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PROTECTION OF BIOLOGICAL DIVERSITY AND COVID-19 PANDEMICS – SELECTED LEGAL ASPECTS

Introduction

Man inhabits the biosphere, or the largest known biological system encompassing all organisms living worldwide and their habitats, uses components of the Earth's surface as the natural resources to acquire land for farming and housing, exploits mineral resources, introduces agricultural and technological innovations, and dramatically pollutes the environment [Barabasz and Pikulicka 2012, 7-16]. The critical threshold of irreversible, avalanche destruction of the natural environment has unfortunately been breached [King and Schneider 1993]. The atmosphere, soil, groundwater, and living organisms have been considerably altered by intense actions [Barabasz and Pikulicka 2012, 10-14]. The planet is estimated to have lost nearly 1/5 of arable land, 1/5 tropical forests, and tens of thousands of plant and animal species since the middle of the last century [Hallam 2006]. The overall wildlife population worldwide has declined by 60% in the last 40 years, 1 million more species are facing the threat of extinction.¹ This catastrophic state of nature directly translates into human health and life, as the connection between restricting biological diversity and emergence of new diseases in humans has been scientifically demonstrated.

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¹ The EU Strategy for Biodiversity 2030, https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/actions-being-taken-eu/eu-biodiversity-strategy-2030_pl [accessed: 02.11.2020].

State policies have for very long remained virtually blind to these developments, treating the environment protection as an obstacle to economic development rather than an asset. Attempts have been undertaken to slow the trend, particularly at the EU level, by rolling out legislative initiatives to bolster biodiversity protection. The situation of Covid-19 pandemics may become the point at which this ignoring attitude is reoriented.

1. Attempt at a definition of biological diversity and legal references

It has already been pointed out biodiversity is of fundamental importance to evolution and permanence of life-sustaining systems in the biosphere. Anticipation, prevention, and countering causes of its shrinking or disappearance are necessary for protection of biological diversity. Depletion of biodiversity is shown in loss of habitats, die-out of species, or reduction of gene variety in populations. Therefore, any actions that will sustain or support biological diversity are so important.²

The term biological diversity was coined by Thomas Lovejoy in 1980. However, its use has become universal only after the National Forum on Biological Diversity in 1986 and propagation of the concept by M.W. Rosen and E. Wilson [Kędziora and Karg 2010, 107].

Biological diversity is addressed in a variety of ways depending on a field. The definitions cited below are mere instances. The PWN Dictionary of the Polish Language says “Biological diversity (in short, biodiversity) is a set of organisms (plants, animals, fungi) existing on the Earth, among other places, on farming and green land.”³ According to the Convention on biological diversity, adopted at the Rio de Janeiro Earth Summit in 1992, this is “Variability of living organisms inhabiting all environments and variability of ecosystems these organisms are part of, where such variability comprises intraspecies, interspecies, and ecosystem diversity.”⁴ In line with the EU strategy for biodiversity 2030, “Biological diversity – the wealth

² Ibid.

³ <https://sjp.pwn.pl/slowniki/Gatunkowa-r%C3%B3znorodno%C5%9B%C4%87-biologiczna.html> [accessed: 30.10.2020].

⁴ The Convention on biological diversity, adopted in Rio de Janeiro on 5 June 1992, Journal of Laws of 2002, No. 184, item 1532.

of ecosystems, species, and genes – is not only a value to itself, but also provides a wide range of ecosystemic services: food, fresh water, pollination, flood protection, etc.”⁵ For the purposes of this study, the legal aspect and its incorporation into the Convention on biological diversity are of particular significance. The perspectives addressing biodiversity in the EU political strategy are important as well. The EU Green Deal Strategy, although it fails to offer a direct definition of biological diversity, plays a major part in its protection.

2. Legal instruments supporting biological diversity

Agriculture and rural areas form a bulk of the EU area and are largely responsible for use of its natural resources. Therefore, a fuller realisation of farming potential to reach the Community aims related to countering of adverse environmental effects is a central objective of the CAP. Special emphasis is laid on limitation of and adaptation to the climate change, protection of biodiversity, and reduction of water and air pollution [Poczta, Sadowski, Czubak, et al. 2017].

