control the way in which they operate.
5. **Disruption of internal production (including workforce):** As a result of climate impacts on its assets and supply chains, as well as on public infrastructure, a business may not have the capacity to continue its operations/production; impacts may also affect working conditions.

As a result of these five risks, private businesses may experience reduced financial performance, which affects financiers' lending and investing activities in them. A business' bottom line may be affected by direct climate risks and their ripple effects on the market, or on policy and regulation; the latter can, for instance, also lead to new investment opportunities for businesses

looking to remain competitive and compliant. This then translates into increased capital/operational costs and/or decrease in revenues for companies. For private financiers, climate risks are indirect, but even these can be significant. For instance, commercial banks can experience the knock-on effects of climate impacts on their borrowers' revenues, costs and property values, for instance, through changes in the probability of default and Loan-to-Value (LTV) ratios⁴ (Acclimatise, 2018). Climate impacts on the global financial market are predicted to be substantial, with, for example,

climate-induced losses to the world's stock of manageable assets projected to reach \$4.2 trillion by 2100 (The EIU, 2015).

See Table 1 for examples of direct and indirect risks across these six categories.

It should be noted that, as of today, many businesses tend to underestimate their exposure to climate risks, which reflects a narrow view of climate risk and related impacts on supply chains and the broader market (Goldstein et al., 2018).

Table 1: Risks from a changing climate to the private sector

Risk		
Direct		
Physical damages on assets, workforce and public infrastructure	Disruption of internal production (including workforce)	Disruption of value chain
<ul style="list-style-type: none"> • Extreme weather • Temperature change • Sea level rise • Water scarcity 	<ul style="list-style-type: none"> • Disruption of productive capacity • Lower productivity of workforce (health risks) 	<ul style="list-style-type: none"> • Decreasing reliability of supplies (e.g. electricity, water, primary commodities) • Failure to deliver products and services to market
Indirect		
Changing downstream market conditions	Regulatory and policy risks	Reduced financial performance
<ul style="list-style-type: none"> • Price volatility and variability of supply/demand of goods • Obsolescence of product mix • Market demand/needs change • New competition emerging • Loss of competitive advantage • Reputational/brand damages (e.g. customers' and investors' concerns, negative media coverage, perception of civil society) 	<ul style="list-style-type: none"> • Changing land use regulations • New water efficiency standards • Policy environment instability 	<ul style="list-style-type: none"> • Loss of income • Increased CAPEX and/or OPEX • Reduced access to capital as investors become more aware of climate-related risks • Rising insurance policies because of higher risk exposure

Source: Adapted from Steeves et al. (2016).

⁴ The LTV ratio is an assessment of lending risk that financial institutions and lenders examine before approving a mortgage. It is calculated by dividing the amount borrowed by the appraised value of the property, expressed as a percentage. Typically, assessments with high LTV ratios are higher risk and, therefore, if the mortgage is approved, the loan costs the borrower more (Kagen, 2018).



Dangerous flash floods in India affect businesses and economic productivity.

Climate change also presents opportunities to the private sector, to capitalise on markets that may potentially expand, shift or newly emerge. However, identifying these opportunities does not imply that a changing climate should be regarded as a positive development. Opportunities arise from the identification, by companies in the real economy and private financiers, of their customers' changing needs – through adaptation and resilience-building. Three broad types of opportunities can be identified (Acclimatise and Four Twenty Seven, 2018):

1. **Opportunities related to managing existing physical climate risks:** Climate change already affects private companies throughout their value chains, and the effective management of these risks may create opportunities to improve financial performance. By managing existing risks through, for instance, contingency planning, market diversification or site retrofits, businesses may benefit from improved processes, increased efficiency and savings. As such, avoiding the costs of physical climate risks can then be seen as an opportunity.
2. **Opportunities in responding to new emerging physical climate risks:** As the effects of a changing climate become more visible, it is inevitable that new physical impacts will emerge that require responses. Opportunities may arise from planning ahead to manage emerging physical climate risks. This would give companies the 'first mover's advantage'. For instance, health care companies can reduce travel distances for temperature-sensitive products, in light of the global gradual rise in temperature (Acclimatise and Four Twenty Seven, 2018). For private financiers, the changing risk landscape and the adverse/beneficial impacts on value chains will create additional demand for finance and advisory services (Acclimatise, 2018).
3. **Opportunities to adapt to market shifts and cater to new market needs:** The fundamental shifts in climate will affect value chains and drive new consumer needs. For example, construction businesses may take advantage of a higher demand for water-permeable pavements, or technology to keep buildings cool as a result of a changing climate. In a similar manner, the agribusiness industry may

need to respond to higher demand among farmers for technologies to improve water and energy efficiency, as well as climate-resilient crops. Private financiers in turn may benefit from private companies' higher demand for loans to access such technologies. They may also be required to provide innovative financial instruments to cope with loss and damage associated with more severe or frequent climatic events (see box below on insurance).

Table 2 presents an overview of direct and indirect opportunities to the private sector emerging from physical climate risks (including existing and new emerging risks, and market shifts).

Along with changing market and regulatory demands comes the opportunity for private financiers to provide new financial or risk management products and services. This is particularly true for the insurance industry in South Asia, given the region's vulnerability to extreme events.

Insurance products and services in South Asia

In its publication on Private Sector Approaches for Climate Change Adaptation (ACT, 2017), ACT identifies an opportunity for the provision of climate-based insurance products for socio-economically disadvantaged farmers in return for their labour on community projects, including weather index insurance and micro-insurance products. Agriculture is not the only sector that is weather-dependent and can benefit from insurance coverage. ACT's (2018b) study of tourism in Nepal demonstrates that benefits could arise from leveraging fees charged to tourists (e.g. for permit passes), for tourism associations to set up funds whose money could be used for insurance coverage.

Table 2: Opportunities from a changing climate to the private sector

Opportunity	
Direct	
Secured supply chains	New products, services and markets
<ul style="list-style-type: none"> Improving the reliability of the supply chain, transport and logistics can provide a competitive advantage. 	<ul style="list-style-type: none"> As a result of changing market demand, new goods and services to offer to clients, for instance in agriculture (e.g. different kinds of seeds, water-efficient irrigation systems), communication (e.g. technology and information services) and water management (e.g. water saving and purification) – 'first mover advantage' New or expanded markets for existing products and services
Indirect	
Increased reputation and brand value	Improved financial performance
<ul style="list-style-type: none"> Increased investors', customers' and other stakeholders' confidence 	<ul style="list-style-type: none"> Increased income Decreased CAPEX and/or OPEX Increased access to capital as investors become more aware of climate-related risks

Source: Adapted from Steeves et al. (2016).

