

Glossary

Adaptation

Adjustment in natural or human systems in response to actual or expected climate stimuli or their effects, which moderates harm or exploits beneficial opportunities. Various types of adaptation can be distinguished, including anticipatory and reactive adaptation, private and public adaptation, and autonomous and planned adaptation (IPCC).

Adaptive capacity

The ability of a system to adjust to climate change, including climate variability and extremes; to moderate potential damages; to take advantage of opportunities; or to cope with the consequences (IPCC, 2007).

Climate change

A change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods (UNFCCC).

Climate change mitigation

Technological change and substitution that reduce resource inputs and emissions per unit of output. Although several social, economic, and technological policies would produce an emission reduction, with respect to climate change, mitigation means implementing policies to reduce greenhouse gas emissions and enhance sinks (see also **Greenhouse gas**) (IPCC, 2007).

Climate hazard

Potentially damaging physical manifestations of climatic variability or change, such as droughts floods, storms, episodes of heavy rainfall, long-term changes in the mean values of climatic variables, potential future shifts in climatic regimes, and so on (Brooks, 2003).

Climate impacts

Consequences of climate and climate change on natural and human systems.

Climate model

A numerical representation of the climate

system based on the physical, chemical, and biological properties of its components, their interactions and feedback processes, and accounting for all or some of its known properties. The climate system can be represented by models of varying complexity (i.e. for any one component or combination of components a hierarchy of models can be identified, differing in such aspects as the number of spatial dimensions, the extent to which physical, chemical, or biological processes are explicitly represented, or the level at which empirical parameterisations are involved (IPCC, 2007).

Climate trend

The general direction in which climate factors, such as average annual temperature or rainfall, tend to move over time.

Climate variability

The UNFCCC makes a distinction between ‘climate change’, attributable to human activities altering the atmospheric composition, and ‘climate variability’, attributable to natural causes.

Coping capacity

The ability of people, organisations, and systems, using available skills and resources, to face and manage adverse conditions, emergencies or disasters (UNISDR, 2009).

Disaster risk management

The systematic process of using administrative directives, organisations, and operational skills and capacities to implement strategies, policies, and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster (UNISDR, 2009).

Disaster

An event, either natural or man-made, that causes great distress or destruction. It is a social crisis which occurs when a hazard coincides with a vulnerable situation, resulting in significant loss of life, severe life-threatening disruption, and substantial

physical damage (Tearfund).

Disaster risk reduction

The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events (UNISDR, 2009).

Early warning system

The set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities, and organisations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss (UNISDR, 2009).

El Niño – or El Niño Southern Oscillation (ENSO)

A complex interaction of the tropical Pacific Ocean and the global atmosphere that results in irregularly occurring episodes of changed ocean and weather patterns in many parts of the world, often with significant impacts over many months, such as altered marine habitats, rainfall changes, floods, droughts, and changes in storm patterns (UNISDR, 2009).

El Niño and La Niña are defined as sustained sea surface temperature anomalies of magnitude greater than 0.5°C across the central tropical Pacific Ocean, El Niño being a warming and La Niña a cooling event. El Niño events are associated with wetter weather in Peru/Ecuador and East Africa and drier conditions in South-East Asia, northern Australia, and Southern Africa. La Niña events generally cause the opposite and are associated with increased Atlantic cyclones. Climate change may increase the strength and frequency of the oscillation.

Extreme weather event

An event that is rare within its statistical

reference distribution at a particular place. Definitions of 'rare' vary, but an extreme weather event would normally be as rare as or rarer than the 10th or 90th percentile. By definition, the characteristics of what is called 'extreme weather' may vary from place to place. Extreme weather events may typically include floods and droughts (IPCC, 2007).

Forecast

Definite statement or statistical estimate of the likely occurrence of a future event or conditions for a specific area (UNISDR, 2009).

Geographic information system (GIS)

A computer-based system designed to collect, store, manage, and analyse spatially referenced information and associated attribute data. **Participatory GIS (PGIS)** facilitates the representation of local people's spatial knowledge using two- and three-dimensional maps. These maps can be used to facilitate decision-making processes, as well as support communication and advocacy. Unlike traditional GIS applications, PGIS places control over access and use of culturally sensitive spatial data in the hands of those communities that generated it (Corbett *et al.*, 2006).

Greenhouse gas

A gas that absorbs radiation at specific wavelengths within the spectrum of radiation (infrared radiation) emitted by the Earth's surface and by clouds. The gas in turn emits infrared radiation from a level where the temperature is colder than the surface. The net effect is a local trapping of part of the absorbed energy and a tendency to warm the planetary surface. Water vapour (H₂O), carbon dioxide (CO₂), nitrous oxide (N₂O), methane (CH₄), and ozone (O₃) are the primary greenhouse gases in the Earth's atmosphere (IPCC, 2007).

Hazard impacts

Impacts related to dangerous phenomena,

substances, human activities or conditions that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage (UNISDR, 2009).

