

THE
WATER LAW



REPORT



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The Water Law Report

*Final Report of the Balkans Legal Research Group
on Water Law*



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Final Report of the Balkans Legal Research Group on Water Law

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Dear reader,

In front of you is a publication which contains results of a research conducted by law students and young lawyers from the territory of 5 Balkan countries, who have joined forces in order to present the most important points regarding the water law legislation in their respective countries.

This book is divided into chapters, each of which is dedicated to one country - Bulgaria, Croatia, Serbia, Hungary and Turkey. Each chapter is divided into 7 sub-chapters - answers to questions which were drafted in cooperation with the members of the Academic Board and which we consider to be crucial for presenting such an important subject.

We hope that our work will provide answers to the most important questions and intricacies which arise regarding water law and will prove to be an interesting source of data and a useful tool for students, academics and practitioners who wish to gain more insight into the topic of the publication.

Berin Günay & Nikola Ćirić

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ELSA Bulgaria

Introduction

Water resources play an important and ever-growing role in modern-day countries. These resources' significance will further expand as the international community noticeably shifts towards sustainable energy production. Moreover, water resources are valuable for economic purposes as they provide for transportation corridors and allow for the fishery, as well as for security purposes in cases in which they serve as international borders. The significance of water resources demands thoughtful and precise regulation of their use and status. The international community has lived up to the challenges of this task as there are various treaties in the sphere of maritime law. Although there is public international regulation of waters, the national countries still have abundant room to exercise their legislative functions. National water regulation is namely the object of this research. More specifically, this report will address the legal framework set forth in the Republic of Bulgaria.

Firstly, the legal regime of water sources will be examined. It is noteworthy that the Republic of Bulgaria is party to several international treaties - both bilateral and multilateral, which either determine its international border or impose a legal framework of higher-order upon its waters. These treaties among the national legislative acts comprising the legal regime of water sources in Bulgaria will be thoroughly examined.

Secondly, this report will enunciate the matter which criminal offences and misdemeanours are recognised in the national legal order with regard to water resources. In order for this to be achieved, the penal legislation will be examined. Thirdly, the Republic of Bulgaria, as a member of the European Union, is obliged by its acts. Contraventions between national law and European Union law are resolved in favour of the latter. Therefore, by virtue of the principle of sincere cooperation, the Republic of Bulgaria is obliged to harmonise its laws with the acts of the European Union. The object of the examination under the third question will focus on the compatibility of the national law with the European Union law.

Fourthly, water will be viewed as a border. The Republic of Bulgaria has two river borders and one sea border. The acts regulating their status will be reviewed for it to be determined.

Fifthly, a retrospective approach will be adopted to review the international and regional legal disputes concerning water resources. The object of the analysis will be to determine over what was the disputes revolving and how were they settled if settled.

Lastly, an overall assessment of the legal situation in the Republic of Bulgaria will be made to elucidate the aspects that need improving in the future. The

conclusion will be based on the findings on the previous topics and will synthesize their essence to allow for general remarks to be reached.

1. Legal regimes for water sources

The highest internal source of law,¹ The Constitution of the Republic of Bulgaria from 1991, spread its protection to all country's natural and other resources and their 'sensible utilization' in Article 15. The Bulgarian Constitutional case law accepts oil, coal, ores as natural resources because when used, they are non-recoverable. The water is in the part of those 'other resources' together with forests and beaches. Decision № 11/1997 of the Bulgarian Constitutional Court states that waters are 'nationwide indivisible resources'.

The next level of the legislature is following acts adopted by The Parliament:

1. Law for protection of agricultural land 1996,
2. The Protected territories Act 1999,
3. Water law 2000,
4. Law on maritime spaces, inland waterways and ports of the Republic of Bulgaria 2000,
5. Law on medicinal plants 2001,
6. Irrigation associations act 2001,
7. Law on territorial structure 2001,
8. Environmental protection law 2002,
9. Law on biological diversity 2002,
10. Health law 2004,
11. Law on regulation of water supply and sewerage services 2005,
12. Disaster protection act 2006,
13. Law on the structure of the black sea coast 2007,
14. Law on responsibility for prevention and elimination of environmental damages 2008,
15. Black Sea Coast Act 2008,
16. Waste management act 2012,
17. Public procurement law 2016,
18. Law on concessions 2017.

The Protected territories Act 1999 in §1., 3. of Additional provisions defines 'water areas' as territories from the land fund, the forest territories and the continental shelf, flooded with water. In Article 7 The Act applies its protection to all protected areas (forests, lands and water areas in it) regardless of the ownership. Article 23 claims that waterfalls are natural sightseeing and State's management aims to save their native features. In Article 21 and 31 are listed a few prohibitions aimed at water protection in national² parks and nature³ parks,

¹ Constitution of the Republic of Bulgaria, art 5.

² 'National park' is defined as wild territories which do not include settlements and include natural ecosystems.

³ In this context 'nature parks' refers to territories which involving diverse ecosystems and renewable natural resources.

which forbids disturbance of the natural condition of water areas & water currents and pollution of the waters and the terrains with household, industrial and other wastes.

The Water Law 2000 in Article 1 states that it regulates the ownership and management of the waters on the territory of the Republic of Bulgaria as a nationwide indivisible natural resource and the ownership of the water management systems and facilities. Article 3 expressly numbers the types of the water: surface waters; groundwater, including mineral waters, inland sea waters and the territorial sea (of Black Sea), Danube, Rezovska and Timok rivers.

All these waters are managed at the national and basin⁴ level by the Minister of Environment and Waters, the Supreme Water Advisory Council and the Water Coordination Council. The councils include represents from the rest of the ministries (Regional Development and Public Works; Agriculture, Food and Forestry; Economy, Energy, Tourism, Transport; Information technologies and communications; Health; Finance; Interior affairs) and represents from the Bulgarian Academy of Sciences, the municipalities and NGOs related to water. This Ministers and the mayors of the cities, supported by The State Agency for Metrology and Technical Supervision (SAMTS) and The Executive Forest Agency are responsible under Article 10 for the state policy related to the activities for operation, construction, reconstruction and modernization of the water management systems and facilities, and flood risk management. Part of SAMTS is Directorate General 'Supervision of dams and related facilities', which inspects dam's wall and carry a public register about dam's owners and Records of the checks.

The Council of Ministers manages⁵ the water supply and sewerage sector through the adopting of The National Strategy for Management and Development of the Water Sector and its performance by the Minister of Regional Development and Public Works, the municipal councils and the mayors of municipalities.

Furthermore, there is a Unified information system and register of water supply and sewerage operators' associations created by an ordinance⁶ of the Minister of Regional Development and Public Works in force from 01.06.2020. The lower level of management and control over the waters is physically exercised by Regional inspectorates for the environment and water and their inspectors.⁷

The Law on Responsibility for Prevention and Alimination of Environmental Damages 2008 adds two more officials: the directors of the basin directorates for water management and directors of national parks who issue an order for

⁴ The Water law 2000, art 9 and art 10(d).

⁵ The Water Law 2000, art 10(a).

⁶ Ordinance № RD-02-20-3 of November 18, 2019 on the conditions and procedure for establishment and maintenance of a uniform information system for the services of services and register of the register

⁷ The Water law 2000, art 151(4).

determining the remedial measures in case of environmental damage under Article 9 and 10.

The Environmental Protection Law 2002 and Law on Regulation of Water Supply and Sewerage Services 2005 are the most focused acts on water use and management. They include definitions, principles and hierarchical structure of responsible authorities. Environmental Protection Law 2002 in chapter III, section 2 'Use and utilization of waters and water objects', Article 36 says that there are three regimes of water-consuming with permit, without permit, by awarding a concession. It also set the incorporation of State enterprise, which the main subject of activity is the realization of ecological projects in implementation of national and municipal strategies in the field of environment.⁸ Law on Regulation of Water Supply and Sewerage Services 2005 lists⁹ the responsibilities of the Energy and Water Regulatory Commission, which is created under Energy Act 2003 and mainly regulates & controls the quality and prices of the water and sewerage services.

The Law on Maritime Spaces, Inland Waterways and Ports of the Republic of Bulgaria 2000 focus on Bulgarian sovereignty over the water territories, define international rules, which are adopted by Bulgaria as a party of international treaties.

The Law on Medicinal Plants 2001 creates an obligation¹⁰ for the owners of waters in which there are deposits of medicinal plants (source of herbs) to apply the measures for their protection.

Article 2 of the Irrigation Associations Act 2001 stimulates voluntary organizations to carry out activities, related to irrigation and drainage of agricultural land through deals.

The Law on Territorial Structure 2001 states that the land properties in the territories occupied by waters and water bodies have a special purpose for internal sea waters and territorial sea, the Bulgarian section of the Danube River, rivers, lakes and dams.¹¹

The Health Law 2004 looks at the waters through another prism as Resort resources.¹² The group includes mineral waters, healing peloids (healing mud), the coastal beach and sea water.

In the first paragraph of the Article 48 of the Disaster Protection Act 2006 states that there is a State of Emergency If the disaster is related to pollution of water with chemical, biological or radioactive substances and materials or the destruction of biological species.

⁸ Environmental Protection Law 2002, art 60(1) and art 61(1).

⁹ Law on Regulation of Water Supply and Sewerage Services 2005, art 5 and art 6.

¹⁰ The Law on Medicinal Plants 2001, art 7.

¹¹ The Law on Territorial Structure 2001, art 7 and art 8.

¹² Health Law 2004, art 75.

The Waste Management Act 2012 is applicable for wastewaters and their sludge used in agriculture after purification. The Act regulates the registration and licensing of commercial activity with waste.

The next levels of the legislature are ordinances for different subtypes of waters as dams; groundwater; surface waters, bathing water; coastal sea waters, drinking and household purposes water; marine waters etc. These waters are considered in few general groups aiming to protect the environment and organisms in the water, agriculture and people, and water itself from pollution and waste of water; researching, monitoring; water facilities and their technical condition. These regulations are influenced by the River basin management plans 2016-2021 and the Flood risk management plans.

According to Article 17 (4) of the Bulgarian Constitution 1991, Article 2 and 6 of the Property Act 1951, Article 2 of the State Property Act 1996 and Article 3 of the Municipal Property Act 1996, the Municipal may own public and private property, the State may own private, public and exclusive state property. The individuals may own only private property, but they also can share ownership rights on it together with the State and/or municipal. The biggest difference between subjects with status Public or Private property is that only the private property could be acquired by prescription, this also is claimed in Article 30 of the Water Act 2000. The decision №19/1993 of Bulgarian Constitutional Court in part III said that the idea of the separation between public or private property coming from the type and function of the object. When the purpose is universal use the State guarantee this use as keeping the object as owner. The early theory adopts this view and repeats that the waters are for universal use and they are out of civil turnover 'res extra commercium', so the commercial deals with waters are void and waters are not suitable object for acquisitive prescription. This is the reason that they are owned by state or municipal.¹³

In article 18, first paragraph of The Constitution 1991 State shall 'enjoy exclusive ownership rights over the waters by law' and in the second paragraph it exercises sovereign rights over Black Sea in 'prospecting, developing, utilizing, protecting and managing the continental shelf and the exclusive off-shore economic zone, and the biological, mineral and energy resources therein'. Later in the fifth paragraph of the Article 18 of the Constitution rules the concessions over those mineral and energy resources and the permits & licences over the upper activates preceding concessions. According to Decision №18 of the Bulgarian Constitutional Court's case №17/1998 all instruments in paragraph 5 are suitable for the exclusive ownership rights and sovereign rights. The earlier Decisions №2 of the Bulgarian Constitutional Court's case №26/1995 and №19 of the Bulgarian Constitutional Court's case №11/1993 define the term 'exclusive

¹³ Maria Pavlova, *Civil law – Generalities*, 2nd edn, Sofia R, 2002, p 394.

ownership rights', which means that the objects can belong only to the state and they are inalienable. The Decree № 77/1987 for establishing an exclusive economic zone of the People's Republic of Bulgaria in the Black Sea numbers the sovereign rights of Bulgaria - 'research, development, use, protection and management of living and non-living natural resources located on the seabed, in its bowels and in the waters covering them, as well as for conducting other types of commercial activity related to the research and use of the area and its energy resources' and the rights and jurisdiction of Bulgaria over islands, scientific researches and protection of the marine environment'. The exclusive economic zone is 200 sea miles (370 km) wide, and its external borders are agreed with other countries around Black sea according to international public law.

The Protected territories Act 1999 in Section II 'Ownership', Article 10 (1) says that the water areas, part of the protected territories, which is not exclusive state property, shall be public ownership of The State or of the municipalities. Right after in Article 11 The Act rules that also private owners or users of water areas in the protected territories are obliged to observe the regimes, established by it, with the order for declaring the protected territory and the plan for its management.

The Water Act 2000 declares in Article 6, that the waters, the water's objects and the water economic systems and facilities on the territory of the country may be property of The State, of the municipalities, of private and legal persons. In Chapter two 'Ownership right over water, water facilities and water management systems and facilities'; Section I. 'State ownership of waters, water bodies and water management systems and facilities' are declaring widely which waters and water object are public property and Exclusive State property. For example, the following groups are Public State property: waters of the dams, water supply systems, rivers, natural lakes, the underground waters, the natural waterfalls, waste waters, islands, the seabed and its bowels and the coastal floodplain of the Danube River.¹⁴ In appendix №1 of the Act are numbered over 50 dams with high importance, and in appendix №2 are numbered 102 mineral water deposits with high importance too.

As it was stated in The Constitution, this later Act repeats, that Exclusive State property are:¹⁵ mineral waters, inland waters and the territorial sea. Despite this under Article 17a, paragraph 1 the management of mineral waters could be executed by State, municipalities or private bodies. Extremely interesting is the option in Article 13 paragraph 2, which claim that ownership over the dams could be transferred from the municipality to the State for free.

The biggest protection over the objects of Public State's property is under Article 16, paragraph 1 which deny transformation of object Public State's property into

¹⁴ Water Act 2000, art 11, art 12 and art 13.

¹⁵ Water Act 2000, art 14.

Private State's property. Private State's properties are water supply installations, networks and facilities, located in the State's properties.¹⁶

Section II. 'Municipal ownership of waters, water bodies and water management systems and facilities' also divide municipal's property in to public and private¹⁷ and in brief can be said that everything, which is not located in States Property's areas, is municipal one. Examples for public municipal's property are natural springs, mineral water, lakes and swamps, dams, located in public municipal property's areas; wastewaters that flows into water - Public Municipal's property;¹⁸ water supply systems, including networks and facilities for abstraction, purification, decontamination, storage and transportation of water, through which water is supplied to consumers in the municipality; street sewerage networks and rainwater intake shafts and drainage sewers. Under Article 21 is mentioned that mineral waters get a certificate for public municipal's property from Ministry of Health under Food Act 1999. Private municipal's property are all the rest waters, which are not mentioned above according to Article 22 of the Water Act 2000 and it also resent the regulation to the Municipal property Act 1996.

Section III- 'Private ownership of waters, water bodies and water management systems and facilities'¹⁹ point that only landowners with water in their estate may have private ownership rights over water. The newest category of water added in article 24 includes wells, lakes, rainwater and etc.

Chapter 2, Section IV 'Co-ownership of water bodies and water management systems and facilities' Articles 27-29 state that waters are undivided objects and the delineation of real parts of water is forbidden. The single possibility for an acquisition is through a legal transaction for the land in which they are located, or by inheritance.

2. Criminal offences and misdemeanours regarding water resources

The main source for criminal offences is Bulgarian Criminal Code 1968, last edited 13 of May 2020, which still saves the principles of 'actus reus' and 'mens rea'. There is a Chapter 11, Section III 'Crimes against public health and the environment', which include all offences punished with imprisonment.

Under Article 349 paragraph 1 a man might be in jail between 2 to 8 years for putting an object which is dangerous for life or health, in any drinking water resource (well, spring). If this action results in grievous bodily harm, the

¹⁶ Water Act 2000, art 15a.

¹⁷ Water Act 2000, art 18.

¹⁸ Water Act 2000, art 19.

¹⁹ Water Act 2000, art 23.

imprisonment is of 3 to 10 years, but if it causes death, the imprisonment is of 10 to 20 years, life imprisonment or life imprisonment without parole – Article 349 paragraph 2. The Article 351 rule the same crime but done without intention: If it is committed by negligence, the punishment is imprisonment for up to 2 years or probation, if in this case death has followed for someone, the punishment shall be imprisonment of up to 5 years. Decision № 55/2016 of the District Court – Topolovgrad found guilty under 349 paragraph 1 a boy under 18 years who poured a six litres tube of engine oil into a private property well with drinking water, but because of reduction he is punished with probation for 6 months - meetings with probation officer twice a week.

The Article 352 has wide scope, because the ‘victim’ by polluted water can be humans, animals and plants and the man could be liable for acts and for omission too. There is a court practice of Administrative court Stara Zagora decision №252/2018 where a farmer - owner of more than 100 animals is found guilty under article 352 for groundwater pollution with dung stocked for manure, but he is punished a fine for the misdemeanour. Another example of offence is found in the decision №214/2012 of Bulgarian Supreme court, where a man has polluted groundwater by depositing chemicals herbicides and the result is that the zone becomes unsuitable for agricultural use.

When the poisoning of water is caused by petrol²⁰ the imprisonment is longer. When the violator is the captain of the ship, the violator may lose their professional permit. The violator also has an obligation to inform immediately about the accident, if not he will be fined 500 BGN. Article 353 ruling imprisonment plus fine for lack or mismanagement of purifying facilities in enterprise or Thermal power plant. The code under Article 353a accepts also as an offence the disclosure of false information of the condition of the water, which cause harms to the environment and people. The next articles of the chapter are focused on the mismanagement of waste or dangerous waste as crimes.

Other offences are illegal building of a water intake facility or facility for the use of surface or groundwater, commercial use of mineral water without a permit, poisoning fishery waters.²¹

There is an offence with an international element at article 240 where the offender can only be a foreigner who is crossing territorial waters of Bulgaria by vessel with intention of commercial fishing. There is a court practice of District court of Rezovo №88/2008 where the judge finds as guilty two citizens of Turkey under article 240 for crossing territorial water of Black sea near village Rezovo and estuary of river Rezovska. They were caught while they were collecting the fishing nets and were imprisoned for one year.

²⁰ The Criminal Code, art 352(a).

²¹ The Criminal Code amendment since 2009, art 239.

According to the theorists²² if the intention is for recreational fishing the act will be accepted as an administrative violation, not as an offence. Definitions of amateur fishing and economic fishing are given in Fisheries and Aquaculture Law 2001.

The regime of the misdemeanours in Bulgaria is ruled by the doctrine of Administrative-criminal and civil liability through coercive administrative measures and financial fines. The main sources are Articles 200 - 202a of the Water Law 2000 and Articles 118-123 Law on Maritime Spaces, Inland Waterways and Ports of the Republic of Bulgaria 2000, ruled the procedure from finding out of the infringement to the payment of the fine.

Civil liability over polluted water is tortious liability run by general civil law procedure. Civil liability over the waste of water is separated into two groups tortious liability and contractual liability. Contractual one may come from breaching of concession contract or land easement.²³ In cases when the violator is a legal body it has property liability via fines only.

According to Article 199 Water Law 2000, the Minister of Environment and Water is capable to order coercive administrative measures in cases of accidents with water systems users with a fine between 150 BGN – 25.000 BGN. For example, such activities might be destroying beds of rivers or riversides, distributing bottled mineral water in the commercial network without a certificate, hiding information about emergency situations in water bodies. The Decision № 135/2003 of the Smolyan District Court is confirmed by The Supreme Administrative Court for the payment of 286, 72 BGN as a fine for preventive control of tailings pond²⁴ 'Erma River', where a company for mining of lead-zinc ores underground violated the emission norms for wastewater discharge.

Under Article 118 Law on maritime spaces, inland waterways and ports of the Republic of Bulgaria 2000 the captain of the nonmilitary ship and the owner of the ship will be fined between 50.000 BGN – 200.000 BGN If the captain sinks the ship in the territorial sea, in inland waters and inland waterways or throws it ashore. Article 119, in paragraph 2 adds other illegal activity with international element, where the captain of a nonmilitary foreigner ship shall be fined between 150.000 BGN – 500.000 BGN if there are nuclear energy devices or nuclear weapons, nuclear, radioactive or other dangerous or poisonous substances on the board. If the environment is damaged as a result of transporting upper goods, the fine is 1.500.000 BGN – 3.000.000 BGN. As a guarantee of payment from

²² Prof. Dr. Momyana Guneva, Adv. Lyubomir Novikov and team, *Crimes against the Environment*, (2015), Sofia, p 99.

²³ Prof. DSc. George Penchev, *Environmental Law of the Republic of Bulgaria - Special Part, Educational Guidelines*, Ciela, 2019, p 92.

²⁴ A facility for storage of by-products from mining operations after separation of ore from the rock.

foreigner ships Bulgarian authorities prohibit their sailing and the captain of the port may arrest them. Article 120 protecting Bulgaria from submarines in Internal waters and Territorial sea, and the closed ports and raids from entering of ships with fine between 50.000 BGN – 200.000 BGN. The next Articles are sanctioning port operator who is not following rules of EU Regulations.

The Law on regulation of water supply and sewerage services 2005 add liability to the operators of water supply and sewerage services. According to the Register in the webpage²⁵ of the Energy and Water Regulatory Commission the operators are 49 and for every municipality is only one, there are few big cities where there is place for choice and alternatives.

The most famous ecological penalties issued by Bulgarian authorities are connected with the TV show ‘Running Wild with Bear Grylls’ where Bear Grylls and Derek Hough were surviving in Protected territories of National Park Rila.

3. Analysis of the laws and regulations that are compatible with EU law

The Republic of Bulgaria, as an applicant country to the European Union, was required to adopt the *acquis communautaire* – the accumulated legislation and court decisions which comprised the body of European Union law. In order for the national legislation to be brought in harmony with European Union law, numerous amendments were to be enacted. Upon compliance with the aforementioned requirement and as of 1 January 2007, the Republic of Bulgaria is a Member State to the European Union and is bound legally by its acts. Owing to these factors, European Union law is a heavy source of influence over the national legal system. This is even more so in the field of water resources since according to the Treaty on the Functioning of the European Union the European Union enjoys exclusive competence over the conservation of marine biological resources under the common fisheries policy²⁶ as well as shared competence in the field of fisheries.²⁷ In this exposition a concise analysis of the Water Act and the Act on Maritime Spaces, Inland Waterways and Ports of the Republic of Bulgaria will be provided in order to determine how and to what extent European Union law has influenced the national legislation regulating water resources.

The first instance in which the Water Act refers to European Union law is in connection to the functions of the National Institute of Meteorology and Hydrology (hereinafter NIMH). Article 171 (6) (9) (b) of the Water Act stipulates that NIMH is under the obligation to collect and provide information and

²⁵ List of Operators, <<https://www.dker.bg/bg/vik/spisk-na-vik-operatorite.html>> accessed 15 September 2020.

²⁶ Treaty on the Functioning of the European Union, art 3(1)(d).

²⁷ Treaty on the Functioning of the European Union, art 4(2)(d).

evaluation of the quantity of water for the preparation of the national reports required by the directives in the field of water resources.²⁸ Under European Union law Member States are obliged to send reports regarding the condition of their water resources.²⁹ As this obligation derives from directives, it is one of result and not of means. Therefore, it falls within the margin of appreciation of the Republic of Bulgaria to decide by which internal body are the reports to be made as long as the obligation is fulfilled.

The second instance in which the Water Act refers to European Union law is in connection to 'priority substances' as defined in Article 2 (1) (30) of Directive 2000/60/EC of the European Parliament and of the Council. According to § 1 (68) of the Additional provisions to the Water Act, 'priority substances' are substances, which constitute a significant risk for the aquatic environment or which through it are toxic for the people and ecotoxic for the aquatic ecosystems and the terrestrial ecosystems connected to them, and which are defined in accordance with Article 16 and Annex № 10 to the directive.³⁰

The legislative approach in this provision is one of redirection to the relevant definitions provided in the directive so as to avoid any discrepancy between the national and the European legal order.

In § 2c of the Additional provisions to the Water Act it is stipulated that the Water Act itself introduces the requirements listed in the following directives – Directive 2000/60/EC; Directive 2007/60/EC and Articles 11 and 12 of Directive 2008/105/EC. These directives provide for a framework for action in the field of water policy, the environmental quality standards in the field of water policy and the assessment and management of flood risks in accordance with the competence of the European Union over the environment pursuant to Article 174 of the Treaty establishing the European Community. By transposing the requirements set forth in the aforementioned directives, the Republic of Bulgaria brought its national legislation in harmony with European Union law pursuant to the principle of sincere cooperation.³¹

The provisions of the Act on Maritime Spaces, Inland Waterways and Ports of the Republic of Bulgaria also provide for harmonisation with European Union law. Firstly, in § 1c of the Additional provisions to the Act it is stipulated that the Minister of Transport, Information Technologies and Communications or another person authorised by him/her presents to the European Commission the information for the previous year regarding the ports reception facilities for ship-generated waste and cargo residues.³² Pursuant to Article 9 (2) of Directive

²⁸ Water Act 2000, art 171(6)(9)(b).

²⁹ Directive 2000/60/EC of the European Parliament and the Council, art 15(2).

³⁰ Water Act 2000, § 1 (68) of the Additional provisions.

³¹ Treaty on European Union, art 4(3).

³² Act on Maritime Spaces, Inland Waterways and Ports of the Republic of Bulgaria, § 1c of the Additional provisions.

2000/59/EC to which the aforementioned provision refers, ‘Member States shall inform the Commission of exemptions granted in accordance with paragraph 1 on a regular basis, at least once a year.’ The transposition in the Act on Maritime Spaces, Inland Waterways and Ports of the Republic of Bulgaria ensures compliance with the European Union law and its uniform application.

Secondly, under § 1d of the Additional provisions to the Act on Maritime Spaces, Inland Waterways and Ports of the Republic of Bulgaria, the Minister of Transport, Information Technologies and Communications or another person authorised by him/her presents reports to the European Commission in respect of the implementation of the provisions concerning delivery of ship-generated waste and waste reception, including cargo residues.³³ In this manner, the European Commission is enabled to monitor the waste management in the area of sea transport.

The Act on Maritime Spaces, Inland Waterways and Ports of the Republic of Bulgaria transposes the requirements set forth in the following acts – Directive 2000/59/EC; Directive 2002/59/EC; Directive 2005/35/EC as well as Council Framework Decision 2005/667/JHA.³⁴ These acts of the secondary European Union law concern port reception facilities for ship-generated waste and cargo residues, the establishment of vessel traffic monitoring and information system on ship-source pollution and on the introduction of penalties for infringements and the strengthening of the criminal-law framework for the enforcement of the law against ship-source pollution. They provide for an effective framework guaranteeing environmental protection in the sea transport. The executive agency ‘Maritime administration’ in cooperation with the competent bodies of other Member States to the European Union and the European Maritime Safety Agency are obliged to develop information systems for implementation of the provisions of the listed directives as well as to establish common practices, including such for monitoring of ships which eject polluting substances and to impose sanctions upon finding a violation.³⁵ The conformity between the national legislation and the European Union law guarantees a higher standard of protection for the environment.

Lastly, under § 42 of the Additional provisions to the Act of Amendment and Supplement of the Act on Maritime Spaces, Inland Waterways and Ports of the Republic of Bulgaria the requirements of Directive 2014/89/EU are transposed. This directive establishes a framework for maritime spatial planning.

³³ Act on Maritime Spaces, Inland Waterways and Ports of the Republic of Bulgaria, § 1d of the Additional provisions.

³⁴ Act for Amendment and Supplement to the Act on Maritime Spaces, Inland Waterways and Ports of the Republic of Bulgaria, § 12 of the Additional provisions.

³⁵ Act for Amendment and Supplement to the Act on Maritime Spaces, Inland Waterways and Ports of the Republic of Bulgaria, § 13 of the Additional provisions.

It is evident, that in respect of water resources the Republic of Bulgaria has adopted the European Union law to a sufficient degree. The effort of the national legislator to harmonise the national legal order with the European one is a commendable achievement. It provides for a higher standard of protection of the aquatic and terrestrial environment and better management of sea transport so as to secure the free movement of goods. Nevertheless, European Union law has a strong influence over the national legal order of the Republic of Bulgaria, especially in the field of water resources in which the European Union has broad powers. This leaves little room for sovereign legislation on behalf of the national parliament. The *acquis communautaire* brings considerable advantages, however, requires that the legislative body transfers some of its functions to the institutions of the European Union. A fair balance must be struck between the prerogatives of the national state and the transfer of powers in the process of European integration.

4. Regulation on the borders of water areas

Bulgaria is located in Southeastern Europe and in the Northeastern part of the Balkan Peninsula. It is a European, Balkan, Black Sea and Danube country. This geographical location puts it at the crossroads of Europe, Asia and Africa. The crossroads also determines its strategic place on the political map of Europe and the Balkans, in relation to regions rich in raw materials and world markets. The following statement will focus on the international borders of Republic of Bulgaria which are defined by the body of water. In order to do that on the first place we need first to have in mind how these borders were established, regulated and defended in time of war. A very accurate and detailed answer presented to us in an interview Mrs. Katya Oncheva, History specialist and teacher in 'Goethe' Highschool, Burgas. The information, which she found most relative to the topic, is part of the historical period, in which Bulgaria was under Ottoman Rule. During the Ottoman Rule, the Black Sea fortresses were an important military-strategic point against the invasion of Russia, which in the XVII-XIX centuries was a major opponent of the Ottoman Empire. At the same time, murals from Nessebar's churches and written sources testify that European ships docked in the Black Sea ports, loading cheap raw materials necessary for the development of industrial centres in the XVIII-XIX centuries. After the Liberation and the signing of the Treaty of Berlin (1878), San Stefano Bulgaria was fragmented. The autonomous province of Eastern Rumelia includes Burgas and the southern Black Sea cities and after the Union in 1885. Bulgaria is already gaining a relatively complete view of the Black Sea border. During the First Balkan War (1912-1913) the young Bulgarian navy celebrated its first victory, as the torpedo boats 'Daring' and 'Brave' attacked and torpedoed the great Turkish cruiser 'Hamidie'. By virtue

of the Peace of Bucharest from 1913 and after the Treaty of Neuilly in 1919. Bulgaria lost part of its Black Sea border in southern Dobrudzha, which has been ceded to Romania. The exit to the White Sea was also lost, as the promised transit corridor to the port of Alexandroupoli (now Alexandroupolis) was not provided to the Bulgarian state. The Munich Agreement of September 29, 1938, by which Britain, France, and Italy ceded to Germany the German-occupied Czechoslovak region of the Sudetenland, marked the official end of the Versailles system of peace treaties after World War I. The Bulgarian government understands that the time has come to revise the Neuilly Treaty. Bulgaria demanded the return of South Dobrudzha to the border in 1913. As a result of the diplomatic steps taken, difficult negotiations began. Assessing the importance of the coast and convenient ports, the Romanian side claims to be in possession of the most important ports in the area - Silistra and Balchik. After successful diplomatic negotiations and with the assistance of all the Great Powers involved in World War II, on September 7, 1940 in the city of Craiova was concluded an agreement between Bulgaria and Romania, according to which South Dobrudzha was returned to Bulgaria and population was also exchanged. The new border started from the Danube River just after Silistra and reached the Black Sea about 8 km south of Mangalia. This territory of 7,695.8 sq. km bordered to the east the Black Sea and to the north the Danube, as the Bulgarian Black Sea coast increased by nearly 93 km - from the village of Ilanlak (Vama Veche) to Ekrene (Kranovo), and the Danube - 75 km from Tutrakan to Silistra. The capture of South Dobrudzha began on September 21, 1940 with the participation of units of the Third Army and the Naval Occupation Corps. The units were transported on board of war- and merchant ships. Ships of the Bulgarian Merchant Shipping Company and the Bulgarian River Navigation participated in the transportation of emigrants from Northern and Southern Dobrudzha. The civilian and military naval establishments interacted during the occupation and in settling the Bulgarian administration. In order to preserve all important coastal and port facilities, Bulgarian military posts were immediately appointed. A commission was set up to accept the important administrative sites in the port cities, chaired by the head of the Varna port, Captain Naiden Naidenov. Bulgarian officials were appointed to civilian positions, who started working even before the withdrawal of the Romanian authorities. Sea communications between the 'new' and 'old' ports were restored. Timetables were drawn up for the movement of the ship 'Evksinograd' between Varna, Balchik and Kavarna, which started on 21 September. The schedule for the movement of the passenger ships of the Bulgarian river navigation on the Danube river from Ruse to Tutrakan and Silistra was also determined. Tariffs for passenger transport were set, shipping agencies were established in the 'new' ports. The continuous operation of the lighthouses at Shabla and Kaliakra, the radio beacon of Kaliakra and the

signalization of Balchik were also ensured. Despite some difficulties, South Dobrudzha was quickly included in the maritime economy of Bulgaria, while at the same time creating conditions for the normal functioning of the coastal settlements of the newly acceded territories. The return of South Dobrudzha provided new opportunities for the development of the sea and river economy of Bulgaria and especially for shipping and fishing. These territories have their significant place as an economic hinterland of the ports of Varna and Ruse and contributed to their development and the realization of Bulgarian maritime interests. Finally, we come to the moment when the modern sea border, as well as the modern borders of Bulgaria were established in 1947 with the signing of the Paris Peace Treaty. The victorious Great Powers and their allies Greece and the newly formed Yugoslav federation, returned Bulgaria to the borders of September 1940. Thus, Bulgarian territory is 111,001.9 square kilometres, which is 22% of the area of the Balkan Peninsula and only 1% of the area of Europe.

The eastern sea border of Bulgaria is natural and consists of 378 km. and to it belong 12 nautical miles (22 kilometres), over which the state has sovereign rights. It starts from Vama Veke (Kartal) in the north and reaches the mouth of the Rezovska River in the south. Some islands belong to the territory of Bulgaria: St. John (the eldest), St. Peter, St. Anastasia, St. Thomas - the Serpent and others. Large ports: Varna and Burgas; ferry connections - Varna - Ilyichovsk - Poti - Batumi; Burgas-Poti-Novorossiysk.

The sea and river spaces of the Republic of Bulgaria have been regulated since 1987, initially in the Law on Maritime Areas and since 2000 in the Law on Maritime Areas, Inland Waterways and Ports. They are entirely based on the spirit and recommendations for an 'establishment of a legal order for the seas and oceans which will facilitate international communication and will promote the peaceful uses of the seas and oceans, the equitable and efficient utilization of their resources, the conservation of their living resources, and the study, protection and preservation of the marine environment' of the 1982 UN Convention on the Law of the Sea, which Bulgaria has signed and ratified. As it is written in Article 2 of the Law on Maritime Areas, Inland Waterways and Ports, the Act is oriented to regulating the regimes of proper distribution of the Black Sea and the rivers, the protection of sea and river environment, facilitating the water connections, insurance of equal access to harbours, the safety of navigation, etc. of the water spaces, which are specific defined in Article 1, Paragraph 1 as Maritime Areas, the Inland Waterways and Ports as separate subjects of law.

The Black Sea is the only Maritime Area representing an international sea border of Republic of Bulgaria which is obeying the national sea law. There is a very specific definition of the sea spaces in Article 5 of the Maritime Areas, Inland Waterways and Ports Act. The maritime areas of the Republic of Bulgaria are

defined *numerus clausus* in 5 legal categories which cover the internal sea waters, the territorial sea, the adjacent zone, the continental shelf and the exclusive economic zone.

According to the Article 6 of the Law on Maritime Areas, Inland Waterways and Ports, the internal sea waters of the Republic of Bulgaria include:

1. the waters between the coastline and the exit lines, from which the width of the territorial sea is measured;
2. the waters of the ports, limited by the sea with the line connecting the most distant points in the sea of the anchorages, the hydrotechnical and the other permanent port facilities;
3. the waters of:
 - Varna Bay between the coastline and the straight-line connecting Cape St. Constantine with Cape Ilandzhik;
 - the Burgas Bay between the coastline and the straight-line connecting Cape Emine with Cape Maslen;
4. (Amended, SG No. 28/2018) the waters between the shoreline and the straight exit lines connecting Cape Kaliakra with Cape Tuzla, Cape Tuzla with Cape Ekrene and Oil Cape with Cape Rohi.

The main importance of defining these internal sea spaces is connected with establishing the regimes of shipping on the territory of the Republic of Bulgaria and exploitation of ports, as it is completely defined further in the Act.

The territorial sea of the Republic of Bulgaria includes the sea strip adjacent to the coast and the internal sea waters with a width of 12 nautical miles, measured from the baselines. The territorial sea of the Republic of Bulgaria is distinguished on the beach. The territorial sea of the Republic of Bulgaria is distinguished from the territorial sea of the neighbouring countries by the geographical parallel from the point of the land border, resting on the seashore. (Article 16, 17 Maritime Areas, Inland Waterways and Ports Act).

In Article 37 and 38 is said that the adjacent area of the Republic of Bulgaria is the sea strip, which extends to the territorial sea and extends at a distance of 24 nautical miles from the baselines, from which the width of the territorial sea is measured. In the adjacent zone, the Republic of Bulgaria carries out control to prevent the violation of customs, financial, border and health requirements within the country, including in the territorial sea, and jurisdiction to punish violators of these provisions.

The continental shelf of the Republic of Bulgaria includes the seabed and the bowels of the underwater region, which are a natural extension of the land territory and extend beyond the territorial sea to the established borders with the continental shelf of other adjacent and opposing states. The external borders of the continental shelf shall be determined by agreement with the neighbouring

adjacent and opposing Black Sea States in accordance with international law in order to reach a fair solution.

The Exclusive Economic Zone (EEZ) is a new status of maritime law introduced by the UN Convention on the Law of the Sea. Each landlocked country has the right to regulate its EEZ in the maritime space up to 200 miles (370 km) off its coast. In this area, the state does not exercise sovereignty, but sovereign rights. According to the most important sovereign law, no one is allowed to exploit the living resources of the sea layers and the seabed in a foreign EEZ without special permission from the owner state.

Article 45 and 46 says that the exclusive economic zone of the Republic of Bulgaria extends beyond the borders of the territorial sea at a distance of up to 200 nautical miles from the baselines from which the breadth of the territorial sea is measured. The external borders of the exclusive economic zone shall be determined by agreement with neighbouring adjoining and opposing states in accordance with international law in order to reach a fair solution.

The estimated at the Article 46 of the Maritime Areas, Inland Waterways and Ports Act need of further actions, the Agreement between the Republic of Bulgaria and the Republic of Turkey on the determination of the border in the Area of the East of the River Rezovska/Mutuldere and the bordering of the sea spaces between the two countries in the Black Sea is the act that continues the determination of the south exclusive economic zone. According to Article 4 the border of the continental shelf and the exclusive economic zone between the Republic of Bulgaria and the Republic of Turkey in the Black Sea starts from the endpoint of the lateral border of the territorial seas, defined in Article 3, item 1 of this agreement, and continues in a north-easterly direction along geodetic lines connecting points with coordinates:

Coordinate system WGS'84

1. 41 ° 59'52 "N and 28 ° 19'26" E
2. 42 ° 14'28 "N and 29 ° 20'45" E
3. 42 ° 26'24 "N and 29 ° 34'20" E
4. 42 ° 29'24 "N and 29 ° 49'36" E
5. 42 ° 33'27 "N and 29 ° 58'30" E
6. 42 ° 48'03 "N and 30 ° 34'10" E
7. 42 ° 49'31 "N and 30 ° 36'18" E
8. 42 ° 56'43 "N and 30 ° 45'06" E
9. 43 ° 19'54 "N and 31 ° 06'33" E
10. 43 ° 26'49 "N and 31 ° 20'43" E

The northern international border of the Republic of Bulgaria is divided into two parts - river and land. The river part covers the section along the Danube River

from the mouth of the Timok River to Silistra, with a length of 470 km. The land border with Romania stretches from Silistra to Cape Kartal on the Black Sea. Its length is 139 km. Obeying to the national legislation, as it follows article 70 of the Law on Maritime Areas, Inland Waterways and Ports defines the Danube river as an 'inland waterway' from kilometre 845,650 to kilometre 374,100, bounded between the right bank of the river and the demarcation line of the border between the Republic of Bulgaria and Romania, determined in accordance with the 1908 Convention on the Determination of the River Border between Bulgaria and Romania. According to Article 1 of the Convention the river border between Romania and Bulgaria follows the middle of the river, at the lowest waters, when these flow in a single bed, and the middle of the arm, which contains the riverbed, when the river is divided by islands into two or more arms. As it follows in Article 2 the islands in the river are also defined by the act- The islands (including the sand deposits) placed to the left of the border, will form an integral part of the Romanian territory. The islands (including the sand deposits) placed to the right of the border will form an integral part of the Bulgarian territory, as also each of the two states will be released from any obligation to the authorities, municipalities, institutions or private persons of the other state, who, in any capacity, would come to claim rights on the islands that passed into the possession of the first (Article 3). Another interesting aspect of the Convention is the natural change of the location of the islands, which respectively will affect the possession of the island. Article 6 says that the two Governments will recognize that an island has passed in one obvious and lasting way from one side of the thalweg to the other and will agree to change its possession when the two minimum probes at the lowest waters taken on the lines of the largest depths on either side of the island would reach to differ from each other by at least 30% of the magnitude of the largest. The two governments will take steps to appoint a joint inspection commission, which will have to complete its work in the same year so that the issues can be finally settled and completed before the start of next year. The first general inspection of the general location of the thalweg will be carried out during the year 1918. The other inspections will be carried out in the same conditions and regularly every ten years.

River Rezovska the next international border - to the South, between Republic of Bulgaria and Republic of Turkey. The status of the river as an international border is obeying national Law on Maritime Areas, Inland Waterways and Ports and is being defined as internal waterway. Further regulation is estimated in the Agreement between the Republic of Bulgaria and the Republic of Turkey on the determination of the border in the Area of the East of the River Rezovska/Mutuldere and the bordering of the sea spaces between the two countries in the Black Sea. As stated in the opening of the Agreement, the countries desire to further develop the existing cooperation on the basis of the

Treaty of Friendship, Good Neighbourliness, Cooperation and Security between the Republic of Bulgaria and the Republic of Turkey. The agreement was signed in Ankara on 6 May 1992. The main goal of the agreement as stated again in the opening is to define the border between the countries in the area of the Rezovska/Mutludere River and to ensure the free flow of its waters into the sea and taking into account all relevant circumstances for establishing a precise and fair delimitation of their respective Black Sea maritime areas exercise sovereignty, sovereign rights or jurisdiction in accordance with the applicable rules of international law. According to Article 1, paragraph 1, 2, 3 the area of the mouth of the Rezovska/Mutludere River is very exact defined between the line connecting the point $x = 5071$ m and $y = 7842$ m on the Bulgarian coast with the point $x = 4978$ m and $y = 7836$ m on the Turkish coast, and the place where the river flows into Rezovsky/Begendik Bay. The border between the Republic of Bulgaria and the Republic of Turkey in the area of the mouth of the Rezovska/Mutludere River follows the middle line in the riverbed/channel (measured at the mean sea level), fixed after its clearing and reshaping. The end point of the border at the mouth of the river is the end point of the land border between the countries.

After defining the borders, we come to the most common aspect – border control. Border control has a very wide meaning itself, the activities of border control are regulated by the Act of Customs authorities which was created first on 6 February 1996 and last changed on 18 February 2020 due to Covid-19 pandemic. According to Article, 2 paragraph 1 and 2 border and custom control is needed when crossing the state border through the border check points, the persons and the means of transport. The goods which are transported by then, are subject to custom supervision and control. Custom supervision and custom control applied over the import, export and transit of goods like cash, precious metals and rocks, foods, plants, animals' biological materials and other from and through the Republic of Bulgaria, as well as during the collection of custom duties and the application of administrative or penalty regulation are opened by the custom authorities. The Customs Authorities is a centralized administrative structure organised in the Customs Agency led by the Minister of Finance. It is a budget-supported legal entity based in Sofia. Customs Authorities, which are based in the border check points on the borders defined by the body of water, are mostly harbours (the most famous are in the cities Vidin, Rousse, Silistra, Balchik, Varna and Burgas) and their obligations we also find in the same Act. As it follows in the first place, Bulgarian and foreign citizens are being controlled on the border checkpoints. According to Art. 8 para. 1, Law on the foreigners in the Republic of Bulgaria, a foreigner (but also a Bulgarian) citizen may enter the state, if they have regular travelling documents, replacement documents and visa when required. After the border control of passengers, there comes the customs

control of ships and goods, which we find again in the Act of Custom Authorities, supported also with the Ordinance on the organisation for implementation of border passport, customs, health, veterinary medical and phytosanitary control, as well as control of vehicles in the ports of the Republic of Bulgaria, serving ships of international navigation.

