

Sanja SAVČIĆ\*  
Intellectual Property Law Aspects of Environmental Protection and Sustainable  
Development: Where Is the Line Between Public and Private Interests?\*

*Abstract*

*Protection of the environment is regulated by numerous laws and bylaws, within legal areas. As regards regulations of an imperative nature, there is no doubt that these provisions represent the public interest and responsibility of the state to preserve and improve the environment. The paper examines the potential of private law rights to contribute to environmental protection and improvement, because the action of entities depends on the choice of whether to act or not in certain circumstances. To illustrate a possible contribution of private law in environmental protection matters, patent and indications of geographical origin have attracted attention. While trying to determine a particular connection between rights and environmental matters, it has become clear that significant improvement of environmental protection can be provided in a circular flow through different areas of law. Protecting and supporting private law rights is not detached from guarding the public interest. An examination of patent law potential should demonstrate that cooperation between scientific research institutions and industry is of primary concern in modern society. In practice, a number of issues obstruct successful cooperation; however, this is an opportunity for the state to encourage collaboration. A similar approach should be suggested in relation to indications of geographical origin. State and local governments should encourage recognition of indicators of geographical origin, attracted to localities of high environmental quality.*

**Keywords:** intellectual property law, environmental protection, sustainable development, public interest, private interest.

## 1. Introduction

Modern human beings have not only adapted nature to their needs but have also created an environment that supports this perception. This achievement has endangered the natural value of water, air, and food for the present and future generations.

Environmental protection has been recognized as a task of the highest law in Serbia. In this context, the Constitution has three types of provisions that are of importance in this matter.

The first is the provision of the right to a healthy environment. Article 74 of the Constitution Act of the Republic of Serbia, Healthy Environment, provides that everyone shall have the right to a healthy environment and the right to timely and full information about the state of the environment. Everyone, especially the Republic of Serbia and its

---

Sanja Savčić: Intellectual Property Law Aspects of Environmental Protection and Sustainable Development: Where Is the Line Between Public and Private Interests? *Journal of Agricultural and Environmental Law* ISSN 1788-6171, 2023 Vol. XVIII No. 34 pp. 125-142, <https://doi.org/10.21029/JAEL.2023.34.125>

\* dr. jur., associate professor, University of Novi Sad, Faculty of Law.

\*\* *The research and preparation of this study was supported by the Central European Academy.*



provinces, shall be accountable for the protection of the environment and shall be obliged to preserve and improve the environment.

The second type of provision establishes a healthy environment as a reason for the restriction of other rights.

Finally, determination of the competence for the issue of environmental protection is also provided by the Constitution Act. The constitution provides that everyone shall be obliged to preserve and improve the environment, but the Republic of Serbia and provinces are accountable for the protection of the environment (Art. 74(2)).

Environmental protection is regulated by numerous laws and bylaws within all legal areas.<sup>1</sup> Many regulations illustrate the need for legal intervention to protect the environment for future generations. Therefore, regulations cover a wide range of legal interventions. Most provisions on environmental matters are directed on setting standards for environmental protection and prohibiting vulnerable or hazardous acts; consequently, these provisions are equipped with different kinds of measures to achieve and maintain the desired standards for a healthy environment.

Regarding regulation of imperative nature, there is no doubt that these provisions represent the public interest and responsibility of the state to preserve and improve the environment. Everyone is obliged to follow imperative rules. Attention in this article is paid to situations when the action depends on choice, whether to act or not, in certain circumstances.

## 2. Civil Law Aspects of Environmental Matters

Civil law rights are guaranteed to protect recognized private interests. Hence, the rights holder has the freedom to decide whether he/she will exercise his/her right, and when, how, and to what extent the right will be exercised. This freedom is limited by imperative norms, public order, and good business practices.<sup>2</sup> Keeping in mind that a healthy environment is of constitutional relevance, indisputable civil law rights could be restricted due to the care of the environment. The Constitution of Serbia contains explicit provisions in this regard, especially that the right to a healthy environment is the reason for restrictions on other human rights. Entrepreneurship, for instance, may be restricted by the law for protecting people's health, environment, and natural goods and security in the Republic of Serbia.<sup>3</sup> Similarly, according to the Constitution, the law may restrict the models of utilization and management of agricultural land, forest land, and municipal building land on private assets, to eliminate the danger of causing damage to the environment or prevent violation of rights and legally justified interests of other persons.<sup>4</sup>

---

<sup>1</sup> According to the official data, there are 17 laws and over 270 by laws relevant to environmental protection. These regulations cover different sectors of commerce and life, the Law on Environmental Protection could be realized as the general law, because it consists of principles of environmental protection.

<sup>2</sup> Law on Contracts and Torts, Official Gazette of the Social Federal Republic of Yugoslavia, no. 29/78, 39/85, 45/89 – Constitutional Court Decision and 57/89, Official Gazette of the FRY br. 31/93, Official Gazette of the Republic of Serbia, No. 1/2003 – and 18/2020, Art. 10.

<sup>3</sup> The Constitution of the Republic of Serbia, Official Gazette of the Republic of Serbia, no. 98/2006 (hereinafter referred to as Constitution), Art. 83.

<sup>4</sup> Constitution, Art. 88.

The latter means that the owner cannot use his/her property rights (*usus, fructus, abusus*) in his/her own manner.

These illustratively mentioned constitutional provisions indicate that the legal system of environmental protection in the field of civil, or rather private law, lays in restrictions. Therefore, it seems that the potential of other civil law regulations, not explicitly linked to environmental protection, is not recognized. Here we consider the fact that the need to protect the environment for future generations could be achieved not only by prohibitions of certain actions, but also by supporting or forcing the exercise of the law. Moreover, as Art. 74, para. 2 provides that there is an obligation of everyone, especially of the state, not just to protect, but to improve the environment as well.

