Reg Environ Change (2014) 14:713–725
DOI 10.1007/s10113-013-0533-4

ORIGINAL ARTICLE

Advancing climate compatible development: lessons from southern Africa

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Received: 22 March 2013 / Accepted: 30 August 2013 / Published online: 19 September 2013

Abstract Climate compatible development (CCD) has emerged as a new concept that bridges climate change adaptation, mitigation and community-based development. Progress towards CCD requires multi-stakeholder, multi-sector working and the development of partnerships between actors who may not otherwise have worked together. This creates challenges and opportunities that require careful examination at project and institutional levels and necessitates the sharing of experiences between different settings. In this paper, we draw on the outcomes from a multi-stakeholder workshop held in Mozambique in 2012, the final in a series of activities in a regional project assessing emerging CCD partnerships across southern Africa. The workshop involved policymakers, researchers and representatives from NGOs and the private sector. We employ a content analysis of workshop notes and presentations to identify the progress and challenges in moving four case study countries (the Democratic Republic of the Congo, Mozambique, Zambia and Zimbabwe) towards CCD pathways, by exploring experiences from both project and policy levels. To advance institutional support for the development of successful CCD policies, practices and partnerships, we conclude that there is a need for: (a) institutional development at the national level to strengthen coordination and more clearly define roles and responsibilities across sectors, based on the identification of capacity and knowledge gaps; (b) partnership development, drawing on key strengths and competences of different stakeholders and emphasising the roles of the private sector and traditional authorities; (c) learning and knowledge-sharing through national and regional fora; and (d) development of mechanisms that permit more equitable and transparent

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distribution of costs and benefits. These factors can facilitate development of multi-stakeholder, multi-level partnerships that are grounded in community engagement from the outset, helping to translate CCD policy statements into on-the-ground action.

Keywords Climate change · Adaptation · Mitigation · Southern Africa · Multi-sector approaches · Policy · Community-based development

Introduction

It is increasingly recognised that human development and economic growth in developing countries are threatened by the impacts of climate change and that efforts to mitigate climate change need to be compliant with the broader context of countries' overall development trajectories (Kok et al. 2008; Sathaye et al. 2007). At the same time, the historical disconnect between climate change adaptation and mitigation activities is being questioned (Kane and Shogren 2000; Tompkins and Adger 2005) as opportunities to simultaneously address adaptation, mitigation and development are beginning to be identified. These realisations have led researchers to coin the term 'climate compatible development' (CCD), defined as 'development that minimises the harm caused by climate impacts while maximising the many human development opportunities presented by a low emissions, more resilient future' (Mitchell and Maxwell 2010: 1). In tandem, policy efforts are shifting towards more integrated national-level approaches, capable of enhancing cross-sectoral co-ordination to support projects that offer 'triple-wins' (Brickell et al. 2012; Stringer et al. 2012a; Tompkins et al. 2013). While most research on CCD has been dedicated to the theoretical concept and the value it can add compared with related conceptual framings such as sustainable development, green growth and climate-resilient development (cf. Nelson and Lamboll 2012), enquiries are starting to take place to understand how CCD can be operationalised in practice (CDKN 2012). The research presented here contributes to the latter efforts and views CCD as an overarching development outcome.

In this paper, we explore understandings, implementation and the emerging added value of CCD-guided interventions at national and regional levels in southern Africa. We analyse the outcomes from a multi-stakeholder workshop held in Mozambique in November 2012 (the final in a series of activities in a regional project that included local-level analysis of nine case study projects) in order to:

1. Assess national awareness of the concept of CCD and the ways in which it is emerging in national policy and project development in four case study countries [Democratic Republic of the Congo (DRC), Mozambique, Zambia and Zimbabwe];
2. Explore the factors that have aided and hindered the translation of CCD into action, drawing on experiences from local-level case study projects presented during the workshop;
3. Identify the key policy and implementation lessons across different sectors and governance levels (local, national and regional) at the stage of CCD operationalisation, with a view to informing enhanced CCD practice.

While the academic literature provides a growing range of examples of CCD implementation, these are often presented as single cases and centre on analyses of local-level project design and implementation. The novelty of this paper lies in its analysis of lessons from four different national settings, looking vertically and horizontally across governance levels and sectors therein, while also contextualising project lessons within broader regional experiences. As such, it fills an important gap in the literature and presents the first large-scale regional analysis of its kind.

In the following sections, we first situate CCD within a broader review of relationships between development and climate change. We then outline our regional focus and study countries. The workshop methodology and approach to analysis is presented, before we evaluate the main findings. We conclude with recommendations to enhance the translation of CCD from policy to practice, identifying the national and regional bodies that could facilitate CCD pathways.

From development and climate change towards climate compatible development

Development in much of the world has typically involved a period of intensive natural resource extraction, leading to industrialisation and economic transformation away from primary agricultural production, towards manufacturing and services industries. While development economics has provided a range of different approaches through which this can take place, the shift away from dependence on the natural resource base for the majority of the population has proven elusive for most of Africa. Indeed, in many African countries, agriculture and forestry remain dominant economic sectors, with agriculture still accounting for approximately 40 % of the continent's hard currency earnings (NEPAD 2002). Natural resources are also important in spreading the risk associated with the availability of food over critical periods and as a means of supplementing local incomes (Shackleton and Shackleton 2004). The large share of economic output linked to the natural resource base means African countries are

particularly sensitive to changing climatic conditions (Boko et al. 2007)—particularly where people are already pursuing marginal livelihoods (Patt et al. 2010) and where climate change amplifies the stresses experienced in other aspects of development (Davis 2011). At the same time, developing countries often lack adaptive capacity, due to poor governance, poor infrastructural development, lack of information and limited access to financial resources (Füssel 2009). Some commentators have suggested that development is the best pathway towards adaptation (e.g. Fankhauser and Burton 2011), while others have argued that development is contingent upon adaptation, whereby accumulation of capital stocks and welfare advances associated with development come after successful adaptation (World Bank 2010).

