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#### COVER NOTE

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From:	European Commission
date of receipt:	27 October 2017
To:	General Secretariat of the Council
No. Cion doc.:	D053019/02 - Annex 1
Subject:	ANNEX to the Commission decision establishing, pursuant to Directive 2000/60/EC of the European Parliament and of the Council, the values of the Member State monitoring system classifications as a result of the intercalibration exercise and repealing Decision 2013/480/EU

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Delegations will find attached document D053019/02 - Annex 1.

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Encl.: D053019/02 - Annex 1



Brussels, **XXX**  
D053019/02  
[...] (2017) **XXX** draft

ANNEX 1

**ANNEX**

*to the*

**Commission decision**

**establishing, pursuant to Directive 2000/60/EC of the European Parliament and of the Council, the values of the Member State monitoring system classifications as a result of the intercalibration exercise and repealing Decision 2013/480/EU**

Part 1 of this annex includes the results of the intercalibration exercise for which all steps of the intercalibration process have been fully completed, including their respective boundary values.

Part 2 includes national methods and their boundary values which are consistent with the normative definition set out in Section 1.2 of Annex V to Directive 2000/60/EC but where it has not been technically feasible to complete the comparability assessment within a Geographical Intercalibration Group due to lack of common types, different pressures addressed or different assessment concepts.

**-- Part 1 --**

<b>Water category</b>	<b>Rivers</b>
<b>Geographical Intercalibration Group</b>	<b>Alpine rivers</b>

**Description of types that have been intercalibrated**

<b>Type</b>	<b>River characterisation</b>	<b>Catchment (km<sup>2</sup>)</b>	<b>Altitude (m a.s.l.) and geomorphology</b>	<b>Alkalinity</b>	<b>Flow regime</b>
R-A1	Pre-Alpine, small to medium, high altitude calcareous	10 - 1 000	800 - 2 500 m (catchment), boulders/cobble	High (but not extremely high) alkalinity	
R-A2	Small to medium, high altitude, siliceous	10 - 1 000	500 - 1 000 m (max altitude of catchment 3 000 m, mean 1 500 m), boulders	Non-calcareous (granite, metamorphic) medium to low alkalinity	Nival-glacial flow regime

**Countries sharing types that have been intercalibrated:**

*Type R-A1:* Germany, Austria, France, Italy, Slovenia

*Type R-A2:* Austria, France, Italy, Spain

ALPINE RIVERS GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

Biological Quality Element

Benthic invertebrate fauna

Results: Ecological quality ratios of national classification methods intercalibrated

Country and Type	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-Good boundary</i>	<i>Good-Moderate boundary</i>
<i>Type R-A1</i>			
Austria	Assessment of the biological quality elements - part benthic invertebrates [Erhebung der biologischen Qualitätselemente - Teil Makrozoobenthos (Detaillierte MZB-Methode)]	0.80	0.60
France	Classification française DCE Indice Biologique Global Normalisé (IBGN). AFNOR NF-T-90-350 and arrêté ministériel du 25 janvier 2010 modifié relatif aux méthodes et critères d'évaluation de l'état écologique {...} des eaux de surface	0.93	0.79
Germany	PERLODES – Bewertungsverfahren von Fließgewässern auf Basis des Makrozoobenthos	0.80	0.60
Italy	MacrOper, based on STAR Intercalibration Common Metric Index (STAR_ICMi)	0.97	0.73
Slovenia	Metodologija vrednotenja ekološkega stanja vodotokov na podlagi bentoških nevretenčarjev	0.80	0.60
<i>Type R-A2</i>			
Austria	Assessment of the biological quality elements - part benthic invertebrates [Erhebung der biologischen Qualitätselemente - Teil Makrozoobenthos (Detaillierte MZB-Methode)]	0.80	0.60
France (Alps)	Classification française DCE Indice Biologique Global Normalisé (IBGN). AFNOR NF-T-90-350 and arrêté ministériel du 25 janvier 2010 modifié relatif aux méthodes et critères d'évaluation de l'état écologique {...} des eaux de surface	0.93	0.71
France (Pyrenees)	Classification française DCE Indice Biologique Global Normalisé (IBGN). AFNOR NF-T-90-350 and arrêté ministériel du 25 janvier 2010 modifié relatif aux méthodes et critères d'évaluation de l'état écologique {...} des eaux de surface	0.94	0.81
Italy	MacrOper, based on STAR Intercalibration Common Metric Index (STAR_ICMi)	0.95	0.71
Spain	Iberian BMWP (IBMWP)	0.83	0.53

**ALPINE RIVERS GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS**

**Biological Quality Element**

**Macrophytes and Phytobenthos**

**Sub-Biological Quality Element**

**Phytobenthos**

**Results: Ecological quality ratios of national classification methods intercalibrated**

Type and country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-Good boundary</i>	<i>Good-Moderate boundary</i>
<i>Type R-A1</i>			
Austria	Assessment of the biological quality elements - part phytobenthos [Leitfaden zur Erhebung der biologischen Qualitätselemente, Teil A3 - Fließgewässer/Phytobenthos]	0.88	0.56
France	IBD 2007 (Coste et al, Ecol. Ind. 2009). AFNOR NF-T-90-354, December 2007. Arrêté ministériel du 25 janvier 2010 modifié relatif aux méthodes et critères d'évaluation de l'état écologique {...} des eaux de surface	0.94	0.78
Germany	Verfahrensanleitung für die ökologische Bewertung von Fließgewässern zur Umsetzung der EG-Wasserrahmenrichtlinie: Makrophyten und Phytobenthos (PHYLIB), Modul Diatomeen	0.735	0.54
Italy	Intercalibration Common Metric Index (ICMi) (Mancini & Sollazzo, 2009)	0.87	0.7
Slovenia	Metodologija vrednotenja ekološkega stanja vodotokov na podlagi fitobentosa in makrofitov, fitobentos	0.80	0.60
<i>Type R-A2</i>			
Austria	Assessment of the biological quality elements - part phytobenthos [Leitfaden zur Erhebung der biologischen Qualitätselemente, Teil A3 - Fließgewässer/Phytobenthos]	0.88	0.56
France	IBD 2007 (Coste et al, Ecol. Ind. 2009). AFNOR NF-T-90-354, December 2007. Arrêté ministériel du 25 janvier 2010 modifié relatif aux méthodes et critères d'évaluation de l'état écologique {...} des eaux de surface	0.94	0.78
Spain	IPS (Coste in Cemagref, 1982)	0.94	0.74
Italy	Intercalibration Common Metric Index (ICMi) (Mancini & Sollazzo, 2009)	0.85	0.64

<b>Water category</b>	<b>Rivers</b>
<b>Geographical Intercalibration Group</b>	<b>Central-Baltic rivers</b>

#### Description of types that have been intercalibrated

Type	River characterisation	Catchment (km <sup>2</sup> )	Altitude and geomorphology	Alkalinity (meq/l)
R-C1	Small lowland siliceous sand	10 - 100	Lowland, dominated by sandy substrate (small particle size), 3 - 8 m width (bankfull size)	> 0.4
R-C2	Small lowland siliceous - rock	10 - 100	Lowland, rock material 3 - 8m width (bankfull size)	< 0.4
R-C3	Small mid-altitude siliceous	10 - 100	Mid-altitude, rock (granite) - gravel substrate, 2 - 10 m width (bankfull size)	< 0.4
R-C4	Medium lowland mixed	100 - 1 000	Lowland, sandy to gravel substrate, 8 - 25 m width (bankfull size)	> 0.4
R-C5	Large lowland mixed	1 000 - 10 000	Lowland, barbel zone, variation in velocity, max. altitude in catchment: 800 m a.s.l., >25 m width (bankfull size)	> 0.4
R-C6	Small, lowland, calcareous	10 - 300	Lowland, gravel substrate (limestone), width 3 - 10 m (bankfull size)	> 2

#### Countries sharing types that have been intercalibrated:

**Type R-C1:** Belgium (Flanders), Belgium (Wallonia), Germany, Denmark, France, Italy, Lithuania, the Netherlands, Poland, Sweden, United Kingdom

**Type R-C2:** Spain, France, Ireland, Sweden, United Kingdom

**Type R-C3:** Austria, Belgium (Wallonia), Czech Republic, Germany, Poland, Spain, Sweden, France, Luxembourg, United Kingdom

**Type R-C4:** Belgium (Flanders), Belgium (Wallonia), Czech Republic, Germany, Denmark, Estonia, Spain, France, Ireland, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Poland, Sweden, United Kingdom

**Type R-C5:** Belgium (Wallonia), Czech Republic, Estonia, France, Germany, Spain, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Poland, Sweden, United Kingdom

**Type R-C6:** Belgium (Wallonia), Denmark, Estonia, Spain, France, Ireland, Italy, Poland, Latvia, Lithuania, Luxembourg, Sweden, United Kingdom

**CENTRAL-BALTIC RIVERS GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS**

**Biological Quality Element**

**Benthic invertebrate fauna**

**Results: Ecological quality ratios of national classification methods intercalibrated**

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-Good boundary</i>	<i>Good-Moderate boundary</i>
Austria	Assessment of the biological quality elements - part benthic invertebrates	0.80	0.60
Belgium (Flanders)	Multimetric Macroinvertebrate Index Flanders (MMIF)	0.90	0.70
Belgium (Wallonia)	Indice Biologique Global Normalisé (IBGN) (Norme AFNOR NF T 90 350, 1992) and Arrêté du Gouvernement wallon du 13 septembre 2012 relatif à l'identification, à la caractérisation et à la fixation des seuils d'état écologique applicables aux masses d'eau de surface et modifiant le Livre II du Code de l'Environnement, contenant le Code de l'Eau. Moniteur belge 12.10.2012	0.94 (type R-C1)	0.75 (type R-C1)
		0.97 (types R-C3, R-C5, R-C6)	0.74 (types R-C3, R-C5, R-C6)
Czech Republic	Czech system for ecological status assessment of rivers using benthic macroinvertebrates	0.80	0.60
Denmark	Danish Stream Fauna Index (DSFI)	1.00	0.71
Estonia	Estonian surface water ecological quality assessment – river macroinvertebrates	0.90	0.70
Germany	PERLODES – Bewertungsverfahren von Fließgewässern auf Basis des Makrozoobenthos	0.80	0.60
France	Classification française DCE Indice Biologique Global Normalisé (IBGN). AFNOR NF T90-350 et arrêté ministériel du 25 janvier 2010 modifié relatif aux méthodes et critères d'évaluation de l'état écologique {...} des eaux de surface	0.94	0.80
Ireland	Quality Rating System (Q-value)	0.85	0.75
Italy	MacrOper, based on STAR_ICM index calculation	0.96	0.72
Latvia	Latvian Macroinvertebrate Index (LMI)	0.92	0.72
Lithuania	Lithuanian River Macroinvertebrate Index (LRMI)	0.80	0.60
Luxembourg	Classification luxembourgeoise DCE Indice Biologique Global Normalisé (IBGN). AFNOR NF-T-90-350, AFNOR XP T 90-333 and XP T 90-388	0.96	0.72
Netherlands	KRW-maatlat	0.80	0.60
Poland	RIVECOmacro - MMI_PL	0.91(type R-	0.72 (type R-

		C1)	C1)
Spain	METI	0.93	0.70
Sweden	DJ-index (Dahl & Johnson 2004)	0.80	0.60
United Kingdom	River Invertebrate Classification Tool (RICT)- WHPT	0.97	0.86

### CENTRAL-BALTIC RIVERS GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

**Biological Quality Element** **Macrophytes and Phytobenthos**

**Sub-Biological Quality Element** **Macrophytes**

#### Results: Ecological quality ratios of national classification methods intercalibrated

Country	National classification systems intercalibrated	Type	Ecological Quality Ratios	
			High-Good boundary	Good-Moderate boundary
Austria	AIM for Rivers (Austrian Index Macrophytes for rivers)	RC-3	0.875	0.625
Belgium (Flanders)	MAFWAT - Flemish macrophyte assessment system	R-C1	0.80	0.60
Belgium (Wallonia)	IBMR-WL - Biological Macrophyte Index for Rivers (Arrêté du Gouvernement wallon du 13 septembre 2012 relatif à l'identification, à la caractérisation et à la fixation des seuils d'état écologique applicables aux masses d'eau de surface et modifiant le Livre II du Code de l'Environnement, contenant le Code de l'Eau. Moniteur belge 12.10.2012)	R-C3	0.925	0.607
Czech Republic	Assessment method of surface running water bodies in the Czech Republic using biological quality element macrophytes	R-C3 (national type 1)	0.83	0.67
		R-C3 (national type 4)	0.82	0.64
		R-C4	0.86	0.62
Denmark	DSPI - Danish Stream Plant Index	R-C1, R-C4	0.70	0.50
Germany	Verfahrensanleitung für die ökologische Bewertung von Fließgewässern zur Umsetzung der EG-Wasserrahmenrichtlinie: Makrophyten und Phytobenthos (PHYLIB), Modul Makrophyten	R-C1	0.745	0.495
		R-C3	0.80	0.55
		R-C4	0.575	0.395
Germany	NRW-Verfahren zur Bewertung von Fließgewässern mit Makrophyten	R-C1, R-C3, R-C4	0.995	0.695



France	IBMR - Indice Biologique Macrophytique en Rivière French standard NF T90-395 (2003-10-01)	R-C3	0.93	0.79
		R-C4	0.905	0.79
Ireland	MTR – IE - Mean Trophic Ranking	R-C4	0.74	0.62
Italy	IBMR – IT - Biological Macrophyte Index for Rivers	R-C1	0.90	0.80
		R-C4	0.90	0.80
Lithuania	Lithuanian River Macrophyte Index	R-C4	0.61	0.41
Latvia	Latvian assessment method using macrophytes	R-C4	0.75	0.55
Luxembourg	IBMR – LU - Biological Macrophyte Index for Rivers	R-C3, R-C4, R-C5 and R-C6	0.89	0.79
Netherlands	Revised assessment method for rivers in The Netherlands using macrophytes	R-C1 and R-C	0.80	0.60
Poland	MIR - Macrophyte Index for Rivers	R-C1	0.90	0.65
		R-C3	0.910	0.684
		R-C4	0.90	0.65
United Kingdom	River LEAFPACS 2	R-C1, R-C3 and R-C4*	0.80	0.60

\* For the United Kingdom these results also apply to the common intercalibration types belonging to the Northern Geographical Intercalibration Group

## CENTRAL-BALTIC RIVERS GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

**Biological Quality Element**

**Macrophytes and Phytobenthos**

**Sub-Biological Quality Element**

**Phytobenthos**

### Results: Ecological quality ratios of national classification methods intercalibrated

Country	National classification systems intercalibrated	Type	Ecological Quality Ratios	
			<i>High-Good boundary</i>	<i>Good-Moderate boundary</i>
Austria	Assessment of the biological quality elements - part Phytobenthos [Leitfaden zur Erhebung der biologischen Qualitätselemente, Teil A3 - Fließgewässer/Phytobenthos]	All types, altitude <500 m	0.70	0.42
		All types, altitude >500 m	0.71	0.43
Belgium (Flanders)	Proportions of Impact-Sensitive and Impact-	All types	0.80	0.60

