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A rights-based perspective on adaptive capacity

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Whilst it is increasingly recognised that socio-political contexts shape climate change adaptation decisions and actions at all scales, current modes of development typically fail to recognise or adequately challenge these contexts where they constrain capacity to adapt. To address this failing, we consider how a rights-based approach broadens understanding of adaptive capacity while directing attention towards causes of exclusion and marginalisation. Drawing on human rights principles and lessons from rightsbased practice, we develop a novel analytical tool for use with communities that considers adaptive capacity through examination of equality, transparency, accountability and empowerment. We apply this to the illustrative case of aquatic agricultural systems in Timor-Leste. This approach yields a qualitative analysis that unpacks the formal and informal institutions and actors that structure opportunities and barriers to adaptive actions. The rights framing exposes the processes of marginalisation and exclusion that lead to differentiation in adaptive capacity, but at the same time helps identify concrete actions that can be taken as part of a rights-based approach to development support for adaptive capacity. The tool and empirical illustration support an emerging body of thought that adaptive capacity requires development actors to engage not only with the technical challenges of responding to climate change, but also with the social and political context that determines the distribution of costs and benefits.

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1. Introduction

As climate change becomes a reality, the increasingly pressing challenge for society is to respond with appropriate and sustainable adaptive actions. This challenge is greatest in the developing world where existing social and economic vulnerabilities are likely to be exacerbated by warmer temperatures, increasing variability of rainfall events, changes to seasonal patterns, and rising sea levels (Conway and Schipper, 2011; Füssel, 2012; Sierra, 2010). The development aid community is working to understand what actions best enable communities to adapt to an increasingly uncertain environment.

Community-based adaptation, defined as "a community-led process, based on communities' priorities, needs, knowledge and capacities" (Reid et al., 2009), has received considerable attention among development organisations concerned with supporting local approaches to adaptation. While these development practitioners

have increasingly recognised the need to address adaptive capacity (for example, Dazé et al., 2009; CCCD, 2010; Pettengell, 2010), evidence from case studies suggests that adaptation interventions at the community scale are frequently focused more on meeting today's short-term challenges than addressing how communities will respond to on-going climate change (Ensor and Berger, 2009; Ludi et al., 2014). Efforts have been made to respond to this failure (for example, Ensor, 2014; L. Jones et al., 2010), bringing consideration of institutions, norms and governance into community-based adaption practice and challenging development practitioners to think in terms of political structures, power, culture and gender (Dodman and Mitlin, 2011). In this paper, we offer an approach to diagnosing barriers to adaptive capacity in a participatory manner to help identify some of the underlying constraints on actions at the local level, and to mobilise action to address them. Our aim is not to theorise those barriers, but to support researchers and practitioners in addressing the institutional, social and political context for adaptive capacity, highlighting those dimensions that might otherwise go underappreciated.

Practitioners, scholars and policy makers increasingly frame climate change adaptation in terms of resilience within dynamic social-ecological systems (Bahadur et al., 2013; Boyd et al., 2008;

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Brown, 2014; Chapin et al., 2006; Ensor, 2011; McEvoy et al., 2013; Nelson et al., 2007). The focus on social-ecological systems emphasises the complexity that arises from myriad interactions between bio-physical and institutional scales and across timescales, resulting in on-going and highly uncertain change (Berkes and Folke, 1998; Adger and Barnett, 2009; Stafford Smith et al., 2011; Scheffer et al., 2012). Resilience is defined as the amount of disturbance that the system can absorb before a threshold is reached, the crossing of which tips the system into a new state with changed functions (for example, leading to the loss of important ecosystem services) (Folke, 2003).

In this context, adaptive capacity becomes a key concern, defined as the ability of social actors to make deliberate changes that influence the resilience of their complex social-ecological systems (Walker et al., 2004). The focus of adaptive capacity is on the potential for actors to respond to, shape, and create changes in that system (Chapin et al., 2006). As such, it can be understood as the preconditions necessary for adaptive actions, comprising both social and physical elements, and the ability to mobilise them (Nelson et al., 2007; Smit and Wandel, 2006). A growing body of literature focuses on identifying specific social and economic conditions that influence the capacity of an individual or community to adapt, including the flexibility and learning needed to make adjustments in response to current or anticipated changes that may be outside previous experience (e.g. Engle, 2011; Folke, 2003; Hogan et al., 2011; Marshall et al., 2013; Marshall, 2010; Tschakert et al., 2014; Wise et al., 2014). Yet despite adaptation inevitably engaging trade-offs and inviting questions of fairness in decision making, normative issues are not typically the focus within a resilience framing. Infusing resilience thinking with critical considerations such as power and equity remains a work in progress (Béné et al., 2014; Brown, 2014; Duit et al., 2010; Keessen and Hamer, 2013).

Nelson et al. (2007) identify that a focus on issues of distributive justice (who experiences harms or benefits?) and procedural justice (who has a say in defining vulnerability and adaptation priorities?) is required to simultaneously reduce vulnerability and enhance resilience. Politics and power are inescapable in shaping how climate risk is understood (Boyd et al., 2014) and which adaptation actions are prioritised (Artur and Hilhorst, 2012; Ayers, 2011; Yates, 2012). Adaptation constraints are those "factors that make it harder to plan and implement adaptation actions" (Klein et al., 2014, np) and include socio-cultural, structural and psychological dimensions that, while often mutable, can combine to undermine adaptive capacity (Adger et al., 2009; Lorenzoni et al., 2007; S. C. Moser and Ekstrom, 2010). Marginalised groups and individuals can be particularly implicated (Adger et al., 2003; Dow et al., 2006), drawing attention to the need for adaptation planning to address drivers of vulnerability and social exclusion (L. Jones and Boyd, 2011; Ruiz Meza, 2014). Paavola and Adger (2006, p. 594) propose that "fair adaptation" demands "putting the most vulnerable first and equal participation of all", reflecting development practice experience, which suggests that accountable and participatory planning processes are necessary to ensure differentiated local interests are properly represented in decision making spaces (Dodman and Mitlin, 2011; Jordan and van Tuijl, 2000). As Pelling and Manuel-Navarrete (2011) illustrate, consequences for resilience follow: elites that are able to dominate in decision making can control how problems are framed, close down opportunities for learning, and prevent the emergence of new pathways in the face of environmental change.

