Text consolidated by Valsts valodas centrs (State Language Centre) with amending regulations of: 11 August 2009 [shall come into force on 15 August 2009].

If a whole or part of a paragraph has been amended, the date of the amending regulation appears in square brackets at the end of the paragraph. If a whole paragraph or sub-paragraph has been deleted, the date of the deletion appears in square brackets beside the deleted paragraph or sub-paragraph.

Republic of Latvia

Cabinet
Regulation No. 858
Adopted 19 October 2004

# Regulations Regarding the Characterisation of the Types, Classification, Quality Criteria of Surface Water Bodies and the Procedures for Determination of Anthropogenic Loads

Issued pursuant to Section 5, Paragraphs four, eight and nine and Paragraph ten, Clauses 1, 3 and 4 of the Water Management Law

### I. General Provisions

- 1. This Regulation prescribes:
- 1.1. the characterisation of the types of surface water bodies and the classification of surface water bodies;
- 1.2. the procedures for the determination of anthropogenic loads, as well as the priority substances and the procedures for limiting the emission thereof;
- 1.3. high, good, moderate, poor and bad ecological quality criteria of surface waters, good and poor chemical quality criteria, as well as ecological potential criteria (also criteria of good ecological potential) of a heavily modified or artificial water body.
- 2. In order to prepare a river basin magement plan (hereinafter management plan) and programmes of measures, as well as to specify the environmental quality objectives to be included in the management plan (hereinafter environmental quality objective), the State limited liability company "Latvian Environment, Geology and Meteorology Centre" (hereinafter Centre), on the basis of the existing monitoring data and other data obtained, processed and compiled prior to the development of the management plan over an extended period of time, shall:
- 2.1. determine the water body types of rivers, lakes, coastal and transitional waters according to the criteria set out in Annex 1 to this Regulation;
- 2.2. according to the type, divide rivers, lakes, coastal and transitional waters into surface water bodies;
  - 2.3. classify surface water bodies and heavily modified or artificial water bodies;
- 2.4. determine the environmental quality objectives for surface water bodies and, taking into account the quality of the particular water body and the impact of anthropogenic load thereon, determine the surface water bodies at risk of failing the environmental quality objectives.

[11 August 2009]

3. Upon the request of the Centre, State and local government authorities shall provide the information at the disposal thereof and the data necessary in order to characterise the types of surface water bodies and to assess their quality, as well as to determine the anthropogenic load of surface water bodies.

[11 August 2009]

# II. Characterisation of the Types of Surface Water Bodies

- 4. The criteria for the types of surface water bodies referred to in Annex 1 to this Regulation shall be taken into account in determining the type of surface water bodies. The type of an artificial or heavily modified water body shall be determined, using the criteria of the type of a surface water body most accurately corresponding to the characteristics thereof. [11 August 2009]
- 5. Upon dividing rivers, lakes, coastal and transitional waters into surface water bodies, substantial circumstances (for example, impact of anthropogenic load (also morphological changes of a water reservoir or watercourse), use of waters for extraction of drinking water, their relation to protected territories) shall be assessed, as well as the following conditions shall be complied with:
- 5.1. only surface water bodies corresponding to the relevant type of water bodies shall be joined into one water body;
- 5.2. the water body does not overlap with another water body and does not cross borders of another water body;
  - 5.3. the water body according to the ecological and chemical quality is homogeneous;
- 5.4. waters of the water body are deemed discrete and significant elements of the hydrographical network.
- 6. Taking into account the conditions referred to in Paragraph 5 of this Regulation, a separate water body shall be:
  - 6.1. a river or rivers, the catchment basin of which exceeds 100 km<sup>2</sup>;
  - 6.2. a lake, the surface area of which is 0.5 km<sup>2</sup> or more;
- 6.3. a river, which has a smaller catchment basin, or a lake, which has a smaller surface area, than that referred in Sub-paragraph 6.1 or 6.2 of this Regulation accordingly, if separate water body is necessary in order to achieve the environmental quality objectives. [11 August 2009]
- 7. The surface waters existing in the protected territories specified in the Water Management Law may be separate water bodies, if separate water body is necessary in order to ensure the protection and management of the particular territory and if such waters are deemed discrete and significant elements of the drainage system.

# III. Procedures for the Determination of Anthropogenic Load and Procedures for Limiting the Emission of Priority Substances

- 8. In order to determine the load caused by anthropogenic activities for surface water bodies in each river basin district, the Centre shall:
- 8.1. compile and analyse information regarding the most substantial anthropogenic loads, including regarding extraction of water (taking into account the seasonal fluctuation of extraction of water, the total quantity of extraction of water per year and water losses in the distribution system) and determine such economic activities, which are related to industry, agriculture, community management and other fields of activities and due to which:

- 8.1.1. point or diffuse source pollution occurs;
- 8.1.2. polluting substances, also the priority substances specified in Annex 2 to this Regulation, the substances specified in Annex 5 to Cabinet Regulation No. 294 of 9 July 2002, Procedures by which Polluting Activities of Category A, B and C shall be Declared and Permits for the Performance of Category A and B Polluting Activities shall be Issued, (in relation to emission of polluting substances into water) and the particularly hazardous substances and hazardous substances to the aquatic environment specified in Cabinet Regulation No. 34 of 22 January 2002, Regulations Regarding Discharge of Polluting Substances into Water, are discharged into water;
- 8.1.3. the hydrological regime or morphology of surface waters changes, including due to deviation or redistribution of water flow;
- 8.2. survey the actual and planned (permitted) type of spatial planning specified in the spatial plans in effect (if such spatial plan does not exist, the type of land use shall be surveyed);
- 8.3. determine the economic activities, which should be taken into account when characterising the anthropogenic load of rivers, lakes, transitional and coastal waters, as well as artificial and heavily modified water bodies;
- 8.4. develop criteria, according to which the significance of anthropogenic loads, as well as the causes, extent and impact of anthropogenic loads shall be assessed;
- 8.5. evaluate whether it is possible to achieve the environmental quality objectives put forward for the water body or there is a risk of failing them.

  [11 August 2009]
- 9. In assessing the anthropogenic load, the Centre shall use the data of water monitoring and information obtained in preparing the characterisation of the river basin. [11 August 2009]
- 10. The priority substances, the emission of which should be limited, are specified in Annex 2 to this Regulation. Emission of priority substances shall be limited in accordance with the procedures specified in Cabinet Regulation No. 34 of 22 January 2002, *Regulations Regarding Discharge of Polluting Substances into Water*.

# IV. Classification of and Quality Criteria for Surface Water Bodies, as well as Ecological Potential Criteria of a Heavily Modified or Artificial Water Body

- 11. Surface water bodies shall be divided in ecological quality classes and chemical quality classes.
- 12. Surface water bodies, in accordance with the ecological quality criteria (biological, hydromorphological, chemical and physico-chemical) specified in Annex 3 to this Regulation and the explanation of criteria specified in Annex 4, shall be divided into high (reference) ecological quality class, good ecological quality class or moderate ecological quality class. If data show that ecological quality of a water body is worse than the moderate, it shall be divided into poor ecological quality class or bad ecological quality class in order to be able to select the most appropriate measures for improvement of the relevant water body condition.
- 12. In determining the ecological quality class, the Centre shall take into account:
  - 12.<sup>1</sup>1. the monitoring data and other data obtained over an extended period of time;
  - 12.<sup>1</sup>2. the results of modelling;
- 12.<sup>1</sup>3. the load caused by anthropogenic activities on the water body, which has been determined in accordance with Chapter III of this Regulation. [11 August 2009]

- 13. Ecological quality of a surface water body is high (reference condition) if it has been established in monitoring that:
- 13.1. values of biological, psysico-chemical and hydromorphological criteria conform to waters of the relevant type totally or nearly totally undisturbed by anthropogenic activities and the natural habitats observed are characteristic to waters of the relevant type;
- 13.2. synthetic substances (of artificial origin) are not detected in the water body or their concentration in water is lower than the concentration to be determined in a laboratory (such concentration, which may be detected during defining of the reference condition using available technological methods, shall be deemed the lowest concentration to be determined);
- 13.3. the concentration of polluting substances of natural origin in water detected in the water body conforms to the background level characteristic to waters of the relevant type undisturbed by anthropogenic activities.

