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Right to a Healthy Environment and Legal Regulation of Viticulture**

Abstract

The foundations for the introduction and development of the modern right to a healthy environment were laid almost half a century ago, by adoption of the Declaration on the Human Environment at the United Nations thematic Conference on the Human Environment, held in Stockholm in 1972. The gathering was preceded by extensive preparations in which members of the academic community and people from politics participated equally. Scientists have obviously prepared a good basis for considering key issues, and representatives of member states and UN bodies have given it an appropriate political dimension. Thanks to that, reasonable, necessary compromises were made, which made it possible to establish a (fragile) balance of interests in the then polarized world and to start a process of great importance for humanity with a lot of optimism. Unfortunately, relatively little has been done on global level since then. This is evidenced by the terminological inconsistency and conceptual uncertainty of the right to a healthy environment, unclear legal nature, dominant development and expansion through constitutionalization at the national level (not on the basis of international instruments), as well as indirect application through the so-called greening of other human rights. The United Nations Human Rights Council, which in October 2021 adopted a Resolution on a safe, clean, healthy and sustainable environment by which the right to a healthy environment was raised to the level of human rights, officially assessed that many questions about the relationship of human rights and the environment remain unanswered and require further examination. This paper opens several interrelated topics whose consideration can contribute to the further development of the right to a healthy environment. The author believes that over time there will be an interaction between the right to a healthy environment and property rights; that this will pave the way for a more extensive interpretation that could result in an individual's autonomous right to independently shape a healthy environment in the space person uses as the owner or holder of another property right; that such interaction would enable the owner to more effectively counter unjustified restrictions on property rights established by state bodies or supranational institutions, such as those existing in the field of viticulture. The paper points out the need to rethink policies and rights related to agriculture and to pay more attention to the part of the population that contributes to the preservation of a healthy environment through their way of life and work. In the final part, winegrowers 'oases that represent specific spatial units are analyzed.

Keywords: human rights; healthy environment; agricultural policy; planting rights; winegrowers' oases.

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1. Right to a healthy environment

1.1. Genesis and evolution

The beginning of October 2021 was also the beginning of a new era in the development of the right to a healthy environment and related basic human rights. In those days, the five-decade-long struggle for the recognition of its independent existence on a global level and for bringing it to the similar level with other rights that are essential for human beings and their communities ended. It is not known whether this happened precisely then because of the tendency of most people to remember something and end something in the jubilee year (or just before it), because the United Nations Climate Change Conference in Glasgow was approaching – COP 26)[1] or because a critical mass of people (decision makers, but also ordinary citizens) have finally understood what is happening and what will happen in their environment.

In any case, on October 8, 2021, at the 48th session in Geneva, the United Nations Human Rights Council adopted a 'Resolution on a safe, clean, healthy and sustainable environment.'[2] This was preceded by a long series of initiatives, analyses, debates, scientific and political gatherings, advocacy and disputes, political proclamations, statutes, and court decisions.

In the literature, the emergence of the idea of the right to a healthy environment is implicitly linked to the modern movement for the protection of the environment (green movement), which emerged in the late 1960s.[3] However, it was only a new beginning in the time that belongs to the present generations. Namely, the fact is that some rudiments of that right existed in ancient times.[4] This is evidenced by the duties that Roman citizens had, but also the recognition of the right to sue in case of environmental damage by various immissions (imissio).

The formation of the modern right to a healthy environment was officially, in the programmatic, legal-political sense, begun with the adoption of the Declaration on the Human Environment at the United Nations thematic Conference on the Human Environment, held in Stockholm in 1972.[5] It is believed that the idea of organizing such a gathering came from the academic world, from the Intergovernmental Conference of Experts on the Scientific Basis for Rational Use and Conservation of Biosphere Resources organized by UNESCO in Paris in 1968,

[1] Such an assumption is indicated by the appeal sent to the COP participants by the Special Rapporteur of the UN Human Rights Council, David Boyd.

