

INTEGRATING FOR ADAPTATION FROM LOCAL TO NATIONAL LEVEL

If adaptation to climate change is to be effective, a so far unseen degree of cooperation and coordination between public and private sectors and civil society is essential

Climate change is already hitting poor and vulnerable people hard, and these groups must be at the heart of efforts to build resilience. As warnings about the potential severity of climate change impact increase, so the urgency grows of developing and putting into action effective adaptation responses. It is clear that climate change adaptation requires a fundamental change in approaches to development.

Foundations of effective climate adaptation planning

- National adaptation strategies developed in consultation with civil society, especially organisations in affected communities.
- These strategies must identify the most vulnerable communities – where poverty and the risk of severe climate change impact coincide – and suggest community-led responses based on local need and perspective.
- Climate science capacity significantly increased so that more accurate and detailed information can be effectively disseminated to communities that need it.
- Responses developed to both short-term variability and longer-term change, integrating emergency response approaches, disaster risk reduction work and longer-term livelihoods development.
- Agriculture must be prioritised, as it is the livelihood most vulnerable to climate changes and the most important to people living in poverty.

National adaptation strategies

More than 40 of the least developed countries have so far produced National Adaptation Programmes for Action (NAPAs). Although civil society consultation was usually envisaged, in many cases it either did not occur or it was nominal. Little funding has subsequently been provided for implementation.

Recently, the World Bank's Pilot Programme for Climate Resilience has invited 11 developing countries to take part in a process involving the development of a national adaptation strategy as a precursor to implementing adaptation measures.

Christian Aid supports the urgent development of national adaptation strategies as the best method to plan and cost an effective adaptation response where:

- they are supported by funds deployed through credible and well-supported channels, such as the United National Framework Convention on Climate Change (UNFCCC) Adaptation Fund
- civil society is effectively and transparently involved in development and implementation so that strategies are as widely supported as possible and can build on the expertise and experience of all sectors involved.

Current practical experience of local adaptation stems largely from action by both national and international civil society groups on disaster risk reduction or on supporting poor people's livelihoods. It is essential to learn from this work.

To be effective, adaptation will require an unprecedented degree of cooperation and coordination. All sectors, including civil

POVERTY

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society, need to be involved in designing and delivering adaptation programmes in order to ensure that currently successful initiatives are scaled up into effective and accountable programmes. Many countries have experience of broad consultation – for example, with the International Monetary Fund, the World Bank, and civil society and development partners – through the development of Poverty Reduction Strategy Papers. These experiences can be used to design and implement a coherent consultation process for adaptation.

Focusing on the most vulnerable

Although climate change will affect livelihoods universally, some will be affected more than others. Poor people, who have few assets and are often located in areas severely affected by climate impacts, are already suffering most. Adaptation strategies need explicitly to recognise this through resource targeting. Thus village-level adaptation plans should prioritise support to relatively poorer and more vulnerable households, while district and national strategies should differentiate similarly. Ideally, national strategies should be at least partly based on aggregating village and district plans, and linking them to national priorities, such as concerns around infrastructure.

Community-based adaptation (CBA), based on informed choices made locally rather than those imposed from outside, will be increasingly important. CBA helps establish a community-owned vision of climate resilience. Adaptation planning for this vision should be based on both climate science and local knowledge, drawing on the best of long-term development, disaster risk reduction and humanitarian emergency response work. Experience in these fields has demonstrated the importance of community participation in identifying priorities, technological innovation and accountable management of resources. Adaptation funds must therefore prioritise CBA to increase the resilience of the poorest and most vulnerable.

Enhancing access to climate science

Currently, Africa has only an eighth of the World Meteorological Organisation's minimum recommended density of weather stations. Existing meteorological networks are unevenly distributed, often missing out areas where some of the most vulnerable people live. For example, in East Africa, drought-prone lowland areas, where pastoralists and marginal farmers are struggling to cope with the impact of climate change, have fewer weather stations than the more fertile highland zones.

Poor and marginalised communities across developing countries often lack access to either short- or long-term climate information. Where it is provided, it is frequently at a time or in a format that makes it difficult to understand and relate to local needs. This is particularly evident in the provision of seasonal forecasts, where probabilistic information derived from data collected at weather stations that may be hundreds of kilometres away is of limited use to smallholder farmers making local choices between crop varieties and planting dates.

Climate science needs to be made available in a form that is timely, easy to interpret and easy to integrate with local climate knowledge and understanding. Predictions of a changed climate need to be applicable to individual household decisions, as well as the wider community's adaptation planning.