5. International and regional water-related legal disputes concerning water as a resource

The topic of legal disputes that Bulgaria has been involved in with regards to water as a resource has turned out to be quite a puzzling matter. Right from the beginning of the research on this issue, an interesting phenomenon occurred. Media outlets such as Svobodna Evropa, Capital and different non-governmental organisations such as ‘Balkanka’ Fishing Club Association, have on numerous occasions highlighted different highly concerning issues with regards to the way different water formations in the country have been managed and the way local authorities have failed to prevent the misuse of dams, lakes, rivers, and also their systemic pollution by improper business owners.³⁶ However, despite the innumerable amount of reports on similar issues all over the country, the research was not able to find much in regards to any past or ongoing legal disputes.

After finding out that, one of the most prominent whistle-blowers was ‘Balkanka’ Fishing Club Association, the research took upon to seek an official position from the Association with regards to the news that they have informed the European Commission of the non-compliance with the Drinking Water Directive (DWD) (Directive 98/83/EC).³⁷ Unfortunately, the said association never reached back with a comment concerning this news. So, on the matter, there are several news pieces saying that the European Commission is about to look into and possibly sue Bulgaria for a breach of the Drinking Water Directive (Directive 98/83/EC). Until an official legal procedure has begun this remains only a possibility in the future.

Despite the numerous accounts of water mismanagement Bulgaria seems to lack any notable legal disputes concerning water. Yes, there are cases of charges being pressed against certain individuals on water-related cases but most of them end in out-of-court settlements or get swept under the rug.

One of the most prominent such cases is the most recent water crisis in Pernik as highlighted by Euronews and other prominent European media outlets.³⁸ The

³⁶ Мила Чернева, *Капка по капка - вир от проблеми*,
<https://www.capital.bg/politika_i_ikonomika/infrastructure/2020/08/05/4083083_kapka_po_kapka_-_vir_ot_problemi/>, accessed 10 September 2020.

³⁷ Drinking Water Directive (DWD) (Directive 98/83/EC).

³⁸ Heather Donald, ‘Bulgaria: Residents in Pernik protest about water shortages’,

citizens of Pernik experienced severe water shortages due to poor management of the city's only water supply, the Studena Dam. The residents of Pernik have been protesting claiming that the crisis happened because of bribery and incompetence. Bulgaria's environment minister, Neno Dimov, resigned after he was charged with deliberate mismanagement of water supplies. Some claim he deliberately allowed water to go to industrial facilities being well aware of the fact that that would affect the drinking water supplies of over 100,000 people. If he is convicted, he faces over eight years in prison.

Another example of a case where charges were pressed but then the charged was released under bail is the case concerning the pollution of the two rivers Yugovska and Chepelarska near Plovdiv. The Regional Prosecutor's Office in Assenovgrad laid criminal charges against two company officials, alleging that they allowed cyanide pollution in those rivers. The pollution of the rivers was so severe that it rendered their waters unfit for domestic and agricultural use. This is a crime under the Criminal Code. Were the men to be found guilty they would face up to five years in prison and a fine between 5000 and 30 000 leva. Bulgarian media said that the pollution was discovered on February 21 during an inspection by the East Aegean Regional Basin Directorate and the Smolyan regional inspectorate of the environment and water. The recent development of the case is that the company will be fined 10 000 leva and the two arrested men were bailed out. Secondary tests found no pollution in the waters. The reliability of the secondary tests cannot be evaluated. Another case resolved with no actual charges and accountability sought.

Bulgaria was set the final deadline for reaching compliance with the Urban Waste Water Treatment Directive as the end of 2014. Years later Bulgaria is still having issues complying with the said directive. Overall, in Bulgaria, close to 26% of wastewater is collected, and 20.4 % of the load collected is subject to secondary treatment. 6.7 % of the wastewater load collected undergoes a more stringent treatment. The Commission started infringement proceedings against Bulgaria in 2017 to address these issues.³⁹ According to the latest information provided by Bulgaria, final projects should be finished by 2023, far beyond the 2015 final deadline.

Unfortunately, due to poor government policies and management, corruption and carelessness among officials and administration, water as a source has not been handled with the needed care in Bulgaria. Many authors both nationals and foreigners have done extensive work when it comes to analysing corruption and decay of the rule of law in post-communist countries such as Bulgaria. The latest

<<https://www.euronews.com/2020/01/25/bulgaria-residents-in-pernik-protest-about-water-shortages>>, accessed 10 September 2020.

³⁹ Commission staff working document, *The EU Environmental Implementation Review 2019*, (Country Report-Bulgaria).

Transparency International survey showed that corruption perceptions in Bulgaria are the strongest in Europe.⁴⁰

Water pollution, the death of astonishing amounts of fish, drying dams and waterless cities are parts of Bulgaria's water reality. Not enough accountability has been sought from courts both on national and supranational level. The fact that there are no sentenced officials or facility owners shows that the system does not work. This, of course, becomes very apparent from this sentence: 'There is a high risk of corruption in many sectors in Bulgaria. A lack of autonomy and transparency in the judicial system has weakened corruption investigations and property rights, encouraged public official impunity and has created an uncertain investment environment', that can be found in the Bulgaria Corruption Report from 2017 published in the Risk and Compliance Portal.⁴¹

Not nearly, enough pollution or mismanagement cases reach the court system. Not enough attention is being paid to the way water is being handled as a resource in Bulgaria by the EU officials. There should be much more and more prominent legal disputes, higher charges and greater fees so that proper management of water as a resource can be assured.

6. Overall assessment

The overall assessment of the legal situation in Bulgaria regarding water law requires a look into the legislation that has been put into place, but more importantly to consider how effective its implementation has been and to what extent it has benefited the administration, usage and maintenance of water resources. Furthermore, one has to look into data on the state of water quality, as well as the condition of water infrastructure in Bulgaria, in order to gain a better perspective when trying to answer the question of whether an adequate balance has been reached between environmental protection and the use of water resources for commercial purposes.

In terms of legislation, as a member of the EU, Bulgaria has adopted the legislation, concerning water law, to a sufficient degree. The following legislation puts in place a protective framework to ensure high standards for all water bodies in the EU. This includes Directive 2000/60/EC of the European Parliament and of the Council, Directive 2008/105/EC, Directive 2000/59/EC, Directive 2002/59/EC, Directive 2005/35/EC, Council Framework Decision

⁴⁰ 'Corruption Perceptions in Bulgaria - The Strongest across the EU', <https://www.novinite.com/articles/202852/Corruption+Perceptions+in+Bulgaria+-+The+Strongest+across+the+EU>, accessed 10 September 2020.

⁴¹ 'Bulgaria Corruption Report', <https://www.ganintegrity.com/portal/country-profiles/bulgaria/>, accessed 9 September 2020.

2005/667/JHA as well as Directive 2014/89/EU, all of which have been mentioned and analysed in Topic 3 of this report.

However, the 2012 National Strategy on the management and development of the water sector reports that some problems have occurred due to a lack of synchronisation in the goals, mechanisms and end results when transposing these acts.⁴² This is not to say that there is an inherent problem in the legislation itself, rather the problem lies within the transposition process. Furthermore, the widespread distribution of functions and competence between different ministries, municipalities and specialized institutions makes it hard to pinpoint which institution exactly bears responsibility for any specific case.⁴³

One has to note that in the years since 2012, the year of the publication of this National Strategy, a lot has been improved upon, but the main tendencies have remained somewhat similar.

In the 2019 Environmental Implementation Review report concerning Bulgaria, the EU Commission has outlined and reviewed key aspects connected with the implementation of the EU's environmental policies. The Report observes that there is overall progress in some areas, while other areas show a lack of progress, such as the rising number of groundwater bodies failing to achieve a good chemical status.⁴⁴

One of the main obstacles to reaching a higher level of water quality is ensuring that strict monitoring for all categories of water bodies and sources takes place regularly. On this note, the Report claims, that 'there are still significant gaps in the establishment of reference conditions for all water categories and quality elements in Bulgaria and there are still significant gaps in the quality elements monitored.'⁴⁵

All of this, together with the relatively low percentage of water that is processed in purification plants, as well as the general need for huge investments in Bulgaria's water infrastructures, illustrates the fact that having sufficient legislation on the national level, as well as adopting the relevant EU law, does not automatically lead to improved administration and management of the water resources. What is needed is more coordinated actions of the institutions of the Executive branch, acting on behalf of the Judiciary when presented with information about illegal pollution of waters, as well as cleaner practices by the enterprises which cause the most pollution. Bulgaria has made progress in the past decade but has yet to strike an adequate balance between environmental

⁴² The Republic of Bulgaria National Strategy on the management and development of the water sector, 2012 (Bulgarian), p 4.

⁴³ The Republic of Bulgaria National Strategy on the management and development of the water sector, 2012 (Bulgarian), p 14.

⁴⁴ *The EU Environmental Implementation Review 2019 Country Report - Bulgaria*, (2019), p 18.

⁴⁵ Ibid 18.

protection and consumer use, ensuring that the available resource will be used effectively.

Conclusion

Overall, Bulgaria has a comprehensive legal framework concerning water law - the Constitution, The Protected territories Act, Water law, Environmental protection law and others. In the Criminal Code, in Chapter 11, Section III 'Crimes against public health and the environment', offences are included that are punished with imprisonment. Together with the legislation coming from the European Union, this constitutes a legal framework that ensures one of the highest standards of protection of water resources.

The international bodies of water acting as a border of the Republic of Bulgaria are the following rivers and sea - River Danube, River Rezovska and the Black sea. These borders have been regulated since the late 1980s. Thanks to the good relationship with all of its' neighbouring countries, as well as the international regulation of the borders with different agreements, such as the Treaty of Friendship, Good Neighbourliness, Cooperation and Security between the Republic of Bulgaria and the Republic of Turkey, Bulgaria has not taken part in any international water disputes, concerning its' water borders.

Concerning internal water-related disputes, there have been a number of cases involving pollution of water from an unknown source, as well as cases of bad management of public water resources (such as the case with Studena dam near Pernik). However, in most of these cases, it seems as if nobody has been properly sanctioned.

The assessment of the overall legal situation concerning water law in Bulgaria points to the fact that an extensive legal framework on a national and supranational level has been adopted. However, its impact on the quality and management of different bodies of water shows that even the adoption of some of the most comprehensive legislation does not automatically lead to satisfactory results. Laws need to be enforced and steps need to be taken if the use and quality of water are to correspond to the standards envisaged in the aforementioned legislation.

In conclusion, it can be said that notwithstanding the legal regulations, the stability in international water borders and the moderate progress in terms of modernisation of water infrastructure, there is still much to be desired and there are multiple issues that require to be solved. More extensive and coordinated actions on behalf of all the branches of government, the NGO sector, media and citizen's initiatives would be a step in the right direction.

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ELSA Croatia

Introduction

Croatia belongs to a group of countries that are relatively rich with water. Water is one of the most important elements for life in general, and it is very important to treat it accordingly. Therefore, another critical factor to bear in mind is how the state legally treats water, and how it regulates it, since the protection of the state is of utmost importance. We are aware that we live in a time where awareness of water conservation is at a higher level, but that is not enough. That is why in this paper we wanted to shed light on how the state legally regulates water, as well as issues that the state faces. This way, we aim to provide a better insight into the overall situation.

1. Legal regimes for water sources

1.1. Introduction

Water is one of the greatest resources of the Republic of Croatia, whether it is groundwater or surface water. Numerous rivers flow or spring in the area of our country, some of them and at the same time. The longest ones are the Sava River, Drava River, Kupa River, Danube River and so on. Croatia is a country with significant sources of drinking water. Unlike many other residents of other countries, the citizens of Croatia have very easy access to clean drinking water – they simply turn on the tap. Drinking water reaches their homes through a public water supply system. Therefore, it is not surprising that, according to Eurostat data, Croatia is the country with the highest water supply per capita in the European Union. In addition to being the foundation of nature, water is important for the survival of every living being and is also of strategic importance for each individual state. In the continuation of this report, the issues of legislation, water management and its protection will be addressed

1.2. Main sources of law that pertain to the use and management

Basic sources of Water Act in the Republic of Croatia are:

1.2.1. *Water Act*⁴⁶

This Act regulates all of the important issues related to water and water resources. These include the legal status of water and water structures, issues of drainage and irrigation, issues of water quality and quantity and protection against their harmful effects, special activities related to water management etc. The legal status of waters in terms of this Act will be discussed further in the text. The term ‘water good’ means cadastral parcels that include aquifers and abandoned surface watercourses, regulated and unregulated inundation area. The water resource also includes areas where water springs are located according to Article 100, Paragraph 1 of the Water Act and areas where there are springs that provide a minimum of 10 m³ of mineral, geothermal and natural spring water required for their physical protection. The islands also belong to water resources, but only those that have formed in aquifers as a result of drying of waters, division into several channels flooding of land or human influence. It is beneficial that is a subject of interest for the Republic of Croatia and that it enjoys special protection. Thus, for example, troughs of natural surface waters are public water good regardless of who is listed in the land register as their owner. The cadastral parcels will cease to have the status of water good when the natural features that determine them as the water good permanently cease to exist. The fulfilment of

⁴⁶ Water Act, Official Gazette No. 66/19.

the preconditions necessary for the termination of the status of water good is determined by the Ministry, at the request of the party, with the prior opinion of Croatian waters. Pursuant to Article 24 of this Act, water structures are considered to be buildings or sets of buildings that, together with the associated equipment and devices, form a technical or technological unit. They are used for the regulation of watercourses and other surface waters, they provide protection against the harmful effects of water, they enable the intended use of water and protect it from pollution. Depending on their purpose, water structures can be divided into the following categories: regulatory and protective water structures (embankments, dams, drainage tunnels etc.), municipal water structures that can be divided into public water supply structures (reservoirs, reservoirs, pumping stations etc.) and structures for public drainage (collectors, channels for collection and drainage of municipal wastewater etc.). The division also includes water structures for land reclamation and water structures for energy production. The river basin district is a unique boundary for river basin management. When it comes to river basin management, there are two river basin districts in the Republic of Croatia. These are the Danube River Basin and the Adriatic River Basin. From the aspect of water protection, it is necessary to pay the most attention to the protection and improvement of aquatic ecosystems, and with regard to water needs, and wetland and terrestrial ecosystems that depend on them. It is also necessary to promote the sustainable use of water-based on the protection of water resources, to ensure the reduction and prevention of further pollution and contribute to mitigating the consequences caused by floods and droughts.

1.2.2. Water Act for human consumption⁴⁷

This Act regulates what falls under health safety standard water used for human consumption, institutions responsible for the implementation of this Act, and ways of handling and reporting if there are deviations from the parameters that check the compliance of water for human consumption. In addition to what has already been stated in this Act, there are also answers related to the manner in which the European Commission reported on the implementation of this Act, monitoring the manner of performing official controls on the water for human consumption and how they are financed. All of this has its purpose, which consists in protecting human health from adverse effects, such as pollution, and its further goal is to ensure that water for human consumption is healthy. In terms of this Act, water for human consumption is all water that is in its original state or after treatment intended for drinking, cooking, preparation of food or for other needs of the household, regardless of its origin and regardless of

⁴⁷ Water Act for Human Consumption, Official Gazette No. 56/13.

whether it originates from the public water supply system, from the tank or from bottles, as well as all water which is used in the food industry for the production of the food, food processing, preserving or placing products or substances intended for human consumption on the market, unless the competent authority does not establish that the quality of the water cannot affect the health of the food in its final form. Healthy water is a type of water that does not contain microorganisms, parasites and their developmental forms in the number that represents a danger for human health. Furthermore, healthy water does not contain harmful substances in concentrations that alone, or together with other substances, represents the danger for human health, and the one that does not exceed values of the parameter of the health safety of the water. Specified parameters must be complied with in the following places: at the point of water consumption, on the tank faucet if water for human consumption is being used, at the point of bottling or another packaging for water in original packaging and during the shelf life of the product, as well as in food business facilities, at the place where water is used in food production, and objects that come in direct contact with food and items of general use. Article 7 of this Act provides that all water wells that are intended for human consumption, as well as water supply facilities, must be protected from accidental or intentional contamination and other impacts that may compromise the health safety of water for human consumption. Likewise, no substances may be added to the water except for those that are demanded by the treatment or disinfection process.

1.2.3. Act regulating water management financing⁴⁸

This act determines sources of funding for water management, especially water fees, including the obligation of paying, base, method of calculation, determination of height, the purpose of said funds, enforcement, statute of limitations and other questions connected to realization and use of these funds. Sources of funding for water management are water fees, price of water service, state budget, budgets of local and regional self-government units and other sources. Water fees are water contribution, compensation for water regulation, water use fee, water protection fee, amelioration drainage fee, irrigation fee, development fee and connection fee. All of them are provided by the public.

1.2.4. Act for water services⁴⁹

This Act regulates the institutional framework for the provision of water services, price of those services, legal status and sustainable supplier of water services business, activities of the Water Services Council and other questions connected

⁴⁸ Water Management Financing Act, Official Gazette No. 153/09.

⁴⁹ Act for Water Services, Official Gazette No. 66/19.

with the provision of water services. Water services are activities of general interest and they are performed as a public service. They are performed permanently, efficiently, economically and purposefully. Moreover, they are provided under non-discriminatory and socially affordable conditions. There are also other numerous by-laws.

1.3. Type of ownership rights that can exist over water resources

According to Article 8 of the Water Act, waters are a common good and they enjoy particular protection of the Republic of Croatia. Waters in bodies of surface and ground waters may not be the object of rights of ownership and other property rights. Listed ones are used and rights are applied in the manner and under the conditions established by this Act. Other than water in the rivers, common goods in the Republic of Croatia are lakes and seas, atmospheric air and seashore. The Republic of Croatia takes care of common goods, manages them and is responsible for them unless otherwise provided by a special act.⁵⁰ According to the Act of Ownership and other real rights, everyone has the right to use things that are owned by the Republic of Croatia and that are intended to be used by all.⁵¹ The Ministry shall enact a decision designating the land as a public water estate, with the prior opinion of the Croatian Waters.⁵² Based on the decision of the Ministry, the registration of the public water good in the ownership of the Republic of Croatia will be carried out regardless of existing entries.⁵³ The area of public water goods will be extended to the lands on which there are plans to build drainage and supply channels, prior to parcelling, the right of easement of passage and transport to the public road is established at the expense of all real estate. In accordance with Article 12 of the Water Act, public water estate is inalienable and in the ownership of the Republic of Croatia, no other person may, by usucapion or in any other way, acquire the right of ownership or any of the other property rights over the public water estate, with the exception of the right of servitude and building rights in the manner regulated by this Act. Water management facilities built over the public water estate shall belong to the public water estate in accordance with the principle of the uniformity of property exclusive of the water management facilities built on the basis of the building right for the duration of the concerned right, and waterworks built on the basis of the right of servitude for pipelines. The Republic of Croatia has the right of pre-emption over lots that comprise the water estate.⁵⁴

⁵⁰ Law on Property and Other Real Rights (consolidated text) (2015), <https://narodne-novine.nn.hr/clanci/sluzbeni/2015_07_81_1548.html> accessed on 4 July 2020.

⁵¹ Act of Ownership and Other Real Rights, OG No. 168/08, Art. 35. Para. 4, Public things subject to common use

⁵² Water Act, Official Gazette No. 66/19, art 11, para 1.

⁵³ Ibid para 4.

⁵⁴ Ibid art 22, para 1.

Those lots are not in the system of the public water estate. If the owner intends to sell the lots, they shall submit a proposal for sale to the Croatian Waters, according to the market prices in the place of sale. Everyone shall be allowed to use water under the conditions and within the limits specified by this Act; water shall be used and utilised rationally and economically. In addition to the already mentioned building and servitude rights, the Government of the Republic of Croatia, based on the river transport development strategy of the Republic, adopts a medium-term plan for the development of waterways and inland ports and ports with planned costs and proposed financing.⁵⁵ This plan must contain the elements necessary for the development of a medium-term plan for granting concessions, in accordance with the regulations governing concessions. In the field of water management, concessions are issued for the commercial use of public or other goods and for the work and services. Concession for commercial use of waters is needed for use of hydropower for the production of electricity, abstraction of geothermal and mineral waters, exploitation of sand and gravel from renewable deposits in the area important for water regime and others.⁵⁶ The concession for public services and public works shall not be issued for performing works of the public water supply system nor shall it be issued for performing works of public drainage.

1.4. Croatian Waters

The Croatian Waters is a legal entity for water management in the Republic of Croatia, established by the Water Act. The institution is public, responsible for managing water and public water estate, protective and hydro-ameliorative water structures.⁵⁷ Its headquarters are in Zagreb. The legal status of this institution is interpreted as a legal entity *sui generis*, to which the regulations applicable to the institutions apply. The governing body of the institution is the Governing Council; the business manager is a General Manager.⁵⁸ Governing Council enacts a statute, water management plan, financial plan, rulebook of internal organization etc. General Manager leads and organizes business of Croatian Waters. The Government of the Republic of Croatia appoints and dismisses them at the proposal of the Minister. The activities of the Croatian Waters consist of preparation of planning documents for water management, surveys and analytical tasks, water regulation and protection from adverse effects of water, amelioration drainage, water use, water protection and irrigation, expert tasks for

⁵⁵ Act for Navigation and Inland Ports, Official Gazette No. 152/14, art 103, para 1.

⁵⁶ Water Act, Official Gazette No. 66/19, Art. 177.

⁵⁷ Interreg Central Europe, 'Croatian Waters: Croatia', <<https://www.interreg-central.eu/Content.Node/PP16---Croatian-Waters-Croatia.html>> accessed on 11 July 2020.

⁵⁸ Hrvatske Vode, 'Legal Status', <<https://www.voda.hr/hr/pravni-status>> accessed on 8 July 2020.

the purposes of awarding concessions for the commercial use of waters and other activities. The Croatian Waters operates throughout Croatia and covers all water and catchment areas. Water management comprises all activities, measures and actions commenced by the Republic of Croatia and the Croatian Waters, local and regional self-government units pursuant to this Act and the Act regulating water management financing, apart from activities, measures and actions related to detailed amelioration drainage, public irrigation and water services. When water management is in question, it is crucial to know that we speak about activities that have their own goal. Their goal is to ensure sufficient quantities of healthy water that is being used by people, as well as to protect humans and their assets from natural disasters such as floods, but from any other harmful effect of water as well, in order to ensure that quality of the water that is being used in economic and personal purposes is appropriate. Water management objectives are not directed only to the listed, but their point is just as well to protect both water and water-dependent ecosystems. Water management has its own principles, of which it is important to single out the following: water is not a commercial product like some other products, but a heritage to be preserved, protected and used wisely and rationally. Furthermore, water management shall adapt to global climate change, protection, and use of water shall be based on the precautionary principle, undertaking preventive measures, the rectification of damage caused to the water environment at the source, and the ‘polluter pays’ or ‘user pays’ principles etc. The Croatian Waters have their own journal. The journal *Hrvatske vode* is an interdisciplinary journal with the main goal of informing the professional and scientific public about the latest achievements in water management by means of publishing scientific and professional papers, information on scientific gatherings, technical papers and reviews as well as other information on all water resources related disciplines.⁵⁹

2. Criminal offences and misdemeanours regarding water resources

2.1. Introduction

Croatian legislature divides water-related criminal offences into multiple laws. Environmental law is rarely applied in Croatia. Water-related criminal offences make part of environmental law. There is a lack of regulation in the Croatian law concerning these types of crimes. An insufficient level of public awareness of the dangers and consequences of these crimes results in a high and dark figure, which

⁵⁹ Hrvatske Vode, ‘Časopis Hrvatske vode’, <<https://www.voda.hr/hr/casopis-hrvatske-vode>> accessed on 8 July 2020.

is due to the fact that those acts occur with no direct victims. This type of crime is considered to be less important than 'traditional' crime. Thus, this makes criminal offences against the environment a type of crime that enables high profit with minimal risk, the so-called *high-profit low-risk*, which opens up a wide array of possibilities for acts of organized crime. In order to determine the commission of an act and the culpability of the perpetrator, as a rule, it is necessary to conduct various expert examinations. It is crucial to conduct those examinations at the earliest stages of criminal proceedings because pollutants often disappear very quickly under the influence of external factors and weather conditions. The concentration of pollution can be reduced, which may jeopardize the proof of the crime such as in the case of CRODUX Ltd. It can be concluded that in proceedings for criminal offences against the environment, the issue of keeping and securing evidence is particularly challenging. Given the already mentioned problems of the nature of criminal offences against the environment, as well as due to the lack of technical and professional experience and limited material resources, such crimes represent one of the most profitable and fastest-growing areas of international criminal activity. As criminal offences against the environment usually contain a blanket disposition, law enforcement authorities and the courts must be cognizant about regulations and their boundaries. Lack of clarity and precision of professional terminology, i.e., overly frequent changes in legislation on one hand, and outdated legislation and legal gaps on the other can lead to delays in the detection and prosecution of crimes against the environment. Environmental legislation requires specific knowledge, training and specialization of law enforcement agencies. Consequently, the investigation processes of these crimes are extremely time-consuming, especially if investigators and prosecutors are not specialized in the field of environmental protection. Detection and punishment of perpetrators are hampered by the limited material resources of law enforcement agencies. The costs of collecting and storing evidence are high, as well as conducting complex expert examinations and hiring experts. Inspections of the ministry responsible for environmental protection should, as a rule, be the first to recognise and report criminal offences against the environment. Therefore, team approach and interdisciplinarity in the research of criminal offences against the environment is especially important, along with fieldwork, which is equally as important as laboratory work. Criminal offences against the environment, are provided in Chapter XX of the Criminal Code.⁶⁰ They belong to the category of criminal offences for which prosecution is carried out *ex officio*. The authorised prosecutor is a state attorney who initiates the prosecution in the interest of the public. When a criminal offence is determined by inspection, the Law on Environmental Protection stipulates the

⁶⁰ Chapter XX, Crimes Against the Environment (valid from 1 January 2020).

obligation of the competent administrative bodies to file a criminal report. Pursuant to Article 258 of the Environmental Protection Act, in case the inspection determines that the Environmental Protection Act and/or a regulation adopted on the basis of said Act has been violated, the competent ministry should file an indictment under the Misdemeanour Act.⁶¹ If misdemeanour is in question, the ministry reports to the competent authority for criminal offences and takes other measures and actions. There are no specialized police units in the Republic of Croatia that deal with environmental crime, nor is there a special department for environmental crime within the State Attorney's Office. Such units and departments have been established in some EU Member States. Since most criminal offences under Chapter XX of the Criminal Code prescribe up to five years of imprisonment, criminal offences against the environment will, as a rule, be prosecuted with simplified procedural forms. Therefore, such criminal offences are not investigated. The state attorney may order the investigators to take evidentiary actions or to carry out evidentiary actions that are purposeful for an indictment. The investigation, as a special stage of criminal proceedings, may be conducted for the criminal offence of environmental pollution pursuant to Article 193, paragraph 2 of the Criminal Code, where there is a threat to health or human life and for forms of serious criminal offences against the environment prescribed by Article 214, paragraphs 1, 2 and 5 of the Criminal Code. An investigation is not obligatory for any of these criminal offences. The State Attorney may, in accordance with Article 341, paragraph 3 of the Criminal Procedure Code file an immediate indictment.⁶²

2.2. Water-related offences in the Croatian Criminal Code

The Croatian Criminal Code contains criminal offences described throughout the Code. Since water-related criminal offences are in question, they will be described hereafter. Article 193 regulates environmental pollution concerning water. Whoever, contrary to regulations, releases or introduces any quantity of a substance or ionizing radiation into water or sea, which may permanently or significantly endanger their quality, or which may significantly endanger animals and plants, health or human life, shall be punished by imprisonment from six months to five years. If the same afore-mentioned criminal offence has been committed, and if it strictly endangers the health or human life, punishment is imprisonment from one to eight years. If the criminal offence referred to in paragraph 1 is committed through negligence, the perpetrator shall be punished by imprisonment for a period that does not exceed two years. If the criminal

⁶¹ Misdemeanour and Penal Provisions, Article 258, Environmental Protection Act (valid from 1 January 2019).

⁶² *Zakon o kaznenom postupku* (2020), <<https://www.zakon.hr/z/174/Zakon-o-kaznenom-postupku>> accessed on 8 July 2020.

offence referred to in paragraph 2 is committed through negligence, the perpetrator shall be punished by imprisonment for up to three years. Thus, the criminal offence of environmental pollution under Article 193, paragraphs 1 and 2 may be committed with intent or out of negligence, as provided for in paragraph 3 of said Article. The act of committing a criminal offence, as referred to in this Article, represents environmental pollution by acting contrary to special regulations for its protection. Therefore, it is a matter of the blanket disposition/blanket act, related to the aforementioned environmental regulations. There is no criminal offence if the perpetrator acted in accordance with said regulations or permitted standards of environmental pollution. As seen in the statistical reports of the Croatian Bureau of statistics for the year 2018, the total number of reported adults for this offence was 14; there were three unknown perpetrators, ten crime reports have been rejected and one charge was rejected by the court.⁶³ One of the examples of this offence in the Republic of Croatia happened in its capital, Zagreb. The amount of disposed waste was enormous, as can be seen in the article listed below.⁶⁴ The waste was disposed of in an ornithological reserve and a standard fishing place. Another case of this offence happened by illegal and excessive construction inside and near Plitvice Lakes National Park. This resulted in illegal sewerage systems and cesspits in the middle of the National Park, which pollute the water of the Park.⁶⁵ In 2018, the National Park was almost removed from the UNESCO World Heritage list because of water pollution, the degradation of the park and the environment.⁶⁶ Article 194, emission of unclean substances from a floating vessel. Whoever, contrary to regulations, discharges pollutants from a maritime facility into the sea or from a vessel into inland waters, and thereby reduces their quality, shall be punished by imprisonment for a period that does not exceed three years. This penalty referred to in paragraph 1 shall be imposed on whoever discharges smaller quantities of pollutants from a maritime facility into the sea or from a vessel into inland waters, which results in a deterioration of their quality. Whoever commits the act referred to in paragraphs 1 and 2 out of negligence,

⁶³ Croatian Bureau of Statistics, 'Adult Perpetrators of Criminal Offences, Reports, Accusations and Convictions, 2018' <https://www.dzs.hr/Hrv_Eng/publication/2019/SI-1651.pdf> accessed 29 May 2020.

⁶⁴ Tomislav Kukec, 'Foto: ekološka bomba u Zagrebu' (Jutarnji list, 29 April 2018) <<https://100posto.jutarnji.hr/news/prije-mjesec-dana-gradska-uprava-je-rekla-da-ce-odmah-rijesiti-problem-smeca-na-jezerima-savica-evo-sto-su-napravili>> accessed 15 May 2020.

⁶⁵ Snježana Krnetić, Andreja Thomas, Paula Osojnik, 'Plitvice su pune fekalija: Kako smo uništili naše čudo prirode?' (6 January 2018) <<https://www.24sata.hr/news/plitvice-su-pune-fekalija-kako-smo-unistili-nase-cudo-prirode-555386>> accessed 29 May 2020.

⁶⁶ HINA, 'Plitvičkim jezerima prijete skidanje s UNESCO-ove liste – Hrvatska podnijela izvještaj o stanju u Nacionalnom parku, otpadne vode su gorući problem' (Jutarnji.hr, 1 February 2018) <<https://www.jutarnji.hr/vijesti/hrvatska/plitvickim-jezerima-prijete-skidanje-s-unesco-ove-liste-hrvatska-podnijela-izvjestaj-o-stanju-u-nacionalnom-parku-otpadne-vode-su-goruci-problem/6992748/>> accessed 1 May 2020.

shall be punished by imprisonment for a period that does not exceed one year. As seen in the statistical reports of the Croatian Bureau of statistics for the year 2018, the total number of reported adults for this offence was only one and they remain unknown. Cruiser ships were caught discharging pollutants into the water near Zlatni rat.⁶⁷ Another example is the pollution of the Adriatic Sea.⁶⁸ Article 196 refers to the endangerment of the environment by waste disposal. Whoever, contrary to the regulations in one or more seemingly related shipments, carries out illicit waste traffic in an amount greater than insignificant, shall be punished by imprisonment for a period that does not exceed two years. Whoever, contrary to regulations, discards, disposes of, collects, stores, treats, imports, exports or transports waste, or mediates in or, in general, manages it or acts in a way that may permanently or significantly endanger the quality of groundwater, water or sea, or endanger animals, plants or fungi to a greater extent or in a wider area, or endanger human life and health, shall be punished by imprisonment for a period from six months to five years. Whoever commits this criminal offence out of negligence shall be punished by imprisonment for a period that does not exceed two years. The perpetrator of this kind of crime can be anybody. The act may be committed with intent or negligence. If the act was committed intentionally, a sentence of up to two years' imprisonment, or imprisonment from six months to five years is prescribed. If the act was committed out of negligence, a sentence of imprisonment up to two years is prescribed. As seen in the statistical reports of the Croatian Bureau of statistics for the year 2018, the total number of reported adults is eight; there were four unknown perpetrators, three ejected crime reports, one terminated investigation and three convicted persons. Article 197 refers to a facility-related endangerment of the environment. Whoever, contrary to the regulations, operates a plant in which dangerous procedures take place or in which dangerous substances are stored or preparations are held shall be punished by imprisonment for a period of six months to five years. Whoever commits this criminal offence out of negligence shall be punished by imprisonment for a period that does not exceed two years. Harmful substances are determined in accordance with the Environmental Protection Act (toxic, carcinogenic, mutagenic, etc.). The perpetrator can be anybody. One of these

⁶⁷ Kapetan Ivica Karmelić, 'Kruzeri ispuštaju fekalije na punti Zlatnog rata, a mi šutimo' (Bol Info.hr, 22 July 2019) <<https://www.bolinfo.hr/vase-vijesti/2019/kruzeri-ispustaju-fekalije-na-punti-zlatnog-rata-a-mi-sutimo/>> accessed 14 May 2020.

⁶⁸ HINA, 'Satelitske snimke otkrile: Jadransko more prekriveno je ogromnim mrljama, neke su veće od 100km²!' (Net.hr, 21 February 2016) <<https://net.hr/danas/hrvatska/nikog-nije-briga-na-jadranskm-moru-uocene-ogromne-uljne-mrlje/>> accessed 20 May 2020.

offences occurred in Viškovo.⁶⁹ Another occurred in Pazin.⁷⁰ One of the country's biggest petrol suppliers CRODUX Ltd was also charged with this offence. A routine check was performed, and it was concluded that petrol leaked into the ground due to an old pipeline. At first, CROUX Ltd. informed the public stating it was only 150 to 200 litres of petrol that leaked into the ground. However, the fire department contradicted this statement and said that around 470 thousand litres were extracted from the ground. The petrol went into the main water collector and water system of the town Slavonski Brod.⁷¹ Around 90 thousand people were left with no water. They had to get supplies of water from cisterns until the pipeline was fixed. The case is not yet resolved and CRODUX Ltd. is pleading not guilty. Article 198, endangering the environment with a radioactive matter. A criminal offence is committed by a person who, contrary to regulations, produces, processes, handles, uses, possesses, stores, transports, imports, exports or disposes of nuclear material or other hazardous radioactive substances in such a way that it can permanently or significantly impair water, either to a considerable extent, or in a wider area endanger animals, plants or fungi, or endanger health or human life, shall be punished by imprisonment for a period of six months to five years. Whoever commits this kind of criminal offence out of negligence shall be punished by imprisonment for a period that does not exceed two years. This kind of crime can be committed with intent, but also out of negligence. The criminal offence referred to in paragraph 1 is punishable by imprisonment for a period from six months to five years, negligence is punished by imprisonment for a period that does not exceed two years. Article 204, poaching game or fish. Whoever hunts game during the hunting season or in an area where hunting is not allowed, or hunts without having passed the hunting exam shall be punished by imprisonment for a period that does not exceed one year. Whoever hunts game, fish or other freshwater or marine organisms in a way or by means which are massively destructive, or by use of illicit aids, shall be punished by imprisonment for a period that does not exceed three years. The legal being encompasses two different modalities of the act of committing this criminal offence. The act is of a general nature (*delictum*

⁶⁹ Crisis Eco Headquarters Marišćina, 'Kaznena prijava protiv odgovornih osoba TD Ekoplus d.o.o.' (11 October 2018) <<https://www.mariscina.com/kaznena-prijava-protiv-odgovornih-osoba-td-ekoplus-d-o-o>> accessed 17 May 2020.

⁷⁰ Anđelo Dagostin i Davor Šišović, 'Posljedice enormnih padalina: Ogromne količine građevinskog otpada, guma i plastike završile u Pazinčici i Pazinskoj jami' (Glas Istre, 5 February 2019) <<https://www.glasistre.hr/istra/posljedice-enormnih-padalina-ogromne-kolicine-gradevinskog-otpada-guma-i-plastike-završile-u-pazincici-i-pazinskoj-jami-580550>> accessed 13 May 2020.

⁷¹ Danka Derifaj, 'Što se to događa u Slavonskom Brodu? Iz „praznog“ produktovoda odjednom izvukli 427 tona benzina' (rtl.hr, 9 November 2018) <<https://www.rtl.hr/vijesti-hr/potruga/3285579/sto-se-u-tisini-dogadja-na-produktovodu-cije-je-izlijevanje-izazvalo-paniku-u-slavonskom-brodu/>> accessed 15 May 2020.

communium) and it can be committed by anyone. The crime of illegal hunting can only be committed with intent. The statistics of the Croatian Bureau of Statistics for the year 2018 reports that the total number of adult perpetrators of this offence is 77. This is one of the most common offences concerning water and the environment. There were 35 unknown perpetrators, 21 rejected crime reports and 14 convicted persons. There was a case of poaching in the Mljet National Park.⁷² Also one case of poaching in the Kopački rit Nature Park.⁷³ Article 210 refers to the change in the water regime. Whoever, contrary to the regulations, changes or disrupts the water regime, and thus does not commit another criminal offence for which a more severe punishment is prescribed, shall be punished by imprisonment for a period that does not exceed two years. Whoever commits the criminal offence referred to in paragraph 1 of this Article in an area which has been declared a protected natural value by a regulation or decision of the competent body, shall be punished by imprisonment for a period that does not exceed three years. The perpetrator shall be punished for the attempted criminal offence referred to in paragraphs 1 and 2 of this Article. According to the statistics of the Croatian Bureau of Statistics for the year 2018, the total number of adult perpetrators for this offence is four. There was one unknown perpetrator and two rejected crime reports. The Pazin case mentioned above also features this particular criminal offence.⁷⁴ One of the biggest tragedies in modern Croatian history has elements of this offence. A flood caused from the embankment of the Sava River collapsing in the village Rajevo Selo, and water flooding villages Račinovci, Gunja etc. in the year 2014. There were 2,467 rejected crime reports from people whose assets were destroyed. Some companies received compensation from the State which means that the Republic of Croatia and the constructor/maintainer of the embankments were found guilty, but some companies in the same position and the same location did not receive compensation.⁷⁵ The verdict came in 2018, four years after the events and the Republic of Croatia was found guilty and ordered to pay around 450,000

⁷² D.D. *'Bivši krim policajac zatečen u krivolovu i to u sred Nacionalnog parka Mljet'* (Morski.hr, 9 months ago) <<https://morski.hr/2019/09/06/bivsi-krim-policajac-zatecen-u-krivolovu-i-to-u-sred-nacionalnog-parka-mljet/>> accessed 10 May 2020.

⁷³ Marija Mihelić, *'Čučali u zasjedi 27 sati i uhvatili ih sa 100kg ribe'* (Glas-slavonije.hr, 17 April 2013) <<http://www.glas-slavonije.hr/196012/8/Cucali-u-zasjedi-27-sati-i-uhvatili-ih-sa-100-kg-ribe>>accessed 10 May 2020.

⁷⁴ Tanja Kocijančić, *'Slučaj ekocida u Pazinu: Podnijeta kaznena prijava zbog onečišćenja okoliša'* (istriamagica.eu, 12 February 2019) <<https://www.istriaterramagica.eu/novosti/politika/slucaj-ekocida-u-pazinu-podnijeta-kaznena-prijava-zbog-oneciscenja-okolisa/>>accessed 20 May 2020.

⁷⁵ Republika.eu, *'Objavljena prva presuda po tužbi za naknadu štete zbog probijanja nasipa u Županjskoj posavini'* (republika.eu, 26 November 2018) <<https://republika.eu/novost/74037/objavljena-prva-presuda-po-tuzbi-za-naknadu-stete-zbog-probijanja-nasipa-u-zupanjskoj-posavini>> accessed 26 May 2020.

euros to one local company⁷⁶. Article 214 refers to severe criminal offences against the environment. If the offence referred to in Article 193 (1) and (2), Article 194 (1) and (2), Article 196 (1) and (2), Article 197 (1), Article 198 (1) of said Act, causes serious physical injury to one or more persons, if changes caused by pollution cannot be neutralised for a long period of time, or if a major accident occurs, the perpetrator shall be punished by imprisonment for a period from one to ten years. If the criminal offences referred to in paragraph 1 of this Article cause the death of one or more persons, the perpetrator shall be punished by imprisonment for a period from three to fifteen years. If the criminal offence referred to in Article 193 paragraph 3, Article 194, paragraph 3, Article 196, paragraph 3, Article 197, paragraph 2 and Article 198, paragraph 2 of this Act causes serious physical injury to one or more persons, if changes caused by the pollution cannot be neutralised for a long period of time, or if a major accident occurs, the perpetrator shall be punished by imprisonment for a period from six months to five years. If the criminal offences referred to in paragraph 3 of this Article have caused the death of one or more persons, the perpetrator shall be punished by imprisonment for a period from one to eight years.

2.3. Water-related offences in the Croatian Water Act

Croatian Water Act, which has been in use since July of 2018, recognises many criminal offences, but they are not punishable by imprisonment. The only punishment is a fine or the obligation of restoring things to their original condition. Article 69 refers to the fine for the polluter. Article 80 refers to waste sludge. The City of Zagreb has been having a serious issue with sludge for years. The images accompanying the article can easily demonstrate said issue.⁷⁷ It can be seen how the sludge was left on the fields, which consequently led to water pollution.⁷⁸ Article 84 refers to pollution prevention and control measures. Articles 141 and 142 refer to prohibitions and restrictions; nine are listed. Article 224 refers to severe violations; 32 are listed and are punishable by a fine from HRK 30,000.00 – HRK 300,000.00 (EUR 4,000.00 – EUR 40,000.00) or HRK 4,000.00 – HRK 10,000.00 (EUR 530.00 – EUR 1,330.00). Toxic spills into the

⁷⁶ Šimun d.o.o. vs Republika Hrvatska (26 October 2018) Poslovni br. 10 P-550/2018-48 (P-430/2016) <<https://www.tportal.hr/media/file/6b7173f55e03b30520a47a5547ca4763>> accessed 26 May 2020.

⁷⁷ Ivan Pandzic, 'Milan Bandić više nema kamo s tisućama tona opasnog mulja' (15 September 2019) <<https://www.24sata.hr/news/milan-bandic-vise-nema-kamo-s-tisucama-tona-opasnog-mulja-648823>> accessed 17 May 2020.

⁷⁸ 'Bandićevo muljanje s muljem dovelo do zagađenja okoliša.' (zelena-akcija.hr, 15 December 2017) <https://zelenaakcija.hr/hr/programi/otpad/bandicevo_muljanje_s_muljem_dovelo_do_zagadenja_okolisa> accessed 16 May 2020.

Zrmanja River were one of the more severe cases.⁷⁹ Extraction of sand and gravel from the Sava, Drava and Dunav River bends was forbidden in Croatia for ten years due to heavy exploitation.⁸⁰ From the year 2019, it was allowed for the rivers to be exploited again. Article 225 refers to medium offences; 25 are listed and are punishable by a fine from HRK 20,000.00 – HRK 100,000.00 (EUR 2,666.00 – EUR 13,330.00). Article 226, basic violations punishable by a fine from HRK 10,000.00 – HRK 50,000.00 (EUR 1,330.00 – EUR 6,660.00).

2.4. Water-related offences in the Croatian Maritime Law

The third appearance of criminal offences in the Croatian legislature is within the Maritime law. Article 49(a) refers to protection from pollution from maritime objects. Article 813 refers to responsibility for the pollution of the sea by oil, which is transported as cargo. Article 823(a) refers to responsibility for pollution of the sea by motor-engine oil. Article 824 refers to the responsibility of an entrepreneur who is the owner of a nuclear vessel. Article 993 refers to maritime violations.