Such thinking demands more explicit attention to social and political structures. Both formal and informal institutions influence access to resources and support, the nature of decision making, and mediate the influence of policies and interventions (Agrawal, 2010; Armitage et al., 2011; Eakin and Lemos, 2010;

J. Gupta et al., 2010; Pradhan et al., 2012). We understand institutions in North's (1990) sense, as the rules of the game that inhere within formal decision making processes and the social norms and practices that guide (and prescribe) adaptation choices and actions (for example, L. Jones and Boyd, 2011). Practitioners are therefore tasked with integrating "fundamental normative issues" (Duit et al., 2010, p. 367) into development activities to diagnose barriers to adaptive capacity and catalyse action to address them.

To aid in this task, we draw on rights-based approaches to development, building on Christoplos' (2014) suggestion that human rights retain the potential to enable resilience practice to become pro-poor, exposing how the institutional, social and political environment leads to different capacities of individuals within social-ecological systems. This is particularly important to avoid development actors being culpable in depoliticising climate change adaptation (i.e. ignoring the underlying drivers of poverty and vulnerability) (Arnall, 2014) and reducing adaptive capacity to a question of individual qualities (Arnall et al., 2013; Kelman, 2013). While we acknowledge that there are frequently limitations to what can be achieved through development interventions and adaptation planning (Boyd et al., 2014), we emphasise that these actions should be undertaken with appreciation of the broader context.

We provide an analytical tool that is explicitly focused on this context, encompassing formal and informal institutions, laws and policies, and that draws on human rights thinking to bring normative questions of equity and justice to the centre of adaptation planning. The analytical tool expands recent governance analysis approaches that attend to stakeholder representation, distribution of authority, and mechanisms of accountability (e.g. Ratner and Allison, 2012; Ratner et al., 2013; Govan et al., 2013) with an additional focus on processes of discrimination and (dis)empowerment. In so doing, we bring marginalisation to the foreground while retaining a practical focus on participatory analysis undertaken with key stakeholders at multiple scales (Ratner, 2013). Rooted as it is in practice, our approach also links directly to actions that development actors can undertake in support of the most vulnerable.

In the next section we review the role of right-based approaches in development. Here we highlight the principles of equality, transparency, accountability, and empowerment in recognising and pursuing entitlements. Building from a body of applied research into rights-based approaches, we argue these principles can serve to identify and address social and political barriers to adaptive actions. The principles are further explored in Section 3, and next illustrated in relation to the case of Timor-Leste, a newly independent state where the issues of state capacity, law, and decision-making authority are all drawn in sharp relief. The qualitative exploration of the structure of power and authority in Timor-Leste reveals opportunities and constraints on adaptive capacity in the current social and political context, and a basis for guiding strategies aimed at supporting adaptive capacity.

2. Rights-based approaches to development

Rights-based approaches provide the tools to bring human rights concerns into the heart of development, structured around the relationship between those with unmet human rights and those with the responsibility to fulfil them. Through a focus on the most vulnerable and the social and political processes through which rights are claimed, accessed or denied, rights-based approaches have the potential to re-politicise development (Gready and Ensor, 2005a). They are part of a "conceptual shift" from a "needs-based and service-driven to a more strategic approach" in development practice (Molyneux and Lazar, 2003,

p. 6). While calls for stronger links between human rights and development have a long history, practice has yielded mixed results. Calls for compliance with human rights laws and standards have been used to, for example, justify aid conditionality that shuts off assistance to the poorest (Abouharb and Cingranelli, 2007; Uvin, 2007); give cover for neo-liberal donor agendas (Jones, 2005; Mohan and Holland, 2001; Uvin, 2007), and legitimise privatisation of resources in ways that entrench inequality (Bakker, 2007).

However, rights-based approaches offer a different reading of the relationship between human rights and development. Here, the emphasis is on how rights claims are advanced by disenfranchised and marginalised groups to demand accountability from the state and private sector. These claims are often rooted in failures to acknowledge, respect or protect economic and social rights, such as access to natural resources, at the local level (Newell and Wheeler, 2006). In this vein, Jones (2005) argues that rightsbased approaches are much more than a narrow reading of individual legal rights. Rather, they rely on a political interpretation of rights that is translated into social action on the ground by communities and popular movements in many different contexts. Rights-based approaches of this sort are less about "doctrinal mandates, prescribing fixed rules for behavior" (Miller, 2010, p. 918), and more about a focus on power relations and rights claims by citizens, sometimes but not always referencing the normative obligations placed on the state by international law (Piron, 2005; Uvin, 2004).

Development NGOs have recognised the potential for a "progressive turn" (Ako et al., 2013, p. 46) in development practice through this interpretation of rights-based approaches, anchored in an understanding that claiming rights means shifting the distribution of power through challenges to inequitable structures and systems (Ako et al., 2013; Gready and Ensor, 2005a; C. O. N. Moser et al., 2001). As such, human rights law has been distilled by development NGOs and intergovernmental bodies into principles that can inform development action (Kindornay et al., 2012; Sarelin, 2007). While varying between agencies, Gready¹ identifies core elements as accountability, equality (or non-discrimination), transparency and empowerment, principles that "render the law real is social and political processes" (2008, p. 736). UN and bilateral development agencies, for example, frequently advocate these principles (De Schutter, 2009a; OHCHR, 2009; Sida, 2010). Through actions that further these principles in practice, development becomes a process of transforming relationships of power and accountability, amplifying the voices of the poorest and building entitlements through "the development of claims that seek to empower excluded groups" (Uvin, 2004, p. 163).

In rights-based development settings, the principle of equality begins with a focus on equal rights before the law, but extends beyond this to examine the structure and dynamics of exclusion and discrimination. Transparency in decision-making is needed to reveal the degree to which equality is upheld in practice, and to provide a basis for different stakeholder groups – especially the poor and marginalised – to seek a voice. Accountability focuses on the ability of affected groups to hold power holders responsible for their decisions. Empowerment underpins each of these principles, based on the recognition that rights claims are not established or secured in a vacuum but instead require the agency of individuals and groups.

