1 November 2011 Rev 6

BASIC TERMINOLOGY FOR WATER ACCOUNTS AND STATISTICS

| Term | Definition | Source |
|---|---|---|
| Abstraction of water | The volume of water (per unit of time) that is removed or collected by economic units directly from the environment within the territory of reference. Abstraction should be used instead of the term withdrawal. | IRWS Annex I |
| Abstraction of water from soil water | The volume of water (per unit of time) used by economic units in rain-fed or non-irrigated agriculture and forestry within the territory of reference, per year. This is the volume of precipitation that falls onto agricultural fields and is transpired by the crops, plantations, orchards etc. This is broadly equivalent to the concept of "green water." | IRWS Annex I |
| Biochemical Oxygen Demand (BOD) test | It is a test that is commonly used to indirectly measure the amount of organic matter in water. The test determines the amount of dissolved oxygen needed by biologic organisms to aerobically decompose the organic matter contained in a sample of water, at a certain temperature during a specific length of time (typically five days = $BOD_5$). It is commonly expressed in milligrams of oxygen consumed for a sample of one litre during an incubation period of five days at 20°C. | |
| Chemical Oxygen Demand (COD) test | Like the BOD test, the COD test is commonly used to indirectly measure the amount of organic matter in water. The COD test does not differentiate the inert organic matter from the organic matter biologically available. It is a measure of the total oxygen required to convert all the organic matter in a sample into carbon dioxide and water. Measurements of COD are always higher than BOD. The advantage of this test is that it can be done in a few hours and not in five days like the $BOD_5$ test. | |
| Evaporation | The volume of water (per unit of time) that enters the atmosphere by vaporization of liquid and solid water to a gas from water and land surfaces. This includes sublimation, which is water that goes from being ice, snow or part of a glacier directly to a water vapor, without going through a liquid phase, i.e., without melting. Evaporation of water consists of water that evaporates directly from surface water and water that evaporates from soil water. | IRWS Annex I |
| Evapotranspiration | The volume of water (per unit of time) from land and water surfaces that enters the atmosphere by vaporization of water into a gas and through evaporation and transpiration from plants, within the territory of reference, per year. Potential evapotranspiration refers to the maximum quantity of water capable of being evaporated in a given climate from a continuous stretch of vegetation covering the entire area of | IRWS Annex I and SEEA-Water paragraph 6.30 |

| Term | Definition | Source |
|---|---|---|
| | ground that is well supplied with water. Actual evapotranspiration, which is reported in the accounts, refers to the amount of water that evaporates from the land surface and is transpired by the existing vegetation/plants when the moisture content of the ground is at its natural level, which is determined by precipitation. It should be noted that actual evapotranspiration can be estimated only through modelling and it may be a rough approximation. | |
| Instream use or non—withdrawal use | Use of water taking place within a stream channel, for example, in hydroelectric power generation, navigation, fish farming, operation of locks and recreation. Sometimes called non-consumptive use. | Glossary of Environment Statistics, UN F 67, 1997. |
| Offstream use of water | Offstream use of water is water abstracted or diverted from a groundwater or surface—water source for public water supply, industry, irrigation, livestock, thermoelectric power generation or other uses. Sometimes called consumptive use. | Glossary of Environment Statistics, UN F 67, 1997. |
| Precipitation | The volume of water (per unit of time) that flows from the atmosphere to inland water resources via rain, snow, sleet, hail, dew, mist etc. Normal precipitation, or in general the term normal refers to a period averages of meteorological/hydrometeorological elements calculated over a uniform and relatively long period covering at least thirty consecutive years. | IRWS Annex I. WMO, UNESCO, International Glossary of Hydrology |
| Return | The volume of water (per unit of time) that flows from economic units directly to inland water resources, to the sea or to land, within the territory of reference. This includes urban storm water, losses due to leakage and burst pipes, irrigation water that infiltrates into groundwater or ends up in surface water, and the discharges of cooling water and water used for hydroelectricity generation. | IRWS Annex I |
| Transpiration | The volume of water (per unit of time) that enters the atmosphere by vaporization of liquid water to a gas from plant surfaces when the ground is at its natural moisture content, determined by precipitation. | IRWS Annex I |
| Water consumption | In water statistics and accounts, the concept of water consumption gives an indication of the amount of water that is lost by the economy during use in the sense that it has entered the economy but has not returned either to water resources or to the sea. This happens because during use, part of the water is incorporated into products, evaporated, transpired by plants or simply consumed by households or livestock. | IRWS Chapter II |

IRWS = International Recommendations for Water Statistics.