

Glossary

Adaptation deficit: the failures in adapting to and managing existing climate variability and climate risks; without specific action, the adaptation deficit is likely to increase as climate change accelerates (World Bank n.d. Guidance Note #4, UNDP-UNEP 2010, World Bank 2010b).

Adaptation mainstreaming: ‘The iterative process of integrating adaptation considerations into policymaking, budgeting and implementation processes at national, sector and subnational levels. It is a multi-year, multi-stakeholder effort grounded in the contribution of climate change adaptation to human well-being, pro-poor economic growth, and achievement of the MDGs. It entails working with a range of government and non-governmental actors, and other actors in the development field’ (UNDP-UNEP 2011: 3).

Adaptation to climate change: a process of adjustment involving the adoption of measures (including changes in procedures, practices and structures) to protect natural and human systems against the actual and anticipated harmful effects of climate change, to exploit any opportunities it may generate, and to ensure the sustainability of investment and development interventions in spite of current climate risks and potentially increasingly difficult climatic conditions; adaptation aims to reduce sensitivity and vulnerability to the effects of climate change (Fall & Niang n.d., Klein et al 2005, IPCC 2007a, EC 2009b, World Bank 2010a).

Adaptive capacity: the extent to which a system, individual or group has the capabilities, and/or has access to the information, resources and institutions, required to cope with existing or anticipated external stresses – and in this specific context, to adapt to climate change, notably through the adoption of risk prevention and mitigation measures (Brooks 2003, IPCC 2007c, EC 2009b, OECD 2009a); also: ‘the property of a system to adjust its characteristics or behaviour, in order to expand its coping range under existing climate variability, or future climate conditions’ (Brooks & Adger 2004: 168).

Adaptive management: ‘a systematic process for continually improving management policies and practices by learning from the outcomes of previously employed policies and practices, through an explicitly experimental approach’ (World Bank 2010a: 353).

Carbon sink: ‘any process, activity or mechanism which removes carbon dioxide from the atmosphere’; photosynthesis is one of these natural processes, so that ‘forests and other vegetation are considered sinks’ (World Bank 2010a: 354).

Climate: the average characteristics of meteorological conditions, calculated over a long period (typically 30 years or more).

Climate change: a shift in average climate parameters and/or in the magnitude of climate variability observed and persisting over long periods (typically decades or longer).

Climate variability: the range of variation in climate parameters, characterised by the difference between observed values and average values calculated at various temporal scales; climate variability is an inherent feature of the climate system but tends to be exacerbated by climate change; ‘current climate variability’ typically refers to variability observed over periods shorter than 10 years (ENDA n.d., EC 2009b).

Downscaling: ‘A method that derives local- to regional-scale (10 to 100 km) information from larger-scale (200+ km) climate-projection models or data analyses’ (World Bank 2010a: 355).

Evaluation: an occasional or periodic activity aimed at ‘taking stock’ of achievements, in a systematic and objective manner, for the purpose of informing stakeholders, re-orienting future activities and/or drawing lessons for future interventions; it may take place during implementation (e.g. mid-term review), soon the end of implementation, or several years later. It is typically structured around five criteria, namely: relevance, effectiveness, efficiency, impact and sustainability (OECD 2002, EC 2004).

Exposure to climate change: the extent to which a person, a group, a system is exposed to the physical manifestations of climate change, considering that their character, magnitude and likelihood and the rate of variation of climate will vary in nature and intensity across regions of the world (Brooks 2003, IPCC 2007a, EC 2009b).

GIS (Geographical Information System): ‘An information system used to enter, store, search for, handle, analyze and produce geographically referenced data (or geo-spatial data), to support decision making in the planning and management of land use, natural resources, the environment, transport and urban amenities. The key components of GIS are the information technology (IT) system, the geo-spatial data and the users. (...) The sources of this geo-spatial data are digitalized maps, aerial photographs, satellite images, statistics and other related documents’ (Fall & Niang n.d.: 3).

Global warming power (GWP): a measure of how much a given mass of a GHG is estimated to contribute to global warming, compared with the same mass of CO₂ (by convention, GWP of CO₂ = 1) (IPCC 2007b).