[11 August 2009]

- 14. Ecological quality of a surface water body is good if values of biological and physicochemical criteria obtained in monitoring only slightly differ from the values that have been determined for a surface water body of high quality (reference condition).
- 15. Ecological quality of a surface water body is moderate if values of biological and physicochemical criteria obtained in monitoring are lower than the values that have been determined for a surface water body of good quality.
- 16. Ecological quality of a surface water body is poor if values of biological and physico-chemical criteria obtained in monitoring are lower than the values that have been determined for a surface water body of moderate quality, and the species and natural habitats found in the water body significantly differ from those characteristic to surface water bodies of the relevant type, which are not affected by anthropogenic activities.
- 17. Ecological quality of a surface water body is bad if values of biological and physico-chemical criteria obtained in monitoring are lower than the values that have been determined for a surface water body of poor quality, and majority of the species and natural habitats characteristic to surface water bodies of the relevant type not affected by anthropogenic activities are not found in the water body.
- 18. Artificial and heavily modified water bodies according to the ecological quality shall be divided into the highest possible ecological potential class, good ecological potential class, moderate ecological potential class, poor ecological potential class or bad ecological potential class. In order to determine the ecological potential of an artificial or heavily modified water body, the water body shall be considered as equivalent to the type of rivers, lakes, water bodies of transitional waters or coastal waters, to which the characteristics of the artificial or heavily modified water body correspond to the most. Upon dividing the particular artificial or heavily modified water body into an ecological potential class, the ecological quality criteria specified in this Regulation for the corresponding type of surface water bodies shall be used.
- 19. Surface water bodies and artificial and heavily modified water bodies shall be divided into a good chemical quality class or poor chemical quality class according to the chemical quality. Such surface water bodies and artificial and heavily modified water bodies shall be divided into the good chemical quality class, the concentration of chemical substances in which does not exceed the environmental quality norms specified in the regulatory enactments regarding environmental protection.

- 20. If the monitoring data show that a surface water body, taking into account different biological, hydromorphological, chemical or physico-chemical criteria, conforms to different quality classes (is not homogeneous), it shall be divided into the lowest quality class.
- 21. In order to determine which values of the ecological quality criteria conform to each quality class and to ensure the mutual comparability of classes, the Centre:
- 21.1. shall determine the quality criteria values corresponding to the reference condition (high quality or the highest possible ecological potential) on the basis of the monitoring data of reference objects, applying modelling or combining both of the referred to methods. If it is not possible to use such methods, the reference condition may be determined, taking into account an opinion of experts;
- 21.2. if the reference condition is determined on the basis of monitoring data, a network of reference objects shall be created, including therein water bodies belonging to all the types specified in Annex 1 to this Regulation, conforming to the high quality (reference condition) class. Such number of reference objects shall be selected, which allows to determine credible quality criteria values, taking into account the variability of the criteria and the information necessary for modelling;
- 21.3. if the reference condition is determined by applying modelling, information obtained over an extended period of time, the data on sediment composition and other data ensuring the credibility and conformity of values of the criteria characterising the reference condition with the relevant type of water bodies, shall be used;
- 21.4. if it is not possible to determine credible values of the criteria of reference conditions due to their high natural variability, the relevant quality criteria need not be used for the quality assessment of the relevant type. In such case it shall be justified in the river basin district management plan why such criteria has not been used;
- 21.5. values of the highest possible ecological potential determined for artificial or heavily modified water bodies shall be reviewed once every six years. [11 August 2009]
- 21. In order to ensure the comparability of monitoring systems in the European Community, the Centre shall:
- 21.<sup>1</sup>1. carry out monitoring in order to obtain data for the determination of values of biological quality criteria;
- 21.<sup>1</sup>2. express the results of the monitoring referred to in Sub-paragraph 21.<sup>1</sup> 1 of this Regulation in the form of ecological quality coefficients, showing the ratio of the value of biological criteria observed in a water body and the value of the same criteria in the reference object. The coefficients shall be expressed in numerical values from zero to one where the value, which is close to one, shall indicate high quality class and the values of poor quality class shall be close to zero:
- 21.<sup>1</sup>3. express the limits of ecological quality classes in numerical values, dividing the ecological quality coefficients in five quality classes;
- 21.<sup>1</sup>4. ensure the comparison of limit values between a high and good quality class, as well as between a good and moderate quality class within the framework of a process for the comparison of quality assessment systems organised by the European Union (hereinafter intercalibration) and use the results of intercalibration for determination of the limits of quality classes;
- 21.<sup>1</sup>5. a corresponding monitoring of water bodies shall be carried out for each type selected in the intercalibration process.

  [11 August 2009]

# V. Closing Provisions

- 22. Cabinet Regulation No. 93 of 17 February 2004, Regulations Regarding the Characterisation of the Types, Classification, Quality Criteria of Surface Water Bodies and the Procedures for Determination of Anthropogenic Loads (Latvijas Vēstnesis, 2004, No. 30), is repealed.
- 23. The State agency "Latvian Environment, Geology and Meteorology Agency" shall perform the tasks specified in this Regulation by 31 July 2009. [11 August 2009]

# **Informative Reference to the European Union Directives**

[11 August 2009]

This Regulation contains legal norms arising from:

- 1) Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy;
- 2) Directive 2008/105/EC of the European Parliament and of the Council of 16 December 2008 on environmental quality standards in the field of water policy, amending and subsequently repealing Council Directives 82/176/EEC, 83/513/EEC, 84/156/EEC, 84/491/EEC, 86/280/EEC and amending Directive 2000/60/EC of the European Parliament and of the Council.

Prime Minister I. Emsis

Minister for the Environment R. Vējonis

# **Types of Surface Water Bodies**

[11 August 2009]

# 1. Rivers

No.	Area of the catchment basin	Longitudinal gradient of the bottom of the bed (in a 1 – 3 km section)	Туре	Characterisation of the type
		Large (> 1.0 m/km)	Small ritral- type river	The river is shallow, the speed of the current exceeds 0.2 m/s. The substrate of the bed is formed by sand, gravel and rocks
	Small (< 100 km <sup>2</sup> )	Small (< 1 m/km)	river	The river is shallow, the speed of the current is less than 0.2 m/s. The substrate of the bed is formed by sand covered in detritus of organic origin and silt
	Medium large (100–1000 km²)	Large (> 1 m/km)	Medium ritral-type river	The river is medium deep, the speed of the current exceeds 0.2 m/s. The substrate of the bed is formed by sand, gravel and rocks
		Small (< 1 m/km)	river	The river is medium deep, the speed of the current is less than 0.2 m/s. The substrate of the bed is formed by sand covered in detritus of organic origin and silt
	_	Large (> 1 m/km)	-	The river is deep, the speed of the current exceeds 0.2 m/s. The substrate of the bed is formed by sand, gravel and rocks
	6	Small (< 1 m/km)	Large potamal-type river	The river is deep, the speed of the current is less than 0.2 m/s. The substrate of the bed is formed by sand covered in detritus of organic origin and silt

# Notes.

- 1. The types of rivers in Latvia have been specified, using System B of the European Community.
- 2. According to the height above sea level, geographical longitude and latitude all river water bodies of Latvia have been divided in one class, because significant ecological differences between rivers have not been observed in Latvia due to such indicators.
- 3. Riverbeds of Latvia are mainly of carbonatic origin, therefore, one class rivers with carbonate bed has been singled out in typology.