	Associated Diatoms (PISIAD)			
Belgium (Wallonia)	IPS (Coste, in CEMAGREF, 1982 ; Lenoir & Coste, 1996 and Arrêté du Gouvernement wallon du 13 septembre 2012 relatif à l'identification, à la caractérisation et à la fixation des seuils d'état écologique applicables aux masses d'eau de surface et modifiant le Livre II du Code de l'Environnement, contenant le Code de l'Eau. Moniteur belge 12.10.2012)	All types	0.98	0.73
Czech Republic	Czech assessment method for rivers using phytobenthos	R-C3, R-C4, R-C5	0.80	0.63
Estonia	Indice de Polluosensibilité Spécifique (IPS)	All types	0.85	0.70
France	IBD 2007 (Coste et al, Ecol. Ind. 2009). AFNOR NF-T-90-354, December 2007. Arrêté ministériel du 25 janvier 2010 modifié relatif aux méthodes et critères d'évaluation de l'état écologique {...} des eaux de surface	All types	0.94	0.78
Germany	Verfahrensanleitung für die ökologische Bewertung von Fließgewässern zur Umsetzung der EG-Wasserrahmenrichtlinie: Makrophyten und Phytobenthos (PHYLIB), Modul Diatomeen	R-C1	0.67	0.43
		R-C3	0.67	0.43
		R-C4	0.61	0.43
		R-C5	0.73	0.55
Ireland	Revised form of Trophic Diatom Index (TDI)	All types	0.93	0.78
Italy	Intercalibration Common Metric Index (ICMi) (Mancini & Sollazzo, 2009)	All types	0.89	0.70
Ireland	Revised form of Trophic Diatom Index (TDI)	All types	0.93	0.78
Lithuania	Lithuanian Phytobenthos Index	R-C1, R-C4, R-C5, R-C6	0.73	0.55
Luxembourg	Indice de Polluosensibilité Spécifique (IPS)	R-C3, R-C4 (low alkalinity)	0.98	0.78
		R-C4 (high alkalinity), R-C5 and R-C6	0.99	0.78
Netherlands	KRW Maatlat	All types	0.80	0.60
Poland	Indeks Okrzemkowy IO dla rzek (Diatom Index for rivers)	All types	0.80	0.58
Spain	Diatom multimetric (MDIAT)	R-C2, R-C3, R-C4	0.93	0.70
Sweden	Swedish assessment methods, Swedish EPA regulations (NFS 2008:1) based on Indice de Polluosensibilité Spécifique (IPS)	All types	0.89	0.74

United Kingdom	Diatom Assessment for River Ecological Status (DARLEQ2)	All types	1.00	0.75
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<b>Water category</b>	<b>Rivers</b>
<b>Geographical Intercalibration Group</b>	<b>Eastern Continental rivers</b>

**Description of types that have been intercalibrated**

Type	River characterisation	Ecoregion	Catchment (km <sup>2</sup> )	Altitude (m a.s.l.)	Geology	Substrate
R-E1a	Carpathians: small to medium, mid-altitude	10	10 - 1 000	500 - 800	Mixed	
R-E1b	Carpathians: small to medium, mid-altitude	10	10 - 1 000	200 - 500	Mixed	
R-E2	Plains: medium-sized, lowland	11 and 12	100 - 1 000	< 200	Mixed	Sand and silt
R-E3	Plains: large, lowland	11 and 12	> 1 000	< 200	Mixed	Sand, silt and gravel
R-E4	Plains: medium-sized, mid-altitude	11 and 12	100 - 1 000	200 - 500	Mixed	Sand and gravel
R-EX4	Large, mid-altitude	10, 11 and 12	> 1 000	200 - 500	Mixed	Gravel and boulder
R-EX5	Plains: small lowland	11 and 12	10 - 100	< 200	Mixed	Sand and silt
R-EX6	Plains: small, mid-altitude	11 and 12	10 - 100	200 - 500	Mixed	Gravel
R-EX7	Balkan: small, calcareous, mid-altitude	5	10 - 100	200 - 500	Calcareous	Gravel
R-EX8	Balkan: small to medium-sized, calcareous karst spring	5	10 - 1 000		Calcareous	Gravel, sand and silt

**Countries sharing types that have been intercalibrated:**

**R-E1a:** Bulgaria, Czech Republic, Romania, Slovakia

**R-E1b:** Bulgaria, Czech Republic, Hungary, Romania, Slovakia

**R-E2:** Bulgaria, Czech Republic, Hungary, Romania, Slovakia, Slovenia

**R-E3:** Bulgaria, Czech Republic, Hungary, Romania, Slovakia, Slovenia

**R-E4:** Austria, Czech Republic, Bulgaria, Hungary, Romania, Slovakia, Slovenia

**R-EX4:** Czech Republic, Romania, Slovakia

**R-EX5:** Hungary, Romania, Slovenia, Slovakia

**R-EX6:** Hungary, Romania, Slovenia

R-EX7: Slovenia

R-EX8: Slovenia

## EASTERN CONTINENTAL RIVERS GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

Biological Quality Element

Benthic invertebrate fauna

### Results: Ecological quality ratios of national classification methods intercalibrated

Country	National classification systems intercalibrated	Type	Ecological Quality Ratios	
			<i>High-Good boundary</i>	<i>Good-Moderate boundary</i>
Austria	Assessment of the biological quality elements - part benthic invertebrates	R-E4	0.80	0.60
Bulgaria	IBI (BG) (Irish Biotic Index (BG))	R-E1a, R-E1b	0.86	0.67
		R-E2, R-E3	0.80	0.60
Czech Republic	Czech system for ecological status assessment of rivers using benthic macroinvertebrates	R-E1a, R-E1b, R-E2, R-E3	0.80	0.60
Hungary	Hungarian Multimetric Macroinvertebrate Index	R-E1b, R-E3, R-E4, R-EX5, R-EX6	0.80	0.60
Romania	Assessment method for ecological status of water bodies based on macroinvertebrates	R-E1a, R-E1b, R-E3, R-EX4	0.74	0.58
Slovenia	Metodologija vrednotenja ekološkega stanja vodotokov na podlagi bentoških nevretenčarjev	R-E4, R-EX5, R-EX6	0.80	0.60
Slovakia	Slovak assessment of benthic invertebrates in rivers	R-E1a, R-E1b, R-E2, R-E3, R-E4, R-EX4	0.80	0.60

**EASTERN CONTINENTAL RIVERS GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS**

**Biological Quality Element**

**Macrophytes and Phytobenthos**

**Sub-Biological Quality Element**

**Macrophytes**

**Results: Ecological quality ratios of national classification methods intercalibrated**

Country	National classification systems intercalibrated	Type	Ecological Quality Ratios	
			<i>High-Good boundary</i>	<i>Good-Moderate boundary</i>
Austria	AIM for Rivers (Austrian Index Macrophytes for rivers)	R-E4	0.875	0.625
Bulgaria	Reference Index	R-E2, R-E3	0.570	0.370
		R-E4	0.510	0.270
Czech Republic	Assessment method of surface running water bodies in the Czech Republic using biological quality element macrophytes	R-E2, R-E3	0.750	0.500
Czech Republic	Assessment method of surface running water bodies in the Czech Republic using biological quality element macrophytes	R-E4	0.770	0.560
Hungary	Reference Index	R-E2, R-E3	0.700	0.370
Romania	Romanian Macrophyte-based assessment system for rivers (Macrophyte River Index (MARI))	R-E2, R-E3, R-E4	R-E2 and R-E3: 0.875, R-E4: 0.783	all types: 0.625
Slovenia	Metodologija vrednotenja ekološkega stanja vodotokov na podlagi fitobentosa in makrofitov, makrofiti	R-E2, R-E3, R-E4	0.800	0.600
Slovakia	Macrophyte Biological Index for Rivers (IBMR-SK)	R-E2, R-E3, R-E4	0.800	0.600

**EASTERN CONTINENTAL RIVERS GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS**

**Biological Quality Element**

**Macrophytes and Phytobenthos**

**Sub-Biological Quality Element**

**Phytobenthos**

**Results: Ecological quality ratios of national classification methods intercalibrated**

Country	National classification systems intercalibrated	Type	Ecological Quality Ratios	
			High-Good boundary	Good-Moderate boundary
Austria	Assessment of the biological quality elements - part phytobenthos	R-E4	0.70	0.42
Bulgaria	Ecological status assessment of rivers in Bulgaria based on IPS diatom index	R-E1a, R-E1b, R-E3	0.87 (national type R2, R4) 0.85 (national type R7, R8)	0.66 (national type R2, R4) 0.64 (national type R7, R8)
Czech Republic	Assessment system for rivers using phytobenthos	R-E1a, R-E1b, R-E2, R-E3, R-EX4	0.80	0.60
Hungary	Ecological status assessment for rivers based on diatoms	R-E2, R-E3, R-EX5	0.80	0.60
Romania	National (Romanian) Assessment Method for Rivers Ecological Status based on Phytobenthos (Diatoms) RO-AMRP	R-E1a, R-E1b, R-E3	0.80	0.60
Slovenia	Metodologija vrednotenja ekološkega stanja vodotokov na podlagi fitobentosa in makrofitov, fitobentos	R-E4, R-EX5, R-EX6, R-EX7, R-EX8	0.80	0.60
Slovakia	Ecological status assessment system for rivers using phytobenthos	R-E1a, R-E1b, R-E2, R-E3, R-E4, R-EX4	0.90	0.70

**Water category****Rivers****Geographical Intercalibration Group****Mediterranean rivers****Description of types that have been intercalibrated**

Type	River characterisation	Catchment (km <sup>2</sup> )	Geology	Flow regime
R-M1	Small Mediterranean streams	<100	Mixed (except silicious)	Highly seasonal
R-M2	Medium Mediterranean streams	100 - 1 000	Mixed (except silicious)	Highly seasonal
R-M4	Mediterranean mountain streams		Non-silicious	Highly seasonal
R-M5	Temporary streams			Temporary

**Countries sharing types that have been intercalibrated:****R-M1:** Bulgaria, France, Greece, Italy, Portugal, Slovenia, Spain**R-M2:** Bulgaria, France, Greece, Italy, Portugal, Slovenia, Spain**R-M4:** Cyprus, France, Greece, Italy, Spain**R-M5:** Cyprus, Italy, Portugal, Slovenia, Spain**MEDITERRANEAN RIVERS GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS****Biological Quality Element****Benthic invertebrate fauna****Results: Ecological quality ratios of national classification methods intercalibrated**

Type and Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-Good boundary</i>	<i>Good-Moderate boundary</i>
<b>R-M1</b>			
France	Classification française DCE Indice Biologique Global Normalisé (IBGN). AFNOR NF T90-350 et arrêté ministériel du 25 janvier 2010 modifié relatif aux méthodes et critères d'évaluation de l'état écologique {...} des eaux de surface	0.940	0.700
Greece	Hellenic Evaluation System-2 (HESY-2)	0.943	0.750
Italy	MacrOper (based on STAR Intercalibration Common Metric Index	0.970	0.720

	ICMi)		
Portugal	Rivers Biological Quality Assessment Method-Benthic Invertebrates (IPtIN, IPtIS)	0.870 (type 1)	0.678 (type 1)
		0.850 (type 3)	0.686 (type 3)
Slovenia	Metodologija vrednotenja ekološkega stanja vodotokov na podlagi bentoških nevretenčarjev	0.800	0.600
Spain	Iberian Biological Monitoring Working Party (IBMWP)	0.845	0.698
Spain	Iberian Mediterranean Multimetric Index—using quantitative data (IMMi-T)	0.811	0.707
<b>R-M2</b>			
Bulgaria	IBI (BG) (Irish Biotic Index (BG))	0.800	0.600
France	Classification française DCE Indice Biologique Global Normalisé (IBGN). AFNOR NF T90-350 et arrêté ministériel du 25 janvier 2010 modifié relatif aux méthodes et critères d'évaluation de l'état écologique {...} des eaux de surface	0.940	0.700
Greece	Hellenic Evaluation System-2 (HESY-2)	0.944	0.708
Italy	MacrOper (based on STAR Intercalibration Common Metric Index ICMi)	0.940	0.700
Portugal	Rivers Biological Quality Assessment Method-Benthic Invertebrates (IPtIN, IPtIS)	0.830 (type 2)	0.693 (type 2)
		0.880 (type 4)	0.676 (type 4)
Slovenia	Metodologija vrednotenja ekološkega stanja vodotokov na podlagi bentoških nevretenčarjev	0.800	0.600
Spain	Iberian Biological Monitoring Working Party (IBMWP)	0.845	0.698
Spain	Iberian Mediterranean Multimetric Index—using quantitative data (IMMi-T)	0.811	0.707
<b>R-M4</b>			
Cyprus	STAR Intercalibration Common Metric Index (STAR_ICMi)	0.972	0.729
France	Classification française DCE Indice Biologique Global Normalisé (IBGN). AFNOR NF T90-350 et arrêté ministériel du 25 janvier 2010 modifié relatif aux méthodes et critères d'évaluation de l'état écologique {...} des eaux de surface	0.940	0.700
Greece	Hellenic Evaluation System-2 (HESY-2)	0.850	0.637
Italy	MacrOper (based on STAR Intercalibration Common Metric Index ICMi)	0.940	0.700



Spain	Iberian Biological Monitoring Working Party (IBMWP)	0.840	0.700
Spain	Iberian Mediterranean Multimetric Index—using quantitative data (IMMi-T)	0.850	0.694
<b>R-M5</b>			
Cyprus	STAR Intercalibration Common Metric Index (STAR_ICMi)	0.982	0.737
Greece	Hellenic Evaluation System-2 (HESY-2)	0.963	0.673
Italy	MacrOper (based on STAR Intercalibration Common Metric Index ICMi)	0,970	0,730
Portugal	Rivers Biological Quality Assessment Method-Benthic Invertebrates (IPtIN, IPtIS)	0.973 (type 5)	0.705 (type 5)
		0.961 (type 6)	0.708 (type 6)
Slovenia	Metodologija vrednotenja ekološkega stanja vodotokov na podlagi bentoških nevretenčarjev	0.800	0.600
Spain	Iberian Biological Monitoring Working Party (IBMWP)	0.830	0.630
Spain	Iberian Mediterranean Multimetric Index—using quantitative data (IMMi-T)	0.830	0.620

#### MEDITERRANEAN RIVERS GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

**Biological Quality Element**

**Macrophytes and Phytobenthos**

**Sub-Biological Quality Element**

**Macrophytes**

#### Results: Ecological quality ratios of national classification methods intercalibrated

Type and Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-Good boundary</i>	<i>Good-Moderate boundary</i>
<b>R-M1, M2, M4</b>			
Bulgaria (R-M1 and R-M2)	RI (BG) (Reference Index (BG))	0.640	0.350
Cyprus	IBMR – Biological Macrophyte Index for Rivers	0.795	0.596
France	IBMR - Indice Biologique Macrophytique en Rivière French standard NF T90-395 (2003-10-01)	0.930	0.745
Greece	IBMR – Biological Macrophyte Index for Rivers	0.750	0.560

Italy	IBMR – Biological Macrophyte Index for Rivers	0.900	0.800
Portugal	IBMR – Biological Macrophyte Index for Rivers	0.920	0.690
Slovenia	Metodologija vrednotenja ekološkega stanja vodotokov na podlagi fitobentosa in makrofítov, makrofítiti	0.800	0.600
Spain	IBMR – Biological Macrophyte Index for Rivers	0.950	0.740