In this regard, further examination would demonstrate whether private law regulations could result in the improvement of environmental protection.

### 3. Environmental Protection and Sustainable Development

The level of development of the society has reached an extent where the survival of the human species has been questioned for a long period. Human beings have not only adapted nature to their needs but have also created an environment in accordance with their own image. In the technical and technological sense, there are numerous illustrations of human power. However, each time humans battle nature, the unpredictable strength of nature is displayed. This long-lasting 'outsmarting', that humans named achievements, threatens to destroy future generations' sources of existential needs: water, air, and food. For these reasons, the current challenge is to find a compromise between nature and humans. In other words, the long-term goal is to shape society that would deliver further technical-technological and economic progress, while preserving natural values for future generations.<sup>5</sup> Specifically, the aim is to promote development that would not endanger living conditions for a long period, that is, to arrange sustainable development.

Sustainable development must be realized as a complex, multidimensional concept. Within the framework of the United Nations, several acts have been adopted to proclaim the principle of sustainable development.<sup>6</sup> None of them contain binding provisions, but they define the priorities of future development. In terms of the above, the concrete measures that need to be taken are quite complex and imply organized social, state, and scientific action at all levels.<sup>7</sup>

The Treaty on the European Community establishes a policy on environmental protection, the rational use of natural resources, and international cooperation in resolving environmental problems. As part of the transferred competence, numerous acts were adopted at the EU level, which define these issues in more detail. With the entry into force of the Treaty of Lisbon, increased activity is expected in ensuring legal

---

<sup>5</sup> Nikolić 2009, 50.

<sup>6</sup> The most important are: Declaration of the United Nations Conference on the Human Environment, Stockholm, 1972, Declaration on Environment and Development, Rio de Janeiro, 1992, Declaration on Sustainable Development, Johannesburg, 2002.

<sup>7</sup> Thus, sustainable tourism, sustainable consumption and production, sustainable agriculture, food, sustainable architecture, etc., are being talked about more often. Radovanović 2011, 951.

frameworks for sustainable development, since the act foresees the obligation to include a high level of environmental protection and the improvement of its quality in the policy of the Union.<sup>8</sup>

Regarding Serbia, the Constitution mentions sustainable development *expressis verbis* only in the provisions on competence of the Republic of Serbia, even though it is a commitment of the Republic of Serbia. According to Article 94, Balanced Development, the Republic of Serbia shall take care of balance and sustainable regional development in accordance with the law. In addition, in Art. 97, para. 1, ad 9 regulates that the Republic of Serbia shall organize and provide for sustainable development, system of protection and improvement of environment, protection and improvement of flora and fauna, production, trade, and transport of arms, poisonous, inflammable, explosive, radioactive, and other hazardous substances.

Considering the importance and complexity of sustainable development, apart from the competence of state authorities, provinces and local municipalities have numerous delegated competences regarding environmental matters.<sup>9</sup> In addition, mentioning sustainable development in the context of environmental protection directly sets the core of sustainability into the framework of protection of the environment and, in particular, natural values. Therefore, the Law on Environmental Protection explicitly prescribes the principle of sustainable development<sup>10</sup> and provides its meaning. In this aspect, sustainable development should be understood as a harmonized system of technical-technological, economic, and social activities in overall development, in which natural and created values of the Republic of Serbia should be implemented on the principles of economy and reasonableness, to preserve and improve environmental quality for present and future generations. More precisely, sustainable development is to be achieved by making and implementing decisions that ensure the harmonization of the interests of environmental protection and economic development. In other words, the principle of sustainable development could be considered as an expression of the necessity to set a permanent and consistent system of balanced and simultaneous economic prosperity and environmental protection.<sup>11</sup>

Attaining sustainable development is a gradual and comprehensive process, which should overcome the influence of institutional and group interests.<sup>12</sup> However, that does not mean that rights that protect private interest should be ignored, partly because private interests could be an engine for desired progress and sustainability.

---

<sup>8</sup> Knez 2009, 289.

<sup>9</sup> As regards environmental matters of autonomous province, Constitution of RS, Art. 183, para. 2, ad 2, and on competence of local self-government units regarding the environment, Art. 190, para. 1, ad 6 and 7.

<sup>10</sup> Law on Environmental Protection, Official Gazette of Republic of Serbia, No.135/2004, Art. 9, para. 1, ad 4.

<sup>11</sup> Drenovak-Ivanović 2021, 39.

<sup>12</sup> Mebratu 1998, 515–518.

#### 4. Innovation as an Aspect of the Environmental Protection and Sustainable Development

The conceptual definition of sustainable development indicates that inventiveness is an integral element. On the one hand, technical-technological progress is based on invention as it drives economic progress. On the other hand, technical-technological solutions should emerge from inventions that maintain the constancy of natural resources to the greatest extent.

With the rise of global emissions, technological innovation has become the focus of policymakers. As stated in the literature, *“Most organizations abandoned response measures and short-term strategies to eliminate environmental inadequacy and adopted proactive and innovative environmental approaches.”*<sup>13</sup> This should be supported by economic and environmental regulations.