2.3 Barriers to the private sector investing in climate change adaptation in developing countries

There remain barriers to the private sector addressing climate risks and responding to the changing needs of customers as they adapt and build resilience. It should be noted that most of these barriers, presented in Table 3, are common hindrances to private investment in developing countries in general. Although not specific to adaptation-related investments, these barriers may be exacerbated by the lack of awareness among businesses and governments about potential climate-related risks and opportunities and new climate technologies and innovations, as well as technical, capacity-based, financial, policy and regulatory barriers hindering climate-related investments (Fayolle and Odianose, 2017). These barriers can result from (UNEP, 2016b):

- **Positive externalities**, which occur when certain investments by the private sector generate benefits to society that do not generate additional cash flows and hence are not captured by pure financial metrics (e.g. internal rate of return, financial net present value). This, in turn, means that financial returns on the investment do not reflect the full value of undertaking the activity.
- **Imperfect capital markets** that are created when capital or risk is not efficiently allocated. For instance, many financial markets are characterised by a shortage of longer-term credit, which inhibits the ability to finance investments



required to cope with longer-term or distant climate impacts.

- **Incomplete or asymmetric information**, which translates into critical information such as the expected impacts of climate change being unavailable, inaccessible or incompletely provided to the private sector. Without accurate and reliable climate data, businesses cannot make informed decisions and invest accordingly.

The 'critical mismatch' of timescales in climate change adaptation

There is a critical mismatch between the short-term thinking of commercial financial institutions to achieve high returns quickly from investments and the need for long-term financing to plan for future climate change impacts. This mismatch was evident in Maharashtra, India, through ACT's research involving Farmer Producer Companies (FPCs). The programme found that most financial institutions provided short-term loans, whereas farmers needed short-term working capital together with longer-term loans to help FPCs plan their business development activities (ACT, 2018a). This situation illustrates a gap between the demand for long-term adaptation finance and the availability of short-term finance.

Short-termism is an issue that financial institutions around the world are starting to address through implementation of the recommendations of TCFD. According to the TCFD report (2017), many financial institutions erroneously perceive climate change implications as occurring in the long run only, and consequently assume they do not have to consider the issue at present. TCFD aims to shift such perceptions, for the private sector to understand the need to consider climate change impacts today and address long-term lending and financing needs to tackle them.

Table 3: Barriers to private adaptation finance

Barriers	Description
Financial	Lack of financial resources and budget constraints; limited or no access to finance.
Institutional	Lack of institutional capacity or weak governance arrangements; shortcomings in governance and institutional arrangements could result in path dependency and inertia. Path dependency means future actions or choices depend on current or past decisions and actions, which can in turn lead to inertia.
Informational	Limited or no access to information or tools to assess risks and opportunities related to climate change.
Political and regulatory	Lack of policies, laws and regulations encouraging or requiring climate change adaptation, e.g. lack of disclosure requirements on climate risks by the financial sector; adverse effects of policy and regulation on business motivations for investing in adaptation, e.g. water pricing/ abstraction licensing, building codes/planning regimes.
Technological	Lack of availability of or access to advanced technologies, tools and structures, for instance drip irrigation systems.
Social and cultural	Social and cultural processes that govern how people and other stakeholders react to climate variability and change. This may result from a lack of education, limited skills and limited awareness on the topic. Inequitable gender norms in certain regions, for instance, can hinder women's participation of adaptation activities, e.g. setting-up a business or leading community activities, which in turn may negatively affect the efficiency and effectiveness of adaptation efforts.

Source: Adapted from UNEP (2016b).



A family harvesting crops in North India.

3. Learning from ACT: Enablers, success factors and challenges in engaging the private sector on climate change adaptation

This section introduces ACT's work on private sector engagement in South Asia. It then presents enablers that policy-makers, practitioners and donors can use to engage the private sector on climate change adaptation (as presented in Figure 1). The section highlights the approach used in ACT's initiatives under each of these enablers (summarised in Table 5). This is followed by an overview of key successes and challenges experienced by the programme. This together helps define a set of key recommendations for designing and delivering technical assistance programmes that aim to engage the private sector in financing climate change adaptation.

Table 4 introduces ACT's work on private sector engagement in South Asia.

3.1 A framework for private sector financing of adaptation

Figure 1 presents a framework for engaging the private sector in financing adaptation, based substantively on ACT's work on the ground, as well as a review of global literature in this area. This framework, therefore, offers guidance on identifying favourable conditions that can motivate the private sector to act on climate change adaptation. By taking action, the private sector can make two types of investments (Koh, 2016):

1. **Resilient investment:** These are broad investments that include a component that is adaptation-related; for instance, a port that includes climate resilient features in addition to investments in the overall infrastructure.
2. **Investment in resilience:** These investments are solely adaptation-focused. For example, investing in a seawall.

Table 4: Overview of ACT's work in South Asia

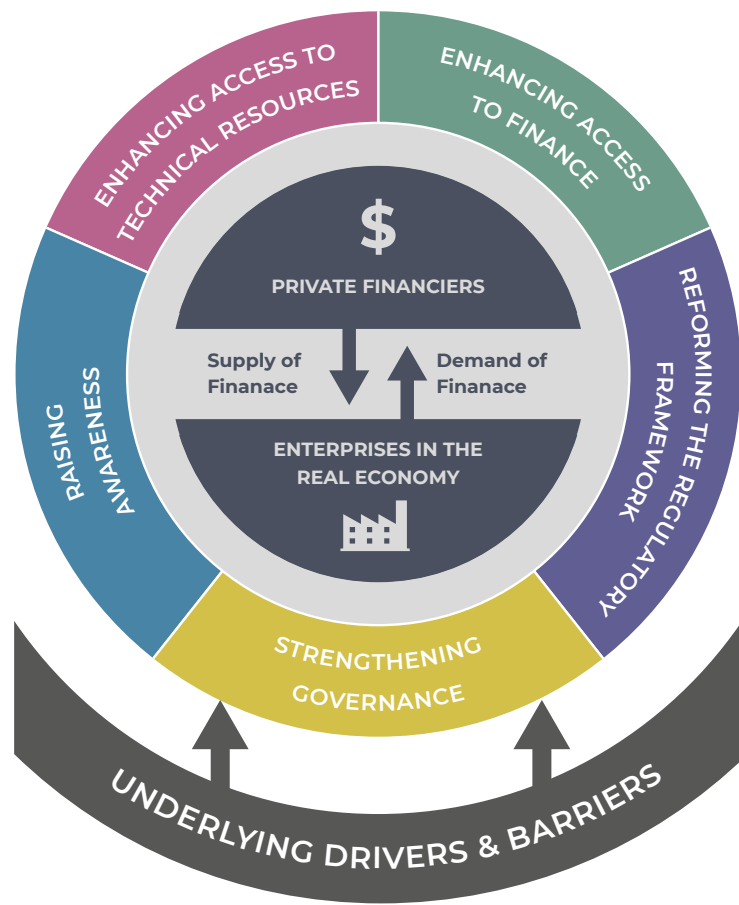
ACT's Intervention	Description
Strengthening FPCs' technical skills for the uptake of climate-resilient farming in Maharashtra, India	<p>ACT supported the Department of Agriculture of the Government of Maharashtra in identifying climate-resilient crops and undertook Value Chain Analysis (VCA) of five crops. The VCA study identified a set of recommendations, including the need to strengthen FPCs in their business planning to enhance their access to technical resources and finance. Working in collaboration with the Government's World Bank-funded Project on Climate Resilient Agriculture (PoCRA),⁵ ACT undertook the assessment of four sample FPCs in one district. This found there was no established practice of engagement between the FPCs and institutional financial lenders (IFLs), resulting in a gap that weakened the agricultural value chain process. Some of these deficiencies are:</p> <ul style="list-style-type: none"> • Shortage of technical capacity among FPCs for developing bankable proposals; • Poor managerial capacity; • Lack of access to various available credit lines; • Poor participation of women; • Lack of knowledge on both sides about climate-resilient crops and resilience-building agriculture technologies and practices; and • Limited understanding among bank managers on markets and value chain functions, resulting in them lacking trust to lend credit to FPCs.

