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## Large wood glossary\*

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**Large wood (or LW):** Tree or portion of a tree (including snags, tree tops, logs, chunks of wood, limbs, branches, stumps, and root wads). Usually considered to be greater than 0.1 m in diameter, and over a meter long (Wohl et al., 2010). Sometimes referred as deadwood, in-stream wood, in-channel wood.

**Bridge log:** Log spanning the channel, above the streambed, touching both banks and resting on the floodplain (Richmond and Fausch 1995; Berg et al. 1998).

**Clogging:** process of deposition of large wood pieces at a given point in the river (natural section or infrastructure), which results in reduced cross sectional area.

**Contributing area:** Synonym of **source area**, refers to the probable area delivering large wood within a basin which is used in developing large wood budgets (Benda and Sias, 2003; Mazzorana et al., 2009).

**Deadwood:** Old/dead wood pieces already recruited and lying in the stream channel (see large wood). Alternatively, it describes dead standing trees or pieces on the forest floor.

**Decomposition or decay:** Biological process by which cellulose and lignin are converted to carbon dioxide and water with a release of energy.

**Decomposition rate:** (or decay rate or coefficient) Series of chemical, biological and physical processes including fragmentation or breakage, leaching, collapse and settling, seasoning, transport, respiration, and biological transformation contributing to reduce size and mass of wood (Harmon et al., 1986).

**Depletion:** Removal of large wood from a channel through decay, transport, and burial processes (Hyatt and Naiman, 2001).

**Driftwood:** Often used as synonym of large wood, but refers to the wood drifting in lakes, oceans or in a water body.

**Entrainment/mobilization:** Initiation of motion, process of initial motion of wood.



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**Green/fresh/living wood:** Fraction of wood usually recently recruited that may still be living or has the capacity to sprout (Gurnell, 2013).

**In-stream/in-channel wood** (instream/inchannel): Tree or portion of a tree (including snags, tree tops, logs, chunks of wood, limbs, branches, stumps, and root wads) that is present in the stream (channel bed). Sometimes used as synonymous of large wood (Wohl et al., 2010).

**Jam/Logjam:** Accumulation of wood pieces, usually a minimum of two or three, within a river channel, along its banks or on the floodplain, including at least one piece, which may completely or partly block the channel (Abbe and Montgomery, 1996).

**Key piece/log/member:** Piece of large wood that, either because of its size or because of its position, is stable within a stream channel and can trap and stabilize other wood pieces, creating a jam. The key piece is responsible for creating the jam or is the piece responsible for stabilizing and maintaining the jam (Abbe and Montgomery, 1996).

**Log step:** Single key member large enough to remain immobile during at least moderate flows with possible racked wood oriented oblique or perpendicular to flow, forming a step within the flow channel which is usually followed by a plunge pool (Richmond and Fausch 1995; Berg et al. 1998).

**(Coarse) Particulate organic matter (POM or CPOM):** Pieces of organic matter with a size larger than 1mm, it spans the range from leave and wood fragments over twigs and branches to logs and complete trees, being large wood at the top of this range (Fisher and Likens, 1972).

**Ramp log:** Log side resting on one bank and the other on the streambed (Richmond and Fausch 1995; Berg et al. 1998).

**Recruitment/delivery:** Process(es) of large wood delivery to streams, such as bank erosion, landsliding, debris flows, avalanches, blowdown, fluvial transport, decay, or mortality (Benda and Sias, 2003; Martin and Benda, 2001).

**Residence time:** Time which a piece of large wood spends within a river reach or entire water course (Wohl and Goode, 2008). Often, it is, however, calculated as the difference between the year of mortality and the year of a specific survey.



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**(LW) Storage capacity:** Wood accumulated within a river reach, is usually measured in  $\text{m}^3 \cdot 100^{-1} \text{m}$ ,  $\text{m}^3 \cdot \text{ha}^{-1}$  (also referred as specific wood storage) or number of pieces  $\cdot 100^{-1} \text{m}$ .

**Trap efficiency/retention efficiency:** Proportion of wood material trapped in a particular storage zone (e.g., a dam or stream reach) in a given period of time.

**Timber/construction wood:** Commercially or industrially used wood (e.g. fire wood), which is often placed close to streams and rivers. In case of a flood event, this wood may be an abundant source for LW. Typically it is completely debranched and cut in different length and diameter (Hübl et al., 2009).

**(Large) Wood budget:** Volumetric mass balance of LW in a reach/segment (usually converted to unit length of channel) a consequence of the differences among input, output, and decay (Martin and Benda, 2001). Balance between the standing crop of wood stored within a river reach and the quantity of wood produced and input to the reach and output from it within a specific time period (Gurnell, 2013)

**(Large) Wood deposition/ storage:** Accumulation of wood in the channel or within the alluvial corridor. Sometimes refer as wood load.

**(Large) Wood discharge/Wood flux:** Volume (or mass) of wood transferred in a certain time, usually measured in  $\text{m}^3 \cdot \text{s}^{-1}$  or  $\text{kg} \cdot \text{s}^{-1}$  (Wohl et al., 2010).

**(Large) Wood dynamics:** Processes involved in the motion and equilibrium of wood under the action of forces. Sometimes it refers to the processes associated with the recruitment, storage and transport of wood.

**(Large) Wood input:** Amount of wood (usually volume or mass of wood including freshly recruited wood) transferred to the inlet of the considered river reach or watershed in a certain time (Martin and Benda, 2001).

**(Large) Wood load:** Amount of wood (usually volume or mass) introduced to the channel by different recruitment processes. Often refer as wood storage.

**(Large) Wood mobility:** Opposite to stability. The quality of being mobile, the movement of wood through river systems.

**(Large) Wood output/Wood export:** Amount of wood (usually volume or mass of wood including previously stored wood and freshly recruited wood) transferred to the outlet of the considered river reach or watershed in a certain time (Martin and Benda, 2001).



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**(Large) Wood potential:** Total amount of available wood (volume or mass) within a specified catchment that is potentially becoming recruited (and mobilized) during an event (Rickenmann, 1997).

**Wood raft:** Congested accumulation of wood that completely spans the active channel and has a length at least several times the average channel width (Triska, 1984; Sedell et al., 1988).

**(Large) Wood retention:** Manner with which wood is retained (naturally or artificially) within river systems.

**Wood-air volume:** Measurement of piece/jam size along three orthogonal axes and the estimation of wood to air ratios for logs, jams, and shrubs to improve volume estimates in log jams.

**(Large) Woody debris (or LWD):** Commonly used over the past decades by scientists and river managers to refer large wood, is nowadays considered inappropriate because it is negatively perceived whereas large wood has significant positive biological effects in term of habitat structure. It is preferably replaced by large wood or in-stream/in-channel wood.



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