## MEDITERRANEAN RIVERS GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

**Biological Quality Element** **Macrophytes and Phytobenthos**

**Sub-Biological Quality Element** **Phytobenthos**

### Results: Ecological quality ratios of national classification methods intercalibrated

Type and Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-Good boundary</i>	<i>Good-Moderate boundary</i>
<b>R-M1</b>			
Bulgaria	IPS (Indice de polluo-sensibilité)	0.820	0.630
France	IBD 2007 (Coste et al, Ecol. Ind. 2009). AFNOR NF-T-90-354, December 2007. Arrêté ministériel du 25 janvier 2010 modifié relatif aux méthodes et critères d'évaluation de l'état écologique {...} des eaux de surface	0.940	0.780
Greece	IPS (Coste in Cemagref, 1982) Intercalibrated (EQR IPS)	0.956	0.717
Italy	Intercalibration Common Metric Index (ICMi) (Mancini & Sollazzo, 2009)	0.800	0.610
Portugal	IPS (Coste in Cemagref, 1982)	0.970 (type 1)	0.730 (type 1)
		0.910 (type 3)	0.680 (type 3)
Slovenia	Metodologija vrednotenja ekološkega stanja vodotokov na podlagi fitobentosa in makrofítov, fitobentos	0.800	0.600
Spain	IPS (Coste in Cemagref, 1982)	0.937	0.727
<b>R-M2</b>			
Bulgaria	IPDS (Indice de polluo-sensibilité)	0.820	0.630
France	IBD 2007 (Coste et al, Ecol. Ind. 2009). AFNOR NF-T-90-354, December 2007. Arrêté ministériel du 25 janvier 2010 modifié relatif aux méthodes et critères d'évaluation de l'état écologique {...} des eaux de surface	0.940	0.780

Greece	IPS (Coste in Cemagref, 1982) Intercalibrated (EQR IPS)	0.953	0.732
Italy	Intercalibration Common Metric Index (ICMi) (Mancini & Sollazzo, 2009)	0.800	0.610
Portugal	IPS (Coste in Cemagref, 1982))	0.910 (type 2)	0.680 (type 2)
		0.970 (type 4)	0.730 (type 4)
Slovenia	Metodologija vrednotenja ekološkega stanja vodotokov na podlagi fitobentosa in makrofitov, fitobentos	0.800	0.600
Spain	IPS (Coste in Cemagref, 1982)	0.938	0.727
<b>R-M4</b>			
Cyprus	IPS (Coste in Cemagref, 1982)	0.910	0.683
France	IBD 2007 (Coste et al, Ecol. Ind. 2009). AFNOR NF-T-90-354, December 2007. Arrêté ministériel du 25 janvier 2010 modifié relatif aux méthodes et critères d'évaluation de l'état écologique {...} des eaux de surface	0.940	0.780
Greece	IPS (Coste in Cemagref, 1982) Intercalibrated (EQR IPS)	0.932	0.716
Italy	Intercalibration Common Metric Index (ICMi) (Mancini & Sollazzo, 2009)	0.800	0.610
Spain	IPS (Coste in Cemagref, 1982)	0.935	0.727
<b>R-M5</b>			
Cyprus	IPS (Coste in Cemagref, 1982)	0.958	0.718
Italy	Intercalibration Common Metric Index (ICMi) (Mancini & Sollazzo, 2009)	0.880	0.650
Portugal	IPS (Coste in Cemagref, 1982)	0.800 (Type 5)	0.651 (Type 5)
		0.940 (Type 6)	0.700 (Type 6)
Slovenia	Metodologija vrednotenja ekološkega stanja vodotokov na podlagi fitobentosa in makrofitov, fitobentos	0.800	0.600
Spain	IPS (Coste in Cemagref, 1982)	0.935	0.700

## Description of types that have been intercalibrated

Type	River characterisation	Catchment area of stretch (km <sup>2</sup> )	Altitude and geomorphology	Alkalinity (meq/l)	Organic material (mg Pt/l)
R-N1	Small lowland siliceous moderate alkalinity	10 - 100	< 200 m a.s.l. or below the highest coastline	0.2 - 1	<30 (<150 in Ireland)
R-N3	Small/medium lowland organic low alkalinity	10 - 1 000		<0.2	>30
R-N4	Medium lowland siliceous moderate alkalinity	100 - 1 000		0.2 - 1	<30
R-N5	Small mid-altitude siliceous low alkalinity	10 - 100	Between lowland and highland	<0.2	<30
R-N9	Small/medium mid-altitude siliceous low alkalinity organic (humic)	10 - 1 000	Between lowland and highland	<0.2	>30

**Countries sharing types that have been intercalibrated:****R-N1:** Finland, Ireland, Norway, Sweden, United Kingdom**R-N3:** Finland, Ireland, Norway, Sweden, United Kingdom**R-N4:** Finland, Norway, Sweden, United Kingdom**R-N5:** Finland, Norway, Sweden, United Kingdom**R-N9:** Finland, Norway, Sweden

## NORTHERN RIVERS GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

**Biological Quality Element**

**Benthic invertebrate fauna (methods sensitive for organic enrichment and general degradation)**

### Results: Ecological quality ratios of national classification methods intercalibrated

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-Good boundary</i>	<i>Good-Moderate boundary</i>
Finland	Revised Finnish river invertebrate fauna assessment method	0.80	0.60
Ireland	Quality Rating System (Q-value)	0.85	0.75
Norway	ASPT	0.99	0.87
Sweden	DJ-index (Dahl & Johnson 2004)	0.80	0.60
United Kingdom	River Invertebrate Classification Tool (RICT)- WHPT	0.97	0.86

**Biological Quality Element**

**Benthic invertebrate fauna (methods sensitive for acidification)**

### Results: Ecological quality ratios of national classification methods intercalibrated

The following results apply to clear, low alkalinity river types

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-Good boundary</i>	<i>Good-Moderate boundary</i>
Norway	AcidIndex2 (Modified Raddum index2) (river acidification)	0.675	0.515
United Kingdom - Scotland	WFD-AWIC	0.910	0.830
United Kingdom – England and Wales	WFD-AWIC	0.980	0.890



**NORTHERN RIVERS GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS**

**Biological Quality Element**

**Macrophytes and Phytobenthos**

**Sub-Biological Quality Element**

**Phytobenthos**

**Results: Ecological quality ratios of national classification methods intercalibrated**

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		High-Good boundary	Good-Moderate boundary
Finland	Finnish river phytobenthos method	0.80	0.60
Sweden	Indice de Polluosensibilité Spécifique (IPS)	0.89	0.74
Ireland	Revised form of Trophic Diatom Index (TDI)	0.93	0.78
United Kingdom	DARLEQ 2	1.00	0.75
Norway	Periphyton Index of Trophic Status (PIT)	0.99 (Ca ≤ 1 mg/l)	0.83
		0.95 (Ca > 1 mg/l)	

<b>Water category</b>	<b>Rivers</b>
<b>Geographical Intercalibration Groups</b>	<b>All</b>
<b>Biological Quality Element</b>	<b>Fish fauna</b>

**Overview of regional groups that have been established for the river fish intercalibration:**

*Lowland-Midland group* – Belgium (Flanders), Belgium (Wallonia), France, Germany, Netherlands, Lithuania, Luxembourg, United Kingdom (England and Wales), Poland, Latvia, Estonia, Denmark, Hungary

*Nordic group* – Finland, Ireland, Sweden, United Kingdom (Scotland and Northern Ireland), Norway

*Alpine-type Mountains group* – Austria, France, Germany, Slovenia, Italy

*Mediterranean South Atlantic group* – Portugal, Spain, Italy, Greece, Bulgaria

*Danubian group* – Czech Republic, Romania, Slovakia, Bulgaria

**Results: Ecological quality ratios of national classification methods intercalibrated**

Lowland-Midland group

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-Good boundary</i>	<i>Good-Moderate boundary</i>
Belgium Flanders	Upstream and Lowland IBI	0.850	0.650
Belgium Wallonia	IBIP (Arrêté du Gouvernement wallon du 13 septembre 2012 relatif à l'identification, à la caractérisation et à la fixation des seuils d'état écologique applicables aux masses d'eau de surface et modifiant le Livre II du Code de l'Environnement, contenant le Code de l'Eau. Moniteur belge 12.10.2012)	0.958	0.792
France	FBI (Fish-Based Index): Indice Poissons Rivière (IPR). AFNOR NF-T-90-344.	1.131	0.835
Germany	FIBS – fischbasiertes Bewertungssystem für Fließgewässer zur Umsetzung der EG-Wasserrahmenrichtlinie in Deutschland	1.086	0.592
Latvia	Latvian Fish Index	0.880	0.660
Lithuania	Lithuanian River Fish Index	0.940	0.720
Luxembourg	Classification française DCE Indice Poissons Rivière (IPR). AFNOR NF-T-90-344	1.131	0.835
Netherlands	NLFISR	0.800	0.600
Poland	EFI+PL index	0.800	0.600



Nordic group

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-Good boundary</i>	<i>Good-Moderate boundary</i>
Finland	Finnish Fish Index (FiFi) – type L2	0.665	0.499
Finland	Finnish Fish Index (FiFi) – type L3	0.658	0.493
Finland	Finnish Fish Index (FiFi) – type M1	0.709	0.532
Finland	Finnish Fish Index (FiFi) – type M2	0.734	0.550
Finland	Finnish Fish Index (FiFi) – type M3	0.723	0.542
Ireland	Fish Classification Scheme 2 Ireland (FCS2)	0.845	0.540
Sweden	Swedish method VIX	0.739	0.467
United Kingdom – Northern Ireland	IR_FCS2	0.845	0.540
United Kingdom - Scotland	FCS2 Scotland	0.850	0.600

Mediterranean group

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<b>High-Good boundary</b>	<b>Good-Moderate boundary</b>
Greece	Hellenic Fish Index (HeFI)	0.800	0.600
Portugal	F-IBIP - Fish-based Index of Biotic Integrity for Portuguese Wadeable Streams	0.850	0.675
Spain	IBIMED – type T2	0.816	0.705
Spain	IBIMED – type T3	0.929	0.733
Spain	IBIMED – type T4	0.864	0.758
Spain	IBIMED – type T5	0.866	0.650
Spain	IBIMED – type T6	0.916	0.764

Alpine group

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-Good boundary</i>	<i>Good-Moderate boundary</i>
Austria	FIA	0.875	0.625
France	FBI (Fish-Based Index): Indice Poissons Rivière (IPR). AFNOR NF-T90-344	1.131	0.876
Germany	FIBS – fischbasiertes Bewertungssystem für Fließgewässer zur Umsetzung der EG-Wasserrahmenrichtlinie in Deutschland	1.086	0.592
Italy	NISECI index (New Index of Ecological Status of Fish Communities)	0.800	0.520
Slovenia	Metodologija vrednotenja ekološkega stanja vodotokov na podlagi rib	0.800	0.600

Danubian group

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-Good boundary</i>	<i>Good-Moderate boundary</i>
Bulgaria	TsBRI (Type Specific Bulgarian Fish Index )	0.860	0.650
Czech Republic	Czech multimetric method CZI	0.780	0.585
Romania	EFI+ European Fish index (cyprinid wading type)	0.939	0.700
Romania	EFI+ European Fish index (salmonid type)	0.911	0.755
Slovakia	Fish Index of Slovakia FIS	0.710	0.570

<b>Water Category</b>	<b>Rivers</b>
<b>Geographical Intercalibration Groups</b>	<b>All – Very Large Rivers</b>

**Description of types that have been intercalibrated**

Type	River characterisation	Catchment area of stretch (km <sup>2</sup> )	Alkalinity (meq/l)
R-L1	Very large low alkalinity rivers	>10 000	< 0.5
R-L2	Very large medium to high alkalinity rivers	>10 000	> 0.5

**Countries sharing types that have been intercalibrated:**

**R-L1:** Finland, Norway, Sweden

**R-L2:** Austria, Belgium (Flanders), Bulgaria, Croatia, Czech Republic, Estonia, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden

**VERY LARGE RIVERS GEOGRAPHICAL INTERCALIBRATION GROUP**

<b>Biological Quality Element</b>	<b>Benthic invertebrate fauna</b>
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**Results: Ecological quality ratios of national classification methods intercalibrated**

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-Good boundary</i>	<i>Good-Moderate boundary</i>
Austria	Assessment of the Biological Quality Elements - part benthic invertebrates (for large alpine rivers)	0.80	0.60
Austria	Slovak assessment of benthic invertebrates in large rivers (for large lowland rivers)	0.80	0.60
Belgium (Flanders)	Multimetric Macroinvertebrate Index Flanders (MMIF)	0.90	0.70
Bulgaria	mRBA - Modified Rapid Biological Assessment	0.80	0.60
Croatia	Ecological status assessment system based on benthic invertebrates in very large rivers	0.80	0.60
Czech Republic	Czech system for ecological status assessment of large non-wadeable rivers using benthic macroinvertebrates	0.80	0.60
Germany	Germany PTI - Potamon-Typie-Index	0.80	0.60
Estonia	Estonian surface water ecological quality assessment _ large river macroinvertebrates	0.90	0.70

Spain	IBMWP - Iberian Biological Monitoring Working Party	0.79	0.48
Finland	Revised Finnish river invertebrate fauna assessment method	0.80	0.60
Hungary	Hungary HMMI_II - Hungarian Multimetric Macroinvertebrate Index for large and very large rivers	0.80	0.60
Italy	ISA (Indice per la classificazione sulla base dei Substrati Artificiali) - mediterranean rivers	0.94	0.70
Italy	ISA (Indice per la classificazione sulla base dei Substrati Artificiali) - non-mediterranean rivers	0.96	0.72
Lithuania	Lithuanian River Macroinvertebrate Index	0.80	0.60
Latvia	LRMI - Latvian large River Macroinvertebrate Index	0.88	0.63
Netherlands	WFD metrics for natural water types	0.80	0.60
Norway	Norway ASPT - Average Score Per Taxon	0.99	0.87
Poland	RIVECOMacro - MMI_PL	0.91	0.71
Romania	ECO-BENT - Assessment method for ecological status of water bodies based on macroinvertebrates	0.79	0.53
Sweden	Average Score Per Taxon (ASPT) and DJ-index	0.80	0.60
Slovenia	Metodologija vrednotenja ekološkega stanja vodotokov na podlagi bentoških nevretenčarjev	0.80	0.60
Slovakia	Slovak assessment of benthic invertebrates in large rivers	0.80	0.60

#### VERY LARGE RIVERS GEOGRAPHICAL INTERCALIBRATION GROUP

Biological Quality Element

Phytoplankton

Results: Ecological quality ratios of national classification methods intercalibrated

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-Good boundary</i>	<i>Good-Moderate boundary</i>
Austria	German PhytoFluss-Index 4.0	0.80	0.60
Belgium (Flanders)	German PhytoFluss-Index 2.0	0.80	0.60
Bulgaria	German PhytoFluss-Index 4.0	0.80	0.60
Croatia	HRPI - Hungarian River Phytoplankton Index	0.80	0.60

Czech Republic	CZ - Assessment method for ecological status of rivers based on phytoplankton	0.80	0.60
Germany	German PhytoFluss-Index	0.80	0.60
Estonia	EST_PHYPLA_R – Estonian Large River Phytoplankton Index	0.85	0.65
Hungary	HRPI - Hungarian River Phytoplankton Index	0.80	0.60
Lithuania	German PhytoFluss-Index for lowland rivers of type 15.2	0.80	0.60
Latvia	Latvian Large River Phytoplankton Index	0.80	0.60
Poland	IFPL metric - Method for large rivers assessment using phytoplankton	1.08	0.92
Romania	ECO-FITO - Assessment Method for Ecological Status of the Water Bodies based on Phytoplankton	0.92	0.76
Slovakia	Phytoplankton-SK - Slovak assessment of phytoplankton in large rivers	0.80	0.60

