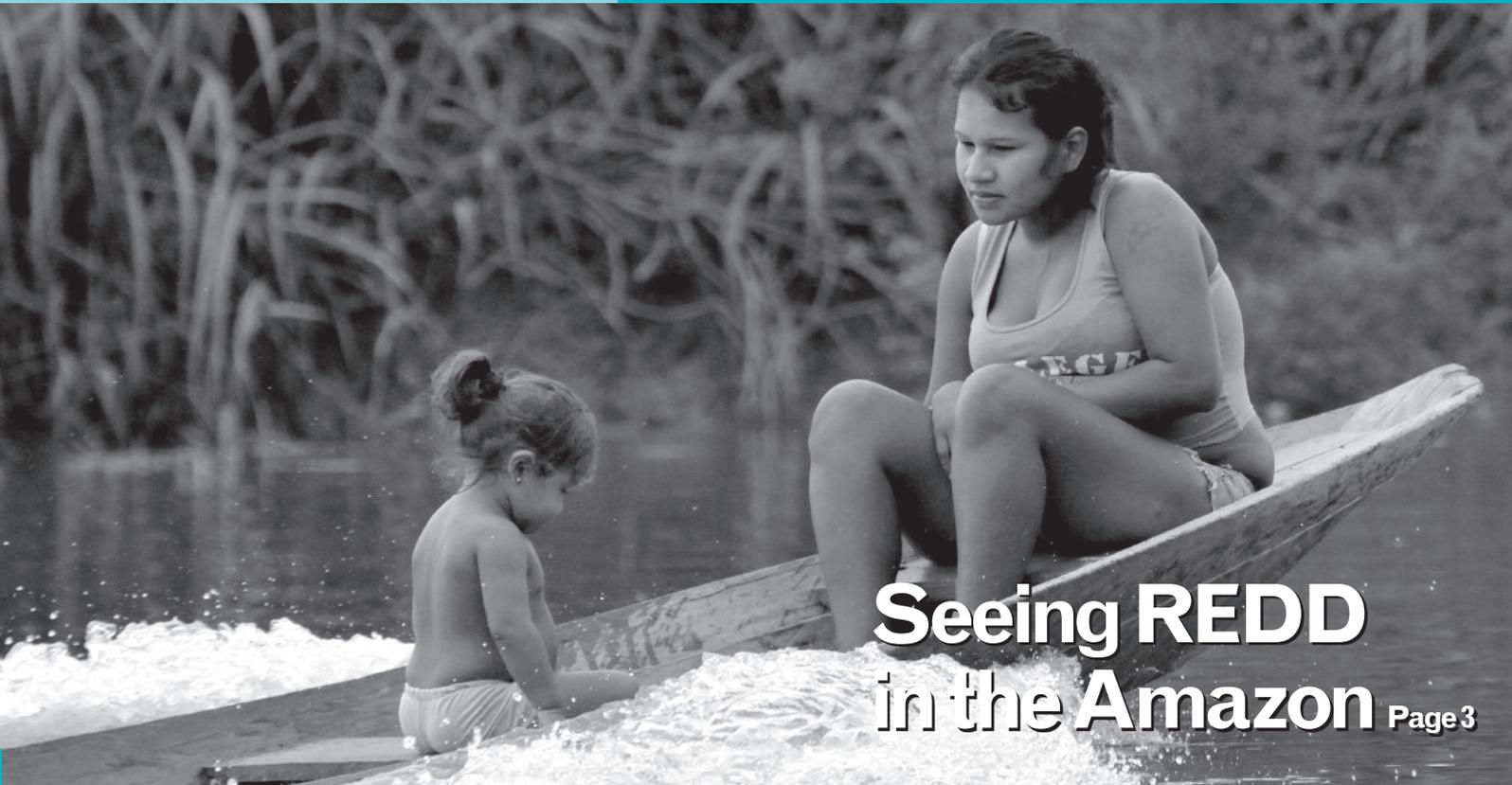


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Cover photo: Mother and daughter in the Amazon
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Family in the Amazon

Seeing REDD in the Amazon

Virgilio Viana argues that REDD in the Amazon is a win for people, trees and climate

Deforestation remains an entrenched and ongoing issue in the Amazon, the world's largest and naturally richest rainforest. But Amazonas, Brazil's largest state, is seeing significant signs of change.

Amazonas harbours some 1.57 million square kilometres of rainforest - six times the size of the United Kingdom. It is also the site of the Juma Sustainable Development Reserve Project, the Amazon's first independently-validated project where locals are being rewarded for protecting their forests and reducing carbon emissions in the process.

Dubbed REDD for "reduced emissions from deforestation and degradation", such projects are up against a formidable status quo in the Amazon. Deforestation there has an economic and social logic. It is the result of a perverse system that financially rewards those who clearfell, from land grabbers and

illegal loggers to agribusiness. Cattle farming, for instance, is a highly profitable enterprise. From 1996 to 2006, numbers of cattle in the Brazilian Legal Amazon - that part of Brazil within the Amazon basin - rose from 37 million to 73 million. Deforestation is not a result of irrationality, ignorance or stupidity: people do get, or expect to get, real benefits

MAIN POINTS

- **The author describes** how REDD (reduced emissions from deforestation and degradation) projects have opened up the possibility of valuing carbon-based environmental services in the Amazon.
- **He concludes** that forest conservation and greenhouse

gas emission reduction targets must top the list of priorities in the new climate agreements.

- **REDD can become** a significant catalyst of change to stop deforestation and eradicate poverty in many regions of the planet.

from deforestation and unsustainable forest harvesting.

Besides the environmental impacts of expanding agribusiness and poor forestry practices, unsustainable development in the Amazon has also led to significant poverty and social inequality, notably the highest concentration of slavery cases in Brazil. Similar social injustices, targeting indigenous and traditional people in particular, occur on other deforestation fronts throughout the tropics.

Over the past few decades, a cautious optimism has emerged as isolated attempts to curb deforestation have yielded positive results. In Amazonas, deforestation has been in continuous decline, from 1582 square kilometres in 2003 to 479 in 2008 - a 70 per cent decrease. As a result of political change in 2003 with the election of Governor Eduardo Braga, the state enacted a set of public policies aimed at reducing deforestation and im-

REDUCING EMISSIONS FROM DEFORESTATION IN DEVELOPING COUNTRIES

"Reducing emissions from deforestation in developing countries and approaches to stimulate action" - REDD for short - entered the agenda of the Conference of Parties to the United Nations Framework Convention on Climate Change at the eleventh session in Montreal, Canada, in 2005. Reducing deforestation and preventing the release of carbon was recognized as the mitigation option with the largest and most immediate global impact on carbon stock per hectare and per year in the short-term.

Subsequently, Decision 2/CP.13 provided a mandate for action to reduce emissions from deforestation and forest degradation in developing countries.

The main commitments are:

- to further strengthen and support ongoing efforts;
- to support and facilitate capacity-building, technical assistance and transfer of technology relating to methodological and technical needs and institutional needs of developing countries;
- to explore a range of actions, identify options and undertake demonstration activities to address drivers of deforestation and enhance forest carbon stocks due to sustainable management of forests; and,
- to mobilize resources to support these efforts.

The decision also provided indicative guidance for the implementation and

evaluation of demonstration activities. *The Good Practice Guidance for Land Use, Land-use Change and Forestry* from the Intergovernmental Panel on Climate Change is recommended for estimating and reporting of emissions and removals.

Over 2008 and 2009, policy approaches and positive incentives relating to reducing emissions from deforestation and forest degradation in developing countries and, under REDD-plus, the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries have been considered under the United Nations Framework Convention on Climate Change Secretariat.

proving livelihoods of forest dwellers. Lessons learned there and elsewhere can be expanded, adapted and replicated.

Obviously, the solution is not a simple, technical one. The starting point is no less than a radical change in the development paradigm.

Forests have historically been seen as valueless and forestry as backwards - neither of them worthy of inclusion in 'development' strategies or in the usual set of policy instruments encouraging relevant investment, such as tax incentives and credit. Yet the sig-

nificant problems deforestation causes now suggest that forests need to be regarded as valuable assets to individuals, families, businesses and governments. In short, public, non-profit and private sector policies have to be guided by a simple message: "forests are worth more standing than cut". This paradigm shift has to be translated into broad cross-sectoral policies in areas such as finance, education, health, energy and sustainable land use systems.

