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## Law in the face of the problem of land take

1. Land and the ecosystem services it provides are critical to the functioning of mankind.<sup>1</sup> Therefore their protection is regulated by law in various aspects and in many areas. The immanent characteristics of land as an environmental resource are limitation and scarcity.<sup>2</sup> Moreover, the demand of a growing population for land to be used, mainly, for the production of food, for urbanisation and industry purposes, and recently also for energy production, is showing an unprecedented rapid growth.<sup>3</sup> Agricultural land is subject to particular pressure. Currently, it occupies more than 37% of the land, being one of the largest biomes on Earth.<sup>4</sup> However, this turns out to be still insufficient to meet the growing needs of mankind, especially in the light of the expected increase in the demand for agricultural land by about 50% by 2050.<sup>5</sup>

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<sup>1</sup> J.A. Foley et al., *Global consequences of land use*, "Science" 2005 No. 309, pp. 570–574; P. Smith et al., *Biogeochemical cycles and biodiversity as key drivers of ecosystem services provided by soils*, "Soil Discussions" 2015, No. 2(1), pp. 537–586; R. Bommarco, D. Kleijn, S.G. Potts, *Ecological intensification: harnessing ecosystem services for food security*, "Trends in Ecology & Evolution" 2013, No. 28(4), pp. 230–238; S. Geisen, D.H. Wall, W.H. van der Putten, *Challenges and opportunities for soil biodiversity in the Anthropocene*, "Current Biology" 2019, No. 29(19), pp. 1036–1044.

<sup>2</sup> E.F. Lambin, P. Meyfroidt, *Global land use change, economic globalization, and the looming land scarcity*, "Proceedings of the National Academy of Sciences of the United States of America" 2011, No. 108(9), pp. 3465–3472.

<sup>3</sup> H. Godfray et al., *Food security: the challenge of feeding 9 billion people*, "Science" 2010, No. 327, p. 812 et seq.

<sup>4</sup> FAOSTAT 2015, <http://www.fao.org/faostat> [accessed on 10 May 2020].

<sup>5</sup> T. Gomiero, *Soil degradation, land scarcity and food security: Reviewing a complex challenge*, "Sustainability" 2016, No. 8, p. 3.

Among the phenomena identified as threats to the protection of the land as an environmental resource, the following are considered particularly important:<sup>6</sup> land take, land degradation,<sup>7</sup> global displacement of land use<sup>8</sup> and unfair (unbalanced) access to the land resources.<sup>9</sup> These threats create new challenges related to the building of adequate protection instruments and new formulas and solutions are being sought to respond to these problems and needs, and which, developed specifically to address them, will allow to build effective the protection instruments.

An example of these attempts is the objective set by the European Union of no net land take by 2050.<sup>10</sup> The idea of land take and associated with it purpose is the subject of this article. Its task is to determine how the above concept functions in the law (especially Polish law). Then an attempt will be made to assess to what extent the perception of this formula in the legal regulation is relevant to the legal model of land protection and whether it has the potential of increasing the effectiveness of the legal regulation adopted, and in particular whether it shows functional suitability for achieving the desired social consequences.<sup>11</sup>

The issue of the protection of land being an environmental resource is of interest to various branches and fields of law, so the literature on this subject is rich and multi-faceted. Basically, two main streams can be distinguished within its framework. One, which can be described as environmental, focuses on the approach to land as a resource and an element of the environment, in which the basic term is “the land’s surface” derived from the Environmental

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<sup>6</sup> *Soil Atlas 2015. Facts and figures about earth, land and fields*, Berlin – Potsdam 2015, [http://www.iass-potsdam.de/sites/default/files/files/soilatlas2015\\_web\\_english.pdf](http://www.iass-potsdam.de/sites/default/files/files/soilatlas2015_web_english.pdf) [accessed on 10 May 2020].

<sup>7</sup> This issue was addressed in my earlier article: J. Goździewicz-Biechońska, *Przeciwdziałanie degradacji ziemi i gleby jako globalne wyzwanie dla prawa*, „Przegląd Prawa Rolnego” 2018, No. 1(22), pp. 41–57; <https://www.15umau.org/conf-data/WCAL2018/files/15UMAU%20-%20Book%20of%20Articles.pdf> [accessed on 10 May 2020].

