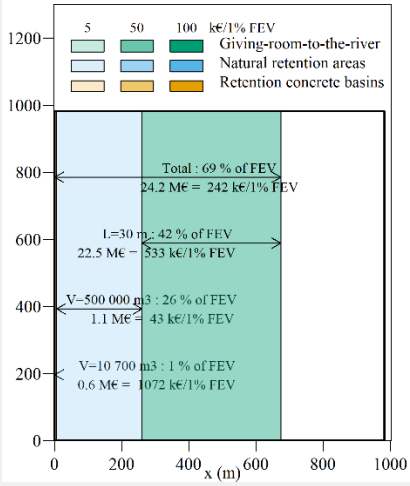

Square lake representation at the Bragues catchment scale on flood disaster of Oct. 2005: the full FEV of 1.9 Mm^3 is equivalent to a square lake of side nearly 1 km long and 2 m deep. The existing retention concrete basin of 10,700 m3 handle less than 1% of this total volume at high cost. Giving 30 m of width to the river would cope with 42% of the FEV while the natural retention areas would cope with 26% of the FEV at low cost. 31% of FEV remains and require other measures if one want to protect against the full event.z

4.20 Rainfall interception rate of NBS

Project Name: OPERANDUM (Grant Agreement no. 776848)

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Rainfall interception rate of NBS	**Water Management**
Description and justification	The aerial parts of vegetation established as part of the NBS can intercept precipitation and thus decrease and delay the amount of water reaching the soil which, in turn, will decrease the risk of erosion and landslides.
Definition	Interception rate refers to the proportion of precipitation that does not reach the soil, but is instead intercepted by the leaves, branches of plants and the forest floor.

Strengths and weaknesses	+ Well established procedures exist for NBS that include trees; large body of empirical models exist for multiple plant species and biomes. - Requires significant effort and suitably qualified workforce for measurement/monitoring; relatively difficult to measure under non-woody vegetation; it is difficult to capture the complex architecture of the canopy; high interference with dripfall and atmospheric turbulence.
Measurement procedure and tool	The rationale for measurement is to measure rainfall below the canopy and beyond the canopy's influence and compare both through linear regression, subtract throughfall and stemflow quantities from it. These quantities can be measured using a rain gauge/graded container
Scale of measurement	Point (tree or individual vegetation), field (meso scale)
Data source	
Required data	Water volume; canopy crown area; canopy cover fraction; leaf area index
Data input type	Numerical, quantitative
Data collection frequency	During every rainfall event
Level of expertise required	Intermediate to high
Synergies with other indicators	Moisture content, stemflow, throughflow, vegetation type, vegetation cover, precipitation
Connection with SDGs	11,13,1,5,17
Opportunities for participatory data collection	Yes
Additional information	
References	Gonzalez-Ollauri, A. & Mickovski, S.B. (2017). Hydrological effect of vegetation against rainfall-induced landslides, *Journal of Hydrology*, *549*, 374–387. Deguchi, A., Hattori, S., & Park, H. (2006). The influence of seasonal changes in canopy structure on interception loss: application of the revised Gash model. *Journal of Hydrology, 318*, 80–102.