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Water and Law – a summary of the results of a natural resource law research**

Abstract

The present article summarizes the results of a legal research presented by the scholars of University of Miskolc in connection with water as a natural resource. Essentially, this legal research of the University might be regarded as an implementation and continuation of the national water science strategy of the Hungarian Academy of Sciences (MTA), and this legal research is based on legal assessments of János Ede Szilágyi which assessments provide a significant link between the water strategy of the MTA and jurisprudence. The legal research of the University broadens its antecedents' results via the following main legal methods applied by the Hungarian scholars: interdisciplinary method, historical method and comparative method.

Keywords: water law, water governance, water management, water protection

This research in law is closely related to the water science strategy of the Hungarian Academy of Sciences (MTA).¹ One of the scientific antecedents of the link between this legal research and the water science strategy is János Ede Szilágyi's works.² In these works, Szilágyi presents the possible connections of legal science to water science, water governance and water policy. Szilágyi analyzes the relationship between water and law in these works as well. The present research is a continuation and expansion of the jurisprudence research in Szilágyi's earlier research. Building on the research of Szilágyi, the present research is primarily based on methodological aspects. All three major methods used in jurisprudence have been applied by the authors involved in the present research, including the interdisciplinary, historical and comparative methods. The interdisciplinary method also includes, on the one hand, the use of non-law disciplines and, on the other hand, approaches of different fields of law. As for the method of the interdisciplinary approach beyond the jurisprudence, applying the hydrological and mining sciences, Peter Szűcs and Csaba Ilyés³ draw attention to the problems which may be relevant also for jurisprudence. The method of legal comparison was also important in several researches. This approach is a determining

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¹ MTA 2018.

² See Szilágyi 2013, Szilágyi 2016 and Szilágyi 2018. Cf. Hildering 2004; Aylward et al. szerk. 2009; Boisson de Chazournes 2015; etc.

³ Szűcs & Ilyés 2019.

method in the Austrian law analyses prepared by *Zsófia Hornyák*.⁴ In a wider sense, the international legal research by *György Marinkás*⁵ and the European law research pursued by *János Ede Szilágyi*⁶ might be considered comparative analysis as well. The historical method is presented by *Anna Petrasovszky*'s nature law,⁷ *Ibolya Koncz*'s Hungarian legal history⁸ and *Pál Sárly*'s Roman law.⁹ There are numerous areas of law within the legal science connected to water issues. Human rights issue appears in research by *Nóra Jakab* and *Gábor Mélypataki*,¹⁰ and the financial legal aspects are involved by the researches of *Éva Erdős*¹¹ and *Zoltán Nagy*.¹² *Anita Nagy* deals with criminal law aspects,¹³ *Bianka Kocsis* details energy law issues (focusing on Hungary's largest energy investment),¹⁴ *Csilla Csák* presents the environmental law issues connected to water¹⁵ and *István Turkovics* analyzes the administrative licensing aspects of water management.¹⁶ In the research program, *István Olajos*¹⁷ assesses fishery law which is one of the water-service-areas neglected by jurisprudence. In this paper, the authors' work is summarized in terms of how they fit into water science research. Before all this, however, we first briefly present the relationship between water and law based on Szilágyi's study.

1. Water and law furthermore the regulatory concepts of water

“The law deals with the relations of society, human behaviour and creates regulations to impose rights and obligations on people. In connection with the legal provisions related to water, both the international literature and the Hungarian literature refer to ‘*water law*’, which suggests the existence of a unified and systematic legal field. However, the situation is exactly the opposite. Water is related directly or indirectly to the numerous relationships of human society. That is, there are many legal provisions for water. The whole set of water-related regulations does not constitute a single system within the law, but the area in the law of nations – that is, in national legal systems – or in international law – that is, in international law – appears, to a greater or lesser extent, in countless fields of law. In this context, it can be stated that in a national

⁴ Hornyák 2019.

⁵ Marinkás 2019. Cf. Raisz 2012a; Szilágyi 2012b; Raisz 2013; Raisz & Szilágyi 2017; Bujdos 2017.

