ANNEX 9

Proposal of the
RULEBOOK ON THE CONDITIONS FOR DETERMINING THE ZONES OF SANITARY PROTECTION OF WATER SOURCES WITH ABSTRACTION OF WATER FROM AQUIFERS WITH CRACK AND CRACK-CAVERNOUS POROSITY IN THE BORDER AREA OF BOSNIA AND HERZEGOVINA AND THE REPUBLIC OF CROATIA

1. GENERAL PROVISION

Subject matter of the Rulebook

Article 1.

This Rulebook lays down the conditions for the determination of sanitary protection zones of water source with water abstraction in the karst aquifer whose catchment area is located on the territory of BiH and the Republic of Croatia used for public water supply, the measures and restrictions implemented therein, the deadlines and the decision-making procedure for the water source protection.

The provisions of this Rulebook shall not apply to:

- sources for which a concession for economic use of water is awarded in accordance with the relevant regulations of BiH and the Republic of Croatia governing concessions for economic use of water,
- Sources that are not used and are not intended as a reserve source for public water supply, but serve economic use in accordance with the concession contract or water management permit.

Definition

Article 2.

The following definitions shall also be introduced for the purposes of this Rulebook:

1. "water source protection study" means the technical documentation produced by one and audited by another professional legal entity based on the results of investigative work in accordance with the provisions of this Rulebook;

2. "hydrological cycle" means a period of at least one year, during which time at least once during each season it determines the abundance and natural composition of water from sources, at least to the extent defined by the regulation governing the health of the water for drinking;

3. "water source" means a narrower space where it comes from a groundwater body or from a body of water surface water abstracted or planned to be abstracted for human consumption;

4. "mineral water" means water source mineral water in its natural state or water source mineral water bottled at the source and intended for human consumption;

5. "water intended for human consumption" means water used, whether in its natural state or after proper purification, for drinking, cooking or preparing food intended for human consumption used irrespective of the type of water source and the method of delivery (public water supply or some type of commercial packaging);

6. "water catchment area" means a narrow, enclosed area around a water catchment object which, in addition the water intake also includes a treatment plant, a reservoir, a pumping station, administrative and
propulsion facilities as well as other infrastructure facilities used for the purpose of provision of public water supply;

7. "water source sanitary protection zone" means a clearly defined groundwater and surface part of a catchment of water source that limits and controls how certain human activities may cause a change in the abundance of water source or a deterioration of the quality of the water relative to the quality defined in the regulations on the health of drinking water and on natural mineral and natural water source waters;

8. "Line Ministries competent for water" - Line Ministries responsible for water at the entity level in BiH (FBiH and / or RS) - the Ministry of Agriculture, Water Management and Forestry of the Federation of Bosnia and Herzegovina and the Ministry of Environmental Protection and Energy of the Republic of Croatia (hereinafter: the line Ministries);


2. CONDITIONS FOR THE ESTABLISHMENT OF ZONES OF SANITARY PROTECTION OF WATER SOURCES

Conditions for the establishment of sanitary protection zones

Article 3.

Sanitary protection zones may be identified:

- if the water survey works referred to in Article 4. of this Rulebook have been carried out and
- if a study of the sanitary protection zones referred to in Article 5. of this Rulebook has been made in the final text in accordance with the provisions of this Rulebook.

Water survey works

Article 4.

Water survey works are works and tests, which include geological, hydrogeological, hydrological, hydrogeochemical and chemical research, and in particular they relate to the determination of the following features:

- geological features and hydrogeological relationships of the catchment area,
- hydrological characteristics of the catchment area,
- size, boundaries and abundance of the aquifer,
- type of aquifer with respect to porosity (intergranular, cracked and cracked - cavernous),
- thickness and permeability of the aquifer cover,
- method of supplying the aquifer,
- the way of water inflow into the reservoir or lake,
- groundwater flow rate to the source,
- purifying capacity of cover deposits and aquifers,
- water quality and
- analysis of the natural system and the overall impact of human activity.

The contracting authority for the water survey works for the existing sources for public water supply are the units of local self-government or units of regional self-government on whose territory the source for which the decision on protection of water source is made are located.

The water survey works referred to in paragraph 1 of this Article shall be carried out in one or two phases.
In the first phase, the results of the detailed water survey work already carried out shall be collected, interpreted and analysed with respect to the features referred to in Article 4, paragraph 1 of this Rulebook (existing water survey works). In the second phase additional detailed water survey works are carried out (additional water survey works).