3. Analysis of the laws and regulations that are compatible with EU law

Water is necessary for life, both for humans and all organisms, plants and animals. The importance of water for the economy of a country should not be forgotten either. Nowadays, the issue of water protection is not exclusively a matter of one state, rather, it is supranational. Croatia is one of the countries with the largest water resources in Europe, and therefore it is extremely important to provide them with adequate protection because water is a pledge for the future. When we talk about the EU Water Framework Directive, it is important to establish a legal framework for the protection and restoration of clean water in the EU and to guarantee its long-term sustainable use. This framework directive has been supplemented by more specific legislations such as the Drinking Water Directive, the Bathing Water Directive, the Floods Directive and the Marine Strategy Framework Directive, and international agreements.

EU policy has established two main legal frameworks for the protection and management of our freshwater and marine resources in a holistic ecosystem-

⁷⁹ Sanja Jurišić, *Ekocid na Zrmanji: Tko će odgovarati za mazut koji sa svakom jačom kišom onečišti rijeku?* (dnevnik.hr, 31 December 2019) <<https://dnevnik.hr/vijesti/ekocid-na-zrmanji-ko-ce-odgovarati-za-mazut-u-rijeci---588727.html>> accessed 17 May 2020.

⁸⁰ Zeleni Osijek, 'Croatia and Serbia cross-border programme' (Zeleni Osijek, No. 05, year 2014) <<http://www.zeleni-osijek.hr/wp-content/uploads/2016/02/Newsletter05.pdf>> accessed 18 May 2020.

based approach. These are the Water Framework Directive and the Marine Strategy Framework Directive.

The European Water Resources Plan also provides for Member States to introduce water bills and water efficiency targets, and to develop EU standards for water reuse. The protection of marine waters in Europe is regulated by four structures for international cooperation, the so-called regional maritime conventions between the Member States and neighbouring countries with which they share common waters: the 1992 OSPAR Convention (based on previous Oslo and Paris Conventions) for the North-East Atlantic, 1992 Helsinki Convention (HELCOM) for the Baltic Sea Area, the 1995 Barcelona Convention (UNEP-MAP) for the Mediterranean, and the 1992 Bucharest Convention on the Black Sea. EU river waters are protected by the 1996 Danube River Protection Convention and the 2009 Rhine Protection Convention. Interregional environmental cooperation targeting marine waters or river basins has led to several macro-regional strategies in the EU: the 2009 Baltic Sea Strategy (the first comprehensive EU strategy designed for a macro-region), the 2011 EU Strategy for the Danube Region, and the 2014 EU Strategy for the Adriatic and Ionian Region.

The first European citizens' initiative in history, Right2Water, called on the EU institutions and Member States to ensure that all citizens have the right to water and drainage, that water supply and water management are not subject to internal market rules, and that water supply services are exempt from liberalization measures. Parliament called by a large majority on the Commission to put forward a legislative proposal implementing the human right to water and drainage as recognized by the United Nations and, if necessary, to propose a revision of the Water Framework Directive to recognize universal access to water and the human right to water.

Stressing the necessary transition to a circular economy, Parliament supported plans to promote water reuse in agricultural irrigation. In that spirit, they supported plans to improve tap water quality to reduce the use of plastic bottles. In its Resolution on International Ocean Governance, Parliament emphasized that 'the creation of a sustainable maritime economy and the reduction of pressures on the marine environment require action on climate change, land-based marine and ocean pollution, marine pollution and eutrophication, protection, conservation and reconstruction of marine ecosystems and biodiversity and the sustainable use of marine resources.' In this context, it 'encourages the Commission to support international efforts to protect marine biodiversity, in particular in the context of the ongoing negotiations on a new legally binding instrument for the conservation and sustainable use of marine biodiversity in areas beyond national competence' and 'calls on the Commission to strengthen legislation to preserve and use of marine biodiversity in areas under

the jurisdiction of the Member States of the European Union.⁸¹ Protection of waters from pollution from vessels, including floating facilities on inland waterways and inland ports, is carried out in accordance with the regulations governing navigation and inland ports, in accordance with the objectives of protection of the aquatic environment from Article 46 of the Water Act and the Plan for river basin management.⁸² The Water Act, OG No. 66/19, which has been in force since 18 July 2019, transposes the following European Union directives into the legal order of the Republic of Croatia:

1. Directive 2000/60/EC
2. Directive 2006/118/EC
3. Directive 2007/60/EC
4. Directive 91/271/EEC
5. Directive 91/676/EEC
6. Directive 2006/11/EC
7. Directive 2006/7/EC
8. Directive 2006/44/EC
9. Directive 2006/113/EC
10. Directive 2008/105/EC
11. Directive 2009/90/EC
12. Directive 98/83/EC

The directives in Croatian laws related to the regulation and establishment of standards ensure all environmental quality standards in the field of water policy, protection of groundwater from pollution in accordance with prescribed standards, and thus care for protection against harmful effects of water and detailed drainage and irrigation. Croatian laws that contain the provisions of the directives are following: the Food Act, the Water Act, the Communal Economy Act, the Water Management Financing Act. Each of these laws includes compliance with EU directives regarding water-related matters.

The Water Act, OG No. 66/19, regulates the legal status of waters, water resources and water structures, water quality and quantity management, protection against harmful effects of water, detailed reclamation drainage and irrigation, special activities for water management, the institutional structure of these activities and other issues related to water and water resources.⁸³ By joining the European Union, the Republic of Croatia has transposed the directives implemented through Community Action in the field of Water Policy (Directive 2000/60/EC), the Protection of Groundwater Against Pollution and Deterioration (Directive 2006/118/EC), as well as the Assessment and Flood

⁸¹ Water Act, Official Gazette No. 66/19.

⁸² Water Act, Official Gazette No. 66/19.

⁸³ Water Act, Official Gazette No. 66/19, Art. 1.

Risk Management (Directive 2007/60/EC), Urban Waste Water Treatment (Council Directive 91/271/EEC), directive on Pollution by Certain Dangerous Substances discharged into the environment (Directive 2006/11/EC), Bathing Water Quality Management (Directive 2006/7/EC), Freshwater Quality (Directive 2006/44/EC), Regulation of Shellfish Life (Directive 2006/113/EC), Environmental Quality Regulation in the Field of Water Policy (Directive 2008/10/EC), Determination of Technical Settings for Chemical Analysis and Observation of Water Status (Commission Directive 2009/90/EC), Quality of Water Intended for Human Consumption.

In the Law on Food, a close connection with the prescribed directives and regulations contained in the law can be found, again duly implemented through the membership of the Republic of Croatia in the European Union. One of them is the regulation of conditions for the use of alumina to remove fluoride from mineral and spring waters (Commission Regulation (EU) 115/2010).⁸⁴

The Water Management Financing Act regulates the issue of financing water management and fees as an obligation of taxpayers, the method of payment and calculation, how the collected funds will be spent, as well as other key issues. Said provisions also include European Union directives establishing a framework for Community action to regulate water policy (Directive 2000/60/EC of the European Parliament and of the Council) and efforts to maintain water protection aimed at nitrate pollution in agriculture (Directive 2000/60/EC, Directive 91/676/EEC of the European Parliament and of the Council).

Efforts to adapt Croatian regulatory measures on water policy are visible through various adaptation plans and efforts aimed at meeting the requirements set by the European Union. Such is the 'Plan for the Implementation of Water and Utilities Directives' from 2010, created with the aim of laying the foundations in the transitional period upon Croatia's accession to the European Union. It shows the implementation of Council Directive 98/83/EC, which contains provisions on microbiological indicators, the Water Quality Directive and Directive 91/271/EEC on urban wastewater treatment. Thus, mandatory parameters are prescribed in accordance with the standards of the World Health Organization and the established practice of monitoring the quality of drinking water in the Republic of Croatia.⁸⁵

In addition to all of the enlisted laws, the Law on Water for Human Consumption can be mentioned as well, and it regulates the most important use, which is the regulation of quality and protection of fundamental human rights, consumption of valuable resources without which there is no life and without which life is not the same. The provisions on how the prescribed parameters for monitoring the

⁸⁴ Food Act, Official Gazette No. 115/18.

⁸⁵ Plan for the Implementation of Water Utility Directives, November 2010.

quality and safety for human health are applied are precisely determined, thus ensuring the validity of water as a valuable resource. The basic Directive contained in this law deals with the quality of water intended for human consumption (Council Directive 1998/83/EC) and the Directive laying down standards for the protection of citizens against substances of a radioactive nature in water intended for human consumption.⁸⁶ The following is defined: what is meant by water for human consumption, what all water for consumption must contain in order to be considered healthy, which parameters must be considered when testing water and how it is done, in which places it can be sampled, the procedure during of which, in case of pollution, the Republic of Croatia must inform the services of the European Union and which bodies are in charge of acting in such a case. Therefore, 'the Ministry is obliged to inform the Croatian Waters about approved overdrafts'⁸⁷ after which the necessary administrative steps will be taken.

Given that water is used to irrigate arable land, the European Union directive and regulation can be found in the Law on Agriculture, where the regulations related to the financing and management of agricultural policy (Regulation (EU) No 1306/2013 of the European Parliament and the Council) are implemented, and conditions governing the use of alumina used to eliminate fluoride from natural mineral waters.

The program of measures listed in the River Basin Management Plan protects surface and groundwater with targeted provisions. In order to encourage the natural regeneration of surface waters without endangering the condition of the surrounding waters, the deterioration of all surface waters is prevented, and the protection of all surface waters is prescribed in order to preserve the ecology and chemical structure. Groundwater is a very important resource since it makes up the majority of drinking water in the European Union, and it, therefore, must be precisely regulated. It is not desirable to risk their quality by introducing or spilling pollutants, thus endangering the situation in these water areas. Quality maintenance can be ensured by reasonable pumping, which then ensures balance without endangering the surrounding waters.⁸⁸

As required by Directive 2006/118/EC of the European Parliament and the Council, priority is given to the protection of groundwater against pollution and deterioration. Groundwater, as an essential resource, plays a major role in human lives due to the supply of water that is repurposed for human consumption. In the European Union, groundwater is the largest body of freshwater, as well as a source of public drinking water supply across Europe. Therefore, it is important

⁸⁶ Water Act for Human Consumption, Official Gazette No. 16/20.

⁸⁷ Water Act for Human Consumption, Official Gazette 16/20, Art. 23, Para. 6.

⁸⁸ Regulation on Water Quality Standards, Official Gazette No. 96/2019-1879.

to embody the norms of protection of such a valuable resource with quality standards.

4. Regulation on the borders of water areas

4.1. Introduction

Croatia is a Central European and Mediterranean country with a 2,028-kilometre-long border. Based on international law on the succession of states, the state borders of the Republic of Croatia are borders that Croatia inherited from the former SFRY. Present-day borders are the following: the border with Italy at sea, Hungary on land and the borders that Croatia shared with other SFRY countries before its independence in 1991 (Serbia on land, and Montenegro, Slovenia and Bosnia and Herzegovina on land and sea). Most borders are natural. Those borders most often include rivers such as the Drava River and Mura River, which form part of the border with Hungary, the Danube River on the border with Serbia, the Sava River, Una River, Glina River and Korana River with Bosnia and Herzegovina, and the Sutla River, Bregana River, Kupa River, Cabranka River and Dragonja River with Slovenia.

4.2. Legal basis for determining the borders of the Republic of Croatia

The legal basis for determining all borders of the Republic of Croatia can be found in the constitutional decision from 1991, by which Croatia declared sovereignty and independence. An Arbitration Commission was established, and it was decided that states ought to solve the issues of succession. The Republic of Croatia demanded that its external borders be respected in accordance with the UN Charter and international law, and that possible application of borders with neighbouring countries be carried out only through international or other agreements. Croatia also demanded that if no agreement is reached on certain borders, those borders remain unchanged and receive international legal protection.

4.3. Historical circumstances upon which borders were established

4.3.1. Croatian border with Hungary

The border between the Republic of Croatia and Hungary is 355 km long and is the only Croatian border with another country that is completely undisputed. It was established after the disintegration of the Austro-Hungarian Monarchy and follows the flows of the Mura River and Drava River. This border was 'formed by the Treaty of Trianon concluded between the Allies and the representatives

of Hungary after the Paris Peace Conference of 1920.⁸⁹ Under the terms of the treaty, 'Hungary has lost at least two-thirds of its territory and two-thirds of its population.'⁹⁰ The territory is divided between Romania, Czechoslovakia, Austria and the Kingdom of Serbs, Croats and Slovenes.

4.3.2. *Border with Slovenia*

The border issue with Slovenia is still not fully defined. The border is 667.8 km long, and it encompasses the Sutla, Bregana, Cabranka, Kupa and Dragonja River. Also, Croatia and Slovenia share a part of the sea border that has not been settled to this day. The existing border originates from the Austro-Hungarian Monarchy. Back in 1992, 'Croatia and Slovenia started their negotiations concerning the border, including both land and sea, but no agreement was reached.' Furthermore, on 4 November 2009, 'an Arbitration Agreement was signed and then ratified in Stockholm on the entire sea and land border between the two countries.'⁹¹ It is 'a full-fledged international agreement concluded with the help of the European Commission.'⁹² Nevertheless, the issue of Savudrija Bay is still subject of a dispute between Croatia and Slovenia.

4.3.3. *Border with Bosnia and Herzegovina*

The border with the Bosnia and Herzegovina is the longest Croatian border, and it is 1001 km long. The rivers that form part of the border are Una River, Sava River, Korana River and Glina River. This is a historical boundary that dates back to 1791 and has remained almost unchanged to this day. In 1999, the Agreement on the State Border in Sarajevo was concluded, but it was never ratified. However, it is applicable because it takes indefinite effect from the date of signing.

According to this Agreement, the land border largely follows the border situation from the time of the disintegration of the SFRY in 1991 and the mutual recognition of these states in 1992. Most of the land border is already marked on the ground with border pillars and signs on border bridges. According to Article 4, Paragraph 2: 'The state border on international navigable rivers with a regulated waterway extends by the kinet of the waterway. The change of the waterway kinet shall be approved by the competent authorities of the Contracting Parties.'⁹³ Croatia and Bosnia and Herzegovina share a sea border in the Neum area, whose issue is still unresolved.

⁸⁹ Treaty of Trianon, <<https://www.britannica.com/event/Treaty-of-Trianon>> accessed 6 July 2020.

⁹⁰ Ibid.

⁹¹ Degan Đ., *Delimitacija i demarkacija vanjskih granica Republike Hrvatske*, Zagreb, 2015, p 58.

⁹² Ibid.

⁹³ Ibid, 59.

4.3.4. *Border with Serbia*

The border with Serbia is 322 km long and largely follows the course of the Danube River. The present-day border was defined in the former Yugoslavia. 'As a result of the armed conflict, the Serbian side holds the left bank of the Danube and Vukovar and Šarengradska ada, which are located to the left of the thalweg (mother) of these one of the two largest international navigable rivers in Europe.'⁹⁴

4.3.5. *Border with Montenegro*

The border with Montenegro is the shortest Croatian border. It is only 25 km long. The border was documented during the Austro-Hungarian Monarchy. There are no border rivers on land, but that is why they share a sea border. In 2002, the 'Protocol between the Government of the Republic of Croatia and the Federal Government of the Federal Republic of Yugoslavia on the Provisional Regime along the Southern Border between the Two States' was signed.⁹⁵ By declaring its independence, Montenegro became a party to the Protocol. The delineation of the maritime space of these two states deviates from equidistance. Namely, 'The area of deviation in relation to the territorial sea of the Republic of Croatia is 52.3 km², which means that Croatia temporarily leaves that area to Montenegro, deviating from equidistance in the Bay of Kotor and beyond to 12 nautical miles, i.e., the outer border of the territorial sea.'⁹⁶

4.3.6. *Border with Italy*

The border between the Republic of Croatia and Italy on land and sea was defined by the Osimo Treaty concluded in 1975 between Italy and the then SFRY. 'Based on the principle of succession, the once unique Italian-Yugoslav border line was inherited as a sea border between Italy and the new eastern Adriatic states – Slovenia, Croatia and Montenegro'⁹⁷ Although the succession was not affirmed by the document, the states did not provide any reasons that would trigger a revision of the inherited border.

⁹⁴ Ibid, 60.

⁹⁵ Barić Punda, V., Filipović, V., Protocol on the Provisional Regime along the Southern Border (2002) With Special Reference to the Decisions of the Governments of the Republic of Croatia and Montenegro on the Exploration and Exploitation of Hydrocarbons in the Adriatic, Faculty of Law, University of Split, 2015.

⁹⁶ Ibid, 76.

⁹⁷ Klemenčić, M., Topalović, D., op. cit., p 313-314.

4.4. International agreements that define waterways and lakes as boundaries and water basin affect

‘In the theory of international law, a state border is defined as a line to which the state territory extends or as a surface that intersects the airspace, the surface of the earth and the underground between neighbouring countries.’⁹⁸

Rivers can be divided into non-navigable and navigable ones. If a non-navigable river divides the territories of two states, as a rule, the middle of the river marks the boundary. If such a river has more than one channel, the middle line of the main channel is most often adopted. In doing so, ‘unless otherwise provided by treaty, navigable rivers are governed by the Thalweg principle, a German term referring to the main navigable or principal channel of a river.’⁹⁹

The Thalweg principle allows the two countries to sail at low water levels. In the case of low water levels, when river islands appear on rivers, Thalweg indicates exactly which of these river islands belongs to which neighbouring country. The Thalweg may be a broken line drawn between its deepest points, or it may also be a boundary line following the main course used by ships navigating the river. Both cases are not applied in practice because they are inaccurate. In agreements, Thalweg is usually a line that goes in the middle of the main navigable channel. If the boundary rivers change course, the boundary is determined towards the middle of the channel by applying Thalweg. The boundary does not change if the river leaves the previous riverbed and forms a new one, unless otherwise stipulated by agreements.

‘When the border river forms an estuary (delta) at the mouth of the sea, the boundary line is determined according to the rules applicable to sea bays.’¹⁰⁰ In accordance with the provisions of the international law, no state may stop or divert the flow of rivers flowing through the territory of that state. The use of water for the purposes of harming another state is also strictly prohibited. In the event that two neighbouring states build a bridge across the border river, the border is most often determined in the middle of the bridge regardless of the border on the river itself.

Speaking of water borders, it is necessary to mention international or border lakes. These are lakes that are located on the borders of two or more countries and whose regulation is subject to international regulation.

⁹⁸ State Border Surveillance Act, Official Gazette No. 173/2003, 100/2004, 141/2006, 8/2007, 146/2008, 130/2011, 83/2013, 27/2016.

⁹⁹ Boczek, B.A., *International law: A Dictionary*, Dictionaries of International Law, No. 2, Scarecrow Press, 2005, 208.

¹⁰⁰ Degan Đ., *op. cit.* 68.

4.5. Protection of water borders

“The protection of the state border is performed by surveillance of the state border in order to prevent violations of the state border on land, sea and rivers on which international navigation takes place, and by protecting and securing the airspace of the Republic of Croatia.”¹⁰¹

According to the State Border Surveillance Act, ‘state border surveillance is the responsibility of the Ministry of the Interior, i.e., state border surveillance is performed by the border police.’¹⁰² In exceptional situations, the intervention of the Armed Forces in border protection is possible. Also, in certain specific situations, police officers may give instructions for action to members of the Armed Forces of the Republic of Croatia and officers of the Customs Administration who perform border control. Captains of cargo ships, passenger ships, yachts or captains of boats intended for sports or leisure participating in international traffic are obliged to dock by the shortest route to the nearest port where the border crossing is located, unless it is a harmless passage. This also applies to international traffic that takes place in the internal waters of the Republic of Croatia in case of intention to dock along the coast. After the border control, the mentioned vessels are obliged to set sail from the Croatian inland waters and its territorial sea in the same way. The captain of the vessel is obliged to cover all costs of stay and removal to a person who was on the vessel without documents for crossing the border, or did not have a travel ticket, or boarded the vessel without the approval of the captain of the vessel or was banned from entering the Republic of Croatia. No border control is required for the crew of a scientific research vessel and public ships with the Croatian flag in case of crossing the state border at sea for the purposes of conducting scientific research, provided that the vessel returns to the appropriate port or another port within 36 hours of departure and without entering the territorial sea of another state or docking in the port of the state in question. The captain of the vessel is obliged to inform the police administration in advance about crossing the border. Captains of vessels in international traffic, in cases of coastal fishing and masters in scientific research and public ships, may not embark or disembark persons outside the border crossing. The exception is the case of rescuing persons which the commander is obliged to report to the nearest police station.

A crew member of a foreign vessel may be issued a permit to move in the place of border crossing or port, or neighbouring places. If said person does not have the required visa, it is necessary for them to prove their status through a valid seaman’s book or a contract and to provide a list of crew and passengers. ‘The authorization may be valid for all announced ports of entry of vessels in the

¹⁰¹ Ivanda S., Police Administrative Law, Official Gazette, Zagreb, 2006, 164.

¹⁰² Staničić F., Police Administrative Law, Official Gazette, Zagreb, 2015, 122-123.

territory of the Republic of Croatia during the detention of the vessel in the port', which may not exceed 90 days.¹⁰³

5. International and regional water-related legal disputes concerning water as a resource

5.1. Introduction

The Republic of Croatia has several legal disputes regarding seawater and river water as a border, as well as its resources, primarily with neighbouring countries as it pertains to fishing. In order to explain this issue in more detail, a historical overview of the cases regarding Croatia's disputes over seawater and river water as a border and its resources will be mentioned first. While the Republic of Croatia was in a state union with other present-day independent countries, it was not considered necessary to precisely regulate state borders because it was still a matter of one country. Namely, with the disintegration of SFR Yugoslavia, it was decided that borders of the Anti-Fascist Council for the National Liberation of Yugoslavia (AVNOJ), which were created as a product of demarcation of the federal units of the newly formed Yugoslav Federation, would be international borders. However, the acceptance of such a solution brings about new issues since disputes, that were up until that point not considered necessary to be resolved, were at the forefront. Since said issues are closely related to water itself, the issue of borders is reflected in the use of water as a resource since the Republic of Croatia regulates the legal status of water through the Water Act, which states that said act applies to groundwater, including coastal waters. Likewise, provisions of said act refer to the territorial waters in terms of their chemical status.¹⁰⁴ According to the Water Act, the use of water is considered, among other things, its use for navigation and the use of inland waters for aquaculture-related activities.¹⁰⁵ Ongoing disputes are specific precisely because of their longevity and lack of political will to resolve them. Hereafter, the report will touch on the Croatia's international disputes with its neighbouring countries.

5.2. Legal dispute with Slovenia

The primary and the most famous Croatian dispute is the dispute with Slovenia over the Savudrija Bay. Croatia and Slovenia, unlike other neighbouring countries, do not have a wartime past, and for much of their history, they have been part of the same country that has its roots from the period of the Austro-

¹⁰³ State Border Surveillance Act, op. cit.

¹⁰⁴ Zakon o vodama, Art. 3, Paragraphs 1 and 2.

¹⁰⁵ Zakon o vodama, Art. 86, Paragraphs 3 and 4.

Hungarian Empire to SFR Yugoslavia. Namely, the disintegration of Yugoslavia led to the creation of independent countries of Croatia and Slovenia, and thus, to the need to specify state borders, which was not relevant up until that point because they were part of the same state union. After the declaration of independence, Slovenia demanded the change of borders on land and sea, and its focus was on the sea border. The new situation has led to the disruption of international relations. The countries tried to solve the problem through arbitration, which was compromised by Slovenia. Slovenia unilaterally moved the border from the Dragonja River, which is rich in fish, to the St. Odorik Channel. This change, which is also one-sided, causes the border at sea to change because, by applying the Slovenian method of defining the border, most of the Savudrija Bay would become part of Slovenia. On the other hand, by applying the Croatian method, the border would go from the old course and, in that case, most of the Savudrija Bay would become part of Croatia.¹⁰⁶ In this confrontation between Croatia and Slovenia, there is a problem of fishing by Croatian and Slovenian fishermen and passing of Slovenian vessels through the Croatian waters. Along with the contested Dragonja River, it is worth mentioning the dispute which is a largely disputed border line along the Mura River for Slovenia, since the Mura River meandered and changed its course over the years. Therefore, parts of Croatian cadastral municipalities 'remained' on the 'Slovenian' side of the river. For that reason, Slovenia claims that it had sovereignty over said areas during the SFRY era.

5.3. Legal dispute with Bosnia and Herzegovina

In order to understand the legal dispute with Bosnia and Herzegovina, one needs to enter into the genesis of the problem. It is about the town of Neum and its surrounding area, i.e., more specifically, about 20 km that belongs to Bosnia and Herzegovina. The reason being is the proceeding concerning the old Republic of Ragusa. After peace was made in Srijemski Karlovci in 1699, the conditions of the treaty were not met. With the Treaty of Karlowitz, the Ottoman Empire was given narrow corridors to the sea in the areas of Neum and Sutorina, which separated Dubrovnik from the Venetian area and was thus protected from possible land intervention.¹⁰⁷ As a result, Bosnia and Herzegovina gained access to the sea, but the Klek peninsula and two islets remained contested. The sea around the Klek peninsula is rich in fish located in the Bay of Mali Ston, south of the Neretva Delta. Today it is an area with 80 inhabitants.¹⁰⁸ The problem

¹⁰⁶ R.I., 'PRIJE I POSLIJE Pogledajte kako izgleda spor oko Piranskog zaljeva u samo dvije slike', <<https://www.index.hr/vijesti/clanak/prije-i-poslije-pogledajte-kako-izgleda-spor-oko-piranskog-zaljeva-u-samo-dvije-slike/979929.aspx>> accessed 20 June 2020.

¹⁰⁷ Dalibor Čepulo, *Croatian Legal History in the European Context*, p 234.

¹⁰⁸ Rongxing Guo, *Territorial Disputes and Resource Management: A global Handbook*, p 158.

arises in several legal areas because Croatia claims that the top of the Klek peninsula belonged to the Republic of Ragusa, and thus to today's Republic of Croatia, which in our case also reflects on the right to water since there is a 'conflict' of international law and water law. Namely, Bosnia and Herzegovina claims that Croatia is violating its right to access the open sea by building the Pelješac Bridge, because, according to them, larger ships will not be able to enter its port, while Croatia claims that the bridge is being built on its inland waters. In that case, the Water Act shall be applied, and it states the following: 'Owners or managers of roads, railways, bridges and other crossings on water resources, regulatory and protective water structures determined by other regulations, are obliged to maintain them so that they do not collect or retain water that may endanger their stability and functionality.'¹⁰⁹ Bosnia and Herzegovina's access to the sea near Neum separates the Dubrovnik area from the rest of Croatia to this day, and there is no end in sight to the solution to this problem.

5.4. Legal dispute with Montenegro

Concerning the Bay of Kotor, when we take its location, history, language and ethnicity into consideration, the situation is unclear when it comes to relations with Croats and Serbs. In 1848, the Assembly decided that the Bay of Kotor would not be united with Croatia. After the disintegration of Yugoslavia, Croatia, Serbia and Montenegro continued the dialogue on the control over the Bay of Kotor.¹¹⁰ The Protocol on Temporary Delineation was signed on December 10th, 2002.¹¹¹ The temporary delineation of maritime areas between the Republic of Croatia and Montenegro under the 2002 Protocol deviates from equidistance. The area of deviation in relation to the territorial sea of the Republic of Croatia is 52.3 km², which means that Croatia temporarily (until the final delineation) leaves that area to Montenegro, deviating from equidistance in the entrance to the Boka Kotorska/the Bay of Kotor and beyond – up to 12 nautical miles, i.e., external border of the territorial sea. This area approximately corresponds to the area of the island of Ugljan (51 km²).¹¹² The partial loss of Croatian sovereignty is clearly stated in Art. 7. by which a mixed crew is formed on a police vessel in the Zone, which, in fact, poses several unfavourable consequences for Croatia. This paper will single out the most important ones. Firstly, Croatia is excluded

¹⁰⁹ Water Act, Art. 143.

¹¹⁰ Rongxing Guo, *Territorial Disputes and resource Management: A global Handbook*, p 161.

¹¹¹ Republika Hrvatska Ministarstvo vanjskih i europskih poslova, 'Pregled dvostranih međunarodnih ugovora Republike Hrvatske po državama' <<http://www.mvep.hr/hr/vanjska-politika/bilateralni-odnosi/pregled-bilateralnih-medunarodnih-ugovora/crna-gora,236.html>> accessed 20 June 2020.

¹¹² Protocol on The Provisional Regime Along the Southern Border (2002) With Special Reference to The Decisions Of The Governments Of The Republic Of Croatia And Montenegro On The Exploration And Exploitation Of Hydrocarbons In The Adriatic.

from the outer bay of the Bay of Kotor to the maximum extent possible precisely because there is no mention of any median line, and the Zone's military and police forces are excluded from the Zone itself. In said area, Croatia shares joint sovereignty with Montenegro, while economic activities are significantly limited (commercial and small-scale fishing cannot be carried out in the Zone until further notice, nor can mariculture expand until the borders are finally established). The second consequence that we would like to mention is that Croatian sovereignty in the Zone is limited, because part of that sovereignty has been transferred to Montenegro. The third consequence is the one that in reality proves the existence of a dual power in the Zone, which is contrary to Art. 2 of the Constitution of the Republic of Croatia, which clearly states that the sovereignty of the Republic of Croatia is inalienable, indivisible and non-transferable. Thus, the existence of dual power in the Zone violates all three previously mentioned principles. Based on all of the above, we can conclude that Croatian sovereignty partly ended up in someone else's hands, was partly shared with someone else, and was partly transferred to someone else.¹¹³

5.5. Legal dispute with Serbia

The only border dispute that Croatia has with the Republic of Serbia is the current dispute concerning the Danube River. However, prior to describing the said issue, it is worth mentioning the common past, i.e., a brief overview of the historical period in order to specify the issues of these two countries. Let us begin in 1945, when the presidency of AVNOJ appointed a commission on June 19th, whose goal was to make a proposal for determining the border between Vojvodina and Croatia. Said commission was convened as follows: Milovan Đilas (Minister for Montenegro under the federal government, who was the president of the commission, and later on it was named 'The Đilas Commission' after him), Vicko Krstulović (Minister of the Interior of the Croatian People's Government), Milentije Popović (Minister of the Interior of the National Government of Serbia), Jovan Veselinov-Žarko (Secretary of the JNOF of Vojvodina) and Jerko Zlatarić (Vice President of the Regional NLC (National Liberation Committee) in Sombor). During the process of border determination between Vojvodina and Croatia, some issues arose anew, which were present during the formation of the Banovina of Croatia as well. The first districts include: Subotica, Sombor, Apatin, Odžaci – north and northeast of the Danube River (Bačka), and they were considered disputed territories between Croatia and Vojvodina. The second districts include: Batina, Darda, in the Drava and Danube River basin (Baranja) The third districts include: Vukovar, Šid, Ilok. – southwest and south of the

¹¹³ Radovan Pavić, Analysis of the Protocol regarding the border between the Republic of Croatia and Montenegro.

Danube River (Srijem).¹¹⁴ The commission paid special attention to the area of western Bačka, i.e., to the area of towns and districts of Subotica and Sombor inhabited by Bunjevci and Šokci Croats. The commission worked quickly, touring the disputed areas, meeting with government officials and collecting data on the ethnic composition of the population in the field. Jerko Zlatarić, a villager from the Baranja village of Gajić, represented the interests of the Bačka Croats, who aspired to join Croatia. In the years prior to the Second World War, Zlatarić was among the most influential people from the Croatian Peasant Party (HSS) in Baranja and had good relations and cooperation with the Bačka HSS members, especially with the Croatian representative and senator from Subotica, Josip Vuković – Đido, to whom he was a deputy on the list of elected senators of the Banovina of Croatia. Testimony on the work of the commission is preserved in an interview that Ivan Cerovac, under the pseudonym Tomislav Županac, conducted with Jerko Zlatarić in September of 1971, and it was published in the newspaper *Nova Hrvatska* in 1973. From everything that has been published and stated, it is clear that the biggest disagreements within the commission occurred due to Bačka. In this context, it is extremely important to mention the opinion of Andrija Hebrang, to whom his ‘commitment’ to the Croats of Bačka was later resented and even used as additional evidence that he encouraged chauvinism and worked to break the brotherhood and unity of the people. Andrija Hebrang adopted a position that Subotica should belong to Croatia. On the other hand, as it usually happens, the Serbian side considered that Serbia itself was damaged by the new structure and federalization of Yugoslavia, and that the unity of the Serbian territory and its people was broken.¹¹⁵ The problem with the disputed events lies precisely in the fact that the areas that the Serbs considered theirs became either new federal units or autonomous provinces within the Federal Serbia. Based on all of the above, one thing can certainly be concluded – taking into account the previous conflicts between Croats and Serbs and all their aspirations towards ethnically mixed areas – Đilas’ commission did not have an easy task. When it comes to delineation, it was stated that the border between Federal Croatia and Serbia will have been the Danube River, which made Baranja a part of Croatia, and as for Srijem, the border will have made Vukovar and Borovo a part of Croatia, and Ilok and Šid a part of Serbia and Vojvodina. After almost half a century of the Đilas Commission, the border dispute on the Danube River is once again the centre of attention. We have two opposing positions: the position of the Republic of Croatia and the position of the Republic of Serbia. The Republic of Croatia believes that the border dispute on the Danube River should entail the acceptance of cadastral parcels as an important indicator of the territory affiliation, while the Republic of Serbia believes that the benefit of the

¹¹⁴ Mario Bara, *Đilas' Commission and the Fate of Bačka Croats*, p 51.

¹¹⁵ *Ibid*, p 52.

border is on the line. In order to resolve an interstate dispute over the issue of delineation, it is considered that there are several methods by which the dispute can be resolved. The most important method is the analysis of archival material by which most disputes are resolved, often including the mediation of neutral arbitrations. Such a method is not an easy task precisely because it requires extensive activities in order to obtain relevant data. However, just as in the aforementioned disputes, there is no end in sight to this one either.

6. Overall assessment

Water is essential for life and it, therefore, represents one of nature's most important resources. The risk of water scarcity in the world is being increased by global warming, climate change, droughts and floods, continuous population growth and, thus, the rise of water consumption. The importance of conversation around water was recognized accordingly as it is considered public property by most countries. In 2010, the United Nations General Assembly adopted the Resolution on the human right to water and sanitation recognizing the right to water and sanitation as a human right.¹¹⁶

The human right to water is not set out in the Constitution of the Republic of Croatia (hereinafter: the Constitution).¹¹⁷ Instead, it designates water as a property of interest to the Republic of Croatia that has special protection. Furthermore, Article 8 of the Water Act prescribes water as a public property that has special protection of the Republic of Croatia and cannot be the subject of property and other real rights.¹¹⁸ As noted above, Croatian legislation recognizes the value of water and establishes norms to guarantee its protection. However, is that enough? This paper will determine the adequacy of water protection compared to the commercial use of its resources. The public is of the opinion that Croatia is rich in water. Yet, *Message in a Bottle – the Analysis of the Public Policy of Concessions for Pumping Water for Bottling and Sale on the Market*, made by Tomislav Tomašević, shows that there are significant differences in the data on the amount of water in Croatia.¹¹⁹ The most frequently

¹¹⁶ United Nations General Assembly Resolution on The Human Right to Water and Sanitation 2010, <<https://www.un.org/press/en/2010/ga10967.doc.htm>> accessed 20 June 2020.

¹¹⁷ Constitution of the Republic of Croatia, Official Gazette No. 56/90, 135/97, 08/98, 113/00, 124/00, 28/01, 41/01, 55/01, 76/10, 85/10, 05/14.

¹¹⁸ Water Act, Official Gazette No. 66/19.

¹¹⁹ Tomašević, T., *Message in a Bottle – the Analysis of the Public Policy of Concessions for Pumping Water for Bottling and Sale* (Project 'INTRA WASP – Increasing transparency in water and spatial resources, Green Action, Institute for Political Ecology and its partners, 2016), <<https://ipe.hr/wp-content/uploads/2017/08/IPE-Poruka-u-boci-optimized.pdf>> accessed 29 June 2020

cited data is that Croatia has 32,818 m³ per capita per year.¹²⁰ Stated data is misleading since most of the said amounts of water come from countries located upstream of Croatia, such as Slovenia, Hungary and others.¹²¹ Croatia is not the sole user of these resources. In addition to this, water resources in Croatia are unevenly distributed throughout the year (winter and summer months) and across different geographical areas. According to the Water Management Strategy, Croatia has renewable groundwater reserves in the amount of 9.133 billion m³ or 2.057 m³ per capita per year.¹²² Given that all water for public water supply and all bottled water for sale on the market is taken from groundwater, it can be concluded that the maintenance and recovery of renewable groundwater is crucial.

The commercialization of water stems from the notion of water as a commodity, not a human right. In recent decades, corporate pressure on governments to commercialize or privatize their water supply and drainage systems has grown worldwide. There are three models of water service management: a new bureaucratic management, a new public management and a participatory management, each with different environmental consequences.

The goal of bureaucratic management of water services is to define it as a matter of public interest and to protect water as an asset of interest to the state. Our Water: An Analysis of Water Services Management conducted by Green Action and project partners established that the model of bureaucratic management with elements of new public management prevails in the Republic of Croatia.¹²³ This implies centralized, authoritative and hierarchical management of water services where orders are passed from higher to lower levels without significant consultation between them, as well as the fact that water services are provided exclusively by public companies as a public service.¹²⁴ At the top of the hierarchy is the Ministry of Environment and Energy, followed by Croatian Waters – a legal entity that manages everything related to water in Croatia. Local self-governments units with public water service providers are at the lowest levels, and they are dependent on higher-level financial transfers.¹²⁵ Bureaucratic

¹²⁰ Ibid 13.

¹²¹ Ibid.

¹²² Water Management Strategy, OG No. 91/08, <https://narodne-novine.nn.hr/clanci/sluzbeni/2008_08_91_2900.html> accessed 10 June 2020.

¹²³ Green Action and project partners, *Our Water: Analysis of Water Services Management in Croatia* (Green Action, 2014) <https://s3-eu-west-1.amazonaws.com/zelenakcija-production/zelenakcija/document_translations/950/doc_files/original/zelenakcija_voda_zaweb.pdf?1412598033> accessed 18 June 2020.

¹²⁴ Ibid 33.

¹²⁵ Čerimagić, Enes, Domes, T., Kekez Koštro, A., Tomašević, T., 'From Bureaucratic to Participatory Management of Water Services in Croatia', 2015, The 6th Croatian Water Conference – Croatian Waters on the Investment Wave, 1384 – 1389,

management can lead to privatization in the long run due to unsustainable planning and the inability to cover the costs of public water service providers, growing infrastructure and increasing debts.

The new public management model leads to the privatization of water services and follows the criterion of the highest possible consumption in order to achieve the highest possible profit. In the Republic of Croatia, water cannot be the subject of ownership or other real rights. According to Article 3, Paragraph 1, Item 20 of the Water Services Act water services are public water supply and public drainage services.¹²⁶ Article 4, Paragraph 1 stipulates that water service activities are of general interest and are performed as a public service. Water services are performed by public suppliers which are founded and owned solely by local self-government units in a service area. Also, according to Article 186, Paragraphs 1 and 2 of the Water Act, concessions for the performance of public water supply and drainage activities may not be granted. Following the above, it can be concluded that the legislator protects water from the possibility of privatization. However, as a result of the harmonization of legislation with EU standards, some elements of public management, such as concessions for wastewater treatment, specialization and consolidation of public water service providers are present in the bureaucratic management. The specialization singled out new separate companies for water services. This has prevented the transfer of money from one utility to another, which was, until then, the most common way to subsidize the price of water. Furthermore, the research states that some subjects consider the consolidation of numerous water utility companies into a smaller number as an introduction to their privatization, since this step came prior to the privatization in England.¹²⁷ How easily harmful the second model can get can be seen in the fact that, in 2012, the Croatian Bureau of Statistics declared the Concession Agreement enabling private suppliers to treat wastewater in Zagreb and Zaprešić as harmful to the City of Zagreb and its citizens because the price of wastewater treatment services is not economically justified, and it allows private suppliers to gain profit of 46% of revenues generated from treatment services.¹²⁸ Although the main arguments for privatization are the introduction of market mechanisms and competition that should lead to lower prices, encourage rational use of water, improve service quality and increase availability by providing private capital important for

<https://www.voda.hr/sites/default/files/6._hrvatska_konferencija_o_vodama.compressed_0.pdf> accessed 3 June 2020.

¹²⁶ Water Services Act, Official Gazette No. 66/19.

¹²⁷ Green Action and project partners (n 8), p 33-34.

¹²⁸ Sarvan, D., Restriction of Entrepreneurial and Market Freedom in Water Services Management, Croatian Waters, Vol. 27, No. 107, 2019, 53-59, <https://hrcak.srce.hr/index.php?show=clanak&id_clanak_jezik=321023> accessed 16 June 2020, 58-59.

infrastructure investments, the reality is much different. Instead of positive effects, the price of water and drainage increased by 50% after privatization in England and Wales. There were gradual price increases approved by the agency established to protect the public interest. Profits of private owners increased by an average of 150%, while water quality did not improve, and the frequency of shortages increased due to insufficient investment in water supply infrastructure. The fact that water is a liquid and it, therefore, cannot be territorially bound or fenced makes it difficult to be turned into a commodity, and above all, it is an irreplaceable resource necessary for life.¹²⁹ Consequently, water management becomes a natural monopoly without competition in supply and infrastructure. Privatization turns a public natural monopoly into a private one without creating a market where the positive effects of market competition and rivalry would lead to such competitive offers, lower prices and improved quality of services for consumers. The private monopolist will always follow their private interest and will try to increase profits at the expense of users, i.e., citizens, by reducing quality and increasing service prices, for which there are no market barriers since consumers have no other option of water supply.

The third model – participatory management – tries to eliminate the shortcomings of the first two models and aims at the rational use of water for the sustainability of water resources. The criteria for measuring performance are the following: long-term water supply, sustainability and protection of water resources, maintenance and renewal of infrastructure. Well-known examples are the cities of Grenoble and Naples. The result of participatory governance in Grenoble is a reduction in the prices of water services and an improvement in water quality, and decisions have become transparent through free public access to information. Investments in infrastructure have tripled and the city has the lowest water price of all French cities with more than 100,000 inhabitants. Various saving training were conducted to make the inhabitants aware of the importance of water conservation, and water consumption in public buildings was successfully reduced by 20%, which was achieved by letting 2.5 litres of water per person per day for free, as a living resource. If the consumption increases, the price of water grows progressively, with the price of water being different for households and economic purposes. Naples in Italy has returned water services to the public sector and changed the structure of decision-making, so as to ensure social control over water supply in order to prevent corruption in the allocation of construction work to subcontractors, as well as party clientelism, i.e., the use of public resources for private interests. To achieve this, they introduced independent experts, activists of environmental associations and service users – citizens – into the governing bodies.¹³⁰ In both examples, participatory

¹²⁹ Green Action and project partners, (n 8), p. 35 and 39.

¹³⁰ Ibid 46-49.

management has positive effects on environmental protection and conservation of water resources.

Guided by the goals of sustainability of water resources and long-term supply, it is clear that investment in infrastructure directly affects the amount of water consumed. Data from the Croatian Bureau of Statistics state that in 2018 in Croatia about 200 million m³ were lost through faulty pipes.¹³¹ Water losses from the water supply system can be reduced by maintaining and investing in infrastructure. A progressive price increase would also influence service users – citizens – to raise awareness of the importance of water conservation and, thus, use it more rationally. The participation of experts and citizens in the decision-making and management of water services would result in a more transparent and, consequently, better management. Based on the above, it can be concluded that the introduction of such a management model would have positive effects on environmental protection and meet the objectives prescribed by the Water Act, as well as on human health.

The objectives of water protection referred to in Article 46 of the Water Act related to the use of water resources are as follows: to prevent further deterioration, to protect and improve the state of aquatic ecosystems and, given that the water needs of terrestrial ecosystems and wetlands are directly dependant on aquatic ecosystems, to promote sustainable water use based on the long-term protection of available water resources; to ensure the gradual reduction of groundwater pollution and prevent their further pollution, and to contribute to mitigating the effects of floods and droughts. The achievement of the objectives referred to in Paragraph 1 of this Article shall contribute to the following: the preservation of human life and health; ensuring sufficient quantities of good quality surface and groundwater needed for sustainable, balanced and equitable use of water; significant reduction of groundwater pollution; protection of inland surface waters and sea waters.