Dasgupta (1993) proposed that development concepts need to pay special attention to the distribution of resources and that policymakers need to ensure that the foundations for human well-being are provided, in the form of, e.g. education, healthcare, energy, food. Sen (1999) views development as freedom of the individual, which in turn requires access to basic key resources to enable needs to be met. A collective element is also important, however, because individual freedom should not be prevented by the activities of others. Climate change results from changes to the atmosphere, an open-access, common property resource. The behaviour and actions of one group of actors in relation to the atmosphere, e.g. countries or sectors with high greenhouse gas emissions, have an impact that affects other actors, including those with lower emissions or with a less-advanced development status (Paavola 2008). The global nature of the atmospheric commons means that exclusion is not possible; the impacts of climate change cannot be targeted towards particular groups or locations, despite efforts to develop rules and processes for benefit and cost sharing, regulation, enforcement and sanctions. This demonstrates how resource allocation, equity and well-being aspects interact: the global scale of climate change affects the freedom of people everywhere to access resources for human well-being in order to pursue their development goals, yet it is those less-developed nations with weak institutions that will be most negatively influenced. Thus, the impacts of climate change are inextricably linked to development challenges.

Efforts to manage climate change are deeply embedded in broader socio-economic processes, including human development (encompassing well-being, basic needs and equity), technological innovation (Forsyth 2007), resource production and consumption patterns and institutional and political frameworks (Haleaes and Verhagen 2007). The dominant underpinning policy approaches used to manage these processes are often grounded (at least in part) in the neoclassical economic paradigm, which is broadly concerned with creating optimal resource allocation. This requires the internalisation of environmental externalities into the market mechanism, through the use of, e.g. taxes, insurance and so on (ibid.). The clean development mechanism (CDM) represents one such example of this approach. It provides incentives to address and internalise externalities related to greenhouse gas emissions reductions (Zhang and Maruyama 2001), although it is widely considered to have failed Africa, offering important lessons for future attempts to deliver other market-based mechanisms, such as Payments for Ecosystem Services (Gold Standard 2011). Despite the international support for these kinds of market-based approaches, they tend to overlook the inefficiencies in resource allocations in developing countries attributed to a weak institutional basis, as well as equity concerns linked to human well-being. If institutions are conceptualised as the structures that shape resource allocations and markets, and if market mechanisms are employed to tackle climate change, it follows that weak institutions restrict a country's ability to employ an equitable and efficient approach to managing climate change.

The concept of CCD offers a way to bring together climate change adaptation, mitigation and development such that individuals, communities and nations can access resources by embracing growth and well-being elements. It calls for institutional changes that allow integration of climate change and development. At a minimum, it requires the mainstreaming of climate change into development policy (cf. Akhtar-Schuster et al. 2011) and demands institutions to be built and strengthened to help reduce risks and move towards greater equity and efficiency. Collaboration is also important, as to achieve CCD requires cross-sectoral, cross-scale and multi-stakeholder efforts (Bryan et al. 2010; Stringer et al. 2012a, b). Some researchers suggest that the necessary multi-stakeholder, multi-sector working and interaction between groups at multiple scales, from the project to the policy level, can permit synergies to be harnessed, trade-offs to be reduced and specific gaps to be targeted (Forsyth 2007; Pinske and Kolk 2012). By building partnerships, actors can come together to build on each other's strengths, to address each other's weaknesses and gaps, while also cross-leveraging resources, knowledge and expertise (Andonova et al. 2009). This can create the pre-conditions for institution building and institutional strengthening.

Critical evaluations of multi-stakeholder partnership approaches and the synthesis of lessons emerging from experience in the context of CCD remain sparse. This is due largely to the relatively recent emergence of the concept. Useful lessons can, however, be gleaned from other spheres. For example, developing areas such as southern Africa have a long history of multi-stakeholder partnership approaches, grounded in community-based conservation

initiatives (Adams and Hulme 2001; Blaikie 2006; King 2007), and community-based rangeland management efforts (Reed et al. 2008, 2011; Rohde et al. 2006). Good practices from each of these highlight the importance of understanding and building on existing local institutional and governance structures and processes and in delivering social as well as economic benefits (Klintenberg et al. 2007; Dougill et al. 2012). Additionally, failures from these case studies highlight areas in existing local, national institutional and governance structures that require improvements in order to successfully implement CCD projects (Phiri et al. 2012).

