



Région Wallonne  
DGRNE  
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**Hydromorphologic Quality Evaluation System developed in Walloon Region**

Hydromorphologic Elements (WFD)	Assessment criteria	Estimation parameters	Scale analysis	Data sources
HYDROLOGY	<b>Hydrologic cycle stability</b>	% flow length regulated by water power plants, dams, navigation use	Reach and water body	Inventory data and expert judgment (impact until next downstream same Strahler's order)
	<b>Low flow perturbation</b>	% downstream length impacted by water abstraction, dams (base flow), diversions (canal)	Reach and water body	Inventory data and expert judgment (impact until next downstream same Strahler's order)
MORPHOLOGY	<b>Channelization</b>	% length impacted % length impacted by navigation use	Reach and water body	Diachronic analysis (historic maps) : change of sinuosity
	<b>Banks type</b>	% length of artificial banks	Reach and water body	Inventory data and geoprocessing data (land use, roads along the river)
	<b>Riparian continuity</b>	% length impacted	Reach and water body	Aerial photography
CONTINUITY	<b>Interruption of fish passage</b>	Number and type of barrier % length interrupted	Water body	Inventory data Geoprocessing data (network analysis)
	<b>Sediment transport continuity</b>	% downstream length impacted by dams, lakes, ...	Reach and water body	Inventory data and expert judgment (impact until next downstream same Strahler's order)

☞ **Criteria weighting system according to reference conditions and alterations of the parameters and geomorphologic types of rivers (7 types in Walloon Region)**

☞ **Scores (0 - 100% - 5 ranks) : criterion, element at valley reach and water body scale**  
**Score (WB) = Min.(score(hydrol.);score(morpho.);score(cont.))**

☞ **Provisionally designation HMWB : score(WB) < 40%**  
**Sample of 100 water bodies in 2004 : 30 HMWB - (this study finish in 2005)**