Additional water survey works shall not be carried out for the sources referred to in Article 10, paragraph 1, item 1 of this Rulebook.

The first phase water survey works and elaboration of the study referred to in Article 5 of this Rulebook for the existing sources shall be financed by the contracting authorities. The manner of financing and conducting water research works will be the subject of an agreement of the interstate Commission for Water Management of the Republic of Croatia and Bosnia and Herzegovina.

Additional water survey works for existing sources and water survey works referred to in paragraph 5 of this Article shall be financed from the water use fees.

Study of sanitary protection zones
Article 5.

Based on the existing water survey works, the client draws up a draft study of sanitary protection zones. The contracting authority referred to in Article 4, paragraph 2 of this Rulebook shall be obliged to request a binding opinion of the committee referred to in Article 7 of this Rulebook on the draft study of sanitary protection zones.

If committee assess that the existing water survey works are sufficient for the elaboration of the study of the sanitary protection zones, they shall state this in a binding opinion, on the basis of which the contracting authority referred to in Article 4, paragraph 2 of this Rulebook may draft the final text of the study of the sanitary protection zones.

If committee assess that additional water survey works are required for the elaboration of the study of sanitary protection zones, it shall state this in a binding opinion, and the contracting authority referred to in Article 4, paragraph 2 of this Rulebook shall be obliged to implement it and to prepare a proposal for the study of the sanitary protection zones and to request a binding opinion of committee again.

The committee shall issue a binding opinion within 30 days from the date of receipt of the request of the contracting authority referred to in Article 4, paragraph 2 of this Rulebook.

Contents of the study of sanitary protection zones
Article 6.

The Sanitary Protection Zone Study contains:

1. introduction,
2. technical description of the water intake,
3. geological and hydrogeological characteristics of the water source basin,
4. hydrological features / characteristics of the water source basin
5. vegetation characteristics of the source basin,
6. characteristics of erosion processes in the source basin
7. determined aquifer boundaries,
8. proposal of boundaries of sanitary protection zones (graphic and descriptive representation),
9. display of water quality,
10. pollutant cadastre with graphical representation of locations,
11. proposal of measures for protection of waters sources (passive and active), including restrictions and prohibitions related to human activities that may adversely affect the state of the waters abstracted from the source,
12. a principle proposal for remedial interventions at existing facilities within the sanitary protection zones of the source, in accordance with needs and priorities;
13. proposal of a place for the designation of marks of appropriate sanitary protection zones,
14. plan for monitoring the quality of surface and groundwater in the catchment area and water source
15. preliminary draft Decision on water source protection

The Study of the sanitary protection zones must also be made in digital form.

Basic graphical representation with all necessary data for IV and III sanitary protection zone are in the scale of 1: 25000, for II zone of sanitary protection at the scale of 1: 5,000, and for zone I of sanitary protection at the scale of 1: 1000.

The contracting authority referred to in Article 4, paragraph 2, is obliged to submit to the Croatian Waters/Water Agency a study of sanitary protection zones in digital form suitable for further processing in GIS applications, as well as for table calculations and word processing applications, in accordance with the Water Information System.

3. PROCEDURE FOR DECISION ON WATER SOURCE PROTECTION

*Draft Decision on Water Source Protection and Program of Remediation Measures within Sanitary Protection Zones for existing buildings and existing activities*

**Article 7**

Upon fulfilment of the requirements of Article 3 of this Rulebook, the Commission is obliged to appoint, and the line ministries of both countries, to approve the appropriate, if possible interdisciplinary, committee for the preparation of the draft Decision on Water Source Protection.

Representatives are appointed to the committee:

- Institute for Spatial Planning and Environmental Protection (local or regional level)
- Ministries in charge of water management
- Agency for watershed / Croatian Waters
- Utilities
- Leaders of research teams
- Institute of Public Health
- Lawyer and economist

The draft Decision is referred to the Commission for agreement.

Agreed Decisions are delivered to the local or regional self-government units in whose area the source is located.

Decisions on the protection of sources for cross-border areas are made by representative bodies of local or regional self-government units, depending on the area in which the source is located.