At the national level, such cross-sector partnerships and interlinkages are less well developed (Stringer et al. 2012b; Chasek et al. 2011). This is especially so in countries with particularly dynamic governance contexts, which have experienced recent (<30 years ago) localised tensions and widespread conflict in the form of civil war or political unrest. In nations and areas affected by these issues, climate change can act as a threat multiplier, while at the same time, the flux in governance structures and national-level institutions could limit the benefits delivered by CCD as the concept is translated from policy to action. Within these complex and contrasting settings, investments must be supported by new forms of multi-stakeholder collaborative working. The international climate regime has committed substantial climate finance resources to help developing countries to instigate such changes and embark on appropriate CCD pathways (Peskett and Stephenson 2010). However, for countries to advance along CCD trajectories, they need to: (a) be aware of the concept of CCD; (b) have the capacity and institutional structures in place to support CCD and the multi-stakeholder partnerships and cross-sector collaborations it demands; and (c) know how CCD can be operationalised in practice.

Regional focus and study countries

The regional focus for this paper is southern Africa, with particular attention on four countries with different governance contexts: the DRC, Mozambique, Zambia and Zimbabwe. Focus on these countries provides the opportunity for comparison, also allowing us to seek explanation regarding the factors that appear to support or inhibit CCD within each context. Both DRC and Mozambique have experienced large-scale conflict and civil war over the past 30 years, while in Zambia, localised conflicts have ensued over resource use due to mining activities (Syampungani et al. 2009), and the impacts of civil war in neighbouring countries such as Angola precipitated large refugee influxes that have led to resource tensions. In Zimbabwe, economic instability and political uncertainty have created challenging conditions for private sector and NGO initiatives aimed at establishing multi-stakeholder partnerships, such as those faced by the CAMPFIRE programme since 2000 (Balint and Mashinya 2008). These study countries provide an interesting focus as they can be said to lack a strong institutional starting point from which to tackle climate change while facing significant development challenges, including high levels of vulnerability to climate change impacts on future agricultural production (Davis 2011). Through comparison between the countries, shared challenges and opportunities can be identified, and explanations sought for similarities and differences. While these countries represent only a sample of those in the southern Africa region, the lessons learned can provide an important starting point for consideration of their applicability across the region.

Various similarities and differences are apparent in the focus of CCD activities in each of our study countries. Both DRC and Zambia are pilot countries in the emerging Reducing Emissions from Deforestation and forest Degradation+ (REDD) programme. Due to the vast extent of their tropical forest and sub-humid miombo woodlands, these countries receive support from international donors through the UN-REDD programme to develop processes through which forests can be conserved as a globally important carbon sink. Mozambique is involved in south–south REDD partnership activities with Brazil, whereas both Zimbabwe and Mozambique have useful experiences in the development and implementation of community-based schemes that have the dual benefit of environmental conservation and the delivery of development benefits.

Research design and methods

Over the period February–October 2012, two multi-stakeholder workshops were convened, one in Zambia involving participants from DRC and Zambia (see Leventon et al. 2012); the other in Mozambique involving participants from Zimbabwe and Mozambique (see Dyer et al. 2012). These national-level workshops brought together different stakeholders, building capacity by sharing experiences and improving understanding of successful and less successful current practices in achieving synergy and multiple benefits from CCD projects across sectors. CCD projects that utilised a range of different partnership approaches and which addressed different combinations of development with adaptation and/or mitigation were identified during these workshops. Subsequent local-level analysis was undertaken from these nine identified case study projects (at least two in each country) to explore their functioning (see Table 1 for a summary of each of the projects). For details of the methodologies employed, see Dyer et al. 2013; Dyer et al.

Table 1 Summary of case study projects

Country	Case study	Background
Zambia	Katanino Joint Forest Management (JFM)	A pilot JFM initiative established by Government and funded through the Finnish International Development Agency (FINNIDA). The project aims to sustainably manage the Katanino Forest Reserve by establishing a Village Forest Management Committee and employing community forest guards (Bwalya 2007)
	Lumwana Agri-Food Innovation (AFI)	The AFI was developed by the Lumwana Mining Company to promote economic development and diversification in surrounding communities to reduce dependence on the mine for employment and income. The project delivers training in agricultural production and has established a microfinance scheme. Activities also include research into high value crops, the promotion of dairy farming for young women and banana production (Dyer et al. 2013)
	Kansanshi Foundation Conservation Farming	The Kansanshi Foundation Conservation Farming initiative aims to provide alternative livelihood opportunities in communities around the Kansanshi Copper Mine. The project provides training in conservation farming techniques and a loan scheme for fertiliser and maize seed (Dyer et al. 2013)
DRC	Kamoa Sustainable Livelihoods Project (KSLP)	The KSLP aims to build a sustainable, independent economy in communities that live and work in the mine concession areas. Conservation agriculture and the introduction of agricultural extension services into the communities, an indigenous tree nursery, and rehabilitation of drilling sites, market gardens and a composting unit are the main focus of activities (Envirotrade 2011)
	Katanga Biodiversity Trust	'Biodiversité au Katanga' (BAK) is an NGO whose aim is to preserve the natural heritage of Katanga. Its work focuses on environmental education and scientific research across Katanga Province and it works closely with the University of Lubumbashi and Belgian donors and research institutions to support community-level projects. Case study projects at Kipushi, Malambwe and Sambwa were studied
Zimbabwe	Shurugwi Partners	A grassroots, community-based organisation working towards poverty reduction, economic development and social safety interventions. The organisation aims to target the poorest members of society (such as orphans) through projects that focus on agriculture and food security
	CAMPFIRE—Mahenye	The Campfire Association's flagship project, Mahenye is a community wildlife conservation and ecotourism project, which was established to reduce human–wildlife conflict around the Gonarezhou National Park. Financial benefits from trophy hunting are shared between tourism firms and the local communities
Mozambique	CleanStar Mozambique	An integrated food, energy and forest protection business. CleanStar are aiming to produce premium smallholder cassava as a livelihood diversification activity for use in ethanol production. They are currently piloting an ethanol stove in communities around Maputo aiming to reduce indoor pollution and urban demand for charcoal
	Nhambita Community Carbon Project	The Nhambita Community Carbon Project is located in the buffer zone of the Gorongosa National Park. The project aims both to generate carbon credits through rehabilitation of degraded forests and to provide livelihood opportunities through agro-forestry systems. The project is Plan Vivo certified (Groom and Palmer 2012)

