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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. 42

Adopted 13 January 2009

## **Regulations Regarding Procedures for Ascertaining of Groundwater Resources and Quality Criteria**

*Issued pursuant to  
Section 5, Paragraph seven and Paragraph ten, Clause 2 and 3 of  
the Water Management Law*

### **I. General Provisions**

1. This Regulation prescribes:

- 1.1. the procedures for ascertaining of groundwater resources;
- 1.2. the procedures by which the influence of anthropogenic loads on groundwater bodies shall be determined;
- 1.3. the classes of the groundwater bodies, and the good and poor chemical quality criteria of the groundwater bodies.

2. When preparing a river basin management plan (hereinafter – management plan) and a programme of measures for achievement of the environmental quality objectives laid down in the management plan (hereinafter – environmental quality objectives), the State limited liability company “Latvian Environment, Geology and Meteorology Centre” (hereinafter – Centre) shall ascertain the groundwater resources, examine the influence of anthropogenic loads on groundwater bodies, and evaluate the quality and quantitative status of the groundwater bodies, but in groundwater bodies, in which there is a risk of not achieving the specified environmental quality objectives (hereinafter – at-risk groundwater bodies), determine significant and sustained upward trend in concentration of all detected pollutants, groups of pollutants and indicators of pollution and the starting point for trend reversals in accordance with the laws and regulations regarding monitoring of surface waters, groundwater and protected territories and drawing up of monitoring programmes.

*[18 December 2012]*

3. The State and local government institutions upon request of the Centre shall provide information thereof which is necessary for ascertaining of groundwater resources, determining anthropogenic loads and evaluating the quality and quantitative status of the groundwater bodies.

*[23 February 2010]*

## **II. Ascertaining of Groundwater Resources and Determination of Anthropogenic Loads**

4. The Centre shall prepare the initial characterisation of groundwater bodies in order to determine the geological and hydrogeological conditions, boundaries, types of use and connection with surface water ecosystems or terrestrial ecosystems.

*[23 February 2010]*

5. When preparing the initial characterisation of groundwater bodies, the Centre shall use monitoring data, and other data regarding hydrogeological conditions, characteristics of soil, groundwater abstraction and wastewater drainage, as well as information regarding the types of land use in the relevant river basin district. When preparing the initial characterisation of a groundwater body, one shall specify:

5.1. the geological boundaries of the water body in the plan and its vertical extent;

5.2. geological, hydrogeological and hydrodynamic conditions of the water body (for example, groundwater watersheds, direction of the flow and water balance, natural or artificial recharge sources, discharge areas, protection against pollution of the groundwater basin, general characterisation of the cover layers in the territory from which groundwater resources recharge);

5.3. the aeration zone in the territory of the groundwater body;

5.4. the overall influence of anthropogenic loads on the groundwater body (for example, point or diffusion sources of pollution which affect the groundwater body, the utilisation of a groundwater body for water abstraction, artificial groundwater level raising or reduction);

5.5. such groundwater bodies, to which surface water ecosystems or terrestrial ecosystems directly dependent on them are connected.

*[23 February 2010]*

6. When the initial characterisation has been prepared, the Centre shall determine groundwater bodies taking into account the boundaries of the underground water horizons in the plan and the vertical extent and connection thereof to the surface water bodies.

*[23 February 2010]*

7. The Centre shall determine groundwater bodies in conformity with the following criteria:

7.1. the geological structure of the groundwater body, special features of the hydrogeological and hydrodynamic conditions;

7.2. the quality of groundwater;

7.3. the influence of anthropogenic activities on the quantitative status and chemical quality of the groundwater;

7.4. the utilisation of the groundwater resources for water supply of the residents;

7.5. the connection between a groundwater horizon and surface ecosystems.

*[23 February 2010]*

8. If the initial characterisation of the groundwater body, as well as the results of the anthropogenic load assessment indicate that, for determination of the environmental quality objectives or activities to be performed, more elaborate classification is necessary, the initially

defined groundwater bodies shall be divided into sub-bodies. The sub-bodies of groundwater shall be classified in conformity with the following criteria:

8.1. the parts of a water body in which the geological structure and characteristic properties of the hydrogeological and hydrodynamic conditions differ from the relevant properties of the rest of the groundwater body;

8.2. the parts of a water body in which natural hydrochemical anomalies are detected;

8.3. parts of a water body which have a significant role in the process of water supply;

8.4. parts of a water body in which changes have occurred as a result of intensive anthropogenic activity.

