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On: 09 July 2014, At: 02:39 Publisher: Taylor & Francis

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Climate and Development

Publication details, including instructions for authors and subscription information: http://www.tandfonline.com/loi/tcld20

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Published online: 23 Jun 2014.

To cite this article: Elizabeth Gogoi, Mairi Dupar, Lindsey Jones, Claudia Martinez & Lisa McNamara (2014): Enablers for delivering community-based adaptation at scale, Climate and Development, DOI: 10.1080/17565529.2014.918869

To link to this article: http://dx.doi.org/10.1080/17565529.2014.918869

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VIEWPOINT

Enablers for delivering community-based adaptation at scale

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(Received 2 September 2013; accepted 18 February 2014)

1. Introduction

A successful community based adaptation (CBA) initiative which results in the design and delivery of grassroots-generated solutions to adapting to the impacts of climate change is of value to the community involved, but can have little wider impact. If these isolated examples are considered CBA *pilots*, then how to learn from and scale out the pilot is the necessary next phase. CBA pilots can be considered as 'laboratories of innovation'.

There is no single path to delivering CBA at a scale needed to have a significant impact. Mainstreaming CBA pilots into government development plans and programmes is one route, but other actors such as the private sector and NGOs are also capable of delivering CBA at scale. Irrespective of who is the agent, one key challenge is to retain the fundamental principle of community empowerment.

This viewpoint reflects on the work of the Climate Development Knowledge Network (CDKN), a programme funded by the UK and Dutch Governments, which aims to help decision-makers in developing countries design and deliver climate-compatible development. Based on a selection of projects supported around the world it highlights some apparent enabling factors for scaling-out: networks and partnerships; documenting evidence and learning; strong adaptive capacity; and deployment of cost-effective institutional channels and finance mechanisms.

2. Networks and partnerships

In Cartagena, a coastal city in Colombia with a population of only 900,000, the city government, NGOs, and business worked together to assess and understand climate impacts and continue to work towards policy integration, demonstrating how diverse actors' comparative strengths in

technical, financial and human resources and in local knowledge can blend to achieve policy progress.

The city faces immediate and future threats from a changing climate such as flooding and storms, which poses a risk for population displacement and the spread of diseases (Adams, Castrol, Martinez, & Sierra-Correa, 2013). A research institute of marine and coastal research, INVEMAR (Instituto de Investigaciones Marinas yCosteras), forged an alliance in 2011–2012 with the municipality of Cartagena, the Cartagena Chamber of Commerce, and CDKN to undertake the city's first comprehensive and participatory vulnerability assessment and adaptation plans (CDKN, 2013).

The institutional support provided by the municipal government has been central to this achievement. Despite tumult in the mayor's office, with four mayors in two years, there has been constant support by senior civil servants in the city administration. INVEMAR, a well-respected scientific institute, has played a critical role in framing the discussion by, for instance, utilizing down-scaled climate models and graphic imaging to produce artwork showing how the city will be affected by future sea level rise. Despite initial scepticism, various business leaders have also played an important role in ensuring that adaptation options are prioritized within local planning processes.

Scaling-out is occurring simultaneously on three fronts: the geographic area covered by the assessment has expanded to include Cartagena's island territories, as well as the mainland; the national government is watching the Cartagena process closely as it develops and refines national-level adaptation plans; and, other coastal cities in Colombia are looking directly to see how elements of Cartagena's approach can be adopted by their own administrations. Cartagena is seen as a 'first mover' for the leadership and innovation that this city 'community' is showing on adaptation.

Local multi-sectoral partnerships have been the cornerstone to progress in Cartagena so far and will be central to other successful CBA pilots in Colombia and beyond. This catalytic role of 'expert' actors, usually an NGO, research institute or international agency, is typical of most documented CBA pilots. While communities themselves experience climate impacts first hand and are frequently able to deploy indigenous knowledge or generate their own innovations, external experts are in the position to provide resources and technical support and transmit supplementary information. Having a network of such partnerships between the community and outside agents who themselves have national and international connections provides a valuable structure and institutional support for scaled-out CBA.

