

Glossary of Terms

Adaptation to Climate Change: Initiatives and measures to reduce the vulnerability of natural and human systems against actual or expected climate change effects. Various types of adaptation exist, e.g. anticipatory and reactive, private and public, and autonomous and planned. Examples are raising river or coastal dikes, the substitution of more temperature-shock resistant plants for sensitive ones, etc. (Source: Glossary of Terms used in the IPCC Fourth Assessment Report, http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_appendix.pdf)

Agricultural Runoff: The runoff into surface waters of herbicides, fungicides, insecticides, and the nitrate and phosphate components of fertilizers and animal wastes from agricultural land and operations. Considered a Non-Point Source (NPS) of water pollution (Source: EPA Terms of Environment Dictionary, http://www.ecologydictionary.org/EPA-Terms-of-Environment-Dictionary/AGRICULTURAL_RUNOFF)

Agro-Meteorological Station: Station providing simultaneous meteorological and biological information and helping to study and use weather and climate information to enhance or expand agricultural crops and/or to increase crop production. Agrometeorology mainly involves the interaction of meteorological and hydrological factors, on one hand and agriculture, which encompasses horticulture, animal husbandry and forestry.

Aquifer Recharge: In its broadest sense it refers to the replenishment or recharge of a groundwater aquifer.

Climate Change: It refers to a change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcings, or to persistent anthropogenic changes in the composition of the atmosphere or in land use. Note that the United Nations Framework Convention on Climate Change (UNFCCC), in its Article 1, defines climate change as: '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'. The UNFCCC thus makes a distinction between climate change attributable to human activities altering the atmospheric composition, and climate variability attributable to natural causes (Source: Glossary of Terms used in the IPCC Fourth Assessment Report, http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_appendix.pdf).

Cloud Seeding: A Weather Modification technique involving the injection of a substance into a cloud for the purpose of influencing the cloud's subsequent development. Ordinarily, this refers to the injection of a nucleating agent, which creates a nucleus around which precipitation will form. In common practice, cloud seeding involves the aerial release of silver iodide particles into convective clouds to create thunderstorms (Source: EPA Terms of Environment Dictionary, http://www.ecologydictionary.org/EPA-Terms-of-Environment-Dictionary/CLOUD_SEEDING).

Conservation Tillage: A level of reduced tillage combined with one or more soil and water conservation practices designed to reduce loss of soil or water relative to conventional tillage. Such activities often take the form of non-inversion tillage that retains productive amounts of residue mulch on the surface (Source: EPA Terms of Environment Dictionary, http://www.ecologydictionary.org/EPA-Terms-of-Environment-Dictionary/CONSERVATION_TILLAGE).

Cost of Environmental Degradation (COED): Monetary estimation of present and future impacts caused by the environmental damage occurring in one given year, or the year of reference. Each final estimate is stated in terms of percentage of the country's gross domestic product (GDP) for the year of reference. This estimate expresses the COED in terms comparable to the most widely used economic indicators, making it immediately intelligible to both policy makers and the general population (Sarraf 2004). It also allows for comparisons of (a) COED estimates among different countries and (b) the costs of different types of environmental damage within the same country. The COED usually measures the damage caused to several environmental categories: water, air quality, agricultural land, forests, waste, and coastal zone. Spatially, the analysis can be done at the local level (for example, a city or a coast), the national level (a country), the multinational level (several countries), or even the regional level (for example, the entire Middle East and North Africa region). Depending on the objective of the analysis, it can focus on environmental categories overall or on just one or a few categories (Source: The World Bank:

<https://openknowledge.worldbank.org/bitstream/handle/10986/2499/562950PUB0Envi1AUGUST0201011PUBLIC1.txt?sequence=2>)

Desalination: Removal of salt, as from water or soil (Source: EEA multilingual environmental glossary http://glossary.en.eea.europa.eu/terminology/concept_html?term=desalination)

Desertification: 1) The development of desert conditions as a result of human activity or climatic changes. 2) The process of land damage which allows the soil to spread like a desert in arid and semi-arid regions. There is a loss of vegetative cover and the soil deteriorates in texture, nutrient content and fertility. (Source: EEA Glossary: http://glossary.eea.europa.eu/terminology/terminology/concept_html?term=desertification).