9. The bodies and sub-bodies of groundwater shall be indicated in the relevant management plan. The Centre is authorised to change the classification of groundwater bodies when the management plan is being renewed.

*[23 February 2010]*

10. On the basis of the initial characterisation's results the Centre shall identify the bodies or sub-bodies of groundwater in which there is a risk of not achieving the specified environmental quality objectives (hereinafter – at-risk water bodies). If necessary, an additional characterisation of hydrogeological and geological conditions thereof, as well as the influence of anthropological loads of the at-risk water bodies shall be prepared. Additional characterisation of anthropogenic load influence shall be determined to all groundwater bodies which cross Latvia's border with another Member State of the European Union.

*[23 February 2010]*

11. When preparing the additional characterisation of hydrological and geological conditions of an at-risk water body, the Centre shall specify:

11.1. the geological structure of the at-risk water body, the distribution and type of water horizons, as well as the distribution of confining beds;

11.2. the special filtration features in each water horizon or water horizon complex of the at-risk water body, natural insulation from the surface pollution, as well as the conditions of recharge and discharge of water resources;

11.3. the general characterisation of the cover layers in the territory from which groundwater resources recharge (for example, thickness of the cover layers, porosity, permeability and absorption characteristics);

11.4. the stratification of the hydrogeological vertical extent in one at-risk water body;

11.5. the scope of interaction between an at-risk water body and surface water bodies connected hydrodynamically thereto and the surface ecosystems dependent from it;

11.6. the groundwater flow direction and exchange speed between the at-risk water body and the associated surface water and groundwater bodies thereof;

11.7. the calculations of the average volume in the amount of which groundwater resources recharge annually (the groundwater balance assessment and hydrogeological models shall be used);

11.8. the chemical composition of the groundwater (the influence of anthropogenic activity on the composition and concentration of substances shall be specified).

*[23 February 2010]*

12. When preparing the additional characterisation of anthropogenic load influence, the Centre shall summarize the following information:

12.1. all the water supply points, from which more than 10 cubic metres of groundwater are abstracted daily or from which drinking-water for more than 50 persons is abstracted, as well as the average annual quantity of water abstracted in each of the referred to places;

12.2. the natural background chemical composition of the groundwater (such concentration of a substance or value of an indicator characterising the chemical quality in a groundwater object which conforms to the conditions that are not affected or are very slightly affected by the human activities) in the groundwater body which is used for water abstraction and the chemical quality of the abstracted water;

12.3. all the locations at which the groundwater supply is artificially recharged, as well as the quantity and chemical composition of the injected water;

12.4. the pollutants' capacity of absorption in the ground and degradation (decomposition) time in the underground water horizons, as well as the types of land use in the territory from which the groundwater resources recharge;

12.5. activities which influence the natural recharge of groundwater resources;

12.6. the background level or natural of artificial pollutants, including the increased background level of the substances and ions or their indicators, which occurs due to natural hydrogeological reasons, and trends of changes in concentration of such substances in a longer period of time.

*[23 February 2010]*

13. On the basis of information provided for in the additional characterisation and the assessment of anthropogenic loads, when assessing the influence of the condition of a water body on the surface water and the terrestrial ecosystems connected thereto, regulation of the bed of a surface water body, protection against flood, land amelioration, as well as the development of economic activities, the Centre shall determine for which groundwater bodies in the river basin management plan exceptions provided for in the Water Management Law regarding determination and fulfilment of water quality objectives shall be applied.

*[23 February 2010]*

### **III. Classes of Groundwater Bodies and Groundwater Quality Criteria**

14. The Centre shall evaluate the bodies and sub-bodies of groundwater by comparing data regarding the status thereof to the criteria, which conform to good or poor groundwater chemical quality, and good or poor groundwater quantitative status. In accordance with the assessment all groundwater bodies shall be divided into the class of good or poor quality. If the quality of the groundwater body according to different criteria conforms to different classes of quality, the Centre shall list the relevant groundwater body into the class of poorer quality or the poorer quantitative status.

*[23 February 2010]*

15. The quantitative status of the groundwater body shall be evaluated on the basis of the groundwater level measurements, as well as using the maps of groundwater level horizons or complexes thereof. On the basis of the results of monitoring and initial characterisation, for each groundwater body the typical seasonal variations of the groundwater level shall be determined and change trends shall be analysed taking into account the annual average rainfall and other factors affecting the groundwater level.