⁶ Szilágyi 2019. Cf. Bándi 2011, 451–464; Szilágyi 2012a; Kecskés 2013; Fodor 2014, 210–234; Farkas Csamangó 2017, 123–139; Baranyai 2018.

⁷ Petrasovszky 2019.

⁸ Koncz 2019.

⁹ Sárly 2019.

¹⁰ Jakab & Mélypataki 2019. Cf. Kardos 2004; Kecskés 2009; Antali 2011; Raisz 2012b; Fodor & Bujdos 2013; Szappanyos 2013; Fórika 2017; Szilágyi 2018, etc.

¹¹ Erdős 2019.

¹² Nagy Z 2019.

¹³ Nagy A 2019.

¹⁴ Kocsis 2019.

¹⁵ Csák 2019.

¹⁶ Turkovics 2019.

¹⁷ Olajos 2019.

legal system, in international law or in European law (i.e. European Union law), water-related regulations are fragmented and do not form a coherent system. The system can only be found in some sub-areas of water-related rules (e.g. water management requirements form such a system). In addition, the systematization of water-related legal provisions is made more difficult by the fact that – besides provisions directly referring to water and watersheds [...] – in water-related cases, there is great importance of rules which do not have direct (*expressis verbis*) content to the water. It can be deduced from this that the legislation on water is not only fragmented, unstructured and enormous, but also unknowable. In our view, the integrative approach (integrated water management), which is often expressed in international and domestic scientific life, is difficult to achieve with a legal background of these characteristics. In light of the foregoing, instead of using the term water law, we could logically use the term ‘*water and law*’, which expresses more unstructuredness. Why shall the term water law be used then? The answer is simple: as it is an existing term, both in foreign and domestic literature.”¹⁸ Szilágyi regards the regulatory concepts of water as the possibility of systematizing water legislation. “It is important to emphasize that the same regulatory concept may be found in several types and levels of legal documents, such as international treaties, EU directives, national legislation, etc. It is also an opportunity that a legal document includes provisions for several regulatory concepts [...]. These regulatory concepts are theoretical categories that can be accessed and organized in many ways. Essentially, with these regulatory concepts, decision-makers are trying to find out what major aspects of water should be regulated in a modern, 21st-century society in order to meet the challenges of water governance and integrated water management concepts, furthermore to achieve water policy goals. [...]he main regulatory concepts concerning waters are as follows: (a) water as a separate legal person, (b) water as the subject of power, possession and property, (c) water as an environmental element, (d) water as a natural resource and the subject of commercial transactions, (e) the right to water (f) the legal regulation concerning water-related damage events, (g) the river basin as an institutional organization concept.”¹⁹

2. Water related legal research in the light of the methods used

2.1. An interdisciplinary method beyond legal science

Péter Szűcs and *Csaba Ilyés*, as representatives of the earth sciences, shared their thoughts on the experienced legal problems connected to water and especially on groundwater. Their comments are particularly valuable for lawyers, as similar engineer scientists can be an important source of knowledge about anomalies related to water regulation. Basically, they focused their comments on the following four issues. (a) Sustainable thermal water utilization: “The production and utilization of hot water above 30 °C, i.e. thermal waters is of paramount importance”.²⁰ “Since thermal systems

¹⁸ Szilágyi 2019, 255–256.

¹⁹ Szilágyi 2019, 258.

²⁰ Szűcs & Ilyés 2019, 300.