submitted. Analysis of key policy documents and government institutions also took place and was explored further in policy presentations at the final regional workshop (Dougill et al. 2013), the findings from which are explored in this paper.

The regional workshop involved participants from across the southern Africa region and was held in Mozambique in November 2012. It involved 29 participants, including policymakers, academics and representatives from NGOs/CBOs and the private sector from across the four study countries, as well as participants from the wider Southern Africa Development Community (Table 2). Participants were selected based on a wider analysis of ministries, NGOs and academics working on climate change and related issues, and some participants had also attended the earlier multi-stakeholder workshops. Although similar numbers of representatives were invited from each country and each stakeholder group, the final distributions were based on the availability of participants to attend the workshop. While this means that a wide variety of perspectives, opinions and experiences were captured during the workshop, it is inevitable that other relevant participants were missing from the discussions.

The workshop goal was to synthesise the outcomes from the analysis of CCD projects with a view to highlighting key policy development and implementation lessons across different governance levels and between sectors. Overall, it provided a forum for policy makers and practitioners from across the region to evaluate different partnership and governance models used in CCD projects and to assess

Table 2 Country and stakeholder profile of workshop participants

Country	Participants by stakeholder group				Total number of participants
	Government	NGO/CBO	Academic	Private sector	
Zimbabwe	3	1	3	1	8
Zambia	1	1	1	1	4
Mozambique	2	2	2	0	6
DRC	2	1	3	0	6
Other	1	0	3	1	5
Total	9	5	12	3	29

their transferability in terms of the institutional support required to deliver successful multi-stakeholder project design and implementation.

Results we present here are based on the analysis of presentations and minuted discussions at the final workshop. Detailed notes were taken by the research team and were subjected to content analysis in order to answer the following questions:

1. Is there national-level awareness of the concept of CCD and how is it handled by the institutional structures and policy processes in the study countries?
2. How can the case study projects analysed during the wider project inform national policy about good practices in the implementation of CCD?
3. What are the key lessons that can be elucidated to guide CCD policy development and project implementation more widely across other southern African countries?

The following sections of the paper are structured around these questions and the answers that emerged from our analysis. We also situate the results within the wider literature. Our discussion synthesises the challenges, similarities and differences in experiences across the study countries, suggesting how the most urgent needs and gaps may be addressed in moving from CCD rhetoric to successful partnership building and on-the-ground implementation.

Results

Is there national-level awareness of the concept of CCD and how is it handled by the institutional structures and policy processes in the study countries?

The concept of CCD was familiar to workshop participants across all ministries and stakeholder groups represented at the workshop. There was consensus that the ultimate goal of CCD—sustainable development that is resilient in the context of a changing climate and exploits the opportunities of the transition to a low-carbon economy—is an appropriate country-level vision. Similar to the more familiar 'sustainable development' concept, its three components (adaptation, mitigation, development) have been variously embraced by the different countries. Despite this, many participants had only heard of CCD through their involvement in the wider research project through the in-country workshops, in which discussions about different interpretations of CCD had taken place. Overall, there was general recognition that CCD provides a valuable framing to guide decision-making processes at local project and national policy levels, broadening the focus of activities to manage climate change beyond standard cost-benefit analyses and mitigation efforts, and affording greater attention to participation and the distribution of costs and benefits. The main value of CCD for policy was seen to be its use as an integrative template to ensure that climate change adaptation and mitigation are actively considered when reviewing economic development and natural-resource-based policies. This contrasts with traditional development approaches, which are historically more sector-specific (Ellis and Biggs 2001). While CCD is an overarching outcome at national level, it was considered unusual for any one project to set out to encompass every theoretical aspect.

The ability of the CCD concept to enable wider cross-sectoral and inter-ministerial discussions—and necessity that it does so to be effective—was identified as both a benefit and a challenge, and again echoes earlier challenges set forth by the sustainable development concept (cf. Lehtonen 2008). The benefit of CCD lies in the fact that climate change affects all sectors and care needs to be taken that the efforts of one sector do not undermine those of another. Actively seeking discussions and policy planning around CCD can reduce this risk (CDKN 2012). A more collaborative approach across sectors and scales can allow synergy to be harnessed (Chasek et al. 2011; Stringer et al. 2012b) with a view to delivering greater development benefits to local communities (Forsyth 2007). The challenge is that CCD cannot take place in a vacuum and is superimposed onto existing institutional structures. As such, it is not immune to existing national-level institutional weaknesses, divisions and coordination deficits, and relies substantially on political will. The challenges of

cross-sector coordination across different government ministries and improved communication systems across local, district, national and international governance levels were identified as key areas where examples of good practice are required from national-level analyses (see also Brickell et al. 2012; Reed et al. 2011). This was viewed as particularly important with regard to how the CCD rhetoric at the policy level can be put into practice and to identify with whom responsibilities sit.

