



Communicating climate change: A practitioner's guide

Insights from CDKN's work in Africa, Asia and Latin America

Discussion Draft 2018



ABOUT THE CONTRIBUTORS

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The experiences summarised in this volume were the collective work of a much larger team, who worked creatively and energetically to communicate climate change across many countries and to document their lessons in project reports. We drew freely on their documents in the compilation of this guide. Thanks to the following colleagues for their insights: Jorge Villanueva and Mathieu Lacoste (Latin America); Claire Mathieson, Simbisai Zhanje and Jean-Pierre Roux (Africa); Elizabeth Gogoi, Aditi Paul and Mochamad Indrawan (Asia); Ari Huhtala, Jebi Rahman, Charlotte Rye and Geoff Barnard (Global). Thanks also to Emma Baker of CDKN for production assistance with this edition.

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Cover image: Weather information and water availability is communicated to community members in Maharashtra, India. Photo credit: Tali Hoffman, ASSAR.

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About this guide

This guide shares tips for communicating climate change effectively, drawn from the Climate and Development Knowledge Network's (CDKN) experience in South Asia and Southeast Asia, sub-Saharan Africa, and Latin America and the Caribbean. It is a guide by practitioners for practitioners and is intended for communications officers, and other champions of climate action, who are working nationally and locally in developing countries.

This guide is intended to fill a gap in sharing practitioners' experiences about climate communications in the Global South. A large amount has been written and debated on how best to communicate climate issues in industrialised countries with a view to both influencing policy debates and changing broader public awareness and behaviour. However, this considerable literature is overwhelmingly 'Northern' – focusing principally on convincing a sceptical or apathetic public in North America, Europe or Australasia.

The guide is written by CDKN's Knowledge Management and Communications staff, who have been working since 2010 to raise awareness of:

- the impacts of climate change on poverty and development;
- the potential for building resilience to climate change; and
- the opportunities of embracing a low-emission economy.

The team's experience spans dozens of low- and middle-income countries.

The climate communicators with whom CDKN has worked in these countries, and their ultimate audiences, don't need to be convinced that climate change is happening. They see the evidence before their eyes: in searing heatwaves and increasing numbers of heat-related illnesses and death; in failing and flooded food crops, and inundated coastal zones.

This initial version of the guide aims to stimulate discussion about what works well. We invite you to compare our tips with your own experiences.

What these audiences also need is to 'make sense' of what they are seeing: to understand their lived experience in scientific context, to know what the future climate might hold, and decide what they should do about it.

This guide shares the CDKN team's tips for communicating the science of climate change, including climate change impacts, risks and vulnerability. It also covers communicating climate change adaptation and mitigation solutions, although often, in practice, these concepts are inseparable, and some of the most effective climate solutions – being both low-emission and climate-resilient – tackle both aspects together.

This guide is also geared toward what it takes to convince people to take climate action *now*, not tomorrow. The reality is that climate change jostles for people's attention with many competing and seemingly more urgent – or entertaining – stories. It takes ingenuity to bump climate change to the top of the agenda and ultimately give it the political and public focus it deserves.

Invitation to share your experience

This initial version of the guide aims to stimulate discussion about what works well. It also shares our experiences on which communications strategies to avoid, or approach with caution, and why.

We invite you to compare our tips with your own experiences. Get in touch to share your tactics and critique ours. We will consider your contributions for a future, expanded version of the guide. Please write to us at: cdkn@southsouthnorth.org

Key to this guide



Top tips

Tips and tricks for communicating climate change



Knowledge builder

Recommended resources to help you build your knowledge and skills



Story

Case studies of creative climate change communications and public engagements



Cautions

Pitfalls to avoid when communicating about climate change



Two women playing a climate resilience game in Ethiopia as part of the Africa Climate Change Resilience Alliance project
– Thomas White

General principles for effective communication

Communicating about climate change has its own unique challenges, which we discuss in detail in this guide: from cutting through the scientific jargon so as to represent climate impacts both simply and faithfully, to opening up conversations about climate solutions to be inclusive and accessible. In spite of its unique challenges, the job of communicating climate change also has much to take from other sectors.

There are many well-proven tools and tactics from social marketing and campaigning that apply equally to communicating climate change:

- Be clear about who you want to reach, and understand the intended audience's knowledge and values before creating communications campaigns. Use framing and language that will resonate with target audiences and evolve their understanding of, and contribution to, an issue.
- Segment the audience, and tailor communications to their specific concerns and needs, where appropriate.
- Work to identify who are the best 'messengers' for your content: who is most likely to capture the attention of your intended audience?
- Request audience feedback often, and revise and update messaging, content and engagement activities to improve when things aren't working well.
- Devise digital outreach campaigns that elevate serious climate change messages in the midst of huge online 'chatter' by using well-tested tactics – such as high quality imagery, innovative infographics, great copy writing and even memes – to make content compulsively shareable.

Communicators have much potential to 'borrow' ideas from other areas of life where public behaviour change, public policy change, and better cooperation among science, policy and civil society is needed, and where communications and engagement campaigns have had notable success. There is much to be learned from such campaigns, be they to eradicate deadly diseases, stop people smoking or get children into school.

Proven public engagement tactics that CDKN and others have used to inspire and stimulate conversations about climate change include:

- a film festival in India, aimed particularly at young people and university students, where the organisers screened climate films and convened audience discussions afterwards;
- theatre workshops to communicate climate risks and actions communities can take to reduce the impacts of extreme weather events and other climate disasters: in low-income neighbourhoods of Manila in the Philippines and in Ghana (see Box: Effective communications and learning by doing in coastal Ghana, page 6); and
- a school art competition in an open public park in Cartagena, Colombia, where children were invited to paint their positive visions of a more climate-resilient, sustainable city (see Box: Sea level rise in Cartagena, Colombia, page 40).

Communicating about climate change has its own unique challenges but can also borrow effective tactics from other sectors.



Effective communications and learning by doing in coastal Ghana

The 'Building Coastal Resilience' project, led by the Regional Institute for Population Studies (RIPS) at the University of Ghana, and supported by CDKN, aimed to mainstream climate change adaptation into development. The project collected and disseminated information on climate risk in order to strengthen the resilience of six urban communities in Ghana's coastal zones: James Town, Ussher Town, Glefe, Anyakpor, Ada-Foah and Totope. The project brought together representatives from all levels of decision-making, from the local to the national.

6 The project team used a 'reciprocal learning' process to engage communities in identifying priorities for climate adaptation action. Community leaders, acting as knowledge brokers and interpreters to overcome barriers of language and understanding, reached out to involve the full community: male and female, young to old. The process helped communities to assess climate change impacts and the risks posed to livelihoods and find ways to reduce them. Now, the focal communities have prepared district-level contingency plans for dealing with climate and disaster risk.



Project team tells the story of climate risks to national decision-makers – *University of Ghana*

Inputs from these subnational climate vulnerability assessments and discussions were 'rolled up' into a national-level policy event in the capital, Accra. Here, the team shared inputs from the local platform meetings with national ministries, including the Ministries of Environment, Science and Technology, Local Government, Water Resources, Works and Housing, as well as the National Development Planning Commission.

Participants used diverse methods to debate the challenges of coastal climate change impacts and form recommendations for mainstreaming climate disaster risk management in national policy. 9

This included using theatre and puppets – a familiar and culturally appropriate method – to get the climate change message across.

Extracted and adapted from: Dovie, D. B. K., Nyamedor, F. and Enwana, E. D. (2014).¹

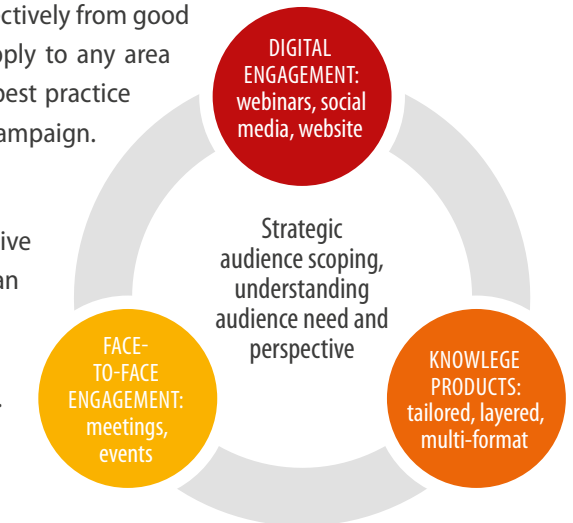


Developing an effective communications campaign

Communications and engagements on climate change can draw effectively from good campaign thinking, which communications professionals would apply to any area of science and the public interest. The following diagram shows a best practice starting point,² which could be applied to a climate communications campaign.

Use these building blocks flexibly to fit your situation:

- ✓ Start by identifying the stakeholder group(s) who can affect positive change, what information and analysis they need and how you can help meet their needs.
- ✓ Craft knowledge products and services that frame the information in ways that are tailored and relevant to the stakeholder group(s). Segment communications to target different groups, where needed, to make the content as useful and relevant as possible.
- ✓ Adopt a range of outreach methods – where appropriate – combining face-to-face engagements with digital outreach, both with smaller groups and via larger broadcast communications, to simultaneously achieve deeper, quality interactions and breadth.



Develop knowledge products that follow these principles:

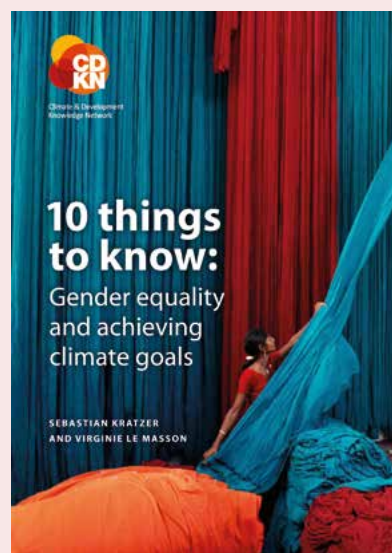
- ✓ Use appropriate language: Translate literally into different languages and/or use more or less technical language according to the target group's needs.
- ✓ 'Layer' the message: Start with simple, eye-catching headlines, and signpost to more complex levels of information and analysis: 5-second read, 60-second read, 10-minute read, 30–60 minute read.
- ✓ Produce diverse formats when the budget allows: Tell the same story, where possible, in multiple formats to cater to people's varying personal preferences, for example: text, pictures (picture galleries, photo essays, etc.), slide packs, films, animations and multimedia products that combine all of the above.
- ✓ Make content easy to access, easy to use, easy to share: Make sure content can be readily understood, applied and distributed by your intended audiences. Extensive review and consultation/co-authorship can assure these tests are met, facilitating excellent uptake and impact.



Bringing it all together: Integrated communications and engagement on climate change and gender issues


Our 2016-17 gender and climate action campaign is a case study of how CDKN applied the following fundamentals of an integrated communications strategy to a climate and development issue:*

- Establish a clear objective and overarching purpose: We wanted to demonstrate how women's empowerment is integral to effective climate action. Our overarching purpose was driven by new and compelling evidence on the links between women's leadership and better outcomes for climate-resilient development, emerging from research in Peru, Kenya and India.
- Identify key audiences: We identified a wide range of audiences. We saw that development programme managers (including NGOs and civil society organisations), funding agencies, researchers, academics and decision-makers at all levels of government, as well as media and 'influencers', could all benefit from the new evidence and be part of the solution. We wanted to reach these audiences in the research countries (Peru, Kenya and India) as well as international audiences who could learn from this important experience and apply the principles elsewhere.



- Select outreach channels and frame messages specifically for different audience groups: We recognised that development audiences, who were already quite strong on gender mainstreaming, may need engagement on the climate aspects of the research, while climate policy-orientated audiences may need special engagement on the gender mainstreaming aspects. As a consequence, our exhibitions and event presentations targeted:
 1. development stakeholders for whom the intersection of gender and climate issues would be new and interesting, e.g. Habitat III Conference; Resilient Cities Congress;
 2. climate policy stakeholders for whom the gender mainstreaming recommendations would be especially important, e.g. the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties; Global Green Growth Week.