<sup>8</sup> See e.g. P. Meyfroidt, T.K. Rudel, E.F. Lambin, *Forest transitions, trade, and the global displacement of land use*, “Proceedings of the National Academy of Sciences of the USA” 2010, No. 107, pp. 20917–20922; J. Weinzettel et al., *Affluence drives the global displacement of land use*, “Global Environmental Change” 2013, No. 23(2), p. 434.

<sup>9</sup> R. Pastuszko, *Dostęp do zasobu gruntów rolnych w procesie globalizacji*, Lublin 2019.

<sup>10</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: A Roadmap to a Resource Efficient Europe (COM/2011/0571).

<sup>11</sup> This objective is linked to the objectives of a theoretical research in detailed legal sciences formulated by Z. Ziemiński, *Szkice z metodologii szczegółowych nauk prawnych*, Warszawa 1983, p. 41.

Protection Law.<sup>12</sup> The other, which may be called agrarian, focuses on land protection as the main research topic.<sup>13</sup> It concerns primarily the Act on the protection of agricultural and forest land.<sup>14</sup> However, these two areas of research are not separate nor even more so contradictory, since many works intertwine threads from both streams.

Land take is the subject of research which focuses primarily on the land use policy, spatial planning and environmental management, as well as life sciences,<sup>15</sup> and the rapid growth of interest in this subject has been seen in

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<sup>12</sup> See e.g. P. Bojarski, *Dualizm prawnej ochrony ziemi*, in: H. Lisicka (ed.), *Prawo i polityka w ochronie środowiska. Studia z okazji 40-lecia pracy naukowej J. Sommera*, Wrocław 2006; M. Górski, *Prawna ochrona powierzchni ziemi i odpowiedzialność za szkody wyrządzone w powierzchni ziemi*, "Geologia" 2009, No. 35; M.A. Król, *Europejskie systemy prawa ochrony ziemi a polskie rozwiązania prawne*, "Studia Prawno-Ekonomiczne" 1994, Vol. L; eadem, *Regulacje prawne ekologicznych podstaw ochrony powierzchni ziemi*, in: S. Prutis (ed.), *Polskie prawo rolne u progu Unii Europejskiej*, Białystok 1998; eadem, *Review of the Legislation Regulating the Use of Land: Legal and Administrative Issues*, "Studia Iuridica Lublinensia" 2018, No. 27(4), pp. 71–97; J. Goździewicz-Biechońska, *Nowe paradygmaty ochrony ziemi jako zasobu środowiska w prawie rolnym*, "Przegląd Prawa Rolnego" 2017, No. 2, pp. 77–92.