⁵ For more information, see <http://projects.worldbank.org/P160408?lang=en>

Table 4: Overview of ACT's work in South Asia continued

ACT's Intervention	Description
Promoting public-private partnerships (PPPs) in Maharashtra, India, for enhanced investment in climate adaptation	<p>ACT facilitated rounds of conversation between Government of Maharashtra and companies to leverage private sector investment to implement the State Action Plan on Climate Change (SAPCC) and other climate change actions in Maharashtra. The ACT team facilitated interactions between the private sector and relevant government stakeholders. The assignment aimed to encourage and nurture partnerships between the Government and the private sector using climate change adaptation as an innovative focal point, and grounding this through pilot PPPs that build the state's climate resilience.</p> <p>ACT also organised a consultation workshop in partnership with the Department of Environment to introduce the SAPCC to the private sector and to map the adaptation priorities of the Government with that of the companies. The consultation highlighted a lack of understanding at both ends on private sector engagement in adaptation, leading to ACT's development of a toolkit documenting various approaches for the private sector to be active in the climate resilience space. ACT identified three companies – Tata Power, Ambuja Cement Foundation and Godrej Industries – with which to develop projects and implementation plans for PPPs.</p>
Silt and its contribution to the ceramic industry, Kosi River, Bihar, India	<p>Ravaging floods have become a constant feature over the past decade in Bihar, increasing siltation in the River Kosi and its floodplain, leading to poorly drained land and forced migration. This cycle of flooding and sediment deposition adversely affects agricultural yields and the livelihood and social development of the local population. While this problem has historically been addressed by removing silt from the river, such an approach can neither address the flooding impacts nor reduce state expenditure on disaster management. Year after year, the silt is removed by the state and then comes back into the river by the next monsoon. This leads to substantial public spending on the same activity with no real benefit, in the face of a recurrent disaster. Based on this analysis, ACT conducted a technical feasibility analysis of the commercial use of silt for the ceramic, brick-making and construction industries along with agriculture, turning a waste product into a commercial resource.</p>
Assessing India's mounting climate losses to financial institutions	<p>While few businesses acknowledge and integrate adaptation into their strategies and investments, it is now important for financial institutions to mainstream climate change risks into their business models to manage the effects. Given their key role both as providers of finance and as investment facilitators to enterprises, these institutions must develop a consistent view on climate-related issues that can serve as the basis for strategic and operational decisions across a range of business units. This is particularly true for the most climate-vulnerable sectors, such as agriculture, water resource management and infrastructure, which represent some of their largest areas for investments. In this context, ACT initiated a study with Indian financial institutions to enhance their understanding of climate-related risks and to structure a lending process that maximises performance and minimises risks.</p>
Promoting climate-resilient tourism through private sector engagement, Nepal	<p>Tourism is vital to Nepal's growth and development. It is one of the largest industries, contributing to around 4% of GDP in 2017, and is expected to grow by 3.8% per year. However, with changing rainfall patterns, increasing temperatures and frequency of climate-induced disasters, the sector is under direct threat from climate change.</p> <p>To address this challenge, private sector engagement was seen as crucial to developing a climate-resilient tourism sector. ACT collaborated with the Ministry of Culture, Tourism and Civil Aviation (MoCTCA) and relevant private sector tourism operators to assess the economic impacts of climate change for the tourism industry and identify approaches and options for private sector engagement. ACT proposed a range of measures, including mobilisation of financial resources through innovative mechanisms such as climate risk insurance to cover losses financed through a surcharge on all tourist arrivals, improved service delivery and use of climate information systems. Additional approaches to foster an enabling environment for the private sector also included reforming regulatory frameworks.</p>

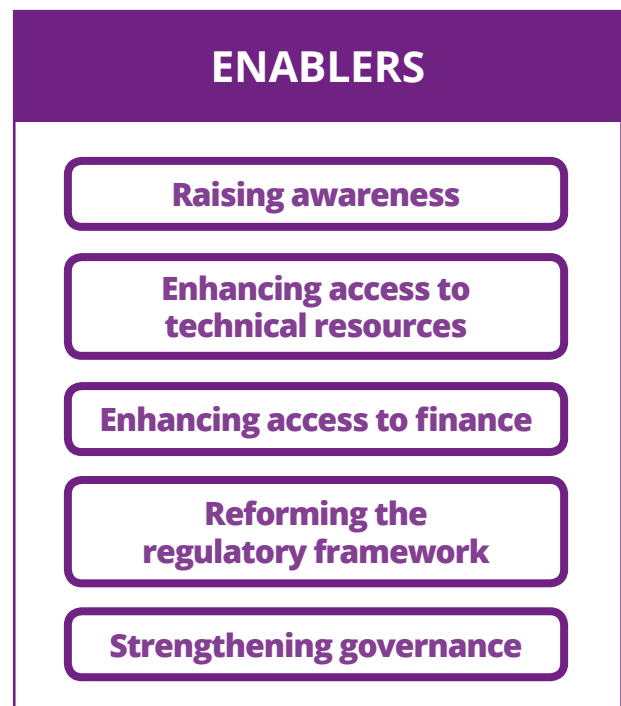
Figure 1: Framework for private sector engagement in adaptation



The remainder of this section outlines enablers for private sector investment in adaptation, alongside lessons learnt and potential success factors emerging from ACT’s work.

3.2 Enablers for the private sector to invest in climate change adaptation

Several factors play a critical role in creating an enabling environment for private sector adaptation, aligned to the multiple drivers and barriers detailed earlier. Some are external to an organisation and/or individual (e.g. market and/or policy environment); others are internal and based on perceptions and experience (Stenek and Amado, 2013). For instance, previous negative experiences associated with natural disasters or extreme weather events have often been correlated with higher levels of investments in climate change adaptation. Identifying how decisions around adaptation are made provides a basis for key factors to consider when influencing



the private sector's involvement in adaptation (Stenek and Amado, 2013;⁶ UNEP, 2016b) – namely, raising awareness; enhancing access to technical resources; enhancing access to finance; reforming the regulatory framework; and strengthening governance.