The natural richness of rural areas is jeopardised by intensive and increasingly chemical-based agricultural production, grass burning, as well as abandonment of low-feed yet naturally valuable land [Feledyn-Szewczyk, Kazimierczak, Rembiałkowska, et al. 2016, 53]. Legal instruments, both at the EU and national levels, continue to be established to prevent these developments, therefore. As far as legal references to biological diversity in the Polish system are concerned, there are three key Acts of Parliament: of 16 April 2004 on nature protection,⁶ of 28 September 1991 on forests,⁷ and of 20 July 2017 on the water law.⁸

Some more legal solutions can be distinguished in the agricultural policy that support biodiversity: 1) the EU Strategy for protection of biological diversity till 2030, 2) the Programme of biological diversity protection

⁵ The EU Strategy for biodiversity 2030.

⁶ Journal of Laws of 2004, No. 92, item 880.

⁷ Journal of Laws No. 101, item 444.

⁸ Journal of Laws item 1566.

and sustainable use including an Action plan for the years 2015-2020,⁹ 3) the Strategy of Poland's sustainable development till 2025,¹⁰ 4) the Network of Nature 2000 areas,¹¹ 5) the Programme for Development of Rural Areas,¹² 6) agricultural-environmental-climate actions,¹³ 7) organic farming,¹⁴ 8) Directives of the European Union,¹⁵ 9) Common Agricultural Policy, 10) standards and requirements of mutual conformity, 11) greening (Resolution No. 213).

In May, the Commission adopted a draft EU biodiversity strategy 2030. The strategy is expected to divert the European biological diversity to the path of restoration, which will serve people, climate, and planet, by 2030.

Till 2030, the biological diversity in the European Union and the ecosystemic services it supplies and which constitute its natural capital will be protected, priced, and adequately reproduced due to the intrinsic value of biological diversity and their fundamental continuity to human welfare and economic prosperity in order to prevent catastrophic changes caused by a loss of biological diversity. The actions proposed as part of the strategy include strengthening of protected areas in Europe and reconstruction

⁹ Resolution No. 213 of the Council of Ministers of 6 November 2015 on the approval of the "Program for the conservation and sustainable use of biological diversity together with the Action Plan for the years 2015-2020," M.P. item 1207.

¹⁰ Poland's Sustainable Development Strategy until 2025, [http://orka.sejm.gov.pl/rejestr.d.nsf/wgdruku/2133/\\$file/2133a.pdf](http://orka.sejm.gov.pl/rejestr.d.nsf/wgdruku/2133/$file/2133a.pdf) [accessed: 02.11.2020].

¹¹ Regulation of the Minister of Environment of 30 March 2010 on the preparation of a draft protection plan for the Natura 2000 area, Journal of Laws No. 64, item 40.

¹² Act of 20 February 2015 on supporting rural development with the participation of the European Agricultural Fund for Rural Development under the Rural Development Program for 2014-2020, Journal of Laws item 349.

¹³ Regulation of the Minister of Agriculture and Rural Development of 18 March 2015 on the detailed conditions and procedure for granting financial aid under the measure "Agri-environment-climate" under the Rural Development Program for 2014-2020, Journal of Laws item 415.

¹⁴ Act of 25 June 2009 on organic farming, Journal of Laws No. 116, item 975.

¹⁵ Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild bird, OJ L 20/7.2010; Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, OJ L 206.1992.

of degraded ecosystems by expanding the areas of organic farming, restrictions on pesticide application, reduction of risks associated with pesticides, and tree planting.¹⁶

Another strategy comprises plans to reform the European agriculture towards a more organic and nature-friendly “from farm to table” production. Its assumptions will also affect biodiversity issues, for instance, by restricting acceptable quantities of pesticides to use.¹⁷

These strategies – in accordance with the European Green Deal – propose ambitious actions and undertakings by the EU to stop the loss of biological diversity in Europe and globally. The importance of these actions needs to be stressed, especially in the light of the European Environment Agency 19.10.2020 report “State of nature in the EU,” the most exhaustive review of the state of nature ever to be conducted in the EU.¹⁸

The report assesses the protection standards of most protected habitats and species as poor or bad and continually deteriorating. “The 15th Conference of Parties to the Convention on Biological Diversity, to be held in Kunming in 2021, may prove of key significance. In his speech at the most recent UN summit on biological diversity, the Chairman Xi Jinping emphasised loss of biological diversity and ecosystem degradation are serious threats to human survival and development and pointed out the coronavirus epidemic is clear evidence man and nature are a community of fates.”¹⁹ The foregoing legal solutions affect the national law system. Some have already been implemented and harmonised with Polish legislation, others are in the process of consultation, some more will require implementation and amendments to the national laws depending on their solutions. For example, as the European Commission has approved new strategies, regulations like the Directive 2009/128/EC of 21 October 2009 establishing a framework for Community action to achieve the sustainable use of pesticides or the Regulation 1107/2009 concerning the placing of plant protection

¹⁶ The EU Strategy for biodiversity 2030.