<sup>13</sup> See e.g. J. Bieluk, *Instrumenty finansowe ochrony gruntów rolnych i leśnych*, "Prawo" 2015, No. 318, pp. 13–24; J. Bieluk, D. Łobos-Kotowska, *Ustawa o ochronie gruntów rolnych i leśnych. Komentarz*, Warszawa 2015; J. Ciechanowicz, *Prawna ochrona gruntów rolnych w Polsce*, in: S. Prutis (ed.), *Polskie prawo rolne...*, pp. 213–224; J. Ciechanowicz-McLean, K. Wysokińska, *Prawna ochrona gruntów rolnych i leśnych w Polsce*, in: A. Barczak, P. Korzeniowski (eds.), *Administracja a środowisko. Prace dedykowane prof. zw. dr. hab. Markowi Górskiemu z okazji jubileuszu 45-lecia pracy naukowej*, Szczecin 2018, pp. 157–171; P. Czechowski, K. Marciniuk, *Ochrona gruntów rolnych*, in: P. Czechowski (ed.), *Prawo rolne*, Warszawa 2019; M. Karpiuk, *Normatywne aspekty ograniczenia przeznaczenia gruntów rolnych i leśnych na cele nierolnicze i nieleśne*, "Studia Iuridica Lublinensia" 2013, No. 20; E. Klat, L. Klat-Wertelecka, *Ochrona gruntów rolnych a miejscowy plan zagospodarowania przestrzennego*, "Rejent" 1996, No. 9(55); M.A. Król, *Instrumenty prawne ochrony jakościowej gruntów rolnych*, "Studia Prawno-Ekonomiczne" 1997, Vol. LV; eadem, *Przeznaczenie gruntów rolnych na cele nierolnicze i ich wyłączenie z produkcji rolnej w procesie planowania przestrzennego*, "Samorząd Terytorialny" 1998, No. 7–8; A. Majewski, *Ewolucja prawnej ochrony gruntów rolnych*, "Gdańskie Studia Prawnicze" 2006, No. 15, pp. 433–448; M. Geszprych, *Antynomie aksjologiczne w ochronie gruntów rolnych i leśnych*, "Człowiek i Środowisko" 2018, No. 1(41); D.R. Kijowski, *Ochrona gruntów rolnych – prawda czy fikcja?*, in: J. Bieluk, A. Doliwa, A. Malarewicz-Jakubów, T. Mróz (eds.), *Z zagadnień prawa rolnego, cywilnego i samorządu terytorialnego. Księga jubileuszowa Profesora Stanisława Prutisa*, Białystok 2012, pp. 116–132; W. Radecki, *Ustawa o ochronie gruntów rolnych i leśnych. Komentarz*, Warszawa 2012.

<sup>14</sup> Act of 3 February 1995 on the protection of agricultural and forest land (i.e. Journal of Laws 2017, item 1161).

<sup>15</sup> Regarding the use of the approach to land take in different research contexts see e.g. A. Barbosa et al., *Modelling built-up land take in Europe to 2020: An assessment of the Resource Efficiency Roadmap measure on land*, "Journal of Environmental Planning and Management" 2017, No. 60(8), p. 1440.

the scientific literature over the last decade.<sup>16</sup> However, legal analyses in this area are rarely undertaken.<sup>17</sup> In the Polish legal literature land take has not been regarded as an issue in need for a separate study so far.

2. The term land take has its origins in agronomy, where it was used in studies of the causes of a loss of agricultural land. Therefore, the idea was based on distinguishing different types of uses and transformations (artificialisations) between them. Four main types of land use have therefore been distinguished: agricultural, forest, “natural,” and artificialised, the latter covering all other types. In this context, land take is a negative construct, referring to the replacement of the first three types of use by the fourth one.<sup>18</sup> Hence land take is the process of transforming natural, forest and agricultural land into artificialised areas (for urbanisation, industry and infrastructure purposes).<sup>19</sup> The European Environment Agency (EEA) has adopted the following definition: “land take is the process in which urban areas and sealed surfaces occupy agricultural, forest or other semi-natural and natural areas.”<sup>20</sup>

Land take is seen as a phenomenon that contributes to many environmental processes and problems such as: urban sprawl, soil sealing, biodiversity loss, erosion as well as soil degradation, flooding, desertification, or a phenomenon that exacerbates the effects of climate change (e.g. by reducing the potential for coal storage)<sup>21</sup> or inducing indirect changes in land use.<sup>22</sup> However, the interconnection of the above processes makes it often difficult to draw conceptual boundaries.<sup>23</sup> Land taking is sometimes identified with urbanisation and the growth of artificial surfaces, and in

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<sup>16</sup> C. Gardi et al., *Land take and food security: assessment of land take on the agricultural production in Europe*, “Journal of Environmental Planning and Management” 2015, No. 58(5), p. 899.

<sup>17</sup> See e.g. S. Naumann et al., *Land Take and Soil Sealing—Drivers, Trends and Policy (Legal Instruments: Insights from European Cities)*, in: H. Ginzky et al. (eds.), *International Yearbook of Soil Law and Policy 2018*, Heidelberg 2018, pp. 83–112.

<sup>18</sup> M. Desrousseaux et al., *Artificialised Land and Land Take: What Policies Will Limit Its Expansion and/or Reduce Its Impacts?* in: H. Ginzky et al. (eds.), *International Yearbook...*, p. 150.