ACT engages with different enablers of the framework through a range of approaches and interventions (as summarised in Table 5). The programme's work to date has contributed to laying the groundwork for the private sector's involvement in climate change adaptation in South Asia. Through the interventions presented in this Learning Paper, ACT has contributed substantially to raising awareness and building the capacity of the private sector around climate change adaptation, focusing on specific climate-sensitive sectors, for instance tourism in Nepal and agriculture and water-dependent industries in India. In addition, the engagement of ACT with national and local governments aimed to shape the enabling environment (including the governance and regulatory frameworks) necessary to drive private sector investments in adaptation. This work is still in its early stages but it provides a strong foundation for future work through its learnings from engaging with the private sector and recommendations for further areas of work.

Raising awareness is critical to secure the interest of the private sector by documenting and disseminating the business case for investing in climate change adaptation. Information should be targeted to the specific priorities and needs of the private sector and presented in a concise and appealing way (preferably using visuals and numerical data). According to Stenek and Amado (2013), information can include data on:

- Climate change observations and projections for specific sectoral and geographic needs (with temporal and spatial solutions aligned with decision-making by businesses and in a format that businesses understand);
- Related impacts taking into account climate projections;
- Climate-related risks and opportunities for specific sectors or geographies;
- Potential adaptation actions elaborated for specific sectors or geographies;

- Best practices from existing successful private sector projects/models/guidance on the costs and benefits of climate change adaptation;
- Diversification strategies to adapt to climate change;
- Trends in operational performance and/or demand for climatically sensitive products or services; and
- New products and services where a changing climate creates competitive advantages (also mentioned in Steeves et al., 2016).

Raising awareness about the innovative uses of silt – the new sediment economy in Bihar, India

Results from an ACT study in Bihar demonstrated that silt could be used for several purposes, including as a fertiliser in agriculture, as well as a raw material for the ceramic, brick-making and construction industries. Building on this initial assessment, ACT developed an investment portfolio and a road map for a sediment management framework with clear entry points for private sector investment.

Additionally, to enable implementation of the sediment management framework and to ensure smooth cash flow, a policy review and governance assessment along with an institutional need analysis were also completed. This portfolio not only helped the Bihar government identify its input costs but also included the primary benefits such as higher agricultural yield, commercial development, livelihood creation and economic growth. Co-benefits such as progressive reduction to the expenditure on disaster management and socio-economic benefits were also identified. This study helped ACT demonstrate that river silt should not simply be considered as 'waste', but rather an important resource, which, managed properly, could be profitable for businesses and also reduce public expenditure.

Enhancing access to technical resources is critical to help businesses progress from planning to the implementation of the adaptation action, building

⁶ This paper was developed based on a review of over 350 publications on private sector adaptation, identifying institutional arrangements, policies, economic incentives and knowledge and technology resources that play a role in motivating the private sector in taking (or not taking) climate change adaptation actions.



Excessive siltation along the Kosi river is affecting agriculture yields and livelihoods.

on the awareness raised among private sector entities. This requires having access to decision support tools, knowledge and capacity to act. According to Stenek and Amado (2013), such technical resources can include:

- Technical assistance or training for building capacity and expertise to carry out assessments on climate risks, opportunities and adaptation actions;
- Decision support tools to understand and assess risk and opportunities and identify potential adaptation actions elaborated for specific sectors or geographies;
- Information and communication technology infrastructure enabling user applications and software for climate adaptation (e.g. early warning systems and climate information services to farmers via mobile phones);
- Tools to analyse and compare the effectiveness and efficiency of different diversification options (e.g. different crops);
- Climate adaptation technologies and process innovation (e.g. water-efficient irrigation, drought-resistant crops, sensor technology); and
- Market research, business planning and the development of new financial products (also mentioned in UNEP, 2016b).

Enhancing access to finance is necessary to drive private sector investment in adaptation, and this requires improving the risk–reward profile of

Enhancing FPCs' technical skills for the uptake of climate-resilient farming in Maharashtra, India

Through its work with the World Bank-funded PoCRA, ACT commissioned an expert team to analyse 21 FPCs in 4 districts and develop an FPC rating tool that PoCRA and IFLs could use to make credit available to FPCs while promoting climate-resilient agriculture practices. PoCRA applied this tool, enabling immediate uptake and impact. Training modules for IFLs and FPCs were developed and imparted to enhance their capacity to prepare quality business plans. ACT also prepared a business planning template, which draws on existing best practices and considers climate and gender-related information. Overall, ACT facilitated private sector's access to technical resources, by, for instance, developing FPCs and IFLs' skills to write and evaluate business plans, as well as building the capacity of IFLs to use the FPC risk rating tool. ACT also helped FPCs access credible finance for their business operations.

adaptation investments. According to Stenek and Amado (2013), this can be achieved by providing access to:

- Incentives in support of the purchase of climate technologies, implementation of adaptation actions and research and development (R&D) in the private sector;
- Public and/or private financing instruments (e.g. loans, equity or guarantees) in support of climate adaptation uptake in the private sector, including purchase of climate technologies, implementation of adaptation actions and R&D in the private sector;
- Microfinance programmes for MSMEs and smallholders in support of the purchase of climate technologies, implementation of adaptation actions and R&D in the private sector;
- Charges and levies used to fund climate adaptation in critical public infrastructure;
- Carbon finance supporting activities that improve climate resilience while mitigating greenhouse gas emissions;
- Environmental trading markets promoting efficient use of environmental resources under pressure from climate change impacts and generating additional revenue opportunities (e.g. water markets); and
- Insurance or financial risk management products that transfer climate-related risks while incentivising risk reduction actions.

Enhancing private sector access to finance through PPPs for climate change adaptation in Maharashtra, India

As part of ACT's work on PPPs in Maharashtra, the team provided technical support to develop a detailed proposal for one pilot project identified with Ambuja Cement. ACT facilitated a PPP between Chandrapur District Authority in Maharashtra and Ambuja Cement to implement a project around Water Resource Management, in line with one of the Government's major water conservation programmes. This pilot contributes both to improving water availability to communities, as per the state's objective, and benefiting a water-dependent cement industry. Such a model enables the state to benefit from technical expertise and investments from the private sector, while giving assurance to the latter that its work is endorsed by public authorities and climate-proofing its activities. This PPP agreement enhances private sector access to finance, as Ambuja Cement will invest money upfront into the project, later being reimbursed by the Government.