These principles—equality, transparency, accountability, and empowerment—can be applied in a rights-based analysis undertaken with communities and local stakeholders that is focused on barriers to development and actions to address these. From a practical perspective, focusing on a small number of principles that

have wide currency in development practice supports engagement with communities, enabling the participation of groups around concepts that resonate with their experiences. This allows rights work to secure relevance in the language of local struggles, while relying on concepts and ideas drawn from international law (Kindornay et al., 2012). However, in using these rights-based principles it is important to acknowledge two key risks. First, it is possible to invoke rights-based principles with little understanding of the social context, Equality, for example, is a cornerstone of human rights, affirmed in the preamble to and Articles 1, 2 and 7 of the Universal Declaration of Human Rights. However, the same document suggests an obligation to understand, in order to address, instances in which individuals and social groups fail to achieve minimum standards in employment, education and subsistence (Ginsburg and Merritt, 1999). The intention is not, therefore, to endorse pure egalitarianism sensu stricto. Indeed in practice human rights give rise to policies of affirmative action and "putting the most vulnerable at the centre" (De Schutter, 2009b, p. 3) that are more readily aligned with alternative bases for distributive justice (Casal, 2007; Wenar, 2008). The function of equality in rights-based analysis is to ensure marginality and exclusion are identified and accounted for, in context.

Pursuing a rights-based approach with attention to social context also means probing the sources of legitimacy in institutions that uphold certain principles and norms. From a broadly sociological perspective, a legitimate institution is one that is accepted or admissible within the society in which it operates (Thornhill, 2011). Mechanisms of accountability, for example, depend on the legitimacy of standards and sanctions. Legitimacy may derive from formal processes (such as law or electoral processes) but equally may be found in informal sources such as tradition or reputation (Grant and Keohane, 2005). Rights-based analysis requires questioning the legitimacy of power where transparency and accountability are not apparent (Keohane, 2006).

A second, related risk is that the language of rights-based approaches become absorbed within mainstream, technical approaches to development planning and implementation, losing the distinctive focus on relationships of power and contestation (Eyben, 2006, 2010; Groves and Hinton, 2004). Transparency, when revealing the logic and perspectives considered in decision making, exposes important aspects of procedural fairness (Smith and McDono, 2001). However, when interpreted as information provision and enabled without the "answerability" of those in decision making institutions it may be insufficient to construct accountability (Fox, 2007). Similarly, the concepts of participation and empowerment have been subject to significant critique (Cooke and Kothari, 2001; Cornwall and Brock, 2005; Hickey and Mohan, 2004). Appropriated as 'buzzwords' by the development industry, they have too often been applied with a restricted intent to increase project efficiency or support packages of neoliberal reform (Cornwall and Brock, 2005; Leal, 2010). In so doing, they have been turned from tools of transformation into "modified, sanitised, and depoliticized" technical issues (Leal, 2010, p. 95). Rights-based thinking emerged in part in reaction to these trends, aiming to "repoliticize" development through support for collective action and claims for citizenship and political space (Gready and Ensor, 2005a; Cornwall and Nyamu Musembi, 2004; Hickey and Mohan, 2004).

3. A rights-based analysis of adaptive capacity

The focus of rights-based practice in a development context is explicitly on changing the "balance of power within society and between state and society" in favour of the marginalised (McGee and Gaventa, 2011: 29). This approach recognises that entitlements are secured or denied in a diversity of contexts, in which

¹ Gready (2008) also identifies 'participation', the analysis of which is captured here through the remaining four principles.

rules and norms are enforced by different (often overlapping) legal and administrative provisions, including through the power and authority of (for example) customary or religious law. As such, attention is drawn to the plurality of institutions that are employed in defining rights, including informal processes at the local level. Rights-based strategies may, then, seek to have entitlements recognised in different rights "regimes" (C. O. N. Moser et al., 2001, p. 23) through contestation in social and political processes (such as advocacy led by women's solidarity organisations or social movements), or through appeal to legal or administrative systems (such as negotiation with religious leaders or local government officials).

3.1. Entry points

This recognition of institutional diversity offers different entry points for development actions, which we summarise here as social, political, administrative, and legal. Rights-based actions can be mapped to each (illustrated in Table 1; for case study examples, see inter alia Ako et al., 2013; Gready and Ensor, 2005b; Rand and Watson, 2008). As the summary in Table 1 suggests,

each entry point has significance for adaptive capacity. Each encompasses norms and practices that shape behaviour, learning and knowledge, and influences access to and control over the information, resources and decision making that enable adaptive actions (Ebbesson and Hey, 2013; Ensor, 2011; Nelson et al., 2007). As such, each plays a role in structuring opportunities to respond to, shape or create change at the community level (Chapin et al., 2006). For example, the way people understand the environment and gain access to resources will likely be influenced by a combination of customary or social norms, processes of political decision making, the administration of state policies or extension services, and legal provisions that embody particular conceptualisations of the relationship between people and the environment and prescribe access to information or equitable representation.

These four entry points provide a structure for applying a participatory approach to rights-based analysis. By providing focal points for participatory dialogue this framing ensures the analysis links to development interventions, such as those illustrated in Table 1. We propose an approach to participatory analysis of the social and political context for planning actions to enhance

 Table 1

 entry points for interventions in relation to adaptive capacity and illustrative examples of common rights-based development strategies.

Entry point	Description	Significance for adaptive capacity	Example of rights-based strategies	
Social	Everyday interactions, encompassing a broad range of institutions, networks, organisations and actors (e.g. family, civil society, gender, ethnicity, customary norms).	Social relations mediate access to material and non-material resources and services, and influence how people interact with each other and their environment.	Community empowerment Change from within	Context specific empowerment processes can challenge particular aspects of social relations within communities, for instance gender norms that discourage participation of women in decision-making. Human rights principles are articulated drawing on existing social and cultural norms and institutions, such as religion or traditional practices, which are used as the basis for change processes.
Political	Decision making in institutions and organisations and the associated role of networks and actors in exercising authority.	Institutional and power relationships determine participation in and the processes and norms through which adaptation decisions are made and resources are secured.	Awareness raising Alliance building	Building public knowledge in order to pressure for change, e.g. in existing laws and policies, to reinforce human rights norms, as well as responsibilities of duty bearers in different settings. Developing advocacy networks among communities, NGOs, social movements, associations and community-based organisations to build voice, reduce risk, monitor state action and secure a greater role for communities in decision making and agenda setting.
Administrative	Institutions and organisations of the state and related actors (e.g. government officers, policy processes, mechanisms of delivery and oversight of public and private actors).	State administrative functions have the potential to deliver, enable, regulate or restrict access to the resources and services necessary to support adaptation (both material, e.g. finance, and non-material, e.g. information services)	Capacity building Relationship building	Capacity building among communities to claim rights, to advocate for policy changes or policy implementation. Capacity building of state actors to enable them to recognise and fulfil their duties. Building effective working relationships between rights holders in communities and state duty bearers. (While 'naming and shaming' of the state is the traditional mainstay of human rights advocacy, it is used less frequently as a rights-based development strategy.)
Legal	Legal institutions and organisations, justice mechanisms and actors.	Legal regimes regulate access to and control over natural resources, decision making (including opportunities for accountability and redress) and material and non-material resources for adaptation.	Litigation Strategic use of law	Litigation may be pursued in anticipation of a successful court case, in particular to hold the state accountable in their duties to respect, protect and fulfil human rights obligations. The threat of litigation alone can be enough to secure political change. Alternatively, litigation may be pursued with the intention of bringing an issue or new information to public attention.

adaptive capacity that is structured in this way, at the centre of which lie the rights-based principles.