- Craft communications products and services appropriate to different audiences' level of technical understanding and time availability, and in multiple formats, to suit people's different needs and preferences:
 1. We produced an authoritative series of research reports, principally for academic audiences. Each country report was a 60- to 120-minute read and was written as a reference guide with a full explanation of our results and methodologies.
 2. We produced the report *10 things to know: Gender equality and achieving climate goals* to make international findings more readily accessible to programme managers and busy executives; as well as country-by-country policy briefs to support conversations with national audiences in each of the study countries.
 3. We translated policy briefs into Spanish for Latin American audiences.
 4. We delivered webinars, led by research experts, to invite universal engagement from the international development community.
 5. We created a slide pack with notes to empower everyone on the CDKN team, from chief executive to programme officer, to deliver the key messages with confidence.
 6. We mounted a social media campaign, in partnership with the research partners, to drive digital traffic to the online resources.

*  <https://cdkn.org/gender-equality-climate-compatible-development/>



Mind the messenger

Climate change as the subject of a public communications or policy advocacy campaign is like other campaigns: the messenger matters as much as the message. People listen to, and act on information from, people they can trust. Trust is important because acting on climate change implies difficult policy choices and personal behaviour changes.

In CDKN's priority countries, CDKN's Country Engagement Leaders have played important roles as messengers for climate action. Usually, country nationals and senior and trusted policy advisors of government, these individuals helped to build government interest in new evidence on climate change as well as often convening diverse groups of people from industry, academia and NGOs.

Getting the climate change framing right

For climate communications – as with all effective communications – you need to ‘know the audience’. In developing countries, that typically means finding the development angle on a climate change story and framing the messages accordingly. Specifically, tackling poverty is high on the public and political agenda and provides a compelling entry point for raising awareness and driving action on climate change.

Although climate change already affects everyone in some way, it affects the poorest people the most; the people who are homeless or living in sub-standard housing – often in areas that are highly exposed to climate change impacts such as floods or extreme heat – with the most marginal and insecure jobs and fewest assets. Consciousness is growing. Many personal stories show that households who have risen out of extreme poverty can be knocked back into poverty by the effects of climate change today.

Climate action has the potential to simultaneously:

- tackle the many dimensions of poverty;
- create resilience to climate shocks such as extreme weather events, as well as resilience to the insidious effects of slow-onset climate changes, like rising sea levels;
- contribute to sustainable economies, as global society will overstep ‘planetary boundaries’ if economic development is not environmentally sustainable;³
- provide an opportunity to shift away from reliance on fossil fuels that are concentrated in the hands of relatively few producer countries, to renewable energies, in great abundance and available to all;
- offer an opportunity to lay the pathway for future growth and development in climate-smart products and services; and
- present a chance for cities and countries to demonstrate national, regional or global climate leadership.

The following sections, with their short case studies, provide guidance on entry points for different kinds of audiences, be they general, policy or business audiences. For more ideas on making the case for climate compatible development, visit the chapter of that title in CDKN’s book* *Mainstreaming Climate Compatible Development*.⁴

*  <https://www.cdkn.org/mainstreaming>

Framing the impacts of climate change



Business and economics-focused audiences

- ✓ Look for examples of risks to company profit – or to a company’s entire business model – posed by climate change impacts on assets, work force, production systems and supply chains.
- ✓ Find the stories of risk to competitiveness – of company, city, region, country – from inattention to climate change impacts.



Government and public policy audiences

- ✓ Highlight the risks that climate change will undermine the achievement of major public policy goals, especially on eliminating poverty and reaching fiscal targets.
- ✓ Highlight obligations and opportunities for meeting international commitments to climate action, such as the Paris Agreement under the UNFCCC.
- ✓ Highlight obligations and opportunities for meeting national commitments to climate action, such as national climate change strategies, action plans, policies and laws.



General audiences

- ✓ Find the ‘human interest’ stories that tell – in a nutshell – how climate change impacts are affecting people and undermining development progress.
- ✓ Back up the human interest with the most authoritative statistics and analysis you can find on the scale of the problem in your country.
- ✓ Find the stories about iconic cultural and historical assets that could be negatively affected by climate change. While important to people’s identity and well-being, these assets are normally also linked to economic development (see Box: Sri Lankan coral reefs at grave risk from climate change, page 13).
- ✓ Look out for the insidious, small-scale impacts of climate change that are weakening people’s resilience over time and affecting their ability to ‘bounce back’ and fulfil their human potential. It may take careful investigation by a research project or a determined reporter to work with communities to document these small-scale ‘invisible’ disasters and tell their stories (see Box: Mapping climate risks in Lima, Peru, page 31).



Where are the greatest climate risks?

Developing countries are particularly vulnerable to the impacts of extreme weather. The Global Climate Risk Index 2017 analysed who suffers most from extreme weather events. The report shows that 'of the ten most affected countries (1996–2015), nine were developing countries in the low income or lower-middle income country groups'.⁵

The geography of poverty, disasters and climate extremes in 2030 shows where the poorest and most climate-vulnerable people are located. It finds that 325 million extremely poor people will be living in the 49 most hazard-prone countries in 2030, the majority in South Asia and sub-Saharan Africa.⁶

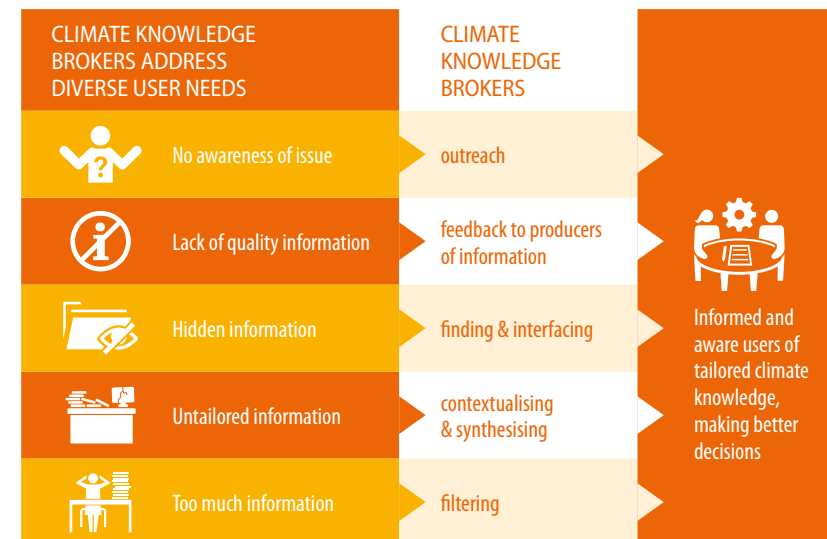


The Climate Knowledge Brokers, Manifesto

The Climate Knowledge Brokers Group is an informal network of climate change researchers and communications professionals who produced a universal set of broad guidelines to support better generation, access to, and use of climate knowledge, following the Paris Agreement.

The Climate Knowledge Brokers' Manifesto* was developed by this group 'with the vision of a world in which people make climate-sensitive decisions, fully informed by the best available climate knowledge'.⁷ It explains that users of climate-related knowledge require access to information that is tailored to their myriad specific circumstances. The manifesto says that climate knowledge brokers – intermediary individuals and organisations – play a key role in filtering, tailoring and crafting information, so that it is relevant to the people who need to use it.

* <https://www.climateknowledgebrokers.net/manifesto>



Sri Lankan coral reefs at grave risk from climate change

In Sri Lanka, warming seas are negatively affecting the country's coral reefs, with implications for the important tourist industry. This message provided a strong wake-up call to government decision-makers. In a short video interview*, Buddika Hemashantha explains how this issue became one of the driving forces for Sri Lanka's low-emission, climate-resilient development strategies.

* <https://ledsgp.org/2018/09/leds-gp-voices-mainstream-low-emission-development/>



Unpacking the local and national impacts

People want to know how climate change is going to affect the places they know, value and depend upon – whether they depend on their environment for jobs and livelihoods, food and energy security, safe and tolerable living conditions, or for recreation, culture, religion and spirituality.

When those places are under threat from climate change – such as heavy rainfall, sea level rise, drought and heat – people want to know what measures they can take to adapt and cope with the impacts.

They ask:

- Are the changes that I'm experiencing in my environment part of something bigger?
- Will there be more changes in the future weather and climate in my area?
- What future changes should I expect in my area, and how soon will they occur?
- How can I cope better now?
- How can I prepare for the future?

And for those in politics, public administration and business:

- How will the weather and climate affect the company, jurisdiction or financial portfolio that I'm responsible for?

In communication terms, it's often possible to say whether extreme weather events experienced today are a part of natural climate variability or whether climate change has played a role (see the section: Linking climate change accurately to extreme weather, page 26). Communicators can also say a lot about common-sense climate change adaptation and disaster preparedness measures that people can take today to deal with current climate conditions (see the section: Framing adaptation, page 15).



What can science tell us about local climate impacts?

In terms of communicating how the future climate will affect your area, and what those changes will be, there is a challenge to match people's information needs to scientific projections of the future climate.

First, climate projections describe plausible future scenarios based on computer models. They are not 'predictions' in the way that weather forecasts are. Communicators need to keep this distinction in mind.

Another challenge is that climate information tends to be produced for relatively large scales: bigger than the neighbourhood, city or district that concerns most individual and organisational decision-makers. Individuals and organisations want climate information that is relevant to them, and often this means information that is quite localised, which tells them how climate change will affect their local community, town, city or district.

As explained by Future Climate for Africa researchers:*

Global climate models (GCMs) are the most widely used method to understand what the climate may be like in the future as a result of emissions of greenhouse gases (global warming). They are run on supercomputers that attempt to simulate the complex atmospheric and oceanic processes that determine the climate conditions we experience. Because they work at a global scale, the resolution of GCM results is typically quite coarse. Each grid cell is roughly 200 × 200 km.

Regional climate models (RCMs) are applied to smaller spatial areas to produce results with greater local detail. However, RCMs still rely on GCMs for input data and therefore are not necessarily more reliable or more accurate.⁸

Nonetheless, most climate models still give enough useful information about future climate trends to help people make decisions today. Local stakeholders have the scope to take the general information provided by climate projections, and consider how trends in temperature and rainfall could affect the natural and built environment in their area.

For example, hydrologists in Jamaica studied, trained and engaged with local communities to understand how heavier rainfall events expected in the future could affect water flows along river courses and, consequently, people, property and livelihoods (see Box: Jamaica's watersheds in a changing climate, page 15).

* http://www.futureclimateafrica.org/wp-content/uploads/2017/09/fcfa_gcm-guide-web.pdf



Jamaica's watersheds in a changing climate

An initiative by the University of the West Indies helped communities to understand the risks of current weather patterns and future climate change in their watersheds. The project team initially trained technical staff from different stakeholder organisations in Jamaica to use a mobile data app to collect disaster data – particularly to document how flooding is affecting communities. They followed this up by training local parish disaster coordinators and community representatives to use the app.

After an initial briefing, participants headed out to the field to practise collecting data on the app, then returned to the lab and uploaded and organised their data on an online platform. Data on the CARISKA platform* involves GIS databases (parish, river, road, flood location, critical infrastructure and hazard maps) as well as different map layers to display. Course participants helped to populate all these data categories.

The outreach initiative has helped communities to understand where flooding risks are currently most acute. When they compare the present-day situation with the projections for future rainfall and sea level rise, they can assess whether extra flood resilience efforts will be needed.⁹



Jamaican inland flooding – iStockphoto

* <http://cariska.mona.uwi.edu/>

Framing the need for climate change adaptation



General audiences

- ✓ Highlight that action on adaptation can prevent the loss of livelihoods, assets, health and well-being – even loss of life – from climate change impacts. Impacts can take the form of both extreme weather events, such as tropical storms, extreme heat and rainfall, and more insidious slow-onset climate impacts, such as sea level rise.
- ✓ Show the power of positive solutions. People don't just want bad news, they want inspiration!



Business and economic-focused audiences

- ✓ Highlight that action on adaptation can create a resilient firm with long-term prospects for business growth and stability.
- ✓ Demonstrate that assessing climate risks to the business demonstrates a robust vision and strategy to shareholders, aimed at ensuring the firm's long-term value. It is about being 'ahead of the curve'.



The triple dividend* of resilience

For climate-related or other disaster risks:

investing in disaster risk management (DRM) has been found to yield real benefits in the short and long term. Reducing disaster-related 'background risk' enables forward-looking planning, long-term capital investments and entrepreneurship.

In addition, and regardless of whether a disaster hits or not, DRM investments generate co-benefits as a result of the 'spill-over' of social, economic and environmental benefits arising from DRM investments themselves. These benefits are in addition to the avoided loss and damage, when a disaster strikes.