Reforming the regulatory framework will be essential for creating a self-sustaining market for private sector adaptation goods and services, by strengthening the enabling environment for the private sector's investment in adaptation. According to Stenek and Amado (2013), the public sector can tackle the issue by implementing:

- Policies, laws and regulations encouraging or requiring climate change adaptation;
- Local zoning regulations incorporating data and information about future changes in climate and their impacts;
- Land use and construction permitting rules promoting climate change adaptation measures;
- Land tenure policies, laws and regulations that secure over the long term the land rights of vulnerable populations that may be more at risk from expropriation and land loss owing to climate change impacts (e.g. more severe floods) or actions by other groups (e.g. land purchase or leasing by organisations looking for more climate-resilient locations);
- Stakeholder consultation and engagement requirements promoting disclosure and consideration of climate risks, opportunities and adaptation;

Reforming the regulatory framework for a climate-resilient tourism industry in Nepal

Close coordination and collaboration between the government, the private sector and other relevant stakeholders is necessary to develop a climate-resilient tourism sector in Nepal. The tourism study undertaken by ACT in Nepal uncovered the need for the MoCTCA to revisit the national Tourism Act, for it to take into account climate resilience. The study also kick-started discussions on developing a comprehensive climate-resilient tourism strategy and action plan as well as codes of conduct for the tourism industry to mainstream climate change adaptation into its operations. Many private tourism operators in Nepal, such as the Trekking Agencies' Association of Nepal, already have codes of conduct. However, such codes of conduct are not endorsed by the regulatory authority, which hampers their implementation. Thanks to ACT's recommendations, the codes of conduct will now both consider climate resilience and be enshrined in the revised Tourism Act. Their high-level buy-in can lead to their effective application on the ground.

- Environmental and social impact assessment laws and regulations and government guidance with requirements to assess the impacts of changing climate conditions and consider adaptation measures;
 - The legal and regulatory obligation on operators of critical infrastructure (e.g. utilities) to incorporate and, where necessary, disclose climate change risks and opportunities in their strategic and operational plans; and
 - Laws or regulations allowing regulated water and energy utilities to offer differentiated tariff and service options to their customers, during periods of peak demand.
- Government and industry organisations that consider climate risks and provide support to alternative means of production, activities and relocation in the private sector; and
 - Governance reforms aimed at engendering a more inclusive growth process led by private economic activity and mainstreaming climate change adaptation (also mentioned by World Bank, 2017).

It should also be noted that technical assistance combined with policy dialogue could improve the regulatory environment, for example on building codes and planning rules, as impending regulatory constraints can drive private sector investment in adaptation (Vivid Economics, 2015).

Strengthening governance mechanisms can help bring together private, public and civil society actors to embed climate change adaptation in their decision-making, and also create multi-stakeholder partnerships and collaborations. According to Stenek and Amado (2013), this can be achieved via:

- PPPs dedicated to the assessment of climate change and provision of adaptation solutions;
- Engagement of the private sector in national or local policy processes, for example the national adaptation planning process;
- Coordinating agencies encompassing government, the private sector, civil society, non-governmental organisations (NGOs) and academia with activities focused on climate risk and adaptation, including funding for climate change adaptation in the private sector;
- Brokers and other intermediaries active in environmental trading markets with climate change adaptation benefits;

Strengthening governance for a climate-resilient tourism industry in Nepal

A Tourism and Climate Action Forum is currently being conceptualised, to enable all private tourism actors to come together and share lessons learnt and best practices to address climate risks. Similarly, a platform under the leadership of the Federation of Nepalese Chambers of Commerce and Industry is under development, to foster corporate sector engagement in catalysing climate finance, through instruments such as corporate sector responsibility. The platform could raise finance as required through the development of funding ideas and linking individual organisations with potential funders.

These strategies should be seen as complementary to each other, rather than in isolation. For example, as part of ACT's work on assessing FPCs' business, institutional structure and credit access in Maharashtra, the programme considered several enablers. While the primary goal was to help FPCs access finance for climate-resilient development by training bank staff, ACT also improved FPCs' overall technical capacity by supporting them in the preparation of their business plans. In addition, as part of an effort to change social norms around gender, ACT worked to promote female entrepreneurship and participation in FPCs.

Table 5: Summary of enablers for private sector engagement in ACT interventions

Enablers	ACT's approach				
	The three PPPs, Maharashtra (India)	Climate-resilient crops and assessment of FPCs, Maharashtra (India)	Promoting climate-resilient tourism through private sector engagement, Nepal	Assessing increasing climate losses to financial institutions, India	Silt and its contribution to ceramic industry, Kosi River, Bihar (India)
1. Raising awareness	Promoting dialogue to align interests of public and private sectors.		Documenting climate change impacts on tourism in high-profile destinations, including through maps of all vulnerable areas.	Raising awareness of climate risks among financial institutions.	Making a business case for using silt as low-cost raw material in ceramic and brick industries and for construction.
	Documenting options for private sector to invest in adaptation.		Developing and disseminating a handbook on good practices for supply chain management in the tourism industry.		
2. Enhancing access to technical resources	Technical assistance and capacity-building on preparing proposals to access national and international climate funds.	Building FPC business planning skills.	Developing training modules as part of existing training courses in tourism training institutes, offering strategies for climate change adaptation.	Developing sectoral methodologies for agriculture, and households and businesses, to assess how climate change risks affect lending patterns and portfolio losses.	
		Bridging the gap between FPCs and facilitators of value chains and GoM schemes and projects.			
		Risk rating tool to enable systematic evaluation of factors that facilitate or restrict FPC business growth.			
3. Enhancing access to finance	Developing PPP models to drive private sector investment in water, waste management and sanitation.	Supporting preparation of business plans of FPCs for climate-resilient crops and technologies.			
		Using FPC rating tool to sensitise local bank staff on current capacities of FPCs in preparing bankable business plans.			

Table 5: Summary of enablers for private sector engagement in ACT interventions continued

Enablers	ACT's approach			
	The three PPPs, Maharashtra (India)	Climate-resilient crops and assessment of FPCs, Maharashtra (India)	Promoting climate-resilient tourism through private sector engagement, Nepal	Assessing increasing climate losses to financial institutions, India
4. Reforming the regulatory framework			Reviewing current Tourism Act and Policy.	Developing lending and disclosure guidelines for financial institutions to consider climate change.
			Developing codes of conduct for tourism.	Developing decision support tools to mainstream climate risks as part of lending due diligence processes.
5. Strengthening governance			Formulating Tourism and Climate Action Forum to share best practices.	Encouraging governance bodies and regulators to consider climate risks to financial institutions.
			Establishing a platform for corporate sector engagement to promote climate resilience in tourism industry.	
				Silt and its contribution to ceramic industry, Kosi River, Bihar (India)
				Designing a policy framework to promote large-scale use of silt in ceramic and brick industries.
				Developing a sediment management plan as part of standard operating procedure for flood management.



ACT studied the entire value chain of a number of climate-resilient crops in India to find entry-points for increasing private investment.

3.3 Emerging lessons from ACT on enabling private sector investment in adaptation

While it is still early to measure ACT's success in engaging with the private sector on climate change adaptation, practitioners involved in designing and delivering technical assistance programmes can learn from ACT's emerging experience. A wide range of success factors for enabling private sector investment in adaptation have been identified in ACT's work.