Some valuations of standing forests in the Amazon have produced very positive results. On the one hand are the results of public policies aiming to increase the value of forest products - such as honey and managed timber - supporting private sector investment and social-environmental entrepreneurship. In Amazonas, the price paid to producers of andiroba oil, derived from the nut of the *Carapa guianensis* tree, increased 3.6 times from 2003 (when sustainable development policies began to be rolled out) to 2008. The more profitable sustainably harvested forest products become, the less attractive deforestation is, and the greater the economic stimulus to conserve forests. On the other hand, environmental services such as carbon sequestration and storage have big potential and are a key part of the equation too. The more valuable environmental services are, the more resources will be available for investment in improving local people's quality of life and ability to generate income.

The biggest challenge is not how to reduce deforestation, but how to finance the reduction. The agricultural frontier in the Amazon is pushed along by a multi-billion dollar per year economy. If the nature of the battle is predominantly economic, irreversible success will come only with sustainable finance - public, private and non-profit programmes aimed at stopping deforestation for carbon stored, biodiversity conserved, water supply protected or poverty eradicated. Financing a new development paradigm in the Amazon is relatively low in cost compared to the environmental services produced by its standing forest ecosystems.

REDD has opened up the possibility of valuing carbon-based environmental services in the Amazon. Sceptics say there may be methodological problems with REDD, but Amazonas's groundbreaking Juma project, spearheaded by the Amazonas Sustainable Foundation (FAS), overcame all such barriers, including the establishment of baselines - benchmarks for calculating emissions reduction. In 2008, the scheme was validated according to standards of the Climate, Community & Biodiversity Alliance by the international verification service TÜV SÜD. It passed the methodology test with flying colours.

The goals of the Juma Sustainable Development Reserve Project are:

- to avoid the degradation of 366,151 hectares of rainforest and the emission of 210,885,604 million tones of carbon dioxide into the atmosphere by 2050;

- to generate carbon credit out of 189,767,027 tons of avoided carbon dioxide emissions;
- to halt deforestation in a forest area that is under severe land conversion pressure; and,
- to improve the well-being of forest peoples living in the Juma Sustainable Development Reserve and its surroundings.

Communities in the reserve will be rewarded for their stewardship. Amazonas State will invest resources generated by avoided carbon emissions in controlling and monitoring deforestation within the Juma reserve and improving the region's living standards. Investments are also expected to generate sustainable economic activities and to sponsor a research and conservation project inside and outside the Juma reserve.

What is needed to ensure the benefits of REDD? REDD financing mechanisms should be flexible so they can incorporate both inter-governmental funding (at national scale) and market-based funding (at project level). REDD should be allowed in the carbon credit market with a quota to avoid flooding the market. Even a small quota of 10 per cent would generate more resources than any other international financing mechanism for tropical forest conservation and poverty. REDD could tip the financial and governance balance in favour of sustainable forest management. Finally, REDD funding should use instruments such as certification and validation to ensure appropriate benefit sharing for indigenous peoples and local communities.

BOLSA FLORESTA

The Juma Sustainable Development Reserve Project is part of a broader initiative focused on payments for environmental services: the Bolsa Floresta (forest conservation grant) programme. Initiated by the Amazonas government and Brazilian private banking giant Bradesco, this is now funded by a range of players. The Marriott hotel chain, for instance, is financing Juma through vol-

untary contributions from guests.

The total investment of US\$8.1 million per year supports 6000 families committed to zero deforestation in all Bolsa Floresta projects. Families receive direct cash payments through a highly efficient instrument: an electronic debit card accessible in banks and post offices in any town. Communities also receive investments

for income generation activities, social programmes and supporting local associations. Poverty eradication is a key component of environmental conservation.

Bolsa Floresta is now ready to be scaled up, and the International Institute for Environment and Development (London, United Kingdom) is assessing a wide variety of schemes for their potential.



Photo: © Jennifer Rock

The global carbon market reached US\$118 billion in 2008, but very little of it was invested in protecting tropical rainforests. Meanwhile, the international community faces a process of great strategic importance: the new international climate agreements, to be signed in December 2009 in Copenhagen. If these include forest carbon as both a market instrument and a mechanism for intergovernmental funding, they will set a historic precedent.

Forest conservation and greenhouse gas emission reduction targets must top the list of priorities in the new climate agreements. REDD can become a significant catalyst of change to stop deforestation and eradicate poverty in many regions of the planet. As Nelson Mandela has said, “Those who are hungry are in a hurry.” We urgently need to start a revolution in the world’s forests. Time is running short. ■

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FURTHER INFORMATION

● **On the Web:** A video interview with Virgilio Viana is available at tinyurl.com/cokury. Details of the methodology developed to quantify reduction emissions from deforestation can be downloaded at tinyurl.com/o354yz. Finally, the REDD Web Platform at tinyurl.com/4coodz provides access to information and resources on reducing emissions from deforestation in developing countries.

ACKNOWLEDGEMENTS

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Community resilience in Nepal

Bimal Regmi and co-authors describe how local knowledge, practices and innovations in Nepal can raise community resilience to climate change

Poor, marginalized people in rural areas of Nepal, who depend solely on natural resources and climate-sensitive sectors such as agriculture, forestry and fisheries for their livelihoods, are particularly vulnerable to climate change impacts. Most farmers depend on monsoon rain for crop cultivation, so changing rainfall patterns could have devastating results. Similarly, extreme rainfall causes landslides and soil erosion and can destroy property or even take lives.

For generations, smallholder farmers in Nepal have used local knowledge and traditional methods and innovations to adapt to climate variability. These local-level adaptation strategies are now being used to help them cope with adverse climate change impacts. Anecdotal information and evidence of this from communities requires further investigation, however. This article

describes the results of research looking at whether or not existing local knowledge and livelihood assets enable villages to cope with climate change. It also explains how local knowledge and innovations are important when designing research and development interventions targeting vulnerable communities.

MAIN POINTS

- **The authors explain** how smallholder farmers in Nepal have used traditional methods and local knowledge to adapt to climate variability for generations.
- **They describe** how these strategies are now helping farmers cope with adverse

climate change impacts.

- **They caution** that some people are more vulnerable than others and that livelihood assets need assessing to understand how such assets contribute to vulnerability.

Research was conducted in the Solukhumbu, Kaski, Tanahun, Kailali, Bardiya, Gulmi, Jhapa, Ilam, Dolpa, Mustang and Bardiya Districts of Nepal. Focus group discussions were carried out with communities to identify key issues, climate change impacts and community-based adaptation mechanisms. Interviews with key informants and informal discussions with respected village figures were held to document local knowledge, innovations and practices promoting community-based adaptation to climate change.

Smallholder farmer adaptation strategies

Few communities in Nepal have benefited from early warning systems, seasonal forecasts or any activities directly related to climate change. They have, however, been using their own traditional community-based adaptation methods for generations. Some of these are described below.

Water storage systems to cope with water scarcity: Communities in Kalabang in the Kaski District built water conservation ponds during the monsoon, and the farmers of Arba use water harvesting tanks to trap rainwater to use in the dry season. Waste water collection and drip irrigation systems were also used for vegetable farming.

Potato cultivation on soil heaps to reduce soil moisture loss: Farmers from Kalabang have experienced reduced winter rainfall for the last six to seven years. To conserve soil moisture, they have started to cultivate potatoes on mounds of soil. They say this helps to retain soil moisture. Other farmers in the area are now replicating this practice.

Coping with water stress using drip irrigation: The farmers of Chaur have adopted a drip irrigation system to cope with water shortages during the pre-monsoon season. This consists of a water tank and a network of pipes with drippers at predetermined intervals that deliver water in a controlled way to the roots of crops such as cucumber and cauliflower. Farmers report that drip irrigation uses less water than bucket irrigation without reducing yields. The people of Chaur also believe that drip irrigation helps their crops mature early.

Management practices: Mulching helps increase soil moisture for those farming vegetables, and bio-fertilizers and bio-pes-



Young girl in rural Nepal

Photo: © Greg Younger

ticides help improve soil fertility. Fodder trees planted on grasslands help tackle the invasion of new grass species, and growing potatoes in rows requires less water so helps people cope with drought. Farmers now sprinkle warm water in their nurseries to maintain heat during the cold season, and some spray ash around the periphery of their nurseries to control ant attacks. Using alternative energy sources, such as biogas, has reduced firewood consumption.