[2] UN Geneva, Human Rights Council Adopts Four Resolutions on the Right to Development, Human Rights and Indigenous Peoples, the Human Rights Implications of the COVID-19 Pandemic on Young People, and the Human Right to a Safe, Clean, Healthy and Sustainable Environment.

[3] Knox 2020, 79–95.

[4] Detailed: Sáry 2020, 199–216.

[5] Stockholm Declaration on the Human Environment, in Report of the United Nations Conference on the Human Environment, UN Doc. A/CONF.48/14, at 2 and Corr.1 (1972); Report of the United Nations Conference on the Human Environment, Stocholm 15-16 June 1972.

while the official initiative of the same year came from the world of politics, from the Government of the Kingdom of Sweden. The idea was supported by the UN Advisory Committee on the Application of Science and Technology to Development and the UN Secretary-General, followed by the Economic and Social Council and the General Assembly of the world's most important organization. This unusually strong union of science and politics was probably the key contributor to the Conference being declared the most successful international gathering in that period, and Declaration on the Magna Carta of the Human Environment. Scientists have obviously prepared a good basis for considering key issues, and representatives of member states and UN bodies have given it an appropriate political dimension. In such an atmosphere, ambitious conclusions and decisions were born. In addition to the Declaration, two other documents were adopted, the Resolution on Institutional and Financial Arrangements and the Action Plan. It was proposed that the United Nations General Assembly establish: an intergovernmental Steering Committee for Environmental Programs, which would provide general policy guidelines for the direction and coordination of environmental programs; Secretariat for the Environment headed by the Executive Director; Environmental Fund, which should provide additional funding for environmental programs; interdepartmental Coordination Committee for the Environment in order to ensure cooperation and coordination between all interested bodies in the implementation of environmental protection programs. The action plan envisaged an environmental assessment, through the establishment of an Earthwatch, designed to identify and measure international environmental problems and warn of impending crises; environmental management based on Earthwatch estimates; and necessary support measures, including education, training, and public information. The goal was to create an appropriate infrastructure at the international level.

By its legal nature, the Stockholm Declaration is a legally non-binding document, which, according to the authors, contains a set of common principles that should inspire and guide the peoples of the world in preserving and improving the human environment. It is the result of numerous consultations, negotiations, and compromises that have led to a (fragile) balance of different interests. It was a time of drastic ideological divisions, of the Cold War, of the growing gap between developed and underdeveloped countries, between rich and hungry... There is authentic evidence that the Conference organizers constantly kept in mind the fact that the mentioned multiple polarizations may jeopardize the adoption of documents and their subsequent application. In an era of bloc divisions and the significant influence of the Non-Aligned Movement, any attempt to impose principles and concrete normative solutions would be completely counterproductive. Diplomatically, everything that could be disputable was avoided, and what was realistically achievable at that time was proposed. Using modern political terminology, we could say that a 'bottom-up approach' has been applied. This is evidenced by the fact that the Draft Declaration was written based on the analysis of the questionnaire sent by the UN Secretary General to all member states, as well as the principles contained in the final version of the document, which were adopted at the Conference.

The Committee in charge of preparing the meeting concluded that the Declaration should contain basic principles that will draw the attention of humanity to the many different, but interrelated problems of the human environment, as well as the rights and obligations of man (individual), the state and the international community related to that. It was considered a goal of the Declaration to encourage community participation in the protection and improvement of the human environment and, where appropriate, to restore its primitive harmony, in the interests of present and future generations.[6] Finally, it was concluded that the principles contained in that document could represent guidelines for governments in formulating policies and goals for future international cooperation. Competences for the implementation of the legal and political commitments expressed in the Declaration are divided between the member states on one hand and the international community on the other. The Declaration states that the relevant national institutions must be entrusted with the task of planning, managing and controlling (national) environmental resources in order to improve the quality of the environment and that states have the sovereign right to exploit their own resources in accordance with their environmental policy.[7] On the other hand, they also have the responsibility to ensure that activities within their jurisdiction or control do not cause harm to the environment of other States or to areas outside the borders of national jurisdiction.[8] At the same time, it was agreed in principle that states would ensure that international organizations play a coordinated, efficient and dynamic role in protecting and improving the environment.[9] The dominant position in that process was given to the state authorities. In the past half century, they have used it to a significant extent for the normative shaping of the right to a healthy environment. In the 1970s, the belief was expressed that the international community, taking responsibility for preserving and improving the human environment, *"would find in the Stockholm Declaration a source of strength for later, more concrete action."*[10] Unfortunately, relatively little has been done internationally since then. This is evidenced by the terminological inconsistency and conceptual uncertainty of the right to a healthy environment, unclear legal nature, dominant development and expansion through constitutionalization at the national level (not on the basis of international instruments), as well as indirect application through the so-called greening of other human rights.