have limited natural replenishment, therefore, due to uncontrolled overproduction, there may be serious negative impacts that can seriously endanger our entire groundwater source, which is at the same time a source of our drinking water, world famous mineral and medicinal waters”.²¹ “The article about water reinjection in the Act LVII of 1995 on water management was changed in 2013 most likely due to the pressure from the agricultural sector, resulting in the abolishment rather than the restoration of the reinjection obligation in general”.²² “[T]he multiplication parameter for geothermal water utilization resource fee (g multiplier, Decree 43/1999 (XII.6) was reduced from 7.5 to 2.0. These modifications show that the present economic regulation does not encourage reinjection”.²³ “Protecting our subsurface water resources should be given higher priority than what is currently established. From the point of water management view, it is unacceptable that from the approx. 50 million m³ thermal water production for energy purposes, only approx. 5-6 million m³ are injected back to the aquifers”.²⁴ “A legal solution to the problem may be the modification of the Act of Water Management in such a way, that the partial or total rejection against other surface receivers should be preferred. Another change may be that the current g multiplier equaling 2 should be raised to at least 4.0-4.5 (above the multiplier of balneological use), to stimulate farmers to partially reinject or even those users who heat buildings with thermal water without any reinjection”.²⁵ “A third solution proposal might be, that the government would declare the solution to this problem as strategic, and the state will also help to resolve the situation on the merits. The most important governmental help would be for thermal water using farmers to finance reinjection wells from state funding”.²⁶ (b) The question of the wells to be established without authorization and notification procedure: “Groundwater plays a pivotal role in Hungary. Drinking water is supplied almost entirely from underground water resources. Our world-famous mineral-, medicinal- and thermal waters are also being produced from groundwater”.²⁷ “Although processes along the flow systems take place at a very low speed, any interference with groundwater never remains local, but in years, decades or even centuries, the effects will occur in larger space as a result of hydraulic continuity”.²⁸ “The adaptation of the proposed law is to establish a regulation that does not require authorization or notification procedures for wells up to a depth of 80 m. If this were to happen, no set-up information would be available for the shallow groundwater that are above than 80 meters or the operation and impact of the wells. Expected negative impacts may affect the relevant groundwater resources in quantitative and qualitative terms. It would render reliable river basin management planning impossible and abolish groundwater resource management. It would endanger

²¹ Ibid.

²² Szűcs & Ilyés 2019, 301.

²³ Ibid.

²⁴ Ibid.

²⁵ Szűcs & Ilyés 2019, 302.

²⁶ Ibid.

²⁷ Ibid.

²⁸ Szűcs & Ilyés 2019, 303.

the world-famous drinking water of our country today”.²⁹ “Apart from known and registered water abstractions, sadly, hundreds of illegally drilled wells are burdening the groundwater resources in Hungary today. According to some estimates, the number of illegal wells can even reach the number of one million. These existing illegal wells are not deeper than 50-60 meters. [...] This quantity already seriously threatens sustainable groundwater management and planning in several areas”.³⁰ “Due to the lack of license and reporting obligation and the lack of control, the high risk of contamination of our current clean and protected aquifers or the unintended linking of already contaminated and non-contaminated water bodies, which will further undermine the situation in many areas in our country. The greatest danger is the lack of know-how of professional planning and drilling procedures”.³¹ (c) To meet the agricultural needs of water from underground water resources: “The demand for irrigation water can be achieved mainly from surface waters. Of course, groundwater resources can also be considered in terms of water demand. Based on careful analyses, annually about 100 million m³ of groundwater will be used for irrigation later, which can fulfil the irrigation of approx. 45,000 hectares of agricultural land. However, it is important to mention, that with irrigation the goal of increasing crop yields can be achieved only by improving soil status in agricultural areas at the same time. Unfortunately, the current situation is quite worrying”.³² (d) Problems with the formation of protective areas and zones: “A significant part of the regulations and technical appendices that have been in place for 20 years, should be revised and modernized based on the extensive experience and feedback gathered so far. The experiences of the last two decades also showed that in some cases there were impossible and impracticable requirements because of some current regulations”.³³ “As described in the National Water Strategy, there are tasks to be implemented in the coming years (until 2021), but the requirements for available EU funds are impossible or the quantity of the support is insufficient. In these circumstances, it is recommended to move in three directions: to expand domestic – national – resources, apply economic regulation tools and increase the efficiency of subsidies”.³⁴ “VGT2 has revealed that the efficiency of water base protection is not sufficient, 68% of the water bases have no designated protective area/zone and securing them is in huge delay. This is why it (VGT2) has aimed to speed up the designation of protective areas and making waterbase protection more efficient in the everyday life. For this purpose, the protection zones of drinking water bases and the rules for the designation of these zones have to be reviewed”.³⁵ “In the case of transboundary groundwater it often happens that the protection zone, which was determined by models based on diagnosis, stretches across national borders.