In exceptional cases, when it is not possible to reach a solution through agreement, decisions are made at the level of line Ministries of both countries.
The decision on water source protection is then forwarded to the units of local or regional self-government in both countries, in the area of which the defined zones of sanitary protection are located, for ratification (verification) and implementation.

The procedure for making a decision on water source protection is carried out in accordance with the regulations on the adoption of general acts of local self-government units or units of regional self-government.

**Decision on protection of water sources**

**Article 8**

Based on the conducted water survey works and the adopted study on the protection of water sources, the decision on the protection of the water source should contain:

a. the name of the competent authority and the legal person responsible for implementing the decision on the protection of the water source;

b. the exact name and location of the source;

c. topographic maps and copies of cadastral plans of adequate scale with the boundaries drawn protection zones;

d. a detailed description of the boundaries of the sanitary protection zones;

e. sanitary and other conditions for carrying out human activities in individual protection zones with a detailed description protection measure, prohibition or restriction;

f. provisions on the supervision of the implementation of the protection regime and safeguards;

g. provisions for monitoring the quality and quantity of water at the source;

h. sources and method of financing the implementation of safeguards for a planning period of at least ten (10) year;

i. time limits for implementation of individual measures;

j. Penal provisions in accordance with the provisions of the relevant legislation on water management of Bosnia and Herzegovina and the Republic of Croatia.

**Program of remediation measures within the sanitary protection zones**

**Article 9**

The body referred to in Article 7, paragraph 5 of this Rulebook shall, within 12 months from the date of the decision on the protection of the water source, adopt a Program of remediation measures within the sanitary protection zones for existing buildings and existing activities, which shall become an integral part of the decision on the protection of the spring.

The provisions of Article 7 shall apply as appropriate to the adoption of the Program referred to in this Article.

The remediation program shall include in particular:

- a list of all pollutants in the area of sanitary protection zones,

- priority remedial actions,

- deadlines for implementation of remedial actions,

- remedial costs,

- obliged to finance the implementation of the Program of Remediation Measures.

In case of non-fulfilment of obligations from the Program of remedial measures, the competent inspector is obliged to issue a decision ordering the elimination of identified deficiencies, that means irregularities and determining the measures and the deadline for their elimination.

By way of derogation from the provision of paragraph 1 of this Article, until the adoption of the Program of remedial measures, for the individual existing buildings and activities, the body referred to in paragraph 1 of
this Article may, on the basis of the study referred to in Article 22 of this Rulebook, prescribe remedial measures and activities.
4. CLASSIFICATION OF SOURCES AND ESTABLISHMENT OF ZONES

Source classification

Article 10

For the purpose of determining the scope of water survey works and determining zones of protection of sources, these Regulations shall be classified into:

1. sources of maximum capacity up to 20 l/s in terms of pumping dynamics,
2. sources of maximum capacity from 20 l/s to 100 l/s in terms of pumping dynamics
3. sources with a maximum capacity exceeding 100 l/s in terms of pumping dynamics.

5. WATER SOURCE SANITARY PROTECTION ZONES WATER ABSTRACTION FROM AQUIFERS WITH CRACK AND CRACK-CAVERNOUS POROSITY

Purpose of determination, zones of sanitary protection of water sources and protection measures of waters from aquifers with crack and crack-cavernous porosity

Article 11

Due to the specificity of karst aquifers, characterized by high groundwater velocities and relatively low groundwater retention potential, a selective approach of gradual protection is applied to determine sanitary protection zones and appropriate protection measures in order to permanently reduce the risk of contamination of drinking water sources.

Article 12

The zones of sanitary protection of sources with abstraction of waters from aquifers with cracks and crack-cavernous porosity are determined to reduce the risk of contamination of aquifers with cracks and crack-cavernous porosity.

The zones of sanitary protection of sources with the abstraction of waters from aquifers with crack and crack-cavernous porosity are:

- restricted zone - IV. zone,
- restriction and surveillance zone - III. zone,
- zone of strict restriction and surveillance - II. zone and
- zone of strict protection and surveillance regime - Zone I.