3. Evidence and learning

Bangladesh, labelled as the 'adaptation capital of the world', has been a pioneer in CBA and has a flourishing NGO sector supporting pilot initiatives throughout the country (Huq, 2013). The country is now establishing platforms and networks that are bringing visibility and accountability to CBA pilots in order to encourage scaling-out. Over 20 INGOs and research partners are implementing a programme of research called 'Action Research on CBA in Bangladesh' (ARCAB) as well as providing a platform to jointly promote CBA in Bangladesh and beyond. An annual international conference on CBA is now a regular fixture and this emerging 'community of practice' has also spread to two new online forums (weADAPT and the CBA Exchange) further increasing the visibility of CBA initiatives. While there is anecdotal evidence that the exposure provided to CBA pilots and practitioners through these networking opportunities has resulted in some instances of scaling-out, research is required to confirm this (Gundel, Anderson, Kaur, & Schoch, 2013).

A visible CBA pilot will only be taken further and considered for scaling-out by an institution if it can prove its value. ARCAB has recognized this and developed a framework, tool and manual for participatory monitoring and evaluation (M&E) of CBA which considers whether achievements match expectations, whether achievements were the right ones, and whether CBA is being done in the right way and reaching the right scale (Action Research for Community Adaptation in Bangladesh, 2012). For example, by using this approach ActionAid found that while their CBA projects in Bangladesh have moved beyond business-as-usual approaches to development and disaster risk reduction, the communities need further support for anticipating and adapting to longer term climate change risk (Faulkner & Ali, 2012). M&E also needs to go beyond looking at how effective the CBA pilot is, to how efficient it is and the scale of benefits for communities relative to the level of investment (Sova, Chaudhury, Helfgott, & Corner-Dolloff, 2012). One of the key reasons why there have been so few success stories for scaling-out is that they are considered too time- and resource-intensive.

The work of ARCAB and others in Bangladesh is testing the hypothesis that a CBA pilot needs to be visible, well-documented and assessed in order to instigate scaling-out by other institutions and actors. Their efforts are illustrating the connection between understanding and learning from CBA pilots and scaling-out.

4. Ensuring CBA supports characteristics of adaptive capacity

A core challenge in scaling-out CBA beyond a piloting stage is the localized nature of adaptive capacity and opportunities for delivering effective adaptation. Success factors in one community may not translate or be replicable in another community context. Despite this, broad commonalities can be drawn from across a range of contexts which help one to focus attention on how CBA pilots can be scaled out.

The Africa Climate Change Resilience Alliance (ACCRA), a network of five INGOs and research partners working in Mozambique, Ethiopia and Uganda, is attempting to better understand these commonalities. Their Local Adaptive Capacity (LAC) framework breaks the adaptive capacity into five characteristics: access to and availability of assets; institutions and entitlements; knowledge and information; innovation; and flexible forward looking decision-making (see Jones, Ludi, & Levine, 2010). ACCRA used the LAC to assess how community-level projects impact on each of the characteristics of adaptive capacity. Their findings have important implications for the design and delivery of CBA at scale.

First, the characteristics of adaptive capacity do not act in isolation: they interact and depend on each other. Therefore, community-level adaptation interventions that focus simply on a single characteristic – such as the provision of physical assets and capitals – are unlikely to address the full spectrum of processes needed to support adaptive capacity (Levine, Ludi, & Jones, 2011). Successful adaptation happens when people understand and fully exploit the interconnected nature of each characteristic. Second is a need to 'rethink' participation; for community priorities to be adequately recognized in the implementation of CBA requires meaningful engagements with local actors, addressing power imbalances, and a two-way sharing of knowledge and information that is rarely achieved in the delivery of 'traditional' development objectives (Levine et al., 2011). Third, greater emphasis is needed on supporting autonomous innovation. People's own ability and practice of experimentation and innovation is one of the key manifestations of their agency. For CBA activities to successfully capitalize on this requires (a) an understanding of how local agents are innovating and (b) an understanding of the constraints to experimentation and uptake of new ideas

ACCRA's experiences serve to document how understanding the factors that support a community's capacity to adapt to change is crucial for successfully scaling-out CBA. More importantly, the network's findings show how CBA activities can learn from the experiences – successes and failures – of wider development interventions, many of which are well documented.