3.2. Four rights-based principles

In this subsection we describe how the principles enable a qualitative analysis of the structure of power and authority in relation to the institutions and actors at different scales that influence local capacities to adapt to climate change. In the following section, the utility of this approach is explored through an illustrative case study of Timor-Leste.

Equality: Individuals and social groups may be marginalised from social, political or economic life for a wide range of reasons, commonly including race, ethnicity, sex, sexual orientation, language, religion, political or other opinion, national or social origin, property, or birth status. While gender has emerged as significant in determining vulnerability in relation to environmental issues (Nelson et al., 2002; Arora-Jonsson, 2011; Nelson, 2011), a perspective on equality (and its correlate, discrimination) necessitates a broader focus on structure and dynamics of exclusion and discrimination (Uvin, 2004). By applying this principle, we aim to identify how, why and to what extent certain individuals and/or groups may be marginalised in formal and informal processes and actions, including access to goods and services, social relations, and voice in decision making.

Transparency: Transparency means that public actions and decisions are visible and clear (Diokno, 2010). Fox (2007) distinguishes between opaque and clear transparency. In the case of the former, information is disseminated, but does not reveal how decisions are made and what the results of actions are. By contrast, in cases of clear transparency, information reveals how institutions perform and how they behave in practice, for example by enabling lay people to interpret reports. Transparency therefore requires that rules, regulations, documents and decisions to be accessible and released on a timely basis; yet it is not only processes, but also actors and power relations that determine how transparency plays out (Fox, 2007). Qualitative participatory approaches look to understand how, why and to what extent public actions and decisions are rendered transparent to local people.

Accountability: Most broadly, accountability describes the ability of affected groups to hold power holders responsible for their actions. Biermann and Gupta (2011) point to four elements of accountability: normative (the required standard of behaviour), relational (linking those with rights to the responsible actors), decision (judgement as to whether the required standard of behaviour has been met), and behavioural (the application of sanctions in response to deviant behaviour). Accountability mechanisms inhere in juridical, formal, and informal institutions (Ratner et al., 2013; Uvin, 2007) that have the capacity to deliver sanctions or redress (Fox, 2007): the justice system (juridical); ombudsmen, elections or administrative consultations (formal): and the systematic mobilisation of shame, challenging socially acceptable discourses, grassroots mobilisation, and media advocacy in favour of certain rights (informal). In a qualitative analysis undertaken with communities, a focus on accountability makes use of participatory methods to explore the elements and mechanisms that form networks of accountability between community members and public and private actors.

Empowerment: Empowerment is rooted in a recognition that power relations affect people's capacities, rights and responsibilities. Where equality looks to identify how and why different groups or individuals are marginalised, in our analysis the principle of empowerment draws attention to the potential for people to make changes in their lives (Eyben and Napier-Moore, 2009). Two factors underpin this potential (Kabeer, 2005). First, is the presence of meaningful choice. Do people have a real ability to

choose to live differently, or does poverty and/or inequality, for example, lock individuals into dependency on more powerful actors, ruling out the capacity to make real choices? Second, can alternatives be seen or imagined, or are choices that may be available to outsiders hidden by the invisible power (Gaventa, 2006) of deeply entrenched social norms? The focus is therefore on the interplay of structure and agency, where agency denotes the freedom to act, make decisions, and distribute resources, while structure sets limits to actions and shapes preferences (Alsop et al., 2005; Scott, 2008). Challenging norms of structure and agency may demand overturning deeply held privileges or practices. Solidarity groups, social movements or lasting associations with NGOs are significant in securing the potential for such change.

4. Example: adaptive capacity in Timor-Leste

This case study illustrates how the proposed rights-based analysis can be used to explore opportunities and constraints for adaptive capacity in the current social and political context. This illustrative example relies on secondary, drawing from peer reviewed publications and widely published reports, and draws specifically on findings reported in a community-based climate change adaptation assessment undertaken during the period August 2012 to March 2013 led by the second author (Park et al., 2012). This latter assessment was conducted in participation with farmers and fishers from communities across the island of Atauro, and around the coastal sub-district of Batugade, and with local NGOs and district and national government representatives. Reference to this study highlights indicative primary data collection methods suitable for populating this rights-based framework.

The assessment methodology involved several components. First, participatory network mapping activities were used to capture in-country perspectives on key actors currently influencing farming and fishing livelihoods, and their decision-making and power relationships. Second, analysis of formal and informal governance was based on a combination of the Collaborative Governance Assessment (Ratner and Allison, 2012; Ratner, 2013; Ratner et al., 2013) and the FAO forest governance assessment tool (PROFOR-FAO, 2012; Kishor and Rosenbaum, 2012). The analysis employed data from primary literature and data collected during semi-structured interviews at the local, sub-district and national level. Third, institutional analysis aimed to understand community perspectives on the effectiveness of farmers' and fishers' interactions with institutions that provide support to rural livelihoods, using a survey of open-ended and multiple choice questions completed by a total of 150 fishers and farmers from the two locations. The research team combined data from these three activities with secondary data from a range of published sources in developing the analysis summarised below.