<sup>19</sup> E. Aksoy et al., *Assessing and analysing the impact of land take pressures on arable land*, “Solid Earth” 2017, No. 8(3), p. 684.

<sup>20</sup> When defining “land take” its effects generating changes in the resources, services and goods supplied by soils are highlighted. *Ibidem*.

<sup>21</sup> G. Louwagie et al., *Impact of land take and soil sealing on biodiversity*, “Urban Expansion, Land Cover and Soil Ecosystem Services” 2017, No. 9, pp. 169–180; E. Aksoy et al., *Assessing and analysing...*, p. 683.

<sup>22</sup> C. Gardi et al., *Land take...*, p. 899.

<sup>23</sup> S.S. Naumann et al., *Land Take...*, p. 84.

this sense it means: “an increase of settlement areas (or artificial surfaces) over time, usually at the expense of rural areas. This process can result in an increase of scattered settlements in rural regions or in an expansion of urban areas around an urban nucleus (urban sprawl). A clear distinction is usually difficult to make.”<sup>24</sup> The above definition of land taking is commonly adopted in the literature.<sup>25</sup>

A similar definition of land taking may be found in EU policy documents dealing with this issue, according to which it is: “the loss of undeveloped land to human-developed land. It can also be defined as the loss of agricultural, forest and other semi-natural and natural land to urban and other artificial land development. This includes areas sealed by construction and urban infrastructure as well as urban green areas and sport and leisure facilities.”<sup>26</sup>

The literature proposes other terms to describe land take, and they include land-use transition which takes into account the complexity of the process and new forms of land take<sup>27</sup> and land consumption that emphasises the increase in artificialised land (surface) regardless of the manner of its use. In this perspective, unsealed soil in urban areas is not considered to be consumed land, as opposed to sealed soil in natural areas.<sup>28</sup> Moreover, as the above definition shows, land take is associated with urban sprawl. Although these processes do not always co-exist, it is nevertheless pointed out that one of the main ways in which land take may be counteracted is the prevention of suburbanisation processes.<sup>29</sup>

The term land take is frequently connected with soil sealing. Generally speaking, soil sealing means the permanent covering of the land and

<sup>24</sup> G. Prokop, H. Jobstmann, A. Schönbauer, A., *Report on best practices for limiting soil sealing and mitigating its effects. Study contracted by the European Commission*, DG Environment, Technical Report-2011-50, Brussels 2011, [http://publications.europa.eu/resource/ce/cellar/c20f56d4-acf0-4ca8-ae69-715df4745049.0001.01/DOC\\_1](http://publications.europa.eu/resource/ce/cellar/c20f56d4-acf0-4ca8-ae69-715df4745049.0001.01/DOC_1) [accessed on 10 May 2020].

<sup>25</sup> S. Naumann et al., *Land Take...*, p. 84; A. Colsaet, A.Y. Laurans, H. Levrel, *What drives land take and urban land expansion? A systematic review*, “Land use Policy” 2018, No. 79, p. 339; European Environment Agency (EEA), *The European environment – state and outlook 2020. Knowledge for transition to a sustainable Europe (SOER 2020)*, 4 December 2019, <https://www.eea.europa.eu/publications/soer-2020> [accessed on 10 May 2020].

<sup>26</sup> European Commission, *Future Brief: No net land take by 2050?*, [https://ec.europa.eu/environment/integration/research/newsalert/pdf/no\\_net\\_land\\_take\\_by\\_2050\\_FB14\\_en.pdf](https://ec.europa.eu/environment/integration/research/newsalert/pdf/no_net_land_take_by_2050_FB14_en.pdf) [accessed on 10 May 2020].

<sup>27</sup> R. Attardi et al., *The multidimensional assessment of land take and soil sealing*, in: O. Gervasi et al. (eds.), *International Conference on Computational Science and Its Applications*, Heidelberg 2015, pp. 301–316.

<sup>28</sup> L. Congedo et al., *Monitoring of land consumption: An analysis of loss of natural and agricultural areas in Italy*, “Annali di Botanica” 2017, No. 7, p. 2.