In addition to the participatory model of water services management, there are other ways to protect water resources from privatization. One of them is the protection of water as a human right at the highest level – the Constitution. The Republic of Croatia abstained from voting at the UN General Assembly on the right to water as a human right. Although the right to water as public property is prescribed at the level of the law, there is the possibility of changing it, as could be seen in Italy when the then-government passed laws contrary to the referendum decision banning the privatization of water services. Thanks to the

¹³¹ The Croatian Bureau of Statistics

<https://www.dzs.hr/PXWeb/Table.aspx?layout=tableViewLayout1&px_tableid=SV13.px&px_path=Okolis__Statistika%20voda__Sakupljanje%20prociscavanje%20i%20distribucija%20voda&px_language=hr&px_db=Okolis&rxid=73407a89-40a7-43e0-bed2-ca82a01f2d9e> accessed 7 June 2020.

legal force of the referendum, the courts found such laws unconstitutional.¹³² From the aforementioned, it can be seen that laws can easily be subject to change, and it can be concluded that the constitutional level is the safest protection of the right to water. Many countries have constitutionalized the human right to water, especially those that have felt the negative consequences of water supply privatization or water scarcity such as South Africa, Congo, Uruguay, Ecuador, Bolivia etc. Determining the human right to water by constitutional law would strengthen its importance and, thus, encourage the public to a more rational use of water resources and their conservation. An example of such action in the EU is Slovenia, which was the first country to introduce the human right to water and the anti-privatization concept of water services management into the Constitution.¹³³ It is possible that other Member States will follow Slovenia's lead.

In addition to the privatization of water services, water resources can be commercially exploited through sales on the market, i.e., by collecting water for packaging and sale on the market. This activity represents one way of using water. Under Article 86, Paragraph 1 of the Water Act, the use of water includes the following: water abstraction of surface and groundwater, including spring, mineral, geothermal water for various purposes, including the supply of drinking water for its placement on the market in its original or processed form in bottles or other types of packaging. Article 91 of the Water Act states that any use of water that exceeds the limits of general water use requires a concession agreement or a water permit. Article 88, Paragraph 1 considers the general use of water to be for personal use in a manner and in quantities that do not exclude others from equal use. For the protection of the environment and, thus, indirectly of human health, the use of water may be restricted in accordance with Article 93, Paragraph 1 if temporary water shortages occur to the extent that it is not possible to meet the needs of all users in a given area, which are abstracted for public water supply purposes to such an extent that there is no possibility of their further abstraction, or if there is a danger of their complete depletion, if the existing abstraction of water or other use worsens the chemical condition of the water body or could worsen it, and if the reduction of the groundwater body level endangers the aquatic and forest ecosystem. As mentioned earlier, the use of water that exceeds the limit of general use requires a concession. Article 177, Paragraph 1 provides that a concession for the use of water is required, *inter alia*, for the abstraction of water for human consumption for its placement on the

¹³² Green Action (n 8) 48.

¹³³ Sarvan, D., Proposal for the Constitutionalization of the Human Right to Water in the Republic of Croatia, *Croatian Waters*, Vol. 27, No. 109, 2019, p. 255-261, p. 259.
https://hrcak.srce.hr/index.php?show=clanak&id_clanak_jezik=330184 accessed 31 May 2020.

market in its original or processed form, in bottles or other types of packaging. Subordinate legislation – Regulation on the Conditions for Granting Concessions for the Economic Use of Water prescribes 30 years as the longest period for granting concessions for the abstraction of water for human consumption for its placement on the market in its original or processed form.¹³⁴ The Message in a Bottle survey found that in 2016, 18 out of 29 concessions were issued for a maximum period of 30 years. Given such a long deadline, the legislator has provided the country with Article 182 of the Water Act in case of changes in the water regime due to climate change or other reasons in such a way that it is possible to limit the scope of the concession or seek adaptation to the new situation. In this way, the Republic of Croatia can protect the environment by limiting the concession without paying a fee to the concessionaire. The fulfilment supervision of the concession contract is carried out by the line ministry or inspection supervision, while water supervision or professional support in the supervision of the fulfilment of concession conditions is provided by Croatian Waters in Article 184 of the Water Act. Despite the fact that the water law inspection would sometimes notice certain irregularities during the supervision of bottled water producers, none of the producers was deprived of the concessions.¹³⁵ Data on current concessionaires are publicly available through the Register of Concessions maintained by the Financial Agency (FINA) for the Ministry of Finance. According to the available data, there are 50 records on concessions for collecting water abstraction for sale on the market, among which 26 of them are currently valid (the rest are going through bankruptcy or the duration of the concession has expired, but it remains unclear why the data have not been updated since in some cases the concession ended 11 years ago).¹³⁶ Data on concessionaires and quantities of affected water are collected by the Ministry of the Environment and Energy and Croatian Waters. For the Messages in a Bottle research, the above-mentioned data were obtained through a request for the right to access information. The largest concessionaire for water abstraction is Jamnica d.d. Plus, which accounts for about 70% of abstracted water for

¹³⁴ Regulation on Granting Concessions for the Economic Use of Water, Official Gazette No. 89/10, 46/12, 51/13, 129/14.

¹³⁵ Tomašević, T. (No. 4) 36

¹³⁶ Available at:

http://servisi.fina.hr/regkconc/pregled.jsp?nazKor=&vrKonc=62&nazDav=&oibDav=&g-recaptcha-response=03AGdBq27npWJqtzcQwVAE8vCv--e3zkynXX3AUwKR8-DTEGZgmOQkxxSkjAQ9uK-8CLbpYHk1peb1lrrp81-99_qjy1pURW7ovAEc8NJqADWSGovmCSZmYXCx94--Wj2TmfZtkm4ap7-7CyqgNy06LIel4qj6GOJvfmRKmtyS16hU2UjooNEMBIL3gzv_RiNGadYGr_RHCEwcm_d fQsXIQB7yd-k4W91o9EsF7MTUkKX1w0WK_3_qrU2ZwsUZ2lc-MjAznxBUjSpzO6PIvEz5IUBi4B9cjLzinNCbskhvGHvhExPMNr7Pg-ojbECa8MbwbVDUrz_xZRO601jUnGHW_I tqfx451DFoSYBg93geLl3BbLpLfg8eKsnPyhbIkYz5tgjUjGnUxtKO&admJed=0_0&checkVrKonc=1&datPocKonc=&oibKor=&d-1342532-p=1

market sales and holds more than two-thirds of the domestic market for water sales. The next largest concessionaire is Podravka d.d. (now Studenac d.o.o.), which abstracts four times less water than Jamnica. The results of the data analysis on the amount of abstracted water showed discrepancies in the data of the line ministry and Croatian Waters, which reduces transparency and credibility of data on abstracted quantities of water for sale on the market. Given that water is an extremely important natural resource that should be used rationally, transparency should be increased by publishing data on the amount of collected water in real-time using telemetry monitoring equipment. This way, better control over the use of resources necessary for life would be introduced.

The concession fee can also have an impact on the environment. Regulation on the Conditions for Granting Concessions for the Economic Use of Water stipulates that the concession fee consists of an annual and a one-time fee. The annual fee according to Article 5 of the Regulation is calculated based on the amount of water abstracted and amounts to HRK 30.00/m³ or 3 lipa per litre. The amount of the one-time fee is determined according to the most favourable bid in the concession award procedure and amount to less than 50% of the amount of the annual fee, determined according to the amount of water for which the concession is granted. There are currently two models for charging concessions for water abstraction in Croatia. The first model stipulates that the amount of the annual concession fee is determined in the amount of 2.5% of the income generated from the sale of that water. The second model, which was supported through lobbying large concessionaires for water abstraction and adopted in the new Water Act in 2010 and the new Regulation on the conditions for granting concessions for economic use of water, determines the amount of an annual concession fee according to the amount of abstracted water. Concessionaires who had concluded concession contracts prior to the adoption of the new law had the possibility of choosing a collection model. Small concessionaires, such as Viva d.o.o., chose to remain on the billing model based on 2.5% of revenue, while large concessionaires such as Jamnica d.d., chose the new billing model based on the amount of water abstracted.¹³⁷ Both concessionaires profited from their choices. The analysis of the Messages in the Bottle research established that Jamnica's billing model choice split the concession fee in half, which would have otherwise been paid to the state budget. For example, it is stated that the total amount of concession fees for water abstraction for sale on the market in 2014 was HRK 12 million, and that, if the calculation model according to the percentage of revenue remained, that amount would be HRK 20 million only because of Jamnica.¹³⁸ Smaller revenues from the concession fee in the budget of already financially dependent units of local and

¹³⁷ Tomašević, T. (No. 4) 52.

¹³⁸ Ibid 53.

regional self-government imply smaller investments in the water supply system maintenance, which raise loss of water and affect sustainable management. The advantage of the model of annual calculation of the concession fee according to the income percentage is the easy determination of the fee, which makes the possibility of abuse more difficult since the revenues from the sale of bottled water are controlled by the Ministry of Finance. The disadvantage concerns the environment. Namely, as the concession fee is determined according to the percentage, regardless of the amount of abstracted water, the concessionaire has no financial incentive to reduce water loss in the technological process of filling or bottling water for environmental reasons. Consequently, in order to protect the environment by encouraging more rational use of water, there is a seemingly better model of annual calculation according to the amount of water abstracted. However, with such a calculation of the fee, there is a greater possibility of abuse due to the more difficult control of data on the amount of abstracted water. Namely, the Analysis of Messages in the Bottle showed that larger concessionaires, in addition to the concession for water abstraction for the purposes of placing it on the market, also have a concession for water abstraction for technological needs. According to Article 2 of the Regulation, processed water is used in the technological process as a raw material (e.g., for the production of juices) and for cooling purposes in said process. The maximum term for this type of concession is 30 years as well. A significant difference between these two concessions is in the fee that is paid. The annual fee for water abstraction for technological purposes, according to Article 5 of the Regulation, is 10% of the fee for water use. Comparing the two amounts of fees – the annual concession fee for water abstraction for sale on the market and the annual concession fee for technological needs (according to the analysis), it can be concluded that the fee for technological needs is 187 times lower than the fee for water abstraction for human consumption. Furthermore, the analysis established that large concessionaires of bottled water have mixed concessions – concessions for water abstraction for sale on the market and concessions for water abstraction for technological needs.¹³⁹ These mixed concessions are based on one decision on the award of a concession and one concession agreement according to which water is taken from one well for two different purposes, for which the difference in the paid concession is a hundred-fold.¹⁴⁰ Such treatment opens a great possibility for misuse of data on the amount of abstracted water from the same well. Given that water from the public water supply can be used for cooling or washing the plant, and since the concession fee for water abstraction is calculated according to the amount of abstracted water, and not the one that ended up in the bottle and was sold on the market, it can be concluded that concessionaires

¹³⁹ Ibid 60.

¹⁴⁰ Ibid 61.

of bottled waters who have a concession for technological needs can write off the loss of water in the process of bottling water as technological water. Consequently, one of the main advantages of the billing model is lost, i.e., said process does not encourage concessionaires to use water more rationally.¹⁴¹ In addition, the public should have access to real-time data on the amount of water affected by the concessionaire, which would increase transparency and remove doubts regarding data reliability. This way, public pressure could influence the rational use of water resources. Environmental protection is also financed by funds through fees. According to Articles 29 and 30 of the Water Management Financing Act, water concessionaires of bottled water, as well as households, are obliged to pay a fee for the protection of water. Furthermore, environmental protection is financed by paying a fee for disposable plastic packaging that concessionaires pay to The Environmental Protection and Energy Efficiency Fund. Given that the production and disposal of plastic packaging have its ecological and economic price and that its cost would not be passed on to society as an external cost, it is necessary that the polluter, i.e., the concessionaire pays the cost in the final price of the product.¹⁴² Drinking water is mainly packaged in disposable PET plastic packaging and sold on the market, which creates large amounts of waste that is harmful to the environment. Given this, it is clear that the use of drinking water from the public water supply in Croatia is more environmentally friendly and cheaper than buying bottled water. According to the Croatian Bureau of Statistics, about 315 million m³ of water is delivered to Croatia through the public water supply, of which about 179 million litres of water is delivered to households. Therefore, it can be concluded that the consumption of water per capita in a household is about 130 litres of water per day, but only 6 litres of water go to drinking and food preparation.¹⁴³ In addition, bottled drinking water accounts for about 100 litres per capita per year. In addition to that, a comparison of data on the price of water leads to the conclusion that, for citizens, buying water in packaging is up to 1000 times more expensive than the consumption of drinking water from the public water supply.¹⁴⁴ It remains unclear why, despite the fact that drinking water from the public water supply is 1000 times cheaper and healthier, a significantly larger amount of bottled water is consumed. The reason for this may lie in insufficient education of citizens about the equal quality of drinking water, the way water prices are formed, and the impact of bottled water on the environment, which is negative not only in increasing waste, but also in energy consumption, oil and higher greenhouse gas emissions that occur during the manufacturing process of

¹⁴¹ Ibid.

¹⁴² Ibid 55.

¹⁴³ Ibid 66.

¹⁴⁴ Ibid 68.

disposable plastic packaging. Incomparably less energy is used in the public water supply system for the production and transport of water, while no packaging is used for delivery. Also, it is stated that energy consumption of water from packaging is about 2000 times higher than that of water from the public water supply.¹⁴⁵

Following all the above, it can be concluded that the legal framework for environmental protection has been established, but there is room for improvement. Contrary to public opinion, it has been established that Croatia does not have unlimited water resources. Therefore, sustainable management of water resources is extremely important in order to enable long-term water supply, protection of aquatic ecosystems, and human health and life. In opposition to environmental protection, we have the use of water resources for commercial purposes: the privatization of water services and concessions to abstract water for sale on the market. Only the second form is currently present in Croatia, but some steps still need to be taken in order to prevent future privatization. Safer protection against privatization would be provided if the Constitution introduced the right to water as a human right together with the activity of public water supply and drainage as activities of public interest. Also, a way of participatory governance would enable a more active role for citizens and independent experts who could participate in the protection of the public property. Another form of commercial exploitation: water abstraction concessions are present in the Croatian legislation, but there are shortcomings. The inconsistency of data on the amount of abstracted water reduces the transparency and credibility of official registers and increases the possibility of its misuse, which directly affects the environment. Public disclosure of this data in real-time would eliminate the problem and allow for public scrutiny, thus contributing to the rise of awareness of the importance of water and the more rational use of water resources. For this purpose, mixed concessions should be separated, especially since water from the public water supply is available for technological needs. Furthermore, citizens should be encouraged to use non-carbonated water from the water supply system, for example through education on the harmfulness of plastics and through the opening of public taps. An increase in concession fees would allow for higher budget revenues, which could increase investment in infrastructure renewal. This would meet the prescribed environmental objectives with regard to significant water losses through the outdated water supply and drainage system.

Following all the above, I would conclude that there is a good basis for improving environmental protection and establishing a balance with the commercial exploitation of water resources.

¹⁴⁵ Ibid 67.

Conclusion

It is very obvious that there is a lot of room for better water protection in Croatia. The fact is that Croatia has not fully regulated the legislative provisions that would protect its water to a greater extent, and thus has many disputes with its neighbouring countries concerning both the border and the use of resources that are exploited through the water. There is room for improvement, and we as citizens have a moral responsibility towards the water. Why? Because water is one of the most important resources for life and we have to be much more careful and considerate.

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Kamilla Bodori

Introduction

The first Regulations in Hungary were adopted on certain water rights areas in the earlier centuries already¹⁴⁶ (in the XVIIIth Century to be totally precise), typically regulating the draining of waters and flood prevention and control.¹⁴⁷

The professionals of the given era saw the need for a law providing a unified regulatory framework of the legal nature of waters, the boundaries of water utilization, as well as the administrative procedural rules related to water rights. An economic policy of larger magnitude could only have been implemented if any of the water rights bills had been adopted and had become effective.

Until the completion of the unified law, only palliative corrections could be made by administrative means. As Ignác Darányi also stated, these legislative acts ‘supplement each other in many ways, yet they often include such contradicting provisions that they are most desired to be cancelled.’¹⁴⁸

The aim of regulating water utilities remained the same, namely, to reach a maximum level (while complying with the European Union). This aim is just as well present today, as it was in the centuries before, obviously Hungary does have already a very clear structure when it comes to water regulation, and as such it is no surprise, that many changes are not predictable for the coming years.

¹⁴⁶ Act XIV of 1751; Act X of 1840 – on Waters and Canals; Act XXXIX of 1871 – On water regulating companies; Act XL of 1871 – on Dam Keeper Services; Act XI of 1874 – On the procedure of draining inland waters; Act XXXIV of 1879 – On water regulating companies; Act XXXV of 1879 – On the state loan provided to the water regulating and flood controlling companies over the tributary streams of the River Tisza and to the Royal Town of Szeged; Act LII of 1881 – On the acts to be done by the state for the flood control of the Tisza valley; and Act IV of 1884 – On regulating the River Tisza and its tributaries.

¹⁴⁷ This was also pointed out during the Parliament session by Sándor Dárdai, the rapporteur of the Committee: ‘So far in our legislation, we almost exclusively limited ourselves to the subject of protection against the adverse effects of waters, and the only possible additional subject was the arrangement of waterways from the aspect of sailing and shipping,’ Parliament Records (hereunder: ‘PR’) 1884. Volume VI, 118th National Parliamentary Session, 7 May 1885, 207. Adolf Zay shared the same view in his parliamentary speech: ‘Until now, Hungary only had laws on water rights in certain small-scale subjects regulating certain relations, but so far we have still been unable to settle the issue in a perfect manner.’ PR 1884. Volume VI, 118th National Parliamentary Session, 7 May 1885, 220; Herrich 1871.

¹⁴⁸ Ibolya Katalin Koncz: The development of water rights administration in Hungary – A vízügyi igazgatás kialakulása Magyarországon. *Journal of Agricultural and Environmental Law* ISSN 1788- 6171, 2019 Vol. XIV No. 27 pp. 103-130 doi: 10.21029/JAEL.2019.27.103 particularly page 117. and ‘KN 1884. VI. kötet 118. országos ülés 1885. május 7., 204.’

1. Legal regimes for water sources

1.1. Main sources of law that pertain to the use and management of water resources in Hungary

Today, the Act No. LVII of 1995 (revised in 2014) on water management is in place and effect, thus it provides the main source of law when it comes to the utilities of water management.

To sum up the act I refer to the well based academic work published on it, that way each particular aspect may be followed upon. Thus, the act ‘considers the objectives of environmental protection, primary rights, and duties in connection with the use and conservation of water as well as the prevention of damages caused by water.’¹⁴⁹¹⁵⁰

It covers underground and surface waters, reservoirs, beds and banks of surface waters; and ‘establishments and activities having an impact on or modifying the conditions of the water flow and watercourses, the quantity and quality of water and reservoir beds and banks’¹⁵¹ and the general ‘use of data on water resources necessary for their evaluation’;¹⁵² ‘the prevention of and protection against damages caused by water; natural and legal persons and commercial enterprises without legal personality operating in the sector’.

Section II sets out government duties in relation to water resources and waterworks. Section III concerns property rights. The activities of water supply and sewerage companies are regulated by section IV. Provisions on water resource management are comprised in section V. Section VI deals with the protection against and prevention of damages caused by water. Section VII lays down provisions relating to immovable property in connection with water resources and waterworks. Section VIII deals with the jurisdiction of water authorities. Section IX deals with water management companies which are incorporated business organizations. These can take the form of water supply and sewerage companies or water regulation and damage prevention companies. The formation, operation, assets, and termination of these companies are regulated by Articles 36-44.

¹⁴⁹ ‘Factsheet: Water management act’, <<https://berst.vito.be/node/1155>> accessed on 15 May 2020.

¹⁵⁰ ‘Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control)’, <<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32010L0075>> accessed on 15 May 2020.

¹⁵¹ Iuliana Kalenikova, ‘The integrated water basin approach for the sustainable water management in international and regional legislation’ (2009), <<https://docplayer.net/61432351-The-integrated-water-basin-approach-for-the-sustainable-water-management-in-international-and-regional-legislation.html>> accessed on 15 May 2020.

¹⁵² Ibid.

The act was heavily amended nonetheless, by the listed legal acts:

Act No. LXVII of 2004 regarding public interest and implementation of the program which ‘aimed to increase the protection against flood in the Tisza River basin, and for land planning and rural development of the surrounding area (re-development of the Vásárhelyi Plan)’.¹⁵³

- Act CLXXXV of 2012 on waste.
- Act No. CXXVIII of 2011 concerning disaster management and amending certain related acts.
- Act No. CCXII of 2013 laying down certain provisions and transition rules in connection with Act No CXXII of 2013 concerning agricultural and forestry land trade.
- Act No. CXLIV of 2009 on water users' associations.

The first amending Act provides for the insurances of water flood, thus for planning, regulating, organizing, governing, controlling of flood preventive activities, through the construction, development, maintenance and operation of protective waterworks. This is a non-local competence, meaning that this is the duty of the State.

The purpose of the second amending Act is the protection of the environment and human health, the mitigation of environmental impact, the efficient management of natural resources, the reduction of the impact and improvement of efficiency of ‘the use of resources, as well as the prevention of waste and its harmful effects, the reduction of its quantity and hazardousness, the re-use of materials, as well as higher rates of waste recycling and environmentally sound disposal of non-reusable and non-recyclable’¹⁵⁴ waste.

The third amending Act declares that disaster management is a national matter, and it is the duty of the State.

The fourth - the most important amending Act - was composed of 20 chapters and it is divided into 148 articles (it changed the regulation on its grounds). Chapter I contains general provisions; Chapter II lays down provisions related to the preliminary provisions of the Act on land trade; Chapter III contains provisions regarding the preferential maximum size of estates; Chapter IV provides rules on acquisition of property rights and usufruct rights; Chapter V provides rules concerning administrative procedures prior to agreements on transfer of property rights.

¹⁵³ Act No. LXVII of 2004 regarding public interest and implementation of the programme aimed to increase the protection against flood in the Tisza River basin, and for land planning and rural development of the surrounding area (re-development of the Vásárhelyi Plan).

¹⁵⁴ Jenci Tünde, ‘Legal Regulations System in the Implementation Process of Geothermal District Heating Investments’ (2019), https://www.researchgate.net/publication/334040023_Legal_Regulations_System_in_the_Implementation_Process_of_Geothermal_District_Heating_Investments accessed on 17 May 2020.

Finally, the fifth amending Act was enacted to perform public functions related to local water management.

1.2. Ownership rights over water resources

Following the 2010 parliamentary elections, the State is seeking more intensive engagement in several sectors, one key sector is agriculture.

Accordingly, the legal environment for water has also been fundamentally re-regulated. Many elements of the water law rule have undergone major changes (e.g., water utility services, a new system was introduced with a different emphasis. Under the new emphasis, the concept of ownership was redone.

Article P of The Fundamental Law of Hungary (hereinafter referred to as the Fundamental Law), prescribes under 'natural resources' that the maintenance and preservation for future generations is the duty of the state and everyone.

The Article 38 of the Fundamental Law lays down additional rules for the natural resources: 'The property of the State and local authorities is national wealth. The purpose of the management and protection of national assets is to serve the public interest, meeting common needs and conserving natural resources, as well as improving the future needs of generations.'¹⁵⁵

According to the same article, the national property must be laid down in detail in a cardinal law and must be determined by that law. National assets may only be transferred for a specific purpose.

Finally - following the change of regime - public utility assets, it must be highlighted that the main importance of constitutional provision is the 'transfer of national assets' which may only be concluded with an organization whose ownership structure is transparent.

In the new legal system based on the Fundamental Law, the Civil Code provisions on property must be interpreted. Water resources had been removed from our Civil Code and the scope of the issue is regulated in a new cardinal law, namely cardinal law on national wealth (hereinafter referred as: Nvtv.).

The law defines, among other things, that the state and the local authorities may own water -since they are national assets. A such the fundamental purpose of national assets is to perform a public task (such as public services). They must be managed in a responsible manner.

Under the Nvtv. the State shall be the only owner of groundwater, natural aquifers, running water and natural lakes abandoned med and newly created island in river waters, natural lakes. The channel, reservoirs, flood defence lines and other aquatic installations as defined in Annex II of the Nvtv., are just well as state-owned Utilities.

¹⁵⁵ Hungarian Fundamental Law art. 38.

Certain state-owned companies, including the five-regional waterworks, may also have some ownership rights. Classification the waterworks is that the lowest level of public participation in them is 75% + 1.

Under the Nvtv, limited national assets (like drinking water) are, maybe in principle, only owned by local authorities or associations of municipalities. (Extension of the State)

In addition, further aspects of water ownership, the Nvtv. defines that any other water not included in the upper mentioned categories only the state and or the local authority may exercise ownership rights.

Thus, the establishment and operation of water utilities and regional utility systems is a state task, while the creation and operation of water can be exercised only by the local authorities. State and the local authority have the temporary right to exercise their exclusive economic activity, by concession, for a maximum of 35 years.

In addition to all these possibilities, the temporary right to exercise the exclusive economic activity of the State and the local government without the conclusion of a concession contract can be done by a single contract. But only (a) the State, (b) the local or the association of municipalities, (c) the budgetary body, (d) the municipality institution, (e) 100 % owned by persons under (a) to (d) or (f) the enterprise indicated in (e) is 100% enterprise owned by the company can be the other party.

Certain state-owned waters, namely that 'state-owned nature reserves protected, or highly protected or protected areas' cannot be subject to such simple contracts.

In the event of disposal, the local authorities have a right of pre-emption. Jurisdiction is laid down specifically to those local authorities whose territories the water either touches or crosses- by.

Further details of ownership are contained in the Water Utility Services Act (Vksztv.) which also stipulate that water utilities may be owned exclusively by the State or local authorities.

Concluding this point, we would like to just sum up by saying that water - especially water resources- in Hungary are national assets and as such ownership is basically restricted to the State and local authorities. Thus, the private sector may have some of the sub-rights of ownership but the whole and unrestricted right of it is saved for the State itself.

Each country's legislation has a great deal of freedom in designing the property in this respect. As pointed out in point 1.2. by the options of water ownership, not big a choice exists.

Our Fundamental Law prescribed water as a national asset, and it must be therefore treated as such.

In Hungary, in respect of waters and aquatic facilities (water utilities and agricultural infrastructure), the most important legislative provisions are contained in the Nvtv. The Nvtv. on the transfer of assets, contains that waters which are owned by the municipality may be only transferred to the State. Certain sub-right (like use) may be given to individuals or private sector entities (e.g., companies) nonetheless, they are forbidden to have full ownership.

As the dear reader may see, the legislation has now strengthened the role of the Hungarian State and its power over the waters and water facilities also when it comes to assets of municipalities. In other words, the clear emphasis on the form of public ownership is typical for water and aquatic facilities.

Finally, we would also like to refer to the exploitation of water, which is just as important question as the ownership on water as main national asset. The exploitation of water goes hand in hand with our agricultural law, meaning the one owning the land has the right or exploiting the water (e.g., use it the way he wants to), yet again he may not possess it as owner.

Since almost any private national can possess agricultural land - the private sector represent itself in means of a sub-ownership right, namely exploitation.

2. Criminal offences and misdemeanours regarding water resources

2.1. Introduction

The Fundamental Law of Hungary (in Article P.) states that it shall be the obligation of the State and everyone to protect water resources and (based on Article XX.) Hungary shall promote the effective application of the right to physical and mental health by ensuring access to drinking water. The importance of water resources can also be found in the criminal offences and criminal system of the country. In Hungary, all crimes are included in the Criminal Code (Act C of 2012) and some minor offences are defined by the Code of Infractions (Act II of 2012). In case of the infractions, only a fine can be imposed, while the crimes in the Criminal Code can be punished by imprisonment. The time of the imprisonment is based on the gravity of the crime.

2.2. Infractions in connection with water resources

In Act II of 2012 on Infractions, Infractions Procedure and the Infractions Database we can find the provisions related to water resources in section 245. In this article, the Hungarian legislative body named three different states of affairs in connection with the pollution of waters. The first one happens, when somebody discharges a pollutant into a body of water, (it can be surface or groundwater) and as a result of this specific activity, the water body becomes

unusable, or the use of that water body will be endangered. The second one is about discharging wastewater or pollutants into water resources and about operating an installation which may cause contamination or pollution of water. The last one is about violating the provisions of the law or the official regulations for the protection area, protection zone of waters or water facilities. These are all in the Code of Infractions which means that only a fine can be imposed in these cases, but this imposition can be made not only by courts but by other authorities, for example by a fishing guard in this specific case. This can be an on-site fine and it won't be followed by a criminal procedure.

2.3. Offences in the Criminal Code

In the Criminal Code we can find the misdemeanours and felonies. The misuse of water resources is incorporated mainly into section 241 which is about the environmental offences. It states that any person responsible for the pollution of the water is guilty of a felony if any of the following three results occur:

- the water resource will be endangered,
- it will be damaged to such an extent that its natural or previous state can be restored by way of intervention only or
- it will be damaged to such an extent that its natural or previous state cannot be restored at all.

Both the endangering and the damaging are material offenses, which means that the causal link between the criminal conduct (the pollution) and the result is necessary for the crime to happen. As we can see the results are divided into three tiers: the first is the least severe and the last is the most severe case. The possible penalties also follow this system. In the first case, the perpetrator is punishable by imprisonment not exceeding three years, in the second case by imprisonment between one to five years and the last case, where the damage causes the water resource to be damaged to such an extent that its natural or previous state cannot be restored at all the perpetrators will be punishable by imprisonment between two to eight years. The misdemeanour version of this crime occurs when somebody is responsible for the pollution which will cause the mentioned three results, but the pollution was caused through negligence. In this case, not a felony but a misdemeanour happens, which has less severe possible punishments: the perpetrator will be punishable for a misdemeanour by imprisonment not exceeding one year in the first case (when the water resource will be endangered), by imprisonment not exceeding two years in the second case (state can be restored by way of intervention only), and by imprisonment not exceeding three years in the third case (unrestorable state).

Based on the same section, the perpetrator shall not be punishable if certain conditions are met: the pollution was resulting in the endangerment of the water resource (independently of negligence) or resulting in damage to such an extent

that its natural or previous state can be restored only by intervention because of the perpetrator's negligence and in either case the perpetrator has to voluntarily terminate or clean up the environmental damage before a ruling is delivered in the first instance. If this termination or clean-up happens when the caused damage can only be restored by intervention, the penalty may be reduced without limitation even if the environmental damage were not caused by negligence. With this, the legislative body wanted to motivate the person responsible for the pollution to restore the original state by himself if possible because the protection and restoration of water resources and the whole environment are considered more important than the punishment of the negligent responsible person or the person who did not cause unrepairable harm.

It is not directly about the misuse of water resources, but section 242, 243 of Act C of 2012 are also in connection with the protection of the water resources, they are about damaging the natural environment, including the protected species of living organisms or the Natura 2000 areas, protected caves, protected sites and the population or natural habitat of protected living organisms. We can also mention section 246 which is about poaching fish. Section 248 can also be applied which is about the disposal of waste at a site that has not been authorized for this purpose. Finally, as regards the possible sanctions we have to mention section 253 which states that banishment may also be imposed against the perpetrators of the crimes described in the above-mentioned sections.

3. Analysis of the laws and regulations that are compatible with EU law

Hungary became a Member of the EU on 1 May 2004 as a part of the Treaty of Accession 2003, therefore, EU legislation applies in Hungary as it does in the other Member States.

According to *Article 4(2) (e) of the Treaty on the Functioning of the European Union (hereinafter: TFEU)*, EU and the Member States have shared competence in the field of environmental protection. Protection and management of water resources, of fresh and saltwater ecosystems and of the water we drink and bathe in is one of the cornerstones of environmental protection in Europe. The above provision thus constitutes the legal basis for EU water policy.

Environmental policy is defined by its objectives laid down in *Article 192-193 of the TFEU*. It is also stated that the EU provides a minimal legal framework, therefore the Member States are not prohibited to individually maintain or establish more stringent protective measures.

The next layer of the EU Environmental law is defined by secondary legislative instruments. *Article 288 of the TFEU* lists five legal acts adopted by the institutions

of the EU, namely regulations, directives, decisions, recommendations and opinions.

The secondary legislative acts of the EU vary in their legally binding effect.

The major legislative acts of EU water law (see 3.2.) have been adopted as directives, which means that they have to be transposed into the national legal system of the Member States, allowing limited legislative discretion to the Member States and their national authorities by regulatory leeway through implementation.

3.1. Initial steps of the EU water law

The current EU water legislation is well into its third generation. The importance of the adaptation of the management of Water and Environmental Resources needs to be underlined in response to Global Climate Change. In April 2009 the European Commission (hereinafter: Commission) presented a *White Paper on adapting to climate change: towards a European framework for action*.¹⁵⁶ It highlighted the urge of promoting strategies that expands the resilience to climate change by the improvement of the management of water resources and ecosystems.¹⁵⁷ Its other key observation was that the success highly depends on the level of integration of the water policies in other sectoral policies¹⁵⁸ (such as energy, agriculture and health), besides maintaining effective water regulations both on the EU - and national level.¹⁵⁹

3.2. Water Framework Directive¹⁶⁰

In the European Union, there is an EU water policy as part of the EU's environmental policy, complementary to national water policies, the current comprehensive legal framework for which is provided by the Water Framework Directive (hereinafter: WFD). The WFD is an important core document of EU water governance, which is also a legally binding source of EU law.

¹⁵⁶ Commission of the European Communities, 'White paper on Adapting to climate change: towards a European framework for action' (2009), <<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52009DC0147>> accessed on 20 May 2020.

¹⁵⁷ Ibid.

¹⁵⁸ 'Industrial production processes account for a considerable share of the overall pollution in Europe to their emissions of air pollutants, discharges of wastewater and the generation of waste.' This issue is addressed in the Industrial Emission Directive (IED) it has been reviewed by the European Green Deal in the beginning of 2020.

¹⁵⁹ European Commission, 'Adapting the management of Water and Environmental Resources in response to Global Change', <https://ec.europa.eu/environment/water/adaptation/index_en.htm> accessed on 20 May 2020.

¹⁶⁰ 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.

It is complemented by more specific legislation (see 3.2.1.-3.2.7.), such as the Drinking or Bathing Water Directive, the Floods Directive and the Marine Strategy Framework Directive (see 3.3.), as well as by international agreements (see 3.4.) relating to water quantity, quality and pollution.

The EU Water Framework Directive (WFD), which came into force on 22 October 2000, establishes a regulatory framework to protect and restore clean water in the EU along with ensuring sustainable use in the long run. The WFD introduced a holistic approach for the management and protection of surface waters and groundwater based on river basins which is natural geographical and hydrological unit, instead of using administrative or political borders. As 2009 was the first deadline for the Member States to draw up river basin management plans (RBMPs), the first river basin management plan including the programme of measures was finalised in 2008 regarding Art 11 and 13 of the WFD. The second management plan was introduced in 2015, in line with the end of the first management cycle. The second management cycle will end in 2021, while the river basin management plan is going to be reviewed in 2033, regarding Art. 4 and 13. The Member States were also obliged to introduce water-pricing policies until 2010.¹⁶¹

Unlike the other Member States, Hungary belongs only to a single river basin district, namely the Danube. Therefore, the Hungarian river basin district is part of the Danube International River Basin District, and the development of the Hungarian river basin management plan was carried out in close co-operation with the other States concerned (such as Slovakia, Austria, Germany, Croatia, Serbia, Romania, Bulgaria, Moldova and Ukraine). This cooperation is supported by the International Commission for the Protection of the Danube River (hereinafter: ICPDR) of which Hungary is also a member.

The adaptation of the WFD has significantly restructured the water protection policy across Europe, including Hungary. The integrated river basin management contributed and will continue to not only to the good status of waters (drinking, bathing, etc.) but also to mitigating the effects of floods.

3.2.1. Groundwater Directive

The regulation of groundwater on the EU level has started at the end of the 1970s as the Directive 80/68/EEC was adopted. The framework has provided a protection against pollutants in order to avoid pollution of groundwater. The next step was an assessment within its Member States, carried out by the Directorate-General for Environment on Consumer Protection and Nuclear Safety of the European Community. The need for further action was declared on

¹⁶¹ 'Water Framework Directive: Timetable for implementation',
https://ec.europa.eu/environment/water/water-framework/info/timetable_en.htm
 accessed on 20 May 2020.

a Ministerial Seminar in the Hague 1991, which was followed by the groundwater action program in 1986. It was followed by the adaption of the WFD, with a focus on quantitative status objectives of groundwater. As a consequence, the chemical status criteria also needed to be laid down in a Directive, thus the Groundwater Directive (hereinafter: GWD) was initiated as a 'daughter directive'. The process was significantly long, as the European Parliament Elections were in 2004, the Directive has been formally adopted on 12 December 2006, after a long negotiation. The Directive obliges the Member States to: establish groundwater quality standards by 2008; carry out studies on pollution trend; take measures to prevent or limit inputs of pollutants into groundwater; review technical provisions every 6 years and comply with the good chemical status criteria. Hungary fulfilled its obligations in link with the Groundwater Directive by introducing Government Decree Nr. 219/2004. (VII.21.), 221/2004. (VII.21.) and 30/2004. (XII.30.)

3.2.2. Drinking Water Directive¹⁶²

The Drinking Water Directive (hereinafter: DWD) is applicable since 25 December 1998. The DWD sets standards for the quality of water intended for human consumption. Its purpose is to protect public health from the adverse effect of any contamination by ensuring that the water for human consumption is uncontaminated and clean. The Directive imposed many obligations on the Member States, such as taking measures to ensure that the water does not contain microorganisms, parasites or harmful substances, they were also obliged to monitor the water and to investigate immediately in case the standards set in the DWD are not met, and also to publish a report in every three years on the quality of drinking water. The Member States had to incorporate it into national law by 25 December 2000. Hungary implemented this rule with the Government Decree Nr. 201/2001. (X.25.) This Government Decision is also the framework of the Hungarian Drinking Water Quality Improvement Program, which has been developed to reduce contamination. The program provides an opportunity to connect previously underserved areas to the utility network.

3.2.3. Bathing Water Directive

Since the 1970s, the EU has met rules in order to safeguard public health and clean bathing waters.

Bathing Water Directive (Directive 2006/7/EC concerning the management of bathing water quality and repealing Directive 76/160/EEC) provided standards and updated these rules. In Hungary, the Directive was implemented by the Government Decree Nr. 78/2008. (IV.3.)

¹⁶² Directive 98/83/EC.

One of the main goals of the Directive is to achieve that all bathing water sites were at least of 'sufficient' quality by 2015.

In accordance with the Bathing Water Directive (hereinafter: BWD) the Member States are obliged to monitor and assess the bathing water. Furthermore, the Member States are also obliged to prepare public reports about bathing water quality and beach management. These reports are known as bathing water quality profiles. The classification is a process of monitoring two microbiological parameters set out in the Directive.

The last annual assessment, which monitored about 21,000 bathing waters across Europe, has been concluded in June 2019 by the European Environment Agency in cooperation with the European Commission's DG Environment.¹⁶³ The assessment found that bathing water quality in Europe persists high. The minimum water quality requirements were fulfilled at 95 % of the assessed sites. The number of sites classified 'excellent' is steadily growing since 2015. In 2019 this number was 84.6 % across Europe and 84.8 % in the Member States.¹⁶⁴

Hungary reported 257 bathing waters in 2019 from which 88.7% was reported as at least sufficient, 70.8% were classified as excellent, 12.5% as good, and only 4% remains poor.

3.2.4. Nitrates Directive

The Nitrates Directive (hereinafter: ND) is an integral part of WFD and it is one of the main vehicles in protection of water against agricultural sources. The Directive (91/676/EEC) was one of the oldest pieces of EU legislation which aimed to improve water quality. It was introduced in 1991 in order to reduce water pollution caused or induced by nitrate from the above-mentioned sources. Under the Nitrates Directive, the Member States are obliged to apply agricultural action programme measures across the whole territory or within discrete nitrate vulnerable zones (Abb.: NVZ's).¹⁶⁵ These zones are those waters that contain a nitrates concentration of above 50 mg/l or are susceptible to contain such nitrates concentration if measures are not taken.

In 2016, Hungary sent its report covering the years between 2012–2015. Overall, it concluded that the Hungarian water quality did not differ significantly from Member States' average.

¹⁶³ European Environment Agency, 'State of bathing water' <<https://www.eea.europa.eu/themes/water/europes-seas-and-coasts/assessments/state-of-bathing-water>> accessed on 13 May 2020.

¹⁶⁴ European Environment Agency, 'European bathing water quality in 2019', <<https://www.eea.europa.eu/themes/water/europes-seas-and-coasts/assessments/state-of-bathing-water/european-bathing-water-quality-in-2019>> accessed on 13 May 2020.

¹⁶⁵ Nitrate Vulnerable Zones, <<https://water.jrc.ec.europa.eu/portal/apps/webappviewer/index.html?id=d651ecd9f5774080aad738958906b51b>> accessed on 13 May 2020.

3.2.4. *Urban Wastewater Treatment Directive*

The Urban Wastewater Directive (hereinafter: UWWTD), which was adopted in 1991, provides standards for the collection and treatment of wastewater originating from households and relevant industrial sectors (e.g., energy, agriculture).

The main purpose of the Directive is to protect the environment from the adverse effects of urban and industrial wastewater discharges. The Directive sets out many obligations of the Member States such as collecting and treating wastewater in urban settlements with a population of a minimum of 2,000 inhabitants and applying the secondary treatment on the collected wastewaters; applying more advanced treatment in urban settlements with inhabitants over 10,000 located in designated sensitive areas¹⁶⁶, monitoring the performance, taking measures to minimize the pollution of receiving waters from stormwater overflows. Regarding the UWWTD site of Hungary, Hungary had 591 urban wastewater agglomerations of more than 2,000 population equivalent (i.e.) in 2016.¹⁶⁷

The Commission has published its latest report on the implementation programmes and the collection and treatment of urban wastewater of the Member States in 2016. The conclusion was that the implementation of the Directive effectively reduced organic and nutrient pollution load discharges; therefore, it has greater importance to achieve the good environmental status of water.

3.2.5. *Environmental Quality Standards Directive*

The Directive on Environmental Quality Standards (hereinafter: EQSD), which is also known as the Priority Substances Directive, lays down the environmental quality standards (Abb. EQS) for the identified thirty-three so-called priority substances and eight other pollutants in surface waters. The Directive amended and subsequently repealed Council Directives 82/176/EEC, 83/513/EEC, 84/156/EEC, 84/491/EEC, 86/280/EEC and amended Directive 2000/60/EC in order to contribute to the Commission's Better Regulation initiative.

The Member States were obliged to comply with this EQS Directive by 13 July 2010. Hungary implemented the Directive with Government Decree Nr. 10/2010. (I.28.)

¹⁶⁶ Approximately 2900 individual sensitive areas or catchment of sensitive areas have been identified. They represent about 75% of the EU territory.

¹⁶⁷ European Commission urban waste water website: Hungary, <<https://uwatd.eu/Hungary/>> accessed on 13 May 2020.

The Directive has also its importance as it established the earlier mentioned list of 33 priority substances in Annex II as Annex X of the WFD¹⁶⁸. The Directive provides an obligation for Member States to establish an inventory of emissions, discharges and losses of the substances in Annex I¹⁶⁹. Member States have also the opportunity to designate mixing zones adjacent to points of discharge¹⁷⁰. These areas should be clearly identified in their national river basin management plans prepared in accordance with the Water Framework Directive. The Member States are also obliged to take measures to ensure that the concentration of substances that normally accumulate in sediment and/or biota does not increase significantly¹⁷¹.

3.2.6. Floods Directive

In the coming years, due to climate change, a major challenge facing the EU legislation is water management. In the field of flood risk, changes have never been so drastic and significant before, especially in the region spreading from Eastern Europe to the UK and Ireland. The number of flood events has dramatically increased in the last 30 years in Eastern Europe. In the first years of 2000, it has exceeded more than a hundred registered events. In these cases, not only the inhabitants but also the economy can suffer significant losses. Moreover, floods pose a high risk to the environment (e.g., drinking water, wetlands, biodiversity). The WFD supplemented by the Floods Directive creates a significant structure for the EU's integrated water management aspirations across the EU.

The European Commission proposed a Directive on the assessment and management of floods, which was adopted in 2007. During the development of the Flood Directive Programme, an internet consultation was also taken place involving stakeholders and the public, to consider its findings during preparation of the proposal by the Commission.

The Directive (2007/60/EEC) included more obligations for the Member States such as: undertaking preliminary flood risk management of river basins by 2011; preparing a flood risk map by 2013 in case of real damage and preparing a flood risk management plan by 2015 in order to take the necessary steps in flood management.

The plans are obliged to be revised every six years, in a cycle coordinated with the WFD. The first milestone was dedicated in 2009. The Commission and the

¹⁶⁸ European Commission, 'Priority Substances and Certain Other Pollutants according to Annex II of Directive 2008/105/EC',
<https://ec.europa.eu/environment/water/water-framework/priority_substances.htm>
accessed on 14 May 2020.