1.2. Terminological inconsistency and conceptual uncertainty

The right to which this paper is dedicated is not precisely terminologically determined. In international documents, in scientific and professional literature, and in public addresses of decision makers at the national and international level, the terms right to healthy environment, right to clean environment, right to sustainable and healthy environment, right to favorable environment, right to wholesome environment, right to ecologically balanced environment etc., are used.

[6] Its. U.N. Doc. A/CONP.48/PC/6, para. 27(32)–(38).
[7] Declaration, Principle 17.
[8] Declaration, Principle 21.
[9] Declaration, Principle 25.
[10] Ibid.

Terminological confusion was further exacerbated by the recently adopted United Nations Human Rights Council Resolution on the Human right to a safe, clean, healthy and sustainable environment. Since the word right is used in the singular, and not rights, in the plural, it can be concluded that the creators of that document established a new, more complex and comprehensive right. An additional problem is that this time its conceptual notion (definition) was again missing.

Like the Roman jurist Iavolenus, who stated that any definition in civil law is dangerous (Omnis definitio in iure civili periculosa est; parum est enim, ut non subverti posset),[11] the drafters of the Stockholm Declaration once concluded that it is risky (dangerous) to define human environment and that the work should be postponed for some other time in which there will be more favorable circumstances. According to the records from the preparatory period, some representatives considered *"that it might be difficult at the present stage to reach agreement on a satisfactory definition which would not be unduly restrictive; and that an attempt to formulate a definition might unprofitably delay the preparatory work on the substance of the draft Declaration."* For the past half century, the right to a healthy environment has not been conceptually defined. There is no comprehensive definition in legal documents and literature on the basis of which it can be concluded what it is and what it is not (Definitio fit per genus proximum et differentiam specificam). Instead, there are only various descriptions that indicate its legal nature.

1.3. Legal nature

The starting point for determining the legal nature of the right to a healthy environment is the Declaration adopted in 1972 in Stockholm, and the final point is in the Resolution adopted in 2021 in Geneva. In the first provision of the first-mentioned document, it is written: *"Man is both creature and moulder of his environment, which gives him physical sustenance and affords him the opportunity for intellectual, moral, social and spiritual growth. In the long and tortuous evolution of the human race on this planet a stage has been reached when, through the rapid acceleration of science and technology, man has acquired the power to transform his environment in countless ways and on an unprecedented scale. Both aspects of man's environment, the natural and the man-made, are essential to his well-being and to the enjoyment of basic human rights - even the right to life itself."*[12]

Based on the above, it can be concluded that the right to a healthy environment is instrumental. It enables the realization of other, related human rights. It is a right that connects and integrates other rights from the same corpus.

According to the provisions of the Geneva resolution, it is one of the basic human rights.

The literature discusses the aspirational nature[13] of the right to a healthy environment. This feature has rights that are unenforceable, that do not create (suable) obligations, but indicate some intention, hope or expectation that cannot be achieved through the courts. The fact is that the right to a healthy environment, at the global scale, is determined by the provisions of legally non-binding acts. However, it is also a

[11] Iavolenus, D, 50, 17, 202.
[12] Declaration, Principle 1.
[13] About that and related topics, Harvey 2004, 102. and 123.; Pirie 2010, 207–228.

fact that there is a case law that testifies to its application. Besides, at the national level, in countries where it is constitutionalized (regulated and guaranteed by the constitution) it is not aspirational, but perfect and effective.