¹⁷ “From farm to table” strategy, https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/actions-being-taken-eu/farm-fork_pl [accessed: 30.10.2020].

¹⁸ State of nature in the EU, <https://www.eea.europa.eu/publications/state-of-nature-in-the-eu-2020> [accessed: 30.10.2020].

¹⁹ <http://polish.cri.cn/news/china/3875/20200930/554317.html> [accessed: 08.11.2020].

products on the market will have to be modified. As a result, e.g. the Plant Protection Products Act of 8 March 2013 will obviously have to be adapted to the amended documents. Provisions for increased application of biological methods of protection as part of the integrated plant protection or successive limitation of acceptable active substances will have both practical and theoretical dimensions affecting both manufacturers of farming and gardening raw materials and consumers.

3. Dependences between biodiversity protection and Covid-19

Discussion of the above issues gives rise to the question if and what dependences there are between protection of biological diversity and Covid-19 pandemics. Expert knowledge and review of literature²⁰ clearly indicate the excessive impact of human actions on nature is the cause of subsequent pandemics, including the present one. A number of new conditions like Ebola, AIDS or Covid-19 are most likely results of the excessive interference with the environment. The expanding agriculture and progressive deforestation disrupt the balance of natural ecosystems and reduce their area. As a result, pathogen-carrying animals come into increasingly common contact with man or farm animals. The processes of acquiring and breeding wild animals for consumption and their trade are quickly gaining in intensity. This is a very easy path for animal-origin viruses to transfer to man by way of mutation. It is recommended man and his technical and agricultural infrastructure should occupy less space and leave more for nature, as it is necessary to restore the planet's balance: climatic, ecosystemic, and thus health equilibrium of humankind. This unambiguously points to the fact our economy on the remaining land must be intensive on the one hand and subject to rigorous limitation of impact on the environment and human health, on the other hand.²¹ Scientific simulations suggest leaving 30% of the Earth's surface to itself would let global economies make savings and facilitate the way out of the coronavirus pandemics

²⁰ See <https://www.gridw.pl/aktualnosci/unep/2340-raport-ipbesnawet-milion-gatunkow-roslin-i-zwierzat-zagrozonychwyginieciem> [accessed: 03.11.2020].

²¹ See <https://naukawpolsce.pap.pl/aktualnosci/news%2C84544%2Cmiedzynarodowy-raport-zagrozenie-pandemiami-mozna-zmniejszyc-dzieki-ochronie> [accessed: 10.11.2020].

[Rogala 2020]. The postulated changes are therefore similar to legal and financial instruments concerning protection of species or climate.²²

The current strategies and legal actions follow up and control existing diseases and are basically limited to establishing protective procedures, looking for vaccination, and development of drugs. No approach preventing and restricting factors of the pandemic risk is in place, though. It can be considerably limited with actions contributing to protection of biological diversity. In practice, this means enhanced protection of protected areas, restrictions on unsustainable exploitation of valuable regions or potential taxation or charges on consumption of meat, animal products and other forms of high-risk activities. A coherent plan of green economic recovery following COVID-19 needs to be taken into account as a precaution against future epidemics, too.

Scientists have noted a pattern indicating that loss of biological diversity is associated with increased transfer of diseases. An analysis of 12 conditions including the West Nile fever or Lyme disease in global ecosystems has demonstrated the diseases become more widespread every time biological diversity declines. Biodiversity can therefore become a natural ‘vaccine’ protecting against pathogens.²³

Not only the human interference with ecosystems should be blamed for the spread of pathogens. Both the interference with wildlife and the climate change are important as well. If legislation is not modified to more effectively protect biodiversity, new pandemics may erupt in future. It is necessary to rebuild ravaged ecosystems, resign from use of wild animals, and limit industrial rearing of animals. A changed approach to biological diversity will help reduce the scale of casualties and cut economic costs.

Environment-friendly actions are highly desirable, and it must be stressed “the *COVID-19 crisis has shown how defenceless we become in the face of the escalating loss of biodiversity.*”²⁴

²² Ibid.

²³ Ibid.

²⁴ See https://ec.europa.eu/commission/presscorner/detail/pl/ip_20_884 [accessed: 08.11.2020].