4. In determining the individual type of water bodies (rivers) in accordance with Paragraph 2 of this Regulation, the average speed of the current shall be calculated in accordance with the requirements of Cabinet Regulation No. 631 of 23 August 2005, Regulations Regarding Latvian Construction Standard LBN 224-05 "Amelioration Systems and Hydrotechnical Structures".

### 2. Lakes

No.	Average depth	Water hards	ness	Chromaticity	Туре
2.1.	Very shallow (< 2 m)	Hard-water (> mkS/cm)			Very shallow clearwater lake with high water hardness
2.2.	Very shallow (< 2 m)	Hard-water (> mkS/cm)			Very shallow brown-water lake with high water hardness
2.3.	Very shallow (< 2 m)	Soft-water (< mkS/cm)			Very shallow clearwater lake with low water hardness
2.4.	Very shallow (< 2 m)	Soft-water (< mkS/cm)			Very shallow brown-water lake with low water hardness
2.5.	Shallow (2–9 m)	Hard-water (> mkS/cm)		Oligohumous (< 80 Pt-Co)	Shallow clearwater lake with high water hardness
2.6.	Shallow (2–9 m)	Hard-water (> mkS/cm)		•	Shallow brown-water lake with high water hardness
2.7.	Shallow (2–9 m)	Soft-water (< mkS/cm)		Oligohumous (< 80 Pt-Co)	Shallow clearwater lake with low water hardness
2.8.	Shallow (2–9 m)	Soft-water (< mkS/cm)			Shallow brown-water lake with low water hardness
	Deep (> 9 m)	Hard-water (> mkS/cm)		Oligohumous (< 80 Pt-Co)	Deep clearwater lake with high water hardness
2.10.	Deep (> 9 m)	Soft-water (< mkS/cm)		Oligohumous (< 80 Pt-Co)	Deep clearwater lake with low water hardness

## Notes.

- 1. The types of lakes in Latvia have been specified, using System B of the European Community.
- 2. According to the height above sea level, geographical longitude and latitude all lake water bodies of Latvia have been divided in one class, because significant ecological differences between lakes have not been observed in Latvia due to such indicators.

- 3. Water hardness (electric conductivity) has been selected as an indicator characterising the geological structure of the lake bed.
- 4. According to the size all lake water bodies of Latvia have been divided in one class lakes, the water surface area of which exceeds 50 hectares.

### 3. Transitional waters

No.	Water salinity (permilles)	Average depth (m)	Wave exposure	Blending	Dominant substrate	Туре
3.1.	0.5 < 5–6		_	Partially stratified		Transitional waters of the Gulf of Riga

### Notes.

- 1. The types of transitional waters in Latvia have been specified, using System B of the European Community.
- 2. According to the geographical longitude and latitude water bodies of transitional waters of Latvia have been divided in one class, because significant ecological differences between transitional waters have not been observed in Latvia due to such indicators.
- 3. The criterion "tidal range" of the System B of the European Community has not been used because tides have not been observed on the coast of Latvia.

# 4. Coastal waters

No.	Water salinity (permilles)	Average depth (m)	Wave exposure	Blending	Residence time (24- hours)	Dominant substrate	Туре
4.1.	6 < 18–20	< 30	Exposed	Complete	< 7	Sand-gravel	Open sandy south-
							eastern coast of the Baltic Sea
4.2.	6 < 18–20	< 30	Exposed	Complete	< 7	Boulders	Open rocky south- eastern coast of the Baltic Sea
4.3.	0.5 < 6		Moderately exposed	Complete	< 7	Sand-gravel	Sandy coast of the Gulf of Riga
4.4.	0.5 < 6		Moderately exposed	Complete	< 7	Boulders	Rocky coast of the Gulf of Riga

## Notes.

1. The types of coastal waters in Latvia have been specified, using System B of the European Community.

- 2. According to the geographical longitude and latitude water bodies of coastal waters of Latvia have been divided in one class, because significant ecological differences between coastal waters have not been observed in Latvia due to such indicators.
- 3. The criterion "tidal range" of the System B of the European Community has not been used because tides have not been observed on the coast of Latvia.

Minister for the Environment

R. Vējonis

# Priority Substances, the Emission of which Need tobe Limited

[11 August 2009]

No	CAS number <sup>(1)</sup>	EU number <sup>(2)</sup>	Name of the substance <sup>(3)</sup>	Notes
1.	15972-60-8	240-110-8	Alachlor	
2.	120-12-7	204-371-1	Anthracene	X
3.	1912-24-9	217-617-8	Atrazine	
4.	71-43-2	200-753-7	Benzene	
5.	not applicable	not applicable	Brominated diphenylether <sup>(4)</sup>	X
5.1.	32534-81-9	not applicable	Pentabromodiphenylether (congener numbers 28, 47, 99, 100, 153 and 154)	
6.	7440-43-9	231-152-8	Cadmium and its compounds	X
7.	85535-84-8	287-476-5	C <sub>10-13</sub> Chloroalkanes	X
8.	470-90-6	207-432-0	Chlorfenvinphos	
9.	2921-88-2	220-864-4	Chlorpyrifos (Chlorpyrifos-ethyl)	
10.	107-06-2	203-458-1	1,2-dichloroethane	
11.	75-09-2	200-838-9	Dichloromethane	
12.	117-81-7	204-211-0	Di(2-ethylhexyl) phthalate (DEHP)	
13.	330-54-1	206-354-4	Diuron	
14.	115-29-7	204-079-4	Endosulfan	X
15.	206-44-0	205-912-4	Fluoranthene <sup>(5)</sup>	
16.	118-74-1	204-273-9	Hexachloro-benzene	X
17.	87-68-3	201-765-5	Hexachloro-butadiene	X
18.	608-73-1	210-158-9	Hexachloro-cyclohexane	X
19.	34123-59-6	251-835-4	Isoproturon	
20.	7439-92-1	231-100-4	Lead and its compounds	
21.	7439-97-6	231-106-7	Mercury and its compounds	X
22.	91-20-3	202-049-5	Naphthalene	
23.	7440-02-0	231-111-14	Nickel and its compounds	
24.	25154-52-3	246-672-0	Nonylphenol	X
24.1.	104-40-5	203-199-4	4-Nonylphenol	X
25.	1806-26-4	217-302-5	Octylphenol	
25.1.	140-66-9	not applicable	4-(1,1?,3,3?-tetramethylbutyl)-phenol	
26.	608-93-5	210-172-5	Pentachlorobenzene	X
27.	87-86-5	231-152-8	Pentachlorophenol	
28.	not applicable	not applicable	Polyaromatic hydrocarbons	X
28.1.	50-32-8	200-028-5	Benzo(a)pyrene	X
28.2.	205-99-2	205-911-9	Benzo(b)fluor-anthrene	X

28.3.	191-24-2	205-883-8	Benzo(g,h,i)-perylene	X
28.4.	207-08-9	205-916-6	Benzo(k)fluor-anthrene	X
28.5.	193-39-5	205-893-2	Indeno(1,2,3-cd)pyrene	X
29.	122-34-9	204-535-2	Simazine	
30.	not applicable	not applicable	Tributyltin compounds	X
30.1.	36643-28-4	not applicable	Tributyltin-cation	X
31.	12002-48-1	234-413-4	Trichloro-benzenes	
32.	67-66-3	200-663-8	Trichloromethane (chloroform)	
33.	1582-09-8	216-428-8	Trifluralin	

## Notes.

- 1. X specially hazardous substance to the aquatic environment, emissions and discharges of which should be eliminated until 22 December 2020.
- 2. (1) Number of the substance in the register of chemical substances *Chemicals Abstracts Service*.
- 3. (2) Number of the substance in the European Inventory of Existing Commercial Chemical Substances (EINECS) or the European List of Notified Chemical Substances (ELINCS).
- 4. <sup>(3)</sup> Where groups of substances have been selected, typical individual representatives are listed as indicative parameters. For these groups of substances, the indicative parameter must be defined through the analytical method.
- 5. <sup>(4)</sup> Only pentabromobiphenylether (CAS-number 32534-81-9) shall be deemed a specially hazardous substance to the aquatic environment.
- 6. (5) Fluoranthene as an indicator of other, more dangerous polyaromatic hydrocarbons.