Early Warning System: Any series of procedures and devices designed to detect sudden or potential threats to persons, property or the environment at the first sign of danger; especially a system utilizing radar technology. (Source: RHW, Terminology source: <http://www.eionet.europa.eu>)

Environmental Valuation: Environmental valuation is a series of techniques that economists use to assess the economic value of environmental goods and services (G&S), many of which have no easily observed market prices. Examples of environmental G&S include scenic views, biodiversity, as well as many indirect processes, such as watersheds and water supply, forests and carbon sequestration or erosion control, ecosystem conservation, and maintenance of genetic material.

Freshwater: 1) Water with salinity less than 0.5 (parts per thousand) dissolved salts (Source: Terminology source: <http://www.semide.net>); 2) Naturally occurring water having a low concentration of salts, which is often acceptable as suitable for abstraction and treatment to produce drinking water; (Source: Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources).

Genotype: the entire genetic constitution of an organism, or the genetic composition at a specific gene locus or set of loci (Source: <http://biodiversity-chm.eea.europa.eu>).

Graywater: Domestic wastewater other than sewage, composed of wash water from kitchen, bathroom, and laundry sinks, tubs, and washers (Source: EPA Terms of Environment Dictionary, http://www.ecologydictionary.org/EPA-Terms-of-Environment-Dictionary/Gray_Water)

Groundwater: 1) Water that occupies pores and crevices in rock and soil, below the surface and above a layer of impermeable material. It is free to move gravitationally, either downwards towards the impermeable layer or by following a gradient (Source: <http://www.eionet.europa.eu>); 2) All water which is below the surface of the ground in the saturation zone and in direct contact with the ground of the soil (Source: Directive 2000/60/EC of 23 October 2000 establishing a framework for Community action in the field of water policy (Water Framework Directive)).

Integrated Water Resources Management (IWRM): A process which promotes the coordinated development and management of water, land and related resources in order to maximise economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems and the environment (Source: Global Water Partnership, <http://www.gwp.org/The-Challenge/What-is-IWRM/>)

Interbasin transfer: Water withdrawal from one river basin (a donor basin) to be distributed for use in another river basin (receiving basin) and with no return to the basin of origin.

Irrigation Scheduling: It involves the definition of the time and the amount of water application to a crop according to a management objective (Howell, 1996). This definition can be based either on soil water balance methods, meteorological models that estimate crop evapotranspiration, or on measurements of plant parameters.

No-Regret Actions (or Measures) for Climate Change Adaptation: 1) Measures whose benefits—such as improved performance or reduced emissions of local/regional pollutants, but excluding the benefits of climate change mitigation—equal or exceed their costs. They are sometimes known as "measures worth doing anyway" (Source: IPCC Glossary <http://www.ipcc.ch/pdf/glossary/ipcc-glossary.pdf>); 2) Activities that yield benefits even in the absence of climate change. In many locations, the implementation of these actions constitutes a very efficient first step in a long-term adaptation strategy. For example, controlling leakages in water pipes or maintaining drainage channels is almost always considered a very good investment from a cost–benefit analysis point-of-view, even in absence of climate change. Improving building insulation norms and climate-proofing new buildings is another typical example of a no-regret strategy, since this action increases climate robustness while energy savings can often pay back the additional cost in only a few years. Whether a measure is no-regret depends on the specific circumstances. For example, additional irrigation infrastructure can be a no-regret measure in regions that already face water scarcity. In other regions, considering the high investment costs, it would be beneficial only if climate change decreases precipitation significantly (Source: Climate Adapt: European Climate Adaptation Platform, <http://climate-adapt.eea.europa.eu/uncertainty-guidance/topic2#What+are+no-regret+adaptation+measures%3F>).

Non-conventional water resources: Complementary supply sources that may be substantial in regions affected by extreme scarcity of renewable water resources. They include: the production of freshwater by desalination of brackish or saltwater (mostly for domestic purposes); the reuse of urban or industrial wastewaters (with or without treatment), mostly in agriculture, but increasingly in industrial and domestic sectors; agricultural drainage water; interbasin transfer, rainwater harvesting, cloud seeding, grey-water reuse, etc.

Private Sector Participation (see Public-Private-Partnership)

Public-Private-Partnership: A Public-Private Partnership (PPP) is a contractual agreement between a public agency and a private sector entity. Through this agreement, the skills and assets of each sector (public and private) are shared in delivering a service or facility for the use of the general public. In addition to the sharing of resources, each party shares in the risks and rewards potential in the delivery of the service and/or facility.