Some farmers have built retention walls along terrace borders and others have

checked soil loss and erosion by planting vegetation barriers, such as broom grass, mulberry and napier grass, on sloping land, roads and in gullies. Drainage canals on rain-fed 'bari' land have checked soil loss following intense rainfall, and trail improvement has also helped conserve soils.

In Kalabang, millet and maize used to be sown immediately after maize tilling in early June. Due to lower June rainfall, however, farmers postponed sowing millet until August so that the millet could get sufficient water for higher yields. Similarly, farmers in Amalchaur have started to sow wheat in December instead of November due to reduced winter rainfall. In December, wheat can get moisture from condensation and dew.

Watering to promote coffee flowering: Coffee flowers from February to April, and during this time it requires a little rain. The coffee flowering season has been delayed in Chaur in the Kaski District due to low or delayed rains, and this has affected coffee productivity. Krishna Neupane, a local resident, tackled this problem by sprinkling water on his coffee plants in the dry season to promote coffee flowering.

Hangin nurseries: Farmers reported that pest numbers were increasing in line with temperature increases. Traditional ways of raising seedlings in nurseries could not tackle losses from pest attack, so farmers

from Serabeshi have started to raise seedlings in hanging nurseries. Farmers say this has helped to control pests and also to save seedlings from frost, weeds, fungus and red ants.

Changing crops: In Kalabang, irrigated 'khet' land was converted to rain-fed 'bari' land due to drought. Millet and mustard replaced rice, and mustard also replaced wheat as it requires less water. Farmers now grow drought-resistant crops in semi-irrigated 'tari' land. They prefer early maturing vegetables and drought-resistant rice varieties such as Mansara and Anga. Farmers also sow high quality rice like Jetho Budho, a local landrace, which they sell at the market to buy cheaper rice varieties like Mansuli.

Farmers in the Mustang and Dolpa Districts are growing new vegetables in their homesteads due to changes in temperature. Similarly, farmers in the flood-prone areas of Bardiya and Kailali Districts are growing watermelon, sesame, black gram, peanuts and sweet potato.

Selecting the right crops and varieties: Farmers in the drought-prone areas of Gulmi District grow drought-resistant crops to make best use of the dry land. Farmers grow elephant foot yam, taro, cassava, winter bean, air potato, cush-cush yam, brinjal and swiss gourd. Similarly, in the marginal areas of Gulmi District, farmers are growing cassava, winter bean, elephant foot yam,

taro, sugarcane, tumeric, ivy gourd and legumes. In water-logged areas in Jhapa District, farmers are cultivating mint, jansen, sweet flag and green vegetables. Farmers are also using new hybrid varieties with short durations and drought tolerance.

Vegetable farming: Communities in Balapur village, Bardiya District, have begun to cultivate vegetables on riverbanks. Previously, riverbanks were used to cultivate other crops, but due to erosion and changing river routes, the land has become too sandy. Communities have learned to cultivate vegetables such as tomatoes, bitter gourd, watermelon, sweet potato, sponge gourd, bottle gourd and pumpkin on this land. Similarly, sandy and riverbank land belonging to the community forest user group was used for communal farming. The group distributed this land equally amongst 116 households who now cultivate rice, wheat, chickpea and lentils. The group collects 15 to 20 kilograms from each household's harvest and funds from the sale of this produce are deposited in the group's bank account and used for social purposes. The communities are clearly managing the land in an equitable and sustainable manner.

Vegetable cultivation in sandy soils has proved very promising in Kailali District and other eastern regions of Nepal. People now grow seasonal vegetables during the winter season to earn income from otherwise fallow sandy land. In Balapur village,



Farming in Nepal

Photo: © global.finland

a farmer can earn around 20,000 to 30,000 Rupees a season this way. Farmers also grow vegetables commercially in the winter season due to high market prices. This practice could be replicated in other villages where farmland is sandy, and applied on barren public and government riverbank land.

Improved storage systems: Farmers have been making pits to store potatoes in because the pits help maintain cooler temperatures allowing the potatoes to last longer.

Farmers in the Kaski District protect their seeds from frost and cold temperatures by covering them with plastic and hanging them in safe places. Farmers in the Kailali District use earthen vessels to store their rice, maize and other cereal seeds. These vessels are kept on raised beds to protect them from flooding. Farmers are also raising the level of their houses and cattle sheds to keep them safe during the monsoon floods.

Collaborative responses: The non-government organization Local Initiatives for Biodiversity, Research and Development (LI-BIRD) and its partner organizations working in the study areas have been instrumental in introducing biodiversity-based livelihood strategies through various projects and programmes targeting poor and socially excluded communities. This has helped raise community awareness about the importance of conservation and build community capacity to use natural resources for livelihood benefits. Income generating activities have targeted poor and landless communities. LI-BIRD and its partners have introduced innovative activities to develop and promote plant varieties and technologies that can cope with extreme climatic events like droughts and floods. Similarly, focus on strengthening and empowering community-based institutions is making communities stronger and increasing their resilience to climate change impacts.

Conclusions and ways forward

From a poverty reduction perspective, adaptation is already necessary as people's lives and livelihoods face an increasing burden of shocks and stresses. Communities have been using traditional knowledge, practices and technologies to cope with adverse climatic stresses. Adaptation and coping mechanisms include conservation and sustainable use of important plant species, use of different soil and water conservation methods such as drip irrigation and technologies to retain soil moisture, changing cropping patterns and crop composition, improved marketing and strengthening community-based institutions including community-based insurance systems. Such mechanisms have been promoted by civil society and non-government organizations working in the study area.

The study also demonstrated that some individuals and communities are more vulnerable than others. Reliance on climate-sensitive crops, poor access to alternative livelihoods, remoteness from markets, inferior social services and weak social networks are important factors contributing to vulnerability. It is, therefore, necessary to assess the various livelihood assets of rural communities, taking socioeconomic factors and local practices into consideration, to understand how they contribute to community vulnerability. ■

ABOUT THE AUTHORS



● **Bimal Raj Regmi** has worked as a programme co-ordinator for Local Initiatives for Biodiversity, Research and Development (LI-BIRD) in Nepal for the past few years, where he authored this article. He has now moved to the United Kingdom Department for International Development, Nepal, as Climate Change and Natural Resources Advisor. His co-authors, **Rojee Suwal, Govinda Shresha, Gyan Bandhu Sharma, Lalita Thapa** and **Suman Manandhar** are all professionals working at LI-BIRD.

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Adaptation by ribbon cutting

Robert Kay argues that a desire for grand ceremonies must not be allowed to skew decisions regarding approaches to adaptation

We all love a phrase that expresses in only a few words something that would take many more words to explain fully. Such expressions often capture a prevailing mood or current sensibility by blending together elements from different places in a language, often mixing a well-known expression or cultural metaphor with emerging themes or issues.

So it is with the phrase *Adaptation by Ribbon Cutting* - four words that encapsulate my concerns regarding potential decision-making biases in adaptation decision-making. I've used the phrase for a while now, only to hear it said twice in one week by separate colleagues working on climate change adaptation in the Asia-Pacific region. Perhaps, then, this is a phrase worth exploring.

Ribbon cutting refers to the action of a dignitary, most often an elected official but can

be a local community leader, wearing a broad smile and usually sporting a hard safety hat, wielding an over-sized pair of shiny scissors to cut a bright ceremonial ribbon. The action of ribbon cutting is usually accompanied by speeches announcing that the ceremony sig-

MAIN POINTS

- **The author describes** how we are rapidly moving from an adaptation landscape dominated by pilot projects, case studies, capacity building and awareness-raising into a new landscape of systematic and sustained decision making.
- **In this real-life landscape**, the biases, skews, influences and factors that influence the minds of decision makers are a constant feature.
- **If we are to identify** effective adaptive solutions, we must be prepared to think beyond short-term political horizons and outside the confines of self-interest and expediency.



nals the opening or completion of something significant.

Commonly, the opening is of public works infrastructure - such as a bridge, road, library, wharf, seawall, flood protection embankment or school. Whatever the occasion, the cutting of the ribbon is a tangible sign of progress, of a decision made that has successfully lead to a tangible outcome, a 'concrete' action leading, quite literally in most cases, to concrete.

I'm sure many of us have heard the words at such ceremonies that go something like:

"I am here to open this new [insert name of infrastructure here] that reflects the leadership of [insert name of political party or group here] in making the bold decision to contribute to this local community, to create jobs, to move us all forward, to face the challenges..."