For longer-term adaptation, data from global climate models needs to be more detailed, providing information at regional level and reducing the gap between short-term seasonal forecasting and long-term climate modelling. Communities are not simply passive recipients in this process – they have their own climate knowledge to contribute. For example, where communities have been linked to meteorology departments in countries such as El Salvador, successful risk reduction and adaptation relies on local monitoring of climate, providing information to meteorologists and operating early warning systems.

Increasing access to climate science also inevitably means restructuring systems that provide advice to communities, especially agricultural advice. In Indonesia and the Philippines, climate field schools have improved knowledge and understanding of climate change thereby improving climate resilience among farmers.

These and other innovations that draw on, for example, information and communication technology, need to be developed and implemented.

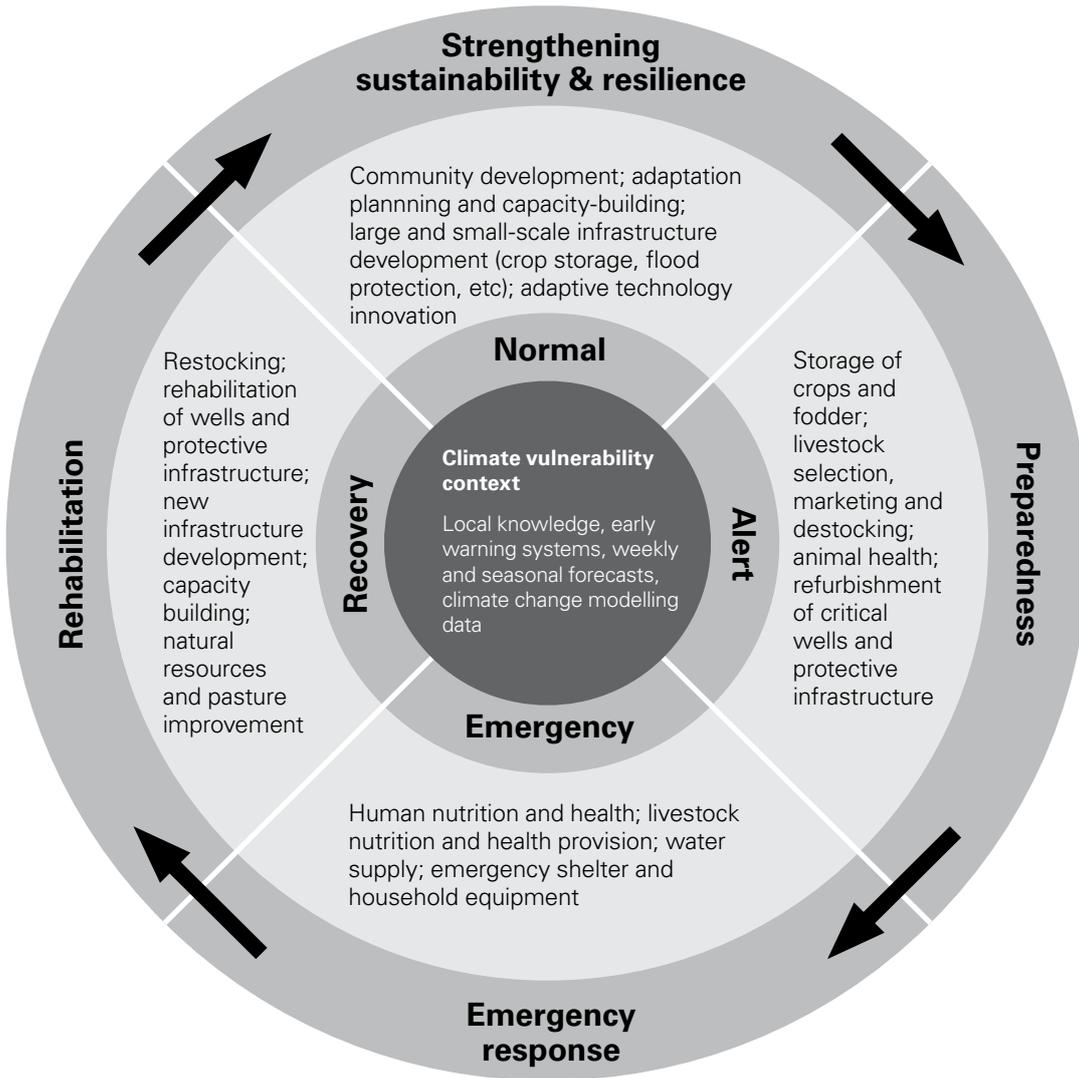
Underpinning this is a much-needed reversal of the neglect of rural development that has characterised the past two decades as well as ensuring that meteorology services are better resourced and integrated at all levels.