#### VERY LARGE RIVERS GEOGRAPHICAL INTERCALIBRATION GROUP

**Biological Quality Element**

**Macrophytes and Phytobenthos**

**Sub-Biological Quality Element**

**Phytobenthos**

#### Results: Ecological quality ratios of national classification methods intercalibrated

Country and Type	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-Good boundary</i>	<i>Good-Moderate boundary</i>
<b>R-L1</b>			
Finland	Finnish river phytobenthos method	0.80	0.60
Sweden	Benthic algae in running water – diatom analysis	0.89	0.74
<b>R-L2</b>			
Austria	Assessment of the Biological Quality Elements - part phytobenthos	0.85	0.57
Bulgaria	IPS (Indice de Polluo-Sensibilité)	0.76	0.58
Czech Republic	Assessment system for rivers using phytobenthos	0.80	0.60
Estonia	Estonian surface water ecological quality assessment – river	0.83	0.64

	phytobenthos		
France	IBD 2007 (Coste et al, Ecol. Ind. 2009). AFNOR NF T90-354, April 2016. Arrêté ministériel du 25 janvier 2010 modifié relatif aux méthodes et critères d'évaluation de l'état écologique {...} des eaux de surface	0.92	0.76
Spain	IPS (Coste in Cemagref, 1982)	0.68	0.48
Germany	Verfahrensanleitung für die ökologische Bewertung von Fließgewässern zur Umsetzung der EG-Wasserrahmenrichtlinie: Makrophyten und Phytobenthos (PHYLIB), Modul Diatomeen	0.725	0.55
Croatia	Ecological status assessment system for phytobenthos in rivers based on diatoms	0.8	0.61
Hungary	Ecological status assessment for rivers based on diatoms	0.762	0.60
Italy	Intercalibration Common Metric Index (ICMi) (Mancini & Sollazzo 2009)	0.89 (national type C)	0.70 (national type C)
		0.82 (national type M3)	0.62 (national type M3)
Netherlands	WFD-metrics for natural water types	0.80	0.60
Portugal	IPS - Specific Pollution Sensitivity Index	0.90 (national type R_GRS/ Guadiana river)	0.67 (national type R_GRS/ Guadiana river)
Slovakia	Ecological status assessment system for rivers using phytobenthos	0.90	0.70
Slovenia	Metodologija vrednotenja ekološkega stanja vodotokov na podlagi fitobentosa in makrofitov, fitobentos	0.80	0.60

Water category

Lakes

Geographical Intercalibration Group

Alpine lakes

#### Description of types that have been intercalibrated

Type	Lake characterisation	Altitude (m above sea level)	Mean depth (m)	Alkalinity (meq/l)	Lake size (km <sup>2</sup> )
L-AL3	Lowland or mid-altitude, deep, moderate to high alkalinity (alpine influence), large	50 - 800	>15	>1	> 0.5
L-AL4	Mid-altitude, shallow, moderate to high alkalinity (alpine influence), large	200 - 800	3 - 15	>1	> 0.5

Countries sharing types that have been intercalibrated:

Types L-AL3: Austria, France, Germany, Italy and Slovenia

Types L-AL4: Austria, France, Germany, Italy

#### ALPINE LAKES GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

Biological Quality Element

Phytoplankton

#### Results: Ecological quality ratios of national classification methods intercalibrated

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Austria	Evaluation of the biological quality elements, Part B2 – phytoplankton	0.80	0.60
France	Phytoplankton Index for Lakes (IPLAC) : Indice Phytoplankton Lacustre	0.80	0.60
Germany	PSI (Phyto-Seen-Index) - Bewertungsverfahren für Seen mittels Phytoplankton zur Umsetzung der EG-Wasserrahmenrichtlinie in Deutschland	0.80	0.60
Italy	Italian Phytoplankton Assessment Method (IPAM)	0.80	0.60
Slovenia	Metodologija vrednotenja ekološkega stanja jezer na podlagi fitoplanktona	0.80	0.60





## ALPINE LAKES GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

Biological Quality Element

Benthic invertebrate fauna

### Results: Ecological quality ratios of national classification methods intercalibrated

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Slovenia	Metodologija vrednotenja ekološkega stanja jezer na podlagi bentoških nevretenčarjev	0.80	0.60
Germany	AESHNA - Bewertungsverfahren für das eulitorale Makrozoobenthos in Seen zur Umsetzung der EG-Wasserrahmenrichtlinie in Deutschland	0.80	0.60

## ALPINE LAKES GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

Biological Quality Element

Fish fauna

### Results: Ecological quality ratios of national classification methods intercalibrated

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Austria	ALFI (Austrian lake fish index): A multimetric index to assess the ecological status of alpine lakes based on fish fauna	0.80	0.60
Germany	DeLFI_SITE - Deutsches probennahmestandort-spezifisches Bewertungsverfahren für Fische in Seen zur Umsetzung der EG-Wasserrahmenrichtlinie	0.85	0.69
Italy	Lake Fish Index (LFI)	0.82	0.64

<b>Water category</b>	<b>Lakes</b>
<b>Geographical Intercalibration Group</b>	<b>Central / Baltic lakes</b>

#### Description of types that have been intercalibrated

Type	Lake characterisation	Altitude (m above sea level)	Mean depth (m)	Alkalinity (meq/l)	Residence time (years)
L-CB1	Lowland, shallow, calcareous	< 200	3 - 15	> 1	1 - 10
L-CB2	Lowland, very shallow, calcareous	< 200	<3	> 1	0.1 - 1

#### Countries sharing types that have been intercalibrated

**Types L-CB1:** Belgium, Germany, Denmark, Estonia, Ireland, Lithuania, Latvia, Netherlands, Poland, United Kingdom

**Types L-CB2:** Belgium, Germany, Denmark, Estonia, Ireland, Lithuania, Latvia, Netherlands, Poland, United Kingdom

### CENTRAL-BALTIC LAKES GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

#### Biological Quality Element **Phytoplankton**

#### Results: Ecological quality ratios of national classification systems intercalibrated

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Belgium (Flanders)	Flemish phytoplankton assessment method for lakes	0.80	0.60
Denmark	Danish Lake Phytoplankton Index	0.80	0.60
Estonia	Estonian surface water ecological quality assessment – lake phytoplankton	0.80	0.60
Germany	PSI (Phyto-Seen-Index) - Bewertungsverfahren für Seen mittels Phytoplankton zur Umsetzung der EG-Wasserrahmenrichtlinie in Deutschland - German Phyto-Lake-Index (Phyto-See-Index)	0.80	0.60
Ireland	IE Lake Phytoplankton Index	0.80	0.60
Latvia	Latvian Lake Phytoplankton Index	0.81	0.61
Lithuania	German Phytoplankton Index (PSI)	0.81	0.61
Netherlands	WFD - metrics for natural water types	0.80	0.60
Poland	Phytoplankton method for Polish Lakes (PMPL)	0.80	0.60



**CENTRAL-BALTIC LAKES GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS**

**Biological Quality Element**

**Benthic invertebrate fauna**

**Results: Ecological quality ratios of national classification methods intercalibrated**

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		High-good boundary	Good-moderate
Belgium (Flanders)	Multimetric Macroinvertebrate Index Flanders (MMIF)	0.90	0.70
Estonia	Estonian surface water ecological quality assessment – lake macroinvertebrates	0.86	0.70
Germany	AESHNA - Bewertungsverfahren für das eulitorale Makrozoobenthos in Seen zur Umsetzung der EG-Wasserrahmenrichtlinie in Deutschland	0.80	0.60
Latvia	Latvian Lake Macroinvertebrate Multimetric Index (LLMMI)	0.85	0.52
Lithuania	Lithuanian Lake Macroinvertebrate Index	0.74	0.50
Netherlands	WFDi - Metric for Natural Watertypes	0.80	0.60
UK	Chironomid Pupal Exuvial Technique (CPET)	0.77	0.64

**CENTRAL-BALTIC LAKES GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS**

**Biological Quality Element**

**Fish fauna**

**Description of common intercalibration types**

Type	Lake characterisation	Altitude (m above sea level)	Mean depth (m)	Alkalinity (meq/l)	Residence time (years)
L-CB1	Lowland, shallow, calcareous	< 200	3 - 15	> 1	1 - 10
L-CB2	Lowland, very shallow, calcareous	< 200	<3	> 1	0.1 - 1
L-CB3	Lowland, shallow, small, siliceous (moderate alkalinity)	< 200	3 - 15	0.2 - 1	1 - 10
L-CB4	Heavily modified water bodies	200 - 700	3 - 30	> 0.2	0.1 - 5

**Countries sharing types that have been intercalibrated**

**Types L-CB1:** Belgium, Germany, Denmark, Estonia, Ireland, Lithuania, Latvia, Netherlands, Poland, United

Kingdom

**Types L-CB2:** Belgium, Germany, Denmark, Estonia, Ireland, Lithuania, Latvia, Netherlands, Poland, United Kingdom

**Types L-CB3:** Belgium, Denmark, Estonia, France, Latvia, Poland

**Types L-CB4:** Czech Republic

**Results: Ecological quality ratios of national classification methods intercalibrated**

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		High-good boundary	Good-moderate
Czech Republic	CZ-FBI	0.870	0.619
Denmark	Danish Lake Fish Index	0.75	0.54
EE	LAFIEE	0.80	0.61
Germany	DeLFI_SITE - Deutsches probennahmestandort-spezifisches Bewertungsverfahren für Fische in Seen zur Umsetzung der EG-Wasserrahmenrichtlinie	0.95	0.80
France	ELFI (European Lake Fish Index) : Indice Ichtyofaune Lacustre (IIL)	0.73	0.49
Latvia	Latvian Lake Fish Index	0.76	0.57
Lithuania	Lithuanian Lake Fish Index	0.865	0.605
Netherlands	VISMAATLAT	0.80	0.60
Poland	LFI+	0.866	0.595
Poland	LFI EN	0.804	0.557

<b>Water category</b>	<b>Lakes</b>
<b>Geographical Intercalibration Group</b>	<b>Eastern Continental lakes</b>

**Description of common intercalibration types**

Type	Lake characterisation	Altitude (m above sea level)	Mean depth (m)	Alkalinity (meq/l)	Conductivity (µS/cm)
L-EC1	Lowland very shallow hard-water	< 200	< 6	1 - 4	300 – 1 000

**Countries sharing types that have been intercalibrated**

**Types L-EC1:** Bulgaria, Hungary, Romania

**EASTERN CONTINENTAL LAKES GEOGRAPHICAL INTERCALIBRATION GROUP**

**Biological Quality Element**

**Phytoplankton**

**Results: Ecological quality ratios of national classification methods intercalibrated**

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Bulgaria	HLPI-Hungarian lake phytoplankton index	0.80	0.60
Hungary	HLPI-Hungarian lake phytoplankton index	0.80	0.60
Romania	HLPI-Hungarian lake phytoplankton index	0.80	0.60

**EASTERN CONTINENTAL LAKES GEOGRAPHICAL INTERCALIBRATION GROUP**

**Biological Quality Element**

**Macrophytes and Phytobenthos**

**Sub-Biological Quality Element**

**Macrophytes**

**Results: Ecological quality ratios of national classification methods intercalibrated**

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Bulgaria	RI-BG - Adapted Reference Index	0.83	0.58
Hungary	HU-RI - Adapted Reference Index	0.89	0.67
Romania	MIRO - Macrophyte Index for Romanian Lakes (Adapted Reference Index)	0.86	0.66

**EASTERN CONTINENTAL LAKES GEOGRAPHICAL INTERCALIBRATION GROUP**

**Biological Quality Element**

**Benthic invertebrate fauna**

**Results: Ecological quality ratios of national classification methods intercalibrated**

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Bulgaria	HMMI_lakes (Hungarian Macrozoobenton Multimetric Index for Lakes)	0.85	0.65
Hungary	HMMI_lakes (Hungarian Macrozoobenton Multimetric Index for Lakes)	0.85	0.65
Romania	ECO-NL-BENT Romanian ecological status assessment system for natural lakes using benthic invertebrates	0.93	0.60

**EASTERN LAKES GEOGRAPHICAL INTERCALIBRATION GROUP**

**Biological Quality Element**

**Fish fauna**

**INTERCALIBRATION RESULTS NOT COMPLETED**

**Water category**

**Lakes**

**Geographical Intercalibration Group**

**Mediterranean lakes**

**Description of types that have been intercalibrated**

Type	Lake characterization	Altitude (m)	Annual mean precipitation (mm) and T (°C)	Mean depth (m)	Area (km <sup>2</sup> )	Catchment (km <sup>2</sup> )	Alkalinity (meq/l)
L-M5/7	Reservoirs, deep, large, siliceous, "wet" areas	< 1 000	>800 and /or <15	>15	0.5 - 50	< 20 000	<1
L-M8	Reservoirs, deep, large, calcareous	< 1 000	-	>15	0.5 - 50	< 20 000	>1

**Countries sharing types that have been intercalibrated**

**Types L-M5/7:** France, Greece, Italy, Portugal, Spain

**Types L-M8:** Cyprus, France, Greece, Italy, Spain

**MEDITERRANEAN LAKES GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS**
**Biological Quality Element**
**Phytoplankton**

Country and Type	National classification methods intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
<b>LM 5/7</b>			
France	Phytoplankton Index for Lakes (IPLAC) : Indice Phytoplankton Lacustre	n.d.*	0.60
Greece	New Mediterranean Assessment System for Reservoirs (NMASRP)	n.d.*	0.60
Italy	New Italian Method (NITMET)	n.d.*	0.60
Portugal	Reservoirs Biological Quality Assessment Method – Phytoplankton (New Mediterranean Assessment System for Reservoirs Phytoplankton: NMASRP).	n.d.*	0.60
Spain	Mediterranean Assessment System for Reservoirs Phytoplankton (MASRP).	n.d.*	0.58
<b>L-M8</b>			
Cyprus	New Mediterranean Assessment System for Reservoirs Phytoplankton (NMASRP).	n.d.*	0.60
France	Phytoplankton Index for Lakes (IPLAC) : Indice Phytoplankton Lacustre	n.d.*	0.60
Greece	New Mediterranean Assessment System for Reservoirs (NMASRP)	n.d.*	0.60
Italy	New Italian Method (NITMET)	n.d.*	0.60
Spain	Mediterranean Assessment System for Reservoirs Phytoplankton (MASRP).	n.d.*	0.60

\*High-Good boundary is not defined for reservoirs (both LM5/7 and LM8 types are reservoirs)



<b>Water category</b>	<b>Lakes</b>
<b>Geographical Intercalibration Group</b>	<b>Northern lakes</b>

## NORTHERN LAKES GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

<b>Biological Quality Element</b>	Phytoplankton
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### Description of types that have been intercalibrated

Type	Lake characterisation	Altitude (m above sea level)	Mean depth (m)	Alkalinity (meq/l)	Colour (mg Pt/l)
L-N1	Lowland, shallow, moderate alkalinity, clear	< 200	3 - 15	0.2 - 1	< 30
L-N2a	Lowland, shallow, low alkalinity, clear	< 200	3 - 15	< 0.2	< 30
L-N2b	Lowland, deep, low alkalinity, clear	< 200	> 15	< 0.2	< 30
L-N3a	Lowland, shallow, low alkalinity, meso-humic	< 200	3 - 15	<0.2	30 - 90
L-N5	Mid-altitude, shallow, low alkalinity, clear	200 - 800	3 - 15	<0.2	< 30
L-N6a	Mid-altitude, shallow, low alkalinity, meso-humic	200 - 800	3 - 15	<0.2	30 - 90
L-N8a	Lowland, shallow, moderate alkalinity, meso-humic	< 200	3 - 15	0.2 - 1	30 - 90