¹⁶⁹ EQSD Directive art. 5.

¹⁷⁰ EQSD Directive art 4.

¹⁷¹ EQSD Directive art 3.

EEA have improved an electronic data and report system on water (Water Information System for Europe, hereinafter: WISE)¹⁷² to grant access to the availability of the reports. A Flood Directive Scoreboard¹⁷³ was also prepared, in order to monitor and inform how the Member States comply with their reporting obligations.

3.3. European Union's Coastal and Marine Policy

The European Union's main objective is to protect and clean up its coasts, seas and oceans as part of an integrated strategy (refer to: Integrated Maritime Policy - IMP) that will enable us to use them sustainably, therefore, to achieve the latter goals the EU progressively implemented in many relevant areas by its Coastal and Marine Policy.

Due to the geopolitical location of Hungary - since Hungary lost its maritime coasts to the Adriatic Sea on 4th of June 1920 - the EU policy regarding coastal and marine is inoperative. Even though, for instance, the regulation of fisheries through the Common Fisheries Policy (CFP) or the control of the input of nutrients and chemicals into the water through the above mentioned WFD are applicable in Hungary, but due to Hungary's minor involvement, Hungary does not deal in detail with the European Union's Coastal and Marine Strategy Framework Directive in the present work.

3.4. International agreements and regional waters

When discussing the EU framework of water legislation, we need to emphasize the significant role of international agreements concerning regional waters (see under point 4). It derives from the international dimension of water legislation due to the nature of the subject of regulation which transcends national boundaries and stretches beyond the boundaries of the EU. The respective provisions are so-called 'mixed' international agreements, to which both the EU and its Member States are parties and form an integral part of European law. This position was reiterated by the case-law of the Court of Justice of the European Union (CJEU; and its predecessors).¹⁷⁴

This highlights the possibility of having a situation where there is no relevant EU law and thus an international water law convention -meeting the above criteria- has a direct effect in the case. It also leads to the conclusion that the EU

¹⁷² European Commission, <https://www.eea.europa.eu/themes/water/interactive/by-category/floods-directive> accessed on 14 May 2020.

¹⁷³ European Commission, 'The EU Floods Directive', https://ec.europa.eu/environment/water/flood_risk/implem.htm accessed 14 May 2020.

¹⁷⁴ Judgment of the Court of 30 April 1974. - R. & V. Haegeman v Belgian State. - Reference for a preliminary ruling: Tribunal de première instance de Bruxelles - Belgium. - Case 181-73, para 5.

institutions may also play a crucial role in the enforcement of international treaties.

3.5. EU Water Policy Developments

Since the inauguration of the *von der Leyen Commission* (December 2019), there has been a significant increase regarding the ‘green ambition’, which translated into the *European Green Deal*. One of the main ambitions there is to achieve Zero Pollution, which entails a cross-cutting strategy for the protection of citizens’ health from environmental pollution and degradation addressing, among others, the air and water quality. Healthy rivers, lakes and wetlands are key to deliver the four main pillars of the European Green Deal.¹⁷⁵

The *5th Water Framework Directive Implementation Report* - assessing respectively the 2nd River Basin Management Plans and the 1st Flood Risk Management Plans - was published at the beginning of 2019.¹⁷⁶ The report observed and concluded that the pressure points are diffuse and point-source pollution, besides hydro morphological alterations and water over-abstraction and over-use.

The findings of the *country specific assessment* in terms of Hungary were the following:¹⁷⁷ The report on the *2nd Hungarian River Basin Management Plan* (RBMP) provided, that 11% of the surface water bodies are in good ecological status. More than half of the surface water bodies are in less than good status. According to the earlier mentioned WISE report improvements in the chemical status of surface bodies and groundwater bodies are not expected until 2015.

In its report, Hungary underlined flood risk as a major issue. Thereby justifying that 38% of the planned future infrastructure projects outlined in the Hungarian RBMP are related to flood control (e.g., water retention schemes, reservoirs to mitigate flood peak levels and new dams).

Hungary also developed its Flood Risk Action Programme (Abb. FRAP) for the Danube regarding ICPDR, and there is also a co-operation between the Danube countries in preparation of similar plans.

¹⁷⁵ ‘Green investment schemes, increased efficiency in production, expansion of the „service economy’ and usage of renewable energies and materials.’ in *The Politics of Ecosocialism: Transforming welfare* (2015) by Kajsa Borgnäs, Teppo Eskelinen, Johanna Perkiö, Rikard Warlenius Routledge (p. 25).

¹⁷⁶ European Commission, ‘The fifth Water Framework Directive Implementation Report – assessment of the second River Basin Management Plans and the first Floods Directive Implementation Report – assessment of the first Flood Risk Management Plans (2019)’, <https://ec.europa.eu/environment/water/water-framework/impl_reports.htm> accessed on 16 May 2020.

¹⁷⁷ RBMP: <<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=SWD:2019:45:FIN&qid=1551205988853&from=EN>> and FRMP: <<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=SWD:2019:71:FIN&qid=1551266824085&from=EN>> accessed on 16 May 2020.

Finally, the Commission report included many recommendations for Hungary, such as

- clarifying the number of Areas that are exposed Potentially to Significant Flood Risk (Abb. APSFRs),
- providing information about the number of taken measures,
- giving information about the estimated costs of the measures,
- preparing a sufficient FRMP that reflects to international coordination issues, developing objects, explaining the effects of climate change in flood risk management etc.

3.6. Conclusion and Future Outlook

In December 2019, the European Commission's final two-year-long review of its water legislation, the so-called 'Fitness Check'¹⁷⁸ of EU water legislation has concluded that the Directives are largely 'fit for purpose'.¹⁷⁹

Looking towards the future, what is essential now to pull all efforts towards reaching the objectives of the WFD by 2027. According to conducted surveys, 60% of EU surface waters are not healthy, failing to meet the WFD's standards which means there is still a great deal to be done.

The Member States -including Hungary- are now finalising their plans (3rd RBMP) to achieve the WFD's objectives during the 2022-2027 cycle, which is an unparalleled opportunity to raise and speed up their efforts on water protection.¹⁸⁰

In conclusion, we can confirm that Hungary's current laws and regulations regarding water are compatible with the EU law.

4. Regulation on the borders of water areas

4.1. Border regulations

The Hungarian borders were established on 4 June 1920 by the Treaty of Trianon.¹⁸¹ Hungary has six water border crossing points are located at

¹⁷⁸ The 'Fitness Check' is a comprehensive policy evaluation of the Water Framework Directive (WFD), the Environmental Quality Standards Directive (EQSD), the Groundwater Directive (GWD) and the Floods Directive (FD). It assesses whether the Directives are fit for purpose by examining their performance against five criteria set out in the Commission's Better Regulation agenda: effectiveness, efficiency, coherence, relevance and EU added value.

¹⁷⁹ European Commission, 'EU Water Legislation - Fitness Check', <https://ec.europa.eu/environment/water/fitness_check_of_the_eu_water_legislation/index_en.htm> accessed on 16 May 2020.

¹⁸⁰ WWF, 'European Commission concludes EU water law is 'fit for purpose'', <<https://www.wwf.eu/?uNewsID=357085>>, accessed on 16 May 2020.

¹⁸¹ Tarján M. Tamás: 1920. június 4.,

Fertőrákos, Komárom, Tiszabecs, Szeged, Drávaszabolcs and Mohács. Hungary mainly has a water border on the south side of the country. These are the south border: Mohács, Drávaszabolcs and Szeged. The border at Mohács is one of the most important borders in Hungary. It is a 16 km part of the Danube which connects Hungary, Croatia and Serbia. At this border, the water traffic is monitored by the Mohács Water Border Crossing.¹⁸² This crossing point is open for passenger and goods traffic. The second south border is the Drávaszabolcs Crossing Point, which is monitoring the Drava River. It is located between Hungary and Croatia. It is open for special requests and only for Hungarian-Croatian passenger traffic. The third south border is at Szeged. This border point is checking the Tisza River. It is between the Szeged and Kanjize (Serbia). It is different from the previous two because it is open between 07:00-19:00 for the international passenger traffic. Csongrád County Police Headquarters, National Tax and Customs Administration of Hungary and Tisza Water Police Headquarters are responsible for the order. The eastern border Tiszabecs connects Ukraine and Hungary. This border is temporary, which is closed nowadays.¹⁸³ The border at Komárom is now functioning as a port. For the aim of shipping, this area can be used independently from the level of the water. This border crossing point is one of the most useful ports in the middle east area in Europe.¹⁸⁴

The only water border crossing point which takes place on the northwest side of the country is the Fertőrákos crossing point. The border crossing point at Fertőrákos is located between Hungary and Austria, this border was built between 1922 and 1923.¹⁸⁵ This crossing point is similar to Komárom, because there is no checking in this area.

The borders are ruled by the Schengen Agreement. For those countries who are members of the Agreement and controlled by it, they do not check persons, who are passing the border. The border crossing points at Komárom and Fertőrákos are regulated by the Agreement for this reason the checkpoints are not testing people who are passing. The other border crossing points are not regulated by the Schengen Agreement therefore Hungary is monitoring and rummaging the people and goods (during opening hours) which are going by the border.¹⁸⁶

<http://www.rubicon.hu/magyar/oldalak/1920_junius_4_a_trianoni_beke_alairasa> accessed 4 June 2020.

¹⁸² Baranya Megyei Rendőr-főkapitányság: Folyami határőrizeti rendszer fejlesztése Mohácson, <<http://www.police.hu/hirek-es-informaciok/legfrissebb-hireink/hatarrendeszet/folyami-hatarorizeti-rendszer-fejlesztese>> accessed 22 June 2020.

¹⁸³ Határinfó adatok, <<http://www.police.hu/hirek-es-informaciok/hatarinfo>> accessed 23 June 2020.

¹⁸⁴ Kikötő, <http://portdanube.hu/area_group/kikoto> accessed 23 June 2020.

¹⁸⁵ <<http://www.fertorakos.hu/fertorakosrol/tortenelem/kronologia/>> accessed 23 June 2020.

¹⁸⁶ EUR Lex, The Schengen area and cooperation,

4.2. Border Types

The doctrine of natural frontiers maintained that a nation's territory should extend to a designated river; mountain, lake or some other natural impediment to population movements and relations.¹⁸⁷ Therefore some international boundaries pass through rivers and canals, lakes, bays and straits, or land-locked seas, and through territorial waters, to the high sea.¹⁸⁸ These water boundaries are subjects to special rules.

4.3. Treaties

The diplomatic delimitation of the international boundary may be on a bilateral or multilateral basis of course. They belong to the category of dispositive treaties passing on succession to the successor state. They are an exception to the operation of the principle of fundamental change of circumstances in the law of treaties.⁴ Particular regimes are also have been established by treaty for certain rivers, which are sometimes referred to as 'internationalized': for example, the Danube, Oder or the Rhine.

5. International and regional water-related legal disputes concerning water as a resource

5.1. The Bős-Nagymaros case

The Nagymaros case is an example of international law textbooks, whether it is contract law, liability, environmental protection or the right to use rivers. Here we only show the context of the latter.

5.1.1. Facts of the Nagymaros case

The idea of a common Hungarian-Czechoslovak power plant system emerged in the 1950s, by the Treaty on Realization and Operation of the *Gabčíkovo-Nagymaros Barrage between the Hungarian People's Republic and the Czechoslovak Socialist Republic*. The technical content reflects the sixties, and the construction plans were drawn up in 1973. According to this, two power plants would have been built, one in Gabčíkovo, Czechs land and one in Nagymaros. 85-95% of the Danube water would have been diverted to the so-called water channel, which would have been built at Dunakiliti, 17 km long, up to 3 km from the main bed, which would have led the water to the eight turbines in Bős. The parties would have been granted

<<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM:l33020>> accessed 23 June 2020.

¹⁸⁷ Encyclopedia Britannica, vol. 3, op. cit., p 964.

¹⁸⁸ Oye Cukwurah: The Settlement of Boundary Disputes in International Law op. cit., p 21.

the same level of ownership and control throughout the system in return for sharing both the investment and hydro potential in half. The Hungarian side has invested considerable sums in the water plant in Bős, so that half of the total investment is allocated to it.

As the Hungarian Academy of Sciences indicated in a secret study in 1982, that the investment entails significant environmental hazards, and that since the public has increasingly dared to protest against it since 1988, the government led by Miklos Nemeth suspended the construction of the Nagymaros facility in the spring of 1989 in order to scientificate the situation, and in the autumn of 1989, in the light of the facts, it rejected the construction of the Nagymaros sector and postponed the diversion of the Danube at Dunakiliti, requiring further investigations.

As the Czechoslovak side wished to continue construction despite the evidence presented to it, the dispute took place in a bilateral framework between 1989 and 1993 and then in the 1993 agreement. Slovakia, which became independent on 1 January 2004, agreed, as Hungary had long called for, to refer the dispute to the International Court of Justice. This was made urgent by the fact that Czechoslovakia arbitrarily diverted the Danube, 11km above Dunakiliti, where both coasts belong. The so-called C variant, which has thus been established, which still operates, although considered illegal in all its elements by the International Court of Justice, differs from the original in that only the ancient power plant operates, which generates more energy than it would have produced in the original system, but does so in continuous mode. Slovakia will unilaterally acquire the total amount of energy produced. Hungary is not involved in the operation of the system; the Slovak side lowers 20% of the average annual water flow in the main bed and diverts the rest to the extended water channel at Dunacsún for energy use.¹⁸⁹

5.1.2. The judgement

At the course of the proceedings, Hungary argued that the implementation of the system would cause irreversible and disproportionate damage to the groundwater supply under Szigetköz, directly connected to and fed by the Danube, which allows the extraction of 750 million litres of re-fuelled, non-purification-intensive drinking water on the Hungarian side. The power plant in Nagymaros would have been equally devastating, the impact of which would have reduced the yield and worsened the yield of the coastal filtration wells above it, but mainly below it, endangering the supply of Budapest population of two million at the time, two-thirds of which come from these wells. Slovakia disputed

¹⁸⁹ Nagy Zsófia, 'Constructs of a conflict. Spatial interpretations of the Bős case' (2014), <<http://real.mtak.hu/17344/1/2555-6733-1-PB.pdf>> accessed 18 May 2020.

the near nature of the dangers and considered that technical solutions could be put to remedy the problems.

In its judgment in 1997, the court acknowledged that Hungary's environmental concerns could serve as a basis for establishing an emergency but did not see that the specific facts did indeed support the occurrence of the emergency. From this, it concluded that the whole system needed to be re-evaluated, looking at how it could operate in such a way that the values to be protected by Hungary would not be harmed, but that energy production would also be maintained. It stated that, at the time of the judgment, there was no longer any reason to build Nagymaros, since the objectives of the original contract could be achieved without it.

With regard to the Bős section, the court confirmed that environmental protection is an equal objective for energy production and shipping, and that all objectives must therefore be achieved in the negotiations to be held by the parties, but that the impact of the work on the environment is a key issue.

The unilateral diversion of the river was declared completely unlawful by the court. He explained that Hungary had not lost its right to fair and rational water use by refusing to complete the power plant system, which is a 'fundamental right'. It rejected the Slovak argument that variant C would have been an 'approximate application' of the contract, which temporarily replaces the original plan. It also rejected, *inter alia*, because Hungary could not exercise its rights under the original contract, that Slovakia would have been entitled to install variant C as a counter-step. The refusal to take a counteraction is important for the interpretation of the rules of water law, since, according to the court, Hungary had committed an infringement in the past and could therefore theoretically have been lawfully to be subject to a counteraction (penalty). However, the diversion of the Danube was a disproportionate reaction and therefore, according to the operative part of the judgment, Slovakia is obliged to compensate for all the damage caused by the diversion. Strengthening the right to fair and rational water use is one of the merits of the judgment. This is illustrated by the fact that even the arbitrator nominated by the Slovak party, Skubiszewski, has recognised Hungary's right to rational and equitable water use, which has not been achieved for more than two decades. The parties' negotiations on the implementation of the judgment, which began in 1997, did not work until mid-2018, despite the fact that after 2010 the government will continue the negotiations in isolation from the public in order to create a better climate.¹⁹⁰

¹⁹⁰ Tamás Kende, Boldizsár Nagy: *International Law*, Second edition 2018. p 303-305.

5.2. The Tisza case

5.2.1. *Facts of the Tisza case*

Hungary was facing the second tragedy on 30 January 2020, while in the late evening, near Baja Mare in Romania (in the neighbourhood of the town of Zazar) the 93-hectare tailings pond of the Australian-Romanian metal mine, Aurul SA Baja Mare Co.' broke through and a major spill of poison flowed into the River Tisza through the tributaries. As a consequence, about one hundred thousand cubic meters of cyanide and meta-rich toxic, wastewater reached the River Zazar, later the Lapus stream, from there the Szamos, which is the tributary of the River Tisza, finally reached the Tisza.¹⁹¹ Thus, in 3 days, about 120 tons of cyanide compounds entered one of the richest living aquatic systems of Europe. An estimated 1,240 tonnes of fish have rapidly died, and many other aquatic organisms and animals have been suffered material damage.

The company has not had a remediation plan in place, so no attempt was made to localize or mitigate the pollution.

Answering the request of the Hungarian Government, the Ministry of Environment of the Czech Republic offered and sent a mission of experts (4 members) to examine the extent of deterioration of the affected environment. Not only those experts have been working on the case, as they joined experts of 6 different European countries, such as Austria, Finland, Germany, Norway, Sweden and Switzerland. The detailed report of the mission was published in March 2000.¹⁹²

The severity of the pollution is characterized by the fact that the concentration of cyanide, which is mortal to all organisms, exceeded 180 times the regulated threshold value, 135 times at the confluence of the Szamos-Tisza, 34 times at the Kiskőrsé reservoir.

The Hungarian water authorities made significant efforts to reduce the effects of the pollution, to ensure the supply of drinking water to the settlements along the River Tisza, to protect the wildlife, and to remove the carcasses after the mass extinction of fish.

Thus, it was achieved that 93 percent of the surface of Lake Tisza remained uninjured, the concentration of cyanide in the section below the Kiskőrsé power

¹⁹¹ Přemysl Soldán, 'Baia Mare Accident--Brief Ecotoxicological Report of Czech Experts' (2001), <https://www.researchgate.net/profile/Michal_Pavonic3/publication/11901679_Baia_Mare_Accident--Brief_Ecotoxicological_Report_of_Czech_Experts/links/5a16d21f0f7e9be37f94b6ad/Baia-Mare-Accident--Brief-Ecotoxicological-Report-of-Czech-Experts.pdf> accessed 15 May 2020.

¹⁹² United Nations Office For The Coordination Of Humanitarian Affairs, 'Activities And Extrabudgetary Funding Requirements' (2000), <<https://www.unocha.org/sites/unocha/files/ochain2000.pdf>> accessed 15 May 2020.

plant decreased by about 25%, the backwaters and floodplains were only minimally polluted.

Shortly after the pollution had subsided, the possibility has appeared to bath in the River Tisza.

5.2.2. *The court proceedings in Hungary*

After Aurul did not respond to the out-of-court settlement offer, the Hungarian state issued a claim for damages against the company in 2001. A spokesman of Aurul has later alleged that media reports from Hungary and Serbia have been politically motivated and the fishes have died as a result of spills from industrial plants along the River Tisza, due to the dynamite explosions have been used to break the ice locks on the river or simply due to the raw sewage pumped into the river. Hungary has asked HUF 29.3 billion in damages, which also includes the costs of repairing the injury caused to wildlife. Romania has declared Aurul responsible for the pollution, however, the investigation there found that the disaster was the result of ‘unforeseen circumstances’.

In 2006, the Metropolitan Court ruled in an interim judgment that Aurul's successor, Transgold, was also responsible for the disaster.

Transgold has continued to operate in Baja Mare, although it has alleged to have made significant improvements to curb pollution. The company, meanwhile, went bankrupt, ceased to exist without a legal successor, and its plant was first owned by a British-Kazakh and then a Russian, and in 2012 by a Kazakh gold mining company. Therefore, as the bankruptcy proceedings of Transgold have also been ended in front of the Romanian courts, in the absence of the defendant, the action for damages has come to end in Hungary.

5.2.3. *Proceedings in front of the European Court of Human Rights*

Romania had to face a proceeding in front of the European Court of Human Rights in 2009¹⁹³. The Court has issued¹⁹⁴, that there had been a violation of Article 8 of the European Convention on Human Rights, on account of the Romanian authorities’ failure to protect the right of the applicants, who lived in the vicinity of a gold mine, to enjoy a healthy and protected environment.¹⁹⁵

¹⁹³ Opinion on the Fourth Amendment of The Constitution of Hungary, <http://vienna.io.gov.hu/download/1/ec/60000/alaptorveny_modositas_szakvelemenyan_gol.pdf> accessed 23 June 2020.

¹⁹⁴ Jörg Gerkrath, *The Constitution of Luxembourg in the Context of EU and International Law as ‘Higher Law’* (2019), <https://www.researchgate.net/publication/333473937_The_Constitution_of_Luxembourg_in_the_Context_of_EU_and_International_Law_as_‘Higher_Law’> accessed 23 June 2020.

¹⁹⁵ *Tatar v. Romania*, no. 67021/01, ECHR,

The *Tatar v. Romania*'s decision focused on gold mining with cyanide technology, which was also challenged in the *Taskin* case, and the extent of the obligations imposed on the state by the risks.

The applicants of the case were Vasile Gheorghe Tătar and Paul Tătar, father and son, who were Romanian nationals, born in 1947 and 1979 respectively. They lived in Baja Mare (Romania) when the accident happened.

After the accident, the two men have filed various administrative complaints concerning the risk incurred by them as a result of the use of sodium cyanide by the Company in its extraction process. They have also doubted the validity of the company's operating licence. The Ministry of the Environment, in November 2003, has informed them that the company's activities did not constitute a public health hazard and that the same extraction technology was used in other countries.

The Romanian authorities have carried out an environmental impact assessment during the permitting process in order to anticipate the risks of the technology to the environment and human health. However, the state measures could not adequately rule out the possibility of serious damage, which could lead to a cyanide leak at the Aurul mine on 30 January 2000.

In its judgment, the Court confirmed that Article 8 also obliges the state to assess the risks in the event of a threat that could cause serious damage to health and to take the necessary measures for protection and prevention.

The Court found an infringement of the precautionary principle in relation to the licensing and supervision of the mine.

The obligation to assess the risks, according to the *Kyrtatos* judgment the obligation to assess the risks exists not only when the activity is authorized, but also during the operation of the facility.¹⁹⁶

Romaltyn Mining had to make an environmental investment of € 35 million by the end of 2010 in order to meet the requirements of the European Union. According to this, the cyanide content of the water entering the settling basin should not exceed ten milligrams per litre. In 2013, the mayor of Baja Mare initiated the elaboration of an International Tisza Protection Convention, which would declare the Tisza River Basin District a cyanide-free zone.

<[https://hudoc.echr.coe.int/fre-press#{%22itemid%22:\[%22003-2615810-2848789%22\]}](https://hudoc.echr.coe.int/fre-press#{%22itemid%22:[%22003-2615810-2848789%22]})> accessed 23 June 2020.

¹⁹⁶ ECtHR, *Kyrtatos v. Greece*, 22 May 2003, 41666/98, § 52, <[https://hudoc.echr.coe.int/fre#{%22itemid%22:\[%22001-61099%22\]}](https://hudoc.echr.coe.int/fre#{%22itemid%22:[%22001-61099%22]})> accessed 23 June 2020.

5.2.4. Steps taken by the EU

In a resolution adopted on 5 May 2010, the European Parliament called on the European Commission to propose a complete ban of cyanide mining technologies before the end of 2011.¹⁹⁷

*In order to achieve compliance with the EU's objectives under the Water Framework Directive, such as to achieve good chemical status for water resources and to protect water resources and biological diversity, was the resolution about banning cyanide mining technology adopted.*¹⁹⁸

The resolution was initiated by MEPs László Tőkés and János Áder, among others. (The use of cyanide mining technology has been prohibited in Hungary since 2009.) In 2014, the European Commission did not consider it justified to take measures for a general ban on cyanide-based mining technologies.

*The Resolution also called on the Commission and the Member States not to support (directly or indirectly) any mining projects that involve cyanide technology until the general ban is applicable*¹⁹⁹.

*It also called on the Commission to propose an amendment to existing legislation on the management of waste from the extractive industries.*²⁰⁰

6. Overall assessment

6.1. Legal regulation

Water is the subject of a wide variety of legal regulation because it is linked to myriad relations of human society, either loosely or more closely. In the Hungarian legal system, as well as in international law the set of regulations related to water does not form a unified system within the law but appears in several branches of law to a greater or lesser extent. Given the above, it can be concluded that in a legal system, international law or European Union law water-related regulations can only be viewed in a fragmented way and do not constitute a coherent system. A system can only be found in certain sub-areas of water-related rules (in the best case, such a system is made up of water management regulations). There are several areas of law in the Hungarian legal system that deals with this issue, so the provisions related to water can be found in constitutional law, environmental protection law and private law, just to mention

¹⁹⁷ Official Journal of the European Union, 'Ban on use of cyanide mining technologies', <<https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2011:081E:0074:0077:EN:PDF>> accessed 23 June 2020.

¹⁹⁸ Ibid.

¹⁹⁹ Ibid.

²⁰⁰ European Parliament, 'Water protection and management' <<https://www.europarl.europa.eu/factsheets/en/sheet/74/water-protection-and-management>> accessed 23 June 2020.

the most important ones. It should be emphasized, however, that there are only a small number of binding provisions in Hungarian legislation that deals with specific water issues - just as in international law-, but international norms, recommendations, and contractual obligations have been promulgated, which, by formulating political expectations to legal commitments, have made non-binding norms part of the legal system as guidelines for implementation. In 2013 the new Fundamental Law of Hungary came into force, which completely changed the regulations regarding water. Reserves of water appear in Article P) (1) as a natural resource and a common heritage of the nation, with the obligation of the State and everyone to protect and maintain it, and to preserve it for future generations. Article 38 on public funds then lays down additional rules for natural resources: 'the property of the State and local governments shall be national assets. The management and protection of national assets shall aim at serving the public interest, meeting common needs and preserving natural resources, as well as at taking into account the needs of future generations'. In the new legal system that is based on the Fundamental Law, many of the rules on state property have been removed from the Act V of 2013 on the Civil Code (hereinafter: Civil Code) and a new cardinal law Act CXCVI of 2011 on National Property (hereinafter: the National Property Act) has been adopted to regulate the issue. According to the National Property Act, the state has exclusive ownership of groundwater, natural aquifers of groundwater, abandoned riverbeds and natural lakes, newly created islands in river waters and natural lakes, and rivers, backwaters, tributaries, natural lakes and their beds as defined in Annex 1, canals, reservoirs, main flood defences and other water facilities and state-owned water utilities as defined in Annex 1.²⁰¹ The National Property Act classifies certain state-owned company shares, including the five-regional waterworks, as non-marketable national assets of major economic importance (the minimum level of public participation in waterworks was set to 75% + 1 vote).²⁰²

The utilization of state-owned waters is laid down in Act LVII of 1995 on Water Management (hereinafter: Water Management Act). The Water Management Act names both the regulation of water damage prevention activities (through the Minister responsible for water management) and its organization, management, control, and defence beyond local public tasks (through the Minister responsible for the management of water management bodies) as state task, and local water management and water damage prevention, flood inland drainage as the task of local governments.²⁰³

²⁰¹ Article 4 of Act CXCVI of 2011.

²⁰² Annex 2 of Act CXCVI of 2011.

²⁰³ Article 2 of Act LVII of 1995.

Further detailing the provisions of the National Property Act concerning the ownership of water utilities, the Act CCIX of 2011 on Water Utilities Services stipulates that water utilities may only be owned by the state and local government.²⁰⁴ With regard to water utility services, the legislator itself considers it important to have non-discriminatory access to services. In addition to the immediate termination of the public service contract by the service provider, the legislator also strictly defined what restrictive measures the water utility service provider is entitled to take (for example, the service provider does not have the possibility to impose such restrictions on residential users in the wastewater sector!). In the case of the drinking water sector, restrictions can only be introduced if the water utility provider is still able to meet the water needs of subsistence, public health and emergency response, provided that a number of other conditions are also met. The supply of drinking water required to meet public health requirements shall be deemed to be ensured if the supply of drinking water in a quantity of at least 20 litres/person/day is available within a maximum distance of 150 meters from the place of residence.²⁰⁵

Among the multilateral regional agreements, the 1992 Helsinki Convention on the Protection and Use of Transboundary Watercourses and International Lakes,²⁰⁶ and the 1994 Sofia Convention on Cooperation for the Protection and Sustainable Use of the Danube River²⁰⁷ should be mentioned.

The outline description of the water law regulations supports my opinion that the Hungarian regulations in the field of water management and water protection have reached the expected level that the international Water Framework Directive (Directive 2000/60/EC) formulates for the Member States. The Hungarian legal regulation is multi-stage. The Fundamental Law formulates the values to be protected, and then the statutes below it specifies them. A great advantage of the Hungarian regulation is that the international treaties ratified by the state are also part of the legislation. However, in some sub-areas, regulation could be refined, such as limiting the supply of drinking water to 70 litres/day/person instead of the 20 litres /day/person mentioned above.

²⁰⁴ Article 6 of Act CCIX of 2011.

²⁰⁵ Article 58 point 10 of Act CCIX of 2011.

²⁰⁶ Convention on the Protection and Use of Transboundary Watercourses and International Lakes, <<https://www.unece.org/fileadmin/DAM/env/water/pdf/watercon.pdf>> accessed 23 June 2020.

²⁰⁷ International Commission for the Protection of the Danube River, Convention on Cooperation for the Protection and Sustainable use of the Danube River (Danube River Protection Convention)
<<https://www.icpdr.org/flowpaper/viewer/default/files/DRPC%20English%20ver.pdf>> accessed 23 June 2020.

6.2. Balance between environmental protection and use of water resources for commercial purposes

With regard to waters, the main regulatory concepts relevant to both Hungarian and international law are set out below:

- water as a separate legal entity,
- water as the object of disposition, or ‘Whose water is it?’,
- water as an environmental element,
- water as a natural resource and subject to commercial transactions
- the right to water,
- legal regulation of water-related damage events,
- the river basin district as an institutional basis.²⁰⁸

The question concerns the regulatory concept defined in point (d); therefore, briefly summarized the relevant Hungarian regulations. The regulatory concepts before this point deals (not exclusively) with the pre-extraction status and the social conditions associated with it. However, this regulatory concept is clearly about water extraction and human usability. Compared to the regulatory concept of water as an environmental element, the definition of water as a natural resource is interpreted too narrowly. Article P) of the Fundamental Law gives an illustrative list of natural resources containing water resources in addition to arable land and forests. Act LIII of 1995 on the general rules for the protection of the environment (hereinafter: Environment Act) defines environmental resources as environmental elements that can be used to meet social needs (such as land, air, water, wildlife) or certain components thereof, with the exception of an artificial environment.²⁰⁹ Thus, the Environment Act provides a more complete list of natural resources compared to the Fundamental Law, and at the same time defines the fundamental difference between environmental elements and natural resources, their usability for satisfying social needs. In Hungarian law, just like in the EU Water Framework Directive, water is a limited natural resource and not a commercial product.²¹⁰

However, water as a natural resource can be the subject of a commercial transaction. Water can appear in two forms in a commercial transaction, as goods or as services. Water as good appears as food in the legislation. Food is a processed or partially processed or unprocessed substance or product intended for human consumption. The concept of food includes water and beverages, as

²⁰⁸ Szilágyi, János Ede (2018) *Vízszemléletű kormányzás – vízpolitika – vízjog: kitekintéssel a vízgazdálkodásra és a víztudományra*. Miskolci Egyetemi Kiadó, Miskolc. ISBN 978-615-5626-33-3 p 229.

²⁰⁹ Article 4 (3) of Act LIII of 1995.

²¹⁰ Szilágyi, János Ede (2018) *Vízszemléletű kormányzás – vízpolitika – vízjog: kitekintéssel a vízgazdálkodásra és a víztudományra*. Miskolci Egyetemi Kiadó, Miskolc. ISBN 978-615-5626-33-3 p 252-253.

well as any substance that is intentionally added to the product during production, processing or handling. Companies and water utility service providers inspect drinking water based on a wide range of tests, the health authority also conducts regular inspections, so the most inspected food in Hungary is drinking water, regardless of whether it is sold via the public water network or bottled. In the case of water-related service activities, the Hungarian regulations distinguish between water supply and water supply related to environmental protection. The first concept can be derived from the EU Water Framework Directive,²¹¹ while the second concept is contained in the second river basin management plan prepared for the implementation of the EU Water Framework Directive, which is Hungary's action program for 2016-2021.²¹² One of the key objectives of this program is to promote sustainable water use through measures for the long-term protection of usable water resources.

The EU Water Framework Directive²¹³ gives priority to industrial, agricultural and domestic water use when discussing the cost-recovery principle for water services. Industrial water use refers to the amount of water used to produce a particular good or service, and under this procedure, individual states or economic communities engage in water trade through products and not through the physical transport of water itself, which would be a more complex and expensive practice. (Perhaps it is worth referring here to the diversified Hungarian regulations relating to the energy sector, such as the regulations associated with hydropower as renewable energy, or the provisions related to the utilization of thermal energy, or the nature protection regulations raised in connection with the cooling of nuclear reactors).

With regard to agricultural water use, the legislator considered it important to redefine the concept of agricultural water management (related to but not exhaustive to the legal concept of territorial water management) and to include the concept of agricultural water supply, which includes irrigation of agricultural land, fishponds and other agricultural water supply and to meet water needs for other purposes related to the agricultural water supply system.²¹⁴

Water is our natural resource, which has played a decisive role throughout history and will continue to play an important role in economic and social development. Adam Smith points out his peculiar nature and value very well with his statement about the paradox of water value. Water, as an elementary condition of life, has little value, while a less useful natural resource such as diamonds represents significant monetary value. However, climate change and pollution are also

²¹¹ Directive 2000/60/EC.

²¹² A Duna-vízgyűjtő magyarországi része Vízyűjtő-gazdálkodási Terv- 2015 (VGT2).

²¹³ Directive 2000/60/EC art 9.

²¹⁴ Szilágyi, János Ede (2018) *Vízszemléletű kormányzás – vízpolitika – vízjog: kitekintéssel a vízgazdálkodásra és a víztudományra*. Miskolci Egyetemi Kiadó, Miskolc. ISBN 978-615-5626-33-3 p 256.

beginning to override this paradox in many parts of the world where people no longer have access to clean water. Economic and social forecasts point to serious problems. The water crisis is encouraging governments to find a solution to the problem, to find new complex regulatory options to preserve and renew this important natural resource of ours.²¹⁵

Summarizing the above, it can be stated that Hungary has reached a state of equilibrium between the protection of the environment and the commercial use of water resources. In commercial use, it not only regulates water quality in detail but has also implemented and applies an appropriate control system for both domestic and industrial water use. Hungary has created the basic conditions for the protection of water resources. It has made it the responsibility of the state to protect water bases, protect against floods and inland waters, and carry out basic water management activities. Hungary is in a fortunate position because a complex system has been implemented that includes the social, political, legal and economic aspects of water as an environmental service.

Conclusion

In Hungary, the most important areas of regulation regarding water are the legislation of groundwater, urban and industrial waste-water discharges, environmental protection and the regulation of the Danube and the River Tisza. The Danube is important so much so, that one of the most generally known international legal dispute involving Hungary was around that very river.

All in all, we can ascertain, that today the regulation of water law has a very clear and working system in Hungary. The regulation recognizes every segment of law from misdemeanours and criminal law, through border regulations, to European and international law. As Hungary is part of the European Union, therefore, the EU legislation applies as well, so most legislation in Hungary also complies with that.

²¹⁵ Zoltán Nagy, The question of water and management of water resources from the point of view of domestic environmental financial regulations – *A víz és vízgazdálkodás kérdései a hazai környezeti pénzügyi szabályozás szempontjából*. Journal of Agricultural and Environmental Law ISSN 1788-6171, 2019 Vol. XIV No. 26 pp. 162-192 doi: 10.21029/JAEL.2019.26.162 p 177.

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Danica Janković

Introduction

As water is one of the most important natural resources, it is pertinent to enact such precise and harmonized regulation that would enable the sustainable production and consumption of water. The question is, did we undertake all the necessary steps towards building an adequate framework for water protection? This work is focused on the analysis and interpretation of the existing legal framework for water protection and dedicated to all who are ready to fight for the preservation of our planet.

All the laws and other regulations which provide protection of the water resources in the Republic of Serbia are not enumerated in this paper, instead only the most relevant examples of such regulation, explicitly and directly associated with the protection of water resources are given.

1. Legal regimes for water sources

All documents that provide the normative framework for the unification of the legal system regarding water as a natural resource and establishing international cooperation in the field of water management are adopted at the level of the Republic of Serbia.²¹⁶

Despite the existing comprehensive legislative framework, some legal gaps are noticeable already in the Constitution of the Republic of Serbia, which can further affect the validity and legitimacy of other laws and bylaws in this area. Namely, the RS Constitution does not contain any explicit provisions directly envisioning the Right to Water. The only provision even remotely related to the protection of water resources, is the more general one, envisioning the Right to a Healthy Environment.²¹⁷ However, some steps towards filling such gaps have been taken recently, through initiatives for the introduction of the Constitutional protection of waters, issued by the Green Party of the Republic of Serbia,²¹⁸ as well as other NGOs engaged in this sector.

The legislative framework of the Republic of Serbia regulating water issues includes numerous laws and bylaws in the field of water-related sectors, including strategic and planning documents that define long-term goals and directions of sustainable water management.²¹⁹ The most important law in this area is unequivocally the Law on Waters,²²⁰ as the major legal act that regulates the legal status of water, integrated water management, management of water facilities and land, the manner of financing water activities, supervision over its implementation and other related issues.²²¹ Its provisions apply to all surface and groundwater in the territory of the Republic of Serbia, including thermal and mineral waters, to watercourses and associated groundwater that form or cross the state border, as well as on river sediments that do not contain impurities of

²¹⁶ CEKOR, National Convent on the EU, *Water Resources of the Republic of Serbia - Analysis of the condition*, Oasis, Belgrade, 2018, p 4.

²¹⁷ *Ustav Republike Srbije*/ The Constitution of the Republic of Serbia (*Official Gazette of RS*, No. 98/2006), Chapter 2. Human rights and freedoms, Article 74, <https://www.paragraf.rs/propisi/ustav_republike_srbije.html> accessed 20 May 2020.

²¹⁸ Green Party, 'The Initiative for the Constitutional protection of Waters', <<https://www.zelenastranka.rs/dokumenti/inicijativa-za-zastitu-voda-ustavom/>> accessed 20 May 2020.

²¹⁹ CEKOR, National Convent on the EU, *Water Resources of the Republic of Serbia - Analysis of the condition*, Oasis, Belgrade, 2018, p 4.

²²⁰ The Law on Waters (*Official Gazette of the Republic of Serbia*, no. 30/2010, 93/2012, 101/2016, 95/2018 and 95/2018 – other law), <https://www.paragraf.rs/propisi/zakon_o_vodama.html> accessed 20 May 2020.

²²¹ CEKOR, National Convent on the EU, *Water Resources of the Republic of Serbia - Analysis of the condition*, Oasis, Belgrade, 2018, p 4,

other useful mineral raw materials.²²² The Environmental Protection Law,²²³ as the *lex generalis*, also relates to the protection of water resources, as it provides for an integrated system of environmental protection which ensures the realization of the human right to life and development in a healthy environment and a balanced relationship between economic development and the environment in the Republic of Serbia.²²⁴ In particular, the said Law regulates the limit values for the emission of pollutants into water,²²⁵ contains the provisions ensuring the preservation and use of thermal and mineral springs as well as spas.²²⁶ Waste and wastewater management is defined through the environmental protection program,²²⁷ while the public participation in the development, amendment and modification of water protection plans against pollution is provided in Article 81.²²⁸

Given the complexity of water management issues and the prescribed sectoral jurisdiction in the field of water, other laws have been enacted that also regulate other related issues in this area, the most important of which are: The Environmental Impact Assessment Law - which regulates impact assessment procedures for projects that may have significant effects on the environment, environmental impact assessment study content, participation of interested bodies, organizations and the public, cross-border notification for projects that may have significant effects on the environment of another country, monitoring and other issues of importance for environmental impact assessment;²²⁹ The Law on Integrated Prevention and Control of Environmental Pollution - regulates the conditions and procedures for issuing integrated permits for plants and activities that may have negative impacts on human health, the environment or material goods, types of activities and plants, supervision and other issues of importance for the prevention and control of environmental pollution²³⁰; The Law on the Strategic Environmental Assessment - regulates the conditions, manner and procedure of assessing the impact of certain plans and programs on the

²²² Ibid, p 4.

²²³ Law on Environmental Protection ('Official Gazette of RS', No. 135/2004, 36/2009, 72/2009, 43/2011, 14/2016, 76/2018, 95/2018).

²²⁴ *Zakon o zaštiti životne sredine* ('Sl. glasnik RS', br. 135/2004, 36/2009, 36/2009 - dr. zakon, 72/2009 - dr. zakon, 43/2011 - odluka US, 14/2016, 76/2018, 95/2018 - dr. zakon i 95/2018 - dr. zakon), art 1, <https://www.paragraf.rs/propisi/zakon_o_zastiti_zivotne_sredine.html> accessed 20 May 2020.

²²⁵ Ibid, art 23, para 3.

²²⁶ Ibid, art 34.

²²⁷ Ibid, art 68.

²²⁸ Ibid, art 81, para5.

²²⁹ *Zakon o proceni uticaja na životnu sredinu* ('Sl. glasnik RS', br. 135/2004 i 36/2009), art 1, <https://www.paragraf.rs/propisi/zakon_o_proceni_uticaja_na_zivotnu_sredinu.html> accessed 23 May 2020.

²³⁰ *Zakon o integrisanoj zaštiti i kontroli zagađenja* ('Sl. glasnik RS', br. 135/2004 i 25/2015), <https://www.paragraf.rs/propisi/zakon_o_integrisanom_sprecavanju_i_kontroli_zagadjivanja_zivotne_sredine.html> accessed 23 May 2020.

environment, in order to ensure environmental protection and promote sustainable development by integrating the basic principles of environmental protection into the process of preparation and adoption of plans and programs²³¹; The Nature Protection Law - regulates the protection and preservation of nature, biological, geological and landscape diversity as part of the environment²³²; The Law on Basic Administrative Procedures²³³ - regulates the administrative matters and procedures; The Law on Communal Activities - determines the communal activities, general conditions and regulates the manner of performing such activities;²³⁴ The Planning and Construction Law - regulates the conditions and manner of arranging space, arranging and using construction land and construction of facilities; supervising the application of this Law and inspection supervision; other issues of importance for landscaping, and use of construction land and for the construction of facilities;²³⁵ The Law on Forests - regulates the preservation, protection, planning, cultivation and use of forests, disposal of forests and forest land, as well as other issues important for forests and forest land;²³⁶ The Agricultural Land Law - regulates the planning, protection, arrangement and use of agricultural land, and other issues of importance for the protection, arrangement and use of agricultural land as goods of general interest;²³⁷ The Law on Energetics - regulates the goals of energy policy and manner of its realization, conditions for reliable, safe and quality delivery of energy and energy products and conditions for safe customers supply, protection of energy and energy customers, conditions and manner of performing energy activities, conditions for construction of new energy facilities, status and scope of work of the Energy Agency of the Republic of Serbia, use of renewable energy

²³¹ *Zakon o strateškoj proceni uticaja na životnu sredinu* ('Sl. glasnik RS', br. 135/2004, 88/2010), art 1, <https://www.paragraf.rs/propisi/zakon_o_strateskoj_proceni_uticaja_na_zivotnu_sredinu.html> accessed 23 May 2020.

²³² *Zakon o zaštiti prirode* ('Sl. glasnik RS', br. 36/2009, 88/2010, 91/2010 - ispr., 14/2016 i 95/2018 - dr. zakon), art 1, para 1, <https://www.paragraf.rs/propisi/zakon_o_zastiti_prirode.html> accessed 23 May 2020.

²³³ *Zakon o opštem upravnom postupku* / Law on Administrative Procedure ('Sl. glasnik RS', br. 18/2016 i 95/2018 - autentično tumačenje), <<https://www.paragraf.rs/propisi/zakon-o-opstem-upravnom-postupku.html>> accessed 23 May 2020.

