4.45 Eutrophication

Project Name: proGIreg (Grant Agreement no. 776528)

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Eutrophication	**Water Management**
Description and justification	Eutrophication is probably the most serious environmental problem affecting water reservoirs. Excessive nutrient input (mainly nitrogen and phosphorus) lead to an overgrowth of biomass that affect water dissolved oxygen, water transparency with a negative impact on human and animal health.
Definition	The water eutrophication level will be evaluated by a Set Pair Analysis of 5 indices
Strengths and weaknesses	A strength of this indicator is that reduce uncertainties for eutrophication level.
Measurement procedure and tool	Total nitrogen, total phosphorus, chlorophyll concentration, dissolved oxygen, will be used in a Set Pair Analysis to detect a eutrophication level
Scale of measurement	NBS Level
Data source	
Required data	concentration of total nitrogen, total phosphorus, chlorophyll concentration, dissolved oxygen
Data input type	Discrete variables
Data collection frequency	Pre and post implementation data collection
Level of expertise required	High
Synergies with other indicators	This indicator is related to other indicators of environmental benefit
Connection with SDGs	Sustainable consumption and production: The implementation of nature-based solutions contributes to “doing more and better with less,” net welfare gains from

	economic activities can increase by reducing resource use, degradation and pollution along the whole life cycle.
Opportunities for participatory data collection	
Additional information	
References	Wu, F. F., and Xu Wang. "Eutrophication evaluation based on set pair analysis of Baiyangdian Lake, North China." Procedia Environmental Sciences 13 (2012): 1030-1036.

4.46 pH of NBS effluents

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pH of the NBS effluents	**Water Management**
Description and justification	Water quality can profoundly impact both aquatic and terrestrial ecosystems. Changes to the quality of water may occur due to many different factors, including human activities. It is therefore important to monitor water quality in environments likely to be affected by anthropogenic activity, or in particularly sensitive aquatic ecosystems. Basic water quality parameters include pH, temperature, electrical conductivity (EC), dissolved oxygen (DO) content and flow rate.
Definition	A measure of the relative acidity or alkalinity of a solution (0-14 pH units). The pH of a sample of water is a measure of the concentration of hydrogen ions (-log[H+]).
Strengths and weaknesses	+ An easy and straightforward assessment + Can be automated to ensure continuous data collection