**Types L-N1, L-N2a, L-N3a, LN-8a:** Ireland, Finland, Norway, Sweden, United Kingdom.

**Types L-N2b:** Norway, Sweden, United Kingdom

**Types L-N5, L-N6a:** Norway, Sweden

**Results: Ecological quality ratios of national classification systems intercalibrated**

Country	National classification methods intercalibrated	Ecological Quality Ratios	
		High-good boundary	Good-moderate boundary
Finland	Finnish phytoplankton assessment method for lakes	0.80	0.60
Ireland	IE Lake Phytoplankton Index	0.80	0.60
Norway	Lake phytoplankton ecological status classification method	0.80	0.60
Sweden	Ecological assessment methods for lakes. quality factor phytoplankton	0.80	0.60
UK	Phytoplankton Lake Assessment Tool with Uncertainty Module (PLUTO)	0.80	0.60

**NORTHERN LAKES GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS**

**Biological Quality Element**

**Macrophytes and Phytobenthos**

**Sub-Biological Quality Element**

**Macrophytes**

**Description of types that have been intercalibrated**

Type	Lake characterisation	Alkalinity (meq/l)	Color(mg Pt/l)
L-N-M 101	Low alkalinity, clear	0.05 - 0.2	< 30
L-N-M 102	Low alkalinity, humic	0.05 - 0.2	> 30
L-N-M 201	Moderate alkalinity, clear	0.2 - 1.0	< 30
L-N-M 202	Moderate alkalinity, humic	0.2 - 1.0	> 30
L-N-M 301a	High alkalinity, clear, atlantic subtype	> 1.0	< 30
L-N-M 302a	High alkalinity, humic, atlantic subtype	> 1.0	> 30

**Types 101, 102, 201 and 202:** Ireland, Finland, Norway, Sweden, United Kingdom.

**Type 301a:** Ireland, United Kingdom.

**Type 302a:** Ireland, United Kingdom

**Results: Ecological quality ratios of national classification systems intercalibrated**

Country	National classification methods intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate</i>

Finland	Finnish macrophyte classification system (Finnmac)	0.8 (all types)	0.6 (all types)
Ireland	Free Macrophyte Index	0.9 (all types)	0.68 (all types)
Norway	National macrophyte index (Trophic Index – TIc)	Type 101: 0.98 Type 102: 0.96 Type 201: 0.95 Type 202: 0.99	Type 101: 0.87 Type 102: 0.87 Type 201: 0.75 Type 202: 0.77
Sweden	Trophic Macrophyte Index (TMI)	Type 101: 0.93 Type 102: 0.93 Type 201: 0.89 Type 202: 0.91	Type 101: 0.80 Type 102: 0.83 Type 201: 0.78 Type 202: 0.78
UK	Lake LEAFPACS 2*	0.8 (all types)	0.66 (all types)
UK	Free Macrophyte Index**	0.9 (all types)	0.68 (all types)

\* Will be used in England, Wales and Scotland

\*\* Will be used also in the UK (North Ireland)

## NORTHERN LAKES GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

### Biological Quality Element

### Benthic invertebrates Fauna

#### Description of types that have been intercalibrated

Type	Lake characterisation	Ecoregion	Altitude (m absl)	Alkalinity (meq/l)	Colour (mg Pt/l)
	Lake littoral acidification				
L-N-BF1	Lowland/mid-altitude, low alkalinity, clear	n.d.	< 800	0.05 - 0.2	< 30
	Lake profundal eutrophication				
L-N-BF2	Ecoregion 22, low alkalinity, clear and humic	22	Area > 1 km <sup>2</sup> , max depth > 6 m	<0.2	n.d.

**Types L-N-BF1:** Norway, Sweden, United Kingdom, Ireland, Finland

**Types L-N-BF2:** Finland, Sweden

#### Results: Ecological quality ratios of national classification systems intercalibrated

Country	National classification methods intercalibrated	Ecological Quality Ratios	
		<i>High-good</i>	<i>Good-moderate</i>

	Lake littoral acidification		
Norway	MultiClear: Multimetric Invertebrate Index for Clear Lakes	0.95	0.74
Sweden	MILA: Multimetric Invertebrate Lake Acidification index	0.85	0.60
UK	LAMM (Lake Acidification Macroinvertebrate Metric)	0.86	0.70
	Lake profundal eutrophication		
Finland	Revised Finnish lake invertebrate fauna assessment method (PICM)	0.80	0.60
Sweden	BQI (Benthic Quality Index)	0.84	0.67

## NORTHERN LAKES GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

### Biological Quality Element

### Fish fauna

#### Description of types that have been intercalibrated

Type	Lake characterisation	Lake area km <sup>2</sup>	Alkalinity (meq/l)	Colour (mg Pt/l)
L-N-F1	Dimictic clear water lakes	<40	< 0.2	< 30
L-N-F2	Dimictic humic lakes	<5	< 0.2	30 - 90

**Types L-N-F1:** Ireland, Finland, Norway, Sweden, United Kingdom

**Types L-N-F2:** Ireland, Finland, Norway, Sweden, United Kingdom

#### Results: Ecological quality ratios of national classification systems intercalibrated

Country	National classification methods intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Eutrophication			
Finland	EQR4	0.80	0.60
Ireland	FIL2	0.76	0.53
UK (Northern Ireland)	FIL2	0.76	0.53
Norway	EindexW3	0.75	0.56
Sweden	EindexW3	0.75	0.56
Acidification			

Norway	AindexW5	0.74	0.55
Sweden	AindexW5	0.74	0.55

<b>Water category</b>	<b>Lakes</b>
<b>Geographical Intercalibration Group</b>	<b>Cross-GIG Phytobenthos</b>

#### Description of types that have been intercalibrated

Type	Lake characterisation	Alkalinity (meq/l)	Ecoregions
HA	High alkalinity lakes	>1	Alpine, Central-Baltic, Eastern Continental, Mediterranean
MA	Moderate alkalinity lakes	0.2 - 1	Alpine, Central-Baltic, Eastern Continental, Mediterranean, Northern
LA	Low alkalinity lakes	< 0.2	Northern

**Types HA:** Belgium, Germany, Hungary, Ireland, Italy, Lithuania, Poland, Sweden, Slovenia, United Kingdom

**Types MA:** Belgium, Finland, Ireland, Italy, Romania, Sweden, United Kingdom

**Types LA:** Finland, Ireland, Sweden, United Kingdom

Country and Type	National classification methods intercalibrated	Ecological Quality Ratios	
		High-good boundary	Good-moderate boundary
<b>HA type</b>			
Belgium (Flanders)	Proportions of Impact-Sensitive and Impact-Associated Diatoms (PISIAD)	0.80	0.60
Germany	Verfahrensanleitung für die ökologische Bewertung von Seen zur Umsetzung der EG-Wasserrahmenrichtlinie: Makrophyten und Phytobenthos (PHYLIB), Modul Phytobenthos	0.80	0.55
Hungary	MIL - Multimetric Index for Lakes	0.80	0.69
Ireland	Lake Trophic Diatom Index (IE)	0.90	0.63
Italy	Italian national method for the evaluation of the ecological quality of lake waterbodies using benthic diatoms (EPI-L)	0.75	0.5
Lithuania	Lithuanian Lake Phytobenthos Index	0.63	0.47
Poland	PL IOJ (Multimetryczny Indeks Okrzemkowy dla Jezior = Multimetric Diatom Index for Lakes)	0.91	0.76

Sweden	IPS	0.89	0.74
Slovenia	Metodologija vrednotenja ekološkega stanja jezer na podlagi fitobentosa in makrofitov, fitobentos	0.80	0.60
UK	DARLEQ 2	0.92	0.70
<b>MA type</b>			
Belgium (Flanders)	Proportions of Impact-Sensitive and Impact-Associated Diatoms (PISIAD)	0.80	0.60
Finland	Finnish lake phytoplankton method	0.80	0.60
Ireland	Lake Trophic Diatom Index (IE)	0.90	0.63
Italy	Italian national method for the evaluation of the ecological quality of lake waterbodies using benthic diatoms (EPI-L)	0.75	0.5
Romania	National (Romanian) Assessment Method for Natural Lakes Ecological Status based on Phytoplankton (Diatoms) RO-AML	0.80	0.60
Sweden	IPS	0.89	0.74
UK	DARLEQ 2	0.93	0.66
<b>LA type</b>			
Ireland	Lake Trophic Diatom Index (IE)	0.90	0.66
UK	DARLEQ 2	0.92	0.70

**Water category****Coastal waters****Geographical Intercalibration Group****Baltic Sea****Description of types that have been intercalibrated**

<b>Type</b>	<b>Surface salinity (psu)</b>	<b>Bottom salinity (psu)</b>	<b>Exposure</b>	<b>Ice days</b>	<b>Other Characteristics</b>
BC1	0.5 - 6 Oligohaline	1 - 6	Exposed	90 - 150	Sites in the Quark and the Bothnian Sea, extending to the Archipelago Sea (for phytoplankton the latter is excluded and integrated in type BC9) . Influence of humic substances
BC2	6 - 22 Mesohaline	2 - 6	Very Sheltered		Lagoons
BC3	3 - 6 Oligohaline	3 - 6	Sheltered	90 - 150	Finnish and Estonian coasts of Gulf of Finland
BC4	5 - 8 Lower mesohaline	5 - 8	Sheltered	<90	Sites of Estonia and Latvia in the Gulf of Riga
BC5	6 - 8 Lower mesohaline	6 - 12	Exposed	<90	Sites in the southeastern Baltic Sea along the coast of Latvia, Lithuania and Poland
BC6	8 - 12 Mid mesohaline	8 - 12	Sheltered	<90	Sites along the Western Baltic Sea at the southern Swedish coast and the southeastern Danish coast
BC7	6 - 8 Mid mesohaline	8 - 11	Exposed	<90	Western Polish coast and eastern German coast
BC8	13 - 18 Upper mesohaline	18 - 23	Sheltered	<90	Danish and German coasts in the Western Baltic Sea
BC9	3 - 6 Lower mesohaline	3 - 6	Moderately exposed to exposed	90 - 150	Sites in the western Gulf of Finland, Archipelago Sea and Asko archipelago (only for phytoplankton)

**Countries sharing types that have been intercalibrated:***Type BC1:* Finland Sweden

*Type BC2:* Germany

*Type BC3:* Estonia, Finland

*Type BC4:* Estonia, Latvia

*Type BC5:* Latvia, Lithuania

*Type BC6:* Sweden, Denmark

*Type BC7:* Germany, Poland

*Type BC8:* Germany, Denmark

*Type BC9:* Finland, Sweden, Estonia (type only relevant for phytoplankton)

## BALTIC SEA GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

### Biological Quality Element

### Phytoplankton

#### Results: Ecological quality ratios of national classification systems intercalibrated

Country and Type	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
<b>BC7</b>			
Germany	German coastal phytoplankton method	0.8	0.6
Poland	Polish coastal phytoplankton method	0.8	0.6
<b>BC8</b>			
Denmark	Danish coastal phytoplankton method	0.8	0.6
Germany	German coastal phytoplankton method	0.8	0.6

#### Results for parameter indicative of biomass (Chlorophyll-*a*)

Country and Type	Ecological Quality Ratios		Values (µg/l)	
	<i>High-good boundary</i>	<i>Good-moderate boundary</i>	<i>High-good boundary</i>	<i>Good-moderate boundary</i>
<b>BC1</b>				
Finland (Quark outer )	0.76	0.59	1.7	2.2
Finland (Bothnian Sea outer)	0.78	0.60	1.6	2.1
Sweden (Quark outer )	0.75	0.58	1.6	2.1
Sweden (Bothnian Sea	0.80	0.60	1.5	2.0



outer)				
<b>BC4</b>				
Estonia	0.830	0.670	2.4	3.0
Latvia	0.82	0.67	2.2	2.7
<b>BC5</b>				
Latvia	0.650	0.390	1.85	3.1
Lithuania	0.880	0.600	2.5	4.9
<b>BC6</b>				
Denmark	0.78	0.62	1.36	1.72
Sweden	0.79	0.64	1.44	1.78
<b>BC9</b>				
Estonia	0.82	0.67	2.20	2.70
Finland	0.79	0.65	1.90	2.30
Sweden	0.80	0.67	1.50	1.80

## BALTIC SEA GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

Biological Quality Element

Macroalgae and Angiosperms

### Results: Ecological quality ratios of national classification systems intercalibrated

Country and Type	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
<b>BC3</b>			
Estonia	EPI - Estonian coastal water phytobenthos Index (macroalgae and angiosperms)	0.98	0.86
Finland	Fucus depth limit (macroalgae)	0.92	0.79
<b>BC4</b>			
Estonia	EPI - Estonian Phytobenthos Index (macroalgae and angiosperms)	0.91	0.70

Latvia	PEQI - Phytobenthos Ecological Quality Index	0.90	0.75
<b>BC5</b>			
Latvia	MDFLD - Maximum depth of the red alga <i>Furcellaria lumbricalis</i> distribution (macroalgae)	0.90	0.75
Lithuania	MDFLD - Lithuanian maximum depth of the red alga <i>Furcellaria lumbricalis</i> distribution (macroalgae)	0.84	0.68

## BALTIC SEA GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

Biological Quality Element

Benthic invertebrate fauna

### Results: Ecological quality ratios of national classification systems intercalibrated

Country and Type	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
<b>BC1</b>			
Finland	BBI - Finnish Brackish water Benthic Index	0.96	0.56
Sweden	BQI - Swedish multimetric biological quality index (soft sediment infauna)	0.77	0.31
<b>BC3</b>			
Estonia	ZKI - Estonian coastal water macrozoobenthos community index	0.39	0.24
Finland	BBI - Finnish Brackish water Benthic Index	0.94	0.56
<b>BC5</b>			
Latvia	BQI - Benthic quality index	0.87	0.61
Lithuania	BQI - Lithuanian benthic quality index	0.94	0.81
<b>BC6</b>			
Denmark	Danish Quality Index version 2 (DKI ver2)	0.84	0.68
Sweden	BQI - Swedish multimetric biological quality index (soft sediment infauna)	0.76	0.27
<b>BC7</b>			
Germany	MarBIT- Marine Biotic Index Tool	-	0.60

Poland	B - Macrozoobenthos BQE assessment by multimetric index	-	0.58
<b>BC8</b>			
Denmark	Danish Quality Index version 2 (DKI ver2)	0.86	0.72
Germany	MarBIT - Marine Biotic Index Tool	0.80	0.60

<b>Water category</b>	<b>Coastal waters</b>
<b>Geographical Intercalibration Group</b>	<b>North East Atlantic</b>