It is well known that the European Union set the target for climate-neutrality by 2050 in the core of the European Green Deal,<sup>14</sup> which is the EU’s commitment to global climate action under the Paris Agreement.<sup>15</sup> With regard to this, and based on a comprehensive impact assessment, the European Commission has proposed to increase the EU’s ambition to reduce greenhouse gases and set it ambitiously for 2030. The assessment shows that all sectors of the economy and society can contribute towards this and it sets out the policy actions required to achieve this goal. With regard to carbon-neutral activities, spending on clean energy technologies has been increasing over the last decade. European companies targeted ‘high-value’ inventions with international protection, which displays a growing confidence in their competitiveness in the global energy technology market.<sup>16</sup> Impact assessment shows that the largest share of respondents perceived that revenue from carbon pricing should be used to finance green technologies and low-emission mobility infrastructure.<sup>17</sup> Further, new Strategic Investment Facility (EUR 15 billion provision) will be the key EU instrument to crowd in private capital to support investments in policy areas essential for achieving the European Green Deal objectives: including renewable energy, energy efficiency, decarbonized energy infrastructure or research and innovation in green technologies. All projects above a certain size financed by InvestEU will be subject to sustainability proofing, to ensure they are in line with the Green Deal.<sup>18</sup>

---

<sup>13</sup> Khurshid et al. 2021, 1; Fraj et al. 2015, 30–42.

<sup>14</sup> A European Green Deal, 12 August 2022.

<sup>15</sup> Paris Agreement, 25 July 2022.

<sup>16</sup> Commission Staff Working Document Impact Assessment – 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, Stepping up Europe’s 2030 climate ambition Investing in a climate-neutral future for the benefit of our people, 30 July 2022.

<sup>17</sup> Ibid.

<sup>18</sup> Ibid. under 9.11.1 Green recovery from the COVID-19 crisis.

## 5. Role of Patent Protection in Environmental Protection and Sustainable Development

Inventiveness is not a goal in itself. By placing a new product on the market or applying a new procedure in production, the inventor expects that the invested values (knowledge, time, and money) will be economically valorized. Patent law plays a significant role in this regard that is, with the recognition of a patent for a technical invention that is creative, has an inventive level, and is industrially applicable, the holder exclusively acquires the right to exploit the subject of protection for a limited period. In other words, he/she is authorized to exploit the patented invention but also to oppose all third parties who do so without his/her consent. By doing so, he/she gains a market advantage over his competitors and, consequently, a financial gain. It is precisely this privilege of exclusivity that the patent provides along with an incentive for further technical and technological improvements.<sup>19</sup>

The economic implications of patent protection go beyond the interests of individuals. If we bear in mind that patent policy is a national issue, it is clear that normative regulation could significantly influence the development of the internal market, as well as the attraction of foreign investments. For these reasons, patent legislation reflects an economic strategy at the national level.<sup>20</sup> Viewed globally, disparity among different legal systems of patent protection deepens the gap between rich and poor societies. In developed countries, investing in inventiveness is an unquestionable method of technical and technological development. Undeveloped and developing countries do not have conditions for the development of their technologies. Therefore, their development depends on the import or transfer of technology from developed countries. For the above reasons, this transfer requires at least an acceptable level of patent protection.<sup>21</sup> The global character of sustainable development imposes an even

---

<sup>19</sup> Radovanović 2011, 951–953.

<sup>20</sup> The most obvious confirmation of this statement is the patent system of the United States of America. Namely, the position of the leader on the world market is largely due to the rather liberal interpretation of the conditions of patentability, which is illustratively reduced to the recognition of a patent for everything “*under the sun that man makes.*” *Diamond v. Chakrabarty* 1980, 447; d’Erme 2022. The other extreme is made up of underdeveloped and developing countries, which recognize patent protection as an obstacle to economic development and the rise of social standards. These countries do not have enough capacity to create a market-competitive product on their own, viewed at the global level. Their economy is based mainly on imports. Placing patented inventions in markets where there is no adequate protection is a risk for the holder. Namely, a protected product or process can be imitated, with significantly less costs than it takes to create it. Therefore, holders want to register patents in these countries as well. Sometimes this is their only interest, because it is possible that they do not locate the production of the protected invention or the application of the protected process in the territories of underdeveloped or developing countries. The subject of the patent, for those reasons, however, must be imported or it would be absent from the market (as regards expensive technology). Kameri-Mboten 2022. See more: Radovanović 2011, 952–953.

<sup>21</sup> An interesting example of the extent to which adequate patent protection contributes to the rise of the economy is certainly China, which is clearly becoming a new economic power. In the past decade, there has been a drastic growth of local production based on imported technologies, but also on the increasing participation of the domestic research sector. In addition to production,

greater obligation on relevant entities to find solutions that would satisfy conflicting interests to the greatest extent. The field of action, understandably, encroaches on the internationalization of the patent system, since inventiveness, as explained earlier, is supposed to be a significant factor in past and future green action plans.<sup>22</sup>

The starting point in the determination of the patent framework of sustainable development is the question of whether technology based on saving the natural environment, that is, on the use of renewable resources (environment friendly technology, green technology, environmentally sound technology [EST], herein after sustainable technology) should be subsumed under a special patent program. In this sense, sustainable technology should be exempt from patent protection, or the protection period should be shortened so that it becomes available as soon as possible.<sup>23</sup>

UN and non-governmental organizations have made efforts to ensure that the relevant institutions, primarily the World Intellectual Property Organization (WIPO) and World Trade Organization (WTO), support sustainable technology. Thus, in 2007, within the framework of WIPO, an act was adopted that accepted recommendations in the direction of sustainable development.<sup>24</sup> However, the provisions are principles rather than binding rules. In addition, the fact that there was a reaction at this level several years after the adoption of the UN Millennium Development Goals and other declarations of similar content indicate that this is a sensitive and important issue. However, a specific system of patents for green technology has not yet been established at the international level.

Certain international acts, most importantly TRIPS, leave room for sustainable technology to be separated from the general regime of patent protection.

Specific solutions, with particular reference to the approach of the legislature of the Republic of Serbia, are explored in this article.