Put simply, not investing in DRM is a missed opportunity for social, economic and environmental progress.¹¹

* <https://www.odi.org/tripledividend>



Government and public policy audiences

✓ Show that prevention costs less than the cure – better to invest in adaptation to climate impacts than relief and reconstruction afterwards (see Box below: Inaction on climate change will cost 20 times more than taking adaptation action today).



Inaction on climate change will cost 20 times more than taking adaptation action today

A series of reports published by CDKN and its partners in 2015* – accompanied by films, press releases, a colourful brochure and outreach events – made the case that immediate investments in adaptation action would cost Uganda 1/20th of the price tag than if the government waited 10 years, until 2025, to take action.¹⁰

* <https://cdkn.org/regions/uganda/>



The people of Uganda and the country's main economic sectors, such as agriculture, are highly vulnerable to climate change – *Mountain Partnership*



Responding to climate change does not have to be bad for business in Kenya

In 2014, CDKN supported the Kenya Private Sector Alliance (KEPSA) to communicate climate change to the private sector. The International Institute for Sustainable Development (IISD) did a detailed analysis on the implications of climate change for five Kenyan business sectors – including tourism, agro-processing and manufacturing – and developed briefing notes for KEPSA on 'Climate Change and Your Business'.

The communications products showed that responding to climate change could be good for the bottom line and create opportunities for the private sector, such as new products and services in response to new market demands created by climate change.

Kenyan businesses could take advantage by becoming leaders in sustainability and creating a positive, climate-friendly image for their companies. It was shown how Kenyan firms are producing and distributing energy-efficient products such as improved cooking stoves and efficient lights; sustainable energy technologies such as solar and wind; and mobile phone applications that enable farmers to access insurance products and make successful claims.¹²



Kenya's cut flower industry – *Felix Masi*



Typhoon-resilient housing in Vietnam

In Da Nang, Vietnam, 244 houses were built using 'climate-adapted' design principles developed by a CDKN-supported project, which was led by the Institute for Social and Environmental Transition-International (ISET-International).

In 2013, Typhoon Nari made landfall in Da Nang, putting the houses to a severe test. All 244 houses remained intact while numerous households around them suffered heavy damages. Convinced by the visible evidence of disaster resilience, the Da Nang city government has decided to integrate climate resilience into their building policy.



Flood-resilient housing, Vietnam – Chris Goldberg



All audiences

- ✓ Demonstrate how smart behaviours have taken people out of harm's way. To be highly effective, adaptation interventions are typically quite site-specific, like these (see Box: Bangladesh's resilient migrants, opposite, and Box: Typhoon-resilient housing in Vietnam, left). See whether you can find – close to you – best practice examples of adaptations, which can inspire others.
- ✓ Be clear on communicating how broader government and/or business policies are important in helping or hindering people's ability to develop resilience. 'Bangladesh's resilient migrants' and 'Typhoon-resilient housing' both demonstrate this.
- ✓ See whether best practice examples in a particular sector (see Box: Making Rwanda's tea and coffee sectors climate-resilient, page 23) have a general relevance to your locality or sector. Find best practice examples of climate adaptation happening elsewhere and explore the relevance of the approach to your country or region.
- ✓ Think about whether the climate adaptation action you want people to take has a seasonal element and thus needs to be timed carefully (see Box: Heatwave awareness in India, page 20).
- ✓ It is easier to inspire people with the power of new technology or something else that is very tangible (see Box: Flood-resilient communities in Iquitos, Peru, page 22). It is more difficult to excite people about a process. But many of the most important adaptation interventions are about changing the way agencies and networks of people communicate with each other with weather and climate information. Mass communications are unlikely to work in isolation. For these behaviours to be adopted, more creative techniques are called for, such as including recommendations in people's work plans and job descriptions. It can take creative and more hands-on engagements to persuade stakeholders of the importance of these processes. (See Box: The *Minimum standards*, page 21)



Bangladesh's resilient migrants

In Bangladesh's delta region, the intrusion of sea water from rising sea levels is having a negative impact on farming. It is becoming more difficult for farmers to grow enough to eat, let alone sell their produce for a living. Individuals and families have begun migrating in response to environmental pressure. Some migrate seasonally to jobs in inland cities and send remittances back to their families in the rural areas; others uproot their families more permanently.

In this context, migration can mean many things, and it is not necessarily a disaster: it can be an effective strategy for coping with climate change. The documentary film *Living on the Go** followed researchers into the delta to hear the climate migrants' stories first hand. The film also followed migrants to the cities to uncover some of the gaps in labour rights and protections that they encountered there. The film and the accompanying research have supported public and policy debates on the circumstances of Bangladesh's climate migrants, both nationally and internationally.¹³

*  <https://youtu.be/KgydGjUMPWI>



Flooding in Bangladesh's delta region forces some residents to migrate seasonally or permanently – UK Department for International Development



Heatwave awareness in India

In South Asian cities, temperatures are reaching deadly levels in the hot season and are worsening due to climate change. In 2010, a heat spike in Ahmedabad caused 1 300 excess deaths, including at-risk groups such as outdoor workers, children, the elderly and slum dwellers. CDKN supported the Natural Resources Defense Council (NRDC), the Indian Institute of Public Health-Gandhinagar, and other partners, to work with the Ahmedabad Municipal Corporation and develop an early warning system and Heat Action Plan to protect city residents from extreme heat.*

The local government is rapidly improving the city's public health infrastructure in response to the project's recommendations. For example, ambulance services are now located strategically in places where many calls for help are issued. Hospitals also receive warnings when extreme temperatures are forecast and now have extra ice packs on hand. Drinking water stations and awareness-building materials are distributed throughout the city: they include placards on minibuses and posters in public areas, megaphone announcements and radio broadcasts.

These 'call to action' communications need to peak when heatwaves are on the way, in order to save lives and safeguard health immediately. However, such communications also have an important role in building long-term awareness of the deadly nature of heatwaves.

As ongoing campaigns, these community engagement efforts initiate a mind shift among residents, helping them realise that, while they live in a hot country, excessive heat can be fatal, and that people can take practical steps to protect themselves, their families, neighbours, patients and employees. In this way, the initiative does a lot more than broadcast near-term weather alerts, but also helps city residents switch on to the need for short- and long-term preparedness for heatwaves, and so stop high temperatures from becoming human disasters.



Medical staff are on the front lines of spreading advice to the community – IIPH

*  <https://cdkn.org/2017/04/film-beat-heat/>

 <https://cdkn.org/project/deepening-and-expanding-heat-health-action-in-india/>



The *Minimum standards* for local climate-smart disaster risk reduction (DRR)

In response to the increasing risk of extreme events posed by climate change, the Climate Centre and its collaborators have developed a practical guide for community leaders:*

‘[T]he *Minimum standards for local climate-smart disaster risk reduction* were developed as a practical checklist to help local community leaders and DRR practitioners ensure their risk reduction efforts are climate-smart and contribute to climate change adaptation, meaning that these efforts consider the future risk patterns induced by a changing climate, often including rising uncertainties. The *Minimum standards* are not idealised solutions, but rather practical approaches to implement DRR activities in a way that is achievable by communities with relatively limited external support.’¹⁴

The minimum standards are based on diverse experiences of Red Cross/Red Crescent chapters across many developing countries. Rather than being specific technical solutions to climate change problems, they are all ‘soft’ solutions around knowledge sharing and organisational processes, which make basic good sense anywhere. Wide uptake of the Minimum standards into practice will require peer-to-peer sharing and discussion. Networks of practitioners, such as the Partners for Resilience (<https://www.partnersforresilience.nl/>) and CDKN and their subnational networks, are ideal for supporting this.

Extracted from:

*  <https://climatecentre.org/resources/games/minimum-standards>



Top: community-based aquaculture, Nepal; Bottom: a climate-vulnerable watershed in the Himalaya region – Toby Smith



Flood-resilient communities in Iquitos, Peru

A team of students from Pontificia Catholic University of Peru (PUCP), taking part in the *Ciudades Auto-Sostenibles Amazónicas* (CASA) project, designed and created an innovative community-based, sustainable water management system. The design captures, stores and treats rainwater and inserts it into pre-existing water networks.¹⁵

Recently awarded the first annual prize at the World Architecture Festival, the judges said:

“The design team’s focus was to overcome the challenges around the integration of water and sewage provision in the Peruvian Amazon, where only 31% of the population has access to water, despite living in an area with the highest levels of annual rainfall worldwide. Differing from a traditional water tank system, the PUCP team developed a system of tubes that capture, store and treat rainwater, and serve as a non-bearing curtain wall that occupies less space and can be more easily integrated with existing architecture. The number of tubes can be increased or decreased according to the user’s water needs. The system also incorporates traditional architectural solutions, such as promoting permeable walls and facilitating cross-ventilation, allowing users to address the high temperatures of the Amazon without the need for artificial systems like air conditioning.”¹⁶

The prototype has clearly inspired others, far beyond the local area.



The housing developed for resettled families is adaptive and sustainable – PUCP



Making Rwanda’s tea and coffee sectors climate resilient

By their very nature, tea and coffee crops are vulnerable to climate variability and change. They grow in subtropical to temperate, wet conditions, but the plants can be damaged by unseasonably heavy rains, or harmed by pests and diseases that spread in a changing climate.

The Government of Rwanda has been relying on a major expansion of the country’s tea- and coffee-growing areas to drive future economic and social development. Climate change puts these plans at risk, but there are many wise steps that government and industry leaders can take to protect crops from current climate variability and manage climate-related risks in the future.

In a policy brief and a compelling film, *Adapting Rwanda** the Future Climate for Africa (FCFA) programme documented some of the smart measures that farmers and estate managers can take to safeguard tea and coffee crops and local livelihoods, in the short to medium term.

The brief and film present a pragmatic approach to climate-proof tea and coffee sector plans from the early design stage, through implementation and project finance. The approach, developed by Paul Watkiss and the Tea and Coffee Climate Mainstreaming Project, in association with the Government of Rwanda, holds promise for Rwanda but also offers lessons to tea and coffee regions elsewhere in the world.¹⁷

*  <https://youtu.be/QAI18ao1XiU>



Tea plantations like this one may need to become more climate resilient – World Bank

Framing specific climate change mitigation solutions



General audiences

- ✓ Health and well-being: Highlight how adopting clean energy technologies delivers essential improvements in people's health and quality of life and can help tackle climate change, too, including, but not limited to, reducing air pollution from industry, transport, indoor cooking, diesel generators and more.
- ✓ Saving money: Show how being more energy efficient almost always saves money – or pays back on the investment in the short term – and makes downright economic sense.



Government audiences

- ✓ Demonstrate how investing in reducing emissions today will mean fewer costs, economy-wide, to deal with impacts of climate change in the future.
- ✓ Make the case that policies that reduce reliance on fossil fuels may – depending on national circumstances – also improve a country or region's energy security.
- ✓ Suggest that policies for improved, clean public transit and non-motorised transport can not only lead to better public health – improving people's well-being and reducing the burden on the health sector – but with good management, such policies can also reduce deaths and injuries on the roads, and minimise lost productivity due to traffic congestion. (e.g. See www.ledsgp.org/resources - select 'Benefits' theme)



Business- and economics-focused audiences

- ✓ Competitiveness: Make the case that green jobs will be more enduring, productive and competitive jobs in the long run. Focus on the growth and value opportunities in low-emissions products and services, including materials efficiency (see Box: Framing the benefits of mitigation action for business, opposite).
- ✓ Avoid stranded assets: Highlight that investing in new, fossil, fuel-based developments will lead to 'stranded assets' which lose their long-term viability and value, in the light of worldwide political commitments to tackle climate change and the 'direction of travel' set by the Paris Agreement (see Box: What are stranded assets? page 47).



