Ecosystem Service	**Chemical condition of salt waters**
CICES class name	Regulation of the chemical condition of salt waters by living processes
CICES Section	Regulation & Maintenance (Biotic)
CICES Class code	2.2.5.2

Brief Description

- Controlling the chemical quality of salt water
- Maintenance of the chemical condition of salt waters by plant or animal species that enable human use or health
- This class should be used "where anthropogenic waste and pollution input is minimal, and a more natural regime maintains the quality of water bodies concerned and where this contributes to human well-being." (Haines-Young, 2023). For mitigating effects of strong anthropogenic contaminations, classes 2.1.1.1 (Biotic remediation of waste) and 2.1.1.2 (Biotic filtration, sequestration and storage of waste) should be used.

Sample Indicators

Indicator values from			
Experiment or direct measurement		Survey	
Expert assessment		Statistical- or census data	
Model or GIS		Literature values	
Stakeholder participation		Not provided	

Table 1: Field Scale

Indicator	**Unit**	**Indicator values from**
[7] NO_3– loss through leaching and runoff, following cover crop or fallow period	Not provided	
[7] Dissolved P loss through leaching and runoff, following cover crop or fallow period	Not provided	
[8] Nitrate leaching prevention: nitrate concentration in drained water	mg NO_3 * liter of drained water $^{-1}$	

Table 2: Farm Scale

Indicator	**Unit**	**Indicator values from**

[3] Share of nitrogen retained during water passage between agricultural sub-catchment and sea.	%	
[3] Share of farmers that express clearly a value and care for the health of the land.	%	

Table 3: Regional Scale

Indicator	Unit	Indicator values from
[1] Phosphorus retention, calculated with InVEST model	kg * ha^{-1}	
[6] Costal nitrogen load per agricultural area in the watershed: amount of nitrogen leached from soils (and not retained) that reaches the coast, divided by the agricultural area	t * ha^{-2} * yr^{-1}	,
[9] Nitrogen retention at watershed level calculated with InVEST's Nutrient Retention Model. Calculation based on nitrogen loading and vegetation filtering value for different land-use classes	t N * yr^{-1} * grid $cell^{-1}$	
[11] Leakage of nutrients	kg * ha^{-1} * yr^{-1}	
[11] Turnover rates of nutrients, e.g., N, P	kg * yr^{-1}	
[11] Total dissolved solids	mg * l^{-1}	
[11] Decomposition rate of organic matter	kg * ha^{-1}	
[2] Water purification: ecosystem service supply depends on the land cover class. The matrix defined by Burkhard et al., 2012 (DOI:10.1016/j.ecolind.2011.06.019) was and used in this study.	Index 0-5	
[3] Share of nitrogen retained during water passage between agricultural sub-catchment and sea.	%	
[3] Share of farmers that express clearly a value and care for the health of the land.	%	
[10] Mediation of water pollution such as excess nitrogen removal: expert based index for ecosystem service supply by land cover class [1-5], multiplied by the area of the land cover class [km^2]	Index 1-5 * km^{-2}	, ,
[10] Mediation of water pollution such as excess nitrogen removal value: expert based index for ecosystem service supply by land cover class [1-5], multiplied by the area of the land cover class [km^2] and a literature-based monetary value of the ecosystem service	$ * ha^{-1} * yr^{-1}	, ,
[11] Area occupied by riparian forests	ha	
[12] Mass of a specific nutrient retained	ton/ (km^2 * year)	
[12] Volume of purified water	m^3/(km^2 *year)	

Table 4: National Scale

Indicator	Unit	Indicator values from
[5] Indicators of groundwater quality	Not specified	⃠

Table 5: Multinational Scale

Indicator	Unit	Indicator values from
[4] Water purification: Values for Corine land cover classes, based on values published by Burkhard et al. (2009; DOI: 10.3097/LO.200915) and modified for the context of riparian zones.	Index 0-5	

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[14]* The impact area discussed on this factsheet is not a focus of the cited paper

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