Article 13

The sanitary protection zones of karst aquifers in the border area of BiH and Croatia are determined according to the criteria given in the following table:

<table>
<thead>
<tr>
<th>PROTECTION ZONES</th>
<th>GROUNDWATER FLOW TO THE PUMPING PLANTS</th>
<th>APPARENT GROUNDWATER VELOCITY IN cm/s</th>
<th>HYDROGEOLOGICAL BASES REQUIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZONE OF STRICT PROTECTION AND I A</td>
<td>IMMEDIATE AREA OF THE PUMPING STATION MUST BE FENCED</td>
<td>SCALE 1: 1,000</td>
<td></td>
</tr>
<tr>
<td>SURVEILLANCE REGIME</td>
<td>ZONE OF STRICT RESTRICTION AND SURVEILLANCE</td>
<td>ZONE OF CATCHMENT DRAINAGE &gt; 3 cm/s</td>
<td>SCALE</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------------------------------</td>
<td>-------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>I B</td>
<td>24 HOURS</td>
<td>ZONE OF CATCHMENT</td>
<td>1:5,000</td>
</tr>
<tr>
<td>III</td>
<td>1-10 DAYS</td>
<td>1-3 cm/s ASSUMED RETENTION ZONE</td>
<td>1:25,000</td>
</tr>
<tr>
<td>IV</td>
<td>10-50 DAYS</td>
<td>&lt; 1 cm/s</td>
<td>1:50,000</td>
</tr>
</tbody>
</table>

Groundwater velocities represent apparent rather than actual groundwater retention times and are used in combination with other hydrogeological elements of karst catchments to determine boundaries of zones of varying degrees of sanitary protection. IV. sanitary protection zone shall be determined in cases where it is assessed by hydro-geological exploration that there is a reasonable doubt that the application of protection I, II and III. zones cannot achieve acceptable source protection effects.

The dimensions and measures of sanitary protection belts are determined according to special conditions.

**Scope (coverage) of the IV. zone**

**Article 14**

IV. zone of sanitary protection of sources with abstraction of waters from aquifers with cracks and crack-cavernous porosity covers the basin of sources outside III. zone with a possible flow through the cracks and cracks-cavernous underground in high water conditions, up to water intakes in the period from:

- 10 to 20 days for sources referred to in Article 11, paragraph 1, item 1 of this Rulebook,
- 20 to 40 days for sources referred to in Article 11, paragraph 1, item 2 of this Rulebook, and
- 40 to 50 days for sources referred to in Article 11, paragraph 1, item 3 of this Rulebook.

By way of derogation from paragraph 1 of this Article IV. zone of sanitary protection of sources with abstraction of waters from aquifers with cracks and crack-cavernous porosity can be determined to cover the catchment of the source outside III. zone, at which apparent groundwater velocities of less than 1 cm/s were determined, as well as the total inflow area involved in the restoration of the waters of the associated source.

**Scope (coverage) of the III. zone**

**Article 15**

III. zone of sanitary protection of sources with abstraction of waters from aquifers with cracks and cracks-cavernous porosity includes parts of the catchment from the outer boundary of II. zone up to the boundary from which the flow through the underground to the water intake is possible in the period of at least 10 days in the conditions of high waters, that is, the areas from which the apparent groundwater velocity rates from 1 to 3 cm/s are determined, or the area that covers the major part of the catchment area (classical statistical-hydrogeological catchment).
Scope (coverage) of II. zone

Article 16

II. zone of sanitary protection of sources with abstraction of waters from aquifers with cracks and crack-cavernous porosity includes the main underground drainage directions in the immediate catchment area of the source, with possible flow through the fissured system of aquifers up to the abstraction of water for up to 24 hours, that means areas from which apparent groundwater velocities are, in high water conditions, greater than 3.0 cm / s, that is, the interior of the classical catchment area.

If within the boundaries of IV. or III. zones identify areas with major points of water collection and runoff by source (sinks and sinkholes), such an area will be designated as part of II. zone of sanitary protection of source with abstraction of waters from aquifers with crack and crack-cavernous porosity.

Sinks and sinkholes are enclosed by a stable fence and designated as II. zone.

Purpose and scope of I. zone

Article 17

I. zone of sanitary protection of sources with abstraction of waters from aquifers with crack and crack-cavernous porosity is determined for the protection of buildings and devices for water abstraction.

I. zone of sanitary protection of sources with abstraction of waters from aquifers with cracks and crack-cavernous porosity includes the immediate surface basin around the source from which water directly comes to the source, source of aquifers with cracks and cracks-caverns porosity, then water supply system facilities (catchment, pumping stations, water conditioning devices) if they are located in the immediate vicinity of the source, storage facilities supplying aquifers with crack porosity, regardless of the distance from the water intake.