Presentations from policymakers from each of the four study countries highlighted key differences in the national-level institutional structures and processes for climate change policy and strategy issues (Table 3). From this it was noted that there is typically a lack of intersectoral cooperation and coordination. There were also clear differences in terms of the sectoral focus of CCD policy attention. The DRC and Zambia are largely concentrating on efforts to more sustainably manage their forest resources, which face a range of deforestation pressures, attributed largely to shifting agricultural practices, charcoal burning, mining and the construction of new settlements (Chidumayo 2002; Syampungani et al. 2009; Ciais et al. 2011). Such diversity of drivers presents the need for improved communication and coordination across agriculture, energy and forestry sectors in particular. DRC representatives reported that in the recent past, decision-makers had known they had to look after their forest resources, but it is only recently they have started to consider the climate change benefits that can be delivered through sustainable forest management. In Zambia, despite the initiation of a future climate change council at national level (with input from across ministries, the House of Chiefs, private sector and NGO representatives), it was viewed that ministries remain autonomous in their operation and decision-making is rather fragmented and lacks harmonisation. Although CCD is being considered through the creation of new institutional structures, it has not yet been mainstreamed within planning processes across sectors. This is clearly exemplified by the current National Programme for reforestation, launched by the Forestry Department, which fails to engage with agricultural issues and threats such as fire, and the vital role agriculture plays in this. The role of the Climate Change Facilitation Unit as the Secretariat to the future climate change council looks set to be particularly important in ensuring that advances result from new, emerging cross-sector institutional arrangements. In Zimbabwe and Mozambique, national-level governance structures have already been established to coordinate multi-sectoral CCD activities and partnership building. However, the cross-cutting nature of climate change has resulted in institutional tussles and challenges in terms of assigning responsibility.

Table 3 National-level institutional structures, policies and communication channels on climate change

Country	Lead ministry on climate change	Mechanism for cross-ministry communications on climate change	Channels for government—civil society communications
Zambia	Ministry of Lands, Natural Resources and Environmental Protection, which has established a Climate Change Facilitation Unit	National Climate Change Programme includes a Future Climate Change Council	Zambia Climate Change Network acts as forum to represent civil society organisations. Includes formal role on Government committees and Future Climate Change Council.
Mozambique	Ministry for Coordination of Environmental Affairs (MICOA)—developing national strategy on climate change and national strategy on REDD+	National Council for Sustainable Development (CONDES) mandated to coordinate on environmental issues, but limited capacity for cross-sector ministerial discussions	An inter-institutional working group on climate change (GIIMC) was established to drive the development of the National Climate Change Response Strategy and includes civil society coordination. This will continue under CONDES, driving the plan of action for implementation
Zimbabwe	Ministry of Environmental and Natural Resources Management established a Climate Change Office	National Task Team on Climate Change co-ordinated through Office of the President	Baseline Report on Climate Change and Development recommends extending National Steering Committee on Climate Change to include representatives from District Environmental Committees
Democratic Republic of Congo	No National Climate Change Policy or Strategy to address climate change vulnerability and adaptation. Focus is on forest issues linked to UN-REDD+ pilot country with national programme co-ordinated by the Ministry for the Environment, Nature Conservation and Tourism (MECNT)	Relies on environment-related policies and action plans to implement climate change initiatives and activities. As yet, no cross-cutting body at national level	No national body to facilitate civil society—government communications. Provincial level Governments (e.g. Katanga Province) link to projects and CBOs directly

For example, interviews with government representatives in Mozambique suggest that overlaps in remit between the National Institute for Disaster Management (INGC), the Ministry for Coordination of Environmental Affairs (MICOA) and the Ministry of Agriculture (MINAG) have led to tensions regarding the development of strategies towards climate change adaptation and mitigation. Some representatives suggested that reorganisation and redistribution of responsibilities within these institutions will be needed if climate change and development are to be effectively addressed. Mozambique's National Climate Change Response Strategy, approved by the Council of Ministers in the week following the regional workshop, lays the groundwork for improved coordination and implementation of CCD.

How can the case study projects explored during the wider project inform national policy on good practices in the implementation of CCD partnerships?

In the wider research project, partnerships between government, the private sector, traditional authorities and NGOs/CBOs were explored in projects focused on rural development, wildlife conservation, conservation agriculture, bioenergy, agro-forestry and joint forest management (JFM). In these areas, CCD was supported using climate finance linked to the voluntary carbon market, international donor aid committed through the UN-REDD programme and private sector funding, often linked to broader corporate social responsibility aims.