Timor-Leste provides a rich case with which to explore the utility of the rights-based analysis of adaptive capacity. It has a history of decolonisation, occupation and civil unrest that has resulted in fragmented attempts at nation building and uneven and inequitable development. The physical and administrative infrastructure of the state was nearly wiped out during the Indonesian withdrawal in 1999, leaving the country highly dependent on the UN and international agencies (Hohe, 2003). This history has contributed to a contemporary development context characterised by extreme poverty and growing economic inequality; limited state resources and governance capacity; and heavy reliance on social institutions (Hohe, 2003; Grenfell, 2009; Smith, 2004; Siapno, 2006; Richmond and Franks, 2008; Anne Brown, 2009). In addition, Timor-Leste is experiencing fundamental legal reform alongside efforts to reconcile formal and informal justice systems. Climate change is likely to exacerbate the development challenges already faced by the nation, in particular for those farmers and fishers dependant on aquatic agricultural systems distributed along coastlines and inland waterways.

The following analysis of the rights-based principles is structured around the four potential entry points for development actions, as summarised in Table 2. We also link the analytical approach to potential interventions, as set out in Table 3.

4.1. Analysis related to the social entry point

Communal life in most *suko*, the smallest political unit, continues to be guided by a system of customary authority and leadership. An important figure is the *liurai*, whose authority emanates from *uma lisan* – a combination of physical structures (the sacred house) and "social structures that guide relationships between members and between natural, social and ancestral worlds" (Tilman, 2012, p. 192). The continued importance of *uma lisan* is seen in maintaining community cohesion and social relations, mediating a "hierarchical network of mutual obligation" between families (da Costa Magno and Coa, 2012, p. 166).

Community cohesion and social relations are substantially influenced by the way traditional law and justice play out in everyday life, while formal justice has a much less significant influence. Research on traditional law and justice in Timor Leste has until now largely addressed women's experiences of discrimination and inequality (see for example Swaine, 2003). More broadly, it has been noted that "the unwritten and arbitrary nature of local laws lacks transparency and allows wide scope for the potential for bias, bribery, and other abuses", missing checks and balances necessary to ensure accountability (Grenfell, 2006, p. 320). Similarly, customary justice systems are identified as lacking

transparency (Swaine, 2003). The national Justice Sector Development Plan for the period 2011–2030 describes traditional justice as having the potential to clash with human rights. Custom, for instance, stipulates women cannot occupy positions of authority in traditional justice systems, and customary land and inheritance rights discriminate against women, leaving them in a weak economic situation and dependent on men (IFC, 2010; Swaine, 2003; NGOs Working Group on CEDAW Alternative Report, 2009; DRTL, 2010). Outside traditional law and justice, gender norms generally discourage women from public decision making and participation, and limit access to resources, in particular to land. Discrimination is also felt by the disabled of both sexes, who are marginalised in development (Trembath et al., 2010).

These patterns of entrenched discrimination and inequitable social relations are inevitably reflected in adaptive capacity, shaping the distribution of risk and benefit in adaptation actions, and converging with gaps in accountability to open opportunities for powerful actors to secure their interests at the expense of the weak. These patterns are also challenging to overcome, as customary justice mechanisms remain the preferred choice among East Timorese (Cummins, 2011), and the internalisation of patriarchal attitudes among both sexes means both are complicit in sustaining them (Trembath et al., 2010). At the same time, recognising the significance of norms and customs in Timor-Leste provides a starting point for effecting changes to adaptive capacity "from within" (Ensor, 2005, p. 265). For example, tara bandu is a "bottom up approach that mobilises communities and creates an ownership of NRM regulations at the community level" (Cardinoza, 2005, p. 198), recognised in law and enjoying a great deal of local legitimacy. It generates accountability, regulating and enforcing behaviours through prohibition and community shame,

Table 2Identifying obstacles and opportunities for strengthening adaptive capacity in relation to the four rights-based principles, illustrated with Timor-Leste examples.

Entry point	Equality	Transparency	Accountability	Empowerment
Social	Large majority of women do not have customary property and inheritance rights over land. Discrimination against disabled people, e.g. those disabled through fishing accidents.	Local laws described as arbitrary, lacking transparency, and open to abuse. Customary justice systems identified as lacking transparency.	Strong traditional authority presence in 'community leadership'. Enforcement of customary norms via exclusion, shame, social sanctions.	Uma Lisan mediates a hierarchical network of mutual obligation between families. Potential for more powerful actors to secure their interests at the expense of the weak.
Political	Legislation stipulates that konsellu de suko must include two women and youths. However, women in these positions have been unable to participate owing to structural issues. State institutions often do not challenge, but rather reproduce and legitimise local systems that underpin inequality.	Traditional authorities generally govern according to members' own views of rights, obligations and law and order. Decision-making process for distribution of agricultural equipment to community member is opaque and a source of confusion.	In some communities, legitimacy of formally elected leaders derives from customary norms, resulting in hybrid governance forms. Void between highly centralised state and community creates a large accountability gap.	Decision making and decision making positions can become closed off to those who cannot marshal ritual and spiritual authority. Structural barriers to decision making include patriarchal norms, low capacity of women, and lack of resources and state support for the konsellu de suko.
Administrative	Exclusion or marginalisation of people and groups from access to state support. Potential marginalisation of small farmers through provisions in Strategic Development Plan.	Perceived arbitrary nature of provisions in Strategic Development Plan. NDFA peskador website for fisheries provides publicly available information on boat census data, daily fish prices, live maps, data on accidents at sea.	Privatisation of key natural resources and market liberalisation shifts responsibility away from the state. Few channels through which claims against the state can be made.	The Strategic Development Plan is actively contested by civil society organisations for overriding the interests of the majority of farmers. Low state capacity severely limits its ability to deliver, enable or protect access to resources.
Legal	Women face additional barriers to justice system, including community pressure, perception that the system will not deliver, and lack of access to financial resources. National constitution and international human rights instruments signed by Timor-Leste provide a tool for gender equality activism.	Justice Sector operates in Portuguese, obscuring the legal process for the majority. Low public awareness, misunderstanding and distrust of justice institutions.	Traditional leadership roles, rights and duties, and election process set out in formal law and limited by the constitution. Poor access to justice and barely existent justice sector offers little in the way of juridical mechanisms and processes for redress, particularly for poorest segments of society	Failure of legal system to protect all from "rule of strength", including draft land laws that potentially enable expropriation of community resources. Specific identification of, and measures to, support vulnerable groups in the Basic Law on Environment.

Table 3 Identifying strategies to enhance adaptive capacity, illustrated with Timor-Leste examples.