1.4. Constitutionalization

1.4.1. Expansion at the national level

Even the most optimistic proponents of the process that began with the adoption of the Stockholm Declaration, half a century ago, probably did not envision that the right to a healthy environment would experience a great expansion. According to official data from the United Nations Environment Program (UNEP), it is recognized and guaranteed by the constitution in more than 150 countries around the world. In addition, it is more precisely regulated by numerous laws passed at the national level.

1.4.2. The importance of constitutionalization and inclusion into the corpus of human rights

The constitutional guarantee of the right to a healthy environment is important for several reasons. First of all, a constitution is the highest legal act of a state with which all laws and other legal acts must be harmonized. In case of relevant deviation, any interested person may request a constitutional review and request the repeal (cessation of effect) of the related legal norm. This achieves the highest level of legal protection at the national level.

The adoption of the mentioned Geneva resolution further strengthened the position of the right to a healthy environment in the states where it is included in the constitution, and at the same time opened the possibility for the application of some other legal instruments.

Human rights, including the right to a healthy environment, have been established to strike a balance between the public interests of the social community, represented by the state, on one hand, and the legitimate private interests of every human being (individual), regardless of nationality, religious, racial, social, and sexual affiliations, on the other hand. They represent a framework in which the individual exercises his autonomy in relation to society, and which the authorities may limit only exceptionally and temporarily, in special circumstances and under conditions determined by the highest international documents and constitutional norms.

Under the influence of global processes, a constitutional complaint (lawsuit) has recently been introduced into the legal systems of many European countries, which may require constitutional courts to make decisions regarding specific disputes arising from human rights violations. This opened the way for a new penetration of public law into the domain of private law. In the opinion of some authors, with whom I fully agree, decisions of constitutional courts that allow the direct application of human rights can have devastating effects on private law and cause a high degree of legal

uncertainty.[14] However, the fact is that such a model exists and works according to certain coordinates. It can, in certain situations, where the so-called 'vertical effect of human rights' is involved, contribute to the 'strengthening and more effective protection of private rights.'

1.4.3. Formulation and content of the constitutional right to a healthy environment

1.4.3.1. Traditional approaches: the right of an individual to demand something from the state or the duty of the state to do something

The right to a healthy environment is formulated in the constitutions as an individual right or as a duty of the state. In the first case, an individual or a collective may require the competent state authorities to take measures to preserve a healthy environment or measures to improve it, and in the second case, the state is obliged to do so independently of the requirements of members of the community. The first variety is based on an anthropocentric approach, and the second is close to the so-called *ecocentric approach* to environmental protection. In both cases, the state is expected to take appropriate measures and provide a healthy environment.

1.4.3.2. A new approach: the autonomous right of the individual to shape a healthy environment

In my opinion individuals and smaller collectives should be enabled to independently shape a healthy environment and seek legal protection in the event of unfounded and unnecessary state interventionism (or the interventionism of supranational institutions) that limits them. The precondition for that is that the interested person also has the right of ownership or some other property right that authorizes him to hold and use a part of his environment.

It is a kind of interaction of two rights (one universal human right and one property right).

1.5. Interaction and interference: greening other rights

1.5.1. Greening human rights

The right to a healthy environment has developed indirectly since the adoption of the Stockholm Declaration, through an extensive interpretation of the provisions governing other human rights. These represent a kind of interference and interactions. The whole process is known as greening human rights. According to John Knox, the first Independent Expert on human rights and the environment, appointed by the UN Human Rights Council, who was one of its key proponents on global level: *"[H]uman rights and environmental protection can form a virtuous circle: the exercise of human rights helps to protect the environment, which in turn enables the full enjoyment of human rights. […]*

[14] Collins 2012, 15–16.