For large floodplains on steep and inaccessible terrain, zone I may be divided into I.A. and I. B. zone.

The water system operator is obligated to enclose the area of protection zones I and I.A of the water source and indicate the warning on the prohibition of unauthorized access and ensure constant electronic and / or physical monitoring.

Protection measures in protection zones

Article 18

Protection measures in the protection zones of drinking water sources shall be implemented through prohibitions, restrictions and other forms controls on human activities to reduce the risk of source pollution or other impacts that may adversely affect water sources, their abundance, quality and health of water. For this purpose, the elaboration of the protection of the water sources determines the activities that in certain protection zones:

a. banned completely (Z in Annex 1);
b. allowed with standard protection measures (S in Annex 1);
c. allowed with standard + additional protection measures (SD n Annex 1).

The standard protection measures referred to in paragraph 1 al. b) and c) of this Article primarily cover the obligation of the polluter to collect all of its waste water by a watertight sewer system and to treat the water thus collected with a minimum of secondary treatment of purification.
The list of activities as well as the level of limitation of their application by individual protection zones is given in the Annex 1, which is an integral part of this Rulebook.

In all cases where certain activities referred to in Annex 1 to this Rulebook must be carried out in addition to standard or additional protection measures must be specified in detail in the water source protection study. In most cases additional protection measures will include the construction of an adequate sewer system with a wastewater treatment plant specific to the pollutant in question, to prevent direct runoff or infiltration of wastewater into the underground.

In exceptional cases, if the assessment of the total risk in the water source protection study determines that the implementation of standard and additional protection measures does not ensure adequate protection of the source in the event of implementation of any of the activities referred to in Annex 1 to this Rulebook, the line ministries shall, depending on which area there is a zone of sanitary protection, inform the Government of the Republic of Croatia, or the Government of the Federation of Bosnia and Herzegovina, and request them to prohibit the activity in question or make a decision on the possible construction of infrastructure facilities that will ensure adequate protection of the water source.

For the implementation of the activities referred to in paragraph 1 al. b) and c) of this Article, interested legal and natural persons are obliged to obtain water acts in accordance with the provisions of the respective Water Acts of BiH and the Republic of Croatia.

Access to enclosures within the I. protection zone of the water source is allowed only to employees designated by the water system operator, the competent inspection bodies during the control, as well as to other persons with special permission and records of the water system operator or user of the water intake facility.

Micro-zoning

Article 19

By way of derogation from the provisions of Articles 18 of this Rulebook, certain interventions in the area or certain activities in the sanitary protection zones of groundwater aquifers may be allowed:

1. if detailed water survey works are carried out to examine the influence of the narrow space of the sanitary protection zone in which it is intended to carry out the operation in the area, or to perform a specific activity (micro-zone) on the aquifer,
2. if a special study is made on the basis of detailed water survey works, with the purpose of proving the circumstances referred to in paragraphs 2 of this Article (hereinafter: micro-zoning study),
3. if the micro-zoning study envisages adequate measures of aquifer protection in the micro-zone.

A micro-zoning study in a zone of sanitary protection of water sources with groundwater abstraction from aquifers with cracks and cracks-cavernous porosity must prove that the features referred to in Article 4, paragraph 1 of this Rulebook in the micro-zone are significantly different from those of Article 4, paragraph 1 of this Rulebook, on the basis of which the sanitary protection zone in which the micro-zone is located has been determined.

Intervention in the micro-zone

Article 20

The investor of the planned operation in the micro-zone with water management conditions will be ordered to carry out the actions referred to in Article 19 of this Rulebook.

10/15
If the circumstance referred to in Article 19 paragraph 2 of this Rulebook proves, the water management conditions will determine the conditions for undertaking interventions in the micro-zone and the obligation to take protective measures.

The operation in the micro-zone is carried out with water monitoring.

Failure to prove the circumstance referred to in Article 19 paragraph 2 of this Rulebook shall reject the application for the issue of water management conditions.

Activity in the micro-zone

Article 21

The actions referred to in Article 19 of this Rulebook for the purpose of permitting the pursuit of activities otherwise prohibited in the sanitary protection zone shall be carried out by the interested person or unit of local self-government or the unit of regional self-government to which the decision on the protection of the water sources relates.