Entry point	Key findings in relation to rights-based principles	Significance for adaptive capacity	Potential rights-based strategies for enhancing adaptive capacity
Social	In some areas <i>tara bandu</i> is a respected social accountability institution that has strong influence on NRM behaviours, and can be altered through negotiation	Renegotiation offers potential for flexibility and learning in NRM behaviours that supports equity in addressing ongoing environmental change	Support and disseminate examples of tara bandu renegotiation that embed rights-based principles. Alliance building activities for national advocacy around state support of tara bandu in the Draft Biodiversity Law.
	Entrenched discrimination, e.g. patriarchy, is normalised; marginalisation of disabled people is common.	Ongoing adaptive actions will further entrench inequality unless adaptive capacity includes a voice for those who remain marginalised	Support civil society organisations through which marginalised groups seek to secure change and challenge social norms, e.g. existing women's empowerment organisations.
Political	Transparency and accountability gap between the state (sub-district level) and community leadership.	Poor resource and information flows between state and community; lack of state oversight of community leadership obligations in relation to environmental protection; lack of shared decision making on potential adaptive actions.	Alliance building activities for advocacy and monitoring to ensure rights-based principles are realised in the proposed state decentralisation that will establish a municipality assembly charged with maintaining close links with community leadership.
	Community leadership has high local legitimacy and offers a degree of accountability, but is at times implicated in poor transparency and discrimination in decision making.	Community leadership could foster adaptive capacity by initiating equitable decision making over adaptive actions, but also can limit representation and close opportunities for learning if decision making is dominated by particular groups.	Awareness raising and capacity building activities with community leaders to build support for rights-based principles; working with marginalised groups (such as women fish traders and rice farmers) to secure recognition of their entitlements.
Administrative	State is unable to adequately deliver, enable or protect access to resources, discriminating against some and disempowering communities due to low capacity and ineffective relationships with fishing and farming networks.	Lack of access to support for on-going adaptive actions.	Development of stakeholder fora to build relationships between all actors in fishing and farming social networks to enable claim making on the state. Awareness and capacity raising with state and community institutions to build recognition of rights and duties. Support for national level advocacy networks to secure equitable distribution of resources within the state.
	Shift of state support to commercial agriculture, identified by civil society as a transparency and accountability failure, disempowering and discriminating against subsistence farmers, eroding livelihoods and access to resources.	Evidence of civil society activism in response to changes in livelihoods demonstrates capacity for claim making in response to future climate change impacts. Renewed state emphasis on extension support.	Collaboration with, and support to, civil society advocacy networks e.g. La Via Campesina, which act as a conduit between, for example, fishing and farming community groups and regional government extension officers, for resources, knowledge and technologies.
Legal	Draft land laws may invite expropriation of community resources, actively disempowering communities and inconsistent with international human rights standards.	Sustainable and predictable access to and control over the natural resources necessary to enable future adaptive actions.	Awareness raising and alliance building activities between civil society and those threatened by expropriation to advocate for recognition of rights within draft laws; working with legal NGOs to develop arguments to challenge expropriation under the draft law should it come into effect.
	Law contains provisions that could empower vulnerable groups, yet the formal justice system lacks capacity, legitimacy and transparency for many in rural communities, making litigation inaccessible for many.	Basic Law on Environment and Constitution provide rights that are central to the ability to adapt to future environmental change, including rights to environmental information, participation in environmental decision making, and gender equality provisions.	Awareness raising, advocacy and capacity building activities with communities and state representatives to secure access to legally enshrined rights without recourse to litigation.

and has a strong influence on how people access resources and interact with their environment.

As such, the institution of *tara bandu* plays an important role in determining adaptive capacity, whilst at the same time being implicated in inequality and discrimination (Shepherd, 2013). Tilman (2012) notes that actors in some communities have been renegotiating *tara bandu* in human rights, democratic and religious terms as a means of aligning cultural practices with new national principles, and community members are calling for its enforcement by the state. At present however, attempts to introduce local resource management are often frustrated by inadequate or uncoordinated support from national or sub-national agencies. Yet

the potential to renegotiate *tara bandu* suggests a capacity to learn and respond to a changing context, and thus an important contribution to local resilience. It also offers an entry point for development activities that aim to work with local institutions to support adaptive capacity.

4.2. Analysis related to the political entry point

Inequality in Timor-Leste is also reproduced in political processes, where the formal and traditional governance structures and their hybridisation set barriers to participation, decision making, and ultimately empowerment (Cummins, 2011). Local

political authority derives to greater or lesser degrees from custom, with the result that decision making and positions of power can become closed off to individuals or groups that cannot marshal ritual and spiritual authority (Cummins and Leach, 2012). While legislation sets out how community democracy should function procedurally, the reality departs from this (dos Santos and da Silva, 2012). In practice the konsellu de suko (suko council) tends to have a strong traditional, male authority presence and largely governs according to members' own views of rights, obligations and law and order (Cummins, 2012; da Costa Magno and Coa, 2012). Meanwhile power is generally shared between the xefe suko (suko head) and nonelected traditional authorities (Cummins, 2012). There are implications for equality, and empowerment, as well as questions about the oversight role of the state: as Cummins (2012, p. 115) notes, "existing inequalities are reproduced and legitimated in state-based institutions as they are incorporated into the local political environment", with policy outcomes shaped by local elites. Legislation stipulates the konsellu de suko must include a minimum of two women and youths (Republic of Timor-Leste, 2009); however, structural barriers to participation include - in addition to often cited patriarchal norms and low capacity of women – a lack of resources, capacity and state support (Cummins,

The reproduction of social, cultural and political relations that marginalise and exclude certain individuals and groups in decision making means that adaptation challenges and opportunities will likely be understood in a limited and partial way, with the costs and benefits aligning with and reinforcing existing relations of power and influence. At present the 'community leadership' is considered among the most important stakeholders for decision making, representation and communication, and offers a degree of accountability in the form of community access to decision makers that can encourage them to be more responsive. However, there are also gaps, with community leadership implicated in, for example, the distribution of resources according to family affiliation (Pereira and Koten, 2012; see also Cummins, 2010), and questioned over transparency in decision making, such as in the distribution of hand tractors. In some cases this has led to the emergence of economic and political patron/client relationships or alliances in Timor-Leste. Networks of this form were evident in the privatisation of public water resources by powerful families with the support of authority figures in state positions (Cummins, 2010). In such cases, the implication for adaptive capacity is the potential to lock adaptation decision making into the interests of a minority, open to their manipulation, and leaving little potential for learning.