# **Ecological Quality Criteria for the Classification of Surface Water Bodies**[11 August 2009]

No.	Quality criteria	Rivers	Lakes	Transitional waters	Coastal waters	
1.	Biological criteria					
1.1.	Composition, abundance and biomass of phytoplankton	(1)	V	V	V	
1.2.	Composition and abundance of macrophytes	V	V	V	V	
1.3.	Composition and abundance of zoobenthos	V	V	V	V	
1.4.	Composition and abundance of fish species	V	v	V		
1.5.	Age structure of fish fauna	V	V			
2.	Hydromorphological elements supporting the biol	logical	eleme	nts		
2.1.	Hydrological regime					
2.1.1.	quantity and dynamics of water flow	V	V			
2.1.2.	residence time		V			
2.1.3.	connection to the groundwater body	V	V			
2.1.4.	river continuity	V				
2.2.						
2.2.1.	depth variations	V	V	V	V	
2.2.2.	width variations	V				
2.2.3.	dominant substrate composition of the bed	V	V	V	V	
2.2.4.	cross-section of the bed		V	v		
2.2.5.	structure of the shore zone	V				
2.2.6.	shore structure		V			
2.2.7.	structure of the tidal zone			V	V	
2.3.	Tidal regime					
2.3.1.	freshwater flow			V		
2.3.2.	direction of the main currents				V	
2.3.3.	wave exposure			V	V	
3.	Chemical and physico-chemical elements support	ing the	biolog	gical elements	S	
3.1.	General criteria					
3.1.1.	water transparency		V	V	V	
3.1.2.	thermal conditions	V	V	V	V	
3.1.3.	oxygenation conditions		V	V	V	
	salinity		V	V	V	
3.1.5.	acidification		V			
3.1.6.	concentration of nutrients		V	V	V	
3.2.	Pollutants					
3.2.1.	artificial polluting substances discharged into the	V	V	V	V	

	particular water body				
3.2.2	other polluting substances discharged into the	V	V	V	v
	particular water body				

Notes.

- 1. v the criterion, according to which the ecological quality of waters of the relevant group shall be evaluated.
- 2. (1) to be assessed only in rivers, length of which exceeds 100 km and area of the catchment basin of which exceeds  $1000 \text{ km}^2$ .
- 3. the following standards shall be used for taking of zoobenthos samples:
- 3.1. standard LVS EN ISO 5667-3:2007 "Water quality Sampling Part 3: Guidance on the preservation and handling of samples";
- 3.2. standard LVS EN 27828:2003 "Water quality Methods of biological sampling Guidance on handnet sampling of aquatic benthic macro-invertebrates";
- 3.3. standard LVS EN 28265:2003 "Water quality Design and use of quantitative samplers for benthic macro-invertebrates on stony substrata in shallow freshwaters";
- 3.4. standard LVS EN ISO 9391:2003 "Water quality Sampling in deep waters for macro-invertebrates Guidance on the use of colonization, qualitative and quantitative samplers";
- 3.5. standard LVS EN ISO 8689-1:2004 "Water quality Biological classification of rivers Part 1: Guidance on the interpretation of biological quality data from surveys of benthic macroinvertebrates";
- 3.6. standard LVS EN ISO 8689-2:2004 "Water quality Biological classification of rivers Part 2: Guidance on the presentation of biological quality data from surveys of benthic macroinvertebrates".

Minister for the Environment

R. Vējonis

# Criteria for the Determination of High, Good and Moderate Ecological Quality of Surface Water Bodies

[11 August 2009]

# 1. Rivers

No.	High status	Good status	Moderate status
1.1.	Biological criteria		
1.1.1.	Phytoplankton		
	The composition of taxonomic groups of phytoplankton corresponds totally or nearly totally to conditions undisturbed by anthropogenic activities.  The average phytoplankton abundance is wholly consistent with the typespecific physico-chemical conditions of surface water bodies and is not such as to significantly alter the typespecific water transparency conditions. Planktonic blooms occur at a frequency and intensity which is consistent with the typespecific physic-chemical conditions of surface water bodies.	the composition and abundance of planktonic taxa compared to the type-specific communities of water bodies. Such changes do not indicate any accelerated growth of algae resulting in undesirable disturbances to the balance of organisms present in the water body or to the physico-chemical quality of the water or sediment. A slight increase in the frequency and intensity of the type-specific planktonic blooms may occur.	bodies exceeding good quality indicators and a significant undesirable disturbance in the values of other biological and physico-chemical quality elements may occur.  A moderate increase in the frequency and intensity of
1.1.2.	Macrophytes and phytobenth		
	taxonomic groups of macrophytes and phytobenthos corresponds totally or nearly totally to conditions undisturbed by anthropogenic activities.  There are no detectable changes in the average macrophytic and the average phytobenthic	composition and abundance of macrophytic and phytobenthic taxa compared to the type-specific communities. Such changes do not indicate any accelerated growth of phytobenthos or higher	composition of macrophytic and phytobenthic taxa differ from the type-specific community and are significantly more distorted than at good status. Moderate changes in the average macrophytic and the average phytobenthic abundance are evident in comparison to good status.

present in the water body or to the physico-chemical community may be quality of the water or interfered with and in some sediment. The phytobenthic community is not adversely tufts and coats present as a affected by bacterial tufts result of anthropogenic activities.

# 1.1.3. Benthic invertebrate fauna

indicators the There are slight changes in The The of composition and composition and abundance the indicators of the abundance of benthic of taxonomic groups of composition and abundance invertebrate taxa differ from benthic invertebrate taxa of benthic invertebrate taxa the type-specific correspond totally or nearly compared to the type-community more than for conditions specific communities. totally good status. Major undisturbed by taxonomic groups of the The ratio of disturbance-type-specific anthropogenic activities. community sensitive taxa to insensitive are absent.

The ratio of disturbance taxa shows slight alteration sensitive taxa to insensitive from type-specific levels of The ratio of disturbancetaxa shows no signs of water bodies. sensitive taxa to insensitive alteration from levels taxa. and the level undisturbed by The level of diversity of diversity, are substantially anthropogenic activities. invertebrate shows lower than the type-specific taxa slight signs of alteration level and significantly lower

The level of diversity of from type-specific levels than for good status. invertebrate taxa shows no undisturbed by sign of alteration from anthropogenic activities. levels undisturbed by anthropogenic activities.

# 1.1.4. Fish fauna

the There are slight changes in The The indicators of composition and composition and abundance species composition and abundance of fish species of taxonomic groups of fish abundance from the type-differ from the type-specific correspond totally or nearly specific communities. community more than for conditions Changes are attributable to good status. Changes are totally to undisturbed by anthropogenic impacts on attributable to physico-chemical and anthropogenic impacts anthropogenic activities. hydromorphological quality physico-chemical type-specific elements. The age structures hydromorphological quality All fish of the fish communities elements. The age structure disturbance-sensitive show signs of disturbance of the fish communities species are present. attributable toshows major signs The age structures of the anthropogenic impacts, and, anthropogenic disturbance, fish communities show little in a few instances, are to the extent that a moderate sign of anthropogenic indicative of a failure in the proportion of the type disturbance and are not reproduction or specific species are absent indicative of a failure in the development of a particular or of very low abundance. or species, to the extent that reproduction development any some age classes may be of particular species. missing.