Framing the benefits of mitigation action for business

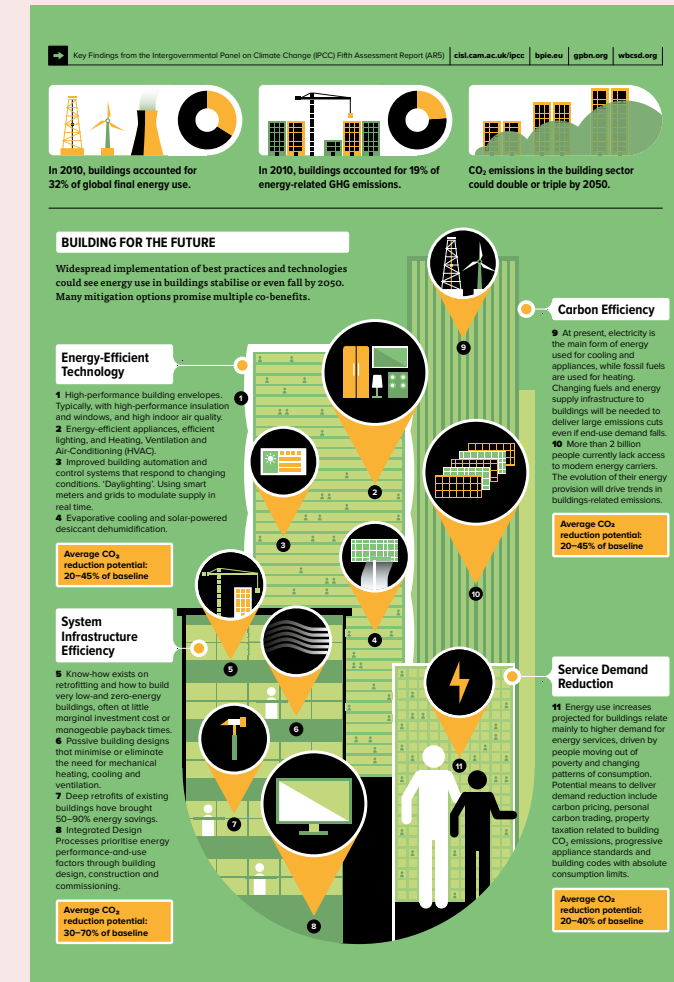
Businesses want to hear about climate change in their language: focused on risks they must manage, and opportunities to shore up their business' development.

One initiative sought to present the science in the IPCC's *Fifth Assessment Report* so that it was in the language of business and presented actionable recommendations for businesses.¹⁸ For example, a briefing note, slide pack and infographic looked at the emissions-savings potential of buildings. It showed how measures to tackle climate change would deliver major benefits for building owners and managers and others in the construction sector:

“The buildings sector offers near-term, highly cost-effective opportunities to curb energy-demand growth rates...In 2010, the world's buildings accounted for 32% of global final energy use and 19% of all greenhouse gas emissions. Widespread implementation of best practices and technologies could see energy use in buildings stabilise or even fall by 2050.

Mitigation options offer multiple co-benefits:

- Higher asset values.
- Lower energy bills.
- More jobs.
- Improved energy security.
- Improved productivity of commercial building occupants.
- Better living and working conditions for owners and tenants.¹⁹



Infographic for business audiences – CISL, WBCSD, BIE, GPN

Linking climate change accurately to extreme weather



Climate change is not always to blame

When an extreme weather event, such as heavy rainfall, a storm surge, heatwave or drought, causes lots of damage, it inevitably hits the news headlines. This opens opportunities to communicate about climate change impacts with the public and with policy-makers. Such events also open the door to speak about rebuilding damaged communities with greater climate resilience in mind. But in spite of the opportunity, there are some potential pitfalls to avoid.

It is important for the sake of credibility and scientific accuracy to be careful how you link climate change and individual extreme events. First, it's not a given that climate change has caused a single, extreme event. Weather varies naturally, even without the influence of human-induced climate change. Climate change refers to changes in patterns of minimum and maximum temperatures and of rainfall, their timing, intensity and duration, and whether and how these patterns are shifting over 30-year timescales.

The good news for climate communicators and public understanding is that climate science is advancing. Scientists are now able to undertake 'attribution analyses' of individual extreme events, which allows them to determine the extent to which an extreme event has been influenced by human-induced climate change (see Box: Extreme event attribution, opposite).

Even without such a fine-grained scientific analysis of an individual extreme weather event, there are other ways that communicators can talk about the increased likelihood of weather and climate extremes in the future, based on climate projections for a region.

For instance, the Intergovernmental Panel on Climate Change's (IPCC) assessments have discussed how certain kinds of extreme events will become more or less likely to happen this century, in certain regions, compared to historic observations. Scientists can now say, for example, that in West Asia, by the end of the 21st century, a high daytime temperature that previously would have been observed only once in 20 years could start to occur every one or two years.²⁰



Extreme event attribution

It is now possible to make quantitative statements about how human-induced climate change influences the likelihood of an extreme weather event. New methodologies, approaches and tools are being developed to improve our understanding of the impact of climate change on the likelihood and intensity of an individual extreme weather event. This emerging field of climate science is referred to as extreme event attribution.*

Scientists use peer-reviewed methods, and a combination of observational data and climate models, to conduct extreme event attribution analyses.

Historical data is used to determine how likely an individual event is based on current climate records. Regional and global climate models are used to simulate worlds with and without climate change. These models allow scientists to isolate the climate change effect and can show where this has changed.

Scientists can now make statements such as this one on the Kenyan drought of 2016-17:** 'Trends indicated that the higher-than-usual temperatures could be the result of human-induced climate change, but that climate change did not have a strong influence on the lack of rainfall.'²¹

*  <https://cdkn.org/resource/attributing-extreme-weather-events>

**  <https://www.cdkn.org/climaterisk>



'Attributing extreme weather events' – CDKN animation

Partnerships for impact

Tackling climate change calls for bridging the science-policy-civil society gap. Effective communications and engagements contextualise people's lived experiences of climate change with scientific findings and analysis, so that they can make sense of the events around them. Effective engagements help scientists to ground-truth their findings with people's experiences and – even more fundamentally – steer scientists' research toward answering the most pressing climate-related questions that shape people's lives. And finally, effective engagements catalyse action from the grassroots community level up to the policy level, helping decision-makers to understand where new or updated policies are needed, whether policies are being implemented well, or where policies are working at cross-purposes to local innovation.

Crowd-sourcing information to support climate action

Informing the community, and engaging with them, helps to capture and compile their relevant knowledge to address climate challenges. This often scattered or seemingly irrelevant information can provide the basis for the government's strategy for climate compatible development. To successfully extract this knowledge, it is vital to engage the community in a dialogue, through events, workshops and information campaigns. In Belize, reliable data and information was scattered and difficult to acquire. WWF-Mesoamerica used locally available knowledge and data from socio-economic and ecological research, as well as from communities living in the cities and towns, to better understand how the interests of tourism can be reconciled with the protection of fragile coastal marine ecosystems. A key success of the initiative was the Government of Belize's adoption of an integrated coastal zone management plan in February 2016.²²

In Madurai, India, art and cultural events, as well as water walks initiated by the Development of Humane Action (DHAN) Foundation help the community learn more about the links between the river and their city. The water walks also provide people with a platform to share their grievances, knowledge and solutions with the local government for reviving the river, which had become poorly managed and more liable to flooding in a changing climate (see Box: Water walks in Madurai, India, opposite).

Informing the community, and engaging with them, helps to capture and compile their relevant knowledge to address climate challenges.



Water walks in Madurai, India

The city of Madurai in Tamil Nadu, southern India, is struggling to adapt to a complicated set of development risks, made worse by climate change.*

Madurai developed as a collection of villages on the banks between the main river Vaigai and the minor river Kiruthumal. As the population grew and the city developed, the river served the needs of the inhabitants for bathing, washing and agriculture, as well as cultural life and religious ritual. It also served the important role of high-quality groundwater recharge and as a flood carrier.

Until the 1970s, the Kiruthumal River flowed full throughout the entire year. With a bed width of between 20 to 50 feet, it supplied an intricate network of water tanks and canals. The remnants of the old villages can be seen along the river, and many of the historically important temples were surrounded by wide and full water tanks.

However, the pattern of development in Madurai during the late 20th and 21st century has significantly affected the quality of the Kiruthumal River and its ability to serve the needs of inhabitants. This essential 'blue-green infrastructure' is now severely disrupted by urban development encroaching onto the river, blocking of channels and the concreting of the river bed.

A toxic mix of plastic and industrial waste clogs the flow and chokes cattle to death, and many of the historically and functionally important tanks are now completely dry. Yet families, often housed in informal settlements, still depend on the river for agriculture, animal husbandry, drinking water and sanitation. Their vulnerability is significantly multiplied by their dependence on the river, and they are disproportionately impacted by its degradation.

The Future Proofing Cities India project, led by Atkins with the Development Planning Unit of the University College London, the Indian Institute of Human Settlement (IIHS) and the DHAN Foundation, examined rapid urban growth in Madurai with the aim of developing strategies for sustainable development and resource scarcities, while reducing multi-dimensional poverty.

The project began with a diagnostic of the city's risks and vulnerabilities to climate change and then involved an action planning phase: moving beyond expert-dominated top-down solutions, towards co-production of knowledge and solutions with a wide range of local stakeholders.

During fieldwork, an innovative new way of understanding and finding solutions to the complicated risks facing the river emerged. The fieldwork included a series of conducted tours along the river corridor. More than 50 participants, including journalists, officials, academics and activists toured 15 km of the corridor. These ‘water walks’ brought these ‘decision-makers’ face to face with life as it is lived close to the river: how sewage frequently contaminates the drinking water; how the foul smell makes houses unpleasant for residents and visitors; how residents often need to wade through waste water during flooding incidents; the prevalence of diseases such as diarrhoea and skin infection, and the infestation of mosquitoes, fleas, rodents and snakes, as well as the systemic causes of the degradation.

By bringing people from the community and institutions together to focus on the lived experience of the degraded river corridor, the water walk rapidly became not just a means of documenting impacts and vulnerability, but also a forum for interaction and deliberation. It was true action–planning in action. Ideas generated during the water walk were then explored in the multi-stakeholder workshops that followed. The water walk, initiated by the project, has already left an enduring impact.

An evocative film on the state of the river and its impact on inhabitants was also created by the architect Balaji. This artistic response to the river as experienced during the water walk further stimulated creative solutions to the current state of the river, building resilience for those who live in the corridor.



Residents of Madurai discuss ways to clean up the river and restore green-blue infrastructure during a water walk – DHAN Foundation

This led to the emergence of collective action-planning, bringing together diverse viewpoints and lived realities and generating an awareness of the interactions between the disrupted water system, the poor sewage system, the lack of effective waste collection and disposal, the water scarcity, and flooding.

The water walks have been a catalyst for the growing social movement in Madurai, and they are now a regular occurrence. The water walks, and the problems that are documented, are frequently reported in the local media as part of the growing river restoration advocacy campaign. There are a growing number of social groups, who gather to clean up and protect water tanks and channels, such as the ‘Wake up Madurai’, a volunteer collective who work selflessly to help conserve water bodies. ²³

Extracted from: ‘Water walks in Madurai’, authored by Gogoi²³, E. (2014).

*  <https://cdkn.org/2014/02/feature-water-walks-in-madurai>

Partnering with community members through citizen science

Thanks to advances in technology – and the falling costs of information technology – new opportunities now exist for crowd-sourcing information about the impacts of climate change. Often called ‘citizen science’, there is the opportunity to mobilise members of the public to help identify climate risks and spur democratic debate about adaptation and mitigation strategies.




Mapping climate risks in Lima, Peru

According to the action research team that pioneered the cLIMA sin Riesgo (Climate without risk) project*, collaborative mapping is a vital tool to capture spatially the natural and man-made conditions that shape people’s different aspects of vulnerability. The project team explains that they have worked with public agencies in Lima’s low-income neighbourhoods and directly with many residents, to undertake the collection and analysis of spatialised quantitative and qualitative data, its visualisation and communication in an accessible way, as well as the development of evidence-based tools for discussion at policy level. Additionally, mapping provides a basis to enable the design of co-produced interventions, contributing to the creation of synergies between climate compatible development, the management of the urban territory and the prevention of risk ²⁴.



Researcher monitors community’s climate risks – cLIMA sin Riesgo project

Among these tools, there are maps created with the help of drones; 3D representations of the areas studied; methods for community-led data gathering and monitoring using applications in smartphones, as well as visualising that information online. Having reassessed the contributions of this research each year, and created a consolidated legacy from the experience in Lima through cLIMA sin Riesgo, these tools have been deployed in Freetown in Sierra Leone and also in Karonga in Malawi under a project entitled Urban ARK. The aim is to continue consolidating and expanding the application of mapping tools and processes that have the capacity to change lives.