16. The quantitative status of a groundwater body shall be good if it conforms to the following criteria:

16.1. the findings regarding the groundwater level in the groundwater body indicate that a long-term annual average rate of groundwater abstraction does not exceed the available groundwater resources (shall be determined as the difference between a long-term average annual regeneration rate and a long-term annual flow rate of the groundwater body) which are necessary for achievement of the environmental quality objectives specified in the Water Management Law in the surface water connected with the water body in order to avoid

substantial deterioration of the ecological quality of such water and substantial damage to the terrestrial ecosystems connected thereto;

16.2. the groundwater level changes caused by anthropogenic activities do not hinder achieving the specified environmental quality objectives of surface water bodies connected with the groundwater bodies, do not deteriorate the ecological and chemical quality of the relevant surface water body and do not substantially influence the terrestrial ecosystems directly connected with the groundwater body;

16.3. the alterations to the flow direction resulting from groundwater level changes occur temporarily or continuously only in a spatially limited area and do not cause saltwater intrusion or other type of intrusion, as well as do not indicate a sustained and clearly identified trend of the groundwater flow direction.

17. The quantitative status of a groundwater body shall be poor if:

17.1. the annual average groundwater level indices obtained from the monitoring of the groundwater body attest that the groundwater level decreases and the decrease is not related to rainfall or any other natural factors;

17.2. the change of the groundwater level deteriorates the status of a surface water body;

17.3. the alterations to the flow direction resulting from level changes are sustained or continuous in an extensive area and cause saltwater intrusion or other type of intrusion, as well as indicate a sustained and clearly identifiable trend in the groundwater flow direction.

18. The chemical quality of a groundwater body shall be good if it conforms to the following criteria:

18.1. the chemical composition of water conforms to the natural chemical composition of water, which is characteristic to the relevant groundwater body, and it has been detected in monitoring that the concentration of pollutants does not exceed the environmental quality standards laid down in the laws and regulations regarding the quality of surface water and groundwater (hereinafter – environmental quality standards) in any point of the monitoring, as well as the chemical composition of water in an at-risk groundwater body does not exceed the threshold value laid down in the environmental quality standard, which is expressed as concentration or value of an individual polluting substance, a group of pollutants or a pollution indicator, which should not be exceeded in order to protect human health and the environment (hereinafter – threshold value of pollutants);

18.2. monitoring attests that

18.2.1. the environmental quality standards referred to in Annex 1 to this Regulation are not exceeded;

18.2.2. intrusion of saltwater or other substances into the groundwater body (it may be detected also by changes in the electric conductivity of groundwater), as well as other negative changes do not occur in the groundwater body;

18.2.3. the chemical quality of the groundwater body does not hinder achieving the environmental quality objectives in the surface water bodies connected with the groundwater body, does not deteriorate the ecological and chemical quality of the relevant surface water body, as well as does not substantially influence the terrestrial ecosystems directly connected to such groundwater body and wetlands.

*[18 December 2012]*

18.<sup>1</sup> The chemical quality of a groundwater body shall also be good if it does not conform to the conditions of Sub-paragraph 18.1 of this Regulation, because the average annual concentration of pollutants in one or several points of monitoring exceeds the environmental quality standards or the threshold values of pollutants, but it is detected in the evaluation of the water body performed according to Annex 2 to this Regulation that:

18.<sup>1</sup> 1. concentration of pollutants, which exceeds the environmental quality standards or the threshold values of pollutants, does not cause substantial risk to the environment, taking into account the scope of spread of the pollution in the groundwater body (evaluation performed according to Paragraph 2 of Annex 2 to this Regulation);

18.<sup>1</sup> 2. the groundwater body conforms to the conditions of Sub-paragraphs 18.2.2 and 18.2.3 of this Regulation (evaluation performed according to Paragraph 3 of Annex 2 to this Regulation);

18.<sup>1</sup> 3. the groundwater bodies used for extraction of drinking water, from which more than 50 persons are supplied or more than 10 m<sup>3</sup> of drinking water per 24 hours are delivered, are protected, thus it is possible to prevent the deterioration of the quality of such groundwater bodies and to reduce purification during the preparation process of drinking water (evaluation performed according to Paragraph 3 of Annex 2 to this Regulation);

18.<sup>1</sup> 4. pollution has not significantly deteriorated the use of the relevant groundwater body for human needs.

