Climate risk screening must become a regular part of the programme cycle, from design, to implementation and evaluation.

Current limitations to the portfolio screening process
For several of the adaptation options it was shown that cost benefit analysis is a replicable method for testing their economic feasibility across a range of scenarios. However, there are major data constraints in analysing non-structural measures – economic analysis should not be regarded as justification for prioritising infrastructural measures over non-structural measures.

The long-term and uncertain nature of climate change projections makes them more suitable for horizon scanning and long-term planning than for guiding adaptation priorities for specific projects. Nevertheless, tackling current climate-related disaster risks should provide a firm foundation for building future resilience in many cases. There is limited documentation on hazard burdens and the vulnerability of human populations to climate change at the regional scale. Improved analysis is urgently required to help inform the portfolio screening process and influence decision-makers.

Lessons for DFID-India
Disaster risk reduction activities must be a high priority. They are the first line of defence against future climate change and can ensure that other development investments reduce the sensitivity of livelihoods to climate shocks and stresses.

Climate risk screening must become a regular part of the programme cycle, from design to implementation and evaluation. While this could feasibly be built into existing environment screening procedures, the risk-based approach applied here may be better suited to integration within the project risk assessment process.

While necessary, screening of individual interventions supported by DFID is unlikely to be sufficient. Adaptation processes and options must be assessed in strategic planning at country and programme level. To do this, there is a clear need for climate risk screening and management to be embedded within Indian institutions, supported by technical and financial assistance. This can help to ensure that adaptation for development processes targets vulnerable people in appropriate ways. For example, different approaches will be necessary for different target groups (identified by DFID’s past 2008 Country Assistance Plan). India’s poorest people: those making progress out of poverty, and those benefiting from an increasingly globalised India.

This work was commissioned by the UK Department for International Development (DFID) and undertaken by a team led by the Institute of Development Studies, UK and TERI, India.

For more information: www.ids.ac.uk/ climatechange or email: climatechange@ids.ac.uk

Climate Risk Screening: The ORCHID approach
Climate risk screening tackles the actual and potential impacts of climate-related events on poverty and poverty reduction programmes. It addresses the need for adaptation to reduce the risks posed by climate change to people’s lives and livelihoods. ORCHID (Opportunities and Risks of Climate Change and Disaster) is a risk management approach to portfolio screening that stresses both the risks and opportunities of climate change. It identifies how climate change concerns can be combined with ongoing programmes, in particular through strengthening components related to disaster risk reduction and climate change adaptation. The ORCHID approach frames adaptation to climate change as an ongoing process of learning rather than a discrete end point. The process raises awareness of the importance of managing present-day climate risks in the context of future change.

More information on the ORCHID methodology can be found in issue 2.5 of IDS In Focus at www.ids.ac.uk/ climatechangeadaptation.

Climate Risk Screening in DFID (DFID-I)
Large numbers of poor people in India depend on climate-sensitive sectors for their livelihoods. They are already vulnerable to climate shocks and stresses and the impacts of climate change are increasing the burden of hazards they face. DFID-I already contributes to vulnerability reduction and building adaptive capacity through supporting good development practice, targeted climate-related efforts and active consideration of climate risks in some DFID-I funded programmes. However, with up to half of DFID-I portfolio of development programmes exposed to climate risk, disaster events on the rise and new climate hazards emerging, risk management needs to be accelerated urgently.

The ORCHID screening process conducted by DFID-I staff and partners assessed how climate risk management can be combined with ongoing priorities and programmes, using a detailed profile of current and future climate impacts.

The process enabled DFID-I staff and partners to:
• think through and act on potential climate risks and opportunities;
• highlight vulnerable sectors and regions, key risks, and opportunities for addressing risks;
• develop a basis for strengthening existing adaptation processes and for developing and selecting new adaptation options relevant to the DFID-I portfolio.
### DFID India Climate Risk Screening: Securing Poverty Reduction in the Face of Climate Change

#### Potential Adaptation Options
For each of the ten programmes flagged by the process for further assessment, a suite of potential risk management and adaptation options were identified. The table below illustrates the additional benefits of the suggested adaptation options by comparing the prevailing climate risks, how the existing programme improves climate risk management, and how adding adaptation components enable the programme to address risks more comprehensively.