States also have substantive obligations to adopt legal and institutional frameworks that protect against environmental harm that interferes with the enjoyment of human rights, including harm caused by private actors. The obligation to protect human rights from environmental harm does not require States to prohibit all activities that may cause any environmental degradation; States have discretion to strike a balance between environmental protection and other legitimate societal interests. But the balance cannot be unreasonable, or result in unjustified, foreseeable infringements of human rights [highlighted by D.N.]"[15]

Some courts have a similar view on this issue. This is evidenced by the decisions in many cases, including famous Urgenda case.[16]

1.5.2. Greening ownership and other property rights

In the future, a stronger functional link between the right to a healthy environment and property rights should be expected. Namely, there are situations in which the protection of the environment in the public interest also protects the legitimate private interests of individuals in the property sphere, and vice versa. This interaction will be more and more pronounced under the influence of climate change,[17] which will require a certain transformation and limitations of ownership and other property rights, but also a further evolution of human rights.

All this requires deeper scientific considerations, such as those that preceded the adoption of the Stockholm Declaration and a more detailed review of current legal policy. As it is stated in documents of the United Nations Council of Human Rights "Yet many questions about the relationship of human rights and the environment remain unanswered and require further examination."

1.5.3. Greening the green: rethinking policies and rights related to the agriculture

Modern agrarian policy and legal rules for its implementation have led to great social stratification, enormous enlargement of agricultural holdings and plant production in a way that greatly endangers the environment of many people. The consequences are numerous.

One of the most difficult is the mass migration from rural areas to cities individuals and familiesthat have contributed to the preservation and improvement of a healthy environment through their way of life and work. The need to support those categories of the population has been recognized within the international framework. This is testified by the United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas, adopted in 2018, whose preamble states that the United Nations Assembly is *"convinced that peasants and other people working in rural areas should be supported in their efforts to promote and undertake sustainable practices of agricultural production that support and are in harmony with nature, also referred to as Mother Earth in a number of countries and regions, including by respecting the biological and natural ability of ecosystems to adapt*

[15] Knox 2020.
[16] Albers 2018.; Krstić & Čučković 2015.
[17] Nikolić 2017, 52–70.

and regenerate through natural processes and cycles." Within the particular provisions, it is emphasized that the Declaration refers to any person engaged in artisanal or small-scale agriculture, that peasants and other people working in rural areas have the right to determine and develop priorities and strategies to exercise their right to development and, that states shall take appropriate measures to eliminate conditions that cause or help to perpetuate discrimination, including multiple and intersecting forms of discrimination, against peasants and other people working in rural areas.[18]

Within the European Union, there is a special greening program to support farmers who use land in a sustainable way. In June 2021, the European Parliament, the European Council, and the European Commission reached an agreement on a new cycle that will begin in 2023. However, the reality is significantly different from political proclamations. Especially when it comes to the common EU agricultural policy in the field of viticulture.

2. Agricultural policy in the field of viticulture and planting rights[19]

2.1. History

The powers deriving from the right of ownership give the owner the freedom to plant on his land. In principle, everyone is free to decide whether, where, and what to plant, taking into account the rights of others and the general interest of the community. However, particular rules have been introduced for the cultivation of certain plant species. Thus, in the region of continental Europe, in different epochs, special legal regimes were introduced for planting vines (and wine production).

State interventionism in this field ranged from restricting property rights by prescribing agro-technical measures, to complete prohibitions that applied to certain categories of the population, certain parts of the state territory, and some grape varieties.

History repeats itself in that area as well. In similar circumstances, similar forms of interventionism have emerged. The history of the legal regulation of viticulture (and winemaking) in Europe is basically a chronology of the introduction of various prohibitions and their abolition. The Roman emperor Domitian (Titus Flavius Domitianus) in 92 AD. passed an edict forbidding planting of new vineyards on the Apennine Peninsula and ordered the removal of half of all vines in the Roman provinces. This restriction was lifted two centuries later (in 280) by Emperor Probus (*Marcus Aurelius Probus*).

In France, the most influential European wine empire there have been several bans. In 1725, under pressure from influential vineyard owners in Bordeaux, King Louis XV banned the planting of new vineyards in the region without his explicit approval. Despite a protest from Charles de Montesquieu (also an owner of a vineyard),

[18] Declaration, Article 3.