Hazard: a potentially damaging physical event, action, situation or phenomenon; a *climate hazard* is a manifestation of climate variability or change, or a specific type of climate event (discrete or continuous, one-off or recurrent), holding the potential to cause harm (Brooks 2003, Jones & Boer 2004, Olhoff & Schaer 2010).

Indicator: a unit of measurement, used to describe a situation, monitor the evolution of a situation or measure achievements against an objective; the measurement may be based on quantitative or qualitative units (OECD 2002, EC 2004).

Institutional framework: a system made up of rules, laws, policies and institutions – in which various organisations interact with each other.

Institutions: the rules, norms, structures and other social arrangements that shape and regulate human behaviour and interactions, and notably support decision making. Institutions are thus not the same thing as ‘organisations’ (although in the common language this is often the meaning given to institutions). Institutions can be formal or informal (North 1990, World Bank 2010a).

Low-regret measures: with regard to adaptation, measures that are expected to have a cost for society in the absence of climate change, but an acceptable one in view of the benefits they would bring if climate change turns out to produce significant effects (Olhoff & Schaer 2010); with regard to mitigation, measures that are expected to have a low net cost for society at zero or low carbon prices – and may thus provide net benefits if carbon prices reach a certain threshold and carbon finance revenues can be obtained.

Mainstream: the prevailing or dominant course, current, tendency or way of thinking.

Mainstreaming: the informed integration of a relevant value, theme or concern into the decisions of institutions that drive national, local and sectoral development policy, rules, plans, investment and action; a long-term, iterative process aimed at transforming ideas and, even more importantly, transforming policies and practices, in order to:

- promote desired developmental outcomes (with regard to gender, environment, climate change, governance, human rights, ...);
- and support the identification and implementation of integrated solutions to human problems (adapted from Dalal-Clayton & Bass 2009).

The mainstreaming of climate change ‘involves the integration of policies and measures to address climate change into ongoing sectoral and development planning and decisionmaking, so as to ensure the long-term sustainability of investments as well as at reduce the sensitivity of development activities to both today’s and tomorrow’s climate’ (Klein et al 2005: 584).

(See also: adaptation mainstreaming)

Maladaptation: an inadequate response to the challenge posed by climate change, by which ‘business-as-usual’ development interventions that overlook the implications of climate change inadvertently result in increased vulnerability to climate change; the term is also used to designate an inadequate adaptation response, which fails to reduce vulnerability to climate change and instead ends up increasing it, displacing it or reducing future potential for adaptation (Burton & van Aalst 2004, EEA 2007, EC 2009b, OECD 2009a, Olhoff & Schaer 2010, World Bank 2010a).

Milestone: a key step in the process of developing or implementing a policy, programme or project. For instance, the adoption of a policy, law or regulation, the establishment of a coordination structure, or restructuring of an organisation may be milestones in the climate change mainstreaming process. The realisation or completion of a milestone is a way of measuring progress towards an objective – but it is not an ‘indicator’.

Mitigation of climate change: human interventions aimed at reducing greenhouse gas (GHG) emissions and/or enhancing the capacity of ‘sinks’ for GHGs, for the ultimate purpose of stabilising their concentration in the atmosphere; aims to reduce global *exposure* to the effects of climate change (Fall & Niang n.d., IPCC 2007d, EC 2009b).

Monitoring: a process aimed at keeping track of progress and external factors, on a continuous basis, to inform management decisions and allow the timely adoption of corrective measures, where necessary, to ‘stay on track’; it is typically associated with the implementation stage of an intervention, and is a normal (indeed fundamental) component of management activities.

No-regret measures: with regard to adaptation, measures that are expected to produce net benefits for society even in the absence of climate change (World Bank 2010a, World Bank 2010g); with regard to mitigation, measures that are expected to produce net benefits for society independently of any ‘reward’ for mitigation (zero or negative net cost at a zero carbon price, i.e. the savings and other benefits entailed by the considered measures exceed its costs even in the absence of carbon finance revenues).

Plan: a purposeful, forward-looking strategy, with coordinated priorities, objectives, options and measures, that elaborates and implements a policy (Sadler 1996, Noble 2000, Partidário 2007).

