

		<h1>Timber production</h1> <p>Responsible partner: IGB</p> <p>Actuality: November 2021</p>				
<h3>Interpretation</h3> <p>The indicator describes timber production as an ecosystem service based on data on the yield (as a multi-annual average) of timber harvested from economically used forest. It indicates the mass of harvested wood in the respective floodplain area in relation to the size of the forest management planning stands. For this purpose, the areal share of the various forest management planning stands in the floodplain segment (or compartment) area is multiplied by the respective yield, and the result is classified using a yield scale. Alternatively, wood increment (growth) data or Timber Quotas (TQ) for wood harvest in economically used forest can be used if available. In any case, values should represent multi-annual averages e.g. for a 10-year period, as wood harvest tends to occur only irregularly.</p>						
Class		Abbr.	Description		Spatial reference	
Provisioning		TP	The indicator describes timber production based on data on the yield (as a multi-annual average) obtained for harvested timber from economically used forest.		Floodplain segment or compartment <input checked="" type="checkbox"/> potential floodplain <input checked="" type="checkbox"/> active floodplain <input type="checkbox"/> river	
Variable		Abbr.	Unit	Variable description	Data basis	Comment
Reference floodplain area in the whole segment or in the compartment (active or potential floodplain)		A_{Seg} A_{AFPseg} A_{PFPseg}	ha	Determination of the area of active floodplain and potential floodplain within the segment	Floodplain segments 100-year flood inundation map, e.g. produced under EU Flood Risk Management Directive	
Forest management planning (stands/sections) in compartments (active and potential floodplain)		FS_{seg} FS_{AFPseg} FS_{PFPseg}	ha	Determination of the area of forest of economic interest within the reference floodplain area	Forest Cover Map	
Harvested wood or Timber Quotas from the forests managed for timber production		HW_i	t ha ⁻¹ year ⁻¹	Weight of the harvested timber Normative Acts with Timber Quotas	Harvested wood mass data Timber Quotas (TQ)	
Calculation method						
Calculation steps				Indicator		
<div>1. Determination of the reference floodplain area size for each segment j (in GIS).</div> <div>2. Identification of the forest stands i within the reference floodplain areas j from Forest Cover Map data (GIS) with differentiation according to location (active or potential floodplain).</div> <div>3. Overlay of forest management planning stands with data on yield / harvested timber mass (in GIS)</div> <div>4. Calculation of the indicator for the reference floodplain areas in the active or potential floodplains</div> <div>5. Classification of the resulting yield into 5 classes</div>				<div>Calculation of the timber production for floodplain segments (for $j = 1, 2, \dots, n$ floodplain segments):</div> <div>$Ind_{TP}(j) = \sum_{i=1}^n (j) \frac{FS_{seg,i} * HW_i}{A_{seg,j}}$</div> <div>$j = 1, 2, \dots, m$ Floodplain segments</div> <div>$i = 1, 2, \dots, n$ Sub-areas (forest management planning stands) within the reference floodplain area in the respective segment</div>		
Ind _{TP}	> 80%	> 60% - 80%	> 40% - 60%	> 20% - 40%	≤ 20%	0
Evaluation Class	5	4	3	2	1	0
Qualitative Evaluation	Very high yield	Above average yield	Average yield	Below-average yield	Very low yield	No yield