#### 1.2. Hydromorphological criteria 1.2.1. Hydrological regime The quantity and dynamics Conditions consistent with Conditions consistent with of flow, and the resultant the achievement of the the achievement of connection to groundwaters, values of parameters values of parameters reflect totally, or nearly characterising good characterising moderate conditions ecological quality totally. quality forecological by biological elements undisturbed biological elements. anthropogenic activities. 1.2.2. River continuity The continuity of the river is Conditions consistent with Conditions consistent with by the achievement of the the achievement of not disturbed anthropogenic activities and values parameters values of parameters undisturbed characterising good characterising allows moderate migration of aquatic ecological quality for ecological quality sediment biological elements. biological elements. organisms and transport. 1.2.3. Morphological conditions Channel patterns, width and Conditions consistent with Conditions consistent with flow the achievement of the the achievement of depth variations. velocities, substrate values parameters values parameters of of conditions and both the characterising good characterising moderate structure and condition of ecological quality forecological quality zones biological elements. biological elements. riparian correspond totally or nearly totally to conditions undisturbed by anthropogenic activities. 1.3. Physico-chemical criteria 1.3.1. General conditions The values physico-Temperature, salinity, Conditions consistent with elements oxygen balance, pH level the achievement of chemical correspond totally or nearly and acid neutralising values of parameters conditions capacity do not reach levels characterising totally moderate to undisturbed by outside the range established ecological anthropogenic activities. so as to ensure the biological elements. functioning of the concentrations specific ecosystem and the Nutrient remain within the range achievement of the values normally associated with specified for good waters by ecological status for the undisturbed anthropogenic activities. biological quality elements. Temperature, salinity, oxygen balance, pH level Nutrient concentrations do neutralising not exceed the capacity do not show signs established so as to ensure anthropogenic the of functioning the and remain ecosystem disturbance the within the range normally achievement of the values of associated with waters parameters characterising undisturbed by good ecological quality for

	anthropogenic activities.	biological elements.	
1.3.2.	Specific synthetic pollutants		
	and at least below the limits of detection of the most advanced analytical techniques in general use.	Concentrations not in excess of the chemical quality requirements set in accordance with the regulatory enactments regarding environmental quality norms for surface waters.	values of parameters characterising moderate ecological quality for biological elements.
1.3.3.	Specific non-synthetic pollut	ants	
	within the range normally associated with waters undisturbed by anthropogenic activities (background levels).	Concentrations not in excess of the chemical quality requirements set in accordance with the regulatory enactments regarding environmental quality norms for surface waters.	the achievement of the values of parameters characterising moderate ecological quality for biological elements.

# 2. Lakes

No.	High status	Good status	Moderate status
2.1.	Biological criteria		
2.1.1.	Phytoplankton		
	The indicators of the composition and abundance of taxonomic groups of phytoplankton correspond totally or nearly totally to conditions undisturbed by anthropogenic activities.  The average phytoplankton biomass is consistent with the type-specific physicochemical conditions of surface water bodies and is not such as to significantly alter the type-specific water transparency conditions.	accelerated growth of algae resulting in undesirable disturbances to the balance of organisms present in the water body or to the physico-chemical quality of the water or sediment. A slight increase in the frequency and intensity of the type-specific planktonic blooms may occur.	composition and abundance of planktonic taxa compared to the type-specific communities of water bodies exceeding good status and a significant undesirable disturbance in the values of other biological and physicochemical quality elements may occur.  A moderate increase in the frequency and intensity of planktonic blooms may
2.1.2.	Macrophytes and phytobenth		
	composition of taxonomic	There are slight changes in the indicators of the composition and abundance	composition of macrophytic

correspond of macrophytic and from phytobenthos the type-specific totally or nearly totally to phytobenthic taxa compared community and type-specific significantly more distorted conditions undisturbed by to the anthropogenic activities. communities. Such changes than at good status. Changes indicate any in the average macrophytic do There are no detectable accelerated ofland growth the average higher phytobenthic abundance are changes in the average phytobenthos or macrophytic and the average forms of plant life resulting evident. phytobenthic abundance. in undesirable disturbance to the balance of organisms The phytobenthic present in the water body or community may be physico-chemical interfered with and in some quality of the water. The areas, displaced by bacterial phytobenthic community is tufts and coats present as a not adversely affected by result of anthropogenic bacterial tufts and coats activities.

# 2.1.3. Benthic invertebrate fauna

the There are slight changes in The The indicators of composition and composition and abundance the composition andabundance of benthic of abundance of invertebrate invertebrate taxa differ from of taxonomic groups invertebrate taxa taxa compared to the type-the type-specific community correspond totally or nearly specific communities. more than for good status. totally conditions Major taxonomic groups of by The ratio of disturbance-the type-specific community undisturbed anthropogenic activities. sensitive taxa to insensitive are absent. taxa shows slight alteration

present due to anthropogenic

activity.

The ratio of disturbance from type-specific levels of The ratio of disturbancesensitive taxa to insensitive water bodies. sensitive taxa to insensitive taxa shows no signs taxa, and the level alteration levels The level of diversity of diversity, are lower than the from byinvertebrate shows type-specific undisturbed taxa level anthropogenic activities. slight signs of alteration significantly lower than for from levels undisturbed by good status.

The level of diversity of anthropogenic activities. invertebrate taxa shows no sign of alteration from levels undisturbed by anthropogenic activities.

# 2.1.4. Fish fauna

The indicators of the There are slight changes in The indicators composition and abundance species composition and composition and abundance of taxonomic groups of fish abundance from the type-of fish species differ from correspond totally or nearly specific communities. the type-specific community conditions Changes are attributable to more than for good status. totally to undisturbed by anthropogenic impacts on Changes are attributable to physico-chemical and anthropogenic impacts anthropogenic activities. hydromorphological quality physico-chemical and All type-specific elements. The age structures hydromorphological quality the disturbance-sensitive fish of the fish communities elements. The age structure

show signs of disturbance of the fish species are present. communities attributable to anthropogenic shows major signs The age structures of the fish impacts, and, in a few anthropogenic disturbance, communities show little signinstances, are indicative of alto the extent that a moderate of anthropogenic disturbance failure in the reproduction or proportion of and are not indicative of a development of a particular specific species are absent. failure in the reproduction or species, to the extent that any some age classes may be development of particular species. missing.

#### 2.2. Hydromorphological criteria

# 2.2.1. Hydrological regime

The quantity and dynamics Conditions consistent with Conditions consistent with of flow, level, residence the achievement of the the achievement of time, and the resultant values of parameters values parameters of connection to groundwaters, characterising good characterising moderate reflect totally, or nearly ecological quality for ecological for quality totally, conditions biological elements. biological elements. undisturbed by

anthropogenic activities. 2.2.2. Morphological conditions

> Lake depth variation, Conditions consistent with Conditions consistent with quantity and structure of the the achievement the the achievement of of substrate, both the values parameters values and of of parameters structure and condition of characterising good characterising moderate the lake shore zone ecological quality for ecological quality for correspond totally or nearly biological elements. biological elements.

totally conditions to undisturbed by anthropogenic activities.

#### Physico-chemical criteria 2.3.

# 2.3.1. General conditions

physico-Temperature, transparency, Conditions consistent with The values chemical elements salinity, pH level, oxygen the achievement of correspond totally or nearly balance and acid neutralising values parameters conditions capacity do not reach levels characterising totally moderate undisturbed by outside the range established ecological quality for the biological elements anthropogenic activities. as to ensure

functioning of the

Nutrient concentrations specific ecosystem and the remain within the range achievement of the values associated with specified for good ecological normally waters undisturbed by status for the biological

anthropogenic activities. quality elements.