²³⁴ *Zakon o komunalnim delatnostima* ('Sl. glasnik RS', br. 88/2011, 104/2016 i 95/2018), Article 1, <https://www.paragraf.rs/propisi/zakon_o_komunalnim_delatnostima.html> accessed 23 May 2020.

²³⁵ *Zakon o planiranju i izgradnji* ('Sl. glasnik RS', br. 72/2009, 81/2009 - ispr., 64/2010 - odluka US, 24/2011, 121/2012, 42/2013 - odluka US, 50/2013 - odluka US, 98/2013 - odluka US, 132/2014, 145/2014, 83/2018, 31/2019, 37/2019 - dr. zakon i 9/2020), art 1, para 1, <https://www.paragraf.rs/propisi/zakon_o_planiranju_i_izgradnji.html> accessed 23 May 2020.

²³⁶ *Zakon o šumama* ('Sl. glasnik RS', br. 30/2010, 93/2012, 89/2015 i 95/2018 - dr. zakon), <<http://demo.paragraf.rs/WebParagrafDemo/?actid=107636>> accessed 23 May 2020.

²³⁷ *Zakon o poljoprivrednom zemljištu* ('Sl. glasnik RS', br. 62/2006, 65/2008 - dr. zakon, 41/2009, 112/2015, 80/2017 i 95/2018 - dr. zakon), art 1, <https://www.paragraf.rs/propisi/zakon_o_poljoprivrednom_zemljistu.html> accessed 23 May 2020.

sources, incentive measures and guarantees of origin, manner of organization and functioning of the electricity, natural gas and oil and oil derivatives markets, rights and obligations of market participants, and the establishment of ownership of networks of system operators;²³⁸ The Law on Land Protection - regulates land protection, systematic monitoring of the condition and quality of land, rehabilitation measures, remediation, reclamation, inspection supervision and other issues of importance for the protection and preservation of land as a natural resource of national interest;²³⁹ The Law on Protection and Sustainable Use of Fish Stock;²⁴⁰ The Law on Planning System of the Republic of Serbia;²⁴¹ The Law on Mining and Geological Research;²⁴² The Public Health Law;²⁴³ The Sanitary Supervision Law²⁴⁴ and the bylaws regulating the hygienic safety of Drinking Water;²⁴⁵ The Law on Emergency Situations;²⁴⁶ The Law on Disaster Risk Reduction and Emergency Management²⁴⁷; The Law on Public Property;²⁴⁸ The Law on Meteorological and Hydrological Activities;²⁴⁹ the Law on the Efficient

²³⁸ *Zakon o energetici* ('Sl. glasnik RS', br. 145/2014 i 95/2018 - dr. zakon), art 1, <https://www.paragraf.rs/propisi/zakon_o_energetici.html> accessed 23 May 2020.

²³⁹ *Zakon o zaštiti zemljišta* ('Sl. glasnik RS', br. 112/2015), art 1, <<https://www.paragraf.rs/propisi/zakon-o-zastiti-zemljista-republike-srbije.html>> accessed 23 May 2020.

²⁴⁰ *Zakon o zaštiti i održivom korišćenju ribljeg fonda* ('Sl. glasnik RS', br. 128/2014 i 95/2018 - dr. zakon) <https://www.paragraf.rs/propisi/zakon_o_zastiti_i_odrzivom_koriscenju_ribljeg_fonda.html> accessed 23 May 2020.

²⁴¹ *Zakon o planskom sistemu Republike Srbije* ('Sl. glasnik RS', br. 30/2018), <<https://www.paragraf.rs/propisi/zakon-o-planskom-sistemu-republike-srbije.html>> accessed 23 May 2020.

²⁴² *Zakon o rudarstvu i geološkim istraživanjima* ('Sl. glasnik RS', br. 101/2015 i 95/2018 - dr. zakon), <<https://www.paragraf.rs/propisi/zakon-o-rudarstvu-i-geoloskim-istrazivanjima.html>> accessed 23 May 2020.

²⁴³ *Zakon o javnom zdravlju* ('Sl. glasnik RS', br. 15/2016), ('Sl. glasnik RS', br. 15/2016), <<http://demo.paragraf.rs/WebParagrafDemo/?actid=125445>> accessed 23 May 2020.

²⁴⁴ *Zakon o sanitarnom nadzoru* ('Sl. glasnik RS', br. 125/2004), <https://www.paragraf.rs/propisi/zakon_o_sanitarnom_nadzoru.html> accessed 23 May 2020.

²⁴⁵ Ibid, page 4-6.

²⁴⁶ *Zakon o vanrednim situacijama* ('Sl. glasnik RS', br. 111/2009, 92/2011 i 93/2012), <https://www.paragraf.rs/propisi_download/zakon_o_vanrednim_situacijama.pdf> accessed 23 May 2020.

²⁴⁷ *Zakon o smanjenju rizika od katastrofa i upravljanju vanrednim situacijama* ('Sl. glasnik RS', br. 87/2018), <<https://www.paragraf.rs/propisi/zakon-o-smanjenju-rizika-od-katastrofa-i-upravljanju-vanrednim-situacijama.html>> accessed 23 May 2020.

²⁴⁸ *Zakon o javnoj svojini*/The law on public property ('Sl. glasnik RS', br. 72/2011, 88/2013, 105/2014, 104/2016 - dr. zakon, 108/2016, 113/2017 i 95/2018), <https://www.paragraf.rs/propisi/zakon_o_javnoj_svojini.html> accessed 23 May 2020.

²⁴⁹ *Zakon o meteorološkoj i hidrološkoj delatnosti* ('Sl. glasnik RS', br. 88/2010), <<http://demo.paragraf.rs/WebParagrafDemo/ZAKON-O-METEOROLOSKOJ-I-HIDROLOSKOJ-DELATNOSTI-SL-glasnik-RS,-br.-88-2010.htm>> accessed 23 May 2020.

use of Energy²⁵⁰ The Law on Spas;²⁵¹ The Waste Management Law,²⁵² and the Law on Public-Private Partnership and Concessions;²⁵³ The Laws mentioned above represent the most important framework for the protection of water resources, since those areas are most directly related to the use of water resources and co-dependent with the water sector and can therefore lead to numerous breaches of water-related rights. However, there are numerous other laws indirectly related to the protection of water resources, such as: The Law on State Administration;²⁵⁴ The Law on Navigation and Ports on Inland Waters;²⁵⁵ The Law on investigation of accidents in air, railway and water transport;²⁵⁶ The Law on Fees For The Use Of Public Goods;²⁵⁷ The Public Enterprises Law;²⁵⁸ The Law on Determining the Jurisdiction of the Autonomous Province of Vojvodina

²⁵⁰ *Zakon o efikasnom korišćenju energije*/ The law on efficient energy use (*Sl. glasnik RS*, br. 25/2013), <https://www.paragraf.rs/propisi/zakon_o_efikasnom_korisnjenju_energije.html> accessed 23 May 2020.

²⁵¹ *Zakon o Banjama*/The law on Spas (*Sl. glasnik RS*, br. 80/92, 67/93 - dr. zakon i 95/2018 - dr. zakon)/The Law on Spas/, <<https://www.paragraf.rs/propisi/zakon-o-banjama-republike-srbije.html>> accessed 23 May 2020.

²⁵² *Zakon o upravljanju otpadom*/Waste Management Law (*Official Gazette RS*, No. 36/2009, 88/2010, 14/2016 i 95/2018 – other laws), <https://www.paragraf.rs/propisi/zakon_o_upravljanju_otpadom.html> accessed 23 May 2020.

²⁵³ *Zakon o javno-privatnim partnerstvima i koncesijama* (*Sl. glasnik RS*, br. 88/2011, 15/2016 i 104/2016), <https://www.paragraf.rs/propisi/zakon_o_javno_privatnom_partnerstvu_i_koncesijama.html> accessed 23 May 2020.

²⁵⁴ *Zakon o državnoj upravi* (*Sl. glasnik RS*, br. 79/2005, 101/2007, 95/2010, 99/2014, 47/2018 i 30/2018 - dr. zakon), (The public administration) law, <https://www.paragraf.rs/propisi/zakon_o_drzavnoj_upravi.html> accessed 23 May 2020.

²⁵⁵ *Zakon o plovidbi na unutrašnjim plovnim vodama* *Službeni glasnik RS*, br. 73/2010, 121/2012 (čl. 53 nije u prečišćenom tekstu), 18/2015 (čl. 114-117. nisu u prečišćenom tekstu), 96/2015 - drugi zakon, 92/2016 (čl. 50-54. nisu u prečišćenom tekstu), 104/2016 - drugi zakon, 113/2017 - drugi zakon, 41/2018 (čl. 59-63. nisu u prečišćenom tekstu), 95/2018 - drugi zakon i 37/2019 - drugi zakon i 9/2020 (čl. 33. i 34. nisu u prečišćenom tekstu), <<https://www.propisi.net/zakon-o-plovidbi-i-lukama-na-unutrasnjim-vodama/>> accessed 23 May 2020.

²⁵⁶ The Law on investigation of accidents in air, railway and water transport *Official Gazette of RS*, no. 66 of July 27, 2015, 83 of October 29, 2018, <<https://www.propisi.net/zakon-o-istrzivanju-nesreca-u-vazdusnom-zeleznickom-i-vodnom-saobracaju/>> accessed 23 May 2020.

²⁵⁷ The Law On Fees For The Use Of Public Goods (*Official Gazette of RS*, No. 95/2018, 49/2019 and 86/2019 – harmonized val. in RSD) <<https://www.paragraf.rs/propisi/zakon-o-naknadama-za-korisjenje-javnih-dobara.html>> accessed 23 May 2020.

²⁵⁸ *Zakon o javnim preduzećima* (*Sl. glasnik RS*, br. 15/2016 i 88/2019), <<http://demo.paragraf.rs/WebParagrafDemo/?actid=125444>> accessed 23 May 2020.

- ‘Omnibus Law’;²⁵⁹ The Law on Local Self-Government;²⁶⁰ The Law on Financing of Local Self-Government;²⁶¹ The Law on the Transportation of Dangerous Goods.²⁶²

As for the water management in Serbia, it is carried out through the development and implementation of key planning documents: The Water Management strategy²⁶³ on the territory of the Republic of Serbia and Water Management Plan for the Danube River Basin, Water Management Plans for water areas, the Flood Risk Management Plan, the General and Operational Plan for Flood Defense, as well as the Pollution protection plan and the Monitoring program.²⁶⁴

Integrated water resources management is a complex task, which includes a set of measures and activities aimed at maintaining and improving the water regime, providing the required quantities of water of the required quality for various purposes, protection from pollution and protection from harmful effects of water.²⁶⁵ Water management is based on the principles set out in Article 25 of the Law on Waters, namely: sustainable development, integrity, unity of the water system, providing protection against harmful effects of water, the principles of ‘user pays’ and ‘polluter pays’, public participation and the principle of respecting the best available techniques.²⁶⁶

The Ministry of Agriculture, Forestry and Water Management – Republic Water Directorate is the authority of the Republic of Serbia in charge of the water

²⁵⁹ *Zakon o utvrđivanju nadležnosti autonomne pokrajine Vojvodine* (‘Sl. glasnik RS’, br. 99/2009 i 67/2012 - odluka US), <https://www.paragraf.rs/propisi/zakon_o_utvrđivanju_nadleznosti_autonomne_pokrajine_vojvodine.html>

²⁶⁰ *Zakon o lokalnoj samoupravi* (‘Sl. glasnik RS’, br. 129/2007, 83/2014 - dr. zakon, 101/2016 - dr. zakon i 47/2018), /*Law on the local self-governance*/, <https://www.paragraf.rs/propisi/zakon_o_lokalnoj_samoupravi.html> accessed 23 May 2020.

²⁶¹ *Zakon o finansiranju lokalne samouprave* (‘Sl. glasnik RS’, br. 62/2006, 47/2011, 93/2012, 99/2013 - usklađeni din. izn., 125/2014 - usklađeni din. izn., 95/2015 - usklađeni din. izn., 83/2016, 91/2016 - usklađeni din. izn., 104/2016 - dr. zakon, 96/2017 - usklađeni din. izn., 89/2018 - usklađeni din. izn., 95/2018 - dr. zakon i 86/2019 - usklađeni din. izn.), /*Law on financing the local self-governance*/ <https://www.paragraf.rs/propisi/zakon_o_finansiranju_lokalne_samouprave.html> accessed 23 May 2020.

²⁶² *Zakon o transportu opasne robe*/Law On Transport Of Dangerous Goods (‘Official Gazette of RS’, No. 104/2016, 83/2018, 95/2018 - other law and 10/2019 - other law), <https://www.paragraf.rs/propisi/zakon_o_transportu_opasne_robe.html> accessed 23 May 2020.

²⁶³ Water Management Strategy On The Territory Of The Republic Of Serbia Until yr. 2034 (‘Official Gazette of RS’, No. 3/2017), <<https://www.paragraf.rs/propisi/strategija-upravljanja-vodama-u-srbiji-do-2034.html>> accessed 23 May 2020.

²⁶⁴ Republic of Serbia Ministry of Agriculture, Forestry and Water Management, Republic Water Directorate, ‘Water Management’, <<http://www.rdvode.gov.rs/upravljanje-vodama.php>> accessed 23 May 2020.

²⁶⁵ Ibid.

²⁶⁶ Ibid.

management.²⁶⁷ The main tasks of this Directorate relate to the preparation of normative acts, coordination of drafting strategic and planning documents for the territory of the Republic of Serbia and approval of acts adopted by autonomous provinces (hereinafter: AP) and the capital, performing regulatory functions in terms of licensing companies operating in the water sector, conducting international cooperation in water management, water information system management, etc.²⁶⁸ Other ministries, state organizations, agencies, bodies of the AP, bodies of local self-government units and public water management companies, scientific institutes and civil society organizations are also involved in resolving these issues.²⁶⁹

The abstraction of water, including drinking water, cannot be done without a water permit which determines the manner, conditions and scope of water use.²⁷⁰ The water permit is issued by the body, i.e. the public water management company, responsible for issuing the water conditions.²⁷¹ Such permits are issued with an appropriate validity period and for a maximum period of 15 years.²⁷² Before issuing a water permit for facilities and works for which a water permit is issued by the Ministry of Agriculture, Forestry and Water Management, and the competent authority of the autonomous province, the applicant is obliged to obtain a report from a public water company on compliance with water conditions, water consent or water permit.²⁷³

The management of the water source and supply system is entrusted to either the public company of the regional water supply or the public utilities company on the territory of the municipality or other entities, depending on whom the water

²⁶⁷ Water resources of Serbia - analysis of the situation in 2018, Legislative and Institutional Framework in The Field of Water, page 4, <<http://eukonvent.org/wp-content/uploads/2019/02/OASIS-Vodni-resursi-RS-analiza-stanja.pdf>> accessed 23 May 2020.

²⁶⁸ Ibid, 7.

²⁶⁹ Ibid, 7.

²⁷⁰ Paragraf Lex, 'The Law on Waters: Only the Republic of Serbia can be the owner of a water source, while foreign companies have received water permits for 15 years', <<https://paragraflex.rs/dnevne-vesti/140319/140319-vest5.html>> accessed 23 May 2020.

²⁷¹ The Law on Waters (*Official Gazette of the Republic of Serbia, no. 30/2010, 93/2012, 101/2016, 95/2018 and 95/2018 – other law*), Article 122, par 4, <https://www.paragraf.rs/propisi/zakon_o_vodama.html> accessed 23 May 2020.

²⁷² Paragraf Lex, 'The Law on Waters: Only the Republic of Serbia can be the owner of a water source, while foreign companies have received water permits for 15 years', <<https://paragraflex.rs/dnevne-vesti/140319/140319-vest5.html>> accessed 23 May 2020.

²⁷³ The Law on Waters (*Official Gazette of the Republic of Serbia, no. 30/2010, 93/2012, 101/2016, 95/2018 and 95/2018 – other law*), Article 122, par 5, <https://www.paragraf.rs/propisi/zakon_o_vodama.html> accessed 23 May 2020.

permit has been issued to.²⁷⁴ Issues related to the necessary hydrogeological research are the responsibility of the bodies responsible for geology.²⁷⁵

According to the Law on Waters (hereinafter: Law), waters are a natural resource and are owned by the Republic of Serbia.²⁷⁶ Public water good is inalienable. Water good includes waters and water land in public ownership. According to the Law, the right of use may be acquired on a public water property, under the conditions determined by this Law and a special law, and the right of the lease may be acquired on water land in public ownership.²⁷⁷ Water land is managed by a public water management company established to perform water activity on a certain territory.²⁷⁸ Water land in public ownership may be leased to legal entities, entrepreneurs and natural persons for the purposes specified in Water Law, in accordance with this Law and acts adopted on the basis of this Law.²⁷⁹ The decision on leasing and the contract on the lease of water land in public ownership is made and concluded by the public water management company.²⁸⁰ Publicly owned water land can be leased in a public bidding process or the collection of written bids through public advertising. Publicly owned water land cannot be subleased.²⁸¹ The right of easement for construction of line infrastructure facilities, installation of pipelines, underground and overhead lines, optical cables and other installations, collectors, water intakes/barriers in the watercourse bed, as well as the right of easement of passages can be established on water land and water property in public ownership.²⁸² The contract establishing the right of real servitude on water land and water facility in public ownership is concluded by the public water management company.²⁸³ The provisions of this Law on leasing water land do not exclude the leasing of water land under special regulations on public-private partnerships and concessions.²⁸⁴ The possibility of a public partner to allow a private partner to conduct a commercial activity or build other facilities within the implementation of the public-private partnership project exists only in the event that it is not otherwise possible to provide the required level of cost-effectiveness of the implementation

²⁷⁴ Paragraf Lex, 'The Law on Waters: Only the Republic of Serbia can be the owner of a water source, while foreign companies have received water permits for 15 years', <<https://paragraflex.rs/dnevne-vesti/140319/140319-vest5.html>> accessed 23 May 2020.

²⁷⁵ Ibid.

²⁷⁶ The Law on waters (Official Gazette of the Republic of Serbia, No. 30/10, 93/12, 101/16 and 95/2018).

²⁷⁷ Ibid, Article 5, par. 5 Art. 5.

²⁷⁸ Ibid, Article 9a, par. 2.

²⁷⁹ Ibid, Article 10a, par. 1.

²⁸⁰ Ibid, Article 10a, par. 2.

²⁸¹ Ibid, Article 10b, par. 1. i par 2.

²⁸² Ibid, Article 10d, par. 1.

²⁸³ Ibid, Article 10d, par. 2

²⁸⁴ Ibid, Article 10v, par. 5

of a public-private partnership project and return on investment.²⁸⁵ Mutual rights and obligations in the implementation of the public-private partnership project, with or without elements of the concession, the contracting parties regulate with public contracts, or institutionally where that relationship can be based on founding contributions in a newly established company or on the acquisition of share capital or through the capital increase of an already existing company.²⁸⁶ Public-private partnership can be achieved through concessions for various purposes prescribed by the Law on Public-Private Partnership and Concessions. For instance, concession can be granted for: research and exploitation of mineral resources and other geological resources, certain activities within protected areas of nature, as well as for the use of other protected natural resources, for building ports etc.²⁸⁷

2. Criminal offences and misdemeanours regarding water resources

All of the Criminal offences are provided by the Criminal Code of the Republic of Serbia.²⁸⁸ Since the Constitution of the Republic of Serbia does not prescribe the protection of the Right to Water explicitly, there are no direct breaches of the said Right in the Criminal Code. Rather, the associated Criminal offences are contained in a few chapters that are relevant to the protection of the water resources: Crimes against the Environment (which contains most direct and explicit breaches of the rights associated with water resources), Crimes Against Property and Crimes Against Human Health. Although they all have their own nexus with the Water Law, only the most direct and explicit breaches of the rights associated with water resources will be examined.

The criminal offence of Environmental pollution²⁸⁹, states that whoever, by violating the regulations on protection, preservation and improvement of the environment, pollutes air, water or land to a larger extent or over a wider area, can be punished by imprisonment of six months to five years and a fine.²⁹⁰ If, as a result of the said offence, large-scale destruction of animals or plant life or environmental pollution has occurred to the extent that its clean-up elimination

²⁸⁵ *Zakon o javno-privatnom partnerstvu i koncesijama*, Article 7, par. 9 (Sl. glasnik RS, br 88/2011, 15/2016 i 104/2016).

²⁸⁶ *Ibid*, Article 8-9.

²⁸⁷ *Ibid* Article 1.

²⁸⁸ Criminal Code of the Republic of Serbia (Official Gazette of Republic of Serbia, no. 85/2005, 88/2005, 107/2005, 72/2009, 111/2009, 121/2012, 104/2013, 108/2014, 94/2016, and 35/2019), <<https://www.paragraf.rs/propisi/krivicni-zakonik-2019.html>> accessed 23 May 2020.

²⁸⁹ *Ibid*.

²⁹⁰ *Ibid*, Art 260, Para (1).

requires a longer period of time or significant costs, the perpetrator can be punished by imprisonment for one to eight years and a fine.²⁹¹ However, if the said offence is committed from negligence, the perpetrator can be punished by a fine or by imprisonment up to two years.²⁹² Nevertheless, if as a result of the said offence, the same aggravating consequence occurs, the perpetrator can be punished by imprisonment for six months to five years and a fine.²⁹³ If the court pronounces a suspended sentence for these offences, it may impose an obligation on the perpetrator to take certain prescribed measures for the protection, preservation and improvement of the environment within a certain period of time.²⁹⁴

The criminal offence of failing to take environmental protection measures is being committed by an official or a responsible person who does not take the prescribed environmental protection measures, or does not act upon the decision of the competent body on taking environmental protection measures.²⁹⁵ Such a person can be punished by a fine or imprisonment up to three years²⁹⁶ but if such an offence is committed through negligence, the perpetrator can be punished by a fine or by imprisonment up to one year.²⁹⁷ However, if environmental pollution occurs as a consequence of this offence, the perpetrator can be punished for the criminal offence *The pollution of the environment*.²⁹⁸ Similarly to the previous offence, the court can oblige the perpetrator to take prescribed measures for the protection, preservation and improvement of the environment, if it pronounces a suspended sentence.²⁹⁹

The criminal offence of Damaging the Environment can be committed either by violating the regulations, exploiting natural resources, constructing facilities, performing any works or in any other way, if such acts cause environmental damage to a greater extent or in a wider area.³⁰⁰ In such a case, the perpetrator can be punished by imprisonment up to three years.³⁰¹ If such an offence was committed through negligence, the perpetrator can be punished by a fine or by imprisonment up to one year.³⁰² If the court pronounces a suspended sentence,

²⁹¹ Ibid, Art 260, Para (3).

²⁹² Ibid, Art 260, Para (2).

²⁹³ Ibid, Art 260, Para (4).

²⁹⁴ Ibid, Art 260, Para (5).

²⁹⁵ Ibid, Art 261, Para (1).

²⁹⁶ Ibid.

²⁹⁷ Ibid, Para. (2)

²⁹⁸ Ibid, Para. (3).

²⁹⁹ Ibid, Para. (4).

³⁰⁰ Ibid, Article 264, Para. (1).

³⁰¹ Ibid, Para. (1).

³⁰² Ibid, Para. (2).

it can oblige the perpetrator to take measures to eliminate harmful consequences.³⁰³

The criminal offence of Damaging buildings and devices for environmental protection³⁰⁴ is committed when someone damages, destroys, removes or in any other way makes unusable objects or devices for environmental protection.³⁰⁵ That person can then be punished by imprisonment for a term not exceeding three years.³⁰⁶ But, if, as a result of the act, air, water or land pollution occurs to a greater extent or in a wider area, the perpetrator can be punished by imprisonment for a term between six months and five years.³⁰⁷ If due to such an act, destruction or damage of large-scale animal or plant life or environmental pollution occur to the extent that its removal requires a long time or high costs, the perpetrator can be punished by imprisonment for one to eight years.³⁰⁸ If the same offence was committed through negligence, the perpetrator can be punished by a fine or by imprisonment up to one year.³⁰⁹ In such a case, and 'if as a result of the act, air, water or land pollution occurs to a larger extent or in a wider area, the perpetrator can be punished by imprisonment up to three years.³¹⁰ But, if due to such an act committed in negligence, the destruction or damage of large-scale fauna or flora or environmental pollution occurs to the extent that its removal requires a long time or high costs, the perpetrator can be punished by imprisonment for a term between six months and five years.³¹¹ In this case as well, if the court pronounces a suspended sentence, he may oblige the perpetrator to take measures for the protection, preservation and improvement of the environment.³¹²

Pollution of drinking water and foodstuffs³¹³, falls under the Criminal Offences Against Human Health. This offence provides that whoever by harmful substance pollutes the water used for human consumption, for drinking or foodstuffs, can be punished by imprisonment for a term between six months and five years.³¹⁴ If such an act was committed from negligence, the perpetrator can be punished by a fine or imprisonment up to three years.³¹⁵

³⁰³ Ibid, Para. (3).

³⁰⁴ Ibid, Article 263.

³⁰⁵ Ibid, Article 263, Par. (1).

³⁰⁶ Ibid.

³⁰⁷ Ibid, Para. (3).

³⁰⁸ Ibid, Para. (5).

³⁰⁹ Ibid, Para. (2).

³¹⁰ Ibid, Para. (4).

³¹¹ Ibid, Para. (6).

³¹² Ibid, Para. (7).

³¹³ Ibid, Chapter 23 - Offences Against Human Health, Polluting Drinking Water and Foodstuffs, Article 258.

³¹⁴ Ibid, Chapter -Serious offences Against Human Health, Article 258, para 1.

³¹⁵ Ibid, Article 258, para 2.

Damage to Dams and Water Economy Facilities falls under the Criminal Offences Against the General Security of People and Property.³¹⁶ According to this offence, whoever damages, destroys or renders unusable a dam, embankment or other water management facility or device for protection against natural disasters can be punished by imprisonment from three months to three years and a fine.³¹⁷ If such an act is committed against an object or device of greater importance, the perpetrator can be punished by imprisonment from six months to five years and a fine.³¹⁸ Provided that the offence was committed from negligence, the perpetrator can be punished by a fine or by imprisonment up to three years.³¹⁹

The chapters which include the Crimes against the Environment and Public Health contain special criminal offences - Grave Offences³²⁰, single out aggravated versions of many of the previous offences, into separate crimes, prescribing more serious punishments for them.

Additionally, there are some criminal offences that also serve to protect the environment during war times, as one of the enumerated protected goods, and such offences are contained in the Article 372 for War Crimes against Civilian Population and the Article 391a for the Destruction and damaging of a nuclear facility.³²¹

The legislative penal framework of the Republic of Serbia does also provide for the Economic offences³²², but since they are not in direct relation neither to the protection of water resources nor to the subject matter of this question, they will not be examined further.

Aside from the aforementioned criminal offences, the legislative framework of the Republic of Serbia provides a set of misdemeanours relevant to the water sector, contained in various sources of Water Law, depending on the related sector in which the water resource is used or protected by.

³¹⁶ Ibid, Chapter 25 - Criminal Offences Against General Safety of People and Property, Damaging Dams and Water Resources management Facilities, Article 282

³¹⁷ Ibid, Article 282 para. 1.

³¹⁸ Ibid, Article 282, para 2.

³¹⁹ Ibid, Article 282, para 3.

³²⁰ Ibid, Grave Offences against Human Health, Article 259.

³²¹ Ibid, Chapter 34, Criminal Offences Against Humanity and other Rights Guaranteed by International Law - War Crimes against Civilian Population, Article 372, par 3; and the Destruction and damaging of a nuclear facility, Article 391d, para 1.

³²² Law On Economic Offenses, 'Official Gazette of the SFRY', No. 4/77, 36/77 - corrigendum, 14/85, 10/86 (consolidated text), 74/87, 57/89 and 3/90 and Official Gazette of the FRY ' , no. 27/92, 16/93, 31/93, 41/93, 50/93, 24/94, 28/96 and 64/2001 and' Official Gazette of RS ' , no. 101/2005 - other . the law),
<https://www.paragraf.rs/propisi/zakon_o_privrednim_prestupima.html> accessed 24 May 2020.

The most important and comprehensive law providing for the violations of the protected water resources is the Law on Waters.³²³ Namely, it regulates in what way the acceptance of flood waves is ensured³²⁴, as well as the misdemeanour envisaged for a legal entity if it does not perform its duty on the accumulation and retention basins in the prescribed manner.³²⁵ The temporary restriction of the right to the special use of water is also regulated³²⁶, in cases if water is not used economically and rationally, in case of major damage to water facilities, if the use of water results in its pollution and endangerment of aquatic and coastal ecosystems.³²⁷ The Law specifically protects springs and other facilities from intentional or accidental pollution that may affect the quality of water, as well as the groundwater from pollution during drilling or during mine works is also envisaged.³²⁸ The use of water for fish farming in the pond is also defined, as well as the places for pond construction, along with the quality of pond water.³²⁹ In order to protect water quality, the introduction of pollutants into groundwater, the discharge of wastewater into stagnant water, the discharge of excessively thermally polluted water, the emitting of water-polluting materials in the water trough, the use of fertilizers or plant protection products in the coastal zone of 5m are prohibited.³³⁰ It is of relevance that according to this Law, the owner of the pipeline is obliged to maintain it in such a way as to prevent leakage of oil into the water.³³¹ The duties of the owner of the water land are defined, for example, allowing the authorized persons to pass over the land, allowing the extraction on their land, temporary disposal and transportation of river sediment and sludge.³³² Misdemeanours related to these provisions are defined in the Art. 212 and the fine ranges from 200,000 to 1,000,000 dinars.³³³ The Law on Environmental Protection³³⁴ considers as a misdemeanour if a legal entity does not allow the inspector to perform control and may be fined from a half-million up to one million dinars.³³⁵ It also envisages imposing a fine to entrepreneurs if they fail to adopt an action plan for the gradual achievement of the limit values for emissions of pollutants into water.³³⁶ The next misdemeanour

³²³ The Law on Waters ('Official Gazette of RS', No. 30/2010, 93/2019, 101/2016, 95/2018)

³²⁴ Ibid, Article 56, Paragraph (1).

³²⁵ Ibid, Article 212.

³²⁶ Ibid, Article 69.

³²⁷ Ibid.

³²⁸ Ibid, Article 80.

³²⁹ Ibid, Article 87.

³³⁰ Ibid, Article 97.

³³¹ Ibid, Article 102.

³³² Ibid, Article 134.

³³³ Ibid, Article 212.

³³⁴ The Law on Environmental Protection ('Official Gazette of RS', No. 135/2004, 36/2009, 72/2009, 43/2011, 14/2016, 76/2018, 95/2018)

³³⁵ Ibid, Article 117.

³³⁶ Ibid.

provides that the responsible person is punished if he prepares an urban or spatial plan without conditions for providing environmental protection measures.³³⁷ The main goal of this Law in the provisions related to the right to water is the protection, regulation and monitoring of the state of the action plans in the implementation of protection measures and reaching the emission limit values pollutants.

There are some laws that contain misdemeanours in direct or indirect connection with the protection of water resources, such as: the Law on strategic Environmental Assessment³³⁸; the Law on Transportation of Dangerous Goods³³⁹; the Law on Spas³⁴⁰; the Law on Fees for Use of Public Goods³⁴¹; the Law on Investigation of Accidents in Air, Railway and Water Transport³⁴²; the Law on Nature Protection³⁴³; the Law on Hydrographic Activities³⁴⁴; the Law on Efficient Use of Energy³⁴⁵; the Law on Waste Management³⁴⁶; the Law on Planning and Construction.³⁴⁷ The mentioned laws cannot be completely disregarded since they do contain some relevant misdemeanours which can lead

³³⁷ Ibid.

³³⁸ The Law on strategic Environmental Assessment ('Official Gazette of RS', No. 135/2004,88/2010)

³³⁹ The Law on Transportation of Dangerous Goods ('Official Gazette of RS', No. 104/2016, 83/2018, 95/2018, 10/2019)

³⁴⁰ The Law on Spas ('Official Gazette of RS', No. 80/92, 67/93 - other laws and 95/2018 - other laws), <<https://www.paragraf.rs/propisi/zakon-o-banjama-republike-srbije.html>> accessed 24 May 2020.

³⁴¹ The Law on Fees for Use of Public Goods ('Official Gazette of RS', No. 95/2018, 49/2019 and 86/2019 – harmonized) <<https://www.paragraf.rs/propisi/zakon-o-naknadama-zakoriscenje-javnih-dobara.html>> accessed 24 May 2020.

³⁴² The Law on Investigation of Accidents in Air, Railway and Water Transport ('Official Gazette of RS', No. 66 July 27, 2015, 83 October 29, 2018,) <<https://www.propisi.net/zakon-o-istrizivanju-nesreca-u-vazdusnom-zeleznickom-i-vodnom-saobracaju/>> accessed 24 May 2020.

³⁴³ The Law on Nature Protection ('Official Gazette of RS', No. 36/2009, 88/2010, 91/2010 - corr., 14/2016 and 95/2018 - other laws), <https://www.paragraf.rs/propisi/zakon_o_zastiti_prirode.html> accessed 24 May 2020.

³⁴⁴ The Law on Hydrographic Activities ('Official Gazette of RS', No. 9 February 4, 2020), <<https://www.propisi.net/zakon-o-hidrografskoj-delatnosti/>> accessed 24 May 2020.

³⁴⁵ The Law on Efficient Use of Energy ('Official Gazette of RS', No. 25/2013), <https://www.paragraf.rs/propisi/zakon_o_efikasnom_koriscenju_energije.html> accessed 24 May 2020.

³⁴⁶ The Law on Waste Management ('Official Gazette of RS', No. 36/2009, 88/2010, 14/2016 and 95/2018 – other laws), <https://www.paragraf.rs/propisi/zakon_o_upravljanju_otpadom.html> accessed 24 May 2020.

³⁴⁷ The Law on Planning and Construction ('Official Gazette of RS', No. 72/2009, 81/2009 - corr., 64/2010 - decision US, 24/2011, 121/2012, 42/2013 - decision US, 50/2013 - US decision, 98/2013 - decision US, 132/2014, 145/2014, 83/2018, 31/2019, 37/2019 - other laws and 9/2020), <https://www.paragraf.rs/propisi/zakon_o_planiranju_i_izgradnji.html> accessed 24 May 2020.

to subsequent breaches of the rights associated with water as a resource, or are necessary for an adequate interpretation and protection of the said right.

3. Analysis of the laws and regulations that are compatible with EU law

The economy and industry of the 21st century brought the environmental crisis and climate change to its peak. Water as a natural resource and its protection are an integral part of that global issue, whose resolving is of the utmost importance. Transitioning countries with underdeveloped economies, such as the Republic of Serbia, are struggling to achieve the highest standards of environmental protection. Although Serbia has not yet become a Member State of the European Union, in March 2012, it was granted the EU candidate status. Therefore, in September 2013, the Stabilisation and Association Agreement between the EU and Serbia entered into force. In the accession process, Serbia has been gradually working on the transposition of EU directives into domestic legislation in the field of water and environment protection.

European common law regarding water as a natural resource is mostly contained in the set of directives that entered into force through the legislative activity of EU organisations and the Member States. According to the Constitution of the Republic of Serbia, ‘the foreign policy of the Republic of Serbia shall be based on generally accepted principles and rules of international law. Generally accepted rules of international law and ratified international treaties shall be an integral part of the legal system in the Republic of Serbia and applied directly. Ratified international treaties must be in accordance with the Constitution’.³⁴⁸ In accordance with these constitutional regulations and the fact that the Republic of Serbia is striving to become a member state of the European Union, all of the EU common law should be taken into consideration when making amendments in legal acts and documents. The most important directive is the Water Framework Directive³⁴⁹ (hereinafter WFD), which starts with the proclamation that: ‘Water is not a commercial product like any other but, rather, a heritage which must be protected, defended and treated as such.’³⁵⁰ WFD represents a strategic and operational framework for the achievement of the main objectives of the EU water policy.³⁵¹ WFD is an ‘umbrella’ directive that incorporates and links other significant directives directly or indirectly dealing with water, the most

³⁴⁸ Constitution of the Republic of Serbia (Official Gazette of the Republic of Serbia, No. 98/2006).

³⁴⁹ 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.

³⁵⁰ Ibid. Recital 1.

³⁵¹ WFD: Art. 1 of the FWD.

important being: Directive 91/271/EEC concerning urban waste water treatment, which sets forth the obligation to treat utility waste water for all agglomerations above 2.000 EC;³⁵² Directive 91/676/EEC on the protection of waters against pollution caused by nitrates from agricultural sources, which identifies vulnerable areas exposed to nitrates caused pollution and promotes rules of good water management practice;³⁵³ Directive 75/440/ECC on the quality required of surface water intended for the abstraction of drinking water, which deals with quality requirements for the water used or intended for abstraction of drinking water;³⁵⁴ Directive 98/83/EC on the quality of water intended for human consumption, setting standards for the quality and control of water intended for human consumption (water delivered to the public water supply systems, water used in food processing industry);³⁵⁵ Directive 2006/7/EC of the European parliament and of the Council concerning the management of bathing water quality and repealing Directive 76/160/EC, setting standards for the quality and monitoring of the water used for bathing and recreation;³⁵⁶ Directive 2006/11/EC on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community, listing dangerous substances whose leakage in the natural receptions is limited or prohibited, as well as setting forth monitoring measures;³⁵⁷ Directive 2006/118/EC on the protection of groundwater against pollution and deterioration, aimed at preventing deterioration of underground waters through special measures of pollution prevention and control;³⁵⁸ Directive 2008/1/EC concerning integrated pollution prevention and control, which stipulates that industrial plants with high potential of pollution must obtain permits only if environmental protection requirements are met;³⁵⁹ Directive 2008/105/EC 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, whose aim is to establish environmental quality standards regarding the presence of certain polluting substances identified as priority based on the level of environmental risk;³⁶⁰ Directive 2009/90/EC laying down pursuant to Directive 2009/60/EC of the European Parliament and of the Council, technical specifications for chemical analysis and monitoring of water

³⁵² Directive 91/271/EEC of the European Parliament and of the Council.

³⁵³ Directive 91/676/EEC of the European Parliament and of the Council.

³⁵⁴ Directive 75/440/ECC of the European Parliament and of the Council.

³⁵⁵ Directive 98/83/EC of the European Parliament and of the Council.

³⁵⁶ Directive 2006/7/EC of the European parliament and of the Council.

³⁵⁷ Directive 2006/11/EC of the European parliament and of the Council.

³⁵⁸ Directive 2006/118/EC of the European parliament and of the Council.

³⁵⁹ Directive 2008/1/EC of the European parliament and of the Council.

³⁶⁰ Directive 2008/105/EC of the European parliament and of the Council.

status, setting forth minimum requirements for their implementation during monitoring, as well as identifying rules to prove the quality of analysis results;³⁶¹ Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks,³⁶² aimed at establishing the framework for the assessment and management of flood risks in order to reduce their negative impact on people, environment and economy. This Directive is particularly significant for Serbia in cases where disturbing instances of uncontrolled seizure of water land and floodplains are taking place and potentially harmful effects are constantly on the rise.

In the fields of water management and protection envisaged in WFD and other directives, legislation of the Republic of Serbia is widely lacking, and a lot of work is yet to be done in order to implement all of the requirements from the EU directives.

With the adoption of the Law on Waters of the Republic of Serbia,³⁶³ as a basic legal act in the field of water with amendments, there has been partial compliance with the WFD. So, even after the amendments, the Law on Waters is not fully compliant with WFD.³⁶⁴ Other laws that regulate issues associated with the protection of water resources, have also been enacted to integrally regulate the system of environmental protection from pollution, and therefore bring regulations closer to EU common law. For example, Law on Environmental Protection;³⁶⁵ Law on Environmental Impact Assessment;³⁶⁶ Law on Integrated Prevention and Control of the Environment Pollution;³⁶⁷ Law on strategic Environmental Impact Assessment.³⁶⁸

The process of transposing EU directives is not yet complete, while full implementation will take at least several more years. The Environmental Impact Assessment Directive 2011/92/EU is still not fully transposed into the national legislative framework. Issues that are not yet fully in line with EU legislation in this area concern environmental impact assessment in a transboundary context (Article 7 of the Directive), as well as projects subject to environmental impact assessment, which are clearly defined in and Annexes I and II of the Directive.³⁶⁹ Both Directive 2001/42/EC on strategic Impact Assessment and the Directive

³⁶¹ Directive 2009/90/EC of the European parliament and of the Council.

³⁶² Directive 2007/60/EC of the European Parliament and of the Council.

³⁶³ Law on Waters ('Official Gazette of RS', No. 30/2010, 93/2019, 101/2016, 95/2018) zakon_o_vodama.html

³⁶⁴ Koalicija 27 (2018) 'Poglavlje 27 u Srbiji: Izveštaj o (ne)napretku' (Chapter 27 in Serbia: A (Non)Progress Report) p. 38.

³⁶⁵ Official Gazette of the Republic of Serbia No. 135/04, 36/09, 43/11 and 14/16.

³⁶⁶ Official Gazette of the Republic of Serbia No. 135/04 and 36/09.

³⁶⁷ Official Gazette of the Republic of Serbia No. 135/04 and 25/15.

³⁶⁸ Official Gazette of the Republic of Serbia No. 135/04 and 88/10.

³⁶⁹ Koalicija 27 (2018) 'Poglavlje 27 u Srbiji: Izveštaj o (ne)napretku' (Chapter 27 in Serbia: A (Non)Progress Report) page 13.

2003/35/EC, which regulates public participation in the development of certain plans and programs relating to the environment, have been only partially transposed into domestic law. On the other hand, the Directive 2004/35/EC on the liability for environmental damage remains at an early stage of transposition.³⁷⁰ There has been a partial compliance with the Water Framework Directive (2000/60/EC), with the adoption of the Law on Waters as amended, and the accompanying bylaws. In order to achieve the full transposition of the WFD into national legislation and its practical application, full harmonisation with directives in the field of environmental protection is needed, such as the Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and wild fauna and flora. Some other important directives that still need to be fully transposed into domestic law are: Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds;³⁷¹ Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment;³⁷² Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment;³⁷³ Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions.³⁷⁴

Additionally, in order to fully implement EU standards and legislative acts into the national legislative framework, the Republic of Serbia has adopted a complementary strategy for managing the water sector. The Water Management strategy for the Territory of the Republic of Serbia until 2034³⁷⁵ is a comprehensive planning document setting forth long-term directions for water management in the territory of the Republic of Serbia. The strategy enables the continuity in the long-term planning of the water sector functioning based on the principle of sustainable development, which will help improve the legislative framework in the Republic of Serbia and further implement EU laws. The Serbian water sector has a years-long continuity in strategic planning, surpassing many other sectors. In 2002, the Water Management Master Plan in the Republic

³⁷⁰ Koalicija 27 (2018) 'Poglavlje 27 u Srbiji: Izveštaj o (ne)napretku' (Chapter 27 in Serbia: A (Non)Progress Report) page 14, 15.

³⁷¹ Directive 2009/147/EC of the European Parliament and of the Council.

³⁷² Directive 2011/92/EU of the European Parliament and of the Council.

³⁷³ Directive 2001/42/EC of the European Parliament and of the Council.

³⁷⁴ 'Vodni resursi Republike Srbije – analiza stanja' Ministarstvo poljoprivrede, šumarstva i vodoprivrede Republike Srbije, Republička direkcija za vode (Ministry of Agriculture, Forestry and Water Management of the Republic of Serbia, Republic Water Directorate), Belgrade 2018 page 54.

³⁷⁵ Strategija upravljanja vodama na teritoriji Republike Srbije do 2034. (Službeni glasnik RS Br. 3/2017) (Water management strategy for the Republic of Serbia (Official Gazette of the Republic of Serbia no. 3/2017))

of Serbia was adopted by the Government Decree, as a strategic planning document according to the laws in force at that time. The present strategy is the continuation of the 2002 document in terms of planning the development of the water sector. It represents its logical innovation after almost two decades since the Master Plan was developed, reflecting a new organisational, economic and development environment. The present strategy and its analyses and development projection cover twenty years period, more precisely, the period until 2034. By that time, a significant improvement of the situation in the water sector is expected. Such improvement will be achieved in line with the social and economic possibilities of the country, simultaneously observing the EU standards related to water management.³⁷⁶

The activities for further harmonisation with EU water policy have been defined, in order to prepare a multi-year investment and financial plan for the gradual practical implementation of EU directives in the field of water. For the WFD (2000/60/EC), the most important are: Urban Waste Water Treatment Directive (91/271 / EEC), the Water Quality Directive for human use (98/ 83/EC) and for the Directive on the protection of waters against pollution caused by nitrates from agricultural sources (91/676/EC). These plans should ensure the gradual introduction of directives in the period 2018-2021.³⁷⁷

Some legislative and managing activities that should be completed in the future are: adoption of the Water Management Plan on the territory of the Republic of Serbia for the period 2021-2027 (until the end of 2021); establishment of a monitoring network and definition of a complete monitoring program for surface and groundwater bodies for certain protected areas, for which the deadline will be extended until 2022; assessment of chemical and quantitative status of groundwater bodies; establishment of quality standards for groundwater (by 2021); improvement of the cost collection system by gradually increasing the price of drinking water in accordance with the principle of accessibility (by the end of 2020); adoption of Action Programs for certain vulnerable areas (by the end of 2021); in the period until 2021, activities and measures are planned on the harmonization of national regulations with the following EU directives: Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks, Directive 2006/7/EC of the European Parliament and of the Council of 15 February 2006 concerning the management of bathing water quality and repealing Directive 76/160/EEC.³⁷⁸

³⁷⁶ 'Report on strategic Environmental Assessment of the Water Management strategy in the Republic of Serbia' The Ministry of Agriculture and Environmental Protection, The Republic Water Directorate p. 8.