*  www.climasinriesgo.net



Citizen journalism in Amazonia

InfoAmazonia* provides timely news and reports on the endangered Amazon region. Using Google Earth software, the project has created an interactive map of the Amazon basin that contains layers of information combining satellite images, news, information and multimedia reports about climate and development from both professional and citizen journalists. The map features stories and information that have helped the public and policy advocacy groups accurately report and respond to the region's need to combat forest fires, deforestation, adapt to environmental change and build a sustainable economy. InfoAmazonia actively encourages the public to submit data and stories through the GeoJournalism platform <https://n.openearth.net/#submit>.

* www.infoamazonia.org/en



InfoAmazonia platform



Who can access information and communication technologies?

Information and communication technologies (ICTs) have great potential to involve citizens in pinpointing climate change-related problems and solutions, from data-gathering projects and citizen reporting to digital democracy initiatives, where governments invite public consultation on development plans via digital channels.

However, when embarking on a major data-gathering or consultative campaign, it pays to consider who has access to ICTs and which voices may be privileged through such a process. A recent report from the Web Foundation for the United Nations²⁵ reveals that the rate of growth in internet access has slowed more than expected in recent years, and that rural populations and women are considerably underserved, compared to city dwellers and men.

For this reason, communications initiatives in developing countries that rely on ICTs need to be carefully planned. Depending on the project's scope and initiative, you may need to make extra efforts to empower and involve under-represented groups.

Turning up the volume of voices that haven't been heard

The initiative to involve communities in mapping urban climate risks in Lima, Peru, as in the earlier case study, is one example of putting ICT into the hands of local people to help them articulate and share their experiences of climate risk better, and contribute meaningfully to possible policy solutions.

Other approaches to amplifying the voices of under-represented groups include:

- creating radio broadcast slots for teenage and young women and other groups who are under-represented in public debates, in rural India (see Box: Radio programme gives a voice to the most vulnerable, page 36); and
- training rural women in the use of video cameras so that they can tell their stories directly to camera (see Box: The missing women in India's climate action plans, overleaf).

As well as such initiatives that intentionally provide a platform for under-represented voices, there are also opportunities to simply evaluate different groups' access to climate information and increase their access in the short term.

In Nepal, Local Initiatives for Biodiversity, Research and Development (LI-BIRD) engaged with key local institutions, such as farmers' groups and cooperatives, local forestry groups, women's groups and Dalit (lower caste) groups, to promote climate-smart agriculture approaches.²⁶ They used these partnerships to communicate how climate-smart agriculture can involve less labour-intensive farming techniques and deliver more reliable crops than conventional approaches. Women and Dalits are now adopting these measures and improving their economic status.

A project to communicate weather and climate data in Namibia found that women were disadvantaged by their low literacy rates: they couldn't read the information distributed by mobile app. As a result, a CDKN-backed project supported the app developer to create a voice-recognition interface. The long-term solution is surely better access to education for girls and women, but this short-term solution is helping women farmers already.²⁷

Innovative forms of partnership and communication can empower women, and other socially excluded groups, to make their voices heard in broader climate-compatible development processes. It can also empower them to access services (e.g. through ICTs) that were previously unavailable.



The missing women in India's climate action plans

India's economy is predominantly agrarian and increasingly female dominated. 80% of all economically active women are employed by the agricultural sector. As men are migrating to urban areas for employment opportunities, partly as farming is now a riskier business, the women are staying back and keeping the homes and farms afloat...

According to the government's own assessment, the agriculture sector is facing serious risks due to the current impacts of climate change: increasing temperatures, erratic rainfall patterns and a higher number and severity of floods, droughts and cyclones. A number of studies project that, unless India adapts to the impacts of climate change, there is a probability of 10-40% loss in crop production in India by 2080-2100 due to global warming. Economic growth, food security and the fight against poverty stand to lose.

Women are at the front line of these impacts, not only due to their involvement in the agriculture sector, but also because they face the burden of the household tasks such as fetching water, fuel, wood and fodder.



Agricultural work in rural India – Elizabeth Gogoi

CDKN commissioned a film from Indian filmmaker Krishnendu Bose to document women's concerns and opportunities to incorporate climate resilience into farming practice – and especially to investigate how State Climate Change Action Plans could be more 'gender aware'.

Instead of simply recording rural women, Dr Bose and his team at Earthrights embarked on a project to train women farmers in the use of the video equipment and record their own views. They gained the trust of a group of local women in the hill state of Uttarakhand, and trained them in basic filmmaking techniques.

The Nayi women then told their story about how women can be leaders in the fight against climate change.

The women have benefited from a state government initiative to set up *Van Panchayats* (forest community governments), which bring together forest department officers and villages to jointly manage village forests. A third of the members of the executive committee, and half of the general body members, are mandated to be women.

'In 2005, after the policy came in, we together with the *panchayat* (village government) and *sarpanch* (village leaders) made our own rules and regulations...cutting grass would be 500 INR fine (GBP 5)...chopping green leaves, 100 INR fine (GBP 1)...and the defaulting person deposits her sickle, and we auction it. This way, we women protected our forest.'

The women have also formed a cooperative, taking knowledge from local NGOs, and gather dry leaves to use for organic farming. The products are then shared within the community, contributing to food security. At the same time, they are bringing to life traditional farming practices as they have seen how commercial farming has been affected by climate change.

'The 2005 rule said that a woman could become the *sarpanch* (village leader). The men protested against this. But, a woman *sarpanch* was elected. This is good for the forest. And we women benefit from it. Now even men have started supporting us.'

Their message to the government is that this is just the first step. For true empowerment, other power hierarchies must be tackled, such as providing women with land ownership. Enhancing such capacities will help women, as well as the rest of their communities, cope and better adapt to climate change and fight environmental degradation.

Extracted from: Gogoi, E. (2015).²⁸



Marketing produce, India – Elizabeth Gogoi

These strong, proactive women are taking charge of their community.



Radio programme gives a voice to the most vulnerable

“In some of the most arid parts of India, isolated communities that depend directly on their immediate environment for food and livelihoods are experiencing the worst impacts of climate change. Farmers are observing long-term changes in their local climate patterns, winter and summer weather has become more erratic, and extreme events, such as flash floods and droughts, are more frequent and intense. Although local communities are well aware of these changes, they see them as either aberrations or consequences of land use changes and environmental degradation.”

A Sustainable Environment and Ecological Development Society (SEEDS)-CDKN project looked at what kinds of local multi-stakeholder platforms could stimulate action on disaster risk reduction and adaptation, both within and outside of their communities.



Weather station results reported by community in Leh, India – SEEDS India

“In Barmer, Rajasthan, SEEDS helped start a community radio programme with a local NGO called Unnati. Malnutrition, illiteracy, child marriage and abuse are very high among adolescent girls in western Rajasthan, where the Human Development Index for women and female children is among the lowest in the world. Unnati trained a group of local adolescent girls from a highly vulnerable and marginalised community to develop, edit and broadcast 10 radio programmes of 15 minutes each on climate change and disaster-related issues facing western Rajasthan. The twice-weekly programme covered a range of topics on climate change, disasters, local adaptation and risk-reduction solutions, and government policies, and included expert interviews and some cultural entertainment. The radio programmes were broadcast in 2013-14. A huge success, the broadcasts helped communities express their views on development decision-making and connect with policy-makers through interviews. Also, they brought cutting-edge research outputs and information directly from experts to local communities, and vice-versa.”

Extracted from: Sharma, S., Chauhan, S. and Kumar, S. (2014).²⁹

Mainstreaming climate messages

Climate change needs everyone’s effort to tackle its effects and to limit global warming. That means working with partners in the ‘mainstream’, teaming up with organisations, influential individual bloggers and spokespeople who are willing to talk about climate impacts and solutions and who are working outside environmental organisations.

A project to uncover the ingredients for successful local climate action, undertaken by CDKN and ICLEI, found that ‘going beyond the environmental arena or public sphere to find partners often enriches the process of identifying appropriate solutions to climate-related challenges’³⁰ (see Box: Chamber of Commerce supports climate initiative in Pakistan’s manufacturing centre, right).



Sample ideas for getting into the mainstream

A few of the tools and tactics CDKN has used successfully (there are many more) include:

- advertorials and editorials on the benefits of investing in climate change adaptation and low-carbon economic growth in national news magazines in Colombia and Peru;
- write-shops with district planning officials in Indonesia to co-produce policy briefs on the business case for developing renewable energy; and
- case studies for business school students in Tamil Nadu, India.



Chamber of Commerce supports climate initiative in Pakistan’s manufacturing centre

In the burgeoning industrial centre of Sialkot, Pakistan, climate champions Ecofys and PITCO found a strong partner in the Sialkot Chamber of Commerce and Industry, which gave them an entry point to its membership of industry associations. This partnership allowed them to communicate the potential of renewable energy sources to representatives of most small and medium companies in the area. The chamber agreed to proceed with developing photovoltaic solar collectors, which will be a cost-efficient, reliable and very low carbon option for ensuring regular power supply, compared to diesel alternatives.³¹



Medium-sized business in Pakistan – Shutterstock

Common myths and lazy story 'angles' on climate change – like the discredited notion that there is a trade-off between jobs and the environment – should not have a place in 21st century climate change debates.

Exposing new angles through investigative journalism

Journalists and their editors and producers have a vital role to play in raising public awareness on climate change and engendering well-informed debate and urgent action.

Some of the challenges to good reporting on climate change in Africa, Asia and Latin America include:

- Commercial pressures: Some editors fear that climate change stories won't sell papers or sell advertising. The onus is on reporters to find human interest and development angles (see the section on Getting the climate change framing right, pages 10–27) that convince editors and audiences that climate change really is a story about people's lives and well-being – and about sustainable economies.³²
- The perceived complexity of climate change as a subject: Especially 5 or 10 years ago, and earlier, climate change communications from the IPCC and other scientific bodies were dense and hard to follow. This has improved in recent years, and many more press statements, headline documents, videos and slides have become available from the IPCC that are accessible to laypeople – while also traceable back to their painstakingly referenced scientific texts and proofs, for those who want to check.
- The perception that climate change is an issue driven by interests in the Global North³³: The plain injustice of the fact that historic greenhouse gas emissions were created overwhelmingly in industrialised countries of the North makes some audiences in the Global South 'shut off' when the topic is raised. The way to move the conversation on is to refer to the overwhelming, global, political consensus that the world must now tackle climate change – but rather more appealingly for cities and countries – to stress the competitiveness of economies that shed polluting fossil fuels and restructure economies toward low-carbon (eventually zero-carbon) emissions – while creating green jobs and compensating low-income citizens who will lose out from the shift.

Often, it takes in-the-field reporting for journalists to be able to uncover the compelling human interest that will illuminate a climate change story. CDKN, Future Climate for Africa, and other organisations have provided small targeted grants to journalists to enable them to travel and tell such climate stories. (See Boxes, right).



Investigative journalism in Latin America

CDKN Latin America ran a project to increase the capacity of investigative journalists in the region to cover climate-compatible development issues. Investigative journalists from Colombia, Ecuador, Peru, Bolivia and Brazil were trained on key aspects of development and climate change, promoting a deeper understanding that they could apply to their work.

The Institute of Press and Society (IPYS) – a well-established regional organisation – ran training workshops and supplementary webinars, while CDKN established a Journalistic Fund to which participants could bid, competitively, for money to support their journalistic investigations.

As a result of the Journalistic Fund, 11 investigations were completed and published. Outlets included: *Vistazo* magazine (Ecuador), *El Comercio* and *Poder* magazines (Peru), *Semana* magazine (Colombia), *Pagina Siete* (Bolivia) and *Estadão* (Brazil). A compilation of all the pieces was also published and distributed (*Desarrollo y Cambio Climático: Reportes Periodísticos desde América Latina*).



The informal network of journalists said they learned well from each other as well as being supported by trainers. This exchange was followed by training on the international climate negotiations in 2014 and further training, in 2016, to explain the significance of the Paris Agreement and its related national climate plans.³⁴

Amazonia region – SPDA



Journalist training in Southern Africa

CDKN and the Republic of South Africa's Department of Environmental Affairs trained journalists from Zimbabwe, Mozambique, Zambia, Malawi and South Africa on the key messages from the IPCC's *Fifth Assessment Report* (AR5), and a government official provided South Africa's official response. This filled an important gap.

'There are a lack of resources and funding to adequately pursue in-depth stories on climate change,' said organiser Claire Mathieson, noting that small, targeted amounts of funding can make all the difference in enabling journalists to get out and cover stories that would not happen otherwise.