Of course, the ribbon-cutting event is often a genuine celebration of the opening of much-needed public infrastructure - in places, and following designs, that represent optimal expenditure of public funds, that enhance, or at least minimize, environmental impact and that are socially and culturally integrated. The metaphor that *Adaptation by Ribbon Cutting* represents can, however, mean something altogether different - a range of political and administrative biases or decision-making skews that lead to the decision to build, for example, hard infrastructure as a climate change adaptation option in preference to softer and often more sustainable solutions.

The phrase *Adaptation by Ribbon Cutting* is shorthand to emphasize two characteristics of a form of decision making that I believe we shall see increasingly with regard to adaptation measures.

- A focus on infrastructure construction as an adaption option - coastal engineering works (such as seawalls, groynes and breakwaters), water management works (irrigation channels, river dams, channel

diversions), flood protection works (embankments, overflow channels), and so on. For example, the construction of a seawall is chosen in preference to building the resilience of coastal ecosystems (such as sand dunes or mangroves) or the relocation of assets and communities at risk from coastal erosion.

- A short-term decision frame in preference to long-term adaption decision making. The motivation behind the short-term focus being the hope from those sponsoring

constituents, electors, elections, perceptions and opinions. It is a messy, movable, dynamic, ever shifting landscape of deal-making, compromise and expediency. In other words, it's real life.

In this real-life landscape, the biases, skews, influences, factors, call them what you will, that influence the minds of decision makers and their advisors are a constant feature, as anyone who has worked within public decision-making systems can testify. Whether it's said out loud, or hidden between the lines,

“we are rapidly moving from an adaptation landscape dominated by pilot projects, case studies, capacity building and awareness-raising into a new landscape of systematic and sustained decision making”

the adaptation infrastructure works that they will personally be there to cut the ribbon within their term of office and so be in the public spotlight to reflect the success of this good deed.

As recent articles in *Tiempo* have demonstrated, we are rapidly moving from an adaptation landscape dominated by pilot projects, case studies, capacity building and awareness-raising into a new landscape of systematic and sustained decision making. This new landscape is the domain of decision makers, decision shapers, stakeholders,

ribbon cutting permeates the advice given to select a particular option that will ensure the maximization of both public relations benefits and political capital.

So what, if anything, can be done to avoid the adverse effects of *Adaptation by Ribbon Cutting*? First, we should simply be aware that there may be powerful decision-making biases implicit in adaptation decision making that can favour infrastructure-focused options (with short-term results). We need to be conscious that such decisions may, in the minds of some, give the impression of strong

leadership, decisive action and, most importantly, give public and media exposure to decision makers at the opening ceremony.

Second, we can fight the biases towards ribbon-cutting adaptation. We might develop decision-support processes and systems that seek to correct for biases by building-in weightings of various adaptation options to take account these potential biases. Of course, this would be fraught with difficulty in being essentially “washing the dirty laundry” of decision-making processes “in public”.

Finally, perhaps we are too shy of embracing ribbon-cutting events, even though they often seem a waste of time and energy, detracting from the main focus of a project. We could embrace the desire for short-term, tangible, concrete action by planning ceremonies for all available adaptation options so that more intangible (even less concrete) options, such as ecosystem resilience building measures or capacity building or awareness-raising programmes, also embed ceremonial activities. Of course, there are also proper considerations of funding accountability - of spending money on ceremonial rather than more tangible, project outcomes - particularly when these are donor funds delivered through tightly-managed project accounting procedures. Perhaps, if decision-biases, like the potential ribbon-cutting bias, are better understood and more explicitly recognized, then all adaptation projects can include funding for appropriate ceremonies.

I think it is becoming clearer and clearer, especially to those outside the professional climate change community, that some hard, controversial and politically unpopular adaptation decisions are coming their way. These decisions may not be in the term of office of today’s decision makers, but they will definitely be there for their political descendants, including those in their own political parties.

How, for example, can forced migration of coastal communities due to permanent inundation of coastal areas from the combined impacts sea-level rise and associated climate changes be turned into a positive, good news story? The more politically expedient decision, at least in the short-term, would be to build a seawall to ‘protect’ those at risk - generating another opportunity to cut ribbon.

Perhaps I’m overreacting to hearing the phrase *Adaptation by Ribbon Cutting* being used by climate change professionals I know and trust. Perhaps I’m not. The key issue in my mind is that we collectively explore its potential meaning. I sincerely hope that this exploration of *Adaptation by Ribbon Cutting* is suggestive of what might be, rather than an indictment of what is coming.

If we are to identify effective adaptive solutions, we must be prepared to think beyond short-term political horizons and outside the confines of self-interest and expediency. That is the challenge that *Adaptation by Ribbon Cutting* highlights. ■

ABOUT THE AUTHOR



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FURTHER INFORMATION

● **In the Cyberlibrary:** Selected websites concerning coastal zone management are listed at www.tiempocyberclimate.org/portal/t73web.htm and on the mangrove ecosystem, a common form of natural coastal protection, at www.tiempocyberclimate.org/portal/t32web.htm.

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○ CONFERENCES

East Asian Seas Congress 2009

Manila, Philippines:

23-11-2009 to 27-11-2009

Working theme of the Congress is "Partnerships at Work: Local Implementation and Good Practices". Aims to provide a venue to debate issues and highlight good practices and lessons learned in coastal and ocean seas management which will include the impacts of climate change amongst other issues. Participants will include experts and practitioners from within and outside the East Asian Seas.

Details: EAS Congress 2009 Secretariat, PEMSEA Resource Facility, DENR Compound, Visayas Ave, Diliman, Quezon City, Philippines.

Fax: +63-2-9269712

Email: congress@pemsea.org

Web: www.pemsea.org/eascongress

3rd World Aqua Congress

New Delhi, India:

02-12-2009 to 04-12-2009

Conference includes an exhibition on the latest water technologies such as waste water treatment, distribution, recycling and water management. Open to all interested in water use efficiency and its role in meeting sustainable development goals. Main themes include: enhancing water use efficiency; institutional, legal and policy issues; enhancing water use efficiency in urban, rural and agricultural areas; and availability of water resources.

Details: Congress Organizer, Aqua Foundation, C-18 B, First Floor, Kalkaji, New Delhi 110019, India.

Fax: 91-11-41318030

Email: wac@worldaquacongress.org

Web: www.worldaquacongress.org

15th Conference of the Parties to the UNFCCC & the 5th Meeting of the Parties to the Kyoto Protocol

Copenhagen, Denmark:

07-12-2009 to 18-12-2009

Overarching goal is to agree post-Kyoto climate treaty framework. Meetings will coincide with the 31st meetings of the treaty's subsidiary bodies - the Subsidiary Body for Implementation and the Subsidiary Body for Scientific and Technological Advice.

Details: UNFCCC Secretariat COP15/ MOP5, PO Box 260124, D-53153 Bonn, Germany.

Fax: +49-228-8151999

Email: secretariat@unfccc.int

Web: www.unfccc.int/meetings/unfccc_calendar/items/2655.php?year=2009

Development and Climate Days at COP15

Copenhagen, Denmark

11-12-2009 to 14-12-2009

As a parallel event to COP15, the International Institute for Environment and Development will host Development and Climate Days. This will bring together individuals and organizations - already attending the COP - interested in development and climate-related issues to share the latest science and best practices in

development and climate change.

There will also be a film festival running parallel to this main event.

Details: Hannah Reid, IIED, 3 Endsleigh Street, London, WC1H 0DD, UK

Email: hannah.reid@iied.org

Fax: +44 (0)20 7388 2826

Web: www.iied.org/climate-change/key-issues/climate-negotiations-capacity-building/d-c-days-cop15

Agriculture & Rural Development Day: COP-15

Copenhagen, Denmark:

12-12-2009 to 12-12-2009

A one day event organized by a large consortium of international partners to be held at the University of Copenhagen during COP-15. Main objective is to lay the groundwork for a workplan of strategies and actions that will see agriculture fully incorporated into the post-Copenhagen agenda. Will consist of plenary sessions, presentations and roundtable discussions.

Details: Christina Lakatos, Environment & Production Technology Division, International Food Policy Research Institute, 2033 K street, NW, Washington DC 20006, USA.