<sup>29</sup> A. Colsaet, A.Y. Laurans, H. Levrel, *What drives...*, p. 340.

its soil with impermeable artificial material such as asphalt or concrete.<sup>30</sup> This term is defined as: “the destruction, or covering of soils by buildings, constructions and layers of completely or partly impermeable artificial material (asphalt, concrete, etc.). It is the most intense form of land take and is essentially an irreversible process. Sealed land is a subset of the above mentioned category; i.e. land consumed by development of settlements, infrastructure, and commercial and industrial areas. An indicator of the intensity of land take is the proportion of the total built-up land area which is sealed.”<sup>31</sup> Soil sealing is considered to be one of the main soil degradation processes.<sup>32</sup> Although it constitutes a soil function serving urbanisation (by creating a physical and cultural environment for people), when it does so, the remaining functions of soil are irretrievably lost.<sup>33</sup> Soil sealing as a result of land take is in fact, from the human perspective, an irreversible process.<sup>34</sup>

It is worth noting that the notions “land take” and “soil sealing” cannot be equated although they are closely related to each other. The literature notes that not all artificialised soils are covered with an impermeable surface and thus sealed. This is true, in particular, to green areas, recreational areas and private gardens in detached houses.<sup>35</sup> It should also be noted that soil sealing can be a side-effect of trade-offs in strategies to counteract soil sealing processes involving land take aimed at compacting the urban structures. The relationship between soil sealing and land take depends therefore on the dynamics of the processes of urban development.<sup>36</sup> The same applies to urbanisation which ought to be treated distinctly to avoid reducing the multifaceted complexity of the issue of land take.<sup>37</sup>

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<sup>30</sup> *Guidelines on best practice to limit, mitigate or compensate soil sealing*, Commission Staff Working Document Brussels, 15.05.2012, SWD(2012) 101 final/2, <https://ec.europa.eu/environment/soil/pdf/guidelines/EN%20-%20Sealing%20Guidelines.pdf> [accessed on 10 May 2020].

<sup>31</sup> G. Prokop, H. Jobstmann, A. Schönbauer, *Report on best practices...*

<sup>32</sup> Communication from the Commission of 22 September 2006, *The Thematic Strategy for soil protection*, COM(2006) 231.

<sup>33</sup> N. Glæsner, K. Helming, W. De Vries, *Do current European policies prevent soil threats and support soil functions?*, “Sustainability” 2014, No. 6(12), p. 9549.

<sup>34</sup> E. Aksoy et al., *Assessing and analysing...*, p. 684; R. Lal, *Restoring soil quality to mitigate soil degradation*, “Sustainability” 2015, No. 7(5), p. 589.

<sup>35</sup> M. Desrousseaux et al., *Artificialised Land...*, p. 153.

<sup>36</sup> BIO by Deloitte, *Study supporting potential land and soil targets under the 2015 Land Communication. Report prepared for the European Commission, DG Environment in collaboration with AMEC, IVM and WU*, 2014, <https://op.europa.eu/en/publication-detail/-/publication/fdbdf00a-87ac-4c85-8eab-ef60118963c5> [accessed on 10 May 2020].

<sup>37</sup> M. Desrousseaux et al., *Artificialised Land...*, p. 156.

Land take is being observed in many different regions worldwide (especially in countries with rapidly developing economies)<sup>38</sup> and throughout Europe as well. It is a complex problem which takes different forms and is conditioned by various factors.<sup>39</sup> Hence there are attempts in the European Union to monitor the processes of land take. The indicators used to determine the scale of this phenomenon are regarded to be among the key elements in the research into the sustainable development.<sup>40</sup> One of these has been developed by the European Environmental Agency (EEA).<sup>41</sup> According to that indicator, between 2000 and 2006 the average annual land take in the EU exceeded 1000 km<sup>2</sup>.<sup>42</sup> However, in subsequent years these processes showed a tendency of slowing down: between 2006 and 2012 the ratio was 860 km<sup>2</sup>/year, and between 2012 and 2018 it fell to 539 km<sup>2</sup>/year.<sup>43</sup> For Poland, this indicator was: 1133.82 km<sup>2</sup>/year (2000–2018); 202.31 km<sup>2</sup>/year (2000–2006); 509.27 km<sup>2</sup>/year (2006–2012); 446.96 km<sup>2</sup>/year (2012–2018). Moreover, the increase in the area of artificialised areas significantly exceeds the population growth in Europe, and paradoxically it is accompanied by an increasing share of abandoned urban and post-industrial (brownfields) sites. These two phenomena (land take and land abandonment) are considered the most important factors for the loss of agricultural land in the EU.<sup>44</sup>