*[18 December 2012]*

19. If the chemical quality of a groundwater body is qualified as good in accordance with Paragraph 18.<sup>1</sup> of this Regulation, in order to protect the water ecosystems, the terrestrial ecosystems and the groundwater used for human consumption, which are dependent from this part of the object, the Ministry of Environmental Protection and Regional Development (hereinafter – the Ministry) shall take the necessary measures, in accordance with Section 20 of the Water Management Law and the regulatory enactment regarding river basin management plans and programmes of measures, in the part of the body, in the monitoring of which excess of the environmental quality standards or the threshold values of pollutants has been detected.

*[18 December 2012]*

20. The chemical quality of a groundwater body shall be poor if, due to pollution or another anthropogenic load, the concentration of the natural and pollutants detected in water exceeds the environmental quality standards, values characteristic to the chemical quality indices or the threshold values of pollutants.

21. *[18 December 2012]*

22. In order to evaluate accurately the chemical quality of groundwater bodies, the Centre shall:

22.1. perform at least measurements of the chemical parameters and the concentration of iron ions laid down in the laws and regulations regarding monitoring of surface water, groundwater and protected territories and the development of monitoring programmes;

22.2. taking into account the special features of the particular groundwater body or sub-body, the background concentration shall be determined for all the indices characterising the chemical quality and, on the basis of the monitoring data, the average values of the indices characterising the chemical quality shall be calculated. If quality standards have been provided for the indices characterising the chemical quality, the average value of results acquired at each monitoring station shall be calculated;

22.3. taking into account the requirements referred to in Annex 3 to this Regulation, determine for each at-risk water body and the Minister for Environmental Protection and Regional Development shall approve a list of threshold values of all such pollutants, groups of pollutants and indicators of pollution, which in accordance with Section 15 of the Water Management Law characterise the groundwater body as an at-risk water body. The environmental quality standards and the threshold values of pollutants shall be used as the criteria for evaluating the chemical status of groundwater, comparing the values obtained in

accordance with Sub-paragraph 22.2 of this Regulation to them. Each pollutant which may cause the risk of the water body not reaching good chemical quality shall be included in the chemical evaluation of the at-risk water bodies.

*[18 December 2012]*

23. If a groundwater body is partially within the territory of Latvia and partially within the territory of another state, including also the territory of such state, which is not a European Union Member State or candidate state, the threshold values of pollutants referred to in Paragraph 22 of this Regulation shall be determined in co-operation with the competent authorities of the relevant state.

24. The list of the threshold values of pollutants referred to in Paragraph 22 of this Regulation shall be reviewed and amendments shall be made to the list in the following cases:

24.1. if it is detected in the monitoring that a groundwater body is not subjected to the risk caused by the relevant pollution anymore and thus the threshold value of pollutants may be deleted from the list;

24.2. if, on the basis of the latest information and expert findings, it is necessary to amend the existing threshold values or to specify threshold values of other pollutants;

24.3. in order to protect human health and the environment, in addition to the condition referred to in Sub-paragraph 24.2 of this Regulation, it is necessary to re-include such threshold values of pollutants in the list, which were previously deleted therefrom.

25. The Centre shall include the following in the river basin management plans:

25.1. the information referred to in Paragraphs 11 and 12 of this Regulation;

25.2. the summary of the chemical quality assessment, including explanation regarding the way in which the exceeded environmental quality standards or the threshold values of pollutants are taken into account in the final evaluation of the groundwater chemical quality;

25.3. information regarding the approved threshold values of pollutants and changes in the list, including:

25.3.1. regarding the link between the threshold values determined for pollutants occurring in nature and the observed background levels of such substances;

25.3.2. regarding the link between the threshold values of all pollutants and the environmental quality objectives, and other national, European Union or international water protection standards;

25.3.3. regarding the link between the threshold values of all pollutants and information regarding the toxicity, ecotoxicity, stability, bio-accumulation potential and spread trend of such substances;

25.3.4. regarding the scale in which the threshold values of pollutants are determined (for example, state, river basin district, groundwater body);

25.4. the summary regarding conformity with the conditions of Annex 3 to this Regulation in determining the threshold values of pollutants;

25.5. information regarding at-risk groundwater bodies and causes of risk:

25.5.1. the number of at-risk groundwater bodies, pollutants or indicators of pollution, which are causes of risk, and their concentration detected in monitoring;

25.5.2. the dimensions of each at-risk groundwater object, the link between such groundwater body, surface water and directly dependent terrestrial ecosystems, as well as background concentration detected in the groundwater body for such pollutants occurring in nature, to which threshold values have been determined;

25.6. information regarding ascending trends in concentration of pollutants, groups of pollutants and indicators of pollution and the measures taken for their prevention or reduction;