5. Finance and institutional mechanisms

An institution needs to be willing and able to deliver CBA at scale. The government would be the obvious choice, with political will and competent and decentralized institutions and governance appearing to be necessary conditions. In fact, the decentralization of appropriate levels of decision-making and management has to go further and rest with the community itself if CBA is to retain its unique community-driven character. The institutional and funding structures to manage scaling out a CBA pilot has to be flexible, and allow culture and indigenous norms or knowledge to determine outcomes.

Private sector actors can in some instances be the agent for scaling-out CBA pilots. For example, Dunavant Zambia Ltd. is the largest cotton ginning company in Zambia, working with over 100,000 small-holder farmers annually through contract farming systems. This involves prior agreements for farmers to produce an agricultural product in a certain manner for a buyer for a guaranteed price. Dunavant Zambia has recognized the potential of community-based agroforestry and conservation farming programmes for improving yields, which have been pioneered in the country since the mid-1990s by Zambia's Conservation Farming Unit and the World Agroforestry Centre (Ward, 2011).

Although many climate-resilient agricultural technologies such as tree crops and conservation farming practices yield long-term benefits, their high upfront input costs discourage adoption by small-holder farmers (Innovations for Poverty Africa [IPA], 2013). However, DunavantZambia have a commercial interest in encouraging soil fertility and higher future agricultural yields. They, therefore, formed a partnership with the NGO Shared Value Africa through the 'Trees on Farms' programme to encourage the adoption of fertilizer trees by their farmers as a strategy to increase long-term soil fertility and crop yields.

The scaling-out process for the Trees on Farms programme has not yet reached the expected level, but shows positive signs. In November 2011, around 2500 farmers received training on tree planting, and there has been high demand for the programme, with 83% take-up for the 1300 farmers studied (IPA, 2013). At the end of the first year, there were a total of 19,400 surviving trees under the care of 700 farmers in the research group (IPA, 2013). DunavantZambia has plans to scale up the current programme to the central and southern parts of the

country to reach 10,000 or more farmers in 2013 (K. Jack, interview, May 14, 2013).

This case indicates that the commercial interests of companies and the climate change and development objectives of communities and NGOs can positively coincide and be a strategy for scaling-out CBA pilots. Private sector flexibility and openness to innovation make commercial companies important role-players in experimenting with novel ways to expand to new communities (K. Jack, interview, May 14, 2013). Commodity crop firms such as DunavantZambia also have existing systems and infrastructure such as training services for farmers that can be harnessed for CBA, which may improve CBA efficiency and cost-effectiveness. However, there are challenges to using the private sector to deliver CBA such as the need to protect the participatory nature of CBA which is focused on the most vulnerable. Government will also remain an important actor by providing supportive policy frameworks, such as subsidizing natural fertilization methods (Ward, 2011).

6. Conclusion

These lessons from Africa, Asia and Latin America on scaling-out CBA suggest there is not one single model or path to scaling out of CBA pilots. Mainstreaming within the development planning process is just one option, with other actors such as the private sector also being potential delivery partners. The context and specifics determine where and how scaling-out can be achieved. However, CDKN's experience suggests that there are some key enabling factors which support the process. Further documentation and assessment of instances when the impact of an individual CBA pilot has been expanded to a larger scale are required. A more rigorous analysis of these enabling factors would help practitioners design and implement CBA pilots, and help external actors, including governments and donors to provide the correct enabling environment.

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