[19] The 2nd and 3rd section of this paper are partialy based on: Nikolić 2018a, 167–177.; Nikolić 2018b.

that restriction was later extended to the whole of France. It was abolished only at the time of the Revolution. A new ban was introduced in 1931 to protect domestic producers from the mass import of wine from Algeria, which was once the largest producer in the world.

French legislation had a great influence on the creation of economic policy of the European Communities in the 1960s and 1970s, as well as on the common agricultural policy of the European Union.

Within the European Communities a restrictive legal regime has been developed since 1970 with a system of vine planting rights. Twenty years later, it was stated that there is hyper-regulation and that many provisions with numerous restrictions did not give the desired results. It is estimated that there is too much wine in the single European market and that it is of poorer and poorer quality. Based on that, and as part of a more comprehensive reform of the common agricultural policy, the ministers of agriculture of the member states, in 2008, at a joint meeting, adopted the proposal of the Commission to liberalize the right to plant. It was an announcement of the gradual lifting of previously established restrictions. This decision was opposed by certain influential interest groups. Protests and lobbying were organized. Under these influences, a new turn in agrarian and legal policy was made in 2013. Instead of the announced liberalization, a new, restrictive system of planting rights has been introduced, the effects of which largely depend on the member states. Namely, Commission Implementing Regulation (EU) no. 2018/274 of 11 December 2017 laying down rules for the application of Regulation (EU) no. 1308/2013 of the European Parliament and the Council regarding the authorization for planting vines stipulates that the member states are obliged to issue approvals for the establishment of new plantations every year at the request of interested persons. This made a concession to winegrowers and winemakers who want to expand production, as well as to countries that have decided to develop that sector of the economy. However, giving permission for planting is limited. The regulation stipulates that the existing area under vines in each Member State may be increased by a maximum of 1% per year.[20] The decision on who will be allowed to plant the vine is made by the state authorities, guided by national interests and public policies based on them.

It is clear that such a common agricultural policy favors Member States with large areas under vines and their growers, who generally have larger vineyards. Instead of contributing to the establishment of balance, it creates growing differences.

According to EUROSTAT data,[21] in 2015, there were about 3,200,000 hectares under vineyards in European Union countries (1.8% of the total area of arable land). Of that, three quarters (74.1%) on the territory of France, Spain and Italy. Two-fifths (39.2%) of the total 2,500,000 owners and other users of vineyards in the European Union are from those countries. Of all the member states, Romania has the most winegrowers (854,766). They grow vines on an area of 183,717 hectares. The average area of vineyards in Romania is 0.21 hectares. In France, the leading wine-growing

[20] See: Regulation, Article 62.

[21] These data were published in 2017. Updates are made every five years. New data will be available in 2022.

country in Europe, there are 802,896 hectares under vines and 76,453 owners and other users of vineyards with an average area of 10.50 hectares.

The Court of Justice of the European Union in one of the so-called historical wine judgments also considers that, in accordance with the common agricultural policy, supranational regulations may in principle prohibit landowners from planting new vineyards, and that, on the other hand, each Member State may determine the conditions under which, within the stated quotas. This position was taken in the late seventies of the XX century in the often cited historical verdict regarding the case of Liselotte Hauer v. The Land of Rhineland-Pfaltz (C 44/79) has not been significantly changed so far.

As proclaimed in the Stockholm Declaration, states have the freedom to determine the policy of using their resources. The authorities have the possibility to spatially plan vineyard areas and it will depend on them whether priority will be given to the enlargement of existing vineyards or the development of smaller winegrowers' estates. A more extensive interpretation of the newly recognized human right to a healthy environment could enable individuals to initiate proceedings before the Constitutional Court to protect a legitimate interest in using their land for grape production. This would also improve the position of owners of smaller estates.

In the Republic of Serbia, which is a candidate for membership in the European Union, the importance of small producers for the sustainable development of rural areas and for the preservation of a healthy environment has been recognized. The creators of the legal system had in mind this category of population when they passed regulations on wine-growing areas.