#### Description of types that have been intercalibrated

Type	Characterisation	Salinity (psu) Tidal range (m) Depth (m)	Current Velocity (knots) Exposure	Mixing Residence Time
Type for opportunistic blooming macroalgae, seagrasses, saltmarshes and benthic invertebrate fauna				
NEA 1/26	Open oceanic or enclosed seas, exposed or sheltered, euhaline, shallow	<30 Mesotidal 1-5 <30	Medium 1 - 3 Exposed or sheltered	Fully mixed Days (to weeks in the Wadden Sea)
Subtypes for intertidal macroalgae				
NEA 1/26 A2	Open oceanic, exposed or sheltered, euhaline, shallow, Temperate waters (mainly, >13°C) and high irradiance (mainly, PAR >29 Mol/m <sup>2</sup> day)	>30 Mesotidal 1 - 5 <30	Medium 1 - 3 Exposed or sheltered	Fully mixed Days
NEA 1/26 B21	Open oceanic or enclosed seas, exposed or sheltered, euhaline, shallow Cool waters (mainly, <13°C) and medium irradiance (mainly, PAR <29 Mol/m <sup>2</sup> day)	>30 Mainly mesotidal 1 - 5 <30	Medium 1 - 3 Exposed or sheltered	Fully mixed Days
Subtypes for phytoplankton				
NEA 1/26a	Open oceanic, exposed or sheltered, euhaline, shallow	>30 Mesotidal 1 - 5 <30	Medium 1 - 3 Exposed or sheltered	Fully mixed Days
NEA 1/26b	Enclosed seas, exposed or sheltered, euhaline, shallow	>30 Mesotidal 1 - 5 <30	Medium 1 - 3 Exposed or sheltered	Fully mixed Days

Type	Characterisation	Salinity (psu) Tidal range (m) Depth (m)	Current Velocity (knots) Exposure	Mixing Residence Time
NEA 1/26c	Enclosed seas, enclosed or sheltered, partly stratified	>30 Microtidal/Mesotidal <1 - 5 <30	Medium 1 - 3 Exposed or sheltered	Partly stratified Days to weeks
NEA 1/26d	Scandinavian coast, exposed or sheltered, shallow	>30 Microtidal <1 <30	Low <1 Exposed or moderately exposed	Partly stratified Days to weeks
NEA 1/26e	Areas of upwelling, exposed or sheltered, euhaline, shallow	>30 Mesotidal <1 <30	Medium 1 - 3 Exposed or sheltered	Fully mixed Days
Types for phytoplankton, macroalgae, seagrasses, saltmarshes, benthic invertebrate fauna				
NEA 5	Helgoland (German Bight), rocky, exposed and partly stratified	> 30 Mesotidal <30	Medium 1 - 3 Exposed	Partly stratified Days
NEA 3/4	Polyhaline, Exposed or moderately exposed (Wadden Sea type)	Polyhaline 18 - 30 Mesotidal 1 - 5 <30	Medium 1 - 3 Exposed or moderately exposed	Fully mixed Days
NEA 7	Deep fjordic and sea loch systems	>30 Mesotidal 1 - 5 >30	Low <1 Sheltered	Fully mixed Days
NEA 8a	Skagerrak Inner Arc Type, polyhaline, microtidal, moderately exposed, shallow	Polyhaline 25 - 30 Microtidal <1 >30	Low <1 Moderately exposed	Fully mixed Days to weeks
NEA 8b	Skagerrak Inner Arc Type, polyhaline, microtidal, moderately sheltered, shallow	Polyhaline 10 - 30 Microtidal <1 <30	Low <1 Sheltered to moderately exposed	Partly stratified Days to weeks
NEA 9	Fjord with a shallow sill at the mouth with a very deep maximum depth in the central basin with poor deepwater exchange	Polyhaline 25 - 30 Microtidal <1 >30	Low <1 Sheltered	Partly stratified Weeks
NEA 10	Skagerrak Outer Arc Type, polyhaline, microtidal, exposed, deep	Polyhaline 25 - 30 Microtidal <1 >30	Low <1 Exposed	Partly stratified Days

**Countries sharing types that have been intercalibrated:**

*Type NEA1/26 opportunistic blooming macroalgae, seagrasses, saltmarshes, benthic invertebrate fauna:*

Belgium, France, Germany, Denmark, Ireland, Netherlands, Norway, Portugal, Spain, United Kingdom

*Type NEA1/26 A2* intertidal macroalgae: France, Spain, Portugal  
*Type NEA1/26 B21* intertidal macroalgae: France, Ireland, Norway, United Kingdom  
*Type NEA1/26a* phytoplankton: Spain, France, Ireland, Norway, United Kingdom  
*Type NEA1/26b* phytoplankton: Belgium, France, Netherlands, United Kingdom  
*Type NEA1/26c* phytoplankton: Germany, Denmark  
*Type NEA1/26d* phytoplankton: Denmark  
*Type NEA1/26e* phytoplankton: Portugal, Spain  
*Type NEA 5*: Germany  
*Type NEA3/4*: Germany, Netherlands  
*Type NEA7*: Norway, United Kingdom  
*Type NEA8a*: Norway, Sweden  
*Type NEA8b*: Denmark, Sweden  
*Type NEA9*: Norway, Sweden  
*Type NEA10*: Norway, Sweden

## NORTH EAST ATLANTIC GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

**Biological Quality Element** **Phytoplankton**

**Phytoplankton: parameter indicative of biomass parameter (Chlorophyll a)**

### Results: Ecological quality ratios and parameter values

Parameter values are expressed in µg/l as the 90%ile value calculated over the defined growing season in a six year period.

Country and Type	Ecological Quality Ratios		Values (µg/l)	
	<i>High-good boundary</i>	<i>Good-moderate boundary</i>	<i>High-good boundary</i>	<i>Good-moderate boundary</i>
<b>NEA 1/26a</b>				
France	0.76	0.33	4.40	10.00
Ireland	0.82	0.60	9.90	15.00
Norway	0.67	0.33	2.50	5.00
Spain (Eastern Cantabrian coast)	0.67	0.33	1.50	3.00
Spain (Western-Central Cantabrian Coast)	0.67	0.33	3.00	6.00
Spain (Gulf of Cadiz coast)	0.67	0.33	5.00	10.00
United Kingdom	0.80	0.60	5.00	10.00

<b>NEA 1/26b</b>				
Belgium	0.80	0.67	12.50	15.00
France	0.67	0.44	10.00	15.00
Netherlands	0.67	0.44	10.00	15.00
United Kingdom (south)	0.82	0.63	9.80	14.30
United Kingdom (north)	0.80	0.60	10.00	15.00
<b>NEA 1/26c</b>				
Germany	0.67	0.44	5.0	7.5
Denmark	0.67	0.44	5.0	7.5
<b>NEA 1/26e</b>				
Portugal (Iberian strong upwelling-A5)	0.670	0.440	8.000	12.000
Portugal (upwelling-A6,A7)	0.880	0.490	4.500	8.200
Spain (Western Iberian upwelling coast)	0.67	0.44	6.00	9.00
Spain (Western Iberian upwelling coast - rías)	0.67	0.44	8.00	12.00
<b>NEA 3/4</b>				
Germany (Eems Dollard)	0.80	0.60	7.00	11.00
Germany (Wadden Sea)	0.80	0.60	7.00	11.00
Netherlands (Eems Dollard)	0.80	0.60	6.75	10.13
Netherlands (Wadden Sea)	0.80	0.60	9.60	14.40
Netherlands (North Sea)	0.80	0.60	11.25	16.88
<b>NEA 8a</b>				
Norway	0.79	0.57	3.95	5.53
Sweden	0.75	0.49	1.54	2.35
<b>NEA 8b (The Sound)</b>				
Denmark	0.79	0.59	1.22	1.63
Sweden	0.80	0.60	1.18	1.56
<b>NEA 8b (The Kattegat and Great Belt)</b>				

Denmark	0.83	0.64	1.22	1.58
Sweden	0.84	0.65	1.18	1.52
<b>NEA 9</b>				
Norway	0.76	0.43	3.92	6.90
Sweden	0.73	0.38	1.89	3.60
<b>NEA 10</b>				
Norway	0.73	0.49	3.53	5.26
Sweden	0.71	0.46	1.39	2.14

### NORTH EAST ATLANTIC GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

**Biological Quality Element** Macroalgae and Angiosperms

**Sub-Biological Quality Element** Macroalgae

**Intertidal or subtidal macroalgae rocky bottom**

**Results: Ecological quality ratios of national classification systems intercalibrated**

Country and Type	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
<b>Type NEA1/26 A2 intertidal macroalgae</b>			
France	CCO - Cover, Characteristic species, Opportunistic species on intertidal rocky bottoms	0.80	0.60
Portugal	PMarMAT - Marine Macroalgae Assessment Tool	0.80	0.61
Spain	CFR - Quality of Rocky Bottoms	0.81	0.60
Spain	RICQI - Rocky Intertidal Community Quality Index	0.82	0.60
Spain	RSL - Reduced Species List	0.75	0.48
<b>Type NEA1/26 B21 intertidal macroalgae</b>			
Ireland	RSL - Rocky Shore Reduced Species List	0.80	0.60
Norway	RSLA - Rocky Shore Reduced Species List with Abundance	0.80	0.60





**NORTH EAST ATLANTIC GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS**

**Biological Quality Element** Macroalgae and Angiosperms

**Sub-Biological Quality Element** Angiosperms

**Seagrasses**

**Results: Ecological quality ratios of national classification systems intercalibrated**

Country and Type	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
<b>Type NEA 1/26</b>			
Germany	SG - Assessment tool for intertidal seagrass in coastal and transitional waters	0.80	0.60
France	SBQ - Seagrass beds quality in coastal and transitional water bodies	0.80	0.645
Ireland	Intertidal Seagrass tool	0.80	0.61
Netherlands	SG - Monitoring beds of SG per waterbody using aerial photographs, ground truth and specifying surface & density per species	0.80	0.60
Portugal	SQI - Seagrass quality index	0.80	0.60
United Kingdom	Intertidal Seagrass tool	0.80	0.61
<b>Type NEA 3/4</b>			
Germany	SG - Bewertungssystem für Makroalgen und Seegräser der Küsten- und Übergangsgewässer zur Umsetzung der EG-Wasserrahmenrichtlinie in Deutschland	0.80	0.60
Netherlands	Monitoring beds of SG per waterbody using aerial photographs, ground truth and specifying surface and density per species	0.80	0.60

**NORTH EAST ATLANTIC GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS**

**Biological Quality Element** Benthic invertebrate fauna

**Results: Ecological quality ratios of national classification systems intercalibrated**

Country and	National classification systems intercalibrated	Ecological Quality Ratios
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Type		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
<b>Type NEA 1/26</b>			
Belgium	BEQI - Benthic Ecosystem Quality Index	0.80	0.60
Denmark	Danish Quality Index (DKI)	0.80	0.60
Germany	M-AMBI - Multivariate AZTI's Marine Biotic Index	0.85	0.70
France	M-AMBI - Multivariate AZTI's Marine Biotic Index	0.77	0.53
Ireland	IQI - Infaunal Quality Index	0.75	0.64
Netherlands	BEQI2 -Benthic Ecosystem Quality Index 2	0.80	0.60
Norway	NQI - Norwegian Quality Index	0.72	0.63
Portugal	BAT - Benthic Assessment Tool	0.79	0.58
Spain	M-AMBI - Multivariate AZTI's Marine Biotic Index	0.77	0.63
United Kingdom	IQI - Infaunal Quality Index	0.75	0.64
<b>Type NEA 3/4</b>			
Germany	M-AMBI - Multivariate AZTI's Marine Biotic Index	0.85	0.70
Netherlands	BEQI2 - Benthic Ecosystem Quality Index 2	0.80	0.60
<b>Type NEA 7</b>			
Norway	NQI - Norwegian Quality Index	0.72	0.63
United Kingdom	IQI - Infaunal Quality Index	0.75	0.64
<b>Type NEA 8b</b>			
Denmark	Danish Quality Index (DKI)	0.84	0.68
Sweden	BQI - Swedish multimetric biological quality index (soft sediment infauna)	0.71	0.54
<b>Type NEA 8a/9/10</b>			
Norway	NQI - Norwegian Quality Index	0.82	0.63
Sweden	BQI - Swedish multimetric biological quality index (soft sediment infauna)	0.71	0.54

**Water category**

**Coastal waters**

**Geographical Intercalibration Group**

**Mediterranean Sea**

Description of types that have been intercalibrated (for phytoplankton only)  
 For benthic invertebrate fauna, macroalgae and seagrasses the intercalibration results apply to the entire Mediterranean Sea covered by the Country

Type	Description	Density (kg/m <sup>3</sup> )	Annual mean salinity (psu)
Type I	Highly influenced by freshwater input	<25	<34.5
Type IIA, IIA Adriatic	Moderately influenced by freshwater input (continent influence)	25 - 27	34.5 - 37.5
Type IIIW	Continental coast, not influenced by freshwater input (Western Basin).	>27	>37.5
Type IIIE	Not influenced by freshwater input (Eastern Basin)	>27	>37.5
Type Island-W*	Island coast (Western Basin)	All range	All range

**Countries sharing types that have been intercalibrated:**

*Type I:* France, Italy

*Type IIA:* France, Spain, Italy

*Type IIA Adriatic:* Italy, Slovenia

*Type Island-W\**(no boundaries for this type and no possible the intercalibration due to justified reasons): France, Spain, Italy

*Type IIIW:* France, Spain, Italy

*Type IIIE:* Greece, Cyprus

**MEDITERRANEAN SEA GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS**

**Biological Quality Element**

**Phytoplankton**

**Phytoplankton: parameter indicative of biomass parameter (Chlorophyll a)**

**Results: Ecological quality ratios and parameter values**

Parameter values are expressed in µg/l of Chlorophyll a, for the 90th percentile calculated over the year in at least a five year period.

