**Directive on groundwater (2006/118/EC)**

*Legal reference*

Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2006 on **the protection of groundwater against pollution and deterioration**

**Transposition**

1. **Which parts of the Directive have been transposed?**

The Directive is in the very early stage of transposition. Annex I and part b of Annex II of this Directive have been fully transposed by the Decree on classification of underground and surface waters (Official Gazette of the Republic of Montenegro 02/07).

1. **How and when will the remaining provisions be transposed?**

The main legal instruments planned to achieve complete transposition are the amendments to the Law on Water defining the Act on protection of groundwater against pollution and deterioration, planned for 2015.

The transposition is planned to be finalized by 2015, according to the Progress Monitoring 2012 data.

**Implementation**

**What has been achieved as regards:**

* **Establishing groundwater threshold values (Art. 3)**

On the basis of Art. 75 paragraph 6 and Art. 76 paragraph 2 of the Law on Waters ("Official Gazette of the Republic of Montenegro" No. 27/07), the Government of the Republic of Montenegro adopted the Regulation on the classification and categorization of surface and ground water ("Official Gazette of Montenegro", no. 2/07 of 29 October 2007). Under this Regulation the bodies of groundwater used for water supply and the food industry are valid limit values ​​(threshold values​​) required for Class A (to be determined complete management plans at catchment areas of river basins or parts of them), the rest of the body other than groundwater of groundwater within the zone) are valid limits for Class A1 (Table 1), and for groundwater bodies within the zone (and source Zeta Chapter) applicable limits for Class A2 (Table 1). Limits for trichlorethylene and tetrachlorethylene were not identified yet.

Tabular presentation of limit values (*threshold values*) for classes A, A1 and A2

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Indicators | Units of measurement | A | A1 | A2 |
| 1 | pH |  | 6,80-8,30 | 6,80-8,50 | 6,50- 8,50 |
| 2 | Color (after regular filtration) | mg/l  Pt scale | 5 | 5 | 10 |
| 3 | Turbidity | NTU | 1 | 5 | 5 |
| 4 | Total suspended matter | mg/l | 0 | <10 | 20 |
| 5 | Temperature | ˚C | 8-12 | 9-12 | 30 |
| 6 | Electrolytic conductivity | μs/cm at 20˚C | 300 | 400 | 600 |
| 7 | Ca/Mg ratio | Mol | 2-3 | 2-3 | 2-4 |
| 8 | Odor (at 25˚C) | Faktor razbl. | < from GD\* | < from GD\* | 3 |
| 9 | Nitrates - NO3 | mg/l | 10 | 20 | 25 |
| 10 | Nitrites - NO2 | mg/l | < from GD\* | 0,003 | 0,005 |
| 11 | Fluorides | mg/l | 0,05 | 1 | 1,5 |
| 12 | Dissolved iron | mg/l | 0,05 | 0,1 | 0,3 |
| 13 | Mangan | mg/l | < from GD\* | 0,005 | 0,01 |
| 14 | Copper | mg/l | 0,005 | 0,02 | 0,05 |
| 15 | Zink | mg/l | 0,01 | 0,05 | 1 |
| 16 | Boron | mg/l | 0,5 | 1 | 1 |
| 17 | Berylium | mg/l | 0,001 | 0,001 | 0,005 |
| 18 | Cobalt | mg/l | 0,001 | 0,001 | 0,010 |
| 19 | Nickel | mg/l | 0,002 | 0,002 | 0,050 |
| 20 | Vanadium | mg/l | 0,001 | 0,010 | 0,020 |
| 21 | Arsenic | mg/l | 0,001 | 0,010 | 0,050 |
| 22 | Cadmium | mg/l | 0,000 | 0,001 | 0,005 |
| 23 | Total chromium | mg/l | 0,000 | 0,000 | 0,05 |
| 24 | Lead | mg/l | 0,001 | 0,010 | 0,05 |
| 25 | Selenium | mg/l | 0,001 | 0,001 | 0,010 |
| 26 | Mercury | mg/l | < from GD\* | < from GD\* | 0,0005 |
| 27 | Barium | mg/l | 0,1 | 0,1 | 0,7 |
| 28 | Cyanide | mg/l | < from GD\* | 0,001 | 0,005 |
| 29 | Sulfates | mg/l | 20 | 20 | 50 |
| 30 | Chlorides | mg/l | 10 | 20 | 40 |
| 31 | Uranium | μBq/l | 0,000 | 0,010 | 0,050 |
| 32 | Surface active agents (react with methyl blue) | mg/l  (lazri-  sulphates) | 0,001 | 0,001 | 0,02 |
| 33 | Ortophosphates | mg/l  PO4 | 0,01 | 0,02 | 0,05 |
| 34 | Phenols | mg/l  C6H5OH | 0,0005 | 0,001 | 0,005 |
| 35 | Total mineral oils | mg/l | < from GD\* | 0,01 | 0,05 |
| 36 | Polycyclic aromatic hydrocarbons | mg/l | < from GD\* | 0,0002 | 0,0002 |
| 37 | Total pesticide | mg/l | < from GD\* | < from GD\* | 0,001 |
| 38 | Chemical oxygen consumtion | mg/l  O2 | 1 | 2 | 4 |
| 39 | Oxidability | mg KMnO4/l | 5 | 5 | 8 |
| 40 | Degree of saturation of dissolved oxygen | %  O2 | 75 | 80-110 | 80-120 |
| 41 | Biochemical oxygen consumption (BPK5) | mg/l  O2 | 2 | 3 | 4 |
| 42 | Ammonium ion | mg/l | 0,00 | 0,02 | 0,05 |
| 43 | Chloroform extracted matters | mg/l | < from GD\* | 0,01 | 0,2 |
| 44 | Total organic carbon (C) | mg/l | 1 | 1 | 2 |
| 45 | Total coliform 37˚C | /1ml | 10 | 10 | 500 |
| 46 | Fecal coliform | /100ml | 10 | 20 | 2000 |
| 47 | Fecal streptococci | /100ml | < from GD\* | 20 | 1000 |
| 48 | Salmonella |  | Not present in 5000 ml | Not present in 5000 ml | Nt present in 1000 ml |
| 49 | Saprobity |  | xenosaprobe | Oligosaprobe | Betamezosaprobe |
| 50 | Saprobity index |  | 1,0 | 1,5 | 1,8 |