³⁷⁷ Ibid. p. 55.

³⁷⁸ Ibid. p. 55.

Despite all the effort in legislative acts and strategies, the problems in the implementation and enforcement of the planning and legal documents in the field of water management remain numerous. The main problem remains the control and prevention of water pollution, control of the use of river sediments and groundwater, as well as control of construction and prevention of illegal construction on water land. The Water Inspectorate is unable to control the water sector adequately.³⁷⁹ Given the state of the water sector in Serbia, the introduction of sustainable water management is imperative for future generations.³⁸⁰ The government of the Republic of Serbia will have to take some drastic measures to achieve all the goals set by the EU legislative acts and universally accepted standards.

4. Regulation on the borders of water areas

Ever since the middle ages, rivers have been used as natural boundaries, to separate one tribe from another. Since then, the importance of determining the exact line of the boundary has increased. People were able to use the rivers in more ways and some principles of using rivers as boundaries were developed. The international boundaries are of great significance for countries as they determine the territory over which the country has supreme power. Concerning the usage of rivers as boundaries, special rules have evolved in international law. In general, where a navigable channel exists, the boundary will follow the middle line of that channel (the *thalweg* principle).³⁸¹ On the other hand, where there is no such channel, the boundary line will, in general, be the middle line of the river itself or its principal arm.³⁸² The *thalweg* principle is widely accepted in the Balkans and it is used in many bilateral agreements between those countries.

In order to classify a river as an international river, four conditions ought to be fulfilled. The first condition is that the river needs to flow through or between two or more countries, while the second one requires the river to be navigable or that it has a navigable part. The third condition requires that navigable parts of the river may be directly or indirectly connected with the sea. Furthermore,

³⁷⁹ 'Plan inspekciskog nadzora vodne inspekcije za 2020. godinu' ('Inspection Plan of Water Inspectorate for year 2020.') The Ministry of Agriculture and Environmental Protection, The Republic Water Directorate, Water Inspection Department, Belgrade 2020. (The document can be found here: <http://www.rdvode.gov.rs/plan-inspekciskog-nadzora.php>)

³⁸⁰ Ibid. p. 57.

³⁸¹ See e.g. *the Botswana/Namibia* case, ICJ Reports, 1999, p. 1062 and *the Benin/Niger* case, ICJ Reports, 2005, p. 149. See also *State of New Jersey v. State of Delaware* 291 US 361 (1934) and *the Laguna (Argentina/Chile)* case, 113 ILR, pp. 1, 209. See, as to the use of the *thalweg* principle with regard to wadis (dried river beds), Mendelson and Hutton, 'Iraq-Kuwait Boundary', pp. 160 ff.

³⁸² Malcolm N. Shaw, *International Law*, (first published 2008, 6th edition, Cambridge) p. 531

the river must be regulated by an international treaty or other agreement.³⁸³ The main reason behind the classification of certain rivers as international is to open them for navigation and transportation as well as preventing any country from taking control over the whole river and hurting the rights of neighbouring coastal countries that are using the river.

The water boundary of the Republic of Serbia is defined by all major Serbian rivers (excluding the Morava).

The Drina river, the largest right tributary of the Sava river, forms the boundary with Bosnia and Herzegovina, which is not an international waterway except in part 0.00 river kilometre to 15.00 river kilometre, where navigation is free for merchant vessels of all countries.³⁸⁴ There is a dispute on the lower part of the Drina river, between Serbia and Bosnia and Herzegovina, which is still unresolved.

The Sava, the largest right tributary of the Danube, also forms the boundary with Bosnia and Herzegovina, where the navigation regime is regulated by the Framework Agreement on the Sava River Basin³⁸⁵ with Annexes and Protocol on the regime of navigation. This Framework is the first development-oriented multilateral agreement signed after geopolitical changes in the 1990s.³⁸⁶ Based on this Framework, the determination of the fairway of the Sava River and its navigable tributaries in the boundary areas remains exclusively within the jurisdiction of Bosnia and Herzegovina and Federal Republic of Yugoslavia.

The river Tisza, the largest left tributary of the Danube, forms the border with Hungary, with which the Republic of Serbia has established cooperation based on the Agreement on Water Management Affairs from 1955.

The Danube, the largest river in Serbia, forms the boundary towards Croatia and Romania, on which the navigation regime is regulated by the Convention on the Navigation Regime on the Danube from 1948. The Danube was declared as an international river by the Congress of Paris in 1856, where the European Commission and the Coastal Commission were created by the Treaty of Paris.³⁸⁷

³⁸³ Branimir Janković, Zoran Radivojević, *Međunarodno javno pravo*, Niš 2014, p. 135;

³⁸⁴ Strategija Integrisanog Upravljanja Granicom U Republici Srbiji (‘Sl. glasnik RS’, br. 111/2012),

<http://www.bezbednost.org/upload/document/strategija_integrisanog_upravljanja_granicom_u_rep.pdf?fbclid=IwAR3MRWuQ2VvOa0lQs_zuZXYVbrVy7THXTkQ5rj17ZZTz3Iut357mMGL3h8g> accessed 20 June 2020.

³⁸⁵ Framework Agreement on the Sava River Basin,

<http://www.savacommission.org/dms/docs/dokumenti/documents_publications/basic_documents/fasrb.pdf> accessed 24 May 2020.

³⁸⁶ Dragana Milovanovic, 23rd OSCE Economic and Environmental Forum Vienna, Session VI: Water governance at different levels

<<https://www.osce.org/files/f/documents/3/7/136901.pdf?fbclid=IwAR3mo-FPuOpQg9F8194iY3QmvzKg0LdjFmLNvj4-5mg62fHAcTjUYM7xt0Q>> accessed 20 June 2020.

³⁸⁷ Branimir Janković, Zoran Radivojević, *Međunarodno javno pravo*, Niš 2014, p.136;

While the European Commission was composed of all the countries that have signed the Treaty of Paris, the Coastal Commission was composed of coastal countries. However, since Serbia, Vlasia and Moldova were non-sovereign countries at this time, they did not have voting rights in this commission. The Coastal Commission lost its function not long after its constitution, and whereas the European Commission, which was supposed to exist for only 2 years, existed for 100 years.

The 'Danube question' was raised at the Congress of Berlin in 1878, where the participating countries agreed in Article 52 of the Treaty of Berlin to make the Danube neutral from Djerdap to the mouth. Article 57 of the Treaty of Berlin gave Austria-Hungary the task of regulating the passage through Djerdap. After World War I, the final statute of the Danube was adopted at an international conference in Paris on the 23rd of July 1921, which allowed free navigation for ships of all flags.³⁸⁸

An international conference in Vienna was held in September 1940, where a new international body, the 'Danube River Council', was formed, consisting of pro-fascist governments, and which was dominated by Germany. Finally, at the conference in Belgrade in 1948, the coastal countries adopted the Convention on the Regime of Navigation on the Danube. According to this Convention, the privileges of the great forces were abolished and a sovereign right of the Danube countries and their mutual equality on this river were declared.³⁸⁹

The boundary between Serbia and Bulgaria on the river Timok is 27 km long and it was regulated between FPR of Yugoslavia and Bulgaria. First, it was regulated by Article 27 of the Treaty of Neuilly-sur-Seine³⁹⁰ in 1919, which was a peace treaty between Bulgaria and victorious Allied powers after World War I. It was officially confirmed by Article 1 of the Treaty of Peace with Bulgaria in Paris in 1947.

Based on article 5 of the Law on the Ratification of the Agreement on Partial Change of the Border Line on the Timok River Concluded Between the FPRY and the People's Republic of Bulgaria³⁹¹ from 1961, it was regulated that the river channel of Timok will be changed as it was agreed based on Project 2b. Project 2b is an appendix to the Agreement on water management between the

³⁸⁸ Ibid, p.136;

³⁸⁹ Ibid, p.137;

³⁹⁰ *Traité de paix entre les puissances alliées et associées et la Bulgarie* (Traité de Neuilly-sur-Seine)/Peace Treaty between the Allied and Associated Powers and Bulgaria (Treaty of Neuilly-sur-Seine), <<https://mjp.univ-perp.fr/traites/1919neuilly.htm#II>> accessed 20 June 2020.

³⁹¹ *Zakon o ratifikaciji Sporazuma o delimičnoj izmeni granične linije na reci Timok zaključenog između Federativne Narodne Republike Jugoslavije i Narodne Republike Bugarske* ('Sl. list FNRJ - Međunarodni ugovori i drugi sporazumi', br. 3/63)

government of the FPR of Yugoslavia and the government of the People's Republic of Bulgaria³⁹² from 1958.

Mixed Commission on the Renovation, Marking and Maintenance between Serbia and Montenegro and Bulgaria border is responsible for the implementation of regulations from the Law on the Ratification of the Convention between the Council of Ministers of Serbia and Montenegro and the Government of the Republic of Bulgaria on the Renovation, Marking and Maintenance of the Border Line and Border Marks on the shared State Border³⁹³ signed in 2003. The Mixed Commission, consisting of members of both countries, is responsible for the renovation, marking, and maintenance of the river Timok. Both countries are committed to complete their obligations to the boundary line on the river.

Even though there were some attempts to negotiate changes of the boundaries on the Timok due to river flow changes, the boundary has remained the same.³⁹⁴ Although there is a large number of agreements between the Republic of Serbia and other boundary countries on the rivers, it may be stated that those regulations are not implemented in practice. It is of great significance for Balkan countries to develop better cooperation to implement these rules.

5. International and regional water-related legal disputes concerning water as a resource

The Republic of Serbia is involved in two major regional water-related legal disputes, one with the Republic of Croatia solving the Danube issue and another with the Republic of Bosnia and Herzegovina about the river Drina.

Since the disintegration of multi-ethnic Yugoslavia, there have been numerous disputes over borderline delimitation among former Yugoslavian republics.³⁹⁵

³⁹² *Sporazum o vodoprivrednim pitanjima između Vlada Federativne Narodne Republike Jugoslavije i Vlada Narodne Republike Bugarske* ('Sl. list FNRJ - Međunarodni ugovori i drugi sporazumi', br. 11/58), <http://demo.paragraf.rs/demo/combined/Old/t/t2006_03/t03_0258.htm> accessed 20 June 2020.

³⁹³ *Zakon o ratifikaciji Konvencije između Saveta ministara Srbije i Crne Gore i Vlade Republike Bugarske o obnavljanju, obeležavanju i održavanju granične linije i graničnih oznaka na zajedničkoj državnoj granici* ('Sl. list SCG - Međunarodni ugovori', br. 9/2004) <http://demo.paragraf.rs/demo/combined/Old/t/t2004_05/t05_0060.htm?fbclid=IwAR02fz0bFoLEvLCN9mj1WQTdl_V1wnfLLW9fNSZ8sr4P03y8yH1Tdmyds> accessed 20 June 2020.

³⁹⁴ Dr Branko Pavlica, 'Reke kao granične linije Srbije – Primer reke Timok', <<http://danube-cooperation.com/danubius/2013/03/08/reke-kao-granicne-linije-srbije-primer-reke-timok/?fbclid=IwAR1CnDv08PL7dVZviOrOr14bORG8SRdAg11Q3fMd1b2pckbiPiZtC5AotY0>> accessed 20 June 2020.

³⁹⁵ Anton Gosar, *Border Puzzle: The Results of Disintegration and EU Integration Processes on the Territory of the Former Yugoslavia*, p 81.

These issues have been solved sporadically and without any will from political figures in the Republic of Serbia as well as in other former Yugoslavian republics, to make conclusive decisions. Among all of the bilateral disputes, disagreements on boundary delineation between these countries are the most serious.³⁹⁶ Since the EU has emphasized that it no longer receives states with unresolved border issues, for Serbia to become a member state, such issues have to be resolved here as well.

If there is no bilateral agreement between the two states, the boundary dispute should be resolved according to accepted principles and rules of international law. Interestingly, the dispute over the Danube between SFRY and Romania from 1957 was resolved using the principle of the immutability of water flows, regardless of the change of water flow.³⁹⁷

The boundary between Serbia and Croatia is 259 km long. The issue with Croatia escalated in 2002, and the Danube River was the key point that decided which part of the border would belong to Serbia and which to Croatia. At the same time, the negotiations on resolving the dispute regarding the 145 km long boundary on the Danube river have also begun. The essence of the problem is that one part of Danube creates River islands on both sides of the border, thus the 3000 hectares on the right bank of Danube are owned by Serbian citizens, while 11000 hectares on its other side are owned by Croatian citizens. From the time when this issue arose, in 2002. until this day, there has not been any agreement on it. With the purpose of resolving the disputes, an intergovernmental commission has been formed, which has met nine times so far.³⁹⁸

Serbia's second regional dispute is with the Republic of Bosnia and Herzegovina. After many resolved disputes between two ex-Yugoslavian neighbours, the one revolving around the river Drina remains.

Drina, the river made from the merge of Tara and Piva rivers, constructs a major part of the boundary separating Serbia and Bosnia and Herzegovina.³⁹⁹ The parts over which the Republic of Serbia and Bosnia are having a dispute are mainly on the lower part of the river Drina.⁴⁰⁰

More specifically, the dispute is mostly about the two hydroelectric power plants (hereinafter HPP) 'Zvornik' and 'Bajina Basta', an area located on the railway Beograd-Bar, and, finally, a section around the municipality of Priboj, which is

³⁹⁶ Ibid p 86.

³⁹⁷ Jelena Nogulović, 'Savremeni odnosi Republike Srbije i Republike Hrvatske kroz analizu graničnog spora u Podunavlju' [2011/2012] 16 Zbornik beogradske otvorene škole, page 74

³⁹⁸ Maja Đurić, 'Granica na Dunavu - 145 kilometara spora Srbije i Hrvatske' (2017)N1 <<http://rs.n1info.com/Vesti/a281394/Sporna-granica-Srbije-i-Hrvatske-na-Dunavu.html>> accessed 30 August 2020.

³⁹⁹ 'Drina River', Encyclopedia Britannica.

⁴⁰⁰ Andjelkovic Katarina, 'Serbia- BIH Border Demarcation' (2017) European Western Balkans.

separated by the territory of the municipality Rudo, in Bosnia and Herzegovina.⁴⁰¹

The Republic of Serbia has made four requests about the territory under dispute. The first of such requests is regarding the 12 km of the territory surrounding the railway on the Bosnian territory. Secondly, Serbia requested a shift of the borderline from the municipality of Rudo to the river Lim. Still, the most disputed areas remain 'Zvornik' and 'Bajina Basta'.⁴⁰² These HPP legitimately belong to the Republic of Serbia, but the state border, positioned in the middle of the river, crosses the dams and accumulative lakes. As a solution, the Republic of Serbia proposed moving the border to the left side to preserve ownership over the stations. In return, the corresponding amount of water surface from the Serbian part of the Drina river would be given to Bosnia. This part of the dispute is especially difficult to resolve since the majority opinion is that the territory of Bosnia and Herzegovina, where parts of HPPs are located, cannot be replaced by any other territory. Bosnia's resources have been used for years, and only the Republic of Serbia has had benefits from it. Electricity produced, according to the situation on the ground, should be shared at least in the ratio of 50 % to one, 50% to another country.⁴⁰³

The main issue is that Bosnian governing parties stay consistent in their claim that the said territories are not exchangeable, especially having in mind the fact that the Republic of Serbia has not offered any specific territory in return.

Moreover, these two countries are not considering reaching for third-party advice, a professional border adviser, although this dispute would be resolved swiftly with such help.⁴⁰⁴

Ultimately, it can be observed that the dispute over the border of Serbia and Bosnia, especially the part revolving around the river Drina, is more of a political than legal nature. The war, disputes, and regional tension have not paved the path for an easy inter-regional dispute resolution. As both of the countries are candidates for the EU membership, it is in both of their interests to resolve this dispute, which is the reason why the talks on potential solutions have begun again.⁴⁰⁵

⁴⁰¹ Rosa Balfour, Dijana Basic, 'A bridge over troubled waters: Europeanising the Balkans' (2010), European Policy Centre.

⁴⁰² Andjelkovic Katarina, 'Serbia- BIH Border Demarcation' (2017) European Western Balkans.

⁴⁰³ Julija Simic, 'Croatia, Serbia, Bosnia show new will to resolve disputes' (2018) Euractiv.

⁴⁰⁴ Andjelkovic Katarina, 'Serbia- BIH Border Demarcation' (2017) European Western Balkans.

⁴⁰⁵ Julija Simic, 'Croatia, Serbia, Bosnia show new will to resolve disputes' (2018) Euractiv.

6. Overall assessment

The EU has set out guidelines and rules in the WFD which all Member States have to follow and implement. The Republic of Serbia as a country that has its goal to become an EU member state has accepted the obligation to be bound by the guidelines and the rules set out in the WFD.

Besides the Law on waters, as the most important legal document, in the Republic of Serbia the water sector legal framework consists of many other laws, bylaws and strategies regulating this field.

In general, the goal of the EU is to make the water environment as safe and protected as possible. The rules of the WFD are clear on how to approach this subject matter, and how to involve the states and the public. Namely, the states are expected to give their maximum to comply with the WFD, with the help of experts and the public. States are required to provide transparency in their work regarding any action they have taken or will take, in order to ensure the preservation and protection of water as a natural resource. The states are also obliged to ensure that the water quality reaches the standard set in the WFD, maintaining it throughout its entire territory.⁴⁰⁶

Despite the complex legal framework regarding the water sector in the Republic of Serbia, the implementation of those laws in practice is not satisfactory. Problems in the implementation and enforcement of planning and legal documents in the field of water management remain numerous. The main problem remains the control and prevention of water pollution, control of the use of river sediments, control of the use of groundwater, as well as control of construction and prevention of illegal construction on water land. The Water Inspectorate has a total of 17 water inspectors, who work with their headquarters in 16 different places on the territory of the Republic of Serbia, in: Belgrade, Loznica, Smederevo, Nova Varoš, Užice, Kragujevac, Raška, Čuprija, Jagodina, Niš, Bor, Zajčear, Leskovac, Piroć, Vranje and Kosovska Mitrovica.⁴⁰⁷ The budget allocated for these matters by the government is very limited, since not enough resources are invested in this matter, nor has the government shown any intention on doing so.⁴⁰⁸ Considering the matter of the Danube River, as an international waterway, there is a prepared draft on regulating the waterway of the Danube, however, it still has not met the criteria set up in the WFD.⁴⁰⁹

⁴⁰⁶ Directive 2000/60/EC of the European Parliament and of the council pg. 2. (14), pg 4. (18), pg 5. (26), Art 3.

⁴⁰⁷ 'Plan inspekcijškog nadzora vodne inspekcije za 2020. godinu' ('Inspection Plan of Water Inspectorate for year 2020.') The Ministry of Agriculture and Environmental Protection, The Republic Water Directorate, Water Inspection Department, Belgrade 2020.
<<http://www.rdvode.gov.rs/plan-inspekcijskog-nadzora.php>> accessed 30 August 2020.

⁴⁰⁸ Koalicija 27, page 39 'Sprovođenje propisa' para 2, Instrument for pre-accession assistance (IPA II) 2004-2020 Serbia Eu Support to the Environment Sector para 5.

⁴⁰⁹ Koalicija 27 (2018) p 38 para 1.

Furthermore, one of the current issues is the issue of the illegal construction of mini HPPs, which are built without the necessary permits, and can therefore create permanent hazardous consequences for the water ecosystems.⁴¹⁰ To our knowledge, there was a draft of a plan on regulating and registering mini HPP, however little is known about that plan except that it was funded by the EU.⁴¹¹ Similarly, it is still unknown whether the public participation in the discussions on such plans will be envisaged, nor has this question even been raised so far. However, having in mind the basic principles of the Aarhus Convention that the Republic of Serbia has accepted, the public should definitely participate in the decision making, as the laws suggest they should.⁴¹² The excuse used by the government in connection to all these issues is that there is a lack of funding in all sectors related to water resources and goods, which seems to be the biggest problem since in Chapter 27 of the Serbian Accession the negotiation agenda requires states to allocate sufficient funding, in line with the Chapter 27, and other EU regulation The EU has provided financial and technical help to Serbia within the Instrument for Pre-Accession Fund (hereinafter – abbrev. IPA). Within the IPA, the EU has underlined the strengths and weaknesses of Water law in the Republic of Serbia.⁴¹³ Considering the waste management, it was found not to be sub-par in standard, however not yet in the rank that the EU requires. The Republic of Serbia legislation in the water management sector is reasonably in compliance with EU standards, but some amendments of the legislation are required, in order to ensure efficient implementation and full compliance.⁴¹⁴ The position of the Republic of Serbia, in regard to the guidelines in the IPA, is that the focus will be on water management and waste treatment. However, the reality is different. The cases of *Fabrika ulja i biljnih masti Vital a.d. Vrbas*, and the *Fabrika šećera Crvenka a.d. Crvenka* indicates the presence of gross negligence regarding the waste management and pollution, and the inspections are unwilling to do their job, as also the very visible presence of corruption in the system.⁴¹⁵ Regarding the water clarity situation in the Autonomous Province of Vojvodina (hereinafter AP Vojvodina), especially in the city of Zrenjanin in Serbia, it is noticeable how dangerous the ‘water privatization’ can be, especially when it ends up disregarding

⁴¹⁰ Igor Conic, ‘Kako izgleda reka na Staroj planini posle izgradnje mini-hidroelektrane’ <<https://www.gradnja.rs/kako-izleda-reka-na-staroj-planini-posle-izgradnje-mini-hidroelektrane/>> accessed 30 August 2020.

⁴¹¹ EuropeAid/135623/IH/SER/RS.

⁴¹² Koalicija 27 page 40. ‘Sprovođenje propisa’ para 2.

⁴¹³ Instrument for pre-accession assistance (IPA II) 2004-2020 Serbia EuSupport to the Environment Sector.

⁴¹⁴ Instrument for pre-accession assistance (IPA II) 2004-2020 Serbia Eu Support to the Environment Sector p 4 para5.

⁴¹⁵ Radio-televizija Vojvodine, ‘Ekološka katastrofa u Velikom bačkom kanalu’, <http://www.rtv.rs/sr_lat/vojvodina/backa/ekoloska-katastrofa-u-velikom-backom-kanalu_1069064.html> accessed 30 August 2020.

basic human rights. This applies especially to the right to safe and clean drinking water and sanitation, essential for the life of all human beings.⁴¹⁶

However, before getting into detail in the case of the city of Zrenjanin, it is important to make a digression in order to emphasize how water can become an overpriced economic good. A popular topic amongst European Water Movement (hereinafter EWM is 'water privatization', the process of transferring the public into private property. This issue becomes especially problematic when the subject of privatization is the water supply network. Basically, big international corporations monopolize the water distribution. However, this is not something unusual, rather it began almost 20 years ago in countries such as France, Italy, England, Portugal and Wales. This further leads to the commodification of water, which transfers water from a public good into a tradable commodity also known as an economic good. The additional consequence is that the price of water can then rise to abnormal heights. A similar example happened with the residents of the city Paços de Ferreira, in Portugal, who protested against the rising prices under the private concession in 2010.⁴¹⁷ Furthermore, this may have very negative consequences if the water supply is controlled and privatized, for which situation good examples can be the violent riots such as the 'water wars' in the Bolivian city of Cochabamba.⁴¹⁸ In the last couple of years, countries began the trend of 'remunicipalisation' of water, which means taking back public control over water supply systems from private companies. In some countries, such as France, specifically in Paris, this had positive effects. From 2011 to 2015 France and the city of Paris saved around 76 million euros and invested that money into the water system and made water accessible to the homeless.

According to the Institute of Public Health of Serbia, the situation in Serbia is as follows: from 154 public water supply systems, only 94 have usable drinking water.⁴¹⁹ In the AP Vojvodina approximately 650,000 people drink water polluted with heavy metals, due to pesticide problems and those that arose from the construction of Iron Gate 1 Hydroelectric Power Station. The water in the city of Zrenjanin, for example, became polluted due to the large presence of arsenic, after which plans were made for the construction of a new public water factory

⁴¹⁶ UN General Assembly resolution 64/292.

⁴¹⁷ João Ferreira, European Parliament, 'Question for written answer on subject: Public outrage at the privatisation of water services', <<https://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+WQ+E-2012-011179+0+DOC+XML+V0//EN&language=DE>> accessed 30 August 2020.

⁴¹⁸ William Finnegan, 'Leasing the Rain', <<https://www.newyorker.com/magazine/2002/04/08/leasing-the-rain>> accessed 30 August 2020.

⁴¹⁹ PTC, '*Voda za pice ispravna u devet od 42 kontrolisana vodovoda u Vojvodini*', <<https://www.rts.rs/page/stories/sr/story/125/drustvo/3675671/voda-za-pice-ispravna-u-devet-od-42-kontrolisana-vodovoda-u-vojvodini.html>> accessed 30 August 2020.

in 2012.⁴²⁰ Additionally, there were protests in 2015 over some untransparent deals which took place without public participation and knowledge. The Law on Communal Activities⁴²¹ has been amended and thereby allowed public-private partnerships in the water supply sector. This angered the local inhabitants because it allows charging hefty prices on water. Today it seems that the water factory in the city of Zrenjanin works without any major issues, at least according to what the authorities have to say. On the positive side, having in mind the EU reports, the Republic of Serbia has broadened the statistics, and as of June 2018 data on waste treatment infrastructure is being submitted.⁴²² The construction of the water treatment and waste management plant in Begeč⁴²³ and Belgrade⁴²⁴ is a step in the right direction. It is also important to mention the rise in budgetary funds diverted to all aspects of water management⁴²⁵, which is a start, but not sufficient as it represents a symbolic gesture. Still, one of the biggest issues regarding the implementation of EU directives is the lack of financial resources. In addition, a major problem is the lack of wastewater treatment plants, a decades-long problem of poor drinking water quality that exists in some parts of Serbia, like AP Vojvodina, low awareness of the need for rational water consumption, the lack of flood defence systems, construction of small HPPs that affect the environment and so on.

⁴²⁰ Danas, 'Proglas Inicijative „Pravo na vodu’ (2019), <<https://www.danas.rs/drustvo/proglas-inicijative-pravo-na-vodu/>> accessed 30 August 2020.

⁴²¹ *Zakon o komunalnim delatnostima* ('Službeni glasnik RS', br. 88/2011, 104/2016 i 95/2018), Art 9.

⁴²² Serbia 2019 Report Accompanying the document Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions 2019 Communication on EU Enlargement Policy p 77 para 4.

⁴²³ RTV, *Počela izgradnja postrojenja za prečišćavanje otpadnih voda u Begeču* (2019), <https://www.rtv.rs/sr_lat/vojvodina/backa/pocela-izgradnja-postrojenja-za-preciscavanje-otpadnih-voda-u-begecu_996327.html> accessed 30 August 2020.

⁴²⁴ N1, *Beograd dobija sistem za prečišćavanje otpadnih voda* (2020), <<http://rs.n1info.com/Biznis/a562152/Beograd-dobija-sistem-za-preciscavanje-otpadnih-voda.html>> accessed 30 August 2020.

⁴²⁵ Uredba o utvrđivanju Programa upravljanja vodama u 2018. godini, Službeni glasnik RS, broj 13/2018.

Conclusion

In order to adequately approach the analysis of the real situation and ensure adequate protection of the right to water, a multidisciplinary method should be applied, by taking into account regulations in the field of energy, utilities and construction. This claim is supported by the recent practice of illegal and illegitimate construction of mini HPP that have caused river flow to change and the rivers to drain. Another justification is reflected in the principles of prevention and precaution, which require the sanctioning of certain regulations that cause environmental damage, i.e., the pollution of water, which again points out related regulations governing the use of water in the fields mentioned above. This must be taken into consideration not only when interpreting and applying such laws, but also in the moment of their creation and enactment, in order to properly comply with the legislation of the Republic of Serbia with the standards set out by the EU.

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ELSA Turkey

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Nihan Çıtır

Introduction

Water has always been one of the most significant natural resources that provides pieces of information about the wealth of a nation. Especially, when the geopolitical location of Turkey is considered, the legal regime applies to water resources within the context of both the national law and the European Union law becomes an essential subject that must be addressed. Therefore, in this research, legal regimes that Turkey provides for water resources will be examined within the scope of national laws, regulations and international treaties firstly. Secondly, the criminal offenses and misdemeanours that Turkey recognizes will be discussed while addressing the Turkish Criminal Code and the Turkish Environment Law. Thirdly, the necessary information on the policies and legal arrangements that have come into the force between Turkey and the European Union will be reported since Turkey is a candidate member with necessary requirements that must be fulfilled but hasn't got a full membership to the European Union. Fourthly, the regulations concerning the borders of the water resources of Turkey with Bulgaria, Greece, Azerbaijan, Iran, Armenia, Iraq, and Syria will be clarified relying on the bilateral agreements between those countries. Fifthly, the water-related disputes Turkey faces throughout history will be mentioned in this research in order to understand the background of all the legal efforts that have been made until today. Lastly, a general assessment regarding the legal situation of Turkish waters and the level of the success of Turkey on the basis of the balance between the environmental protection of the Turkish waters and the commercial purposes acquired by those water resources will be evaluated.

1. Legal regimes for water sources

There are certain laws, regulations and international treaties in Turkish domestic law that are enacted for the governance of water resources. These laws, regulations and international treaties that are related to this subject will be examined in chronological order below.

Environmental policies regarding water resources were firstly regulated in the early years of Turkish Republic. The Village Law (No.442) in 1924 was the starting point of further legal steps regarding the governance of water resources. The Village Law (No.442) contains articles related to ‘villages’ which are the smallest and most common local administrations nationwide.⁴²⁶ From the scope of Water Law, the Village Law had a significant importance because it brings an obligation on municipalities and village administrations to provide clean drinking water.⁴²⁷

The Law Concerning Waters (No. 831) entered into force in 1926. Article 1 of the Law Concerning Water was requiring the municipalities to be in charge of water supply to towns and cities with the Village Law. According to this Law, the Village Council of Elders was responsible for the water supply in villages and the Ministry of Health and the Social Aid was the main authority for the implementation of this Law while providing assistance for the water infrastructure projects.⁴²⁸

The Public Health Law (No. 1593) of 1930 had been regulating that the municipal health policy regulations setting rules, norms and procedures for the protection of urban hygiene have had to be approved by the Ministries of Interior and Health.⁴²⁹

The Law on the Establishment of the General Directorate of State Hydraulic Works (No. 6200) of 1953 defines power and responsibility of the *Devlet Su İşleri* (State Hydraulic Works) and its organizational form.⁴³⁰

The Law Regarding Potable Waters in the Villages (No. 7478) of 1960 brought responsibility for State Hydraulic Works to supply potable and non-potable water. Even though the Central Government established the water facilities, the

⁴²⁶ Ö. Özçevik, C. A. Brebbia and S. M. Şener, *Sustainable Development and Planning VII* (WIT Press 2015) 158.

⁴²⁷ Ayşegül Kibaroglu, Annika Kramer, Waltina Scheumann, *Turkey's Water Policy: National Frameworks and International Cooperation* (Springer Verlag Berlin Heidelberg 2011) 9.

⁴²⁸ Nilgün Harmancıoğlu and Doğan Altınbilek, *Water Resources of Turkey* (Springer Nature Switzerland AG 2020) 495.

⁴²⁹ Council of Europe, *Supervision and Auditing of Local Authorities' Action* (Local and Regional Authorities in Europe, No.66) 134.

⁴³⁰ International Business Publications USA, *Turkey Ecology, Nature Protection Laws and Regulations Handbook* (Volume 1 Strategic Information and Basic Laws) 53.

local authorities were responsible for the operation of these facilities.⁴³¹ In 1964, the responsibility of State Hydraulic Works had been transferred to the General Directorate of Rural Services (GDRS).⁴³²

According to the Groundwater Law (No.167) of 1960, groundwater resources are public resources, and they shall be under the command and possession of the State and owning a part of land does not constitute an ownership of water under that land. Also, the Groundwater Law authorized State Hydraulic Works as a central public authority to manage groundwater resources which will undergo a change through several legislations later.⁴³³

The Law on Supplying Potable, Usable, and Industrial Waters to Residential Areas that has Municipal Organization (No. 1053) of 1968 sets financial and administrative rules and procedure in regard to supply potable and non-potable water in the cities of Ankara and Istanbul and the Law defined the power and responsibility of municipalities and General Directorate of State Hydraulic Works.⁴³⁴

The Environment Law (No. 2872) of 1983 aims the protection of the environment and its management besides establishing a balance between humans and the environment on the basis of economic development and thus provides awareness that humans are also parts of the ecosystem.⁴³⁵

The Law of Agricultural Reform Concerning Land Arrangements in the Irrigation Fields (No. 3083) of 1984 regulates the rearrangement of land in irrigated areas and land reforms besides determining land norms for big landowners as well as the farmers who do not own a land.⁴³⁶

The purpose of The Coastal Law (No. 3621) was ‘to set out the principles for protection of the sea, natural and artificial lakes and river coasts and the shore buffer zones, which are extensions of these places and are under their influence, by paying attention to their natural and cultural characteristics and their utilization towards the public interest and access for the benefit of society.’ Also, the Law defines coastal as ‘the line along which water touches the land at the

⁴³¹ Hellmut Wollmann, Gérard Marcou, Ivan Koprić, *Public and Social Services in Europe: From Public and Municipal to Private Sector Provision* (Springer Nature 2016) 221.

⁴³² Yacov Tsour, Terry L. Roe, Mohammed Rachid, *Pricing Irrigation Water: Principles and Cases from Developing Countries* (Resources for the Future 2004) 278.

⁴³³ Harmancioğlu and Altunbilek, (n 3) 502.

⁴³⁴ Food and Agriculture Organization of the United Nations, ‘Law No. 1053 on potable and industrial water supply for municipalities’ (*FAOLEX Database*) <<http://www.fao.org/faolex/results/details/en/c/LEX-FAOC114696/>> accessed 15 June 2020.

⁴³⁵ Ronald Parker, Alcira Kreimer, Mohan Munasinghe *Informal Settlements, Environmental Degradation and, Disaster Vulnerability The Turkey Case Study* (The International Bank for Reconstruction and Development/ The World Bank 1995) 49.

⁴³⁶ Mevlüt Uyan and Tayfun Çay, ‘Effects of the Gradation Maps Obtained by Two Different Methods on the Land Consolidation Projects in Turkey’ (2018) <<http://sujest.selcuk.edu.tr/sumbtd/article/view/540>> accessed 16 June 2020.

coasts of seas, natural or artificial lakes and rivers, excluding the inundation periods.⁴³⁷

The Forest Law (No. 6831) of 2003 defines forests as ‘groups of trees and small trees growing naturally or grown by people are considered forest together with the land where they stand’ and also refers to an exception of this definition. The Law revises the jurisdiction and outlines the boundaries, development and use of forests.⁴³⁸

The purpose of The Law of Metropolitan Municipalities (No. 5216) has been to establish the legal status of metropolitan municipality administration and ensure that services are provided in a planned, programmed, effective, efficient and consistent manner. According to the Law, it ‘covers metropolitan municipalities and the municipalities located within the boundaries of a metropolitan area.’ The Law defines metropolitan municipality as ‘a public entity having administrative and financial autonomy which comprises at least three districts or first-tier municipalities, coordinates the functioning of such municipalities, discharges its statutory duties, responsibilities and exercises statutory powers, and the decision-making body of which is elected by voters.’

The purpose of the Law on Provincial Special Administration (No. 5302) of 2005 is ‘to lay down the establishment, organs, administration, duties, powers, responsibilities and working procedures and principles of special provincial administration.’ The Law strengthens the local administrations and while increasing the responsibilities of the local administrations, it also gives opportunity to have more autonomy and participation.⁴³⁹

The Law on Soil Conservation and Land Use (No. 5403) of 2005 provides regulations regards to the land use and conservation and it sets out ‘the rules and principles determining land and soil resources and their classification, preparing land utilisation plans, preventing non-purpose utilisation, and defining the tasks and obligations to ensure land and soil preservation.’⁴⁴⁰

The purpose of the Geothermal Resources and Natural Mineral Water Law (No.5686) of 2007 is ‘to set forth the rules and principles for effective searching, exploring, developing, producing and protecting the geothermal and natural mineral water resources, for becoming the beneficiary of such resources and for turning over such rights, for making economical use in compliance with the environment and for their proper reclamation after use.’ The Law regulates

⁴³⁷ Paul D. Goriup, *Management of Marine Protected Areas: A Network Perspective* (John Wiley & Sons 2017) 258.

⁴³⁸ Christina Luke, *A Pearl in Peril: Heritage and Diplomacy in Turkey* (Oxford University Press 2019) 28.

⁴³⁹ Yüksel Demirkaya, *New Public Management in Turkey Local Government Reform* (Routledge 2016) 340.

⁴⁴⁰ OECD, ‘Innovation, Agricultural Productivity and Sustainability in Turkey’ (OECD Publishing 2016) 75.

geothermal resources besides natural mineral water resources and geothermal related gases and sets up the procedures' rights on these resources and licences that are required for the usage of these resources.⁴⁴¹

Turkey, even though it has several regulations handling the subject, has no comprehensive framework on the water law. This need for a framework law is brought into question during Turkey's membership process of the European Union and this framework is accepted as a requirement for Turkey's accession to the European Union. Therefore, a Draft Water Law was prepared by the State Hydraulic Works in 2001.⁴⁴²

Besides the laws mentioned above, the Constitution of the Republic of Turkey and the Turkish Civil Code also have provisions regarding management, sovereign rights of the Turkish Republic, and property rights of the natural and judicial person. According to the Article 168 of the Turkish Constitution with the exploration and exploitation of the natural resources title line, 'natural wealth and resources shall be under the authority and at the disposal of the State. The right to explore and exploit these belongs to the State. The State may delegate this right to persons or corporate bodies for a certain period. Of the natural wealth and resources, those to be explored and exploited by the state in partnership with persons or corporate bodies, and those to be directly explored and exploited by persons or corporate bodies shall be subject to the explicit permission of the law. The conditions to be observed in such cases by persons and corporate bodies, the procedure and principles governing supervision and control by the State, and the sanctions to be applied shall be prescribed by law.' Additionally, Article 43 of the Turkish Constitution regulates the utilization of the coasts. For Article 43 of the Turkish Constitution, 'the coasts are under the authority and disposal of the State. In the utilization of seacoasts, lake shores or riverbanks, and of the coastal strip along the sea and lakes, public interests shall be taken into consideration with priority. The width of coasts and coastal strips according to the purpose of utilization and the conditions of utilization by individuals shall be determined by law.'

Moreover, waters are classified as public and private waters in Turkish Civil Law and according to Article 715/2 of the Civil Law, 'unless prescribed otherwise, waters at the service of public ... are not owned by anyone in any way and cannot be subject to private ownership.' Even though water resources are described as public resources, the Civil Law does not completely prohibit private ownership of the water resources. Article 756 of the Turkish Civil Law by constituting

⁴⁴¹ International Business Publications USA, *Turkey Business and Investment Opportunities Yearbook* (Volume 1 Strategic Information and Opportunities Intl Business Pubns USA 2009) 130.

⁴⁴² Aysegul Kibaroglu, Vakur Sümer, 'Turkey's New Water Law and WFD Implementation: An Analysis' (2015) <<http://cdn.istanbul.edu.tr/FileHandler2.ashx?f=kibaroglu-et-al-2011-academia-turkey%E2%80%99s-new-water-law-and-wfd-implementation-an-analysis.pdf>> accessed 16 June 2020.

‘resources of the land are the component part of the land, and ownership over the resources shall be acquired through the acquisition of the land ownership,’ it gives a limited opportunity to gain private ownership over the water resources. However, in the second paragraph of the same Article, groundwaters are still considered as public waters but the owner of the land can benefit from groundwater underneath his land according to special provisions regarding groundwaters.

There are also several international treaties between Turkey and other states, which are parts of the domestic law since the ratified international treaties become the part of the Turkish legal system and they have the same legal force as laws according to the Article 90 of the Turkish Constitution. According to the Article 90, ‘international agreements duly put into effect have the force of law. No appeal to the Constitutional Court shall be made with regard to these agreements on the grounds that they are unconstitutional. In the case of a conflict between international agreements, duly put into effect, concerning fundamental rights and freedoms and the laws due to differences in provisions on the same matter, the provisions of international agreements shall prevail.’

The Ramsar Convention on Wetlands of International Importance signed in 1971 and came into force in 1975, was the first modern international treaty that aims to conserve natural resources globally. The Convention has two fundamental goals. Firstly, it aims ‘a commitment to entering internationally significant wetlands on the List of Wetlands of International Importance, and promoting their conservation’ and secondly, ‘a commitment to promoting, as far as possible, the ‘wise use’ of all wetlands within member states’ ‘territories’.⁴⁴³

During the United Nations Environment Program, a decision related to protect the Mediterranean Sea took place and the Mediterranean Action Plan (MAP) in 1975 which is an action-orientated effort involving the countries in the border of Mediterranean Sea and the European Union countries. For the action planned in the Mediterranean Action Plan (MAP), there was a need for a legal regulation and the Convention on the Protection of the Mediterranean Sea Against Pollution was signed. The Convention aims sustainable development, increased public participation and environmental impact assessment. In this context, the Convention was renamed as The Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean of 1995. The Convention entered into force in 2004, and Turkey has become a Party to the Convention in 2002.⁴⁴⁴

⁴⁴³ David Farrier and Linda Tucker, ‘Wise Use of Wetlands Under the Ramsar Convention: A Challenge for Meaningful Implementation of International Law (2000).

⁴⁴⁴ Republic of Turkey Ministry of Foreign Affairs, ‘The Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean’

The Convention on the Protection of the Black Sea Against Pollution signed by Turkey, Romania, Ukraine, Bulgaria, Georgia and the Russian Federation in Bucharest in 1992, and entered into force in 1994. The Convention establishes a Commission on the Protection of the Black Sea Against Pollution and a Permanent Secretariat.⁴⁴⁵

2. Criminal offences and misdemeanours regarding water resources

‘Water resource’ is defined as ‘seas, rivers, streams, lakes, groundwater that cannot be privately owned.’⁴⁴⁶ Turkish Law recognizes some criminal offences and misdemeanours regarding water resources.

The Turkish Penal Code Article 168 regulates ‘benefiting without payment’ as a crime. Article 168 states that ‘Any person who obtains a benefit, without the consent of the possessor or in a way to prevent the consumption amount from being determined, from electrical energy, water or natural gas to be consumed in line with the principles of subscription, shall be sentenced to a penalty of imprisonment for up to three years.’

Articles between 181 to 183 of the same Law regulate offences against the environment. Article 181 regulates ‘intentional pollution of the environment’ and states that ‘Any person who intentionally discharges waste or refuse material into the earth, water or air, contrary to the technical procedures as defined in the relevant laws and in such a way as to cause damage to the environment, shall be sentenced to a penalty of imprisonment for a term of six months to two years...’

Article 182 regulates ‘pollution of the environment due to recklessness’ and states that ‘Any person who discharges waste or refuse material into the ground, water or air through his recklessness such as to cause environmental damage shall be sentenced to a penalty of a judicial fine. Where the waste or refuse material has the propensity to remain in the ground, water or air then the penalty to be imposed shall be imprisonment for a term of two months to one year.’

Article 20 of ‘Turkish Environment Law regulates misdemeanours on environmental violations that require administrative penalties. In the Law, a clear definition of water pollution hasn’t been set out, but indirectly from the provisions on penalties, it is understood what actions are related to the

<http://www.mfa.gov.tr/the-convention-for-the-protection-of-the-marine-environment-and-the-coastal-region-of-the-mediterranean_barcelona-convention_en.mfa> accessed 18 June 2020.