### 5.1. Exceptions to Patentability

According to Art. 27, paragraph 2, TRIPS provides that members may exclude from patenting those inventions whose commercial exploitation in their territory is not acceptable for reasons of protection of public order and morals, including the protection of life and health of humans, animals, or plants, or to avoid serious damage to the environment, provided that the exclusion is not made only because the exploitation is prohibited by national law.

TRIPS does not exempt sustainable technology from patent protection but rather adopts, conditionally speaking, a compromise that only those inventions that may seriously harm the environment can be patented. Starting from the market implications of the patent, which actually form the core of TRIPS, in an indirect way, the funds

---

the world's leading companies are increasingly moving research centers to China. A significant role in this process was undoubtedly played by the fact that intellectual property protection was raised to the level of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). Straus 2009, 31. See more: Radovanović 2011, 952–953.

<sup>22</sup> Radovanović 2011, 953.

<sup>23</sup> Radovanović 2011, 954.

<sup>24</sup> WIPO Development Agenda, 30 July 2022.

intended for research and development of technology are directed precisely toward sustainable technology. Suppression of the exploitation of technology that seriously damages the natural environment should follow spontaneously, according to the market laws of competitive supply and demand.<sup>25</sup>

Serbian legislators take a neutral position on this matter. The provision on exceptions to patentability covers only inventions that are against the public order and morals of society and harm the life and health of people and animals, or plant varieties,<sup>26</sup> but not inventions that could seriously damage the environment.

The Law on Patents of Serbia provides several situations in which a compulsory license<sup>27</sup> may be granted.<sup>28</sup> Even though all of the provided cases, under certain circumstances, could be applied, for the purpose of this research few of them would be mentioned. The most relevant provisions on compulsory license are those provided in the case that exploitation of the patent is in the public interest, as well as those compulsory licenses for the purpose of protecting health, nutrition of the population, public interest in areas of vital importance for socioeconomic and technological development, or for the purpose of protecting competition on the market.<sup>29</sup>

Although not explicitly stated, the need to preserve the environment is a legitimate reason for issuing a compulsory license, even more so because the preservation of a healthy environment is the reason for the restriction of other constitutional rights. Thus, considering the social importance, it is possible for a compulsory license for sustainable technology to be granted immediately after obtaining or registering a patent in the Intellectual Property Office, with the obligation of interested users to pay the appropriate fee.<sup>30</sup> Additionally, if the patent holder does not use or insufficiently uses the protected invention in the field of sustainable technology for four years from the date of submission of the application, that is, three years from the date of recognition of the patent, the interested party may (after proving that he or she tried to conclude a license agreement with the holder under reasonable economic conditions and deadlines)<sup>31</sup> submit a request for the issuance of a compulsory license to the competent authority in the field in which the invention is to be applied. A compulsory license will not be granted if the interested party does not have the technological conditions and production capacities necessary to exploit the patent.<sup>32</sup> Such a solution is understandable, considering the function of the cited provisions. The purpose of a compulsory license is not to limit rights but to exploit the patent economically for the benefit of society.

If we relate this to the foregoing exceptions to patentability and the conditions for obtaining a compulsory license, a national strategy regarding sustainable technology could be perceived. These inventions are patentable, and consequently, it is possible to register

---

<sup>25</sup> Radovanović 2011, 955.

<sup>26</sup> Law on Patents, Official Gazette of the Republic of Serbia, No. 99/2011, 113/2017, 95/2018, 66/2019 and 123/2021, Art. 9.

<sup>27</sup> Compulsory licence means that government, under certain condition, is allowed to authorise the use of a patented invention without the consent of the patent holder.

<sup>28</sup> Art. 26–31.

<sup>29</sup> Marković & Popović 2020, 145.

<sup>30</sup> Law on Patents, Art. 26, para. 8.

<sup>31</sup> Law on Patents, Art. 26, para. 2.

<sup>32</sup> Law on Patents, Art. 26,



a patent of foreign origin for sustainable technology. This creates favorable conditions for foreign investments. In this sense, issuing a compulsory license can represent a way to exploit advanced sustainable technology in the domestic market or to develop domestic inventions.<sup>33</sup> However, the widespread practice of approving compulsory licenses could have the opposite effect that is, of discouraging investment by foreign business entities. Thus, to avoid compulsory obligation, a foreign company can decide not to register a patent in Serbia. In this case, protected inventive products would not be offered in the domestic market.<sup>34</sup>

In addition, the use of any, even sustainable, technology can be largely based on knowhow, which is not covered by a compulsory license, or on human resources (knowledge and experience). Therefore, compulsory licenses cannot be considered an assurance that sustainable technology will actually become available in the domestic market or in industry.

## 5.2. Commercialization of Green Technology

The previous part of the examination of patent law demonstrated a proper ground for the development of green technology in the domestic market.<sup>35</sup> However, the practical consequences were not as strong as expected. Regarding foreign investments, it could be stated that the reasons for the insufficient transfer of technology oriented toward the preservation and protection of the environment are outside the legal framework of patent protection. It is similar to domestic invention. While for foreign inventors, one could find justification, among other things, in the fact that Serbian market is not attractive enough, at the same time, for domestic inventors the incentive should not be lacking.<sup>36</sup>

On the one hand, the exploitation of domestic patents usually begins within Serbian territory. On the other hand, the economic growth of the domestic economy depends, largely, on the ability to compete in the world market with domestic technological innovations. Therefore, factors of sustainable development in the national economy are found in the economic exploitation of domestic inventions in the field of green technology. In other words, future development should be based on two simultaneous processes: stimulation of innovations in the field of sustainable technology, and creation of conditions for full-scale economic exploitation.<sup>37</sup>

This proclaimed goal is in accordance with the Serbian (UN) Agenda 2030 to achieve a sustainable industry that works on clean technology to reduce the emission of CO<sub>2</sub> in relation to GDP, which is, according to World Bank data, double the value of

---

<sup>33</sup> Bainbridge 2007, 434; Varga 2010, 154; Radovanović 2011, 957.