²⁹ Ibid.

³⁰ Szűcs & Ilyés 2019, 303–304.

³¹ Szűcs & Ilyés 2019, 305.

³² Szűcs & Ilyés 2019, 306.

³³ Szűcs & Ilyés 2019, 307.

³⁴ Szűcs & Ilyés 2019, 308.

³⁵ Ibid.

The designation of protected areas can only be carried out in accordance with the Hungarian legal system, so in case of transboundary aquifers some international coordination would be needed that enforces such standards that are applicable across borders”.³⁶

2.2. The method of comparative law

Law comparisons play an important role in jurisprudence today. In this research, *Zsófia Hornyák*'s analysis is a separate part. *Zsófia Hornyák* chose Austrian law, including water law, as the subject of her analysis. His choice is a great opportunity to develop Hungarian law, because there are many connections between Austrian and Hungarian law and water law, which makes Austrian law an easy-to-use example for Hungarian law. One of these links, to which *Zsófia Hornyák* also draws attention, is that “the Hungarian water management has a common historical root with Austrian water law”.³⁷ *Zsófia Hornyák*'s study primarily analyzes Austrian water law along the regulatory concept of ‘water as a natural resource’.

In her study, *Anita Nagy* analyzes the criminal law aspects of water protection. At the same time, however, her findings will be presented in this part of the present study because the comparative elements are particularly valuable in her study. As for her assessments, there are “differences between the criminal codes of European countries in relation to water protection offenses. The German criminal code – Chapter 29 of the ‘*Strafgesetzbuch*’ (hereinafter referred to as ‘StGB’) – includes environmental offenses, with separate water-related crime, namely the ‘*Gewässerverunreinigung*’, providing a special criminal law framework on water pollution [...]. StGB also includes general crimes that are consistent with Hungarian crime of ‘environmental offenses’ and ‘damaging the natural environment’ [...]. The crime of poaching is also determined in the German criminal code. The Russian criminal code also provides special crimes, e.g. water pollution offenses in surface or underground waters, drinking water sources and marine pollution, furthermore the protection of aquatic animals, plants and fish stocks. Polish, as well as Ukrainian criminal code, also punishes water pollution, while the Slovenian criminal code includes the crime of poaching similarly to the Hungarian criminal code.”³⁸

International law and European law play a key role in unifying the national laws. In view of their role, we are dealing with them in the legal comparison. At the same time, however, we could deal with these issues in 2.4. part of the present article as well.

The aim of the article by *György Marinkás* is “to introduce and examine the bilateral treaties concluded between Hungary and her neighbouring states on water management and to evaluate them with regard to their conformity with the recent developments of international and community law”.³⁹ Taking this aim into

³⁶ Ibid.

³⁷ Hornyák 2019, 89.

³⁸ Nagy A 2019, 147–148.

³⁹ Marinkás 2019, 96.

consideration, “the author identified the following principles and aspects in the international and the EU law, which shall be taken into account during the possible revision of the treaties: river basin management, integrative approach – that is to say taking into account the whole hydrological cycle – and combined regulation, which applies both quantitative and qualitative approach. The principle of polluter pays, rectifying the environmental damage at source and the principle of cost recovery should also be taken into account. The further aspects are: proactive water-flood management, the wide appreciation of water services. – However the latter is not reflected in the secondary sources of the EU, the European Commission is consistent regarding this appreciation, thus one should take it into account as the path for future development. – Last, but not least the obligation to settle the disputes indoor – that is to say before the institutions of the EU – is worth mentioning.”⁴⁰ Then György Marinkás “examined whether the principles mentioned above in the writing are present in these treaties. As can be seen from the enclosed chart, these principles are barely present in the treaties or not; without repeating the above written: none of the treaties mention the principle of cost recovery, even the polluter pays principle is mentioned in only two of them. Although the water basin management and the combined approach are more common, it would be reasonable to base each and every treaty on these criteria for the sake of EU conformity.”⁴¹

2.3. The historical method

On the one hand, the historical models of individual legal institutions help to better understand the current legal models of the present day, and on the other hand, after certain modifications, they can serve as examples for the present decision makers. With this in mind, scientific studies using the historical method are considered to be particularly valuable elements of this research program.