25.7. information regarding the way in which the evaluation of the trends detected in individual monitoring points of the groundwater body has been used in order to determine, in accordance with the laws and regulations regarding river basin management plans and programmes of measures, whether increase or decrease in concentration of Pollutants, groups of pollutants and indicators of pollution is observed in such groundwater bodies, as well as the justification for selecting the starting point for trend reversals in accordance with the laws and regulations regarding monitoring of surface water, groundwater and protected territories and the drawing up of monitoring programmes;

25.8. the measures which are necessary:

25.8.1. to prevent the introduction of dangerous substances into groundwater, including information that should be taken into account in determining the permitted emission into water in relation to especially dangerous pollutants and substances with especially substantial environmental impact, which belong to the groups of substances determined in the laws and regulations regarding the procedures by which Category A, B and C polluting activities shall be declared and permits for the performance of Category A and B polluting activities shall be issued;

25.8.2. to restrict the introduction of such pollutants into groundwater, which are not referred to in Sub-paragraph 25.8.1 of this Regulation and which are not considered as dangerous, but cause or may cause the risk of pollution. The measures shall ensure that introduction of the abovementioned substances in groundwater does not result in deterioration of its condition or upwards trends in concentration of pollutants, groups of pollutants and indicators of pollution. In determining such measures, the environmental technologies determined in the laws and regulations regarding environmental protection and the best available techniques laid down in the laws and regulation regarding pollution shall be taken into account;

25.8.3. to limit the negative impact on the chemical quality of groundwater, which is caused by the diffuse pollution sources detected during the additional characterisation referred to in Paragraphs 11 and 12 of this Regulation;

25.9. information regarding the institutions which are responsible for implementation of the measures referred to in Sub-paragraph 25.8 of this Regulation.

[18 December 2012]

#### **IV. Closing Provision**

26. Cabinet Regulation No. 857 of 19 October 2004, Regulations Regarding Procedures for Ascertaining of Groundwater Resources and Criteria of Quality (*Latvijas Vēstnesis*, 2004, No. 168) is repealed.

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

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

Prime Minister

I. Godmanis

Minister for the Environment

R. Vējonis



**Environmental Quality Standards to be Used in the Evaluation of the  
Chemical Quality of Groundwater**  
*[18 December 2012]*

1. The environmental quality standards of pollutants are as follows:

No.	Polluting substance	Quality standard and unit of measurement
1.1.	Nitrates	50 mg/l
1.2.	Active substances of pesticides, including appropriate metabolites thereof, as well as degradation and reaction products <sup>(1)</sup>	0,1 µg/l (separately) 0,5 µg/l (in total) <sup>(2)</sup>

Notes.

<sup>(1)</sup> Pesticides are plant protection products within the meaning of the Plant Protection Law and biocides within the meaning of the Chemical Substances Law.

<sup>(2)</sup> Total pesticides is the sum of all pesticides detected individually in monitoring and determined quantitatively, as well as degradation and reaction products.

2. Application of the environmental quality standards determined for pesticides in accordance with the procedures laid down in Cabinet Regulation No. 42 of 13 January 2009, Regulations Regarding Procedures for Ascertaining of Groundwater Resources and Quality Criteria, does not apply to the requirements of the Chemical Substances Law and the Plant Protection Law regarding risk analysis.

3. The Ministry shall evaluate the environmental quality standards laid down in this Annex, if due to their application there is a risk in a particular groundwater body that:

3.1. the environmental quality objectives determined according to the Water Management Law will not be achieved in surface water bodies connected with this body;

3.2. ecological or chemical quality of the surface water body will deteriorate significantly;

3.3. significant harm to such terrestrial ecosystems will occur, which are directly dependent on the particular groundwater body.

4. If recognised as necessary during evaluation, the Ministry shall prepare proposals regarding determination of stricter threshold values for the pollutants referred to in Paragraph 1 of this Annex. Conformity with the environmental quality standards shall be ensured also in implementing programmes and measures in accordance with the laws and regulations regarding water and soil protection from pollution with nitrates caused by agricultural activity.