The statistics collected by the EEA and the results of the research work<sup>45</sup> indicate that the problem of land take is particularly acute in the case of agricultural land. Due to historical conditions (urban settlement developed in areas with fertile land), the spatial urban development was and still is done at the expense of land of highest agricultural value.<sup>46</sup> Between 2000 and

<sup>38</sup> C. Gardi et al., *Land take...*, p. 900.

<sup>39</sup> On land take determinants see also e.g. A. Colsaet, A.Y. Laurans, H. Levrel, *What drives...*, passim.

<sup>40</sup> BIO by Deloitte, *Study supporting potential land...*

<sup>41</sup> *Land take* (CSI 014/LSI 001) constitutes one of the 127 indicators IMS: EEA's Indicator Management System (IMS). More on them in: European Environmental Agency, *Digest of EEA indicators 2014*, Technical report No 8/2014, <https://www.eea.europa.eu/publications/digest-of-eea-indicators-2014> [accessed on 10 May 2020].

<sup>42</sup> <https://www.eea.europa.eu/data-and-maps/indicators/land-take-2/assessment-1> [accessed on 10 May 2020].

<sup>43</sup> EEA, *Land take in Europe. Indicator assessment report*, 2019, <https://www.eea.europa.eu/data-and-maps/indicators/land-take-3/assessment> [accessed on 10 May 2020].

<sup>44</sup> EEA, *Urban sprawl in Europe – the ignored challenge*, Report No. 10/2006, [https://www.eea.europa.eu/publications/eea\\_report\\_2006\\_10](https://www.eea.europa.eu/publications/eea_report_2006_10) [accessed on 10 May 2020].

<sup>45</sup> E. Aksoy et al., *Assessing and analysing...*; C. Gardi et al., *Land take...*, passim; L. Congedo et al., *Monitoring of land consumption...*

<sup>46</sup> S. Tobias et al., *Soil sealing and unsealing: State of the art and examples*, "Land Degradation & Development" 2018, No. 29(6), p. 2015; C. Gardi et al., *Land take...*, p. 900.

2018, 78% of the land take in the EU affected agricultural land (of which 50.5% concerned arable land and land for permanent crops). During this period, 394 km<sup>2</sup> of arable land and 212 km<sup>2</sup> of pasture and mosaic fields in the EU were converted annually as a result of land take.<sup>47</sup> However, in the context of the effects of land take, it is rightly pointed out that it would be too simplistic to automatically link the loss of agricultural land with the loss of biodiversity, since the protection of the former does not always ensure the preservation of the latter.<sup>48</sup>

The role of agriculture in the dynamics of land take processes is essential, although complex and ambiguous. Less dispersed agricultural holdings with high productivity, financial support for agriculture or a higher value of agricultural products are factors that may successfully stop urban expansion. On the other hand, low profitability of agricultural activity may adversely affect farmers' motivation to artificialise their land. Yet, as some studies indicate, there is no correlation in this respect or indeed the opposite effect is observed.<sup>49</sup>

3. Despite the terminological discrepancies indicated above, which make it difficult to define the concept of "land take" clearly, this term has started to appear in public debates and political discussions at various levels.<sup>50</sup> The objective of no net land take by 2050 fits into the formula of UN sustainable development goals (in particular the following targets: 15.3 neutrality of soil degradation, 2.4 food security, 3.9 reduction of soil pollution and contamination; 11.3 sustainable cities and communities, 15.2 sustainable agriculture and forestry).<sup>51</sup> The European Union has also addressed this issue in its environmental policy, proposing in the Action Plan "A Roadmap to a Resource Efficient Europe" adopted in 2011,<sup>52</sup> a no net land take target by 2050 of the following wording: "By 2020, EU strategies will take into account their direct and indirect impact on land use in the EU and worldwide and the land take indicator will be applied with the aim of achieving a no net land take by 2050; soil erosion will be reduced

<sup>47</sup> EEA, *Land take in Europe...*

<sup>48</sup> M. Desrousseaux et al., *Artificialised Land...*, p. 150; S.J., Butler, J.A. Vickery, K. Norris, *Farmland biodiversity and the footprint of agriculture*, "Science" 2007, No. 315, pp. 381–384.