Temperature, transparency,

salinity, pH level, oxygen Nutrient concentrations do balance and acid neutralising not exceed capacity do not show signs established so as to ensure of anthropogenic disturbance the functioning and remain within the range ecosystem and the normally associated with achievement of the values of by parameters waters undisturbed characterising

	anthropogenic activities.	good ecological quality for biological elements.	
2.3.2.	Specific synthetic pollutants		
	and at least below the limits of detection of the most advanced analytical	Concentrations not in excess of the chemical quality requirements set in accordance with the regulatory enactments regarding environmental quality norms for surface waters.	the achievement of the values of parameters characterising moderate ecological quality for biological elements.
2.3.3.	Specific non-synthetic pollut	ants	
	within the range normally associated with waters undisturbed by anthropogenic activities	Concentrations not in excess of the chemical quality requirements set in accordance with the regulatory enactments regarding environmental quality norms for surface waters.	the achievement of the values of parameters characterising moderate ecological quality for

# 3. Transitional waters

composition and the indicators of the composition of mac abundance of taxonomic composition and abundance and phytobenthic tax groups of phytoplankton of planktonic taxa compared from the type correspond totally or to the type-specific community and nearly totally to communities. Such changes significantly more	ka differ -specific
The indicators of the There are slight changes in The indicators of composition and the indicators of the composition of mac abundance of taxonomic composition and abundance and phytobenthic tax groups of phytoplankton of planktonic taxa compared from the type correspond totally or to the type-specific community and nearly totally to communities. Such changes significantly more	crophytic ka differ -specific
composition and the indicators of the composition of mac abundance of taxonomic composition and abundance and phytobenthic tax groups of phytoplankton of planktonic taxa compared from the type correspond totally or to the type-specific community and nearly totally to communities. Such changes significantly more	crophytic ka differ -specific
conditions undisturbed by anthropogenic activities.  The indicators of the disturbances to the balance of disturbed and may be phytoplankton biomass organisms present in the to produce a signare consistent with the type-specific physico-chemical conditions and are not such as to significantly alter the significantly alter the transparency conditions.  Planktonic blooms occur at a frequency and intensity which is consistent with the type-specific physico-chemical conditions.  3.1.2. Macroalgae	oderately e such as gnificant ce in the iological e in the nsity of ay occur od status. s of occur

the There are slight changes in The indicators indicators of of composition of taxonomic the indicators the composition of macroalgal of groups of macroalgal taxa composition and abundance taxa differ from the typeor of macroalgal taxa compared specific community and are correspond totally nearly totally type-specific significantly more distorted toto conditions undisturbed by communities. Such changes than at good status. Moderate anthropogenic activities. do indicate anychanges not in the ofmacroalgal accelerated growth abundance There are no detectable phytobenthos or higher forms evident compared to good changes in macroalgal of plant life resulting in status and may be such as to due toundesirable disturbance to the result in an undesirable cover balance of organisms present disturbance to the balance of anthropogenic activities. in the water body or to the organisms present in the water physico-chemical quality of body. the water. 3.1.3. Angiosperms The indicators of the There are slight changes in The indicators the andthe composition of composition of angiosperm composition abundance of taxonomic angiosperm taxa compared to taxa differ from the typegroups of angiosperms the type-specific specific community and are correspond totally or communities. significantly more distorted nearly totally to than at good status. conditions undisturbed by Angiosperm abundance of There are moderate distortions anthropogenic activities. shows slight signs disturbance. the abundance There are no detectable angiosperm taxa compared to good status. changes in angiosperm abundance due anthropogenic activities. 3.1.4. Benthic invertebrate fauna The indicators the There are slight changes in The composition and composition andthe composition andabundance benthic abundance of taxonomic abundance benthiclinvertebrate taxa differ from of groups benthic invertebrate taxa compared to the type-specific community of type-specific more than for good status. invertebrate taxathe or communities. Most of the Taxa indicative of pollution correspond totally to sensitive taxa of the type-are present. nearly totally conditions undisturbed by specific communities are anthropogenic activities. present. Many of the sensitive taxa of the type-specific communities All disturbanceare absent. the sensitive taxa associated with conditions undisturbed by anthropogenic activities

## 3.1.5. Fish fauna

are present.

The indicators of the The abundance of the Anthropogenic impact on and disturbance-sensitive species physico-chemical composition or abundance of taxonomic shows of hydromorphological slight signs groups of fish correspond distortion from type-specific elements is so significant that

totally or nearly totally to conditions attributable to many type-specific species are conditions undisturbed by anthropogenic impacts on absent. anthropogenic activities. physico-chemical or hydromorphological quality elements. Hydromorphological criteria 3.2. 3.2.1. Tidal regime The freshwater flow Conditions consistent with Conditions consistent with the corresponds the achievement of the values achievement of the values of regime totally or nearly totally to of parameters characterising parameters conditions undisturbed by good ecological quality for moderate ecological quality anthropogenic activities. | biological elements for biological elements. 3.2.2. Morphological conditions Depth variations, Conditions consistent with Conditions consistent with the substrate conditions, and the achievement of the values achievement of the values of both the structure and of parameters characterising parameters condition of the intertidal good ecological quality for moderate ecological quality zones correspond totally biological elements. for biological elements. totally nearly conditions undisturbed by anthropogenic activities. Physico-chemical criteria 3.3. 3.3.1. General conditions Physico-chemical Temperature, oxygen balance, Conditions consistent with the correspondsalinity and transparency, as achievement of the values of elements totally or nearly totally to well nutrient parameters as characterising conditions undisturbed by concentrations do not reach moderate ecological quality anthropogenic activities. levels outside the ranges for biological elements. established so as to ensure the Nutrient concentrations functioning of the ecosystem remain within the range and the achievement of the normally associated with values of parameters waters undisturbed by characterising good anthropogenic activities. ecological quality for biological elements. Temperature, oxygen balance, salinity and transparency do not show signs of anthropogenic disturbance and remain within the range normally associated with conditions undisturbed anthropogenic activities. 3.3.2. Specific synthetic pollutants Concentrations close to Concentrations not in excess Conditions consistent with the zero and at least below the of quality achievement of the values of the chemical limits of detection of the requirements in parameters characterising set most advanced analytical accordance with the moderate ecological quality techniques in general use. regulatory enactments for biological elements.

		regarding environmental quality norms for surface waters.	
3.3.3.	Specific non-synthetic poll	lutants	
	within the range normally associated with waters undisturbed by anthropogenic activities (background levels).	of the chemical quality requirements set in	