Success factors

Using a recent and local extreme weather and climate event as a starting point for engaging with the private sector:

Motivation to adapt to climate change is more directly spurred by recent experiences with climate events. For example, the 2017 flooding had acute impacts on tourism operators working in Chitwan National Park in Sauraha in Nepal. This sent a powerful message to the tourism sector and helped raise awareness of and interest in the need to adapt to climate change. People are often open to awareness-raising when they see that very

tangible losses may arise from extreme events such as floods. ACT's work in tourism in Nepal has shown that stakeholders, such as the Federation of Nepalese Chambers of Commerce and Industry and many Nepalese trekking agencies, tour operators and tourism associations, are already well aware of weather and climate-related risks as a result of more frequent and severe flooding events and landslides, resulting from changing rainfall patterns and increased probability of glacial lake outburst floods (ACT, 2018b). As noted by Sunil Acharya, ACT Team Leader for Nepal, 'during the 2017 floods tourism operators in Sauraha had to halt operations for half a month, which triggered their thinking on the necessity to act.'

Speaking the right language: Climate change is not just an environmental issue but also an economic one:

While environmental and social responsibility has moved within many companies from the margins to being mainstreamed, the private sector is driven primarily by balance sheets and profit and loss accounting. Therefore, climate change adaptation will be attractive only if it contributes to the bottom line. This is why it is necessary to start with issues the private sector cares about and then include

climate change. Making the case for action to businesses requires speaking their language in terms of profit and loss, revenues and market share, risk and opportunity, etc. In fact, ACT's work with the tourism industry in Nepal has shown that stakeholders think primarily about climate change as an environmental issue (e.g. waste management and planting trees). However, interest from the private sector means there is an opportunity to shift this narrative to focus on impacts on private sector operations (including production and supply chains), and their knock-on effects on their bottom line (e.g. revenues and market share).

Involving the private sector in development and implementation of adaptation policies and plans:

The earlier you engage with all relevant stakeholders on climate change adaptation-related policies, the earlier you can gauge, and address, stakeholder needs and concerns. Early engagement can also counteract the fear of change, which can often lead to objection in policy processes. As part of the tourism study in Nepal, it was critical to bring in private actors from the beginning in the national adaptation plan formulation process. As underscored by ACT's Nepal Team Leader, Sunil Acharya, tourism operators had the feeling that they had been part of the process from the start, and hence were very responsive during the study's implementation. In Maharashtra, although the private sector was not involved from the beginning in the formulation of the SAPCC, private companies were particularly interested in knowing what the state government's climate priorities were over the next five to ten years in order to be able to identify opportunities for future investments. This is why ACT facilitated a match-making process between the public and private sectors on their respective priorities, which brought in a policy dimension to the investment space.

Promoting dialogue and building a shared vision between the public and private sector:

Government agencies have strong incentives to deliver policy results. ACT's experience confirms that these priorities can be aligned with those of the private sector. In Nepal, MoCTCA's leading role in driving dialogue with the tourism private sector was essential to carry out the private sector study. MoCTCA was at the forefront in bringing public and private sectors around the same table, creating common ownership and responsibility in tackling the climate issue. In Maharashtra, ACT acted as facilitator between Ambuja Cement

and the Government by helping the company secure a memorandum of understanding with district authorities. It was also important for the three pilot partnerships to engage with the relevant government departments. While the environment department is in charge of planning, the mandate for implementation lies within the sectoral departments. ACT's work on PPPs in the state enabled public and private entities to connect and work together on adaptation, by getting private actors to talk to the relevant government departments, for instance by connecting companies with the water department for water-related projects. Through this project, ACT identified overlaps between state priorities (such as watershed management and climate-resilient agricultural activities) and interest from the companies that could be involved in PPPs.

Accessing networks, expertise and resources:

Any stakeholder engagement and awareness-raising should be planned carefully and realistically. Capacity-building efforts such as hand-holding locally trusted partner organisations and building their understanding require time and resources but are essential to long-term sustainability. This includes having access to external technical expertise, tools and methodologies. In Maharashtra, when reaching out to 619 FPCs, ease of access to these resources was critical to the effective implementation of the activities as well as contributing to a good rapport between the ACT team and the World Bank-funded PoCRA. International development partners in particular have the resources to help create and finance market opportunities. In Maharashtra, ACT provided know-how to the 21 FPCs and government counterparts, which was further passed on to more than 600 FPCs in 15 districts of Maharashtra. In Nepal, a key success factor was ACT's role as a facilitator to access and leverage technical resources and networks across businesses, associations, NGOs, government agencies and development partners. In Maharashtra, ACT leveraged PoCRA's existing work to enhance the climate resilience and profitability of smallholder farming systems in selected districts of Maharashtra and provided them with an FPC rating tool that fed into their work. Prior to developing the tool, the ACT team engaged with financial institutions to understand the processes they follow when making lending decisions to FPCs, and identified that climate change resilience in agriculture was not considered, before integrating it into the tool. As described by Naman Gupta, ACT Team Leader

in Maharashtra, 'PoCRA had the resources, we provided the framework.'

Challenges

A key challenge across a majority of ACT's work on private sector adaptation lies in the time lags resulting from securing the necessary approvals and buy-in from the public sector. Although the public sector's support is critical for influencing the enabling environment, these time lags further affected the depth and breadth of the engagement with the private sector. Common issues encountered in the programme include the following.

Blurred lines between climate change adaptation versus business-as-usual development:

While it is relatively easy to identify mitigation action (i.e. its contribution to the reduction of greenhouse gases in the atmosphere and/or whether it increases the capacity of an ecosystem to absorb them), the blurred line between business-as-usual development and climate change adaptation has been a contentious issue in the international climate finance debate, including at recent Green Climate Fund Board meetings. This was also a challenge in Maharashtra when engaging with both the Government and private companies on agriculture, water and natural resource management projects: ACT had to raise awareness on the differences and overlaps between business-as-usual development and climate resilience. As Naman Gupta, ACT Team Leader in Maharashtra, explained, integration of the adaptation angle proved complex for both public and private sector actors.

Conflicting signals from the government and lack of a continuous engagement:

A clear and consistent enabling framework is paramount if the private sector is to finance climate change adaptation. Uncertainty about policies and regulations from the government is a deterrent for private sector investors. In Maharashtra, when developing the business models for the three PPPs, there was a lack of clarity on the degree of endorsement of these from top politicians and bureaucrats. Limited top-level support for state-wide action in developing PPPs meant Ambuja Cement could not secure a memorandum of understanding at state level

for the programme, and did so only at district level. However, at the initial stages, ACT was successful in bringing together companies such as Ambuja Cement, which was interested in water management for business purposes, with state authorities' support for such an initiative. In Nepal, any new stakeholder engagement in the tourism industry and beyond also required approval from several different government authorities. Furthermore, after the 2018 general elections, the delayed transfer of power meant it was necessary to hold off activities to ensure government participation, which is critical to creating an enabling environment. Government staff turnover in agencies engaged in the study substantially delayed the process, as new staff members needed to be briefed on the work each time before new activities could be implemented.