Fax: +1-202-4674439. Email: c.lakatos@cgiar.org

Web: www.agricultureday.org

Fourth International Conference on Community-Based Adaptation (CBA) to Climate Change

Dar es Salaam, Tanzania

21-02-2010 to 27-02-2010

The conference aims to share and

consolidate the latest developments in CBA planning and practice in different sectors and countries amongst practitioners, policymakers, researchers, funders and the communities at risk. Ultimately the aim is to share knowledge and experiences to help those most vulnerable to climate change.

Details: Hannah Reid, IIED, 3 Endsleigh Street, London, WC1H 0DD, UK

Email: Hannah.reid@iied.org

Fax: +44 (0)20 7388 2826

Web: www.iied.org/climate-change/key-issues/community-based-adaptation/cba-conference-0

World Sustainable Energy Days 2010

Wels, Austria:

03-03-2010 to 05-03-2010

World Sustainable Energy Days will include days dedicated to the European Pellet Conference, Solar Thermal Conference, Building Renovation - Towards Low Energy Consumption, as well as an exhibition and trade show from the 3rd to 7th March. Presentations will cover topics such as: renewable energy sources; energy efficiency in buildings, industry and transport; pellets; solar thermal; and building renovation.

Details: Christiane Egger, O.Oe. Energiesparverband, Landstrasse 45, A-4020 Linz, Austria.

Fax: +43-732-772014386

Email: office@esv.or.at

Web: www.wsed.at

DISCCRSV: Interdisciplinary Climate Change Research Symposium

**Arizona, USA:
13-03-2010 to 20-03-2010**

Aim of the Dissertations Initiative for the Advancement of Climate Change Research (DISCCRS) is to provide a week long symposium for scholars, researchers and mentors to discuss knowledge and insights and to establish collaborative contacts and networks. Participants must have completed their PhD in any discipline between April 2007 and July 2009. From those applying to attend the symposium, 34 scholars will be selected.

Details: Susan Weiler, Office for Earth System Studies, Whitman College, Walla Walla, WA 99362, USA.

Fax: +1-509-5275961

Email: info@disccrs.org

Web: www.disccrs.org/

DISCCRSposter.pdf

5th Annual International Symposium on Environment

**Athens, Greece:
20-05-2010 to 23-05-2010**

Main session topics include: energy which will cover efficiency, renewables, management strategies and technologies; water which will cover waste, quality, engineering and policies; and pollution which will cover atmospheric, climate change, cleaner production and management.

Details: Theophilos Theophanides, Athens Institute for Education and Re-

*search, 8 Valaoritou Street, Kolonaki 10671 Athens, Greece.
Fax: +30-210-3634209
Email: atiner@atiner.gr
Web: www.atiner.gr/docs/Environment.htm*

Resilient Cities 2010: 1st World Congress on Cities & Adaptation to Climate Change

**Bonn, Germany:
28-05-2010 to 30-05-2010**

Co-hosted by ICLEI - Local Governments for Sustainability - and the City of Bonn, this is the annual forum on urban resiliency and adaptation to climate change. Open to all partners of the ICLEI organization which has members across five continents, as well as interested parties from all related sectors. Aims to provide a forum for networking, discussion and policy propositions.

Details: ICLEI World Secretariat, 401 Richmond St, Studio 417, Toronto, Ontario M5V 3A8, Canada.

Fax: +1-416-6420954

Email: iclei@iclei.org

Web: www.iclei.org/bonn2010

ASLO-NABS 2010 Joint Meeting Santa Fe, USA:

06-06-2010 to 11-06-2010

Working theme of the meeting is "Global Changes from the Center to the Edge". Organized by the American Society of Limnology and Oceanography and the American Benthological Society. Aims to draw attention to the entirety of aquatic systems on which

humans depend encompassing the entire hydrological cycle. Session topics include watersheds, water resources, science education and public policy.

Details: 2010 Meeting Organizer, ASLO Business Office, 5400 Bosque Blvd, Suite 680, Waco, Texas 76710, USA.

Fax: +1-254-7763767

Email: business@aslo.org

Web: www.aslo.org

Third International Conference on Sustainable Irrigation Management, Technologies & Policies

**Bucharest, Romania:
07-06-2010 to 09-06-2010**

Will look at the strategic importance of fresh water resources, their over-exploitation, contamination and detrimental environmental effects. Participants will address the different aspects of irrigation including management, scientific and technical aspects together with matters related to policy and economics.

Details: Irene Moreno Millan, Sustainable Irrigation 2010, Wessex Institute of Technology, Ashurst Lodge, Ashurst, Southampton SO40 7AA, UK.

Fax: +44-238-0292853

Email: imoreno@wessex.ac.uk

Web: www.wessex.ac.uk/10-conferences/sustainable-irrigation-2010.html

2010 International Climate Change Adaptation Conference - Climate Adaptation Futures

**Gold Coast, Australia:
29-06-2010 to 01-07-2010**

Working theme of the conference is "Preparing for the unavoidable impacts of climate change". Co-hosted by the Australian National Climate Change Research Facility and the CSIRO Climate Adaptation Flagship. One of the first international forums to focus solely on climate impacts and adaptation, bringing together scientists and researchers from developed and developing nations.

Details: Conference Secretariat, YRD (Aust) Pty Ltd, PO Box 717, Indooroopilly, Qld 4068, Australia.

Fax: +61-7-33682433

Email: nccarf-conf2010@yrd.com.au

Web: www.nccarf.edu.au/conference2010

ISEE 2010 Conference: Advancing Sustainability in a Time of Crisis Oldenburg & Bremen, Germany: 22-08-2010 to 25-08-2010

The 11th biennial conference organized by the International Society for Ecological Economics. Main subjects for presentations and discussion include: climate change; energy; biodiversity and ecosystem services; sustainable development; land use; green business; environmental ethics and values; and ecology.

Details: Bernd Siebenhuner, School of Computing Science, Business Administration, Economics and Law, Carl von Ossietzky University of Oldenburg, 26111 Oldenburg, Germany.

Fax: +49-441-7984379

Email: bernd.siebenhuner@uni-oldenburg.de

British adaptation support

Prakriti Kashyap describes United Kingdom government action on climate change adaptation in developing countries and discusses the criticisms of its approaches

Adaptation is now both urgent and unavoidable in both developed and developing countries. Unlike the early years of global climate change discussions, adaptation is now also acknowledged as a necessary part of the global policy response to climate change. The Intergovernmental Panel on Climate Change defines adaptation to climate change as adjustments in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderate harm or exploit beneficial opportunities. Adaptation is especially urgent and necessary in less developed countries with the least human, institutional and financial capacity to anticipate and respond to climate change impacts. These countries need special support for adaptation.

Various studies show that tens of billions of dollars are required to support adaptation activities in developing countries, but

that there is currently a huge funding deficit. Existing adaptation financing falls into two categories. Firstly, the United Nations Framework Convention on Climate Change (UNFCCC) requires countries responsible for historic greenhouse gas emissions - Annex 1 countries (developed countries) - to provide funds and technology to support adaptation activities in developing countries. There are

MAIN POINTS

- **The author describes** approaches taken by the United Kingdom government to support climate change adaptation in developing countries.
- **She explains what drives** these approaches and discusses the criticisms levelled at them.
- **She concludes by detailing** what action the government should take to secure a fair deal for developing countries at the forthcoming climate treaty negotiations in Copenhagen.

three specific funds under the UNFCCC that target adaptation: the Least Developed Countries Fund, the Special Climate Change Fund and the Adaptation Fund.

Secondly, major donors and development agencies are also pledging funds through new bilateral and multilateral financing systems outside the UNFCCC. Voluntary bilateral funds that support adaptation in developing countries include: the Japanese Cool Earth Partnership, the European Commission's Global Climate Change Alliance, the United Kingdom (UK) government's Environment Transformation Fund - International Window (ETF-IW), and the Government of Germany's International Climate Initiatives. The World Bank administered Pilot Programme for Climate Resilience under the Strategic Climate Fund and the United Nations Development Programme administered Millennium Development Goals Achievement Fund - environment and climate change thematic



Collection of fuel wood, Cambodia

Photo: © Aaron Atteridge

window also have provisions for adaptation under their multilateral financing structures.

Adaptation is of interest not only for climate communities but for development communities too. Development agencies are working to ensure their development efforts are climate resilient. They are also analysing the impacts of climate change on development objectives

and identifying and minimizing the negative impacts of development activities on the climate. Donors claim this approach is a quick and effective way to mainstream adaptation into national development planning and pilot adaptation actions on the ground when compared to the longer bureaucratic and project-based UNFCCC approach. There are, however,

arguments against this approach. Adaptation financed from development budgets supports the 'mainstreaming of adaptation' rather than 'stand-alone adaptation' and is definitely not enough to ensure effective adaptation on its own.