Table 4 provides an overview of the projects analysed in the wider research and presented by workshop participants, which displayed varying levels of good practice (see Table 1 and Dyer et al. under review for more information on selected projects). Within the partnerships that stakeholders perceived to be successful, roles and responsibilities were clearly defined, and communication pathways were open and multi-directional. In addition, partners were given the freedom to fully utilise their strengths. Nevertheless, not all projects realised positive outcomes in each of development, adaptation and mitigation spheres. This reflects a broader challenge associated with the translation of CCD policy rhetoric into on-the-ground practice and is explained because not all projects set out to deliver across all dimensions of CCD. Some projects were motivated by development, others by adaptation or mitigation goals. The inclusion of the projects in the research was on the basis that they offered the potential to deliver development together with adaptation and/or mitigation benefits, not that they necessarily delivered triple-wins. The partnership structures we identified did not clearly map onto the different facets of CCD. It was not the case that, e.g. one partner was responsible for development, with another responsible for mitigation. Indeed, where roles were split within projects,

Table 4 Emerging good practices, partnership models and remaining challenges in case study projects

Partnership model/lead (and projects researched)	Emerging good practices	Remaining challenges identified
Community-based organisation led (Shurugwi Partners, Zimbabwe; Katanga Biodiversity Trust, DRC)	CBO ensures strong social cohesion and provides entry point into communities for donors Innovative market linkages provided for smallholder farmer groups to realise income from climate compatible agronomic practices (e.g. conservation farming, organic vegetable production)	Small-scale nature of community initiatives implies wider environmental benefits limited (e.g. due to strong charcoal market pressures in Katanga)
Donor-led Community-Based Natural Resource Management project (CAMPFIRE, Zimbabwe; Katanino Joint Forest, Zambia)	Successes where community involved in decision-making and clear communication at all levels (as per CAMPFIRE model)	Problems stem from communication breakdowns between government and community, lack of legal support for community monitoring and centralised decision-making (e.g. Katanino JFM) Benefit-sharing needs strong local institutional systems to avoid problems of elite capture of project benefits
Private sector led (Lumwana and Kansanshi Mines, Zambia; Kamoa Sustainable Livelihoods Project, DRC; Cleanstar, Mozambique; N'hambita Community Carbon Project, Mozambique)	Success based on inspiring project manager and capacity building initiatives enabled through local extension support Project design based on analysis of gaps needed to be filled by partners (e.g. resource—labour, finance, regulatory, participatory) and development of clear roles and responsibilities of all partners Multiple project goals to diversify livelihoods and reduce project risks (e.g. Cleanstar with combined agricultural and energy supply design)	Lack of local ownership of project design and implementation is evident when community design is not enabled at start of project (e.g. Kansanshi Mine) Collaborative working with local institutional structures and traditional leaders can be difficult and requires mutual respect and time to build strong collaboration

such as where different partners have responsibility for, e.g. community development and forest management dimensions of efforts supported around new mining developments in Zambia, project problems ensued. Instead, partnerships were found to be vital in terms of allowing stakeholders to address particular resource, capacity and training gaps, with the achievement of successful project outcomes being the shared focus (Dyer et al. 2013).

In the case study examples explored in this research, the private sector emerged as a key stakeholder in successful CCD partnerships. For example, in the DRC, the Kamoa Mine case demonstrated that the private sector can offer a nuanced approach to CCD that is sensitive to context. Successes resulted from the collaborative working of the mining company (with strong support from its senior executives) and the consultancy company responsible for management of projects with both a community development and environmental management remit across a wide area surrounding the mine site. Unlike conventional development projects driven by the aid industry and led by government, in which there is often no funding to undertake a detailed scoping study, the private sector can provide resources to support project design to allow community perspectives and needs to be incorporated more comprehensively. In Kamoa, such an approach permitted local priorities to be addressed from the outset, resulting in greater buy-in and satisfaction of community members (Dyer et al. under review). Similarly, in Zimbabwe, the CAMPFIRE programme's initial success linked to the delivery of actual benefits stemming from a high value resource (wildlife), in which communities were directly involved in decision-making (cf. de Vente et al. under review). In Mozambique, Cleanstar Energy communities were involved in project design allowing the initiative to address their key concerns across agricultural and energy dimensions, while in Zambia, communities involved in the Kansanshi Conservation Farming Project were less involved in the scheme's design and felt their expertise was underutilised and their opinions side-lined.

The role of wider political and economic forces was identified as particularly important in determining the extent to which CCD benefits could be delivered at the project level. For example, in Zimbabwe, politics had a negative economic impact during the period 2007–08. Political tensions and uncertainties resulted in extremely high levels of inflation across sectors, with CAMPFIRE also affected by reduced incomes (Balint and Mashinya 2008). Hunting, normally dependent on foreign exchange, acted as a cushion for many of the negative effects. Local communities nevertheless suffered because they were receiving income in the local currency, whereas those brokering the hunting operations were receiving payments in foreign currency. In the N'hambita project in Mozambique, the Plan Vivo-certified credits produced by the project's agroforestry activities have been negatively affected by low global carbon prices and are selling more slowly than those produced under other accreditation schemes [e.g. the verified carbon standard (VCS)]. This has stalled payments to project participants, so while the mitigation benefits are currently still being delivered, the development benefits have faltered (see also Palmer and Silber 2012; Dougill et al. 2012). These examples demonstrate that clear vertical communication mechanisms are required between partners at different levels on the role of broader political and economic forces in shaping the delivery of benefits if local stakeholders are not to become disheartened by the projects when they are affected by larger-scale national or international forces (Groom and Palmer 2012). A clear understanding needs to be established across all partners with regard to the main risks and threats, especially as these are often dynamic and linked to changes in national and global markets.