Timeframe constraints:

While time lags are common in technical assistance programmes, capacity-building takes time and, within the private sector, awareness on climate change adaptation is often lower than it is within government. ACT's experience shows that continuous engagement is critical to build buy-in in the results and recommendations emerging from ACT's work. In Nepal, time was a component the team struggled with, as private stakeholders wanted and needed more time to wrap their heads around the concept of adaptation and resilience: they kept referring to mitigation actions when discussing climate change issues. Sunil Acharya, ACT Team Leader in Nepal, also stressed that, as these were relatively new concepts, '[the private sector] often needs time to consolidate their learning before they can apply the acquired knowledge'. However, time constraints and inefficiencies got in the way of implementing many recommendations emerging from the study with tourism actors. This also resulted in missed opportunities to engage with those who could invest in climate change adaptation and develop investment models, such as large corporations and private financiers. In Maharashtra, private companies such as Tata Power and Godrej Industries were unable to secure formal commitments to funding support because of the project's timeframe. There was not enough time for companies to pursue their respective Boards to allocate funds for the PPP projects. As the ACT project was ending, the team was unable to follow up with these companies.

4. Steps for engaging the private sector in financing climate change adaptation

This section provides a set of five broader considerations related to engaging the private sector in financing climate change adaptation. These are targeted at those seeking to design and implement technical assistance programmes on climate change adaptation.

4.1 Construct a foundation of narratives

Building awareness and interest in climate change adaptation in the private sector requires developing a foundation of narratives, using as a starting point of engagement their direct experience in a recent and local extreme weather and climate event and the tangible impacts this had on their business. Language is also important. Words like ‘adaptation’, ‘mitigation’ and ‘private sector engagement’, which originate from a science-based background within the United Nations Framework Convention on Climate Change, do not mean a great deal to businesses. Making the case for action on climate change adaptation requires speaking in terms of profit and loss, revenue and market share, risk and opportunity. Physical climate impacts generate both risks and opportunities for private sector operations (including production and supply chains), with knock-on effects on their bottom line (e.g. revenues and market share). Visual descriptions and numerical data in a succinct format, for instance graphs, tables and charts, can help private sectors better understand the narratives, rather than lengthy textual descriptions. As a starting point, awareness-raising can be carried out through business associations and standards bodies that represent the private sector.

4.2 Build a shared vision between the public and the private sectors

Climate change adaptation is not the responsibility of the public sector alone; the private sector is equally exposed to physical climate risks and can provide the innovation, technology and risk management capabilities to devise solutions. An important starting point to promoting dialogue between the public and the private sectors is identifying overlaps between government priorities and private sector interests, starting with what matters to the government in terms of delivery

of policy results by focusing on priority sectors in policy frameworks that are climate-sensitive and where there is a significant role for the private sector. PPPs are increasingly used to bring together public and private interests and work together on climate change adaptation.

4.3 Build the capacity and expertise of private sector champions to take action

Decision support tools to understand and assess risk and opportunities and/or identify potential adaptation measures can help the private sector take action. It will be important to start with building the capacity and leadership of climate change adaptation champions in climate-sensitive sectors (e.g. agriculture, tourism and water) before expanding to reach others. This will help them make more informed decisions to manage and minimise existing or emerging risks while taking advantage of investment opportunities emerging from a changing climate, through, for instance, the development and promotion of specific investment business cases. This could include conducting cost-benefit analysis on specific investments and presenting the scale of the opportunity, type and combination of incentives that could be applied to mobilise the necessary investment.

4.4 Bridge the gap between the demand and the supply of private finance

Bringing together those that provide the investment opportunities in the real economy (e.g. MSMEs) and those that can invest in them (including large corporates, private financiers, the public sector and national/international climate funds) is paramount to move from awareness, capacity-building and planning towards implementation on the ground. While first mover businesses in climate change adaptation may be able to access financial support from the public sector and/or development partners, there is not enough money to keep pace with the private investment needs in climate change adaptation as interventions are scaled up. To cope with this growing demand for adaptation finance, there is a need to develop the capital market and the capacity of financial service providers to provide

longer-term financial products and services. As a starting point, this includes raising awareness on how climate change may have knock-on effects on the revenues, costs and property values of their borrowers and potential borrowers, though 1) assessing the current and future climate exposure of the investment portfolio of financial institutions; 2) designing concrete solutions for mainstreaming climate risk management into their lending due diligence processes; and 3) developing new financial and risk management products that can meet the financing needs of private enterprises in the real economy to take action on climate change adaptation. Against this backdrop, it is also important to raise awareness among credit rating agencies about the importance of climate risk, which could incentivise banks and financial service providers to integrate climate risk considerations into their lending strategies and portfolios.

4.5 Allow adequate time and resources for moving towards shaping the governance and regulatory frameworks

Unlike in mitigation, there is relatively little experience in the implementation stage of private sector investment in climate change adaptation. This is mainly because of a weak enabling environment. Private sector involvement in climate change adaptation is a fairly new focus of international discussions around climate change, with most recent efforts focused on raising awareness and building capacity of the private

sector around adaptation (focusing on the most climate-sensitive sectors). Preliminary work is also underway in terms of removing existing barriers to financing adaptation by the private sector, such as developing investment or business models or providing low-cost finance and/or risk-sharing instruments. Strengthening governance and reforming the regulatory framework working hand-in-hand with the public sector is a more nascent area that will be critical to consolidate these gains over the long run. Public sector support is essential to overcome barriers and create an enabling environment for private investment in climate change adaptation. Supportive policies, mechanisms for implementation, subsidies, access to data, technical support and collaborative opportunities are all areas where public sector support is needed. While engaging with the government, businesses need a clear strategy, including engagement and consultation with high officials at all relevant bureaucratic levels from local to national. This strategy should cover specific roles and responsibilities, concrete actions and timelines for specific public actors. To navigate complex public bureaucracies, engagement of staff or experts who have prior experience with relevant local and state levels may also be considered. In Bihar, where ACT promoted the innovative use of silt, the development of a sediment management plan was identified as a way to shape the policy and regulatory framework. ACT supported the government to revise the existing standard operating procedure for flood management to incorporate the sediment management plan.



ACT's economic impact assessment of the tourism sector in Nepal highlighted the potential for private sector engagement in climate-resilient tourism.

Figure 2: Steps for engaging with the private sector adaptation

Source: Authors.