This article explains the origins and rationale for the approach taken by donors (particularly the UK Department for International Development - DFID) to funding adaptation. The analysis is based on a literature review, the study of policy documents and detailed interviews with key experts in this relatively new and rapidly moving area of development donor activity.

UK government action on climate change

The UK has a long history of providing development assistance to alleviate poverty in developing countries. The UK government, through DFID, was one of the first donors to support adaptation by integrating it into its development portfolio, and it remains one of the largest. Domestic climate adaptation activities are managed by the Department for Environment, Food and Rural Affairs. The Department for Energy and Climate Change is responsible for climate change mitigation and for UNFCCC negotiations preparation. The UK government focuses its actions to tackle climate change on these important fronts: preventing dangerous climate change by reducing emissions and building low carbon economies, preparing poor countries for

the impacts of climate change by helping them adapt to climate change, and getting a coherent, coordinated, integrated global agreement.

The UK's financial contribution to climate activities in developing countries can be categorized into pledges for UNFCCC climate-specific funds, multilateral climate funds such as World Bank administered Climate Investment Funds, and many other bilateral regional programmes in Asia, Africa and Latin America. International development programmes administered through DFID country offices are also following climate-friendly pathways by focusing on strengthening societal adaptive capacity and reducing the vulnerability of the poor. UK support ranges from research, capacity building and specific interventions, to mitigation strategies. Adaptation, however, is a cross-cutting theme so interwoven through all parts of the UK government's international development support.

The announcement of £800 million being made available through the ETF-IW is a major UK government financial pledge. The ETF, announced in 2007, aims to reduce poverty, protect the environment and help developing countries tackle climate change. £50 million of this £800 million is earmarked to protect forests in the Congo basin. ETF money will be made available through the World Bank administered Climate Investment Funds, joining a multi-donor global effort to help tackle climate change and poverty. The Climate Investment Fund has two trust funds:

the Clean Technology Fund to help developing countries grow in cleaner, more efficient ways, for example, by using new and innovative technologies that reduce carbon emissions, and the Strategic Climate Fund. The Pilot Program for Climate Resilience is a programme under the multi-donor Climate Investment Funds, managed by the World Bank and regional development banks. It will help ten developing countries integrate climate risk and resilience into their core development planning, and then provide substantial programmatic resources to public and private sector investments identified through the planning process. The Forest Investment Program and the Program for Scaling-Up Renewable Energy in Low-Income Countries are also being designed within the Strategic Climate Fund.

Financial contributions made by the UK government to climate change adaptation include the following.

- £225 million of the £800 million ETF will be allocated to adaptation through the Pilot Programme for Climate Resilience.
- £22 million donated to the Least Developed Countries Fund and Special Climate Change Fund to help developing countries adapt to climate change. The UK was one of the largest and earliest donors to these funds.
- Covering the administrative and start-up costs of the Adaptation Fund.
- £13 million to help multilateral development banks move the Energy Investment

Framework forward - adaptation is a key part of this.

Why does the UK government support adaptation in developing countries?

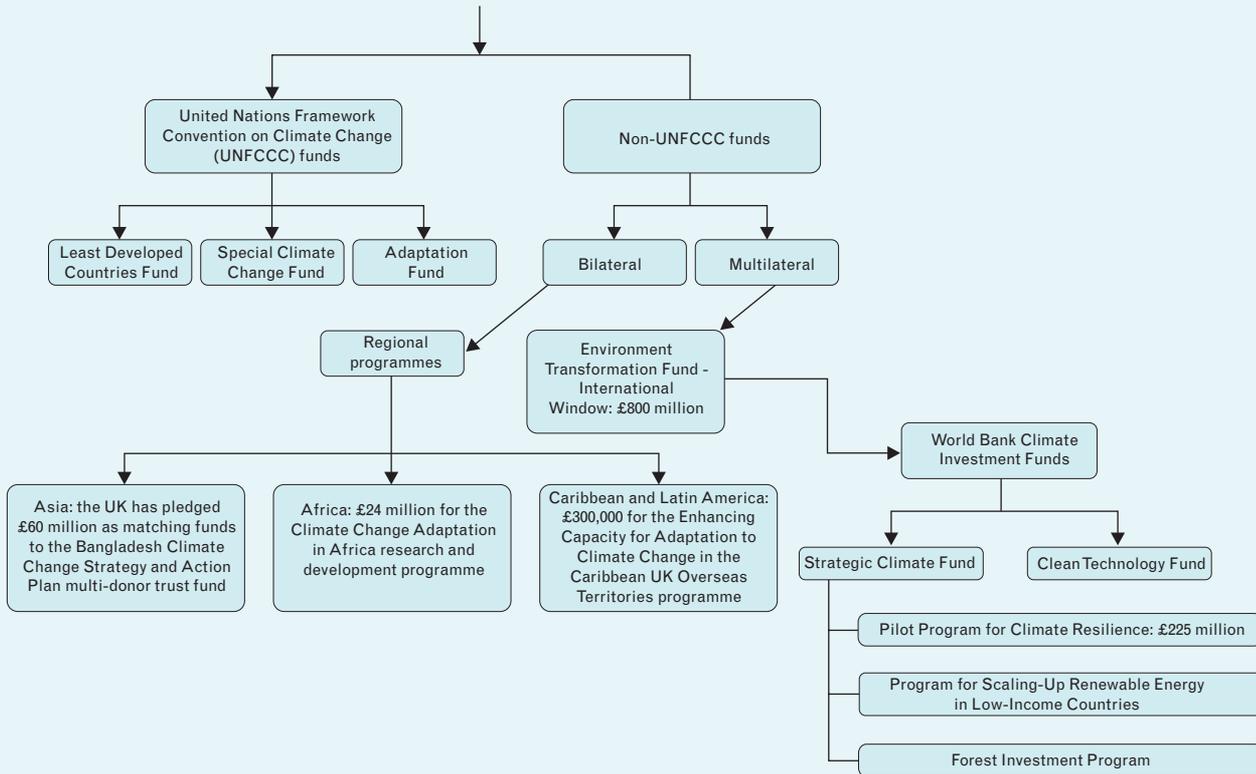
Development agencies are interested in adaptation because of the close links between poverty, climate change and development. But there are other drivers that have advanced UK government commitments to adaptation.

First, international negotiations like the UNFCCC are important policy drivers. The UNFCCC requires developed countries such as the UK to support developing countries and has specific funds for adaptation activities. International policy and strong domestic political support for climate change action has driven the development of domestic climate and development policies in the UK. Actions include the Climate Change Act 2008, and energy white papers and development white papers addressing the importance of adaptation strategies at national and international scales.

Second, political understanding of the emerging science on climate change has increased and this has helped prioritize adaptation. Climate change is a great podium for political parties to 'green' their image and gain popularity amongst the public and media at national and international levels. In the UK, the Labour government seems to have acknowledged the severity of climate

UK GOVERNMENT FUNDING ROUTES FOR CLIMATE CHANGE ADAPTATION

UK government climate change adaptation support



change and committed itself to tackling it. The 2005 G8 meeting at Gleneagles under the presidency of the UK introduced climate change to the agenda of an international political arena (other than the UNFCCC) for the first time. The commissioning of the 2006 Stern Review on the Economics of Climate Change by Her Majesty's Treasury, and the announcement of the £800 million ETF-IW has spurred on political momentum to make climate change a priority.

Third, whilst institutions are necessary to implement policy decisions, established institutions can also drive new policy directions. The Intergovernmental Panel on Climate Change, for example, has raised awareness about climate change science and adaptation and mitigation strategies. DFID has pushed internally to make adaptation a UK government priority, and other UK government departments and institutions like the Department for Environment, Food and Rural Affairs, the Department of Energy and Climate Change, the Office of Climate Change, Her Majesty's Treasury and even British embassies are also strategically positioning themselves on climate change issues.

Fourth, strong non-government organization pressure and wide media coverage of climate change impacts, such as flooding and sea-level rise in developing countries, have facilitated the process by drawing attention to the moral obligation of rich countries like the UK to take action.