Rainwater Harvesting: The capture of rainwater from the roofs of buildings that can be used for indoor needs at a residence, irrigation, or both, in whole or in part (Adapted from: Harvested Rainwater, <http://rainwater.sustainable-sources.com/>).

Renewable Energy: Energy produced from sources that do not rely on fuels of which there are only finite stocks. The most widely used renewable source is hydroelectric power, other are biomass energy, solar energy, tidal energy, wave energy, and wind energy. (Adapted from: EEA multilingual environmental glossary, http://glossary.eea.europa.eu/terminology/concept_html?term=renewable%20energy%20source)

River Basin: The area of land from which all surface run-off flows through a sequence of streams, rivers and, possibly, lakes into the sea at a single river mouth, estuary or delta. (Definition source: dataservice, <http://dataservice.eea.eu.int>)

Salt Water Intrusion: Process by which an aquifer is overpumped creating a flow imbalance within an area that results in salt water encroaching into fresh-water supply. (Definition source: EEA multilingual environmental glossary, http://glossary.eea.europa.eu/terminology/concept_html?term=saltwater%20intrusion).

Soil Erosion: 1) It consists in the removal of soil material by water or wind. It is a natural phenomenon but it can be accelerated by human activities. (Definition source: EEA multilingual environmental glossary, http://glossary.eea.europa.eu/terminology/concept_html?term=soil%20erosion); 2) Detachment and movement of topsoil or soil material from the upper part of the profile, by the action of wind or running water, especially as a result of changes brought about by human activity, such as unsuitable or mismanaged agriculture. (Source: BJGEO)

Surface Water: All waters on the surface of the Earth found in rivers, streams, ponds, lakes, marshes, wetlands, as ice and snow, and transitional, coastal and marine waters. (Definition source: EEA multilingual environmental glossary (http://glossary.eea.europa.eu/terminology/concept_html?term=surface%20water))

Wastewater Quality Monitoring: Programmed process of sampling, measurement and subsequent recording of the entire wastewater treatment process, including trade effluent, influent, wastewater treatment process, discharged effluent, sludge/biosolids, groundwater, soils, and rivers up- and downstream of the discharge with the aim to inform and result in the required process changes.

Wastewater Reuse: The planned reuse of waste water for specific beneficial purposes (Source: EPA Terms of Environment Dictionary, http://www.ecologydictionary.org/EPA-Terms-of-Environment-Dictionary/WASTEWATER_RECLAMATION).

Wastewater Treatment: Removal of organic matter, bacteria, viruses and solids through physical-chemical and biological processes from residential, commercial and industrial wastewaters before they are discharged in rivers, lakes and seas (Definition Source: ETC/CDS. General Environmental Multilingual Thesaurus (GEMET 2000)).

Water Capping: Applying quantity limits to the use of water in relevant sectors (e.g domestic, agricultural, industrial, etc.).

Water Demand Management: It refers to the implementation of policies or measures which serve to control or influence the amount of water used. (Definition source: UKWIR/EA. 1996. Economics of demand management - Main report and practical guidelines. UK Water Industry Research Limited. London. Quoted by: EEA. 2001. Sustainable water use in Europe: Part 2. Copenhagen)

Water Governance: The range of political, organizational and administrative processes through which communities articulate their interests, their input is absorbed, decisions are made and implemented, and decision makers are held accountable in the development and management of water resources and delivery of water services at different levels of society (Definition source: <http://www.semide.net>)

Water Harvesting: Collection of both runoff and rainwater for various purposes, such as irrigation or fountains (Source: EPA, <http://water.epa.gov/type/watersheds/whatis.cfm>).

Water Mainstreaming: process of integrating water management related concerns into any planned action, including legislation, policies or programmes in any area/sector and at all levels.

Water Pricing: Applying a monetary rate or value at which water can be bought or sold (Source: EEA http://glossary.eea.europa.eu/EEAGlossary/W/water_pricing).

Watershed: The area of land where all of the water that is under it or drains off of it goes into the same place.

Water Supply Management: Policies and measures to control the water which is collected and passed through pipes and made available for the use of people in a community or region.

Water Users Associations (WUAs): A group of water users, such as irrigators, who pool their financial, technical, material, and human resources for the operation and maintenance of a water system. A WUA usually elects leaders, handles disputes internally, collects fees, and implements maintenance. In most areas, WUA membership depends on one's relationship to a water source (such as groundwater, source or a canal).