3. Legal specificum: winegrowers' oases

A few years ago, a new, specific category of agricultural estate, called the winegrowers' oases, was introduced into the legal regulations of the Republic of Serbia, related to viticulture and winemaking. The name itself indicates that it is a space shaped by winegrowers. The emphasis is on the subject (person, individual or group of people) and not on the object. The word oasis refers to something that is different from the surrounding and is associated with a healthy environment. In reality, it really is. In oases, grapes are produced by small producers, in a way that least endangers the environment and human health.

3.1. Legal notion

In the Ordinance on the regionalization of wine-growing geographical production areas of Serbia, it is written that a 'winegrowers' oasis' is a narrow wine-growing area, which has no geographic borders with the remaining part of the vine region to which it belongs.[22] These are geographical areas of an enclave type, comprising one or more vineyard plots in a region which is mainly used for farming or other types of agricultural production.

[22] Article 2, paragraph 1, item 3 of the Rulebook on regionalization of wine-growing geographical production areas of Serbia.

3.2. Production and legal advantages of winegrowers' oases

Winegrowers' oases enable uniform or at least more harmonized technology of grape production, because they typically represent smaller, isolated spatial units owned by one or a smaller number of persons. This is very important both from a production and a legal point of view. The application of different technologies and approaches to viticulture, opens a number of legal issues and can result in a multitude of legal problems.

In Serbia, as in other parts of the world, various technological procedures are applied.

The most widespread is the conventional viticulture. This methodological approach implies application of various chemical substances to control grapevine diseases, such as downy mildew, powdery mildew, phytoplasma, then to protect grapes from botrytis, to control weeds in vineyards, and the like. Typically, synthetic (artificial) fertilizers are used to fertilize the vines. Conventional viticulture (as well as conventional agriculture in general) is considered to endanger the environment.

In some countries, there are large plantations where, in addition to what is characteristic of classical conventional production, heavy mechanization (vine pruning machines, grape harvesters, etc.) is used, which affects the structure and permeability (drainage) of the soil. The plantations are monocultural. Typically, producers destroy all biological species except the vine. Such an approach could be called industrial viticulture.

Conventional viticulture is close to the methodological approach, which in literature is referred to by the French compound la lutte raisonée (in free translation: reasonable struggle). Unlike industrial viticulture, which has the most drastic impact on the environment, here certain elements of conventional production are eliminated or significantly limited. Smaller quantities of chemical substances are used to the most necessary extent,[23] taking into account the impact on the environment. In recent times, for the needs of such a methodological approach, special sensor-type devices are being developed, together with advanced computer programs,[24] atomizers with more precise sprayers, etc. This is the so-called smart viticulture. Further development will be due to the fourth industrial revolution that eliminates the boundaries between physical, digital, and biological and allows fusion of various technologies and technical facilities, in accordance with the concept known as the Internet of Things. The institutions of the European Union estimate that in this way the costs of grape and wine production could be reduced by 20-30%. The application of this approach in viticulture in most countries is currently not controlled and falls more into the domain of viticultural etics than legal regulations. From the legal point of view, it is important that the winegrowers who claim to use it are allowed to emphasize on the bottles that the wine was produced from grapes grown in the conditions of la lutte raisonée. Anyone who would dispute that claim would have to prove the allegations untrue. The burden of proof, in accordance with the general legal rules, is on the one who claims something.

[23] Jensen 2014, 23.
[24] Berk, Hočevar, Stajnko & Belšak 2016, 273.