In his study, Pál Sáy categorizes the water issues of ancient Roman law. In this respect, work is also considered to be an outstanding achievement at international level, as some authors deal with some of the issues of Roman law in the water, but there are almost none who have comprehensively analyzed Roman law taking the water issues into consideration. In particular, Pál Sáy pointed to the significance of the question in connection with the practice and the jurisdiction of Roman law. On the basis of these, the following systemic issues were determined in his research: “(1) the legal position of the sea and the seashore; (2) the rules connected with public rivers (ownership rules, provisions for the sake of the undisturbed navigation, flood protection measures); (3) the rules of building, using, repairing of the public works connected with waters (bridges, aqueducts, sewers, baths); (4) predial servitudes connected with water; (5) the problems of damage caused by rainwater in the field of neighbouring rights (the rules of the *actio aquae pluviae arcendae*).”⁴²

⁴⁰ Marinkás 2019, 104.

⁴¹ Marinkás 2019, 107.

⁴² Sáy 2019, 219.

Katalin Ibohya Koncz dealt with the development and, especially, the establishment of water management in Hungary. In the introduction of her article, she stated that the “formation of public administration from a modern perspective – i.e. when administrative goals were specifically and clearly determined, the given administrative areas were regulated in the form of legislations and the organisation for fulfilling the respective tasks and duties were formed – took shape in Hungary around the second half of the 19th century.”⁴³ Then she continued her introduction detailing the goals of her research; namely “to find out about the ambiance in which Act XXIII of 1885 was adopted, which had a particular significance in the Dualist Era with regard to the emergence of water rights administration as well as about the state policy goals that were specified in relation to the subject. I also aim to find out about the necessary human and material resources for the implementation of such goals according to the perspectives of the legislature. [...] In this following study, I aim to explore the first steps in the emergence of water rights administration, which can serve as a sufficient basis for assessing the development of water rights administration.”⁴⁴ As a conclusion, her last findings are that “the currently existing water rights property relations in Hungary was not intended to be changed, and the already acquired rights would continue to be ensured for the given water right holders. Nevertheless, if you examine the wording of the Bill and then of the adopted Act, it can be stated that property rights were not directly regulated in them; however, through the provision that an authority permit is required for the exercising of all rights, such rights were indeed taken under state control. During the Parliamentary discussion of the Bill, the governing party obviously emphasized the advantages of the issuance of authority permits, pointing out that the holder of a water utilisation right would subsequently have rights protected by the state as well. Members of the Opposition pointed out all kinds of issues indicating the negative characteristics of the permitting procedure. In contrast to the concentrated centralism of neo-absolutism, the people of the dualist era found it hard that the state wished to intervene and take control in certain areas. In dualist Hungary, a new concept appeared, that in this new era everyone has to be given an opportunity for progress; enterprises have to be encouraged and not limited by regulations. Some people mixed up state control with the limitation of the freedom to conduct business. In my view, the authority permitting obligation set forth by the Act rather supported than limited decent business enterprises in the middle of the 19th century. This is because the new Act was expected by everyone that the rights of use they had already acquired or wished to acquire in the future should be ensured in all circumstances. One of the measures to ensure this aspect was the introduction of water registers, which built up a system in the field of utilisation rights similar to that of the national land register in terms of real property. Through the thus established system, water rights administration, became a new special administrative area in the state administrative system, with its special, unique, one-of-a-kind characteristics.”⁴⁵

⁴³ Koncz 2019, 103–104.

⁴⁴ Koncz 2019, 104.

⁴⁵ Koncz 2019, 115.