<sup>34</sup> Radovanović 2011, 957.

<sup>35</sup> The reason for this is the fact that while drafting the Law on Patents (and other laws governing the legal protection of intellectual property), Serbia respected the standards contained in international conventions, especially those to which it is a signatory. In addition, Serbia has been a full member of the European Patent Convention and the European Patent Organization since October 1, 2010.

<sup>36</sup> Radovanović 2011, 958.

<sup>37</sup> Ibid.

EU members' average. Moreover, there is unfavorable ground for the enhancement of scientific research, improvement of technological capacities, and incentives for innovations.<sup>38</sup> Even though the number of researchers has been increasing over the last decade, Serbia still has almost half the number of studies per million citizens than the EU average. Participation of private entities in the field of science is extremely low if the investments, researchers, and range of research in the companies are considered.<sup>39</sup>

### 5.3. Incentives for Research in Green Technology

When it comes to stimulating innovation in the sphere of green technology, there are encouraging circumstances. According to the Strategy for Scientific and Technological Development of the Republic of Serbia for the period 2021–2025,<sup>40</sup> environmental protection, and climate change are of the highest priority. This is a continuation of the previously settled goals regarding science and technology development.<sup>41</sup>

Since protection of the environment is a commitment of the state authorities, the sustainability of public finance demands a balance between income and outcomes in environmental matters. From this point of view, financial instruments are aimed at providing public finances, and incentives to private individuals and businesses to harmonize their activities with environmental protection policies.<sup>42</sup> The Law on the Budget System, in Art. 18, paras. 1 and 2, provide that fees may be introduced for the use of goods that are determined by a special law as natural resources, that is, goods of general interest and goods in general use.<sup>43</sup> All the provided fees are included in the Green Fund, which was established in 2016,<sup>44</sup> in accordance with the Law on Environmental Protection. The aim of the Green Fund is to receive funds intended for financing the preparation, implementation, and development of programs, projects, and other activities in the field of conservation, sustainable use, protection, and improvement of environmental change. The question arises as to which entities are invited to respond to

---

<sup>38</sup> 9.5.1. UN indicator, Agenda, 14.

<sup>39</sup> 9.5.2. UN indicator, Agenda, 14.

<sup>40</sup> Strategijanaučnogitehnološkograzvoja Republike Srbije za period 2021–2025.

<sup>41</sup> Strategijanaučnogitehnološkograzvoja Republike Srbije za period 2010–2015.

<sup>42</sup> Cvjetković 2014, 386.

<sup>43</sup> The person liable to pay the fee, the basis for payment of the fee, the amount of the fee, the manner of determining and paying the fee, as well as the affiliation of the fee are regulated by a special law proposed and implemented by the ministry in charge of finance. The usual fees in Serbia are: fee for the use of natural values (Law on Environmental Protection, Art. 84); compensation for environmental pollution (Law on Environmental Protection, Art. 85); fee for the use of the fishing area; fee for the use of the protected area; fee for the collection, use, and trade of species of wild flora, fauna, and fungi; fee for protection and improvement of the environment; compensation for products that after use become special waste streams; fee for packaging or packaged products that after use becomes packaging waste; fee for water pollution (Law on fees for the use of public goods, Official Gazette of the Republic of Serbia, no. 95/2018, 49/2019, 86/2019, 156/2020, 15/2021).

<sup>44</sup> Decision on the establishment of the Green Fund of the Republic of Serbia: 91/2016-17, 78/2017-24, Official Gazette of the Republic of Serbia, no. 91/2016.

the expectations of the government and other authorities or organizations that invested in the research.

Universities and scientific research institutions should be able to respond to expectations regarding certain research. Universities, as educational and scientific institutions, have the necessary capacity for the research and development of sustainable technology. This primarily refers to human resources, which are already engaged in research within the scope of the employer's activities. However, research, in itself, and even when patents are granted, is an initial phase of improvement. To achieve economic development, it is necessary to make the results available in the market. At this stage, institutions face certain problems because of their non-commercial nature. The funds intended for research are limited in scope and purpose, and therefore are usually exhausted during the research. The production or application of sustainable technology for the sake of market exploitation requires new investments. The next step in marketing the improved technology depends on business entities. In addition, researchers do not have sufficient market-relevant information or negotiation skills. For this reason, cooperation between research and business can only be achieved if the conditions for multidirectional communication are created.<sup>45</sup>

## 6. Indications of Geographical Origin

### 6.1. Indications of Geographical Origin in General

Indications of geographical origin are used to mark natural, agricultural, food and industrial products, and traditional handicraft products and services.<sup>46</sup> It is a common term for two different types of indications: appellation of origin, and geographical indication.

Appellation of origin, according to Article 3, is the geographical name of region, locality, or country used to designate a product originating therein, the quality and specific characteristics of which are due exclusively or essentially to the geographical environment, including natural and human factors, and such a product is produced, processed, and prepared entirely within a specific geographic area. Geographical indications identify particular goods as goods originating from the territory or specific country, region, or locality within such a territory, where a given quality reputation or other characteristics of such goods can be essentially attributed to their geographical origin, and such goods are produced and/or prepared within a definite geographical area (Article 4).

The distinction between the appellation of origin and geographical indication is in fact whether all phases in the production procedure take place in a narrow-limited area, as in the case with the appellation of origin or just the phase that gives the product its reputation (special characteristics and quality).<sup>47</sup>

---

<sup>45</sup> Radovanović 2011, 962.

<sup>46</sup> Law on indications of geographical origin, Official Gazette of the Republic of Serbia, no. 18/2010 and 44/2018, Art. 2.