Conclusion

Agriculture and rural areas account for a prevailing part of the Earth's surface and the ways these resources are used directly affect biological diversity to a large extent. The natural plenty of rural areas is threatened by intensity and excessive quantities of chemicals in agricultural production, grass burning, as well as abandonment of green land that has low feeding and high natural value. Biodiversity in agriculture assures: preservation of soil structure and fertility, crop pollination, biological control, prevention of soil erosion, circulation of nutrients, control of water flow and distribution.

Biological diversity is defined by a variety of scientific disciplines, including legal regulations. Its preservation is necessary for maintenance of environmental functions and processes that ensure soil fertility, productivity and proper functioning of agricultural ecosystems and make farming and agricultural production more sustainable and profitable. In the face of dynamic changes in progress, search for instruments to bolster biological diversity becomes important.

Man-made ecological disruption and unsustainable consumption are identified among causes of the pandemic. This involves, among other things, changing ways of land use, expansion and intensification of agriculture, and trade in wild animals. Scientists do not rule out the risk of more pandemics, possibly associated with human and wild animal movements and spread of pathogens. The changing methods of land use – deforestation, human settlements in primeval wildlife environments, growth of plant and animal production and urbanisation – are major factors of pandemic development globally. All these elements make considerable contributions to shrinking of biological diversity.

In accordance with the precept in the Hippocratic oath, “prevention is preferable to cure,” the issue of biodiversity preservation must be pondered seriously and development of effective regulations needs to be emphasised. Although steps are taken, especially at the EU level, a holistic, systemic approach to the issue is hardly in place. As far as the current epidemic is concerned, we can only learn from mistakes and negligence in relation to the environment while incurring enormous social and economic losses. This situation may become a turning point for the whole world, making us

realise how important biological diversity is to protection of our health and life. Instead of more intensive utilisation of the natural environment, work for its protection, including environment-friendly modifications to law, can become more intense. Biodiversity will gain the status of a potential “vaccine” and actions to protect it will become priorities.

The new EU strategy for biological diversity 2030 and “from farm to table” strategy also offer hope for bolstering and expanding the network of protected areas, restoration of degraded ecosystems, and guaranteeing ecosystems will remain healthy, resistant to the climate change, and highly biodiverse and will provide a range of functions necessary for public well-being and welfare. High hopes are also raised by the 15th Conference of Parties to the Convention on Biological Diversity, to be held in Kunming in 2021. Creation of regulations and guidelines will be “enriched” with the experience of the pandemic. Biological diversity can be protected globally, continentally or nationally, however, regional or even local protection of biodiversity is the most effective. Therefore, amendments to regulations that will result in more effective biological diversity in specific regions are and will continue to be so extremely desirable.

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Protection of Biological Diversity and Covid-19 Pandemics – Selected Legal Aspects Abstract

The paper is an attempt at answering the questions: Are the current regulations expected to protect biodiversity effective and systemic? Have any actions in this respect been taken at the national and EU levels during the Covid-19 pandemics? Given the scale of the coronavirus threat, what should be the direction of legislative changes to effectively foster protection of biological diversity? To what extent can effective provision of biodiversity protection with legal regulations affect minimising the risk of global pandemics in future? The subject matter is particularly topical and pressing from the public perspective as the pandemic situation is being exacerbated and searching for solutions that may protect the world against this situation in future is a priority.

Keywords: biological diversity, Covid-19, organic production

Ochrona bioróżnorodności a pandemia Covid-19 – wybrane aspekty prawne Abstrakt

Artykuł jest próbą odpowiedzi na pytania: czy obecne przepisy, mające chronić bioróżnorodność, są efektywne i mają charakter systemowy? czy w czasie pandemii Covid-19 zostały podjęte działania w tym sektorze na szczeblu unijnym i krajowym? W jakim kierunku, wobec skali zagrożenia koronawirusem, powinny podążać zmiany legislacyjne, aby w sposób skuteczny wspierać ochronę bioróżnorodności? W jakim wymiarze skuteczne zabezpieczenie regulacjami prawnymi ochrony bioróżnorodności może mieć wpływ na minimalizację ryzyka wystąpienia globalnych pandemii w przyszłości? Tematyka ta jest szczególnie aktualna i istotna ze społecznego punktu widzenia wobec pogarszającej się sytuacji pandemicznej, a szukanie rozwiązań, które mogą zabezpieczyć świat przed tą sytuacją w przyszłości są priorytetowe.

Słowa kluczowe: bioróżnorodność, różnorodność biologiczna, Covid-19, produkcja ekologiczna

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