⁴⁴⁵ Republic of Turkey Ministry of Foreign Affairs, ‘Convention on the Protection of the Black Seas Against Pollution’ <http://www.mfa.gov.tr/convention-on-the-protection-of-the-black-sea-against-pollution_bucharest-convention_en.mfa> accessed 18 June 2020.

⁴⁴⁶ Mühübe Gürlek İlgin, *Su Davaları* (1st edn, Adalet Yayınevi 2008) 4.

violation.⁴⁴⁷ Article 20/I states that ‘Contrary to the limitations and prohibitions that are foreseen in this Law, at the seas that are under the sovereignty of this country and sea authority areas that are bound to judging and water areas related to them, natural or artificial lakes and rivers;

- Oil tankers which discharge or release oil and derivations; 40 Turkish Liras per gross ton for the ones with a thousand gross ton, 10 Turkish Liras per each additional gross ton for the ones with one to five thousand gross ton, and 100 cents per additional and amounts above gross ton for the ones with more than five thousand gross ton,
- Tankers that discharge dirty ballast, 30 Turkish Liras per gross ton for the ones with a thousand gross ton, 6 Turkish Liras per this amount and each additional gross ton for the ones with one to five thousand gross ton, 100 cents per additional and amounts above gross ton for the ones with more than five thousand gross ton,
- Ships or other sea vehicles that discharge oil derivations (slush, slop, fuel oil, oily waste) or dirty ballast; 20 Turkish Liras per gross ton for the ones with a thousand gross ton, 4 Turkish Liras per each additional gross ton for the ones with one to five thousand gross ton, and 100 cents per additional and amounts above gross ton for the ones with more than five thousand gross ton,
- Ships or other sea vehicles that discharge solid waste or domestic sewage; 10 Turkish Liras per gross ton for the ones with a thousand gross ton, 2 Turkish Liras per each additional gross ton for the ones with one to five thousand gross ton, and 40 cents per additional and amounts above gross ton for the ones with more than five thousand gross ton,

are fined as above.

In the case of discharge of dangerous materials and wastes, fines are taken into the category of oil and derivations and multiplied ten times.

Following the pollution in the case of detection of removal of the pollution by ship or sea vehicle caused by it, the administrative fine is applied at a rate of 1/3. In case of the fine is not paid at once and in one single payment or sufficient guaranty is not served, the ships and the other sea vehicles that can be moved are submitted to the nearest port authority and are banned from activity and sea traffic. Bank tender guaranty or tender guaranty that is conducted by the club insurance company are acceptable as collateral.

At seas that are under foreign country sovereignty, in the case of violation of the regulation of these countries by Turkish flagships, on condition of no fine by

⁴⁴⁷ Ali Parlar, Muzaffer Hatipoğlu, *Cezai ve Hukuki Sorumluluk Boyutlarıyla Çevre Hukuku* (1st edn, Adalet Yayınevi 2010) 461.

these countries and demand from Turkey to fine, these provisions of Law are applied.

Except for the first paragraph of this Clause, those who discharge waste at seas that are under the sovereignty of the country and sea authority areas that can be judged, at waters that are not used as drinking water and daily water are fined 24.000 Turkish Liras. In the case of this action being executed in houses, each house is fined 600 Turkish Liras. This responsibility of fine belongs to the user in individual houses and to the administer of other houses.⁷

Groundwater includes all the waters that are in the underground which are still or in motion. In accordance with Article 1 of the Law on Groundwater, groundwater is in the declaration of public waters and is under the rule and saving of the State. All kinds of exploration, use, protection and registration of these waters are subject to the provisions of this Law.⁴⁴⁸

According to Turkish Groundwater Law Article 8, it is compulsory to inform the General Directorate of State Hydraulic Works and receive a document from the same institution for excavation and drilling. The same obligation stands for the search and the utilization of the groundwater as well as the reclamation and the modification of drilled wells and groundwater resources under Articles 10 and 11.

Article 18 of the same Law regulates that:

‘Those who do not fulfil their duties in this Law are punished according to the provisions of this article if they do not constitute a crime according to other laws. Those who do the works in article 8 without a document and those who deliberately give false information are punished with administrative fines from one thousand Turkish Liras to five thousand Turkish Liras. Those who violate the provisions of Article 10 and 11, those who do not comply with the conditions set out during the search, use, correction and amendment activities, those who do not comply with the obligation in the last paragraph of Article 8, are punished with administrative fines from five hundred Turkish Liras to two thousand Turkish Liras. Besides, the well gets closed and the expense gets taken away from the recipient.’

In this article, behaviours that are contrary to the obligations related to the use document, correction and amendment certificate, which are required to obtain documents and provide information stipulated in Articles 8, 10 and 11 of the Law, are regulated as a misdemeanour that requires administrative sanction. However, if the behaviours are constituted as a crime according to other laws, the relevant provision of the law is applied.⁴⁴⁹

⁴⁴⁸ Parlar, Hatipoğlu, (n 22) 655.

⁴⁴⁹ Parlar, Hatipoğlu, (n 23).

3. Analysis of the laws and regulations that are compatible with EU law

3.1. Main Situation in Turkey and EU

The Republic of Turkey is not a member state of the European Union; however, as a candidate member, has been negotiating with the EU since December 2004.⁴⁵⁰ During the Helsinki Summit in 1999, Turkey was officially recognized as a candidate state of the European Union. After the approval of the Accession Partnership for Turkey and the adoption of the Framework Regulation by the European Council in 2001, Turkey has started its National Programme for the Adoption of the EU acquis in the same year. For that reason, the relationship between the EU and Turkey is in a unique position and gained a new perspective. As searched and analysed in both the EU and Turkey institutions has not come to a specific agreement and arrangement in terms of water, water protection policy other than the accession process. All the policy related to EU's consideration on the water with the EU is governed and occurred in the chapters of Turkey's accession to the EU.

There are 35 chapters, which are considered as a part of an accession of the candidate members of the EU. The journey of Turkey's chapter to accession is not yet completed. Besides, the legal arrangements made between Turkey and the EU is entirely based on the EU membership and Turkey's accession to the EU. Not any specific deal, policy or agreement has been seen in the literature; nevertheless, it would not be surprising to figure out that they proceed to the common policy and perspective on the water by considering the position of EU candidacy status. It is also noteworthy that there are numerous legal acts, policies and by-laws legislated by the National Assembly of Turkey; however, they are not, as an EU-Turkey common legal arrangement, other than the accession to the EU.

Among the 35 chapters by the EU for the accession process, chapter 27 on environment and climate change includes water protection and numerous plans. Water is defined in that Chapter as a value of the environment.⁴⁵¹ Hence, Turkey's relation to the EU's water policy is covered by the Chapter 27 and proceeded in that channel. The negotiation between Turkey and the EU for the Chapter on environment and climate change started with screening and screening projects for Turkey, then had been completed in 2006.

⁴⁵⁰ Turkish Ministry of Foreign Affairs, 'The Report on EU Candidate Members Progress' 2019 <https://www.ab.gov.tr/siteimages/birimler/kpb/mzakerelere_balayan_aday_ulkelerin_ilerleme_durumu_temmuz_2019_tr.pdf> accessed 17 May 2020.

⁴⁵¹ Turkish Ministry of Foreign Affairs, 'EU Directory Chapter 27 on Environment' <https://www.ab.gov.tr/92_en.html> accessed 17 May 2020.

As a result of the screening, two opening benchmarks were the subject of the starting of the accession negotiations. One of them is preparing the strategic plan on how to deal with the progression, and another was related to the implementation of applicable environment *acquis* in line with the relevant EC-Turkey Association Council Decisions. When looked to the decision made out by the EC and Turkey, there was no arrangements taken by association, organising specific arrangement on the water in this part. In the EU level, Water Framework Directive⁴⁵² (WFD) was proposed in October 2000, which was followed by coming into force in December 2000. The WFD is an umbrella directive conceptualising and organising central legislations in EU regions to achieve a common goal for the qualitative and quantitative status of all water flooding and existing waters in the EU. The WFD has a critical position by considering directives mainly, set out steps to achieve the goals of being in a good status considering water resources by 2015 and during 2012 the EU Commission published a report showing the main process of what how the planning dealt on the context of River Basin Management.⁴⁵³ In that point, it is necessary that the figures in the report show that while 23 countries adapted the WFD into their national law, four countries could not legislate necessary propositions and plans.⁴⁵⁴ It is a bumpy road to complete and demands organisation, infrastructure and policy. The last report in 2019 on Turkey's progress, prepared by the EU Commission highlighted mainly the position of Turkey in chapter on confirming preparation to the accession. The report mentions that there has been some progress in the Chapter on environment and climate change, more specifically underlines that Turkey should work closely on adopting directives on water.⁴⁵⁵ Turkey's preparation to close the Chapter on environment and climate change generally is focusing more on project development and infrastructure development rather than just legislation. Many projects have been finished, and still, some of them are in progress. In that point, it should be said that the Chapter is one of the most cost-demanding chapters for the accession by considering the vast infrastructure foundations. Additionally, it is mentioned in connection with the quality of water in Turkey that 'Over 30% of water bodies was identified as sensitive areas' and four river basins management projects have been almost

⁴⁵² Parliament and Council Directive 2000/60/EC on establishing a framework for Community action in the field of water policy (2000).

⁴⁵³ 'Report from The Commission To The European Parliament And The Council on the Implementation of the Water Framework Directive (2000/60/EC)' <<https://eur-lex.europa.eu/legalcontent/EN/TXT/PDF/?uri=CELEX:52012DC0670&from=EN>> accessed 16 May 2020.

⁴⁵⁴ Ibid.

⁴⁵⁵ European Commission, 'EU Neighbourhood Enlargement; Turkey Report 2019' <<https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/20190529-turkey-report.pdf>> accessed 16 May 2020.

completed. Moreover, the EU Commission sees that the transboundary consultation on the water issues is still at an early stage.⁴⁵⁶

3.2. National Policies and Legal Arrangements regarding the accession of EU

Under the governance of the National Programme, Turkey conducted the Project of the Implementation of the Water Framework Directive (The MATRA Project) with the partnership of the Government of the Netherlands between January 2002 and November 2003. As a result of the project, Turkey prepared an institutional reform and developed new strategies to govern the water resources in conformity with the EU Directive.

The Ministry of Forestry and Water Affairs (reorganized as Ministry of Agriculture and Forestry in 2018) was established to develop and coordinate Turkey's water policy and take necessary steps for the adaptation of Turkish legislation to the EU Law.

As mentioned above, the negotiation between Turkey and the EU started in 2004 and has been considered and carried out by both parties since it has started. Turkey's obligations to accomplish are shown in each chapter. In order to deal with them, Turkey published environmental strategy papers for the Chapter 27 on the environment and climate change as a candidate member status. The first paper was published in 2007 by the Ministry of Environment and Forest, showed the possible and occurred legal arrangement by-law and enforcement dates for the accession of the EU. For that purpose, Turkey carried out its strategy and legislated most of the proposed by-laws.

The preparation of strategy papers was also a requirement for opening the Chapter 27 and it's one of the benchmarks. The Chapter is not just about legislation of several EU directives; it comprises the fundamental horizontal issues; Environmental Impact Assessment, Strategic Environmental Assessment, accessing to the environmental information and legislation. The environment policy can touch almost every field of law such as company to investment; thus, the legislative process should be carefully carried out.

Turkey published the EU Integrated Environmental Approximation Strategy, which was named 'UCES'⁴⁵⁷ in Turkish. The EU Integrated Environmental Approximation Strategy includes information and agenda to supply technical and institutional necessities and infrastructure for alignment with the EU's environmental policy by considering environmental improvement and

⁴⁵⁶ European Commission, (n 30).

⁴⁵⁷ Forest and Environment Ministry of Turkey, UCES; EU Integrated Environmental Approximation Strategy (2007)
<https://www.ab.gov.tr/files/ardb/evt/2_turkiye_ab_iliskileri/2_2_adaylik_sureci/2_2_8_diger/ab_entegre_cevre_uyum_stratejisi.pdf> accessed 16 May 2020.

developments. At the same time, the UCES supplies Turkey's target, strategy and how to cope with them in the timeline.

Two UCES were prepared by the Ministry, the first was in 2007 and another one was in 2016 respectively. There are numerous by-laws in the first UCES legislated to adopt for complying with the EU legal resources as proposed in 2007, the by-laws can be seen in table 1.⁴⁵⁸ These sources are prepared by the subject ministries for each chapter to show how the preparation will be held.

Table.1⁴⁵⁹

EU Legislation	EU Directive Number	Turkish Legislation	Accepted Date
*Pollution caused by certain dangerous substances discharged into the aquatic environment of the Community	76/464/EEC	<i>*Tehlikeli Maddelerin Su ve Çevresinde Neden Olduğu Kirliliğin Kontrolü Yönetmeliği</i>	26.11.2005
*Sampling and Analysis of Surface Water intended for the abstraction of Drinking Water Directive	79/859/EEC	<i>*İçmesuyu Elde Edilen veya Elde Edilmesi Planlanan Yüzeysel Suların Kalitesine Dair Yönetmelik</i>	20.11. 2005
*The quality of bathing water	76/160 EEC	<i>*Yüzme Suyu Kalitesi Yönetmeliği</i>	09.01.2006
*The quality of water intended for human consumption	98/83/EC	<i>*İnsani Tüketim Amaçlı Sular Hakkında Yönetmelik</i>	17.02. 2005

⁴⁵⁸ Ibid.

⁴⁵⁹ Ibid.

*The quality required of surface water intended for the abstraction of drinking water in the Member States	75/440/EEC	<i>*İçmesuyu Elde Edilen veya Elde Edilmesi Planlanan Yüzeyel Suların Kalitesine Dair Yönetmelik</i>	20.11. 2005
*The protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture	86/278/EEC	<i>*Toprak Kirliliğinin Kontrolü Yönetmeliği</i>	31.05.2005
*The protection of waters against pollution caused by nitrates from agricultural sources	91/676/EEC	<i>*Tarımsal Kaynaklı Nitrat Kirliliğine Karşı Suların Korunması Yönetmeliği</i>	18.02.2004
*Urban waste-water treatment	91/271/EEC	<i>*Kentsel Atıksu Arıtma Yönetmeliği</i>	08.01.2006

According to the first UCES, the Water Framework Directive (WFD) was on the list for infrastructure preparation. The reason was that the infrastructure side of the projects are mainly cost and time-demanding to fulfil and mainly the Chapter on environment and climate change has been opened at the late stage of accession period of the EU.⁴⁶⁰ Following the first UCES published, as planned but not implemented numerous by-laws could not be confirmed by the Ministry. The by-law on the protection of groundwater against pollution was proposed and came into effect on 7 April 2012, which was strictly related to water protection policy and part of the EU accession and complied with the 79/923/EEC.⁴⁶¹

⁴⁶⁰ 'Turkish Ministry of Foreign Affairs; the relationship on Environment with EU' <http://www.mfa.gov.tr/iv_avrupa-birligi-ile-cevre-alaninda-iliskiler.tr.mfa > accessed 19 May 2020.

⁴⁶¹ Council Directive EEC 79/923 on the quality required of shellfish waters (1979).

As followed after almost ten years, the last UCES was published in 2016 for the new accession strategy to the EU and showed what was legislated and considered to be complying with the EU for the Chapter 27 on environment and climate change. As can be seen from table 2,⁴⁶² several by-laws legislated and published in the Turkish Official Gazette. Some of them occurred under one by-law; others took more than once or revised to catch up to the up-to date amendment made by the EU Commission.

Table.2⁴⁶³

EU Legislation	EU Directive Number	Turkish Legislation	Accepted Date
*Environmental quality standards in the field of water policy	2008/105/EC	* <i>Yerüstü Su Kalitesi Yönetmeliği</i>	30.10.2012
		* <i>YüzeySEL Sular ve Yeraltı Sularının İzlenmesine Dair Yönetmelik</i>	11.02.2014
		* <i>Yerüstü Su Kalitesi Yönetmeliğinde Değişiklik Yapılmasına Dair Yönetmelik</i>	10.08.2016
*Technical specifications for chemical analysis and monitoring of water status	2009/90/EC	* <i>Çevre Ölçüm ve Analiz Laboratuvarları Yeterlik Yönetmeliği</i>	25.11.2013
*The assessment and management of flood risks	2007/60/EU	* <i>Taşkın Yönetim Planlarının Hazırlanması, Uygulanması ve İzlenmesi Hakkında Yönetmelik</i>	04.07.2011
		* <i>Orman ve Su İşleri Bakanlığının Teşkilat ve Görevleri Hakkında 645 sayılı Kanun Hükmünde Kararnamesi</i>	12.05.2016

⁴⁶² Forest and Environment Ministry of Turkey,, UCES; EU Integrated Environmental Approximation Strategy, (2016) <<https://webdosya.csb.gov.tr/db/cygm/icerikler//uces-belges--20180125144313.pdf>> accessed 19 May 2020.

⁴⁶³ Ibid.

*The management of bathing water quality and repealing Directive 76/160/EEC	2006/7/EC with 596/2009 amendment	<i>*Yüzme Suyu Kalitesi Yönetmeliği</i>	09.01.2006
*The protection of groundwater against pollution and deterioration	2006/118/EU	<i>*Yeraltı Sularının Kirlenmeye ve Bozulmaya Karşı Korunması Hakkında Yönetmelik</i> <i>*Yeraltı Sularının Kirlenmeye ve Bozulmaya Karşı Korunması Hakkında Yönetmelikte Değişiklik Yapılmasına Dair Yönetmelik</i>	07.04.2012 22.05.2015
*The protection of waters against pollution caused by nitrates from agricultural sources	91/676/EEC	<i>*Tarımsal Kaynaklı Nitrat Kirliliğine Karşı Suların Korunması Yönetmeliği</i>	23.07.2016
*The quality of water intended for human consumption	98/83/EU	<i>*İnsani Tüketim Amaçlı Sular Hakkında Yönetmelik</i> <i>*İnsani Tüketim Amaçlı Sular Hakkında Yönetmelikte Değişiklik Yapılmasına Dair Yönetmelik</i>	17.02.2005 07.03.2013

There are numerous by-laws considered and progressed by the Ministry of Forest and Environment; however, they are in developing stage such as infrastructure, expert preparation. Notably, the WFD was mentioned in the last strategy report 'UCES' but again like the first report, still in developing to complete and cover all part of by-laws and regulations, when looked into the depth of the policy, it can be seen that the river arrangements in Turkey is in different direction comparing with the WFD, the changing to the river basin management system is time and organisation demanding as well as infrastructure. For that reason, other

arrangements for the Chapter on environment and climate change has progressed faster than the implementation of the WFD itself.

According to the Ministry of Foreign Affairs of Turkey, the Chapter on environment and climate change has required more than three hundred legislation arrangements⁴⁶⁴ as a total number to reach adequate legislation to accomplish the Chapter on the Environment.

Another aspect mentioned and highlighted in the last Turkey 2019 Report of the EU Commission on the EU enlargement is that Turkey's position is, still not a party, to the Aarhus Convention. The Aarhus Convention is about Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters. The Aarhus Convention was signed in 1998 in Danish city Aarhus and came into force in 2001. The Convention mainly creates a line for interaction between public and private authorities to get information and to join the process of decision-making on environmental issues.

The Convention⁴⁶⁵ is signed by 39 European Countries and the EU Community; however, it does not mean all EU members become a party of the Convention automatically. Members should ratify on behalf of them. There are countries which have not signed yet such as; Germany, Greece, Ireland, Luxembourg, Slovakia and Sweden.⁴⁶⁶ Turkey as a candidate, has also not signed the Convention, and the situation was stressed in the Turkey 2019 Report by the EU Commission.

The importance of the Aarhus Convention is that it includes three pillar access to environment information, public participation and access to justice as part of the Convention. The EU has taken into account the Aarhus Convention as an interpretation resource for its policies when the directives implemented, hence, the Convention remains as the main resource for the Commission. The situation affects Turkey's EU accession integration indirectly regarding to the implementation of the EU Directives on environment.

The Aarhus Convention grants the right to get information from the relevant public authorities without any discrimination based on nationality, domicile and citizenship. As her central policy, Turkey sees the subject of this provision should be discussed exclusively in its internal affairs, not forced by an international instrument; therefore, the Convention has not been signed by Turkey.

⁴⁶⁴ Forest and Environment Ministry of Turkey, (n 32).

⁴⁶⁵ 'Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters;
<https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg_no=XXVII-13&chapter=27&clang=_en> accessed 19 May 2020.

⁴⁶⁶ 'Aarhus Convention Ratified by the European Community'
<https://www.unece.org/fileadmin/DAM/press/pr2005/05env_p01e.htm> accessed 19 May 2020.

4. Regulation on the borders of water areas

Turkey has great importance in its region due to the environmental values it possesses, water resources can be considered as one of these values.⁴⁶⁷

As a result of Turkey's geographical location, Turkish legislators are aiming to create a structured legal basis related to Water Law since the foundation of the Turkish Republic.

Because of the utilization of waters situated in more than one state is governed by international law, Turkey became a side of various treaties. Rivers, lakes, underground waters and international sea areas seem to worth preserving for every country and international law entities including Turkey and Turkey's neighbouring countries that share different types of borders with Turkey.

In other words, Turkey as a non-EU member country with various boundaries with either EU member or non-EU member countries has several borders that have old-dated disputes as well as possible disputes related to water conflicts.

Turkey has five water borders between Bulgaria, Greece, Azerbaijan, Iran, Armenia, Iraq and Syria. These water borders are Aras River, a water border between Turkey and Azerbaijan, Iran and Armenia, accepted by the Treaty of Kars;⁴⁶⁸ *Arpaçay*, a water border between Turkey and Armenia, accepted by the Treaty of Kars.⁴⁶⁹ Hezil River (a branch of Tigris River) a water border between Turkey and Iraq, accepted by the Treaty of Ankara.⁴⁷⁰ Maritza River, a water border between Turkey and Bulgaria and Greece, accepted by the Treaty of Lausanne.⁴⁷¹ Rezovo River, a water border (brook) between Turkey and Bulgaria, accepted by the Treaty of Lausanne.

In the Lausanne Treaty, it was envisaged to draw the water borders according to the thalweg line. In the course of any change on the water streams, the Boundary Commission, established by the Treaty, is the responsible body to specify whether the frontier line shall follow any changes or to decide whether the border shall be fixed.

The water border between Turkey and Greece is fixed taking into account the geographical condition of the Meriç basin dated back to 1926 by the Bilateral Agreements between the two states signed in 1934 and in 1963 respectively.

Earlier agreements between Turkey and Greece on the Meriç River mainly covered the construction of facilities for food protection, erosion control and

⁴⁶⁷ Aynur Aydın Coşkun, Water Law: The Current State of Regulation in Turkey, *Water International Journal*, 28:1, 70.

⁴⁶⁸ Treaty of Kars, 1921, art 4.

⁴⁶⁹ Ibid.

⁴⁷⁰ Treaty of Ankara, 1926, art 1.

⁴⁷¹ Treaty of Lausanne, 1923, art 2.

water diversion. Recently, the two countries entered a Memorandum of Understanding (MoU).⁴⁷²

In the Kars Treaty, the water borders between Turkey and its neighbouring countries are defined as the thalweg line of Aras River and Arpaçay. There is no provision on the revision of borders in the course of any change on the water stream.

5. International and regional water-related legal disputes concerning water as a resource

Turkey is both downstream and upstream country in its transboundary waters, which are Meriç (Maritsa) River, Kura-Aras (Araxes) River, Coruh River, Fırat-Dicle (Euphrates-Tigris) River and Asi (Orontes) River.⁴⁷³ Turkey's policy towards transboundary waters is based on the following principles:⁴⁷⁴

- Transboundary waters are a source of cooperation among riparian countries, rather than a source of conflict, Treaty of Kars, 1921.
- Transboundary waters are a source of cooperation among riparian countries, rather than a source of conflict,
- Transboundary waters should be used in an equitable, reasonable and optimum manner,
- Riparian countries should settle the disagreements among themselves instead of including third parties,
- Share of the benefits should be aimed in the usage of transboundary waters,
- Every riparian country has the right of sovereignty to use the water in its territory, as long as they do not cause 'significant harm' to other riparian countries,
- Fırat and Dicle should be viewed as two rivers in one basin. In the evaluation of sufficiency for the fulfilment of three riparian countries' needs, two rivers' total water potential should be calculated together.⁴⁷⁵

⁴⁷² Annika Kramer, Alina Schellig (2011) Meric River Basin: Transboundary Water Cooperation at the Border between the EU and Turkey. In: Ayşegül Kibaroglu, Annika Kramer, Waltina Scheumann, *Turkey's Water Policy: National Frameworks and International Cooperation* (Springer Verlag Berlin Heidelberg 2011)

⁴⁷³ Ministry of Foreign Affairs, 'Turkey's Policy on Water Issues'

<http://www.mfa.gov.tr/turkey_s-policy-on-water-issues.en.mfa> accessed 15 June 2020.

⁴⁷⁴ Serap Perçin, '*Genel Hatları İtibariyle ABD, AB ve Türk Su Hukuku*' (Ministry of Forestry and Water Affairs, Dissertation, Ankara 2014) 117.

⁴⁷⁵ Serap Perçin, '*Genel Hatları İtibariyle ABD, AB ve Türk Su Hukuku*' (Ministry of Forestry and Water Affairs, Dissertation, Ankara 2014) 117-118.

Turkey's water-related disputes have mostly been about Fırat, Dicle and Asi Rivers with Iraq and Syria. Three states did not have any issues relating to transboundary waters during the 1920-1960 era.⁴⁷⁶ Throughout this period, projects and plans concerning these waters were done unilaterally. However, in early 1960s technical discussions were held between these three states.⁴⁷⁷ The disagreements at the beginning of the Keban Dam's construction on Fırat River in 1965 could be named as the earliest conflict regarding water between Turkey, Iraq and Syria.⁴⁷⁸ In this period, Iraq and Syria started accusing Turkey of trying to achieve dominance over them by gaining control over water.⁴⁷⁹ Both states were in opposition to the dam project.⁴⁸⁰ The dispute was resolved on 31 August 1966, with the agreement and protocol signed between Turkey and U.S. Agency for International Development (USAID), stating that Turkey would release a certain amount of water to Iraq and Syria while USAID would be providing a loan of 40 million U.S. Dollars for the dam construction.⁴⁸¹ Iraq's and Syria's objections were repeated with the announcement of the Karakaya Dam Project.⁴⁸² During the construction period of Karakaya Dam, which is the second dam on Fırat River, Syria tried to hinder the using of international initiatives. As a respond to Turkey's loan application for this dam, World Bank preconditioned negotiation with Syria and Iraq within the frame of the Bank's transboundary water usage model.⁴⁸³ Instead, Turkey was looking for a solution to this issue by technical negotiations with Syria and Iraq. The disagreements about Karakaya Dam were solved in 1976, as Turkey convinced the other riparian countries with the promise of 500 m³/s flowrates of monthly water discharge.⁴⁸⁴

The disagreements between Turkey, Iraq and Syria, on the usage of Fırat River, arose in the 1980s when Turkey realised South-Eastern Anatolian Project (GAP in Turkish). The GAP's primary objectives were determined as; preventing overflows and damages, energy production and utilization of irrigation at Fırat-Dicle Basin.⁴⁸⁵ Both Iraq and Syria pursued a policy opposing GAP. One of the

⁴⁷⁶ Abdulkadir Dursun, '*Sınraşan Sular Fırat ve Dicle Nehirlerinin, Türkiye, Suriye ve Irak İlişkileri Üzerine Etkileri*', (Isparta, Süleyman Demirel University, Institute of Social Sciences, Department of International Affairs, Master's Thesis, 2006) 96.

⁴⁷⁷ Ibid 96.

⁴⁷⁸ Seyfi Kılıç, '*Türkiye-Irak İlişkilerinde Su Meselesi ve Geleceğe Dönük Öneriler*', (2018), (ORSAM Review of Regional Affairs, No. 72) 2.

⁴⁷⁹ Levent Aytemiz, '*Timuçin Kodaman, Sınır Aşan Sular Kullanımı ve Türkiye-Suriye İlişkileri*', (2006), (Cilt 2, TMMOB Su Politikaları Kongresi) 533.

⁴⁸⁰ Yüksel İnan, '*Sınraşan Suların Hukuksal Boyutları*' (1994), Ankara Üniversitesi SBF Dergisi 49, 246.

⁴⁸¹ İnan, (n 56) 246-247.

⁴⁸² Murat Köle, '*1954-2016 Dönemi Türkiye Sınraşan Sular Politikası*', (2017) (Marmara Geographical Review) 129.

⁴⁸³ Dursun, (n 52) 100.

⁴⁸⁴ Köle, (n 58) 129-130.

⁴⁸⁵ Ibid.

main reasonings for this opposition was the thesis claiming that the practice of irrigated farming would cause a decrease in waterflow.⁴⁸⁶ With the support of Saudi Arabia, Syria and Iraq convinced the World Bank not to finance the project unless Turkey agreed on working on a riparian treaty.⁴⁸⁷ The control Turkey gained over the Fırat and Dicle Rivers with GAP was seen as a threat by Syria. It was feared that Turkey would use this control as a political tool in order to gain power in the region. In order to achieve a bargaining tool against Ankara, Syria started harbouring organisations recognised as terrorists by Turkish authorities.⁴⁸⁸ Syria also claimed that GAP caused reduction on water quality, along with pollution and salinization on Fırat River. Nevertheless, the main reason for the salinization of the river detected was the high percentage of salt in the Syrian and Iraqi soil that got mixed in the river water after irrigation process of the land.⁴⁸⁹ Another disagreement that gained attention in this period revolved around the issue of basin identification. As Fırat and Dicle rivers merge into Shatt al-Arab river 180 km north of the Persian Gulf and flow into the sea there, Turkey recognises them as two tributaries of the same river and argues that these two rivers should be viewed as two rivers in one basin. However, Iraq opposes this view and demands separate water allocations concerning Fırat River and Dicle River.⁴⁹⁰

The closure of the Atatürk Dam in 1989 was another major problem in the disagreement of these states on GAP. November 1989 announcement, stating that Turkey would be diverting Fırat waters from 13 January to 12 February 1990, caused Iraq and Syria to lodge protests.⁴⁹¹ Syria repeated the claims on Turkey using the water as a political tool while Iraq claimed a breach in international law. On 13 January 1990, Atatürk Dam, the largest project of the GAP, started getting filled. This caused Saddam Hussein to send Iraq's Minister of Oil to Ankara next day and Syria to send a protest note to the Turkish Embassy on 15 January.⁴⁹² Iraq and Syria were claiming that Turkey has caused 'significant harm' to them, as the filling of Atatürk Dam affected their energy production, farming and reservoirs negatively. The states made atrocious propaganda against Turkey both in Arabian and international platforms. On 18 January, Secretary General of the Arab League published a notice of condemnation that did not recognize the sovereignty of Turkey on the Fırat River and supported Iraq and Syria.⁴⁹³ Syria

⁴⁸⁶ Köle, (n 60).

⁴⁸⁷ Ali Çakıroğlu, Mine Eder, *Domestic Concerns and Water Conflicts over the Euphrates-Tigris River Basin* (Taylor & Francis Ltd. 2001) 59.

⁴⁸⁸ Ibid 59-60.

⁴⁸⁹ Duygu Doğu Kırkıcı, *Sınırtaşın Sular Bağlamında Türkiye, Suriye ve Irak İlişkileri*, 46-47.

⁴⁹⁰ Ibid 84.

⁴⁹¹ Çakıroğlu, Eder, (n 63) 61.

⁴⁹² Dursun, (n 52) 146-147.

⁴⁹³ Ibid 146-148.

also requested Arabian solidarity against Turkey from Arab countries, international banks and finance organisations and Arab banks and funds to prevent the funding of the GAP projects.⁴⁹⁴

Even though several bilateral and trilateral attempts were made to resolve this regional tension, none were fruitful. Turkey and Syria still were not able to reach a solution to terrorism issues. Moreover, Syria started protesting against Birecik Dam, which was another part of the GAP and its construction began in 1992.⁴⁹⁵ Syria filed a complaint to the Arab League regarding the issue. Iraq also joined the protests against Birecik Dam, and both states sent protest notes to Turkey against the dam.

Turkey tried to solve the disagreements on the usage of Fırat and Dicle Rivers with the 'Three Phase Plan'. The plan aimed to ensure the equitable, reasonable and optimum usage of the rivers. The plan was presented for the first time in 1984, and even though its negotiations lasted until 1990, they did not make progress. One of the main objections from Iraq and Syria against the plan was caused by the difference of opinions on the status of these rivers. While Turkey was defining Fırat and Dicle Rivers as transboundary waters, Syria and Iraq defined them as international waters. Another disagreement concerned the sharing of the rivers. Syria and Iraq wanted to use a mathematical share, a method that fully contradicted with the 'equitable utilization' principle of international law.⁴⁹⁶ As the states were not able to come to an agreement regarding these issues, the plan was not realised.

Another dispute regarding transboundary waters between Turkey and Syria is on the utilisation of the Asi River. Asi River enters Turkey after forming a 22 km border between Turkey and Syria. 98% of the river flows within Syrian and Lebanese borders and, only 2% of the river flows within Turkish borders. In the earlier period, Syria refused to define the river as transboundary water. Main reason for this refusal was the fact that Syria claimed Hatay as a part of their territory; thus, the Asi River should have been considered as national water rather than a transboundary one. Between 1956 and 1967 Syria carried out the NEDECO project, which consisted of the construction of two dams, two drainage channels and other irrigation channels on Asi River. During the planning and realisation of said project, Turkey's utilisation rights and interests on the Asi River were utterly ignored. Turkey also was ignored and uninvited during the negotiation process of 'Agreement on the Distribution of Orontes River Water', which was signed on 20 September 1994.⁴⁹⁷

⁴⁹⁴ Dursun, (n 68) 147-148.

⁴⁹⁵ Çakıroğlu, Eder, (n 63) 61.

⁴⁹⁶ Kırkıç, (n 65) 106-108.

⁴⁹⁷ Ibid 69-74.

Even though projects like friendship dams were created through years between these states, it still is not possible to state that the conflicts between these states had come to a suitable solution.

6. Overall assessment

Turkey is not considered as one of the water-rich countries and due to inefficient water use, the country is in danger of water poverty. The main reasons of inefficient water use are based on wrong water use strategies in different sectors and water pollution. Problems and difficulties are getting more important as the Turkish economy grows and needs more water for each type of sector. In addition to existing population and change in water consumption habits, the pressure on Turkey's water resources will be increasing in the future, provided that the existing resources will not be depleted in 20 years.⁴⁹⁸ For this reason, Turkey needs to protect its water resources and use them effectively in order to keep healthy and sufficient amount of water for future generations. To achieve this aim, it is required to determine a strategy both in legal and technical aspects to increase both water quantity and quality.

Turkey's per capita internal availability of freshwater is only half of the world average. Agriculture is the main reason of the country's water use (89%), followed by domestic (7%) and industrial water use (4%).⁴⁹⁹ Irrigation techniques have an important role for water use in agricultural area. In fact, the most preferred irrigation technique in Turkey is gravity irrigation, which is not indeed effective compared to drop irrigation system. The inefficient use of water in irrigation results in over-abstraction of water from both surface and groundwater in several river basins.⁵⁰⁰ Many scientific studies have been made to improve irrigation techniques but there is still a need to settle a better water use strategy.

Secondly, pollution of water resources is another problem generated mostly by industrial and urban wastewater. In 2014, about 12.7 billion m³ wastewater was discharged to receiving bodies from residential areas (municipalities and villages) and industries (manufacturing industry establishments, mining establishments, organised industrial zones and thermal power plants). Without an integrated

⁴⁹⁸ Phyllia Restiani, Sila Temizel and Nilgün Ciliz, 'Water Governance Mapping Report: Textile Industry Water Use in Turkey' [2016] 17,18
<<https://www.siwi.org/wp-content/uploads/2017/06/Water-governance-mapping-report-Turkey.pdf>> accessed 16 June 2020.

⁴⁹⁹ World Bank, 'Valuing Water Resources in Turkey A Methodological Overview and Case Study' [2016] 16
<<http://documents1.worldbank.org/curated/en/600681476343083047/pdf/AUS10650-REVISED-PUBLIC-Turkey-NCA-Water-Valuation-Report-FINAL-CLEAN.pdf>> accessed 16 June 2020.

⁵⁰⁰ World Bank, (n 75) 18.

planning and cumulative impact assessment, these problems are threatening the ecological integrity and health of freshwater ecosystems.⁵⁰¹

According to Turkey's latest development plan, protection of environment and natural resources, improvement of its quality, providing of its effective, integrated and sustainable management and realisation of environment and climate friendly practices are the main aims.⁵⁰² However, considering water protection as a part of environmental protection, there is no integrated plan which considers both ground and surface water availability, nor does existing planning consider water quality, wastewater disposal, current and projected land use, anticipated future demand and return flows, or projected future quantity and quality of water resources.⁵⁰³

Considering legal area, there is no extensive system to determine rules of water use in Turkey. Article 56 of the Turkish Constitution grants the right to a healthy environment and stipulates the prevention of environmental pollution as a duty of the State and its citizens. This right is supported by Environment Law, which has entered into force in 1983 and of which the main principle is to guarantee the protection of environment by forcing all sectors to bear responsibility and to take action for necessary measures.⁵⁰⁴ However, there is no code in law in force dedicated directly to water use regulations. Since the beginning of the 2000s, Turkey has started to consider its EU candidacy seriously and has taken notable steps to adapt its domestic law to EU framework. These steps have led to a new enactment process, and a Draft Water Law and the aim of which is to regulate the water sector in a legal framework. However, the Draft Law has never been entered into force, and thus has never been able to realise its aim. Several provisions concerning water protection are present in other different laws; however, these laws contain legal gaps, which are fulfilled by judicial decrees.⁵⁰⁵ On the other hand, there are numerous by-laws considering water protection. These water law regulations are presented disorganised in nearly 30 laws and by-laws and seize a sectoral approach rather than an integrated approach.⁵⁰⁶ Also, these regulations are too old to apply, and even though they set ambitious goals,

⁵⁰¹ Ibid.

⁵⁰² *Türkiye Cumhuriyeti Cumhurbaşkanlığı Strateji ve Bütçe Başkanlığı, On Birinci Kalkınma Planı* [2019] 183

<<http://www.sbb.gov.tr/wp-content/uploads/2019/07/On-Birinci-Kalkinma-Plani.pdf>> accessed 16 June 2020.

⁵⁰³ Ayşegül Kibaroglu and Argun Baskan, 'Turkey's Water Policy Framework' (ResearchGate 2011) 21

<https://www.researchgate.net/publication/301184614_Turkey%27s_Water_Policy_Framework> accessed 16 June 2020.

⁵⁰⁴ Ibid 4.

⁵⁰⁵ Kibaroglu and Başkan (n 79) 2.

⁵⁰⁶ Ahmet Mithat Güneş, '*Avrupa Birliği Su Çerçeve Yönergesi ve Türk Su Hukuku*' (2010) 7 Journal of Yeditepe University Faculty of Law 167, 188.

their implementation has always been weak. Several other communiques regarding water protection have entered into force in 2009 and in 2010 to replace the communiques which have entered into force mostly at the end of 1980s and at the beginning of 1990s⁵⁰⁷ but their implementation is still questionable.

In order to enhance water protection policy, it is possible to accept several different approaches. First of all, the lack of a comprehensive water law can be considered as the major challenge in Turkish water sector. For this reason, establishing a multi-dimensional water law, which assembles the guiding principles, norms, rules and procedures is an urgent need. A framework law, which will be based on an integrated approach will play an important role to make Turkish water policy suitable for a sustainable and environment-friendly water use insight.⁵⁰⁸ This water law should be flexible to changes, and the time allocated for their design should be reasonable in order not to have a law fully outdated before its adoption.⁵⁰⁹ While designing water legislation, international regulations setting leading principles for water use such as the EU Water Framework Directive (WFD) should also be taken into account. The Directive is mainly based on the protection of all water resources' current situation, its improvement, decrease of water pollution, discharge of hazardous substances and sustainable, equal and balanced water use. According to the Directive, an integrated basin management with member States became compulsory and integrated basin management of member States with non-member States is highly supported.⁵¹⁰ On the other hand, the fact that the Directive and Turkey seize different approaches for international basin management model is the main reason of Turkey's hesitation to accept the Directive. Turkey is using Harmon doctrine, which foresees an absolute sovereignty for basin management, whereas the Directive is providing a system based on declaring international basin areas and creating an international competent authority to manage these areas.⁵¹¹ However, it is still possible to reconcile to define which basin management system to use, and thus it is possible to adapt the Directive to domestic law.

Secondly, providing coordination between different executive parts is an important part to settle a water protection system. Even though different ways of water protection have been tried over the years, a specific way of water protection is not found out, and the lack of cooperation became apparent. An applicable water protection system, especially the one compatible with the

⁵⁰⁷ Ibid 182.

⁵⁰⁸ Güneş (n 82) 188.

⁵⁰⁹ Carl Bruh, Torkil Jonch Clausen, Serap Percin and Raya Marina Stephan, 'Legal Aspects on Protection of Water Resources' (3rd İstanbul International Water Forum, İstanbul, 2014) 34 <http://www.iusf.org.tr/PDF/3IIWF_Final_Report.pdf> accessed 16 June 2020.

⁵¹⁰ Turhan Aküzüm, Belgin Cakmak and Zeki Gökalp, '*Türkiye'de Su Kaynakları Yönetiminin Değerlendirilmesi*' (2010) 3 Tarım Bilimleri Araştırma Dergisi 67, 71.

⁵¹¹ Güneş (n 82) 186.

Directive needs a serious supply of financial and personal resources, investment of big infrastructures and increase of technical capacity.⁵¹²

Last of all, public awareness is very crucial to ensure that water legislation is fully understood and supported. Water protection is not considered as essential as it should be, and for this reason, water laws should be applicable, and the key points should be understood by each stakeholder.⁵¹³

In conclusion, even though there are several regulations concerning water law, Turkey still needs notable progress. If the steps that are mentioned above are taken into account, the country can set up a Water Law compatible with the EU standards.

⁵¹² Ibid 188.

⁵¹³ Bruh, Clausen, Percin and Stephan (n 85) 39.

Conclusion

Turkey, as a country located in a semi-arid region is not a water-rich country and due to the increase of energy consumption that comes with population and economy growth, Turkey faces with the risks of lack of water. Also, because Turkey has water borders with several countries, regulations on both national and international level are essential in order to a stabilized and peaceful region. Turkey's regulations on water resources are dated back to the foundation of Republic of Turkey, as the first legal step to govern water was taken in 1926 and since then numerous laws, by-laws and international treaties are enacted. Today, we can say that Turkey's regulations on water resources are mostly shaped by its relations with the countries that are sharing a border with Turkey and with the European Union, especially considering its situation as a candidate member of EU.

EU candidacy is one of the most important courses when it comes to Water Law legislation in Turkey. Since the beginning of the negotiations between Turkey and European Union, Turkey enacted more than 20 by-laws in order to regulate water and environmental matters and complete its adaptation to EU.

Regarding the current situation, Turkey took serious steps, mostly with the aim of accession to EU, but it is not yet 'perfect', because there are some issues mostly in the implementation of regulations. And the other issue is that Turkey does not have a comprehensive and collective Water Law, so water resources are regulated under numerous laws and by-laws, operated under many different administrative bodies which make it harder to implement the regulations due to the lack of coordination.

In conclusion, in this report, the regulation of Turkey's water resources has been examined chronologically from different areas of law and from different point that affects the overall development of water policies.

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Conclusion

As the research shows, the Balkan countries can be divided into 2 basic groups: members of the European Union and countries which are candidates to become members. There are, of course, similarities between the two groups, since Serbia and Turkey are in the EU accession process, which requires synchronisation of the entire legal system with the system of the Union. In addition to this, we should mention the division into coastal and continental countries.

It should be noted that, despite the similarities that these 5 countries share, the scope of legislation varies, starting from the constitutional level and onwards. Although a legal framework regarding this issue has, in different capacities, already been established in all 5 countries, as the importance of sustainable water management grows, new legislation is expected to come in place and solve current inconsistencies and inadequacies.

Regardless of different qualities of individual legal systems, there is still more work to be done. Laws need to be enforced and steps need to be taken if usage and quality of water are to correspond with the needs of the countries the standards which they have adopted.

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The Balkans Legal Research Group on Water Law discusses and presents an overview of regulation regarding water sources in Bulgaria, Croatia, Serbia, Hungary and Turkey. The report explores 5 different topics regarding water law in each country: legal regimes for water sources, criminal offences and misdemeanours regarding water resources, analysis of the laws and regulations and their compatibility with the EU regulation and regulation of borders.

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