If the circumstance referred to in Article 19, paragraph 2 of this Rulebook proves, the administrative body of the local self-government unit or unit of regional self-government to which the decision on the protection of the water source refers, shall adopt an act permitting the activities in micro-zone.

If the circumstance referred to in Article 19, paragraph 2 of this Rulebook fails to prove, the administrative authority of the local self-government units or units of regional self-government to which the decision on the protection of the water source applies, shall inform the interested person or persons that the prohibitions in this Rulebook and the decisions on the protection of water source are in force.

Existing buildings and existing activities in the sanitary protection zone

Article 22

If in the zone of sanitary protection there are buildings constructed in accordance with the regulations on spatial planning and construction, and whose construction is prohibited by this Rulebook, or if in the zone of sanitary protection there are buildings constructed in contravention of the regulations on spatial planning and construction, and whose construction is prohibited by this Rulebook, or if in the area of sanitary protection, conducted are activities that are prohibited by this Rulebook, the local self-government unit or the unit of regional self-government to which the decision on the protection of the water source refers, will define the manner and time of removal of the building in question and a special act to determine constant monitoring of the impact of these buildings or activities on the source before and after removal.

For the purpose of harmonizing the existence of a building or performing the activities referred to in paragraph 1 of this Article, the local self-government unit or the unit of regional self-government to which the decision on the protection of the water source refers, shall order the preparation of a special study determining the necessary remedial measures and activities.

Remedial actions and measures may also relate to newly planned interventions in the area, for the purpose of expanding and / or developing an existing activity whose implementation ensures the good status of water, i.e. improves the existing status of water and aquatic environment.

The necessary remedial actions and measures are carried out at the final expense of the owner or other holder of the existing building or the person performing the prohibited activity.

If it is determined that remedial actions and measures will not have an effect, the local self-government unit or the unit of regional self-government to which the decision on the protection of the source is required, shall request the removal of buildings constructed contrary to the regulations on spatial planning and construction, or inform the person performing the existing activity that the same is forbidden.
The obligations referred to in paragraphs 1 to 4 of this Article shall form an integral part of the decision on the protection of water sources, as well as the sources of financing for the fulfilment of these obligations.

6. TRANSITIONAL AND FINAL PROVISIONS

Deleges for decisions on the protection of water sources

Article 23

The deadline for taking decisions on the protection of water sources referred to in Article 7 of this Rulebook shall be 5 (five) years from the entry into force of this Rulebook.

Failure to meet deadlines

Article 24

If a local self-government unit or a regional self-government unit fails to act within the deadlines referred to in Article 23 of this Rulebook, there will be no co-financing of the construction, reconstruction or rehabilitation of the utility water buildings on their agglomeration or water supply area from the state budget, water use fees and water protection fees, until the decision on the protection of the water sources takes effect.

Authorized person

Article 25

The contractor for the water survey works referred to in this Rulebook, that means the developer of studies on sanitary protection zones, micro-zoning studies and studies referred to in Article 22, paragraph 2 of this Rulebook may be exclusively a person registered to perform geological and hydrogeological surveys, who holds a certification decision issued by the competent ministry.
### ANNEX 1.

List of activities and level of restrictions on their application by individual protection zones