# 4. Coastal waters

No.	High status	Good status	Moderate status		
4.1.	Biological criteria				
4.1.1.	Phytoplankton				
	The indicators of the		The composition and		
		abundance of phytoplanktonic			
		taxa show slight signs of			
		disturbance. Such changes do			
	consistent with conditions not indicate any accelerated				
		growth of algae resulting in			
	anthropogenic activities.	undesirable disturbances to the			
	The average	balance of organisms present in the water body or to the			
		physico-chemical quality of			
			biological quality elements.		
	consistent with the type-the water.  specific physico-chemical biological quality elements.				
	conditions and is not such A slight increase in the A moderate increase in the				
	as to significantly alter the frequency and intensity of the frequency and intensity of				
		water type-specific planktonic planktonic blooms may			
	transparency conditions.	blooms may occur.	occur in comparison to good		
			status. Persistent blooms of		
	Planktonic blooms occur		phytoplankton may occur		
	at a frequency and		during summer months.		
	intensity which is				
	consistent with the type-				
	specific physico-chemical				
-	conditions.				
4.1.2.	Macroalgae and angiosperi				
	All disturbance-sensitive		A moderate number of the		
	_	macroalgal and angiosperm			
		taxa associated with conditions			
		undisturbed by anthropogenic			
		l ±	conditions undisturbed by anthropogenic activities are		
	anthropogenic activities are present.	The level of macroalgal cover	1 0		
	are present.	and angiosperm abundance			
	The levels of macroalgal				
	The revers of macroalgar	onow ought oighs of			

cover and angiospermdisturbance.  abundance are consistent with conditions undisturbed by anthropogenic activities.  4.1.3. Benthic invertebrate fauna  The indicators of the There are slight changes in the The level of diversity and composition and composition and abundance of fabundance of invertebrate days of the type-specific days of the type-specific conditions undisturbed by present.  All the disturbance by anthropogenic activities.  All the disturbance by anthropogenic activities are present.  All the disturbance-sensitive taxa activities are present.  4.2.1. Tidal regime  The freshwater flow Conditions consistent with the Conditions consistent with regime and the directionachievement of the values of the achievement of the and speed of dominant parameters characterising good values of parameters correspond totally cological elements.  4.2.2. Morphological conditions  The depth variation Conditions consistent with the Conditions consistent with structure and substrate of achievement of the values of the achievement of the the coastal bed, and bothparameters characterising good values of parameters the structure and conditione cological quality for characterising moderate of the inter-tidal zones biological elements.  4.2.2. Morphological conditions  The depth variation Conditions consistent with the Conditions consistent with the the conditions undisturbed by anthropogenic activities.  4.3.1. General conditions  Physico-chemical Temperature, oxygenation Conditions consistent with elements correspond conditions, salinity and waterthe a			
with conditions undisturbed by anthropogenic activities.  4.1.3. Benthic invertebrate fauna  The indicators of the There are slight changes in the The level of diversity and composition and abundance of abundance of invertebrate abundance of taxonomic benthic invertebrate taxatax is moderately outside groups of benthic compared to the type-specific conditions that invertebrate taxa-communities. Most of the type-specific conditions than one are present of tally of sensitive taxa of the type-specific conditions and present anthropogenic activities.  All the disturbance-sensitive taxa associated with conditions undisturbed by anthropogenic activities are present.  4.2. Hydromorphological criteria  4.2.1. Tidal regime  The freshwater flow Conditions consistent with the regime and the directionachievement of the values of the achievement of the and speed of dominant parameters characterising good currents correspond totally ecological quality for characterising moderate or nearly totally to biological elements.  4.2.2. Morphological conditions  The depth variation, Conditions consistent with the conditions consistent with the tructure and substrate of achievement of the values of the achievement of the the coastal bed, and both parameters characterising good values of parameters the structure and conditione cological quality for characterising moderate of the inter-tidal zones biological elements.  4.2. Morphological conditions  The depth variation, Conditions consistent with the conditions undisturbed by anthropogenic activities.  4.2. Physico-chemical riteri		cover and angiosperm disturbance.	Macroalgal cover and
undisturbed by anthropogenic activities.  4.1.3. Benthic invertebrate fauna  The indicators of the There are slight changes in the The level of diversity and composition and abundance of abundance of invertebrate fauna abundance of taxonomic benthic invertebrate taxalaxa is moderately outside groups of benthic compared to the type-specific the range associated with the invertebrate taxal communities. Most of the type-specific conditions undisturbed by anthropogenic activities.  All the disturbance-sensitive taxa associated with conditions undisturbed by anthropogenic activities are present.  4.2. Hydromorphological criteria  4.2.1. Tidal regime  The freshwater flow Conditions consistent with the regime and the direction achievement of the values of the achievement of the and speed of dominant parameters characterising good values of parameters currents correspond totally cological quality for conditions undisturbed by anthropogenic activities.  4.2.2. Morphological conditions  The depth variation, Conditions consistent with the conditions consistent with structure and substrate of achievement of the values of the achievement of the he coastal bed, and both parameters characterising good values of parameters the structure and conditions conditions consistent with the structure and conditions conditions undisturbed by anthropogenic activities.  4.2.2. Morphological conditions  The depth variation, Conditions consistent with the coastal bed, and both parameters characterising good values of parameters the structure and condition cological quality for characterising moderate of the inter-tidal zones biological elements.  correspond totally to conditions undisturbed by anthropogenic activities.  4.3.1. General conditions  Physico-chemical Temperature, oxygenation Conditions consistent with teachievement of the totally or nearly totally to transparency do not reach values of parameters conditions undisturbed by levels outside the ranges characterising moderate conditions undisturbed by levels outside the ranges chara			
anthropogenic activities.  4.1.3. Benthic invertebrate fauna  The indicators of the There are slight changes in the Composition and composition and abundance of abundance of invertebrate abundance of taxonomic benthic invertebrate taxal axa is moderately outside groups of benthic compared to the type-specific the range associated with the invertebrate taxal communities. Most of the type-specific conditions than correspond totally or sensitive taxa of the type-specific conditions than nearly totally to pecific communities are indicative of pollution are conditions undisturbed by present.  All the disturbance-sensitive taxa associated with conditions undisturbed by anthropogenic activities are present.  4.2. Hydromorphological criteria  4.2.1. Tidal regime  The freshwater flow Conditions consistent with the regime and the directionachievement of the values of the achievement of the and speed of dominant parameters characterising good values of parameters conditions undisturbed by anthropogenic activities.  4.2.2. Morphological conditions  The depth variation, Conditions consistent with the conditions consistent with structure and substrate of achievement of the values of the achievement of the the coastal bed, and both parameters characterising good values of parameters the structure and conditions consistent with the conditions undisturbed by anthropogenic activities.  4.2.2. Morphological conditions  The depth variation, Conditions consistent with the conditions c			moderately disturbed and
the balance of organisms present in the water body.  4.1.3. Benthic invertebrate fauna  The indicators of the There are slight changes in the composition and abundance of abundance of invertebrate abundance of taxonomic benthic invertebrate taxataxa is moderately outside groups of benthic compared to the type-specific the range associated with the invertebrate taxa-communities. Most of the type-specific conditions than correspond totally to specific communities are indicative of pollution are conditions undisturbed by present.  All the disturbance-sensitive taxa associated with conditions undisturbed by anthropogenic activities are present.  4.2. Hydromorphological criteria  4.2.1. Tidal regime  The freshwater flow Conditions consistent with the regime and the directionachievement of the values of the achievement of the and speed of dominant parameters characterising good values of parameters currents correspond totally to biological elements.  4.2.2. Morphological conditions  The depth variation Conditions consistent with the conditions consistent with structure and substrate of achievement of the values of the achievement of the the coastal bed, and both parameters characterising good values of parameters of the inter-tidal zones biological elements.  4.2.2. Morphological conditions  The depth variation Conditions consistent with the conditions consistent with structure and substrate of achievement of the values of the achievement of the the coastal bed, and both parameters characterising good values of parameters of the inter-tidal zones biological elements.  4.2.2. Morphological conditions  The depth variation Conditions consistent with the conditions consistent with the conditions conditions consistent with the conditions conditions consistent with the conditions consistent with the conditions condit		j	1 -
4.1.3. Benthic invertebrate fauna  The indicators of the There are slight changes in the The level of diversity and composition and composition and abundance of laxonomic benthic invertebrate taxal axia is moderately outside groups of benthic compared to the type-specific the range associated with the correspond totally or sensitive taxa of the type-specific conditions than correspond totally or sensitive taxa of the type-specific conditions than conditions undisturbed by present.  All the disturbance-sensitive taxa associated with conditions undisturbed by anthropogenic activities are present.  4.2. Hydromorphological criteria  4.2.1. Tidal regime  The freshwater flow Conditions consistent with the conditions undisturbed by anthropogenic activities are present.  4.2.2. Mydromorphological criteria  4.2.3. Or her freshwater flow conditions consistent with the conditions undisturbed by anthropogenic activities.  4.2.4. Mydromorphological criteria  4.2.5. Or her freshwater flow conditions consistent with the conditions undisturbed by anthropogenic activities.  4.2.6. Mydromorphological criteria  4.2.7. Or her freshwater flow conditions consistent with the conditions consistent with the conditions consistent with the conditions conditions undisturbed by anthropogenic activities.  4.2.1. The depth variation conditions consistent with the conditions condition		anthropogenic activities.	an undesirable disturbance to
4.1.3. Benthic invertebrate fauna  The indicators of the There are slight changes in the Composition and composition and abundance of abundance of invertebrate abundance of taxonomic benthic invertebrate taxalaxa is moderately outside groups of benthic compared to the type-specific the range associated with the invertebrate taxal accommunities. Most of the type-specific conditions than correspond totally or sensitive taxa of the type-at good status. Taxal nearly totally tospecific communities are indicative of pollution are conditions undisturbed by present.  All the disturbance-sensitive taxal associated with conditions undisturbed by anthropogenic activities are present.  4.2. Hydromorphological criteria  4.2.1. Tidal regime  The freshwater flow Conditions consistent with the Conditions consistent with regime and the direction achievement of the values of the achievement of the and speed of dominant parameters characterising good values of parameters currents correspond totally ecological quality for characterising moderate or nearly totally tobiological elements.  4.2.2. Morphological conditions  The depth variation Conditions consistent with the Conditions consistent with structure and substrate of achievement of the values of the achievement of the the coastal bed, and both parameters characterising good values of parameters the structure and conditione ecological quality for characterising moderate of the inter-tidal zones biological elements.  4.2.2. Morphological conditions  The depth variation conditions consistent with the conditions consistent with structure and conditions ecological quality for characterising moderate of the inter-tidal zones biological elements.  Conditions undisturbed by anthropogenic activities.  4.3.1. General conditions  Physico-chemical Temperature, oxygenation conditions consistent with econditions undisturbed by levels outside the ranges characterising moderate conditions undisturbed by levels outside the ranges characterising moderate			
The indicators of the There are slight changes in the The level of diversity and composition and abundance of abundance of invertebrate abundance of taxonomic benthic invertebrate taxad taxa is moderately outside groups of benthic/compared to the type-specific/the range associated with the invertebrate taxad communities. Most of the type-specific conditions than correspond totally or sensitive taxa of the type-specific conditions than correspond totally or sensitive taxa of the type-specific conditions than conditions undisturbed by present.  All the disturbance-sensitive taxa associated with conditions undisturbed by anthropogenic activities are present.  All the disturbance-sensitive taxa associated with conditions undisturbed by anthropogenic activities are present.  4.2. Hydromorphological criteria  4.2.1. Tidal regime  The freshwater flow Conditions consistent with the regime and the direction achievement of the values of the achievement of the and speed of dominant parameters characterising good values of parameters currents correspond totally ecological quality for characterising moderate or nearly totally to biological elements.  4.2.2. Morphological conditions  The depth variation, Conditions consistent with the structure and substrate of achievement of the values of the achievement of the the coastal bed, and both parameters characterising good values of parameters the structure and conditione cological quality for correspond totally or nearly totally to conditions undisturbed by anthropogenic activities.  4.2.2. Mypsico-chemical retieria  4.3.1. General conditions  Physico-chemical Temperature, oxygenation Conditions consistent with elements correspond conditions, salinity and water the achievement of the totally or nearly totally to transparency do not reach values of parameters conditions undisturbed by levels outside the rangescharacterising moderate conditions undisturbed by levels outside the rangescharacterising moderate conditions undisturbed by levels outside the rangescharacterising			present in the water body.
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anthropogenic activities. established so as to ensure the ecological quality for			_