Partnerships can facilitate informal, timely communication, rather than being dependent on formal structures. However, workshop participants perceived a need for both informal and formal mechanisms. In some countries, useful networks and mechanisms have already been established. In Zambia, civil society and NGO groups led by the Zambia Climate Change Network (ZCCN) play a key integrative role. The ZCCN has a large membership and works to highlight the concerns and good practices emerging in development advances that include climate change issues, drawing on experiences from local-level projects. This helps to shape policy and share information, awareness and knowledge between members. It also demonstrates similarities with networks in other countries in southern Africa, e.g. the Centre for Environmental Policy Advocacy (CEPA) in Malawi (Stringer et al. 2012b) and the South African Adaptation Network. These kinds of fora are especially necessary if good practices and challenges in the implementation of CCD are to guide national CCD policy.

Figure 1 summarises the key opportunities and challenges presented by CCD based on the above analysis. It also elucidates the emerging key lessons that can guide CCD policy development and project implementation. These lessons are discussed further in the next section, together with the steps that can be taken to apply them.

Discussion

What are the key lessons that can be elucidated to guide CCD policy development and project implementation more widely across other SADC countries?

Despite the challenges identified by workshop participants, both the concept and practice of CCD offer a number of

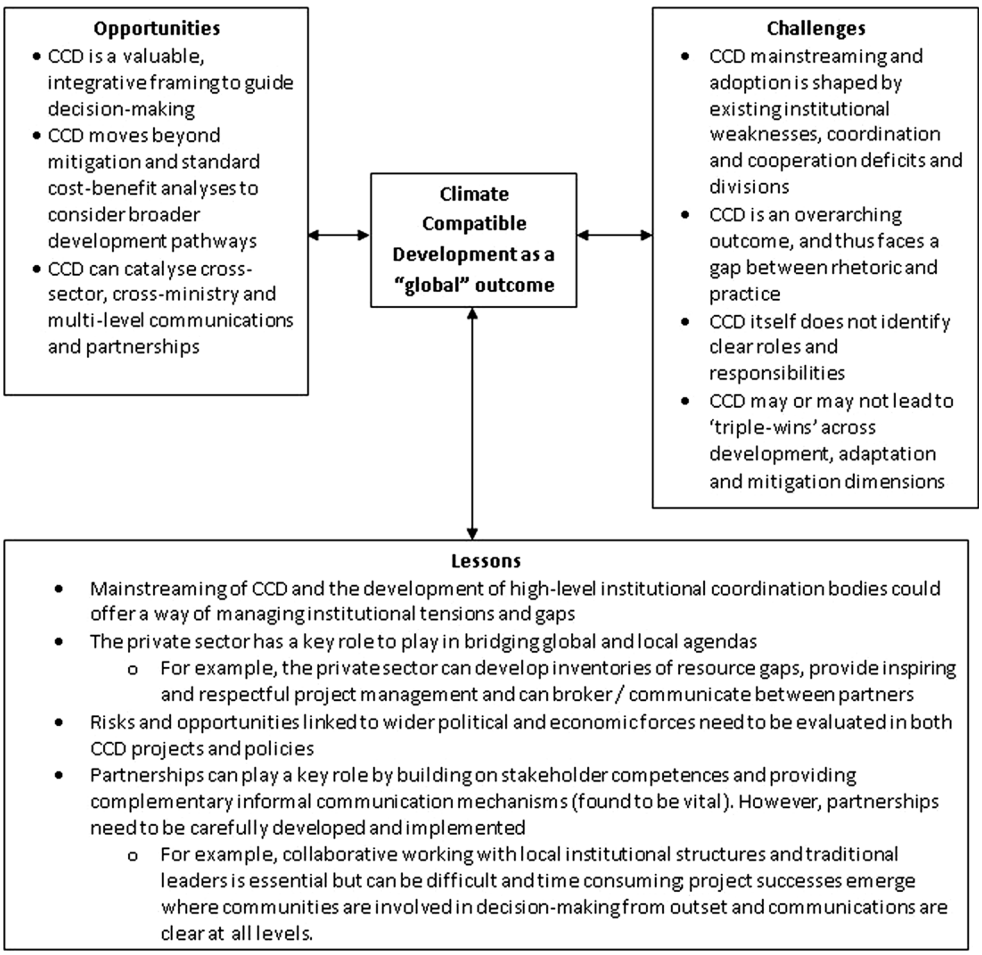

Fig. 1 Opportunities, challenges and lessons emerging from CCD

opportunities for each of the study countries, and the southern Africa region more widely. Progress towards CCD is taking place at different speeds in the countries within our study area, and through the use of different mechanisms. These findings support those presented by Ellis et al. (2013) in their meta-scale analysis of CCD projects in 40 countries. While for the most part CCD has been driven by international-level processes (and as a result, at a speed determined by the international community), the emerging lessons offer a way forward for CCD to be better institutionalised and enacted and for ownership to be strengthened. In the case study projects examined in this research, we note that CCD is fairly well accepted as a concept in forestry and agricultural sectors, but is less commonly used within mining and energy, despite these sectors being well positioned to harness triple-wins across development, mitigation and adaptation dimensions. This suggests there is a need for partnerships and institutional coordination that bridges these sectors, as well as a re-shaping of the power relations and hierarchies between different ministries. Unlike the sustainable development concept that had a route map to action at sub-national and local levels through Agenda 21, Local Agenda 21 and so on, CCD faces an ongoing challenge in moving across scales and from policy to action.