5. Conclusion

This paper has outlined a framework for practitioners involved in designing or implementing technical assistance programmes, to identify potential enablers for them to engage with the private sector on climate change adaptation. It identifies a number of steps for engaging private companies and financiers on climate change adaptation, as presented in Figure 2, alongside some success factors and challenges based on the experiences of the ACT programme. Cutting across the specific learnings and recommendations are the following considerations:

Set a realistic timeframe: Any stakeholder engagement and awareness-raising should be planned carefully and realistically. Capacity-building efforts, including hand-holding of stakeholders and building their understanding, also requires time and resources but are essential for long-term sustainability. As such, the programme timeframe should align with stakeholder consultation, awareness-raising and capacity-building needs, while bearing in mind potential election periods and the time needed to invest at the initial stages in building buy-in, trust and credibility with partners (both private and public) (Whittle et al., 2012).

Bring on board relevant technical expertise: Access to relevant networks of technical expertise is critical to the delivery of quality outputs. Identifying and engaging with relevant networks that can provide the right technical expertise, alongside replicable and best practice tools and methodologies, can save time and resources. Opportunities can be harnessed by building partnerships and collaborating with other businesses, associations, civil society, government agencies and development partners to take advantage of the resources, networks and expertise each provides.

Ensure hand-in-hand work between the public and private sector: High-level political buy-in has proved successful to all ACT initiatives around private sector engagement. Both policy incentives and adequate regulatory frameworks constitute a necessary foundation for private sector investments in adaptation to thrive (PwC, 2010).

These and other lessons from the ACT programme will have relevance across the region and globally, for any practitioner from the government, civil society or donors, designing or delivering a programme that aims to support adaptation to climate change.

References

- Acclimatise (2018) 'Navigating a New Climate. Assessing Credit Risk and Opportunity in a Changing Climate: Outputs of a Working Group of 16 Banks Piloting the TCFD Recommendations PART 2: Physical Risks and Opportunities'. Commissioned by UNEP-FI.
- Acclimatise and Four Twenty Seven (2018) 'Advancing TCFD Guidance on Physical Climate Risks and Opportunities'. Commissioned by EBRD.
- Action on Climate Today (ACT) (2017) 'Private Sector Approaches for Climate Change Adaptation'. Accessed on 10 December 2018.
- ACT (2018a) 'An Assessment of FPCs in Maharashtra'. Final Report. Accessed on 17 December 2018.
- ACT (2018b) 'Promoting Climate Resilient Tourism through Private Sector Engagement in Nepal'. Accessed on 17 December 2018.
- Ahmed, M. and Suphachalasai, S. (2014) *Assessing the Costs of Climate Change and Adaptation in South Asia*. Mandaluyong City: ADB.
- Buchner, B., Oliver, P., Wang, X. et al. (2017) 'Global Landscape of Climate Finance 2017'. Accessed on 17 December 2018. <https://climatepolicyinitiative.org/wp-content/uploads/2017/10/2017-Global-Landscape-of-Climate-Finance.pdf>
- Fayolle, V. and Odianose, S. (2017) *Using Blended Finance to Overcome Barriers to Climate Investments*. London: Acclimatise and CDKN. Available at https://cdkn.org/2017/01/feature-using-blended-finance-overcome-barriers-climate-investments/?loclang=en_gb
- Fayolle, V., Odianose, S. and LeMasson, V. (2016) 'What Does It Mean for a Climate Project to be Gender Sensitive – Part 1'. Accessed on 17 December 2018. <http://www.acclimatise.uk.com/2016/12/19/what-does-it-mean-for-a-climate-project-to-be-gender-sensitive-part-1/>
- Goldstein A., Turner, W., Gladstone, J. and Hole, D. (2018) 'The Private Sector's Climate Change Risk and Adaptation Blind Spots'. *Nature Climate Change* 9: 18–25.
- Huq, S. (2016) 'Adaptation Finance: Climate Change's Forgotten Child'. *Climate Change News*, 15 November. Accessed on 10 December 2019. <http://www.climatechangenews.com/2016/11/15/adaptation-finance-climate-changes-forgotten-child/>
- Kagen J. (2018) 'Loan-to-Value Ratio – LTV Ratio'. *Investopedia*. Accessed on 9 January 2019. <https://www.investopedia.com/terms/l/loantovalue.asp>
- Koh, J., with E. Mazzacurati and S. Swann (2016) 'Bridging the Adaptation Gap: Approaches to Measurement of Physical Climate Risk and Examples of Investment in Climate Adaptation and Resilience'. GARI Working Group Discussion Paper. Accessed on 17 December 2018. <https://garigroup.com/discussion-paper>
- OECD (Organisation for Economic Co-operation and Development) (2001) 'Non-Financial Corporations'. <https://stats.oecd.org/glossary/detail.asp?ID=1805>
- Padraig O., Clark, A. and Meattle, C. (2018) 'Global Climate Finance: An Updated View 2018'. Accessed on 17 December 2018. <https://climatepolicyinitiative.org/wp-content/uploads/2018/11/Global-Climate-Finance-An-Updated-View-2018.pdf>
- PwC (2010) 'Business Leadership on Climate Change Adaptation: Encouraging Engagement and Action'. Accessed on 25 January 2019. <https://pwc.blogs.com/files/encouraging-engagement-and-action-full-report-publication.pdf>
- Shakya, C., Cooke, K., Gupta, N. et al. (2018a) 'Building Institutional Capacity for Enhancing Resilience to Climate Change: An Operational Framework and Insights from Practice'. ACT Learning Paper.
- Steeves J., Fayolle V. and Odianose S. (2016) 'Business Case for the Bangladeshi Private Sector to Invest in Climate Change and Access to International Climate Finance'. Produced in collaboration with IIED and ICCCAD. London: Acclimatise.
- Stenek, V. and Amado J.-C. (2013) *Enabling Environment for Private Sector Adaptation*. Washington, DC: IFC.
- TCFD (Task Force on Climate-related Financial Disclosures) (2017) 'Recommendations of the Task Force on Climate-related Financial Disclosures – Final Report'. Accessed on 14 December 2018. <https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-TCFD-Report-062817.pdf>
- The EIU (The Economist Intelligence Unit) (2015) *The Cost of Inaction: Recognising the Value at Risk from Climate Change*. London: EIU.
- UNEP (United Nations Environment Programme) (2016a) *The Adaptation Finance Gap Report*. Nairobi: UNEP.
- UNEP (2016b) *Demystifying Adaptation Finance for the Private Sector*. Nairobi: UNEP.
- Vivid Economics (2015) 'Building an Evidence Base on Private Sector Engagement in Financing Climate Change Adaptation'. Commissioned by EBRD.
- Whittle, S., Colgan, A. and Rafferty, M. (2012) *Capacity Building: What the Literature Tells Us*. Dublin: The Centre for Effective Services.
- World Bank (2017) 'Strengthening Governance, Basic Services and Private Sector Opportunities in New Strategy for Togo'. Press Release, 16 May. Washington, DC: World Bank.

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

Mariamamma '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

ACT

E: elizabeth.gogoi@opml.co.uk

W: actiononclimate.today

 [@act_climate](https://twitter.com/act_climate)

 www.facebook.com/ActionOnClimate



ACTION ON CLIMATE TODAY