Anna Petrasovszky's natural law research reveals the intellectual background of the legislation of the period analyzed by Ibolya Kónecz. „The claim for water regulation is shown by the fact that whereas the legal regulation regarding water hardly ever appeared in our laws in the course of the former centuries, however, in the years of 1800's, especially in their last third, the Hungarian Parliament established acts referring to water issues.”⁴⁶ Namely it was „the state that played an increasingly active role in water management and its legal regulation. The law of reason version of natural law served as a theoretical basis for it in the first half of 19th century.”⁴⁷ „Natural law researching self-organizing mechanism took a strong racionalistic turn from the 17th century. In this process, in view of the ideas of enlightenment, it created a specific version known as the law of reason doctrine by the turning point of the 19th century, which became a synonym for the theoretical jurisprudence. By this nomination it referred to the fact, that contrary to the former natural law based on racionalism in its strict sense ‘*the source of rights are provided by their ethical justification*’, and that can be concluded by pure reason by means of formal logic. The law of reason doctrine approving the ‘*moral turnaround*’ by Immanuel Kant derived the source of rights not from human instincts, but it started from the premise that human being is able to control himself as a rational being, and in consequence he is ethically responsible for his deeds. [...] Therefore, the issue is not what he can do within the scope of natural rules and his physical abilities, but what it is allowed to do, in other words, what he should do on the basis of reason. Natural law elaborated its theoretical conclusions for the practical application from this new aspect, in which it attributed a prominent role to public management in the public interest. It strived to reveal the principles of operating rationally organized state based on an up-to-date legitimate legal order. [...] The merit of this new critical theory of reason was to elaborate the theoretical principles of individual rights and legal regulation of public law derived from them in a coherent system. This natural law trend rooted in the Hungarian legal philosophy in the first decades of 19th century, as well as it is available in the contemporary legal literature written in Latin.”⁴⁸ „Special maxims have not been elaborated yet, but certain parts of natural law concept involve aspects which may be related to water as a subject of legal regulation. Natural resources including water were considered by the state as the part of its national wealth. Regardless of their ownership they are treated as subjects of legal regulation whereby the state by the virtue of *ius eminens* is empowered to intervene in the ownership relations of society.”⁴⁹

2.4. Water and the different fields of law

In the research of *Nóra Jakab* and *Gábor Mélypataki*, human rights issues were at the centre. The authors analyzed the right to water in a characteristic approach, namely as a fundamental social right. So far, this has been a less developed aspect of the right

⁴⁶ Petrasovszky 2019, 195.

⁴⁷ Petrasovszky 2019, 204.

⁴⁸ Petrasovszky 2019, 196–197.

⁴⁹ Petrasovszky 2019, 204.

to water in Hungarian law, which makes the authors' study a particularly valuable analysis. In connection with these, the authors found the following. "The explicit definition of the right to water as a social fundamental right occurred in the text of the Social Pillar at first. However, this approach has been common in its practical use. This is essentially because it is a third-generation right, but by nature it acts as a fundamental social right, which comes from the right to health and is related to communities. The members of the community are those who require social aid. However, the basis for eligibility is not the actual exercise of the right, but the equality of the access to the law. Investigating the concepts of equality, proportionality and solidarity completes the picture. These elements are parts of all social fundamental rights. From this perspective, the nature of the right to water has dual nature. On the one hand, as a third-generation right, addressees cannot always be defined. As a result, similarly to other third-generation rights, its enforcement is contested. Although, in connection with the right to water, the state's active involvement is also needed. In this context, the notion of the state should be interpreted extensively, it also includes local governments, which traditionally play a major role in social areas, both in terms of organization and financing. This also comes up in the case of the right to water. Access to water must be equally guaranteed for everyone, and it should be organized where needed. The state must never aim at aid, but rather on the position of an individual: creating conditions and creating (supporting) communities that can help the individuals to cope with their social difficulties. And the right to water can be qualified as a fundamental social right on the basis of the above, as there is a need for a significant amount of public investment in this area to try to put people in position by providing the possibility of equal access for them. Analysing domestic and international sources of law, we can say that the right to water is a social fundamental right, just as a third-generation right, derived from its connection to Article XX of the Fundamental Law and the nature of legitimacy outlined above."⁵⁰