<sup>47</sup> Marković & Popović 2020, 179, 180.

As is the case with all intellectual property (IP) rights, indications of geographical origin represent the exclusive property right that authorizes its holder to prohibit another from using the protected indication at the market.

From a commercial point of view, indications of geographical origin provide certain advantages in the market. Namely, the products or services labeled with indications of geographical origin indicate the distinctiveness of the goods, which is in connection with the geographical locality. This usually affects consumer choice on buying products. The higher value that consumers attach to products originating from specific geographic locations is expressed in the higher price for that product. The origin of goods gives them quality, reputation, or other valuable characteristics that are essentially attributable to their geographical origin.<sup>48</sup> Undoubtedly, with regard to the national economy, indications of geographical origin should play an important role. This is the case with producers of goods who are authorized to use indications of origin as well. Moreover, this commercial advantage underlies the legal intervention into the natural condition of the products' or services' success among other undifferentiated commodities.<sup>49</sup>

The additional value of products, created by indications of geographical origin, contributes to the national economic development, competitiveness of commercial entities, and promotion of tourist capacities – all of which could enable higher employment, regional and, rural development, and protect traditional knowledge. Apart from this economic justification and goal, indications of geographical origin, due to their essentiality, could receive the additional function of environmental protection and sustainable development, which we examine next.

## 6.2. Impact of Indications of Geographical Origin on Environmental Matters

To understand the impact of indications of geographical origin on environmental matters, it is necessary to briefly explain the procedure for the recognition of the indications of geographical origin and the recognition of the status of the authorized user of the indications.

The protection of geographical origin is realized in two phases. The first phase of administrative procedure, initiated in the Intellectual Property Office of the Republic of Serbia, concerns the registration of the indication of geographical origin (appellation of origin or geographical indications).<sup>50</sup> Application can be filed by domestic natural persons or legal entity persons who produce products marked with the name of the geographical area, or an association of individuals, or a chamber of commerce association of producers, or government bodies interested in the protection of goods with indications of origin. Foreign applications are proceeded if the indication is recognized in the country of its origin when it arises from international agreements.

The geographical indication shall be registered when goods originate from the territory of a certain country, region, or locality, where certain quality, reputation, and other characteristics can essentially be attributed to its geographical origin; however, for

---

<sup>48</sup> Blakeney 2017, 163.

<sup>49</sup> Révion et al. 2009, 10–16.

<sup>50</sup> Law on indications of geographical origin, Art. 18–31.

the registration of the appellation of origin, it is required that the characteristics of a certain product are exclusively or essentially conditioned by its geographic origin. The link between appellation of origin and locality is clear because all phases of production (preparation, processing, and production) take place in the related geographical area. In the case of geographical indications, one of these phases must be performed in a certain area.<sup>51</sup>

The distinction between the two types of indications of geographical origin implies procedural requirements as well as legal and commercial consequences.

The application for indications of geographical origin must contain, among other relevant data, a description of the geographic area, which includes precisely determined boundaries of a certain area, a geographical map of that area, and data about geographical and human factors from which the product attracts specific characteristics, quality, and reputation. Additionally, regarding appellation of origin, the application form is elaborate, and includes a project report. The project report is proof of the performed quality control and the special characteristics of the products.

The second phase of the administrative procedure is the recognition of authorized user status of the indication of geographical origin. Among other elements of the application, the applicant must provide proof on the performed quality control and special characteristics of the products, which shall be taken to be the certificate on the performed control of quality and special characteristics of the product issued by the certification body, not older than three months.<sup>52</sup>

The indication of geographical origin is acquired by entry into the Register of Indications of Geographical Origin, and its duration is unlimited. The status of the recognized user of the indication of geographical origin is acquired by entry in the Register of the Recognized Users of The Indication of Geographical Origin, and it lasts three years from the date of entry of granted status of recognized user, but it can be renewed unlimited number of times, as long as the appropriate indication of geographical origin lasts.<sup>53</sup> However, the status of the authorized user could cease, among other reasons, if the quality of products and services has changed, or the production has been extended out of the recognized geographical locality, or the technology of production has been changed.<sup>54</sup> For this reason, authorized users would make extraordinary endeavors to preserve the environmental conditions of their products. Drinking water could be considered the most illustrative product labeled by indication of origin, for which the user undertakes all necessary measures and improvements in order to guard its natural quality. In Serbia, few water sources are registered indications of geographical origin.<sup>55</sup> Associated to the potential of this natural good, this is a weak outcome.

---

<sup>51</sup> Law on indications of geographical origin, Art. 3 and 4.

<sup>52</sup> Law on indications of geographical origin, Arts. 32–51.

<sup>53</sup> Law on indications of geographical origin, Art. 48.

<sup>54</sup> Markovic & Popovic 2020, 182.

<sup>55</sup> National Register of the Intellectual Property Office of the Republic of Serbia, 29<sup>th</sup> August 2022.

### 6.3. Environmental Protection and Indications of Geographical Origin: Where Is the Link?

Considering the substantiality of the indications of geographical origin, the product for which indication is recognized has characteristics that are mainly attracted by natural conditions within a certain geographical area. For this reason, goods are often free of contaminants.<sup>56</sup>

There are a few reasons for this. The first reason is that product quality and specific characteristics primarily depend on conditions of geographic location – usually nature. Second, particularly when it comes to appellation of origin, quality of product must be proven by an expert entity, from the very moment of application, and further, during the whole period of its existence. As pointed out, the case of the opposite situation could be the reason for ceasing the status of the authorized user of indication.