Country and Type	Ecological Quality Ratios		Values (µg/l)	
	<i>High-good boundary</i>	<i>Good-moderate boundary</i>	<i>High-good boundary</i>	<i>Good-moderate boundary</i>
<b>Type II A</b>				
France	0.67	0.37	1.92	3.50
Spain	0.67	0.37	1.92	3.50
<b>Type II A Adriatic</b>				

Croatia	0.82	0.61	1.70	4.00
Italy	0.82	0.61	1.70	4.00
Slovenia	0.82	0.61	1.70	4.00
<b>Type IIIW</b>				
France	0.67	0.42	1.18	1.89
Spain	0.67	0.42	1.18	1.89
<b>Type IIIE</b>				
Cyprus	0.66	0.37	0.29	0.53
Greece	0.66	0.37	0.29	0.53

## MEDITERRANEAN SEA GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

**Biological Quality Element**

**Macroalgae and Angiosperms**

**Sub-Biological Quality Element**

**Macroalgae**

### Results: Ecological quality ratios of national classification systems intercalibrated

The following results apply to the upper infralittoral zone (3.5-0.2 m depth) in a rocky coasts:

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Cyprus	EEI-c - Ecological Evaluation Index	0.76	0.48
France	CARLIT - Cartography of Littoral and upper-sublittoral rocky-shore communities	0.75	0.60
Greece	EEI-c - Ecological Evaluation Index	0.76	0.48
Croatia	CARLIT - Cartography of Littoral and upper-sublittoral rocky-shore communities	0.75	0.60
Italy	CARLIT - Cartography of Littoral and upper-sublittoral rocky-shore communities	0.75	0.60
Malta	CARLIT - Cartography of Littoral and upper-sublittoral rocky-shore communities	0.75	0.60
Slovenia	Metodologija vrednotenja ekološkega stanja obalnega morja na podlagi makroalg	0.76	0.48
Spain	CARLIT - Cartography of Littoral and upper-sublittoral rocky-	0.75	0.60

	shore communities		
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### MEDITERRANEAN SEA GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

**Biological Quality Element** Macroalgae and Angiosperms

**Sub-Biological Quality Element** Angiosperms

#### Results: Ecological quality ratios of national classification systems intercalibrated

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Croatia	POMI - Posidonia oceanica Multivariate Index	0.775	0.55
Cyprus	PREI - Posidonia oceanica Rapid Easy Index	0.775	0.55
France	PREI - Posidonia oceanica Rapid Easy Index	0.775	0.55
Italy	PREI - Posidonia oceanica Rapid Easy Index	0.775	0.55
Malta	PREI - Posidonia oceanica Rapid Easy Index	0.775	0.55
Spain	POMI - Posidonia oceanica Multivariate Index	0.775	0.55
Spain	Valencian-CS	0.775	0.55

### MEDITERRANEAN SEA GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

**Biological Quality Element** Benthic invertebrate fauna

#### Biological Quality Element

#### Results: Ecological quality ratios of national classification systems intercalibrated

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Italy	M-AMBI - Multivariate AZTI's Marine Biotic Index	0.81	0.61
Slovenia	Metodologija vrednotenja ekološkega stanja obalnega morja na podlagi bentoških nevretenčarjev	0.83	0.62
Cyprus	Bentix	0.75	0.58

France	AMBI	0.83	0.58
Greece	Bentix	0.75	0.58
Spain	BOPA	0.95	0.54
Spain	MEDOCC	0.73	0.47

<b>Water category</b>	<b>Coastal waters</b>
<b>Geographical Intercalibration Group</b>	<b>Black Sea</b>

**Description of types that have been intercalibrated**

Type	Description
CW-BL1	Mesohaline, microtidal (< 1 m), shallow (< 30 m), moderately exposed to very exposed, mixed substratum (fine sand for zoobenthos)

**Countries sharing types that have been intercalibrated: Bulgaria and Romania**

**BLACK SEA GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS**

<b>Biological Quality Element</b>	<b>Phytoplankton</b>
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**Results: Ecological quality ratios of national classification systems intercalibrated**

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Bulgaria	IBI	0.80	0.63
Romania	IBI	0.80	0.63

**BLACK SEA GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS**

**Biological Quality Element**

**Macroalgae and Angiosperms**

**Results: Ecological quality ratios of national classification systems intercalibrated**

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Bulgaria	EI-Ecological index	0.837	0.644
Romania	EI-Ecological index	0.837	0.644

**BLACK SEA GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS**

**Biological Quality Element**

**Benthic Invertebrate fauna**

**Results: Ecological quality ratios of national classification systems intercalibrated**

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Bulgaria	M-AMBI(n) - Multivariate AZTI's Marine Biotic Index Normalized	0.90	0.68
Romania	M-AMBI(n) - Multivariate AZTI's Marine Biotic Index Normalized	0.90	0.68

**Water category**

**Transitional waters**

**Geographical Intercalibration Group**

**Baltic Sea GIG**

**Description of types that have been intercalibrated**

Type	Surface salinity psu	Bottom salinity (psu)	Exposure	Ice days	Other Characteristics
BT1	0 - 8 Oligohaline	0 - 8	Very sheltered	-	Polish Vistula lagoon and Lithuanian Curonian lagoon

**Countries sharing types that have been intercalibrated:**

Lithuania and Poland

## BALTIC SEA GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

Biological Quality Element

Phytoplankton

Results for parameter indicative of biomass (Chrophyll a)

The following results refer to summer mean May/June – September

Country	Ecological Quality Ratios		Values (µg/l)	
	<i>High-good boundary</i>	<i>Good-moderate boundary</i>	<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Lithuania	0.83	0.57	31.70	46.60
Poland	0.77	0.61	33.46	42.20

Water category

Transitional waters

Geographical Intercalibration Group

North East Atlantic

Description of types that have been intercalibrated

Type	Characterisation	Salinity (psu), Tidal range (m), Depth (m)	Current Velocity (knots), Exposure	Mixing Residence Time
NEA 11	Transitional Waters	0 - 35 Micro to macrotidal <30	Variable Sheltered or moderately exposed	Partly permanently stratified Days to weeks

Countries sharing type that have been intercalibrated:

Belgium, Germany, France, Ireland, Netherlands, Portugal, Spain, United Kingdom

Description of sub common intercalibration types for Biological quality element Benthic Invertebrate Fauna:

Sub type	Characterisation	MS sharing sub-type
A	Lagoons	Ireland, Spain, United Kingdom
B	Freshwater-oligohaline, medium river flow	Ireland, Spain, United Kingdom
C	Mesotidal estuary with irregular river flow	Portugal, Spain
D	Large estuaries	Germany, Ireland, Netherlands, Portugal, Spain, United Kingdom



E	Small-medium estuary with >50% intertidal area	Ireland, Germany, Spain, United Kingdom
F	Small-medium estuary with <50% intertidal area	Ireland, Portugal, Spain, United Kingdom

## NORTH EAST ATLANTIC GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

**Biological Quality Element:**

**Phytoplankton**

**Phytoplankton: parameter indicative of biomass parameter (Chlorophyll a)**

**Results: Ecological quality ratios and parameter values**

Parameter values are expressed in µg/l measured as the national chlorophyll-a metric calculated in a six year period. National metrics for France, Netherlands, Portugal and Spain typically use a measure of P90 Chl-a with salinity adjusted thresholds, Ireland uses a combination of P90 Chl-a and median values, and United Kingdom uses a metric based on a count of exceedances of certain statistical measures. In the case of UK, P90 values were calculated only for IC purposes.

Country	Ecological Quality Ratios		Values (µg/l)	
	<i>High-good boundary</i>	<i>Good-moderate boundary</i>	<i>High-good boundary</i>	<i>Good-moderate boundary</i>
France	0.67	0.397	5.33	8.88
Ireland	0.80	0.60	12.96	25.96
Netherlands	0.80	0.60	12.00	18.00
Portugal-North	0.667	0.467	10.000	14.288
Spain - Central Cantabrian and Galician estuaries - Mixing zone*	0.67	0.44	8.00	12.00
Spain - Central Cantabrian and Galician estuaries - Euhaline*	0.67	0.33	4.00	8.00
Spain - East Cantabrian estuaries - Euhaline*	0.67	0.33	1.95	3.90
Spain - East Cantabrian estuaries - Polyhaline*	0.67	0.33	3.30	6.60
Spain - East Cantabrian estuaries - Mesohaline*	0.67	0.33	5.10	10.20
Spain - East Cantabrian estuaries - Oligohaline*	0.67	0.33	6.60	13.20
Spain - Gulf of Cádiz estuaries - Mixing zone	0.67	0.33	3.75	7.50
Spain - Gulf of Cádiz estuaries - Euhaline*	0.67	0.33	3.00	6.00
United Kingdom	0.80	0.60	10.00	15.00

\*Salinity ranges established by the median (P50) salinity as follows: Euhaline [30.1-34.4] PSU; Polyhaline [18.1-30.0] PSU; Mesohaline [5.1-18.0] PSU; Oligohaline [0.5-5.0] PSU

#### NORTH EAST ATLANTIC GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

**Biological Quality Element:** Macroalgae and Angiosperms

**Sub-Biological Quality Element** Macroalgae

**Intertidal blooming macroalgae soft bottom, indicative of abundance**

**Results: Ecological quality ratios of national classification systems intercalibrated**

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
France	TWOGA - Macroalgal Bloom Assessment	0.80	0.60
Ireland	OGA Tool - Opportunistic Green Macroalgal Abundance	0.80	0.60
United Kingdom	OMBT- Opportunistic macroalgal blooming tool	0.80	0.60

#### NORTH EAST ATLANTIC GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

**Biological Quality Element:** Macroalgae and Angiosperms

**Sub-Biological Quality Element** Angiosperms

**Seagrasses**

**Results: Ecological quality ratios of national classification systems intercalibrated**

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Germany	SG-Assessment tool for intertidal seagrass in coastal and transitional waters	0.80	0.60
France	SBQ-Seagrass beds quality in coastal and transitional water bodies	0.80	0.645
Ireland	Intertidal Seagrass tool	0.80	0.61
Netherlands	SG- Monitoring beds of SG per waterbody using aerial photographs, ground truth and specifying surface & density per species	0.80	0.60

Portugal	SQI-Seagrass quality index	0.800	0.600
United Kingdom	Intertidal Seagrass tool	0.80	0.61

#### NORTH EAST ATLANTIC GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

**Biological Quality Element:** Macroalgae and Angiosperms

**Sub-Biological Quality Element** Angiosperms

#### Saltmarshes

**Results: Ecological quality ratios of national classification systems intercalibrated**

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Spain - Cantabria	AQI - Angiosperm Quality Index	0.88	0.73
Portugal	AQuA - Angiosperm Quality Assessment Index	0.800	0.600
United Kingdom	SM - UK Saltmarsh Tool	0.800	0.600

#### NORTH EAST ATLANTIC GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

**Biological Quality Element:** Benthic invertebrate fauna

**Results: Ecological quality ratios of national classification systems intercalibrated**

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
<b>Sub type D</b>			
Germany	M-AMBI - Multivariate AZTI's Marine Biotic Index	0.850	0.700
Netherlands	BEQI2 - Benthic Ecosystem Quality Index 2	0.800	0.600
Spain	M-AMBI - Multivariate AZTI's Marine Biotic Index	0.770	0.530
Portugal	BAT - Benthic Assessment Tool	0.838	0.582
<b>Sub type E</b>			

Spain	M-AMBI - Multivariate AZTI's Marine Biotic Index	0.770	0.530
Spain	QSB - Quality of Soft Bottoms	0.800	0.600
<b>Sub type F</b>			
Spain	M-AMBI - Multivariate AZTI's Marine Biotic Index	0.770	0.530
Portugal	BAT- Benthic Assessment Tool	0.806	0.580

## NORTH EAST ATLANTIC GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

**Biological Quality Element:** Fish fauna

**Results: Ecological quality ratios of national classification systems intercalibrated**

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Belgium	EBI - Zeeschelde Estuarine Biotic Index	0.850	0.615
France	ELFI - Estuarine and Lagoon Fish Index	0.910	0.675
Germany	FAT – TW - Fischbasiertes Bewertungswerkzeug für Übergangsgewässer der norddeutschen Ästuare	0.840	0.620
Ireland	TFCI - Transitional Fish Classification Index	0.810	0.580
Ireland	EMFI - Estuarine Multi-metric Fish Index	0.920	0.650
Netherlands	FAT – TW - WFD Fish index for transitional waters, type O2	0.800	0.600
Portugal	EFAI - Estuarine Fish Assessment Index	0.865	0.700
Spain	AFI - AZTI's Fish Index	0.780	0.550
Spain	TFCI - Transitional Fish Classification Index	0.900	0.650
United Kingdom	TFCI - Transitional Fish Classification Index	0.810	0.580
United Kingdom	EMFI - Estuarine Multi-metric Fish Index	0.920	0.650

<b>Water category</b>	<b>Transitional waters</b>
<b>Geographical Intercalibration Group</b>	<b>Mediterranean Sea</b>

**Description of types that have been intercalibrated**

<b>Common IC type</b>	<b>Type characteristics</b>	<b>MS sharing IC common type</b>
CL-Oligohaline	Coastal lagoons (Salinity <5 psu)	Spain, France, Italy
CL-Mesohaline chocked and restricted	Coastal lagoons (Salinity 5 - 18 psu)	Spain*, France*, Italy, Greece
CL-Polyhaline chocked and restricted	Coastal lagoons ( Salinity 18 - 40 psu)	Spain*, France*, Italy, Greece
Hyperhalines (Salinity > 40 psu).	Hyperhalines (Salinity > 40 psu)	Spain
Estuaries	Estuaries (salt wedge type)	Spain, Croatia

\* Spain and France do not consider distinction between restricted or chocked lagoons.

**MEDITERRANEAN SEA GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS**

**Biological Quality Element: Phytoplankton**

**Phytoplankton: Ecological quality ratios of national classification systems intercalibrated**

<b>Country and type</b>	<b>National classification systems intercalibrated</b>	<b>Ecological Quality Ratios</b>	
		<b><i>High-good boundary</i></b>	<b><i>Good-moderate boundary</i></b>
<b>Coastal lagoons Polyhaline chocked</b>			
France	PhIL - Phytoplankton index for Mediterranean polyhaline lagoons	0.710	0.390
Greece	MPI - Multimetric Phytoplankton Index	0.780	0.510
Italy	MPI - Multimetric Phytoplankton Index	0.780	0.510
<b>Coastal lagoons Polyhaline restricted</b>			

France	PhIL - Phytoplankton index for Mediterranean polyhaline lagoons	0.710	0.390
Greece	MPI - Multimetric Phytoplankton Index	0.820	0.540
Italy	MPI - Multimetric Phytoplankton Index	0.820	0.540

#### MEDITERRANEAN SEA GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

**Biological Quality Element:**

**Macroalgae and Angiosperms**

**Results: Ecological quality ratios of national classification systems intercalibrated**

Country	National classification systems intercalibrated	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
France	Exclame	0.8	0.6
Greece	EEI-c - Ecological Evaluation Index	0.7	0.4
Italy	MaQI - Macrophyte Quality Index	0.8	0.6

#### MEDITERRANEAN SEA GEOGRAPHICAL INTERCALIBRATION GROUP RESULTS

**Biological Quality Element:**

**Benthic invertebrate fauna**

**Results: Ecological quality ratios of national classification systems intercalibrated**

Country and Type	National classification systems intercalibrated	Ecological Quality Ratios	
		<b>High-good boundary</b>	<b>Good-moderate boundary</b>
<b>Coastal lagoons Polyhaline restricted</b>			
France	M-AMBI - Multivariate AZTI's Marine Biotic Index	0.84	0.63
Italy	M-AMBI - Multivariate AZTI's Marine Biotic Index	0.96	0.71
Greece	M-AMBI - Multivariate AZTI's Marine Biotic Index	0.83	0.62
<b>CL-Mesohaline choaked and restricted</b>			
Italy	M-AMBI - Multivariate AZTI's Marine Biotic Index	-	0.71

Greece	M-AMBI - Multivariate AZTI's Marine Biotic Index	-	0.62
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-- Part 2 --

<b>Water category</b>	<b>Rivers</b>
<b>Geographical Intercalibration Group</b>	<b>Cross-GIG River fish fauna</b>

<b>Biological Quality Element</b>	<b>Fish fauna</b>
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**Results: Ecological quality ratios of national classification methods**

**Mediterranean group**

<b>Country</b>	<b>National classification systems intercalibrated</b>	<b>Ecological Quality Ratios</b>	
		<i>High-Good boundary</i>	<i>Good-Moderate boundary</i>
Italy	NISECI index (New Index of Ecological Status of Fish Communities)	0.80	0.60
Bulgaria	TsBRI (Type Specific Bulgarian Fish Index )	0.860	0.650

<b>Water category</b>	<b>Rivers</b>
<b>Geographical Intercalibration Group</b>	<b>Cross-GIG Very Large Rivers</b>

<b>Biological Quality Element</b>	<b>Macrophytes and Phytobenthos</b>
<b>Sub-biological Quality Element</b>	<b>Phytobenthos</b>

**Results: Ecological quality ratios of national classification methods intercalibrated – Type R-L2**

<b>Country</b>	<b>National classification systems intercalibrated</b>	<b>Ecological Quality Ratios</b>	
		<i>High-Good boundary</i>	<i>Good-Moderate boundary</i>
Belgium (Flanders)	PISIAD index (Proportions of Impact-Sensitive and Impact-Associated Diatoms)	0.80	0.60



<b>Water category</b>	<b>Lakes</b>
<b>Geographical Intercalibration Group</b>	<b>Alpine lakes</b>

