Adaptive capacity
Responding to climate variability and change is one of the principle challenges of our time. The impacts of current and projected changes in global and regional climate are certain to have major implications for ecosystems, physical systems and the livelihoods of those who depend on them (Tompkins and Adger 2004). In Africa, these impacts need to be examined in the wider context of development pressures arising from rapid population growth, management of scarce natural resources, and urbanisation. Each is likely to be exacerbated by a pattern of rapidly changing climate. This has required the development community to re-evaluate how its current activities and interventions actually impact on adaptive capacity at the local level, and the best ways to promote it.

Considerable debate surrounds the definition and practical applications of what ‘adaptive capacity’ actually means. Broadly speaking, adaptive capacity denotes the ability of a system to adjust, modify or change its characteristics and actions to moderate potential, future damage; take advantage of opportunities; and to cope with the consequences of shock or stress (Brooks, 2003). One key component is ensuring that individuals, communities and societies are actively involved in processes of change (Pettengell, 2010) in ways that relate to changes in behaviour, as much as to resources and technologies.

The Local Adaptive Capacity framework: Linking adaptation and development
The Local Adaptive Capacity framework (LAC), which was developed as part of the Africa Climate Change Resilience Alliance (ACCRA), draws on extensive consultations with academics, policy-makers and practitioners. It is an attempt to incorporate the intangible and dynamic dimensions of adaptive capacity, as well as capital and resource-based components, into an analysis of adaptive capacity at local level.

The LAC framework forms a conceptual basis for ACCRA’s country-level research, which seeks to understand how development or social protection interventions undertaken by ACCRA members (Oxfam, Save the Children, World Vision and CARE) contribute to adaptive capacity in 11 communities in three African countries (Uganda, Mozambique and Ethiopia).

The LAC focuses on the local level, recognising that while considerable attention has been paid to developing characteristics and indicators at national level, little research and analysis has been conducted on adaptive capacity at community and household levels. The framework lays out five distinct yet interrelated characteristics of adaptive capacity, with the underlying assumption that positive impacts on any or all of these characteristics will enhance the system’s overall adaptive capacity.

This is one in a series of ACCRA briefs developed as an output of ACCRA’s research and capacity-building work conducted in 2010-11, in three sites in Ethiopia, and in Uganda and Mozambique. See http://community.eldis.org/accra/ to find out more about ACCRA and to subscribe to our monthly update.
Because the LAC is not a theory of change, it can be used as a lens to look at the impact of any intervention on a system’s capacity to adapt.

**How can the LAC be used?**

Although the immediate application of the LAC by ACCRA’s members has been to look at adaptive capacity to climate change, the framework is designed to look at change in general, and may be applicable in other contexts of changing shocks and trends. The LAC has the potential to be used in a number of different contexts, and for a range of purposes; for example, by mainstreaming climate-change adaptation, design or evaluation purposes. ACCRA is already looking at how it can be used by ACCRA members in policy and programming.

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**Table 1: Features of Adaptive Capacity**

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<thead>
<tr>
<th>Characteristic</th>
<th>Features that reflect adaptive capacity</th>
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<tr>
<td><strong>Asset base</strong></td>
<td>The financial, physical, natural, social, political and human capitals necessary to prepare a system to respond best to a changing climate. This category incorporates the importance of different kinds of capital, often informal, non-monetary or reliant on social networks. [Physical capital: sand dams, flood defence schemes, boreholes, etc; financial capital: household savings, access to financial loans, livestock and household wealth, etc; natural capital: forest resources, access to water resources, etc.]</td>
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<tr>
<td><strong>Institutions and entitlements</strong></td>
<td>The ability of system to ensure equitable access and entitlement to key resources and assets is a fundamental characteristic of adaptive capacity. Entitlement to the key resources needed for adaptation can be differentiated according to age, ethnicity, class, religion and gender (among other groups). It follows that an institutional environment that allows equitable opportunities to all groups, particularly the marginal and most vulnerable, to the impacts of climate change, is essential to building the capacity to adapt. Representation and participation in key institutions is also essential to enabling an equitable distribution of resources. Access to key resources, participation in decision-making processes and empowerment are key elements of this characteristic. [Examples: Local norms that regulate access to natural resources or water points (e.g. whose animals, and how many, are allowed at which water point during which season); religious rules that prevent women from ploughing; social norms that encourage wealthier households to support poorer neighbours in times of stress or crisis, etc.]</td>
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<td><strong>Knowledge and information</strong></td>
<td>Successful adaptation requires information and understanding of future change, knowledge about adaptation options, the ability to assess them, and the capacity to implement the most suitable interventions. In the context of climate change it is important to ensure that systems are in place to distribute relevant information at both national and regional scales. In addition, forums must be made available for dialogue and discussion among all stakeholders. [Examples: Flood early warning systems; meteorological data and forecasting; climate impact data].</td>
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<td><strong>Innovation</strong></td>
<td>A key characteristic of adaptive capacity relates to the system’s ability to support innovation and risk taking. Innovation can be planned, technically oriented and geared towards large-scale innovations; or it can be autonomous, local-level initiatives that help people adapt to changes to local climate. An enabling environment that promotes and allows for experimentation and the exploration of niche solutions is required to take advantage of new opportunities and to confront challenges presented by climate change. The environment also needs to protect against the risks of failure associated with innovation. [Examples: changing crop types, adopting new farming practices, switching livelihoods, taking advantage of new opportunities presented in the face of a changing climate].</td>
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<td><strong>Flexible forward-looking decision-making and governance</strong></td>
<td>Informed decision-making, transparency and prioritisation are all key elements of adaptive capacity. Ensuring that local organisations are well-informed of future climate trends enables them to take measures to plan for their impacts. Similarly, flexibility to allow systems – and the institutions that govern them – to evolve and adapt to a changing environment is a crucial characteristic of adaptive capacity. [Examples: land-use regulations that protect floodplains while allowing moderate use, and that are reassessed every planning period against new, climate-change evidence; regulations that prevent women from ploughing; social norms that encourage wealthier households to support poorer neighbours in times of stress or crisis, etc.; environmental legislation that can be reinterpreted to allow for water points; e.g. whose animals, and how many, are allowed at which water point during which season; religious rules that prevent women from ploughing; social norms that encourage wealthier households to support poorer neighbours in times of stress or crisis, etc.; environmental legislation that can be reinterpreted to allow for water points].</td>
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References


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