The article of *Csilla Csák* focuses on an important issue of water protection and nature conservation, namely the protection of aquatic ecosystems in the Hungarian national law. In a quite complex way, she especially analyses the legal aspects of constitutional law, water management law, environmental law, nature conservation law and private law. Fundamentally, her conclusions are optimistic: "The Hungarian regulation follows and enforces the implementation of the goals set in the field of environmental protection and nature protection, the maintenance and increase of the level of protection, despite the fact that there are still some obstacles and shortcomings that have to be solved."⁵¹

Zoltán Nagy's article affects one of the most topical issues of the Hungarian water management, namely the financial aspect. His research essentially focuses on problems connected to the appropriate application of the cost recovery principle of the Water Framework Directive in Hungary. In connection with this principle, he stated that the "regulation has to consider water-related economic and social issues. Water is not only a primary condition for human life, but also an essential resource for

⁵⁰ Jakab & Mélypataki 2019, 60.

⁵¹ Csák 2019, 20.

economic activity. It is necessary to ensure that household consumers have access to fair prices and economic operators at prices and terms that does not interfere their activity and ensure their competitiveness. On the other hand, there is limited natural resources available, whose reproduction must be guaranteed, and use must be sustained. The presented financial instruments show that it is a complicated, highly politicized system that is difficult to change, though it should. There is a need for change in a more cost-effective utilization and for building a more up-to-date line and service system. Funds could be provided by the introduction of water tax. Income tax would be the revenue of a local government that could be only used for protecting the water base and improving the service. The transmitter could be a lane progressive tax in which the lanes would be formed in the proportion of consumption and a 0 percent or a minimum amount would be established for a lower consumption rate. The tax would aid the protection of natural resources and stimulate a more efficient consumption.”⁵²

In her article, *Éva Erdős* uniquely connects the property issues of waters with the different fields of financial law. As for the links, she emphasizes the following connections: “the ownership of water into national assets – [i.e.] state and municipal property, water regulation, financial issues of water management, rules of water utilization, or it is precisely the regulation of water use charges, whether in the form of fines (groundwater fines, sewage penalties) or contributions (water supply charges).”⁵³

István Olajos dealt with a less researched area of Hungarian law, namely the fisheries law. The study has highlighted a number of serious legal issues in the area. István Olajos’s research can be considered as an unique and precious report. The author’s starting point is the following. “Due to the amendment of the Fishing Act in 2017, fishermen living from water and fishing companies were out from our natural waters, because the Act directly prefers the angling utilisation [...]. The first result of the made set of measures is that the conflict between the fishermen and anglers was further expanded. The fishermen excluded from the natural waters are increasingly forced to turn to artificial lakes and quarry ponds, which owners may be such owners, who exercise the state ownership and furthermore such natural persons, whose are interested in the outside fishing economic utilisation of their waters. It is an important questions whether the sacrement of the ownership and the compliance of all three part licenses predominate in case of fishing waters. [...] The other questions are how the fishing companies ensures the living of the fishermen excluded from the natural waters”⁵⁴ “The fishing right, which was qualified as the inseparable part-right of the waters’ ownership for a long time, but it makes the owner entitled for the fisheries management or the sublessee the subject of the exercise of right from 2013. The acquisition on fish of the practical fishermen or angler is one form of the exercise of right by the entitled person. The acquisition on fish of the practical fishermen or angler has several public law obstacles, so with the compliance of the omission of these obstacles, the entitled person for fisheries management get the ownership on fish. The nature and role of the fish farmer’s nature conservation fish farmer was increased.

⁵² Nagy Z 2019, 174.

⁵³ Erdős 2019, 53.

⁵⁴ Olajos 2019, 131.