Integrating humanitarian and development support

Adaptation to climate change presents an unprecedented challenge to those working in both humanitarian and development work. It exposes the artificiality of dividing work into emergency relief, disaster risk reduction and long-term development. The current fragmented approach to both funding and implementation severely hinders effective

Adaptation planning should be based on both climate science and local knowledge

Figure 1: a risk-cycle management approach



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adaptation. Development projects often treat sudden shocks as unexpected, while emergency responses either persist inappropriately or close down before they lead to effective rehabilitation and resilience-building.

All three sectors need to be integrated into a risk-cycle management approach (see above) where future shocks are expected and communities are properly prepared to survive emergencies, recover afterwards, and plan and prepare for new shocks that may arise. The ideal is that communities are equipped to deal with and recover from an emergency as quickly as possible so as to maximise the time spent investing in their own sustainability and resilience.

This also requires adaptation to integrate responses to both short-term and longer-term climate change so as to minimise the danger of a short-term response increasing vulnerability to a longer-term threat. For instance, farmers in eastern Kenya routinely turn to charcoal-making in response to poor

crop yields, fully aware that the associated deforestation reduces catchment protection, increases soil erosion and has a negative impact on their local environment. In these situations, alternative coping strategies must be supported if genuinely sustainable resilience is to be achieved.

A focus on agriculture

The 2008 food crisis gave an early warning of how the global food system might respond to the profound climate impacts that are predicted. This in turn has exposed the folly of reducing the priority of agriculture and food security, given its status as the provider of livelihoods to the poorest but also as the most climate-vulnerable sector.

It is crucial, however, that a renewed focus on agricultural development learns from the mistakes of the past. A vital precondition to both climate resilience and long-term sustainable development will be land tenure security, so that smallholder farmers and

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pastoralists are confident that anything they invest in more sustainable and resilient production is worthwhile.

Second, farmers have to be at the heart of the technology-development process so that technology builds on their detailed knowledge of local circumstances and responds to their priorities rather than the convenience of central government or donor programme planning.

This is particularly true in the development of new climate-resilient crop varieties. This means an increased focus on conserving the diversity of local crop varieties and a reorientation of agricultural research to climate resilience and ecological sustainability. Widespread experience has already been gained in farmer-led advisory systems, such as farmer participatory research and farmer field schools, and these can be scaled up. Likewise, the now extensive knowledge of the dangers of over-promoting expensive inputs, such as chemical fertilisers and pesticides, in terms of indebtedness, deteriorating soil quality, negative human health impacts and increased pest resistance, should lead to a more sustainable and ecological approach to building resilience.

In many areas, smallholder farmers themselves have demonstrated the key elements of climate-resilient agriculture: minimum tillage, planting a diversity of locally-adapted crop varieties, integrated pest management, enhancing soil fertility

through intercropping with nitrogen-fixing crops and applying mulches and manures, and integrating agroforestry techniques. Recent research points to the greater productivity of these systems compared to their 'chemical' or conventional equivalents. Research and extension needs to build on these sustainable approaches to climate resilience rather than engage in increasingly expensive schemes, such as arbitrarily raising the level of chemical fertiliser use. Monocultures of intensified hybrid crops soaked in toxic fossil fuel-based pesticide and fertiliser, operated by increasingly destitute farmers taking out loans on next year's harvest to pay for this year's inputs, are not and can never be climate resilient or sustainable.

Finally, in the next 40 years it will also be essential to maximise the adaptation-mitigation co-benefits of agriculture. Currently 13 per cent of greenhouse gases are derived directly from agriculture with a substantial proportion of this from developing country farming systems, especially rice production. Many of these emissions are associated with intensive unsustainable agriculture – for example, emissions of nitrous oxide (296 times more powerful a greenhouse gas than carbon dioxide) are associated with the use of nitrogen fertiliser. Diversified, ecologically sustainable agriculture has the potential to both reduce such emissions and increase stocks of carbon stored in the soil by increasing the levels of soil organic matter.



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Endnotes

1 Lim Li Ching, Is Ecological Agriculture Productive? Oakland Institute, February 2009, www.oaklandinstitute.org/?q=node/view/499 This shows tropical ecological agriculture outyielding conventional chemical agriculture by 80 per cent.

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