Policy: a general course of action or proposed overall direction (“roadmap”) that a government is pursuing or intends to pursue, and which guides all downstream decision making (Sadler 1996, Noble

2000, Partidário 2007); it usually reflects a long-term vision, defines high-level objectives and sets a number of priorities and rules.

Project: a coherent set of activities that together, based on a detailed design and implementation schedule and with a given resource envelope, are expected to lead to the achievement of a specific objective (OECD 2002, EC 2004, Partidário 2007).

Programme: a coherent, organised schedule of commitments and interventions (investments, projects, activities) that support common objectives; may constitute the operational translation of a policy, strategy or plan (Sadler 1996, OECD 2002, EC 2004, Partidário 2007).

Radiative forcing: ‘a measure of the influence that a factor has in altering the balance of incoming and outgoing energy in the Earth-atmosphere system’ and ‘an index of the importance of the factor as a potential climate change mechanism’ (IPCC 2007b – Summary for Policymakers, p. 2).

Resilience: the ability of a system, individual or group to absorb disturbances, overcome and recover from a critical situation, and generally adapt to stress and change; the concept may apply to natural systems (*ecological resilience*) as well as social systems (*social resilience*) (Fall & Niang n.d., Tompkins & Adger 2003, IPCC 2007c, World Bank 2010a).

Risk: the combination of: (i) the probability (or frequency) of occurrence of a defined hazard resulting in adverse consequences; and (ii) the magnitude of these consequences, given the interaction of the hazard with the properties of the exposed system; *climate risks* thus result from the combination of the probability or frequency of occurrence of specific climate hazards, and the sensitivity and vulnerability of those exposed to such hazards (Brooks 2003, Dessai & Hulme 2004, Jones & Boer 2004, IPCC 2007a, Olhoff & Schaer 2010).

Risk assessment: ‘a standardized methodology consisting of risk identification, risk quantification, risk reduction, and risk mitigation’ (World Bank 2010a: 257).

Robust decision making: ‘in the face of uncertainty, choosing not the measure or policy that would be optimal under the most likely future world, but the one that would be acceptable across a range of possible futures’ (World Bank 2010a: 257); with regard to adaptation, robust measures are those that produce net benefits or deliver good outcomes across various possible climate change, carbon price and economic development scenarios.

Screening: a procedure, implemented at an early stage (e.g. identification stage) in the development of a programme or project, aimed at determining whether it is exposed to risks or likely to generate impacts that require further assessment at the design stage. Screening may be undertaken against a variety of themes and criteria (e.g. environmental impacts, gender-related aspects, climate risks).

Sensitivity to climate variability or change: how severely an individual or system is actually affected when exposed to climate variability or change, considering its specific susceptibility to disturbances and stress (Fall & Niang n.d., EC 2009b, OECD 2009a).

SRES scenarios: ‘a set of descriptions or storylines of possible futures used in climate change related modeling developed for the IPCC. The scenarios are used to project future emissions based on assumptions about changes in population, technology, and societal development’ (World Bank 2010a: 358).

Strategy: a set of objectives and coordinated priorities, to which resources are allocated, that elaborates a policy and provides a framework for its implementation, usually with a medium-term perspective (EC 2007a).

Target: a performance standard to be reached, or the concrete translation of an objective, expressed by means of an indicator associated with a value or status, and a point in time by which it is expected to be reached; it may or not be expressed against a baseline.

Uncertainty: ‘An expression of the degree to which a value (such as the future state of the climate system) is unknown. Uncertainty can result from lack of information or from disagreement about what is known or even knowable. It may have many types of sources, from quantifiable errors in the data to uncertain projections of human behavior’ (World Bank 2010a: 358).

Vulnerability to climate variability and change: the extent to which a system, individual or group of people is susceptible to, and unable to cope with, the adverse effects of climate variability and change; vulnerability to climate change depends on *exposure* to climate variability and change, *sensitivity* to its effects and *adaptive capacity* (Brooks 2003, IPCC 2007c, EC 2009b, OECD 2009a).

Weather: the meteorological conditions (air temperature and pressure, humidity, wind speed, precipitation, ...) that prevail in a given place at a given time.