<sup>49</sup> A. Colsaet, A.Y. Laurans, H. Levrel, *What drives...*, passim.

<sup>50</sup> M. Desrousseaux et al., *Artificialised Land...*, p. 150.

<sup>51</sup> United Nation, *Transforming our world: the 2030 Agenda for Sustainable Development*, 2015, A/RES/70/1.

<sup>52</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions of 20.09.2011: Roadmap to a Resource Efficient Europe, COM/2011/0571 final.

and the soil organic matter content will be higher, while a remedial action will be taken on contaminated sites.”

The 7<sup>th</sup> Environmental Action Plan (7<sup>th</sup> EAP)<sup>53</sup> also refers to this objective, pointing to the need to orient land management decisions towards its achievement, stating that: “Environmental considerations including water protection and biodiversity conservation should be integrated into planning decisions relating to land use so that they are made more sustainable, with a view to making progress towards the objective of ‘no net land take,’ by 2050.”

The concept of no net land take by 2050 has been adopted in the above EU documents albeit not defined in them. This kind of formula is relatively new but used in other EU environmental policies as well, for instance in the Biodiversity Strategy to 2020<sup>54</sup> (“no net loss of biodiversity or ecosystem services”), in the Directive on the promotion of the use of energy from renewable sources<sup>55</sup> (“no net carbon emissions from land-use change”), or in the Communication from the Commission “A Clean Planet for all”<sup>56</sup> (“net-zero greenhouse gas emission by 2050”).

The essence of the no net land take concept is maintenance of the balance between land take (and thus transforming land into artificialised sites) and its rehabilitation (i.e. restoring it to its natural or semi-natural state).<sup>57</sup>

However, the concept may be interpreted in a number of different ways. In arithmetical terms, it constitutes: “changes of non-artificial areas into artificial areas, which are not compensated by the restoration of the same amount of artificial areas into non-artificial areas.”<sup>58</sup> While non-artificial land is either agricultural land, forests or (semi-)natural land, artificial land is considered to be land developed for housing, transport, industry, trade and recreation. The latter may include not only sealed land, but also uncovered soils (e.g. at the initial stage of construction), gardens and urban green areas (e.g. parks, cemeteries, lawns) and recreational and sports areas.

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<sup>53</sup> Decision No 1386/2013/EU of the European Parliament and of the Council of 20 November 2013 on a General Union Environment Action Programme to 2020 ‘Living well, within the limits of our planet’ Text with EEA relevance OJ L 354, 28.12.2013, pp. 171–200.

<sup>54</sup> Resolution of the European Parliament of 20 April 2012 on biodiversity as our life insurance, our natural capital: an EU biodiversity strategy to 2020 (2011/2307(INI))

<sup>55</sup> Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, OJ L 140, 5.06.2009, pp. 16–62.

<sup>56</sup> Communication from the Commission, A clean planet for all European long-term strategic vision for a thriving, modern, competitive and climate neutral economy, COM(2018) 773.

<sup>57</sup> <https://www.eea.europa.eu/publications/soer-2020> [accessed on 10 May 2020].