Preparation of mud bricks, Sangkhlaburi, Thailand

Photo: © Aaron Atteridge

Finally, amongst all these driving factors, the UK has shown a willingness to become a 'front runner' in promoting adaptation support and has showcased several flagship interventions. There are suggestions that the UK government wants to become a pioneer in the climate change field. For example, it is one of the few countries to have pledged funding beyond its Kyoto Protocol commitments.

Criticism of UK action to support adaptation

Many claim that UK government initiatives are early and proactive, and that pilot adaptation activities will guide future adaptation strategies in developing countries. There is also criticism, however, regarding the way these initiatives are approached. Some feel

the UK government approach is merely a rebranding of existing overseas development assistance, undermines UNFCCC processes and promotes a top-down donor controlled approach to fund governance.

Rebranding existing overseas development assistance as support for climate adaptation goes against the spirit of the UNFCCC Bali Action Plan, which requires new and additional funds for adaptation. Provision of adaptation funding in the form of loans is also criticized for going against the compensatory nature of climate change liability. This requires rich industrialized countries to pay developing countries for the damage caused to the global climate by past emissions.

Top-down, donor driven and donor controlled access to funding is another criticism of UK adaptation support. Since climate funds are compensation money and not voluntary aid, developing countries want to have direct access to them without developed country interference and control. Developing countries and non-government organizations fear that the UK's preference for multilateral financing structures outside the UNFCCC will undermine the UNFCCC process, increase distrust and create confusion due to the proliferation of similar funding structures. World Bank involvement is also contested because the Bank is famous for supporting dirty coal-fuelled development instead of renewable energy, and also has an extremely undemocratic governance

structure. Promoting the World Bank as a vehicle for channelling adaptation funding is seen as donor countries wishing to undermine new UNFCCC institutional arrangements, which are more democratic and allow developing country parties an equal say in decision-making.

The UK on the road to Copenhagen

It is hoped that a new global post-Kyoto climate deal will be reached at the December 2009 Copenhagen UNFCCC negotiations, with a clear architecture for climate adaptation financing. For UK action on adaptation to be welcomed by all stakeholders and gain political recognition under the UNFCCC, a trustworthy momentum to the UNFCCC process, leading to a fair global climate deal, is essential.

A successful global post-2012 climate deal needs developing country participation to mitigate climate change. New and emerging polluters must join the emissions reduction targets and actions. But this will only be possible if developed countries like the UK fulfil their obligations on adaptation financing, respecting the spirit of the Bali Action Plan by providing new, additional, sustainable, predictable and equitable funds.

In order to promote an ambitious climate deal at Copenhagen the UK should concentrate its energy on consulting with developing countries, pushing the European Union for a clearer position on its commitments, particularly to financing adaptation activi-

ties in developing countries, and supporting the UNFCCC Least Developed Countries Fund, which requires at least US\$2 billion in it to implement the urgent activities identified by the Least Developed Countries in their National Adaptation Programmes of Action.

The UK must also internalize learning from current approaches such as the Pilot Programme for Climate Resilience, and replicate good practices in accordance with UNFCCC agreements and guidance. It will be interesting to see how the UK will change its adaptation support for developing countries in response to any Copenhagen deal.

Considering the close links between development and adaptation, development assistance cannot be completely decoupled from adaptation initiatives. If development agencies are to successfully deliver development objectives, they have no choice but to follow climate resilient development pathways integrating adaptation to climate change. It will, however, be important to closely observe the fate of adaptation driven by overseas development assistance under the UNFCCC negotiations.

The UK government must also do some in-house mitigation actions to make deep cuts in its greenhouse gas emissions. This will send a strong signal to the international community that it is serious about tackling climate change. ■

ABOUT THE AUTHOR



● **Prakriti Kashyap** has a Masters in Environmental Science, Policy and Management from the Central European University (Hungary), University of the Aegean (Greece), Lunds Universitet (Sweden) and University of Manchester (UK).

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● This article is based on the author's masters dissertation: *Exploring the UK Government's Climate Change Adaptation Support for Developing Countries* which draws on detailed interviews with key experts from the UK government, non-government organizations and research institutes. The author expresses her gratitude to all interviewees.

MALDIVES

Mohammed Nasheed, president of the Maldives, told world leaders at the United Nations Summit on Climate Change:

"We stand here and tell you just how bad things are. We warn you that unless you act quickly and decisively, our homeland and others like it will disappear before the rising sea, before the end of this century. We in the Maldives desperately want to believe that one day our words will have an effect, and so we continue to shout them even though, deep down, we know that you are not really listening."

Read more:
tinyurl.com/lyjej93n

CHINA

A commitment at the United Nations Summit on Climate Change by Chinese president Hu Jintao to slow his nation's rate of emissions growth has been widely applauded.

Hu announced that China would reduce carbon intensity by a "notable margin" from 2005 levels by the year 2020. "The world expects us to make a decision in the face of climate change, an issue which bears on mankind's survival and development," he said. "It's striking that China has come to New York with some real proposals while President Obama's speech was largely rhetorical," said Jennifer Haverkamp of the Environmental Defense Fund in the United States.

Read more:
tinyurl.com/lyjej93n

AFRICA

Using Africa's agricultural resources to address the climate problem could generate additional income amounting to US\$1.5 billion a year, according to Ngozi Okonjo-Iweala of the World Bank.

"It is essential that climate change be viewed as a major development opportunity for Africa," she said. A United Nations study has concluded that, by the year 2030, an estimated 5.5 to 6 gigatonnes of carbon dioxide equivalent a year could be mitigated by agriculture, with about 89 per cent achieved by soil carbon sequestration.

Read more:
tinyurl.com/lyj4hcbo

JAPAN

Japan has strengthened its proposed national emissions cut for the year 2020 to a 25 per cent reduction below 1990 levels, the most ambitious target advanced by a major industrialized nation.

"We can't stop climate change just by setting our own emissions target," said Japan's new prime minister Yukio Hatoyama. "Our nation will call on major countries around the world to set aggressive goals." Connie Hedegaard, Danish minister for climate and energy, said: "Japan has taken a bold step forward and set an ambitious target. I hope this will inspire other countries to follow suit."

Read more:
tinyurl.com/lykcb2n

MARSHALL PLAN

The latest World Economic and Social Survey, from the United Nations Department of Economic and Social Affairs, has called for a 'Marshall Plan' to help developing nations tackle climate change.

Shifting to clean energy and adapting to climate change would require "a level of international support and solidarity rarely mustered outside a wartime setting," the report concludes. "The ballpark figure... is one per cent of world GDP, something in the order currently of 500 billion to 600 billion dollars annually," said author Richard Kozul-Wright.

Read more:
tinyurl.com/lygxbt

Agriculture and the negotiations

Atiqur Rahman argues the importance of securing a better future for poor people reliant on agriculture in the forthcoming climate change negotiations

Unabated, climate change will have dramatic and irreversible consequences for agriculture. Water availability will become more variable, droughts and floods will be more frequent and sea-level rise will cause salinity to affect large tracts of coastal areas. In most developing countries agricultural productivity will decline. Food shortages, climate-induced migration and conflicts for scarce resources such as water are predicted to become more frequent.

For 1.4 billion poor rural people in developing countries, mostly dependent on agriculture, this will mean increasing poverty and a rolling back of the gains made in realizing the Millennium Development Goals. They risk losing their meager livelihoods and sliding back deeper into poverty and hunger.

Poor countries lack physical, financial and technological resources to meet these

challenges. Donors and global actors such as the United Nations system, committed to achieving the Millennium Development Goals, are responsible for ensuring that poor people, who have contributed least to greenhouse gas emissions, are protected from their adverse consequences. Within the United Nations system, each agency working in its area of comparative advan-

MAIN POINTS

- **The author describes how** climate change will have huge impacts on agriculture, which supports the livelihoods of 1.4 billion poor people.
- **He outlines how** donors and global actors must help poor people meet the

challenges of climate change.

- **He stresses the importance of** including stakeholders such as poor groups in the negotiations process and not just the negotiating parties.

tage can, and should, provide the support needed to help poor people meet the challenges of climate change.

The ongoing negotiations for a post-Kyoto Protocol regime under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC) provide an opportunity to bring various actors under one umbrella. This opportunity must be seized and directed to the benefit of poor rural people.

Any action plan has to start with the development of strong advocacy messages to convince negotiating parties of the full potential of the agricultural sector in mitigating and adapting to climate change. The interagency task force on land degradation is working to this effect, but work will have to expand to encompass other stakeholders such as civil society and the private sector.