**Requirements for Evaluation Performed in Case of Exceedance of the  
Environmental Quality Standards or the Threshold Values of Pollutants**  
*[18 December 2012]*

1. In commencing the evaluation referred to in Paragraph 18 of Cabinet Regulation No. 42 of 13 January 2009, Regulations Regarding Procedures for Ascertaining of Groundwater Resources and Quality Criteria, (hereinafter – Regulation) the Centre shall take into account:

1.1. the information aggregated in the economic analysis of the use of water resources, the river basin characterisation and the impact of human activity assessment performed in accordance with the Water Management Law, as well as the initial characterisation referred to in Paragraph 5 of this Regulation, the additional characterisation referred to in Paragraph 11 and the additional characterisation of anthropogenic load impact referred to in Paragraph 12;

1.2. the results of the monitoring of groundwater chemical condition performed in accordance with the laws and regulations regarding monitoring of surface water, groundwater and protected territories and drawing up of monitoring programmes;

1.3. other corresponding information, including comparison of average annual concentration of pollutants in a particular monitoring point with the environmental quality standards and the threshold values of pollutants.

2. In order to ascertain whether a groundwater body conforms to the good chemical quality conditions of groundwater referred to in Sub-paragraphs 18.3.1 and 18.3.4 of this Regulation, the Centre shall evaluate in how large a part of the groundwater body the average annual concentration of polluting substance or substances exceeds the environmental quality standards or the threshold values of pollutants. The summary of monitoring results shall be used for such evaluation, which, if necessary, shall be supplemented with estimates regarding concentration of pollutants obtained on the basis of hydrogeological model of the groundwater body or group of bodies.

3. In order to ascertain whether a groundwater body conforms to the good chemical quality conditions of groundwater referred to in Paragraph 18.<sup>1</sup> of this Regulation, the Centre shall, if necessary, using corresponding results of monitoring and an appropriate hydrogeological model of the groundwater body, evaluate:

3.1. the impact of pollutants on the groundwater body;

3.2. the quantity and concentration of pollutants, which are discharged or may be discharged from the particular groundwater body in surface waters connected thereto or in directly dependent terrestrial ecosystems, as well as the anticipated impact thereof;

3.3. the extent of intrusion of saltwater or other substances in the groundwater body;

3.4. how the pollutants detected in the groundwater body endanger the quality of the drinking water extracted therefrom or intended for human consumption.

4. Chemical quality of the groundwater body shall be presented in maps in accordance with the laws and regulations regarding river basin management plans districts and programmes of measures. If possible, all points of monitoring, in which the environmental quality standards or the threshold values of pollutants are exceeded, shall be indicated in such maps.

## **Requirements for Determination of the Threshold Values of Pollutants**

*[18 December 2012]*

1. Such limits of pollutants shall be determined that exceedance thereof, in performing monitoring in representative points of groundwater bodies, would indicate risk that the groundwater body does not conform to or several of the good chemical quality conditions of groundwater referred to in Sub-paragraph 18.<sup>1</sup> of Cabinet Regulation No. 42 of 13 January 2009, Regulations Regarding Procedures for Ascertaining of Groundwater Resources and Quality Criteria, (hereinafter – Regulation).
2. In determining the threshold values of pollutants, the following shall be taken into account:
  - 2.1. the initial characterisation of groundwater bodies referred to in Paragraph 5 of this Regulation;
  - 2.2. the additional characterisation of the at-risk groundwater body referred to in Paragraphs 11 and 12 of this Regulation, including the amount of interaction among groundwater, the surface water that is hydrodinamically connected thereto and the terrestrial ecosystems dependent on them, the hydrogeological characterisation, information regarding background levels of pollution substances and pollution and the water balance;
  - 2.3. all pollutants, due to which the groundwater body has been determined as an at-risk object (if necessary, threshold values shall be determined for at least arsenic, cadmium, lead, mercury, ammonium ions, chloride ions, sulphate ions, trichloroethylene, tetrachloroethylene, electrical conductivity);
  - 2.4. threat by pollution to current or future lawful use of groundwater;
  - 2.5. origin of pollutants, their potential occurrence in nature, toxicity and spread trends, stability and bio-accumulation potential.
3. If elevated background concentration of specific substances, ions or their indicators in a specific groundwater body occurs due to natural hydrogeological circumstances, the background concentration shall be taken into account in determining the threshold values of pollutants for such groundwater body.
4. In determining threshold values of pollutants, a control mechanism of the collected data shall also be intended, on the basis of data quality assessment, analytical considerations and background concentrations for such substances that can be both of natural and anthropogenic origin.
5. Threshold values of pollutants characterising good chemical quality shall be determined, taking into account the protection needs of the groundwater body and in conformity with the conditions of Paragraphs 2 and 3 of this Annex. Special attention shall be paid to the impact of the groundwater body on hydrodinamically connected surface water and the terrestrial ecosystems and wetlands dependent on them and mutual connection with them, as well as scientific statements and experience in the field of toxicology and eco-toxicology shall be taken into account.