<table>
<thead>
<tr>
<th>No</th>
<th>Name of the activity</th>
<th>Groundwater</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Sanitary protection zones</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I</td>
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<tr>
<td>----</td>
<td>----------------------------------------------------------------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>A.</td>
<td><strong>URBANIZATION AND CONSTRUCTION WORKS</strong></td>
<td>Z- Forbidden, S-Allowed with standard protection measures, SD-Allowed with standard + additional protection measures</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Z</td>
</tr>
<tr>
<td>1</td>
<td>Urbanization</td>
<td>Z</td>
</tr>
<tr>
<td>1.1</td>
<td>Construction of new urban settlements</td>
<td>Z</td>
</tr>
<tr>
<td>1.2</td>
<td>Expansion of existing urban settlements</td>
<td>Z</td>
</tr>
<tr>
<td>1.3</td>
<td>Individual residential construction using stand-alone wastewater treatment systems (eg septic tanks)</td>
<td>Z</td>
</tr>
<tr>
<td>1.4</td>
<td>Maintenance of existing building structures without change of purpose</td>
<td>Z</td>
</tr>
<tr>
<td>1.5</td>
<td>Performing or conducting any activities that cause and/or promote soil erosion</td>
<td>Z</td>
</tr>
<tr>
<td>2</td>
<td>Construction Excavations</td>
<td>Z</td>
</tr>
<tr>
<td>2.1</td>
<td>Excavations in the aquifer</td>
<td>Z</td>
</tr>
<tr>
<td>2.2</td>
<td>Removal of material from watercourses</td>
<td>Z</td>
</tr>
<tr>
<td>2.3</td>
<td>Construction and operation of quarries and other material lending facilities</td>
<td>Z</td>
</tr>
<tr>
<td>2.4</td>
<td>Mining and other construction works not in the function of water supply, which may disrupt the composition of aquifers</td>
<td>Z</td>
</tr>
<tr>
<td>2.5</td>
<td>Conducting exploratory work for oil, mineral waters, natural gas and other substances that may endanger the quality of water at the source</td>
<td>Z</td>
</tr>
<tr>
<td>3</td>
<td>Construction and operation of special facilities</td>
<td>Z</td>
</tr>
<tr>
<td>3.1</td>
<td>Transformer stations</td>
<td>Z</td>
</tr>
<tr>
<td>3.2</td>
<td>Maneuvering and military training grounds</td>
<td>Z</td>
</tr>
<tr>
<td>3.3</td>
<td>Construction of new, use or extension of existing cemeteries</td>
<td>Z</td>
</tr>
<tr>
<td>B.</td>
<td><strong>COMMUNAL ACTIVITIES</strong></td>
<td>Z- Forbidden, S-Allowed with standard protection measures, SD-Allowed with standard + additional protection measures</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Z</td>
</tr>
<tr>
<td>1</td>
<td>Wastewater collection and treatment</td>
<td>Z</td>
</tr>
</tbody>
</table>
1.1 Construction of sewage and other infrastructure installations that allow the water bodies of the water catchment area to function regularly  
1.2 Discharge of untreated urban wastewater  
1.3 Construction and operation of urban wastewater treatment plants  
2 Waste disposal  
2.1 Disposal of any solid, construction, municipal and other waste  
2.2 Construction and operation of sanitary landfills  
2.3 Construction and operation of sludge treatment plants within wastewater treatment plants  
2.4 Construction and operation of animal waste treatment plants  

C. INDUSTRIAL ACTIVITIES  

<table>
<thead>
<tr>
<th>1</th>
<th>Mining and quarrying</th>
<th>Z- Forbidden , S-Allowed with standard protection measures, SD-Allowed with standard + additional protection measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Underground exploitation of mineral resources, construction and operation of facilities for the deposit, milling and processing of raw materials and tailings</td>
<td>Z</td>
</tr>
<tr>
<td>1.2</td>
<td>Surface exploitation of mineral resources, construction and operation of facilities for depositing, grinding and processing of raw materials and tailings</td>
<td>Z</td>
</tr>
<tr>
<td>2</td>
<td>Exploitation of oil, gas and radioactive substances</td>
<td></td>
</tr>
<tr>
<td>2.1</td>
<td>Drilling and exploration wells for oil and natural gas</td>
<td>Z</td>
</tr>
<tr>
<td>2.2</td>
<td>Conducting exploration and exploitation of radioactive substances</td>
<td>Z</td>
</tr>
<tr>
<td>3</td>
<td>Industrial plants hazardous to water quality</td>
<td></td>
</tr>
<tr>
<td>3.1</td>
<td>Metal industry facility</td>
<td>Z</td>
</tr>
<tr>
<td>3.2</td>
<td>Refinery</td>
<td>Z</td>
</tr>
<tr>
<td>3.3</td>
<td>Chemical industry plants</td>
<td>Z</td>
</tr>
<tr>
<td>3.4</td>
<td>Rubber industry plants</td>
<td>Z</td>
</tr>
<tr>
<td>3.5</td>
<td>Paper and pulp industry facility</td>
<td>Z</td>
</tr>
<tr>
<td>3.6</td>
<td>Leather industry facility</td>
<td>Z</td>
</tr>
<tr>
<td>3.7</td>
<td>Food industry facility</td>
<td>Z</td>
</tr>
<tr>
<td>4</td>
<td>Power plants</td>
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</tr>
<tr>
<td>4.1</td>
<td>Gas power plants</td>
<td>Z</td>
</tr>
<tr>
<td>4.2</td>
<td>Thermal power plants</td>
<td>Z</td>
</tr>
<tr>
<td>4.3</td>
<td>Nuclear power plants</td>
<td>Z</td>
</tr>
</tbody>
</table>
5 | **Industrial warehouses and landfills**  
---|---  
5.1 | Storage of industrial raw materials and chemicals hazardous to water  
5.2 | Storage and disposal of radioactive substances and waste  
5.3 | Storage and disposal of slag and ash  
5.4 | Landfills of industrial waste hazardous to water quality at the source  
5.5 | Landfills of industrial waste harmless to water quality at the source  
6 | **Collection and treatment of industrial waste water**  
6.1 | Construction and operation of industrial sewage systems  
6.2 | Construction and operation of industrial wastewater treatment plants  
6.3 | Discharge or accumulation of untreated industrial wastewater and cooling water