Provision of adequate resources remains the most important stumbling block in re-



Zambezi Valley - Oikos demonstration crop field in Mutarara district, Mozambique

Photo: © Borja Cuervo Alonso EC/ECHO

alizing the full mitigation and adaptation potential of the agricultural sector. Poor countries need to be engaged much more effectively in accessing the various global funds for mitigation. The Clean Development Mechanism has so far failed to benefit most

developing countries with the exception of large nations like India and China. There is an inherent bias in this mechanism which only allows large developing countries access to it. The high technical demands for developing, processing and verifying Clean

Development Mechanism projects are often beyond the reach of most developing countries. They need institutional support to access these funds. Capacity needs to be built at national and international levels to bulk products together and sell them for carbon credits. United Nations agencies, like the International Fund for Agricultural Development and others, could help these countries develop their products with technical help, funding and advice as needed.

With appropriate incentives, poor communities can contribute significantly to carbon sequestration and reducing carbon emissions. Schemes promoting payments for environmental services have shown encouraging results in many areas. These can be replicated and institutionalized with adequate financial support, for example, by creating a global fund for providing payments for environmental services channelled to local communities.

Other actions can also increase the availability of local level funding, for example, budgetary support from governments or the private sector. They can be engaged through innovative initiatives like microinsurance schemes (such as the weather-indexed insurance scheme currently being supported by the International Fund for Agricultural Development and World Food Programme under a Bill Gates Foundation scheme) and microcredit programmes.

Poor countries are now being challenged to adapt to irregular and often abrupt cli-

matic conditions. Local community knowledge on climate change adaptation is useful, but increasingly irregular climate change requires much better adaptation measures to cope with such changes. There is no firm estimate of total adaptation costs, but available estimates indicate that requirements may run into billions of dollars. The funds set up under the UNFCCC are totally inadequate to meet these needs. Agencies like the International Fund for Agricultural Development

Further research on the links between adaptation and mitigation is needed. This could be promoted by setting up a special research and technology fund, which could also be directed at developing technologies for adaptation and disseminating them widely in developing countries.

The development community must support the creation of strong monitoring and verification systems for impacts due to natural and anthropogenic changes in the climate

“ the Clean Development Mechanism has so far failed to benefit most developing countries with the exception of large nations like India and China ”

and others must press for increasing the volume of resources available for adaptation support.

Adaptation, however, need not be hugely expensive. There are various community-driven low-cost adaptation options. The Adaptation Fund set up at the thirteenth Conference of Parties to the UNFCCC in Bali in 2007 should make provision for promoting such low-cost local level options using local institutions such as farmer's organizations, local communities and indigenous peoples' groups. Developing countries need strong support to develop their capacities to take advantage of these and other climate change related funding mechanisms and facilities.

and impacts averted due to better adaptation and mitigation practices. Local data are often available, but these need to be standardized and put into a data bank for use by all stakeholders trying to devise better ways of dealing with climate change.

Lastly, it is important to include all stakeholders in the negotiations process and not just the negotiating parties. Poor people must get a chance to voice their concerns, and stakeholders such as civil society and grassroots organizations of poor people should all take part in the negotiations to develop an agreement for a new climate change regime. ■

ABOUT THE AUTHOR



● **Atiqur Rahman**, a Bangladesh national, is Lead Strategist and Policy Coordinator at the International Fund for Agricultural Development, responsible for coordinating policy work on climate change. He holds a PhD from Cambridge University and has published extensively on development issues.

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FURTHER INFORMATION

● **On the Web:** Rachel Slater and her co-authors at the Overseas Development Institute in the United Kingdom discuss climate change, agricultural policy and poverty reduction at tinyurl.com/jygcy7kw.

Does Kyoto have a future?

NEWS

BANGKOK

Bangkok was the venue for the October round of this year's intensive climate negotiations. Tiempo editors Mick Kelly and Sarah Granich report.

Members of the G77 group of developing nations walked out of the Bangkok Climate Change Talks in protest at moves to replace the Kyoto Protocol with a completely new agreement in the post-2012 climate regime. "Do we keep totally separate regimes for the two constituencies, or do we start building what the United States calls a continuum that includes both - that's the big question," said Claire Parker, consultant to the International Union for Conservation of Nature.

The G77 is extremely concerned that developed countries who are party to the Kyoto Protocol might not agree to new targets for the second commitment period of the Protocol, Alf Wills, spokesman for South Africa, told Reuters. "The G77 rejects the notion and proposal to collapse or 'cut and paste the good parts of the Kyoto Protocol' (one wonders what the bad

parts are) into a new single legal instrument under the Convention," he said.

The European Union is concerned that the Kyoto framework does not permit the inclusion of developing nations in a single global agreement. "We can all continue to argue in favour of maintaining Kyoto. We think that's not enough. We need to have a wider participation. We're not convinced we will get this into the Kyoto Protocol as we know it," stated European Commission delegate Karl Falkenberg. "If the United States joined with other countries in the developed world without other major economies [such as India and China], we don't solve the problem," said United States negotiator Jonathan Pershing.

The United States came in for criticism over its failure to commit to a tough emissions target for the year 2020. "I think that they are in an uncomfortable position since they cannot put on the table any figures unless the Congress process is clearer," commented Fernando Tudela from Mexico. "They are increasingly identified as a stumbling block for the negotiations and it's up to them to dispel this perception and to show the real leadership we're expecting from them," he continued.

The heated debate notwithstanding, Yvo de Boer, head of the climate treaty secretariat, remained optimistic. "This is the first time over the past two years that we have seen this kind of constructive focus on how we are actually going to make this thing work," he said.

Further progress was made on Reducing Emissions from Deforestation and forest Degradation, which now includes conservation, sustainable management of forests and enhancement of forest carbon stocks (termed REDD-plus).

"REDD-plus is capable of delivering durable emissions reductions," said Carole Saint-Laurent, forest policy advisor for the International Union for Conservation of Nature. "However, it must be agreed that countries will be rewarded as they move from preparation of REDD-plus actions to verified performance for putting in place safeguards for biodiversity and ecosystem services, and good governance arrangements, including the participation of stakeholders."

● **Further information:** Daily reports and a meeting summary are available from Earth Negotiations Bulletin at www.iisd.ca/climate/ccwg7/.

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think of our earth and its people...



...act unselfishly, for all our sakes!

Lawrence Moore

Mainstreaming adaptation

Climate change is not perceived as a priority by the planners and policy makers in most poor countries because of more urgent survival needs, including diseases such as HIV/AIDS, education, infrastructure and poverty. Vulnerability to climate impacts is, however, rapidly becoming a national concern in Tanzania. Impacts on agriculture and water resources due to extreme weather events, impacts on infrastructures such as roads, railways and bridges due to floods and cyclones, impacts on tourism and coastal resources due to sea-level rise and impacts on forest resources are starting to change the thinking and style of both planners and policy makers. Mainstreaming of climate change issues in the process of preparing National Adaptation Programmes of Action (NAPAs) has also helped to raise awareness.

Mainstreaming entails integration of sustainability principles into development strategies and, for most poor countries, building capacities for better identification of environ-

mental concerns and opportunities. It also entails the execution of appropriate interventions and performance indicators and attendant capacity to monitor progress. The latter implies properly integrating actions into plans and budgets. In Tanzania, the local government planning and budget cycle requires that planning should start at the lowest level where most people are vulnerable and thus emphasizes a bottom-up planning approach to ensure that people's priorities and concerns are captured.

THE FINAL WORD

M. J. Mwandosya
considers key issues
in implementing
adaptation
measures.

There is a clear need to link climate change concerns with poverty eradication efforts at all levels. Tanzania has issued guidelines for mainstreaming environment, including climate change, into the National Strategy on Growth and Reduction of Poverty. Changes will be required in the way that baseline development assistance is delivered to create integrated strategies for climate-resilient development.

At the global level, efforts such as the climate treaty initiatives and the Kyoto Protocol

mechanisms can, through mainstreaming, play a significant role in changing the planning process. Yet inadequate resources are being committed by the international community to address the issue of vulnerability of local communities and their resources in poor countries. Meeting both mitigation and adaptation costs requires adequate international financial and technical support be set aside through processes such as the Least Developed Country Fund and Adaptation Fund. Continuing support for the development of current NAPAs so that they can become long-term strategic climate change adaptation planning documents is critical, as is support for their implementation to enhance local coping strategies and planning processes at district and village levels.



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