While the IPCC's *Fifth Assessment Report* was not necessarily 'news' – as it was published months prior to the training and outreach events – the speakers could be quoted and their views were story-worthy and often heard for the first time. Journalists found feel-good stories to be better received than doom and gloom pieces. Sharing story ideas on these angles was invaluable.³⁵



Visualising climate change

Data visualisation techniques can present the impacts of climate change in scientifically accurate and compelling ways that transform awareness and can even catalyse behaviour change.

Showing the impacts of climate change visually through mapping can be very powerful and can be a decisive factor in bringing some stakeholders to the table at all – as scientists found in Cartagena, Colombia (see Box: Sea level rise in Cartagena, Colombia, right) when they were trying to catch the interest of businesses. Using data visualisation to convey the steep rise in average global temperatures is difficult but when done accurately and masterfully, can electrify audiences (see Box: The climate spiral, page 43).



Sea level rise in Cartagena, Colombia

The story of how diverse groups worked together in the coastal city of Cartagena, Colombia, to come up with Latin America's first climate change adaptation plan is a story of 'unusual partnerships' (see the section on Mainstreaming climate messages pages 37–39). It's also a story about the power of maps and data visualisations to coalesce conversations on a city's future.

Cartagena's historic centre is a UNESCO World Heritage Site and, as well as being an important source of pride and beauty to Colombians, it generates millions of dollars annually in tourism revenue. The coastal city also has an economically important working port. The city is, however, highly exposed to climate change, having already felt the impacts of storm surges, coastal flooding, erosion and sea water intrusion, with the threat of more to come as a result of a changing climate.

CDKN formed an alliance with marine and coastal research institution INVEMAR, the Cartagena city authority, Chamber of Commerce and other interest groups. The team invested heavily in cultivating buy-in among civil servants – they out-stay politicians – and made the case to businesses for taking adaptation action to boost their long-term competitiveness. One of the most important framings used in communications to get business on board was to highlight the issue of Cartagena's future competitiveness: if companies simply chose to ignore the rising seas and associated risks, they would reduce their future value. One of the most vital tools in bolstering this case were the data visualisations and maps of near-term sea level rise, which scientists at INVEMAR were able to make, based on historic climate records and future climate projections.³⁶

Later, the CDKN team commissioned drone footage of the city for the film *Cartagena: Thriving in a changing climate**, producing breathtaking views of the World Heritage Site as well as Cartagena's low-income neighbourhoods and industrial areas, all of which are exposed to climate hazards. This different perspective on the city has also provided an important tool for raising awareness and starting public conversations on issues and solutions.

*  https://youtu.be/ppy_Q72LDDQ

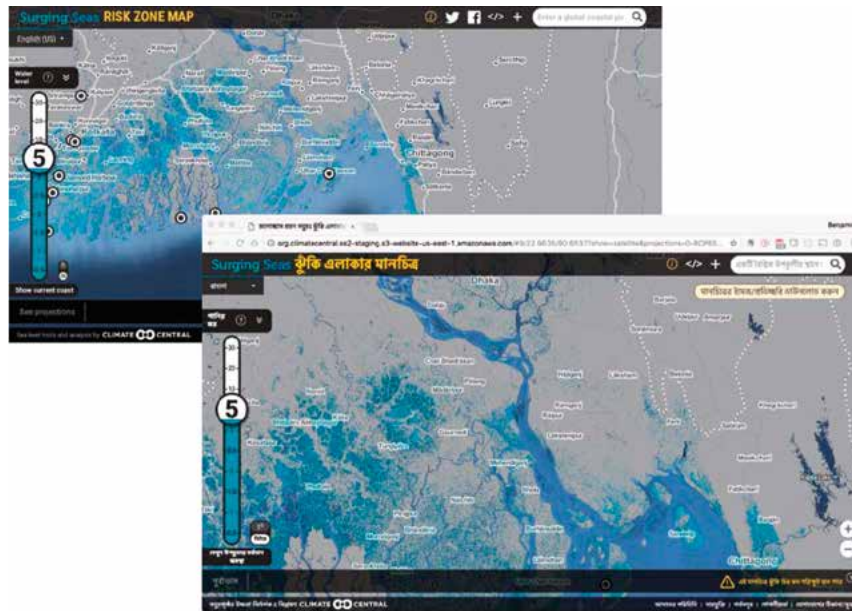


Map showing areas of Cartagena to be impacted by sea level rise by mid-century – INVEMAR



Bangladesh: The Surging Seas tool

The Surging Seas tool helps communities, planners and leaders better understand sea level rise and coastal flood risks. It was adapted for use in Bangladesh and translated into Bengali to make it more accessible.* A workshop in Dhaka brought together the technical team that had produced Surging Seas, to train a wide range of stakeholders from government and NGOs. They exchanged ideas, local stakeholders learned how to use the tool, and together they identified ways to improve the tool in the future.



Surging Seas Tool shows extent of coastal flooding – World Weather Attribution Initiative and CDKN

The technical team also produced an ‘exposure report’, (see image, opposite) which estimates the amount of population and land that would be at risk of inundation in the period 2050-2100 under worst-case and best-case greenhouse gas emissions scenarios. The figures on the left, at top and bottom, describe the range of outcomes for sea level rise and flooding under a best-case scenario (RCP2.6) under which global emissions are cut massively and immediately; and the figures on the right, at top and bottom, describe a range of outcomes for sea level rise and flooding under a worse-case scenario (RCP8.5) under which global emissions keep increasing at current rates.

* <https://cdkn.org/resource/bangladesh-surging-sea/>

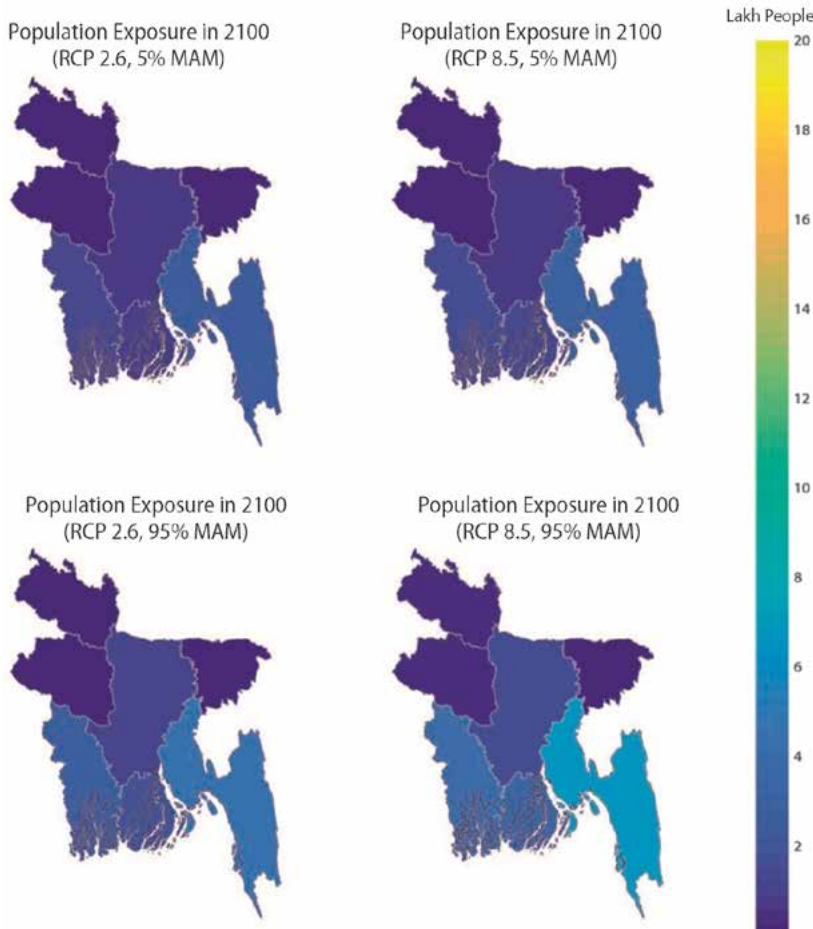


The climate spiral

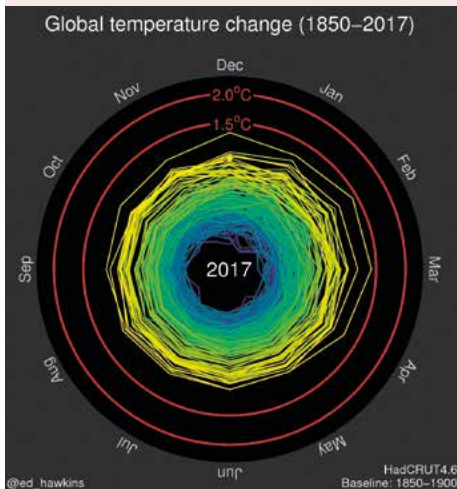
The animated climate spiral is a different way to show the historically observed changes, and it resonates with a broad audience. The original version, showing global average temperature change from the year 1850 to now, quickly went viral, being seen millions of times on Facebook and Twitter. A version was even used in the opening ceremony of the Rio Olympics!*

* <http://www.climate-lab-book.ac.uk/spirals/>

Lowest (5th percentile, top) and highest (95th percentile, bottom) likely number of people currently living under the projected high tide line in 2100 in Bangladesh divisions, under emissions scenarios RCP 2.6 (large, immediate cuts to global emissions) and RCP 8.5 (global emissions continue to rise unabated).



Exposure of Bangladesh's population to sea level rise under different climate scenarios – World Weather Attribution Initiative and CDKN



Global average temperature change from 1850-2017 – Climate Lab

Engaging with public policy and its implementation

Appealing across government

Climate change is a particularly thorny issue for policy design and implementation because its impacts and solutions affect so many aspects of society and the economy. In governmental terms, climate solutions call for coordination across ministries and departments, and among national, regional and local administrations. For examples of 'across government' approaches to championing climate policy, see Box: A cross-government climate campaign in Kenya (right). Equally, policy-focused climate communications need to take into account 'vertical integration': harmony from high-level policy support all the way to local implementation – or, vice versa, from local innovation all the way up to high-level support.



A cross-government climate campaign in Kenya

“A major lesson learned from the process of developing Kenya’s Climate Change Framework Policy and Bill is the importance of stakeholder involvement and engagement. Governments often focus on stakeholders from outside government at the expense of those within government. The Kenyan experience underlines the importance of bringing on board both categories of stakeholders. Within government, the involvement of Parliament, county governments, and key national government ministries such as the National Treasury, and Devolution and Planning, have proved invaluable. It is also informative that membership of the National Climate Change Council cuts across the whole spectrum of stakeholders, with representation from both government and non-state actors.”

– Stephen King’uyu,
Coordinator of Kenya’s National Climate Change Action Plan*

* <https://www.ledsgp.org/2016/06/kenya-spearheading-low-emissions-development-africa>

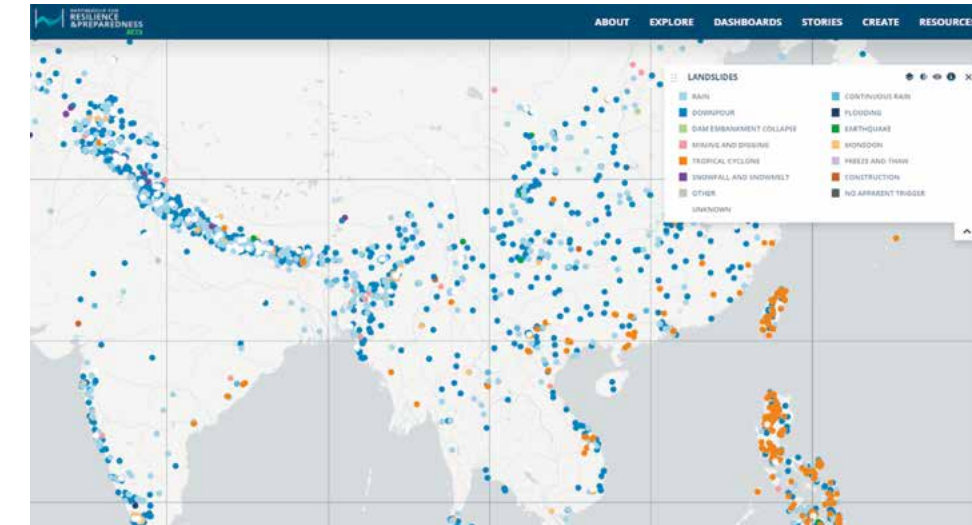


Stephen King’uyu, Government of Kenya – LEDSGP



A boost for Madhya Pradesh’s State Action Plan on Climate Change

Madhya Pradesh was one of the first Indian states to develop a State Climate Change Action Plan (2012). Climate leaders in the Madhya Pradesh state government soon realised that one of the greatest challenges to implementing the Action Plan was civil servants’ low awareness of and commitment to it. To remedy the situation, the state government and CDKN commissioned policy briefs that talked about the relevance of the Action Plan for different economic sectors, and presented the messages in an attractive, easy-to-read format.