| **D. TRANSPORT AND TRAFFIC** | Z- Forbidden, S-Allowed with standard protection measures, SD-Allowed with standard + additional protection measures |  
---|---  
1 | **Traffic**  
1.1 | Construction of motorways and roads reserved for motor traffic  
1.2 | Construction of urban roads and associated facilities (parking lots, bridges, tunnels, ...)  
1.3 | Construction of a depot for heavy vehicles  
1.4 | Construction and operation of bus stations and terminals  
1.5 | Construction of railway lines, marshalling yards and terminals  
1.6 | Construction and operation of airports or runways for use in air traffic  
1.7 | Construction and operation of pipelines for the transport of liquids hazardous to water quality  
1.8 | Road transport of chemicals, liquid fuels and other hazardous substances  
2 | **Transport and storage of oil and petroleum products**  
2.1 | Overhead or underground tanks  
2.2 | Petrol stations  
2.3 | Gas stations along roads  
2.4 | Storage of limited quantities of fuel oil or fuel for agricultural machinery for the needs of individual households
### E. CATTLE BREEDING, AGRICULTURE AND FORESTRY

<table>
<thead>
<tr>
<th>1</th>
<th>CATTLE BREEDING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Intensive livestock and poultry production</td>
</tr>
<tr>
<td>1.2</td>
<td>Livestock and poultry production for personal needs of individual households</td>
</tr>
<tr>
<td>1.3</td>
<td>Depositing solid or liquid manure for individual households</td>
</tr>
<tr>
<td>1.4</td>
<td>Intensive grazing</td>
</tr>
<tr>
<td>1.5</td>
<td>Watering livestock from surface watercourses</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2</th>
<th>Agriculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Fertilizer and pesticide storage</td>
</tr>
<tr>
<td>2.2</td>
<td>Agricultural production followed by intensive use of artificial fertilizers, manure, pesticides, herbicides and insecticides</td>
</tr>
<tr>
<td>2.3</td>
<td>Irrigation with treated wastewater</td>
</tr>
<tr>
<td>2.4</td>
<td>Agricultural production of healthy food without the use of artificial fertilizers, manure, pesticides, herbicides and insecticides</td>
</tr>
<tr>
<td>2.5</td>
<td>Natural cultivation of grass without the use of fertilizers and other agro-technical means</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3</th>
<th>Forestry</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Uncontrolled felling and deforestation</td>
</tr>
<tr>
<td>3.2</td>
<td>Controlled felling and deforestation</td>
</tr>
</tbody>
</table>

### F. TOURISM AND RECREATION

| 1 | Construction and operation of sports, recreational and spa facilities | Z | SD | SD | S |
| 1.2 | Camping or other kind of organized gathering of people in nature | Z | SD | SD | S |
| 1.3 | Construction and operation of outdoor sports fields | Z | SD | SD | S |
| 1.4 | Construction and operation of a golf course | Z | SD | SD | S |
| 1.5 | Construction and operation of ski resorts | Z | SD | SD | S |
| 1.6 | Tourist activities (rafting, ...) | Z | S | S | S |
| 1.7 | Recreational and sport fishing | Z | S | S | S |
| 1.8 | Use of craft with internal combustion engines | Z | Z | SD | S |