Authorized users must keep production that complies with recognized quality, labeled by indications of the geographical origin. This means that the user of an indication should avoid technology or substances that could lead to the termination of the recognized status. This approach could cause decreasing production or even a lack of products in a certain period. However, eventual losses could be replaced by the benefit of labeled products on the market. Consumers are eager to pay increasing value for food with integrity, such as the environmental standards involved in the geographical landscape.<sup>57</sup>

Studies confirm the willingness of consumers to accept higher prices for products if the price includes transparency in relation to the structure and origin of the product.<sup>58</sup> Therefore, indications of geographical origin are equipped to testify to the local and natural characteristics, thereby acting as proxies for quality.<sup>59</sup> This statement is in line with policymakers' view that responsible environment management should be a justification for the protection of geographical indications of origin.<sup>60</sup>

An empirical study of the European olive oil industry, conducted by Belletti et al., demonstrates the effectiveness of the indications of geographical origin on environmental protection. The authors identified the connection between the indications and environmental preservation and protection. Along similar lines, lower rates of soil erosion have been detected, along with improvement of the fire-risk control, water efficiency, lower pollution, and other environmental improvements.<sup>61</sup>

---

<sup>56</sup> Blakeney 2017, 164.

<sup>57</sup> Renting et al. 2003, 393.

<sup>58</sup> Xu & Wu 2010, 1368.

<sup>59</sup> Zhao et al 2014, 77.

<sup>60</sup> European Commission, Common Agricultural Policy towards 2020 Assessment of Alternative Policy Options, Brussels, Belgium, SEC (2011) 1153 final/2, pp. 4, 25, 47. Similar approach is visible in the literature: Vandecandelaere et al. 2021; Flinzberger et al. 2022; Ferrer-Pérez et al. 2020; Marescotti et al. 2020; Owen et al. 2020; Chilla et al. 2020; Millet et al. 2020; Fernández-Zarza et al. 2021; Fracarolli 2021; Mariani et al. 2021.

<sup>61</sup> Blakeney 2017, 167.

Even though there is no imperative regulation on environmental issues within the content of indication of geographical origin, it is obvious that producers of products labeled by indication of geographical origin are interested in preservation and protection of the environment, to safeguard both their own reputation and market success.<sup>62</sup>

## 7. Conclusion

This paper has examined the potential of private law rights to contribute to protection and improvement of environment. To illustrate this, patents and indications of geographical origin have attracted attention. While determining the connection between those rights and environmental matters, it is evident that significant improvement of environmental protection can be provided in a circular flow through different areas of law. Protecting and supporting private law rights is not detached from guarding public interest.

Regarding environmental matters, the question is not where the line between public and private interests is, but rather whether there is a line at all. More precisely, the effective collaboration of private entities and state authorities depends on the benefits for both sides. The task put in front of authorities should be to identify obstacles in the cooperation between the two mentioned sectors and efforts to eliminate them.

As demonstrated by the examination of patents, cooperation between scientific research institutions and the industry is of main concern in modern society. In practice, there are issues that could be obstacles to successful cooperation. The core of cooperation lies in freedom of contracting. However, this freedom is limited by mandatory regulations, public order, and good business practices. The need for sustainable development is of national importance. With regard to this, by insisting on the absolute autonomy of the will, private interests could be overestimated at the expense of public ones. Although great caution is required during any intervention in the market flow, we believe there is a need (and justification) to do so in terms of sustainable technology. In our opinion, since it is a technology that occupies a priority place in scientific research activity and development, the disposal of sustainable technology should be legally defined in a non-exclusive manner, or exclusive assignments should be limited in time.<sup>63</sup> Besides, since fiscal obligations represent a burden on economic entities, a significant incentive in the intensification of technology transfer should come from the side of the state, in the form of fiscal benefits.

A similar approach should be suggested in relation to indications of geographical origin. State and local governments should encourage recognition of indications of geographical origin attracted to localities of high environmental quality. Therefore, environmental issues would be included in the determination of specific characteristics of products or services, and consequently in certain labeled goods.

---

<sup>62</sup> Williams 2007, 43, 61.

<sup>63</sup> Radovanović 2011, 961.

### Bibliography

1. Bainbridge D (2007) *Intellectual Property*, Harlow.
2. Blakeney M (2017) Geographical Indications and Environmental Protection, *Frontiers of Law in China*, 13(2), pp. 162–173, doi: <https://doi.org/10.3868/s050-006-017-0011-9>
3. Chilla T, Fink B, Balling R, Reitmeier S & Schober K (2020) The EU Food Label ‘Protected Geographical Indication’: Economic Implications and Their Spatial Dimension, *Sustainability*, 12(14), 5503, doi: <https://doi.org/10.3390/su12145503>
4. Cvjetković C (2014) Ekološke naknade kao instrument zaštite životne sredine, *Zbornik radova Pravnog fakulteta u Novom Sadu*, 48(2), pp. 385–399.
5. d’ Erme R (2022) *Sustainable Human Development: Why Patents Are The Paramount*, <http://www.atrip.org/Content/Essays/Roberto%20d’Erme.pdf> [01.08.2022]
6. Drenovak Ivanovic M (2021) *Ekolosko pravo*, Beograd.
7. Fernández-Zarza M, Amaya-Corchuelo S, Belletti G & Aguilar-Criado E (2021) Trust and Food Quality in the Valorisation of Geographical Indication Initiatives, *Sustainability*, 13(6), 3168, doi: <https://doi.org/10.3390/su13063168>
8. Ferrer-Pérez H, Abdelradi F & Gil J M (2020) Geographical Indications and Price Volatility Dynamics of Lamb Prices in Spain, *Sustainability*, 12(7), doi: <http://dx.doi.org/10.3390/su12073048>
9. Flinzberger L, Cebrián-Piqueras M A, Pepler-Lisbach C & Zinngrebe Y (2022) Why Geographical Indications Can Support Sustainable Development in European Agri-Food Landscapes, *Frontiers in Conservation Science*, 2, doi: <http://dx.doi.org/10.3389/fcsc.2021.752377>
10. Fracaroli G S (2021) The Effects of Institutional Measures: Geographical Indication in Mercosur and the EU, *Sustainability*, 13(6), 3476, doi: <https://doi.org/10.3390/su13063476>
11. Fraj E, Matute J & Melero I (2015) Environmental strategies and organizational competitiveness in the hotel industry: the role of learning and innovation as determinants of environmental success, *Tour Manag*, 46, pp. 30–42, doi: <https://doi.org/10.1016/j.tourman.2014.05.009>
12. Kameri-Mbote P (2022) *Patents and Developments*, <http://www.ielrc.org/content/a9401.pdf> [01.08.2022]
13. Khurshid A, Rauf A, Cantemir Calin A, Qayyum S, Hussain Mian A, Qayyum S, Fatima T et al (2021) Technological innovations for environmental protection: role of intellectual property rights in the carbon mitigation efforts. Evidence from western and southern Europe, *International Journal of Environmental Science and Technology*, 19(1), doi: 10.1007/s13762-021-03491-z
14. Marescotti A, Quiñones-Ruiz X F, Edelmann H, Belletti G, Broscha K, Altenbuchner C, Penker M & Scaramuzzi S et al (2020) Are Protected Geographical Indications Evolving Due to Environmentally Related Justifications? An Analysis of Amendments in the Fruit and Vegetable Sector in the European Union, *Sustainability*, 12(9), 3571, doi: <https://doi.org/10.3390/su12093571>