Producing a Madhya Pradesh climate change dashboard is one of the most recent knowledge initiatives – this wider snapshot shows climate hazards and vulnerabilities across Asia – Prepdata

One briefing note summarises the entire Action Plan; nine further notes discuss its application to specific sectors (forests, water, health, etc); and one addresses cross-cutting issues, such as gender and technology development.³⁷ A science brief summarises the state’s key vulnerabilities to climate change. As part of a process of engaging local stakeholders to implement the Action Plan, the project also invited local and national experts to write supporting articles, which were published in a special Compendium. The partners distributed the materials widely in government departments: www.climatechange.mp.gov.in

More recently, new alliances have enabled the state government to offer further tailored information to decision-makers in Madhya Pradesh. For example, the “Partnership for Resilience and Preparedness” (www.prepdata.org) programme has developed a Madhya Pradesh online dashboard. This interactive dashboard encourages government departments, research and academic institutes to explore robust scientific information on climate impacts and vulnerabilities – all of which can support development planning and practice.

Engaging with opposing views

Instigating climate protection measures intentionally is one thing. Undoing polluting policies or the financial incentives for polluting behaviour is another. Most governments are still subscribed to tax, subsidy, and other fiscal measures, as well as state investments, which actively support polluting developments such as coal-fired power stations and diesel-fuelled energy access. Strategically, campaigns to mobilise cross-government support for climate action need to take aim at highlighting and dismantling harmful policies, as well as promoting helpful ones.



Frame emissions reductions in terms of both poverty and climate change solutions

But, a word of caution: withdrawing fossil fuels can have immediate public benefits, such as cleaner air, but could also cause economic damage to people on low incomes and living in poverty, whose energy access and livelihoods depend on fossil fuels and who cannot afford the alternatives. There are many proven, effective measures that can protect society's poorest from the withdrawal of unsustainable fossil fuels and help them make the switch to more sustainable alternatives. So, any communication campaigns about decarbonising the economy and stamping out fossil fuel use need to be very well informed by an analysis of who wins and who loses from climate-smart measures, and what steps governments can take to protect the poorest.



Communicating the 'public goods' and the 'private goods' created by cutting emissions

Taking on fossil fuel interests and the forces behind destructive deforestation and land use changes that drive climate change can involve communicating about the 'public bads' – as opposed to 'public goods' – created locally and nationally by greenhouse gas emissions, for example:

- Emissions data from polluting sectors and industries: This is typically collected and communicated by governments to the UNFCCC as part of their greenhouse gas inventories and so becomes a matter of public record, although the robustness and reliability of the data for many developing countries still needs to be much improved.
- Evidence on the broader public health costs and public harms caused by climate-related emissions: For example, where researchers have gathered data on excess illness and death caused by air pollution.

However, another growing area of evidence is around the financial benefits, to governments, companies and entire industry sectors, of divesting from fossil fuels. The increasingly prominent financial debate around 'stranded assets' talks to investors', businesses' and governments' economic bottom line. It is not just a conversation of the industrialised world, either. Given the global nature of financial capital, the 'stranded asset' debate has far-reaching ramifications across developing countries. A recent initiative of Indian and UK researchers (see Box: India's stranded assets, page 48) shows how the Government of India is going to lengths to prop up coal power, working against the many forces that are otherwise 'stranding' these assets – but for how long?



What are stranded assets?

A landmark 2013 report by the Carbon Tracker Initiative and Grantham Institute of the London School of Economics called *Wasted capital and stranded assets* found that, the previous year, US\$674 billion had been invested in essentially 'unburnable' carbon³⁸. A few years later, following the signature Paris Agreement, a study in *Nature* estimated that a third of oil reserves, half of gas reserves and more than 80% of known coal reserves should remain unused in order to meet global temperature targets under the Paris Agreement. Sini Matikainen of Grantham explains: 'The value of "stranded assets" might not be fully reflected in the value of companies that extract, distribute, or rely heavily on fossil fuels, which could result in a sudden drop if this risk were priced in.'

Other resources for communicators to understand the concept of stranded assets, and to use the terminology appropriately, include the Carbon Tracker guide.*

*  <https://www.carbontracker.org/terms/stranded-assets/>



India's stranded assets

“In 2015, under the UNFCCC's Paris Agreement, governments committed to keeping global temperature increases to 2°C and to pursue efforts towards a more ambitious 1.5°C target. Global decarbonisation efforts may increase the risk of asset stranding – that is, loss of value, revenue or return on investment – in fossil fuel production assets. This is particularly relevant to coal assets, as it is estimated that phasing out inefficient coal power plants alone could contribute to halving power sector emissions globally.*”

A paper by ODI, Global Subsidies Initiative and Vasudha Foundation develops a broad framework for understanding the links between government interventions and the wider drivers of asset stranding and applies this to India's coal power sector as a first case study. This approach can inform investigations and communications into fossil fuel investments in other countries. They find that five major current and future factors are driving India's coal power generation industry toward being 'stranded assets':

- the cost competitiveness of renewable energy alternatives;
- financial distress in distribution companies;
- air pollution regulation;
- water scarcity; and
- coal shortages.

“A number of these drivers are already significantly impacting India's power sector. 40 gigawatts of commissioned and under-construction coal-fired power capacity are already 'stressed', which presents an ongoing systemic financial risk for the government and the financial system dominated by the Indian public sector. The Government of India is intervening in coal power – across the value chain, from coal mining to power production and distribution – in several ways...”

These include financial support to the tune of billions of dollars' worth of public finance and national subsidies. In so doing, the government is delaying the influence of market signals and delaying the costs to coal power project developers and investors of the environmental and wider climate impacts of their activities.

“Experts find similar patterns of government intervention in the coal power value chain elsewhere – e.g. European Union, United States, China, South Africa, Indonesia and South Korea. It will be critical for governments in these countries and regions to carefully manage their interventions in the power sector to avoid fossil fuel subsidies and support their wider commitment to energy access, and a transition to low-carbon energy sources.”³⁹

Extracted and adapted from: Worrall, L., Whitely, S., Garg, V., Krishnaswamy, S. and Beaton, C. (2018).

* <https://www.odi.org/publications/11185-india-s-stranded-assets-how-government-interventions-are-propping-coal-power>

Five major drivers of stranded assets in India's coal power sector



Cost competitiveness of renewable energy



Financial distress in power distribution companies



Air pollution regulation



Water scarcity



Coal shortages

Government interventions are undermining these signals and giving a lifeline to coal

The power of witness

Testimonials from climate-affected people, as well as people on the forefront of solutions, are a powerful storytelling technique to illuminate climate impacts, risks and management techniques and to introduce audiences to practical management tools. Video-based testimonials can be an important tool to substitute for face-to-face meetings. See, for example, the experiences documented in the Box: Bangladesh's resilient migrants (page 19), which were screened for, and discussed with, policy-makers.

Witness trips – where affordable – are also important ways of breaking open new conversations with policy-makers. Whether these are based around climate-related disasters and the slow-onset impacts of climate change, or around positive solutions, witness trips can prove pivotal in unlocking new understanding, commitments and actions (see Box: What Nigeria learned from Ghana, right).



What Nigeria learned from Ghana

In 2018, a team of Nigerian experts on mini-grids (small electricity grids that are independent from the main grid and can be powered by renewable energy) travelled to Ghana to better understand how Ghana is scaling up its low-carbon mini-grids programme.⁴⁰

Victor Osu, of Nigeria's Rural Electrification Authority, said:

“When we started this project, there were three key questions we wanted to answer about the mini-grids power system in Ghana:

- How are the enabling policies regulated?
- What is the implementation methodology used?
- How can this implementation be sustained?

[The trip enabled us to] be able to understand the whole framework that Ghana has put in place for developing mini-grids. Being there in person was so important. That said, even outside of normal 9-5 meetings, we've started our own internal communications channels where we call to discuss our mini-grids problems and check that everyone is on track with their strategies – often on weekends and Sundays.”*

* <https://cdkn.org/2018/09/scaling-up-mini-grids-how-nigeria-learned-from-ghana>

Ghanaian professionals visit a successful Nigerian mini-grid – Charlie Zajicek, LEDSGP

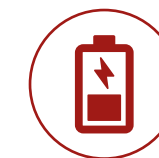


Businesses volunteer for energy audits – and showcase results to others

A project to promote greater energy efficiency and emissions savings by Peruvian businesses started with technical studies of how to save energy in selected companies and followed with a business-to-business outreach programme. The project:

- identified and assessed energy efficiency opportunities for seven companies in Peru, by carrying out reviews of the operations and procedures, and developing strategies to implement change;
- built the capacity of specialist energy consultants in Peru, e.g. to carry out energy audits and develop business cases to cut energy use;
- piloted an energy efficiency workshop for groups of small and medium enterprises (SMEs) to help them manage their energy demands and identify savings. This pilot was designed to be replicable in the future and was, for example, been targeted at groups of SMEs that are either suppliers or customers of larger corporates; and
- disseminated the results nationally to the Peruvian private sector, in business language, and also presented the results at the World Climate Summit (a business-led event held in association with the UNFCCC Conference of Parties).

An easy-to-use summary of the firms' energy-saving opportunities offers practical pointers, such as – for example – how unblocking air conditioning filters and condensers can increase the performance of appliances. Not only are such solutions useful for the businesses that received the energy audits, but they are relevant for other businesses in Peru and the developing world.⁴¹ By showing businesses what was possible, based on their peers' experience, the project encouraged higher ambitions for energy efficiency in Peru and beyond.



Energy management

Data availability



Operational maintenance

Staff engagement and awareness



The project highlighted these operational energy management opportunities for Peruvian businesses – Carbon Trust

Role plays put officials in the 'hot seat'

Role-playing games, in a small group environment, are a highly participatory way to stimulate decision-makers' thinking on climate-related risk. They are feasible with one small group, or a large number of small groups, in a shared learning space.

Dr Pablo Suarez of the Red Cross Red Crescent Climate Centre, who has pioneered the use of games to raise awareness and commitment to climate action among decision-makers, developed this method after what he refers to as the frustrating years of writing papers, which led nowhere (see Box: Serious fun games, right).



Serious fun games

Games are a way of getting people's brains more deeply engaged in climate challenges, according to Dr Pablo Suarez, game designer at the Red Cross Red Crescent Climate Centre.* A typical game puts the participant in the role of a decision-maker who must second-guess the coming season's weather and its effect on crops and food security. They also have the option to make different kinds of 'investment' to protect their assets. Then, participants are subject to rolls of the dice to see how the climate and weather unfold. Pablo said: 'You have to think about trade-offs, thresholds and delays. You have to think about what happens if you do or if you don't take action.'

The games, and the practical, reflective discussions they encourage, are appropriate for community or policy settings. The Climate Centre team has delivered them in settings that range from subsistence farmers developing contingency plans for flooding, to World Bank staff integrating games into their risk assessment methodology.

His creative partner and wife, Janot Mendler de Suarez, even took the games concept into the 'gender dimension', following the success of the first round of game design:

“With support from PopTech and the Red Cross Climate Centre, I worked with the Kenya Red Cross (KRC) to design a game that staff and volunteers could use to open conversations

about gender implications of climate change with rural farming communities. Existing gender asymmetries include land ownership (over 90% of the land belongs to men), and unequal access to credit or fertiliser. Such unequal access means that women often derive less benefit from farm work than their male counterparts.”

In one game about crop-planting decisions, Janot has introduced male and female roles through the assignment of coloured bracelets to the players:

“Those given a brightly coloured bracelet to wear play as 'men', all those with no bracelet play 'women' and find themselves starting the game with fewer beans – the currency of the game. As the game plays out, women reap a smaller harvest than the fictional men... The Kenya Red Cross now plans to train facilitators to use this game in rural communities. The game should deepen understanding within affected communities about climate risk strategies to cope with the changing weather patterns affecting agriculture. With luck, it will help open deep discussion about the differential implications of climate change for women and girls, compared to men and boys, and what these additional pressures mean for their life choices.”⁴²

*  <https://climatecentre.org/resources-games/games>



Serious fun game at Sendai Disaster Risk Reduction Conference – *Climate Centre*.