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		functioning of the ecosystem		
	Nutrient concentrations	and the achievement of the		
	remain within the range	values of parameters		
	normally associated with	characterising good ecological		
	waters undisturbed by	quality for biological elements.		
	anthropogenic activities.	Nutrient concentrations do not		
		exceed the levels established		
	Temperature, oxygen	so as to ensure the functioning		
	balance, salinity and	of the ecosystem and the		
	transparency do not show	achievement of the values of		
		parameters characterising good		
	disturbance and remain	ecological quality for		
	within the range normally			
	associated with conditions			
	undisturbed by			
	anthropogenic activities.			
4.3.2.	2. Specific synthetic pollutants			
	Concentrations close to	Concentrations not in excess		
	zero and at least below the	of the chemical quality	the achievement of the	
		requirements set in accordance		
	most advanced analytical	with the regulatory enactments	characterising moderate	
	techniques in general use.	0 0	1 3	
		quality norms for surface	biological elements.	
		waters.		
4.3.3.	Specific non-synthetic poll	utants		
	Concentrations remain	Concentrations not in excess	Conditions consistent with	
	within the range normally	of the chemical quality	the achievement of the	
		requirements set in accordance	-	
		with the regulatory enactments		
	anthropogenic activities	regarding environmental	ecological quality for	
	1			
	(background levels).	quality norms for surface	biological elements.	

# 5. Artificial or heavily modified surface water bodies

No.	Maximum ecological potential	Good ecological potential	Moderate ecological potential
5.1.	Biological criteria		
	The values of the relevant biological quality elements reflect, as far as possible, those associated with the closest comparable surface water body type, given the physical conditions which result from the artificial or heavily modified characteristics of the water body.	the values of the relevant biological quality elements as compared to the values found at maximum ecological potential.	changes in the values of the relevant biological quality
<b>5.2.</b>	Hydromorphological criteria		
	The hydromorphological conditions are consistent with the only impacts on the surface water		with the achievement

body being those resulting from elements. biological quality the artificial or heavily modified elements. characteristics of the water body once all mitigation measures have been taken to ensure the best approximation to ecological continuum, in particular with respect to migration of fauna and appropriate spawning and breeding grounds. 5.3. Physico-chemical criteria 5.3.1. General conditions elements The values for physico-Conditions consistent Physico-chemical correspond totally or nearly totally chemical elements are within with the achievement to the conditions undisturbed by the ranges established so as of the values for the anthropogenic activities associated to ensure the functioning of biological quality with the surface water body type the ecosystem and the elements. most closely comparable to the achievement of the values for artificial or heavily modified body the biological quality concerned. elements. Nutrient concentrations remain Temperature and pH do not normally reach levels outside the within range waters ranges established so as to associated with such anthropogenic ensure the functioning of the undisturbed by activities. ecosystem and achievement of the values for The levels of temperature, oxygen the biological quality balance and pH are consistent with elements. Nutrient the those found in the surface concentrations do not exceed water body type most closely the levels established so as to comparable to the artificial or ensure the functioning of the heavily modified body concerned ecosystem under conditions undisturbed by achievement of the values for anthropogenic activities. the biological quality elements. 5.3.2. Specific synthetic pollutants Concentrations close to zero and at Concentrations not in excess Conditions consistent least below the limits of detection of the chemical quality with the achievement of the most advanced analytical requirements in of the values set techniques in general use. accordance the parameters with enactments characterising regulatory regarding environmental moderate ecological quality norms for surface potential for waters. biological elements. 5.3.3. Specific non-synthetic pollutants Concentrations remain within the Concentration not in excess Conditions consistent range normally associated with of the quality with the achievement chemical byrequirements undisturbed specified in of the values waters anthropogenic activities accordance with this parameters (background levels). Regulation. characterising

	mode	erate	ecological
	poter	ntial	for
	biolo	ogical o	elements.

Minister for the Environment

R. Vējonis