That CCD challenges the existing power distribution across ministries and governance levels is a major obstacle. As identified above, and again, similar to the sustainable development concept, CCD necessitates partnerships and coordination across traditional line ministries, as is being embraced through the creation of inter-ministerial/institutional working groups. The experience of these inter-ministerial/institutional mechanisms varies across the four countries: while seeming to be successful in Zimbabwe, for example, in Mozambique, there remain on-going tussles regarding roles and responsibilities. These difficulties suggest there is a need to develop alternative mechanisms that can provide higher-level support for inter-ministerial coordination, and mainstream CCD thinking and practice (cf. Swart and Raes 2007). This would help to ensure a consistently high level of understanding regarding the importance of climate change, as well as helping to locate capacity deficits. It could further facilitate equitable sharing of costs and benefits, and allow an opportunity for clearly defined and agreed roles and responsibilities to be established, with a combination of mainstreaming and

institutionalisation of CCD helping to reduce competition for resources between ministries. However, until the evidence base supporting triple-wins resulting from policy is augmented, the capacity of donors remains rather limited in terms of identifying, monitoring or evaluating progress along a CCD trajectory (cf. Tompkins et al. 2013). Evidence is needed in order to assess whether or not countries are heading in the desired direction. In turn, the lack of evidence limits both assessments of the real impact of distribution and equity imbalances and any steps taken to remedy them.

Projects involving partnerships can reconcile competing or conflicting objectives; they can be used to develop effective vertical communication and to facilitate knowledge exchange that, in turn, can provide useful policy inputs. They can also serve as a model for higher-level inter-ministerial collaboration if sufficiently supported by political will. The private sector has been demonstrated to play a key role in facilitating the consideration of community needs within larger-scale projects and programmes involving national and international partners, while coalitions and networks such as ZCCN effectively bring together different stakeholders across governance levels. In countries in the wider SADC region that are lagging behind regarding climate change policy (e.g. Swaziland, Botswana), the scaling-up of such exchange fora could prove extremely useful. This could potentially be coordinated through regional bodies such as SADC or COMESA, including (or interfacing with) regional NGO networks (e.g. SADC-CNGO), as well as private sector representatives whose Environmental Management and Corporate Social Responsibility Plans are increasingly—even though often implicitly—addressing CCD (Lesolle 2012).

In the case study projects analysed in this research and presented at the workshop, the role of wider political and economic forces in shaping CCD outcomes was shown to be paramount. Projects that focus on co-benefits beyond mitigation and carbon payments were found to be better insulated from these dynamics. In today's globalised world, market fluctuations cannot be avoided, so it is vital that robust and reliable communication mechanisms are in place and that all partners are well aware of the risks and returns associated with their participation in a CCD project. Partnership working can allow the genesis of informal communication mechanisms, which can complement those more formal channels at larger scales. Indeed, in other SADC countries with less dynamic governance contexts, such mechanisms may be more feasible. Lessons from partnerships can also inform the evolution of future policies, such that market forces may be mediated by national-level forces, for the benefit of communities. This could include, for example, the regulation of REDD interventions brought to Zambia by external partners.

Conclusion

In recent years, the links between climate change and development have become increasingly clear. Nevertheless, progress towards advancing CCD is not straightforward due to the continued dominance of solutions that tend to neglect the political and economic challenges associated with the policy process and the gulf between policy and implementation. CCD itself has stemmed from the policy sphere and represents a 'global' outcome. Unlike the sustainable development concept that was accompanied by Agenda 21 to allow action across levels, CCD currently lacks a clear road map for its implementation. Only gradually is attention being shifted towards the ways in which governance arrangements at national and sub-national levels can accommodate progress towards this goal. Conversely, the augmentation of climate finance rebalances the incentives for different stakeholders to participate in CCD across scales and bears the risk of imbalances in the access of single groups to benefits.

Governments and donors are both currently investing in CCD with little evidence of (a) triple-wins being delivered in practice; (b) sufficient time having passed to adequately monitor and evaluate the utility of the CCD concept in moving countries towards a more 'climate friendly' trajectory; and (c) the distributional impacts of CCD in terms of resource allocation and equity across scales. Although we have touched upon these challenges in the research reported in this paper, these areas remain fruitful avenues for further research. In planning terms, for CCD to move forward in our study countries and throughout southern Africa, countries first need to take ownership of the CCD approach as a conclusive, powerful development concept. Tensions and overlaps with other concepts such as sustainable development and green growth need also to be resolved. Nations need to set out their own vision and develop appropriate institutions (including a strong and accepted coordination body in government) that can contribute to a CCD outcome, and to define related processes, roles and responsibilities. This may involve reframing the existing situation, as was the case in the DRC when forests became the subject of interest for climate change mitigation initiatives. Alignment and mainstreaming, particularly horizontally at the ministerial level, but also vertically, can allow knowledge exchange and harmonisation, building on good practices in partnership development and reinforcing locally appropriate systems. Overall, such an approach would foster mutual accountability, with different stakeholders and partners accepting responsibility within their particular niche. In turn, the multi-level partnerships that ensue would be grounded in community engagement from the outset. Following this approach, they can help to translate CCD strategy into on-the-ground action ensuring the more

equitable distribution of costs and benefits. As state-led (e.g. SADC/COMESA) and NGO-led networks further develop, lessons, experiences and good practices can be shared to up-scale CCD across the southern Africa region.

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