Making good science go viral

It takes a bit of planning to produce high-quality, shareable materials on climate change science that will be influential and well used. And it takes a lot of careful consideration and creative thinking to tap into 'new knowledge markets' and avoid overlap with existing initiatives, but when you do, the results can be transformative.

CDKN's outreach programme to promote the key messages of the IPCC's science showed that there is an appetite for authoritative, trustworthy climate change information in developing countries, especially in formats that can be readily shared and tailored to people's everyday communication needs. The communications toolkit was extremely popular and continues to be well used; and it yielded lots of stories about how people are using the content in their daily work (see Box: An outreach programme for the IPCC's climate science, opposite). A key part of the programme was enlisting scientific experts – IPCC authors – to fact-check all the written materials before they were issued.

Meanwhile, an initiative in Nepal to boost awareness of climate change took off when a climate change centre offered students small grants for public education and a mobile public library, thus reaching people who had not been reached with good climate information before (see Box: Nepal's Climate Change Knowledge Management Centre, page 57).



Making climate change content shareable

Think about how you can package your climate change content in small, bite-sized pieces, that make it more likely that people will share it with others or incorporate it into their own presentations, papers and articles:

- ✓ Consider how to make complex concepts understandable at a glance – both through straightforward language and through infographics, with the help of a clever designer.
- ✓ Make individual image and infographic files available for download where possible, with clear instructions about how people can use them, and who they must credit.
- ✓ Licence your materials under the Creative Commons, so that people know they are welcome to re-use them.⁴³
- ✓ Ensure you have respected scientific sources to back up your statements and, for major campaigns or press releases, get a climate scientist or adaptation/mitigation expert to check your work. In this era of 'fake news' it is vital to get the messages scientifically correct.



An outreach programme for the IPCC'S climate science

The IPCC's *Fifth Assessment Report (AR5)* was released in 2013-14. It was made up of reports on: the physical science of climate change; impacts, adaptation and vulnerability; climate change mitigation; and a final synthesis report. CDKN ran a wide-ranging outreach programme to bring the report's findings to developing country governments and other stakeholders, so that the latest state-of-art climate science could be better incorporated into their decision-making.

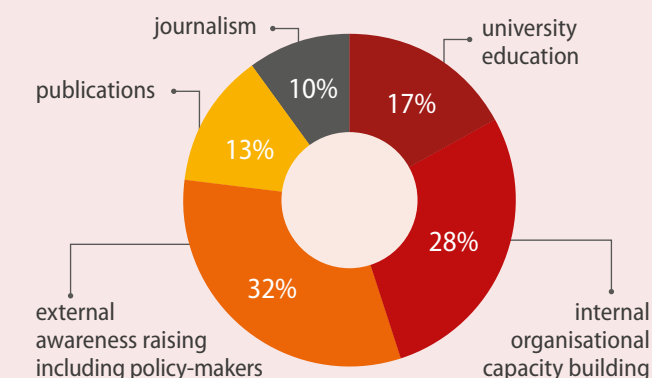
Often policy-makers want to access country and region-specific climate information quickly. The IPCC's country information is tucked away in the long chapters of the reports, but CDKN pulled out the information and made it more readily available. The original AR5 runs to well over 5 000 pages.

CDKN produced four regional summaries of the AR5 science, in a colourful and appealing format: 'The IPCC's Fifth Assessment Report: What's in it for Africa?', 'What's in it for South Asia?', 'What's in it for Latin America?' and 'What's in it for Small Island Developing States?'. Each of these summaries is just 24 to 28 pages long.

CDKN also launched an online communications toolkit with the IPCC's key messages for countries and regions, which contains slide packs, free infographics and image resources for communicators to use. Our slide packs 'boil

down' the essential messages of the assessment and present them largely in graphical format. Since launching, the kit has had over 28 000 visits.*

Of people who registered to use the communications toolkit, they report that they are using it for:



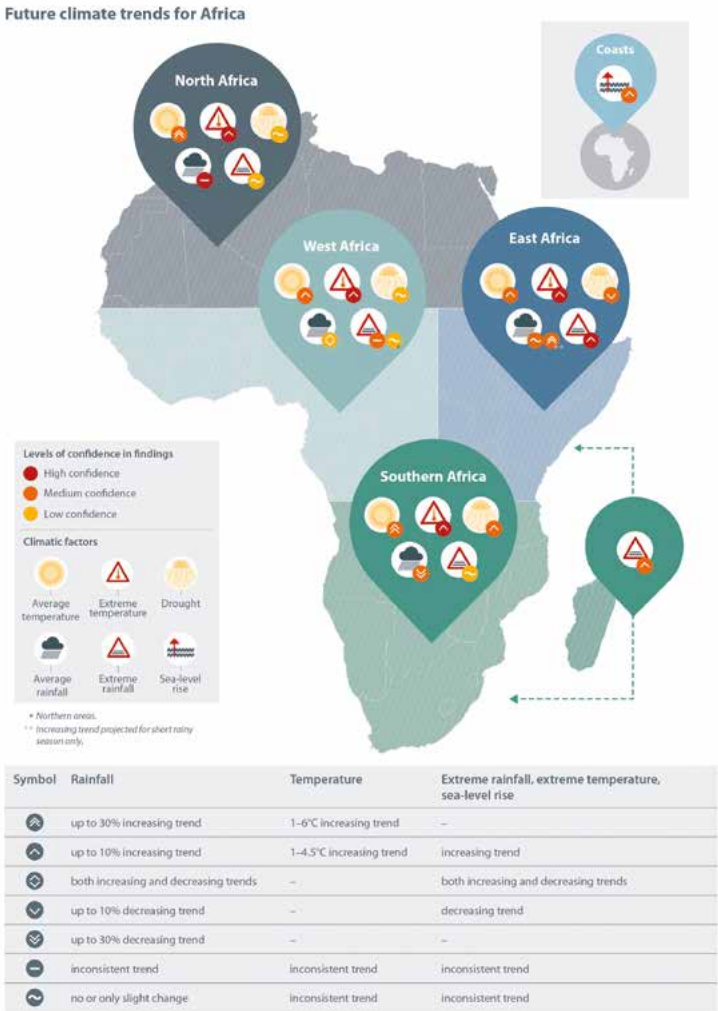
Interviews with these toolkit-users revealed:

- An NGO worker described the materials as his 'armour' to contribute to national plans and forums on how to mitigate the effects of climate change.
- One ministry representative in Rwanda said she would use the material for community sensitisation programmes.
- An academic said he would use the materials to prepare the national UNFCCC delegation of Uganda for climate talks.

- One of the participants reportedly used his new knowledge to build a stakeholder engagement platform for taking forward the investment plans proposed at the city and district level in Madurai, Tamil Nadu, India.
- Most of those with research backgrounds said they would use the material for proposal writing and to inform their research.
- Interviewees emphasised the value of easy-to-use summaries of the climate science.
- Almost all of those originally surveyed said they would refer to climate change more frequently in their future work.

The idea of the AR5 communications toolkit was borne from the press kits that organisations typically prepare as part of media and marketing campaigns. However, this kit – by being promoted far beyond the conventional media to communicators and educators of all types – has reached more deeply into organisations and helped influence their practices. It has helped tens of thousands of people to become messengers for good climate science (see Box: Mind the messenger, page 9).

*  <https://www.cdkn.org/ar5-toolkit>



Nepal's Climate Change Knowledge Management Centre

An initiative to promote better understanding of climate change in Nepal took off at local levels, thanks to a modest small grants programme via the Nepal Climate Change Knowledge Management Centre (NCKMC). The grants were given to students to innovate ways to spread climate information at the local level. Programme organisers noted that there was a lot of information about climate change in the capital, Kathmandu, but little outside, and so local people jumped at the chance to access and share information

The Knowledge Management Centre also organised a Mobile Library Campaign for Climate Change Awareness, which visited community schools in 10 remote districts of Nepal. Of the campaign, Dinesh Raj Bhuj, Bimala Devkota and Pawan K Neupane wrote:

“The Centre organised the campaign targeting students and teachers at community schools in 10 remote districts of Nepal. In pursuit of sensitising the young minds on issues related to climate change, the challenge was to develop concise and portable related materials. We displayed the self-explanatory posters and short films in simple Nepali language. We also organised inter-school climate change quizzes and panel discussions on local FM radios. The interaction between experts with students, teachers and policy-makers helped to make the campaign effective. As there was high demand for the posters, NCKMC reproduced handy-sized posters and distributed to the schools for wider use.”⁴⁴

After participating, Kumari Suwal, a ninth grade student in Panchthar district, said that she and her friends came to understand the basics of climate change and its impacts and hoped for more, future campaigns.



Nepali students' imaginations have been fired by the climate outreach campaign – Shutterstock

Walking the walk

Climate communicators can do much to avoid greenhouse gas emissions in the course of their work and still create impactful engagements.

It doesn't make sense to communicate about climate change and be part of the problem.

Sometimes it has to do with the way a campaign is designed from the very start – and, of course, how much budget is available. Campaigns that can afford to mobilise many spokespeople in a decentralised way to engage others can be efficient and effective and potentially avoid emissions, compared to a centralised communications team reliant on core spokespeople to travel extensively. This is especially the case for developing country settings where face-to-face engagement is important. Many domestic and international organisations typically rely on decentralised staffing to promote awareness of climate change and adaptation practices. See the discussion of the Kenya Red Cross' work in Box: Serious fun games (page 52).

Naturally, the rapid expansion of ICTs has revolutionised the way that people can access climate information and the way that climate communicators can interact with information users. Signalling a gear shift from previous-generation broadcast communications such as radio, which are one-way, ICTs allow two-way conversations, including peer-to-peer learning and knowledge exchange on climate action.



Digital platforms for engaging on climate action

Digital platforms include the following:

- Social media, including closed, invitation-only Facebook and Whatsapp groups, as well as open groups.
- Webinars, which enable real-time interaction, where typically participants may pose questions to presenters in text or verbally.
- Scribblelive, and similar functionality, which provides a moderated way – again in real time, during an advertised window of time – for experts and practitioners to exchange ideas around specific discussion topics. Instead of relying on audio, these are text-only.
- Platforms such as Slack – again based on text – where an invited group of people, located in a single office or a remotely dispersed group or network, can participate in one or multiple simultaneous conversations on topics of interest.
- E-learning platforms, including Massive Open Online Courses (MOOCs) where course facilitators take registered participants through a planned curriculum over several weeks to cover designated topics; to support learning and elicit comments and insights from the remotely-based student body.
- Livestreamed video – via internet – of public events, a well-established technology, supported by an array of platforms. At the time of going to press, this is being expanded to a new and ambitious scale by the Climate Vulnerable Forum's 2018 Virtual Conference. *

*  www.virtualclimatesummit.org

As a diversity of digitally-supported platforms has blossomed, the popularity of different social media and virtual channels has varied considerably by country, region and even by age group. Accessibility to these platforms is, of course, limited by financial status and, in some cases, by social and cultural norms, which may, for instance, limit women's access (see section on Turning up the volume of voices that haven't been heard, page 33).

What is certain is that ICTs offer tremendous potential for extending conversations and building momentum on climate action in the years to come. The degree to which ICTs do this effectively and inclusively will depend, in turn, on the inclusivity of development as a whole. It will also depend on the roles to be played by the facilitators and curators of climate knowledge – the 'climate knowledge brokers' – in making tailored, relevant information accessible and navigable in the world's ocean of climate information.

Endnotes

1. See Dovie, D. B. K., Nyamedor, F. and Enwana, E. D. (2014). *Building coastal resilience through an integrated approach: Lessons from Ghana*. London: CDKN.
2. Sourced from internal planning documents for CDKN and Ecosystem Services for Poverty Alleviation programme, Mairi Dupar (2015-17).
3. Planetary boundaries is a concept involving Earth system processes which contain environmental boundaries, proposed in 2009 by a group of Earth system and environmental scientists led by Johan Rockström from the Stockholm Resilience Centre and Will Steffen from the Australian National University. An introduction to the concept is available online: <https://stockholmresilience.org/research/planetary-boundaries.html>
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