The fisheries management right of the establisher of a new fishing water is provided only for the first 15 years of fisheries management cycle. The artificial contradiction between fishermen and anglers can be solved through a more thoughtful fishing policy. Related to the exercise of fishing rights, the role of local communities should be increased. The utilisation right of special waters should be left to the local governments. The issues of water and fisheries management authorities and the nature conservation authority should be harmonised. In case of the establishment of fishing areas, the fisheries management right of the owner should not be diminished.”⁵⁵

Bianka Kocsis examined some water issues related to the enlargement of the Paks Nuclear Power Plant in her study. In her research, she sought in particular the following questions: “(a) Has the environmental impact assessment study got parts on examining whether the good status of water of the Danube is in safe? (b) Were there any comments in connection with good status of water of the Danube during the first or second instance environmental permitting procedure? (c) What kind of comments were submitted? (d) With regard to the comments, were the first and second instance permissions legal? (e) What are the potential risk factors during the water licence procedure?”⁵⁶ Finally, she stated that „environmental impact assessment study of the Paks II investment analyses maintenance of good status of water of the Danube in details”,⁵⁷ and that „[d]espite of the submitted comments first and second instance permits were legal alike – the environmental impact study has no serious shortcomings, and it does not harm the examined regulations of the Water Framework Directive.”⁵⁸ Besides, she drew attention to the situation that „the water licence in principle is in effect until 2019, or in case of lengthen until 2020. According to the original plan, construction permit must be applied for in September of 2018, however it has not been applied yet (one of its reasons is the long examinations of the EU). If it will be applied for in 2019, the licence will be in effect. However, in case of further continuance, the licence will not be in effect, when the investment will get the establishing permit. From the viewpoint of law, it is not an obstacle for the investment, since water licence in principle is not a condition for the establishing permit. Nevertheless, content of the licence will not binding for the water authority – and it could cause some difficulties, and more continuance. Although it is just a hypothetic situation, but it worse to draw attention to that, because continuance of the investment may cause higher costs. For example, if the construction will not be finished until 15.03.2026, Hungary must start the repayment of the loan came from Russia before finishing the project. In my opinion, as a result of this process, Hungary may be forced to take additional loan because of the higher costs. To summarize the results of the study, in case of correct procedures of the future periods of the investment, it does not threaten the achievement of good status of water of the Danube (and other neighbouring surface and groundwaters).”⁵⁹

⁵⁵ Olajos 2019, 143–144.

⁵⁶ Kocsis 2019, 65–66.

⁵⁷ Kocsis 2019, 75.

⁵⁸ Ibid.

⁵⁹ Kocsis 2019, 76.

In his study, *István Turkovics* examined the specialty of administrative procedures in water issues. In this respect, he made a particularly valuable individual analysis. He stated that “[i]t can be observed that even the administrative area the subject of which is water, i.e. a natural resource, will exist as a mixture of several administrative areas. It is because water-related administrative tasks can be considered as specific issues related to other administrative areas. If one examines the tasks occurring in the field of water administration, it can be seen that they usually have nature protection, transport, healthcare or construction features, sharing one common issue, which, in the present case, is water. [...] From regulatory and administrative perspectives, water [legislation and management] can be divided into a number of different fields, such as water as national treasure management, water related utility services, as well as the protection of water as natural treasure.”⁶⁰ Then, his analysis was focused on the above mentioned types of water administration.

3. Conclusions

If the results obtained by the authors of each research are placed in the system described in the first chapter of this paper, the following statement can be made. The researches of Anna Petrasovszky, István Olajos, Ibolya Koncz, Pál Sály and Éva Erdős provided new approach to the regulatory concept of ‘water as the subject of power, possession and property’. The reports of Anita Nagy, Csilla Csák, Zoltán Nagy, György Marinkás, János Ede Szilágyi essentially affect the regulatory concept of ‘water as an environmental element’. The regulatory concept of ‘water as a natural resource and the subject of commercial transactions’ is analysed by Ibolya Koncz, Zsófia Hornyák, Zoltán Nagy, Bianka Kocsis, Anna Petrasovszky, Pál Sály, István Turkovics, István Olajos, György Marinkás, János Ede Szilágyi, Péter Szűcs and Csaba Ilyés. The regulatory concept of ‘the right to water’ is on the focus of the research provided by Nóra Jakab, Gábor Mélypataki, János Ede Szilágyi. The regulatory concept of ‘the legal regulation concerning water-related damage events’ is analysed by Pál Sály, György Marinkás, János Ede Szilágyi. The regulatory concept of ‘the river basin as the basis of institutional system’ is assessed by György Marinkás, and János Ede Szilágyi.

⁶⁰ Turkovics, 215–2016.

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