<table>
<thead>
<tr>
<th>DFID-supported programme</th>
<th>Key climate risks identified</th>
<th>Existing risk management and adaptation processes</th>
<th>Additional adaptation options (ongoing or suggested)</th>
<th>DFID-supported programme</th>
<th>Key climate risks identified</th>
<th>Existing risk management and adaptation processes</th>
<th>Additional adaptation options (ongoing or suggested)</th>
<th>Additional adaptation options (ongoing or suggested)</th>
</tr>
</thead>
</table>
| Water and Sanitation Programme, South Asia | • Damage to drinking water pipelines and sewerage lines  
• Changes in water demand and supply  
• Occurrence and spread of waterborne diseases | • Helping central government with management of technical and financial frameworks for maintenance of UZSP services  
• Helping central government with development of best-practices for water resources management  
• State-level water quality monitoring and surveillance to check the secondary order impacts of climatic events | • Improve compliance and awareness of planners on building codes and best practices  
• Vulnerability and risk assessment exercises before infrastructure construction  
• Incorporate analysis of projected changes in drinking water supply in contracts of service providers  
• Integrate flood and disease warning and evacuation plans | West Bengal Programme on Strengthening of Rural Decentralisation | • Risks to livelihoods in sectors directly dependent on natural resources | • Enabling communities to build resilience to climatic shocks by income diversification | | |
| Sarva Shiksha Abhiyan – National Elementary Education Programme | • Damage to school infrastructure  
• Indirect impacts on absenteeism | • Synergies with other programmes on livelihood-based initiatives  
• Rainwater harvesting and water purification techniques to assure quantity and quality of water supply  
• Environmental standards exist for school buildings covering extreme events (pre-fabricated structures, cyclone shelters at schools, building codes) | • Replicate need-based and region-specific initiatives for school infrastructure across the country  
• Improve linkages with disaster mitigation and management programmes, especially for school infrastructure | West Bengal Health Systems Development Initiative | • Damage to health infrastructure  
• Damage to health service provision  
• Health risks due to spread of diseases  
• Impacts on management of resources | • Lacks specific attention to climatic shocks, but provides overall support to West Bengal Health Sector Strategy in improving health coverage, management and service delivery | | |
| Reproductive and Child Health Programme Phase II | • Damage to healthcare infrastructure  
• Damage to drinking water supplies  
• Damage to communication networks and power supply  
• Spread of diseases and risk of epidemic outbreaks | • Bolstering national health care programme targeting at reducing maternal and infant mortality rates  
• Health facility mapping in vulnerable areas  
• Sensitise policy makers to climate-related health impacts  
• Convergence with other programmes, including sanitation and provision of quality drinking water | • Health facility mapping in vulnerable areas  
• Sensitise policy makers to climate-related health impacts  
• Convergence with other programmes, including sanitation and provision of quality drinking water | Rural Livelihoods Programmes (RLPs) | • Drought and extreme weather damages to agricultural and forest production  
• Extreme weather damages to assets, housing and infrastructure  
• Health risks through changes in malaria and waterborne disease distribution | • Enabling communities to build resilience to climatic shocks by income diversification | | |
| Kolkata Urban Services for the Poor Programme | • Urban flooding  
• Health risks due to contamination of water supplies  
• In-situ slum upgrading  
• Operation and Maintenance of existing water supplies and drainage system  
• Enabling Urban Local Bodies to develop and follow environmental standards for sanitation and drinking water | • Strengthen Operation and Maintenance activities with periodic monitoring and evaluation  
• Integrate climate risk management in urban planning systems  
• Develop a spatial and temporal database for water quality surveillance  
• Tackle flood impacts through raising plinth levels and better insulation of toilet pits | • Strengthen Operation and Maintenance activities with periodic monitoring and evaluation  
• Integrate climate risk management in urban planning systems  
• Develop a spatial and temporal database for water quality surveillance  
• Tackle flood impacts through raising plinth levels and better insulation of toilet pits | Andhra Pradesh RLP | • Water and soil conservation  
• Water and soil conservation  
• Access of forest-based communities to revenues from carbon markets  
• Capacity building of rural communities by vocational training  
• Supporting development of agri-technologies and livestock management | • Localising appropriate climate-hardy cultivars and agro-forestry practices | | |
| Madhya Pradesh RLP | • In-situ slum upgrading  
• Operation and Maintenance of existing water supplies and drainage system  
• Enabling Urban Local Bodies to develop and follow environmental standards for sanitation and drinking water | • Strengthen Operation and Maintenance activities with periodic monitoring and evaluation  
• Integrate climate risk management in urban planning systems  
• Develop a spatial and temporal database for water quality surveillance  
• Tackle flood impacts through raising plinth levels and better insulation of toilet pits | • Strengthen Operation and Maintenance activities with periodic monitoring and evaluation  
• Integrate climate risk management in urban planning systems  
• Develop a spatial and temporal database for water quality surveillance  
• Tackle flood impacts through raising plinth levels and better insulation of toilet pits | Western Orissa RLP | • Supporting climate-resilient livelihood opportunities  
• Soil and water conservation  
• Supporting development of climate-hardy agricultural practices and crop varieties  
• Targeting off-farm activities for income generation  
• Enabling convergence with other state programmes such as Rural Employment Guarantee Scheme | • Enhance water conservation and irrigation measures, focusing on small scale and marginal farmers | | |

---

www.ids.ac.uk/climatechange