<b>Biological Quality Element</b>	<b>Benthic invertebrates fauna</b>
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**Results: Ecological quality ratios of national classification methods**

Country	National classification systems	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Italy	BQIES (Benthic Quality Index Expected Species number)	0.88	0.76

<b>Biological Quality Element</b>	<b>Fish fauna</b>
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**Results: Ecological quality ratios of national classification methods**

Country	National classification systems	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
France	ELFI (European Lake Fish Index) : Indice Ichtyofaune Lacustre (IIL)	0.73	0.49

<b>Water category</b>	<b>Lakes</b>
<b>Geographical Intercalibration Group</b>	<b>Central-Baltic lakes</b>

<b>Biological Quality Element</b>	<b>Phytoplankton</b>
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**Results: Ecological quality ratios of national classification methods**

Country	National classification methods	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
France	Phytoplankton Index for Lakes (IPLAC) : Indice Phytoplankton Lacustre	0.80	0.60

**Biological Quality Element** **Macrophytes and Phytobenthos**

**Sub-biological Quality Element** **Macrophytes**

**Results: Ecological quality ratios of national classification methods**

Country	National classification methods	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
France	French Macrophyte Index for Lakes (IBML) : Indice Biologique Macrophytique en Lacs	0.80	0.60

**Biological Quality Element** **Fish fauna**

**Results: Ecological quality ratios of national classification methods**

Country	National classification methods	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Belgium (Flanders)	Fish-based index for lakes and reservoirs in Flanders (Belgium)	0.80	0.60

**Water category** **Lakes**

**Geographical Intercalibration Group** **Mediterranean lakes**

**Biological Quality Element** **Phytoplankton**

**Results: Ecological quality ratios of national classification methods**

Country	National classification methods	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
France	Phytoplankton Index for Lakes (IPLAC) : Indice Phytoplancton Lacustre	0.80	0.60
Greece	HeLPhy - Hellenic Lake Phytoplankton Assessment Method	0.80	0.60
Italy	Italian phytoplankton assessment method (IPAM)	0.80	0.60



<b>Water category</b>	<b>Lakes</b>
<b>Geographical Intercalibration Group</b>	<b>Eastern Continental lakes</b>
<b>Biological Quality Element</b>	<b>Fish fauna</b>

**Results: Ecological quality ratios of national classification methods**

<b>Country</b>	<b>National classification methods</b>	<b>Ecological Quality Ratios</b>	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Bulgaria	Bulgarian fish based method for ecological classification and monitoring of lakes	0.76	0.52

<b>Water category</b>	<b>Coastal waters</b>
<b>Geographical Intercalibration Group</b>	<b>Baltic Sea</b>
<b>Biological Quality Element</b>	<b>Phytoplankton</b>

**Phytoplankton: parameter indicative of biomass parameter (Chlorophyll a)**

**Results: Ecological quality ratios and parameter values**

<b>Country and Type</b>	<b>Ecological Quality Ratios</b>		<b>Values (µg/l)</b>	
	<i>High-good boundary</i>	<i>Good-moderate boundary</i>	<i>High-good boundary</i>	<i>Good-moderate boundary</i>
<b>BC2 (including German national types B1, B2a, B2b)</b>				
Germany (B1)	0.91	0.67	9.30	12.70
Germany (B2a)	0.89	0.67	1.80	2.40
Germany (B2b)	0.93	0.67	1.40	1.95

## Results: Ecological quality ratios of national classification systems

Country and Type	National classification systems	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
<b>BC2</b>			
Germany	PHYBIBCO - PHYtoBenthic Index for Baltic inner coastal waters	0.80	0.60
<b>BC1</b>			
Finland	Fucus depth limit(macroalgae)	0.90	0.74
Sweden	MSMDI (macroalgae and angiosperms)	0.60	0.40
<b>BC6</b>			
Denmark	Depth limit of eelgrass, <i>Zostera marina</i> (angiosperm)	0.90	0.74
Sweden	MSMDI(macroalgae and angiosperms)	0.60	0.40
<b>BC7</b>			
Germany	Balcosis - Baltic ALgae COmmunity AnalySIs System(macroalgae and angiosperms)	0.80	0.60
Poland	MQAI - Macrophyte Quality Assessment Index	0.90	0.70
<b>BC8</b>			
Germany	Balcosis - Baltic ALgae COmmunity AnalySIs System(macroalgae and angiosperms)	0.80	0.60

**Results: Ecological quality ratios and parameters values for parameter indicative of abundance (Depth limit of eelgrass *Zostera marina* (angiosperm))**

Country and Type	Ecological Quality Ratios		Parameter values/ranges Depth limit (m) Eelgrass <i>Zoster marina</i>	
	<i>High-good boundary</i>	<i>Good-moderate boundary</i>	<i>High-good boundary</i>	<i>Good-moderate boundary</i>
<b>BC8</b>				
Denmark Open coast	0.90	0.74	8.5	7

**Biological Quality Element**

**Benthic Invertebrate fauna**

**Results: Ecological quality ratios of national classification systems**

Country and Type	National classification systems	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
<b>BC2</b>			
Germany	MarBIT- Marine Biotic Index Tool	0.80	0.60
<b>BC4</b>			
Estonia	ZKI - Estonian coastal water macrozoobenthos community index	0.39	0.24
Latvia	BQI - Benthic quality index	0.88	0.75

**Water category**

**Coastal waters**

**Geographical Intercalibration Group**

**North East Atlantic**

**Biological Quality Element**

**Phytoplankton**

**Results: Ecological quality ratios of national classification systems**

Country and Type	National classification systems	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
<b>NEA 7</b>			
United Kingdom	Phytoplankton tool	0.80	0.60

**Phytoplankton: parameter indicative of biomass parameter (Chlorophyll a)**

**Results: Ecological quality ratios and parameter values**

Parameter values are expressed in µg/l as the 90<sup>th</sup>ile value calculated over the defined growing season in a six year period.

Country and Type	Ecological Quality Ratios		Values (µg/l)	
	<i>High-good boundary</i>	<i>Good-moderate boundary</i>	<i>High-good boundary</i>	<i>Good-moderate boundary</i>
<b>NEA 1/26d</b>				
Denmark	0.66	0.50	3.00	4.00
<b>NEA 5</b>				
Germany	0.67	0.44	5.00	7.50
<b>NEA 7</b>				
Norway	0.67	0.33	2.50	5.00
United Kingdom (inshore/North Sea)	0.67	0.33	10.00	15.00
United Kingdom (Atlantic)	0.67	0.33	5.00	10.00

**Biological Quality Element**

**Macroalgae and Angiosperms**

**Sub-Biological Quality Element**

**Macroalgae**

**Intertidal or subtidal macroalgae rocky bottom**

**Results: Ecological quality ratios of national classification systems**

Country and Type	National classification systems	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
<b>Type NEA 5</b>			
Germany	HPI - Helgoland Phytobenthic Index	0.80	0.60

**Biological Quality Element**

**Macroalgae and Angiosperms**

**Sub-Biological Quality Element**

**Macroalgae**

**Intertidal blooming macroalgae soft bottom, indicative of abundance**

**Results: Ecological quality ratios of national classification systems**

Country	National classification systems	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
<b>NEA 3/4</b>			

Germany	OMAI - Opportunistic Macroalgae-cover/acreage on soft sediment intertidal in coastal waters	0.80	0.60
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**Biological Quality Element**

**Macroalgae and Angiosperms**

**Sub-Biological Quality Element**

**Angiosperms**

**Saltmarshes**

**Results: Ecological quality ratios of national classification systems**

Country	National classification systems	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Germany	EM - Assessment of saltmarsh vegetation in coastal and transitional waters	0.80	0.60
Ireland	SMAATIE - Saltmarsh Angiosperm Assessment Tool for Ireland	0.80	0.60
Netherlands	TSM - WFD-metrics for natural watertypes: tidal salt marsh	0.80	0.60
United Kingdom	SM - UK Saltmarsh Tool	0.80	0.60

**Biological Quality Element**

**Macroalgae and Angiosperms**

**Results: Ecological quality ratios of national classification systems**

Country and Type	National classification systems	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
<b>Type NEA 8b</b>			
Sweden	MSMDI (macroalgae and angiosperms)	0.80	0.60
Denmark	Depth limit of eelgrass <i>Zostera marina</i> (angiosperm)	0.90	0.74

**Biological Quality Element**

**Benthic Invertebrate fauna**

**Results: Ecological quality ratios of national classification systems**

Country and Type	National classification systems	Ecological Quality Ratios
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		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
<b>Type NEA 1/26</b>			
Portugal	RAT - Rocky Shore Assessment Tool	0.800	0.600
Spain	BO2A - Benthic Opportunistic polychaetes/amphipods index	0.83	0.50
<b>Type NEA 5*</b>			
Germany	MarBIT - Marine Biotic Index Tool	0.80	0.60

<b>Water category</b>	<b>Coastal waters</b>
<b>Geographical Intercalibration Group</b>	<b>Mediterranean Sea</b>
<b>Biological Quality Element</b>	<b>Phytoplankton</b>

**Phytoplankton: parameter indicative of biomass parameter (Chlorophyll a)**

**Results: Ecological quality ratios and parameter values**

Parameter values are expressed in µg/l of Chlorophyll a, for the 90th percentile calculated over the year in at least a five year period.

<b>Country and Type</b>	<b>Ecological Quality Ratios</b>		<b>Values (µg/l)</b>	
	<i>High-good boundary</i>	<i>Good-moderate boundary</i>	<i>High-good boundary</i>	<i>Good-moderate boundary</i>
<b>Type I</b>				
France	0.670	0.330	4.925	10.000
Italy	0.850	0.620	5.600	14.100
<b>Type II A Tyrrhenian</b>				
Italy	0.84	0.62	1.17	2.90
<b>Type III W Adriatic</b>				
Italy				1.7*
<b>Type III W Tyrrhenian</b>				
Italy				1.17*

\*The values are not national boundaries but threshold values

<b>Biological Quality Element</b>	<b>Macroalgae and Angiosperms</b>
<b>Sub-Biological Quality Element</b>	<b>Angiosperms</b>

**Results: Ecological quality ratios of national classification systems**

Country	National classification systems	Ecological Quality Ratios	
		High-good boundary	Good-moderate boundary
Greece	CymoSkew	0.75	0.5

<b>Water category</b>	<b>Transitional waters</b>
<b>Geographical Intercalibration Group</b>	<b>North East Atlantic</b>

<b>Biological Quality Element</b>	<b>Phytoplankton</b>
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**Phytoplankton: parameter indicative of biomass parameter (Chlorophyll a)**

**Results: Ecological quality ratios and parameter values**

Parameter values are expressed in µg/l as the 90%ile value calculated over the defined growing season

Country	Ecological Quality Ratios		Values (µg/l)	
	<i>High-good boundary</i>	<i>Good-moderate boundary</i>	<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Belgium	1.00	0.60	100	200

<b>Biological Quality Element</b>	<b>Macroalgae and Angiosperms</b>
<b>Sub-Biological Quality Element</b>	<b>Angiosperms</b>

**Saltmarshes**

**Results: Ecological quality ratios of national classification systems**

Country	National classification systems	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Belgium	TMQI -Tidal Marsh Quality Index	0.85	0.75
Germany	EM - Assessment of saltmarsh vegetation in	0.80	0.60

	coastal and transitional waters		
Ireland	SMAATIE - Saltmarsh Angiosperm Assessment Tool for Ireland	0.80	0.60
Netherlands	TSM - WFD-metrics for natural watertypes: tidal salt marsh	0.80	0.60

**Biological Quality Element**

**Macroalgae and Angiosperms**

**Sub-Biological Quality Element**

**Angiosperms**

**Seagrasses**

**Results: Ecological quality ratios of national classification systems**

Country	National classification systems	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Spain - Cantabria	AQI - Angiosperms Quality Index	0.850	0.700

**Biological Quality Element**

**Benthic Invertebrate fauna**

**Results: Ecological quality ratios of national classification systems**

Country and Type	National classification systems	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Belgium	BEQI - Benthic Ecosystem Quality Index	0.75	0.5
<b>Sub type D</b>			
Germany	AeTV - Aestuar Type Verfahren	0.80	0.60
Ireland	IQI - Infaunal Quality Index	0.75	0.64
Spain	TasBEM - Taxonomically Sufficient Benthic Multimetric	0.79	0.66
United Kingdom	IQI - Infaunal Quality Index	0.75	0.64
<b>Sub type E</b>			
Germany	AeTV - Aestuar Type Verfahren	0.80	0.60
Germany	M-AMBI -	0.85	0.70

Ireland	IQI - Infaunal Quality Index	0.75	0.64
Spain	TasBEM - Taxonomically Sufficient Benthic Multimetric	0.79	0.66
United Kingdom	IQI - Infaunal Quality Index	0.75	0.64
<b>Sub type F</b>			
Ireland	IQI - Infaunal Quality Index	0.75	0.64
Spain	TasBEM - Taxonomically Sufficient Benthic Multimetric	0.79	0.66
United Kingdom	IQI - Infaunal Quality Index	0.75	0.64

<b>Water category</b>	<b>Transitional waters</b>
<b>Geographical Intercalibration Group</b>	<b>Mediterranean Sea</b>
<b>Biological Quality Element</b>	<b>Phytoplankton</b>

**Results: Ecological quality ratios of national classification systems**

Country and Type	National classification systems	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
<b>Coastal lagoons oligohaline and mesohaline</b>			
Spain (Balearic Islands)	FITOHMIB	0.93	0.73
<b>Estuaries</b>			
Spain (Southern Coast)	TWIf - Phytoplankton index for transitional waters	0.50	0.36
Croatia	MPI - Multimetric Phytoplankton Index	0.80	0.60

<b>Biological Quality Element</b>	<b>Benthic invertebrate fauna</b>
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**Results: Ecological quality ratios of national classification systems**

Country and Type	National classification systems	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>

<b>Coastal lagoons Oligohaline, Mesohaline and Polyhaline</b>			
Spain (Balearic Islands)	INVHMIB	0.93	0.73
<b>Coastal lagoons Oligohaline</b>			
Spain (Northeastern Coast)	QAELS	0.86	0.58
<b>Coastal lagoons Mesohaline</b>			
Spain (Northeastern Coast)	QAELS	0.72	0.62
<b>Estuaries</b>			
Spain (without salt wedge - Southern Coast)	BO2A	0.87	0.45
Spain (with salt wedge - Southern Coast)	BO2A	0.87	0.52

**Biological Quality Element**

**Fish fauna**

**Results: Ecological quality ratios of national classification systems**

<b>Country</b>	<b>National classification systems</b>	<b>Ecological Quality Ratios</b>	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Italy	HFBI - Habitat Fish Bio-Indicator	0.94	0.55
Croatia	M-EFI - Modified Estuarine Fish Index	0.80	0.60

**Water category**

**Transitional waters**

**Geographical Intercalibration Group**

**Black Sea**

**Biological Quality Element**

**Phytoplankton**

**Results: Ecological quality ratios of national classification systems**

<b>Country</b>	<b>National classification systems</b>	<b>Ecological Quality Ratios</b>	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Romania	IBI - Integrated Biological Index	0.70	0.42



## Results: Ecological quality ratios of national classification systems

Country	National classification systems	Ecological Quality Ratios	
		<i>High-good boundary</i>	<i>Good-moderate boundary</i>
Romania	M-AMBI(n) - Multivariate AZTI's Marine Biotic Index Normalized	0.90	0.68