Moving to a higher scale, there remains a wide gap in accountability between the Timorese state and rural communities. The nature of weak political processes and inadequate links between state and community undermines both downward accountability and transparency. This in turn circumscribes the potential for adaptive actions at the local level (through poor resource and information flows), or across scales (through a lack of opportunities for shared decision making).

4.3. Analysis related to the administrative entry point

At present, low capacity, inadequate budgets and lack of human resources in the public sector are undermining national policy aims, as well as the more general objectives and standard-setting functions of the Ministry of Agriculture and Fisheries (MAF) and its departments. Poor implementation capacity in National and District government agencies is particularly visible in the fisheries sector, and to some extent in agricultural extension services. In many respects the state is unable to deliver, enable, or protect access to the resources and services necessary to support adaptation. This is more than just a financing issue, as cumbersome

and dysfunctional links between key actors operating within fishing and farming social networks – including state actors – limit the ability to respond to local concerns. Moreover, the disproportionate budget allocation to physical infrastructure at the expense of other economic, social and cultural goods (e.g. health, education, agriculture) has been criticised by the UN Special Rapporteur (Carmona, 2012). The distance of the state from rural communities renders few channels through which claim-holders can call upon the state to uphold rights, undermining downward accountability. Present plans to decentralise are intended to promote democratic participation and improve service delivery.

The national Strategic Development Plan (2011-2030) moves away from state support for agriculture, towards a free market system (Kelly, 2013). This is likely to speed a transformation from subsistence to commercial agricultural production (DRTL, 2011). The plan emphasises the importance of effective extension services for the adoption of new farming and fishing techniques, equipment and research for fisheries and agricultural development, which could provide an important boost to adaptive capacity if delivered upon in an equitable manner. In one recent initiative, the MAF launched a peskador fisheries website to provide information including census data, daily fish prices and laws that govern the sector. However, the Strategic Development Plan has been contested on bases that are significant for adaptive capacity: contradictions between the priorities of subsistence farmers and the emerging export-orientated growth model (Kelly, 2013), a shift away from state responsibility, and a risk of restricting community access to resources and undermining existing livelihoods (La Via Campesina, 2009, 2010). Civil society organisations have expressed particular concern about the privatisation of land, water, and seed supply, as well as proposed World Bank-sponsored reforms of land law and policy (La Via Campesina, 2010). In the process, civil society organisations have demonstrated belief in their role as empowered actors, seeking to hold the state accountable to citizens' interests by advocating for recognition in domestic law of peasant rights and the associated promise of improvements in transparency, accountability, and equality (La Via Campesina, 2008, 2010). By broadening the representation of affected groups in decision-making, this newly vocal civil society sector can potentially benefit adaptive capacity.

4.4. Analysis related to the legal entry point

Timor-Leste has only recently begun to develop a fully functioning justice sector. However, some legal tools may be mobilised to support adaptive capacity and social change more generally. For example, activists challenging gender inequality are utilising the national Constitution and gender equality policies. The recently promulgated Basic Law on Environment - a framework for environmental protection - outlines citizens' rights and responsibilities as they relate to the environment (including access to environmental information and education, the right to participate, and the duty to conserve and participate), and it explicitly identifies and includes measures to support vulnerable groups (DRTL, 2012a). The draft law on biodiversity (DRTL, 2012b) addresses ecosystems, habitats and species, and provides for the support and promotion of tara bandu as a means of ensuring sustainability of biological resources and conservation of biodiversity. Traditional leadership roles, rights and duties, and the procedures for electing local leaders, have now been set out in formal law. At the international level, Timor-Leste is party to the key human rights and environmental agreements, which provides a legal basis to refer to international guidelines and standards where national ones are lacking. Thus, legal norms support adaptive capacity directly, by recognizing a wide set of entitlements and state obligations, secured and enforced through legal processes, and indirectly, where these legal norms can be translated into political and social processes that communities, civil society and development actors can support.

However, certain aspects of statutory law may have negative implications for adaptive capacity. For example, the Draft Transitional Land Law and Expropriation Law are criticised for leaving open opportunities for land-grabbing, and for inconsistencies with Timor Leste's international human rights obligations (Bugalski, 2012; Oxfam New Zealand, 2012; La'o Hamutuk, 2012). Access to formal justice is also poor, as the justice sector is small, public awareness of justice institutions low, and the legal framework far from complete (DRTL, 2010), resulting in a failure to prevent the "rule of strength" prevailing for many (DRTL, 2010, p. 10). Cultural factors, structural barriers, and people's experience also combine to reduce demand for formal justice compared to customary processes. For example, community pressure, financial resources, a misunderstanding or distrust of processes, or a perception that the formal system cannot deliver justice, has resulted in an unwillingness of some women victims to approach the formal system (UNMIT, 2010; Grenfell, 2009). In addition, the use of Portuguese as the operational language of the formal justice system obscures the laws and legal processes from the non-Portuguese speaking majority. Some national NGOs, such as The Judicial System Monitoring Programme and Rede Feto, are working to improve community access to justice, rights, equality and empowerment more generally, and as such are working towards improvements in access to the provisions in law that support adaptive capacity directly (involvement in environmental decision making) or indirectly (equality and non-discrimination).

5. Discussion

The utility of this rights-based tool lies in a form of analysis that, first, enables identification of constraints on adaptive actions at the local level and, second, links this analysis to actions that can be planned in support of adaptive capacity. We propose that this tool can be used as the basis for participatory work with vulnerable communities, in which qualitative methods are used to probe the practical implications of gaps and opportunities related to equality, transparency, accountability, and empowerment. In reviewing a range of data from Timor Leste, we found multiple constraints resulting from different forms of marginalisation of those in working in aquatic agricultural livelihood systems. Accountability gaps across and between scales undermine potential avenues to disrupt established patterns of power and discrimination. Different forms of discrimination are evident in social norms, the distribution of state support, and access to formal justice, which persist despite legal reforms and, indeed, through state institutions that legitimise local systems of inequality. While women, youth and people with disabilities in particular continue to experience discrimination, the potential exists for empowerment strategies to work through statutory laws to challenge inequality and, in the process of claiming rights, strengthen accountability. Sections of civil society such as The Judicial System Monitoring Programme, Rede Feto, La Via Campesina, or those renegotiating tara bandu, for example, are active in challenging perceived inequalities that arise from state development strategy. Broadly, however, hierarchy based in customary norms excludes certain groups from participating in decision making, compounding failures to challenge the way power is distributed in social institutions and manifested in state actions or access to justice.