To protect the environment and preserve human health organic viticulture is increasingly encouraged. It is in almost diametrically opposite positions in relation to conventional production. Only limited use of certain types of chemicals is allowed. The goal is to preserve the ecosystem in the vineyard and to provide conditions for the unhindered development of the vine through the application of various techniques and non-invasive or less invasive methods. Growers strive to ensure biodiversity, that is, the coexistence of different biological species in the vineyard. It is considered that a balanced ecosystem is much more resistant to various plant diseases[25] and the appearance of harmful insects. That is why some growers who have opted for organic production sow or plant other plants between the rows (cover crops). Some of them are habitats for organisms that protect the vine or allow the accumulation of nitrogen in the soil and the like. The soil is primarily enriched with compost, not artificial mineral fertilizers. Heavy mechanization is not used to preserve the drainage of the soil, which is of great importance for the resistance of the vine to certain plant diseases. In establishing such a production more and more importance is given to the varieties that are resistant (or more resistant) to plant diseases.[26] Organic viticulture is subject to strict control regulated by law and other regulations. It requires lengthy preparations to start production, significant investments and much more human labor than conventional production.

Distinct specificity represents biodynamic viticulture, based on the works of the Austrian scientist and philosopher Rudolf Steiner, who stated at the beginning of the 20th century that Western civilization was self-destructive, that the balance between material and spiritual, as well as between people and nature was disturbed. In 1924, he gave a famous series of lectures on agricultural production[27] in which he pointed out that the use of artificial fertilizers and other chemical substances would impoverish arable land, reduce its production value, lead to plant and livestock diseases, reduce food quality and endanger survival an increasing number of human populations. These lectures formed the basis for his book Agriculture, which became the canon of biodynamic production. Many of Steiner's settings have been confirmed by time. Mankind has indeed faced the serious problems he wrote about a hundred years ago. Biodynamics has become topical again and increasingly represented in many areas. Modern biodynamic viticulture is characterized by the application of a complex system of preparations consisting of protective liquids of plant origin and compost, as well as by the fact that the works in the vineyard are realized according to precise timing, respecting the cosmic and Earth cycles. In some variants, such viticulture is even accompanied by obscure spiritual rites. Some of the leading, world-famous wine producers in France, and some winemakers in Serbia on an experimental level, have also opted for a biodynamic approach. From a legal point of view, it is important to

[25] Organic agriculture, environment and food security (eds. Nadia El-Hage Scialabba, Caroline Hattam), Food and Agriculture Organization of the United Nations, Rome, 2002, second chapter: Organic Agriculture and the Environment – The ecosystem approach in organic agriculture.
[26] Cindrić, Korać & Ivanišević, 2019 177–207.; Korać 2011, 31–37.
[27] Paull 2011, 64–70.

emphasize that the approval for highlighting the biodynamic component on wine bottles is given by the international certification association *Demeter*.

According to the official statistics listed in the Annex Ordinance on the regionalization of wine-growing geographical production areas of Serbia, winegrowers' oases, as of now, cover relatively small areas of land under vineyards. Thus e.g,. the Bačka region consists of three such spatial units: the oasis of Temerin, with about 13 hectares; the oasis of Bački Monoštor (Pisak), with about 2.5 hectares; and the oasis Karavukovo, with about 6.5 hectares of cultivated vineyards. According to the census of agriculture from 2012, there are only 22.53 hectares in the Bačka region, of which 20.11 hectares are cultivated and native. Table grape varieties are produced on 9.69 hectares, and wine varieties on an area of 12.84 hectares. Only 76 agricultural farms are engaged in viticulture.[28] In most cases, these are small, usually unconnected estates, on which the production of grapes and wine for the needs of family households is based. In such circumstances, it is almost impossible to organize the so-called industrial viticulture. Small vineyards do not use heavy machinery that compacts the soil and reduces the leakage of land in the area where the vineyard is located, and which could also affect the change of water regime on neighboring plots, owned by other persons. Preparations for the protection of vines and grapes from plant diseases are applied more precisely and typically do not reach the neighboring plots. Since they produce grapes and wine for their own needs, the winegrowers in the oases act in accordance with the previously described principles of la lutte raisonée. They have less impact on the environment and by their actions less endanger production on neighboring vineyard plots, even if it is based on an even more restrictive approach, such as organic viticulture. Summa summarum, in winegrowers' oases there are significantly fewer reasons for disputes among growers that should be resolved in court proceedings.

[28] Appendix Ordinance on the regionalization of wine-growing geographical production areas of Serbia.

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