

# Climate Change Adaptation (CCA)

**Climate change is increasing weather related hazards and pressure on water availability, agriculture and ecosystems.**

Climate change adaptation involves:

- adapting current practices to take account of increased temperatures, sea levels and changes in rainfall patterns;
- managing and reducing the risks associated with more frequent, severe and unpredictable extreme weather events.



*Photo: Drought-resistant rice. Credit: CIAT/N. Palmer*

Hazards	Potential impact	Adaptation activities
<b>Rising temperatures</b>	<ul style="list-style-type: none"> <li>▪ Reduced agricultural yields</li> <li>▪ Increased heat-related mortality, insect infestation, demand and impact on water resources and risk of bushfires</li> <li>▪ Declining air quality in cities</li> </ul>	<ul style="list-style-type: none"> <li>▪ Promote use of drought-resistant crops, agroforestry and conservation farming techniques (for greater water retention)</li> <li>▪ Improve protection of water sources to reduce losses</li> </ul>
<b>Extreme rainfall</b>	<ul style="list-style-type: none"> <li>▪ Increased frequency or severity of flooding, contaminated water sources, soil erosion</li> <li>▪ Damage to or loss of housing, infrastructure, crops, livestock</li> <li>▪ Risk of death, injury, infectious and respiratory diseases</li> <li>▪ Disruption to commerce, transport, public services</li> </ul>	<ul style="list-style-type: none"> <li>▪ Construct flood defences, protect water supply and sanitation systems, improve drainage</li> <li>▪ Move housing and infrastructure away from flood-prone areas. Identify 'safe places' for people and livestock</li> <li>▪ Promote raised-bed agriculture</li> </ul>
<b>Changing rainfall or seasons</b>	<ul style="list-style-type: none"> <li>▪ Land degradation, lower yields, crop damage, risk of bush fires</li> <li>▪ Food and water shortages</li> <li>▪ Loss of livestock, malnutrition, and water- and food-borne diseases.</li> <li>▪ Migration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Diversify and increase yield of existing livelihood activities</li> <li>▪ Facilitate access to weather forecasts and early warnings</li> <li>▪ Promote crop diversification, conservation farming methods, and rainwater harvesting</li> </ul>
<b>Storm</b>	<ul style="list-style-type: none"> <li>▪ Damage to housing, crops, trees, infrastructure and communications</li> <li>▪ Risk of death, injury and disease through contaminated water or food</li> <li>▪ Withdrawal by insurers of risk coverage in vulnerable areas</li> </ul>	<ul style="list-style-type: none"> <li>▪ Use safe and storm-resistant materials and building designs e.g. avoid iron roof sheets</li> <li>▪ Support government and community public awareness and early warning measures</li> <li>▪ Identify 'safe places' for shelter and storage during storms</li> </ul>
<b>Rising sea levels</b>	<ul style="list-style-type: none"> <li>▪ Salinisation of irrigation and freshwater systems, affecting availability of safe water</li> <li>▪ Risk of drowning</li> <li>▪ Damage to coastal areas and loss of housing, crops, livestock</li> </ul>	<ul style="list-style-type: none"> <li>▪ Sustainable water sources for humans, livestock, livelihoods</li> <li>▪ Facilitate access to saline-resistant crop varieties</li> <li>▪ Construct coastal and sea defences e.g. mangroves</li> </ul>

## Measures to mitigate the effects of climate change

- Assess vulnerability and integrate climate adaptation measures in disaster risk reduction plans.
- Build government and community disaster risk management capacity.
- Minimise soil erosion and deforestation through alternative cooking fuels, crop diversification and conservation agriculture methods.
- Support watershed management, rainwater harvesting and flood and wind resistant structures.
- Minimise risks of flood damage and water contamination through appropriate hygiene promotion and sanitation.
- Avoid using materials which cause soil, shoreline, or forest degradation.

### Additional resources on All In Diary website

Climate Guide, © 2007 Red Cross/Red Crescent Climate Centre  
Tackling the limits to adaptation, © 2012 CARE Intl & Action Aid  
Quick Guide to Climate Change Adaptation © 2009 IASC

### Web links for further information

IPCC: <http://www.ipcc.ch/>  
CCA toolkits: <http://careclimatechange.org/tool-kits>  
IFRC - <http://www.climatecentre.org/site/publications?type=3>