* **Assessing groundwater chemical status (Art. 4)**

Systematic examination of the quality characteristics of groundwater in Montenegro is done by Hydrometeorological Institute of Montenegro as part of its core business and competencies, as defined by the Law on Water (Official Gazette of Montenegro, no. 27/07). Groundwater quality monitoring is currently performed at the sources that are used for water supply (groundwater provides about 92% of the total amount of water for cities) and 9 points (wells) that are included in the annual program of systematic testing of water quality (it should be noted that of the territory of Montenegro is 13 812 km2). The bodies of groundwater used for water supply of the population and the food industry accounts for the "class" ie. have good chemical status (good chemical status) if they meet the standards prescribed for Class A. For the rest of the bodies of groundwater (except groundwater bodies within the zone), it is calculated that they have a good chemical status if they meet the standards prescribed for Class A1, for groundwater bodies within the zone are calculated to have a good chemical status if they meet the standards set for Class A2.

* **Establishing a procedure and methodology for identifying and reversing significant and sustained upward trends (Art. 5)**

Article 73, paragraph 2 of the Law on Water defines the objectives of groundwater in listing the following two objectives:

- Prevent or limit the input of pollutants in groundwater and prevent deterioration of the status of all bodies of groundwater;

- Reducing the significant increase in the concentration of pollution resulting from the impact of human activities in order to progressively reduce pollution of groundwater.

Procedures and methodologies for the identification and reversal of significant and sustained upward trends (procedures and methodology for identifying and reversing significant and sustained upward trends) was not legally established, however, the Environmental Protection Agency (EPA) in its annual report shows a comparative analysis of the concentration of pollutants detected in groundwater in the last 4 years, based on what they can see potential upward trend (upward trends).

* **Establishing measures for preventing inputs into groundwater of hazardous substances (Art. 6)**

The Law on Water (Article 73, paragraph 2) defined objectives of groundwater as mentioned above. In addition, there is the Rulebook on the determination and maintenance of zones of sanitary protection of the water supply, which is needed to implement appropriate restrictions in the use of hazardous substances in separate zones. However, not all the prescribed measures laid that by Directive which should be done in the next period.

* **Establishing measures for limiting inputs into groundwater of non-hazardous substances (Art 6)**

Same answer as the previous question .

* **Establishing an inventory of exemptions referred to in Art 6 (3)**

Not determined yet.