Indigenous knowledge

Also referred to as local knowledge, is the ancient, communal, holistic, and spiritual knowledge that encompasses every aspect of human existence (Brascoupé and Mann, 2001).

Institutions

Institutions are humanly created formal and informal mechanisms that shape social and individual expectations, interactions, and behaviour. They can be classified as falling into public (bureaucratic administrative units, and elected local governments), civic (membership and cooperative organisations), and private sectors (service and business organisations) (Uphoff and Buck, 2006). Understanding how local institutions and their organisational forms shape the adaptation practices of poor communities is important for strengthening communities' adaptive capacities.

Livelihoods

A livelihood comprises the capabilities, assets (stores, resources, claims, and access), and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels in the long- and short-term (Chambers and Conway, 1992).

Maladaptation

Actions that increase vulnerability to climate change. This includes making development or investment decisions while neglecting the actual or potential impacts

of both climate variability and longer-term climate change (Burton, 1998).

Maladaptation feedbacks

Consequences of actions taken to reduce short-term vulnerability which then accelerate medium or long-term vulnerability to climate change.

National Adaptation Programmes of Action (NAPAs)

Documents prepared by least developed countries identifying urgent and immediate needs for adapting to climate change. The NAPAs are then presented to the international donor community for support (UNFCCC).

Remote sensing

The process of gathering information about the Earth from a distance. Such data is commonly gathered by satellite or air (aerial) photography (IAPAD).

Resilience

The ability of a system, community or society exposed to hazards to resist, absorb, accommodate, and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions (UNISDR, 2009).

Risk

Expected damage or loss due to the combination of vulnerability and hazards.

Scenario

A plausible and often simplified description of how the future may develop, based on a coherent and internally consistent set of

assumptions about driving forces and key relationships. Scenarios may be derived from projections, but are often based on additional information from other sources, sometimes combined with a narrative storyline (IPCC, 2007).

Triangulation

The verification of information gained from one source or methodology with that gained from one or more other sources or methodologies.

Vulnerability

The extent to which a natural or social system is susceptible to sustaining damage from hazards caused by climate change, and is a function of the magnitude of climate change, the sensitivity of the system to changes in climate, and the ability to adapt the system to changes in climate. Hence, a highly vulnerable system is one that is highly sensitive to modest changes in climate and one for which the ability to adapt is severely constrained (IPCC, 2007).

SOURCE

Christian Aid (2009a). 'Module I: Framework and Approach.' *Christian Aid Adaptation Toolkit: Integrating adaptation to climate change into secure livelihoods*. Christian Aid: UK

Definitions and figures that are unattributed were generally based on original material, multiple information sources, and/or adapted substantially to ensure they relate to the Christian Aid context (or a combination of these).

REFERENCES

- Brascoupe, S. and H. Mann (2001). *A community guide to protecting Indigenous Knowledge*. Research and Analysis Directorate, Department of Indian Affairs and Northern Development: Canada
- Brooks, N. (2003). 'Climate change, growth and sustainability: the ideological context.' Tyndall Centre Briefing Note 8. Online: www.cru.uea.ac.uk/~e118/publications/TynBNote08.pdf
- Burton, I. (1998). 'Adapting to Climate Change in the Context of National Economic Planning and Development.' In P. Veit (ed.) *Africa's Valuable Assets: A Reader in Natural Resource Management*. World Resources Institute: Washington DC
- Chambers R. and G. Conway (1992). 'Sustainable rural livelihoods: practical concepts for the 21st century.' Institute of Development Studies: Brighton. Online: www.eldis.org/vfile/upload/1/document/0708/DOC12443.pdf
- Corbett, J., G. Rambaldi, P.K. Kyem, D. Weiner, R. Olson, J. Muchemi, M. McCall, and R. Chambers (2006). 'Overview: mapping for change – the emergence of a new practice.' *Participatory Learning and Action 54 Mapping for Change: practice, technologies and communications*. IIED: London and CTA: Wageningen. Online: www.planotes.org/pla_backissues/54.html
- IAPAD (Integrated Approaches to Participatory Development website). Online community mapping glossary: www.iapad.org/glossary/default.htm
- IPCC (2007). *IPCC 4th Assessment Report 2007*. Intergovernmental Panel on Climate Change. Online: www.ipcc.ch
- IPCC online glossary: www.ipcc.ch/pdf/glossary/tar-ipcc-terms-en.pdf
- Tearfund online glossary: <http://tilz.tearfund.org/Publications/Glossary.htm>
- UNFCCC (United Nations Framework Convention on Climate Change). Website: <http://unfccc.int>
- UNISDR United Nations International Strategy for Disaster Reduction (2009). *UNISDR Terminology on Disaster Risk Reduction*. Online: www.undp.org/ge/new/files/24_619_762164_UNISDR-terminology-2009-eng.pdf
- Uphoff, N. and L. Buck (2006). 'Strengthening rural local institutional capacities for sustainable livelihoods and equitable development.' Paper prepared for the Social Development Department of the World Bank: Mimeo