15. Mariani M, Casabianca F, Cerdan C & Peri I (2021) Protecting Food Cultural Biodiversity: From Theory to Practice. Challenging the Geographical Indications and the Slow Food Models, *Sustainability*, 13(9), 5265, doi: <https://doi.org/10.3390/su13095265>
16. Marković S M, Popović D V (2020), *Pravo intelektualne svojine*, Beograd.
17. Maskus K (2022) *Differentiated Intellectual Property Regimes for Environmental and Climate Technologies*, <http://www.oecd-ilibrary.org/docserver/download/fulltext/5kmfwjvc83vk.pdf?expires=1302859851&id=0000&accname=guest&checksum=9E3DB6C471BFB311EAB1C15F31063E80> [20.07.2022]
18. Mebratu D (1998) Sustainability and Sustainable Development: Historical and Conceptual Review, *Environmental Impact Assessment Review*, 18(6), pp. 493–520, doi: [https://doi.org/10.1016/S0195-9255\(98\)00019-5](https://doi.org/10.1016/S0195-9255(98)00019-5)
19. Millet M, Keast V, Gonano S & Casabianca F (2020) Product Qualification as a Means of Identifying Sustainability Pathways for Place-Based Agri-Food Systems: The Case of the GI Corsican Grapefruit (France), *Sustainability*, 12(17), 7148, doi: <https://doi.org/10.3390/su12177148>
20. Nikolić D, Brkić S, Gajstlinger M, Đurđev D, Ećinski R, Knez R, Milkov D, Pajvančić M, Petrušić N, Popov Đ, Salma J, Drakić D, Lukić T et al (2009) *Osnove prava životne sredine*, Univerzitet u Novom Sadu Pravni fakultet, Centar za izdavačku delatnost, Novi Sad.
21. Owen L, Udall D, Franklin A & Kneafsey M (2020) Place-Based Pathways to Sustainability: Exploring Alignment between Geographical Indications and the Concept of Agroecology Territories in Wales, *Sustainability*, 12(12), 4890, doi: <https://doi.org/10.3390/su12124890>
22. Radovanović S (2011) Uloga patentnog prava u održivom razvoju, *Pravo i privreda*, 4(49), pp. 948–963.
23. Renting H, Marsden T K & Banks J (2003) Understanding Alternative Food Networks: Exploring the Role of Short Food Supply Chains in Rural Development, *Environment and Planning A: Economy and Space*, 35(3), pp. 393–411, doi: <http://dx.doi.org/10.1068/a3510>
24. Réviron S, Thevenod-Mottet E & Benni N (2009) *Geographical Indications: Creation and Distribution of Economic Value in Developing Countries*, [https://nanopdf.com/download/geographical-indications-creation-and-distribution-of\\_pdf](https://nanopdf.com/download/geographical-indications-creation-and-distribution-of_pdf) [10.07.2022]
25. Varga S (2010) *Pravo industrijske svojine*, Kragujevac.
26. Vandecandelaere E, Samper L F, Rey A, Daza A, Mejía P, Tartanac F & Vittori M (2021) The Geographical Indication Pathway to Sustainability: A Framework to Assess and Monitor the Contributions of Geographical Indications to Sustainability through a Participatory Process, *Sustainability*, 13(14), 7535, doi: <https://doi.org/10.3390/su13147535>
27. Williams R M (2007) *Do Geographical Indications Promote Sustainable Rural Development: Two UK Case Studies and Implications for New Zealand Rural Development Policy*, Lincoln University, Oakland.
28. Xu I & Wu L (2010) Food Safety and Consumer Willingness to Pay for Certified Traceable Food in China, *Journal of the Science of Food and Agriculture*, 90(8), pp. 1368–1373, doi: <https://doi.org/10.1002/jsfa.3985>

29. Zhao X, Finlay D & Kneafsey M (2014) The Effectiveness of Contemporary Geographical Indications (GIs) Schemes in Enhancing the Quality of Chinese Agrifoods – Experiences from the Field, *Journal of Rural Studies*, 36(3), 2014, pp. 77–86, doi: <http://dx.doi.org/10.1016/j.jrurstud.2014.06.012>