As might be expected, the analysis exposes differentiation in the capacity to adapt both within scales, with uneven distribution of opportunities and resources across members of a particular community, and also across scales as a result of how the influence of institutions and actors are experienced. These deficits are revealed in terms of the mechanisms and outcomes of marginalisation and exclusion: in access to material and non-material resources and services; how such access is enabled or protected and resources delivered; how people interact with their environment; how decisions are arrived at that have a bearing on the local context; and how legal institutions relate to potential adaptive actions. In this way, the analysis draws specific attention to those whose capacity to adapt is being constrained, shedding light on why adaptation actions are regularly not realised by local actors (Wise et al., 2014).

As Table 3 illustrates, opportunities for action flow from this analysis, often addressing the human rights principles in combination when working through the different entry points. The focus here encourages adaptation planning to expand the frame of reference beyond immediate problems, such as infrastructure, technological deficiencies and job creation, towards underlying inequality and how it structures risk and opportunity. Several of the potential actions propose alliance building and development of or support for advocacy networks. These are central rights-based strategies that have been demonstrated to open new spaces for accountability (where power holders become answerable for their actions), at the same time as fostering transparency (monitoring and disseminating information about actions and decisions) and empowering new actors to become involved in decision making (Gready and Ensor, 2005b).

These are not quick fixes. Efforts to build support for a Draft Biodiversity Law in Timor Leste that secures state backing for tara bandu, for example, would seek to increase public knowledge of the development and content of the law, and bring new voices into political decision making. Such an approach would also aim to hold the state accountable for bringing the law off the statute books and into action, and secure new support for respected social institutions such as tara bandu. This is not only a long term project, but one that requires strategic and flexible thinking in order to mobilise support and build pressure in a fluid political environment. On the other hand, ensuring provisions within the Basic Law on Environment that provide for information and participation translate into real opportunities for people to respond to emerging environmental change will likely require relationship and capacity building between community members and extension workers, alongside advocacy for resources and technical support at higher levels of government.

The case we have provided for Timor Leste, it is important to note, aims simply to illustrate the potential of a rights-based analytical approach. The reliance on secondary data in this illustration means that we have interpreted and prioritised this material. A natural follow on would be to use the findings from literature review to triangulate with the conclusions from participatory processes, and organise subsequent dialogue activities to probe potential courses of action in further depth. Yet what emerges in Table 3 is a portfolio of potential actions in support of adaptive capacity that are, in more or less explicit ways, inherently political, reflecting and reinforcing the claim that "human responses to climate change must engage with social relations of power" (Pelling and Manuel-Navarrete, 2011 np; see also: Adger and Barnett, 2009; S. C. Moser, 2009; Tschakert, 2013). The opportunities for action identified through rights-based analysis are both local and cross-scale, and involve challenging existing distributions of authority, power and resources. For this reason, the analysis presented here is only a starting point.

Realising the benefits of rights-based analysis in practice demands development actors engage in or support awareness raising, advocacy, network building and collaboration with social movements. This is a significant reorientation in the focus and emphasis of many development organisations working through community-based adaptation. The emphasis on participation and

respect for local knowledge means that community-based adaptation is well placed to work in support of rights-based actions (Reid, 2014). However attending to both local and higher scale processes of change can be a substantial practical challenge (Ako, 2013). As Dodman and Mitlin (2011) point out, it means moving beyond participatory approaches that are limited to the scope of a particular project, and towards forms of support that build links with coalitions for change, often via organising or working with organised citizen groups that are able to advance the interests of the marginalised or disenfranchised at the national level.

In the Timor-Leste example, for example, this could mean providing support to La Via Campesina, the global peasants' movement, as a member-based organisation that is engaged in a political advocacy representing subsistence farmers. A step such as this means NGOs ceding power and decision making, negotiating their contribution in a struggle that is framed and owned by others. Such work is at the heart of rights-based approaches to development and, we would argue, needs to be brought to the centre of efforts to support adaptive capacity. But it also challenges NGOs to move beyond their comfort zones, and recasts external professionals as facilitators of processes that address political and institutional constraints. This is a challenge in an environment where technical skills such as hydrology, forestry, or agronomy have traditionally dominated (Ball, 2005). But the implication is also that development organisations will need to abandon aspirations towards well ordered, technocratic development trajectories in order to support inherently "unruly" social transformation that is not so easily managed (Stirling, 2014).

Our analysis confirms that a complex social and political background, such as that identified in Timor-Leste, creates intense challenges for equitable adaptation planning (Boyd et al., 2014). Threats to adaptive capacity are evident on many fronts, including through the expropriation of community resources, the weakness of the state, and entrenched discrimination. Overcoming these means engaging in a context in which formal and informal governance are entangled, and power relations are structured in ways that close down opportunities for accountability of the powerful and empowerment of those who are marginalised. While rights-based analysis identifies and offers strategies to mitigate these issues, it is not our intention to suggest that change can be wrought readily or easily. However, what our approach reveals is how, without attention to this context, groups and individuals can be left with limited opportunities in the face of environmental change, and investments to build resilience can lead to inequitable outcomes that further entrench inequality.

6. Conclusion

Dodman and Mitlin (2011) observe in relation to the practice of community-based adaptation that all too often development actions overlook structural issues, fail to relate to governance, and isolate communities from broader political debates. As the Timor-Leste example suggests, this shortcoming can be overcome by adopting a rights-based perspective, which exposes the mechanisms of marginalisation in relation to adaptive capacity. Rightsbased approaches politicise development practice through processes that expose and seek to change the distribution of power and authority (Ako et al., 2013; Gready and Ensor, 2005a). Here, in taking the principles of analysis embedded in rights-based development and applying them to the control and use of resources for adaptation, a similar politicisation occurs. It is an approach that explicitly engages with the underlying politics in development practice, showing how pre-existing inequalities yield deficits in adaptive capacity, and how they can be addressed.

We concur with the view that human rights retain the potential to enable resilience practice to become pro-poor (Christoplos, 2014), and we provide an analytical tool to support this. In this view, attention to adaptive capacity will demand development practitioners undertake analyses and identify strategies that are capable of reworking relationships, in context, in favour of the most vulnerable. While a rights-based approach to adaptive capacity offers this potential, it remains for development organisations to internalise the implications and be ready to adopt new methods to address entrenched patterns of power and marginalisation.

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