<sup>58</sup> BIO by Deloitte, *Study supporting potential land...*

The absence of net land take must therefore be distinguished from gross land take which refers to the formation of artificialised land without taking into account its renaturalisation.<sup>59</sup> Thus, the EU target of no net land take assumes that urbanisation processes will be carried out in post-industrial areas (brownfields) or that every new land take will be compensated by restoring artificialised land to its previous state.<sup>60</sup> In this context, the growing importance of land recycling may also be seen as complementary to the no net land take approach.<sup>61</sup>

Apart from this quantitative approach, which is commonly adopted for measuring land take processes (notably due to the use of quantitative methods that facilitate data collection), there are also attempts to interpret them based on a qualitative approach which may be described as “functional” or “ecological.”<sup>62</sup> The reference point for them is the balance between the functions of the land – lost and restored. They allow for a more in-depth study of land take processes, for example by taking into account the value and functions of the lands undergoing artificialisation or their sensitivity and location.<sup>63</sup> This approach, however, is difficult to implement due to its methodological complexity.

The year 2020 is a time to take stock and adopt new strategies in the EU environmental policy. How is the concept of “no net land take by 2050” assessed in this context? The problem with land take, particularly seen as a threat to soil protection, is explicitly identified in the new Biodiversity Strategy to 2030.<sup>64</sup> It has also heralded further measures including the Strategy for a Sustainable Built Environment. However, the most recent 6<sup>th</sup> EEA Report on the European environment – state and outlook (SOER)<sup>65</sup> indicates that meeting this target by the EU is threatened. Nonetheless, recognising that urban and infrastructural expansion is slowing down, the same Report concludes that provided that appropriate measures are taken, these targets may still be achieved.

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<sup>59</sup> Ibidem.

<sup>60</sup> EEA, *Land take in Europe...*

<sup>61</sup> EEA, *Land recycling in Europe*, Report No. 31/2016, <https://www.eea.europa.eu/data-and-maps/indicators/land-recycling-and-densification/land-recycling-in-europe-eea> [accessed on 10 May 2020].

<sup>62</sup> BIO by Deloitte, *Study supporting potential land...*

<sup>63</sup> Ibidem.

<sup>64</sup> Communication from the Commission, *Biodiversity Strategy for 2030 Bringing nature back into our lives*, 20 May 2020, COM(2020) 380.

<sup>65</sup> European Environment Agency (EEA), *The European environment – state and outlook 2020. Knowledge for transition to a sustainable Europe (SOER 2020)*, 4 December 2019, <https://www.eea.europa.eu/publications/soer-2020> [accessed on 10 May 2020].

The EU's no net land take target by 2050 is not binding. Nor does it entail any implementation mechanism. In principle, there is no binding target at the EU level, nor are there any binding measures or incentives directly related to land and soil protection.<sup>66</sup> Indirectly, however, many acts of secondary legislation are relevant to this issue, in the sense that their application may contribute to meeting the set target. This does not mean that the idea of no net land take by 2050 might be derived from the directives indicated below, of which the following ought to be mentioned in particular: the Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora ought to be mentioned,<sup>67</sup> and Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds,<sup>68</sup> Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment,<sup>69</sup> Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment,<sup>70</sup> Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks, Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy.<sup>71</sup>

It is also worth noting that the European Union has no direct competence when it comes to spatial planning. Therefore, the EU merely determines the regulatory framework and possible restrictions in this area, especially through environmental legislation, leaving the Member States with considerable discretion in this respect.<sup>72</sup> As a matter of fact some Member States have set their own targets for reducing land take.<sup>73</sup> Austria, for example, established a target to reduce the land take from 0.25 km<sup>2</sup> per day recorded in 2002 to 0.025 km<sup>2</sup> per day by 2020, while Switzerland adopted in 2002 a target to reduce gradually land consumption to 400 m<sup>2</sup> per citizen. Germany on the

<sup>66</sup> EEA, *Land take in Europe...*

<sup>67</sup> OJ L 206, 22.07.1992, pp. 7–50.

<sup>68</sup> OJ L 20, 26.01.2010, pp. 7–25.

<sup>69</sup> OJ L 197, 21.07.2001, pp. 30–37.

<sup>70</sup> OJ L 26, 28.01.2012, pp. 1–21.

<sup>71</sup> OJ L 327, 22.12.2000, pp. 1–73.

<sup>72</sup> S. Naumann et al., *Land Take...*, pp. 84–85; A.B. Jędruszko, *Europeizacja gospodarki przestrzennej w Polsce – zarys propozycji założeń nowej ustawy*, “Problemy Rozwoju Miast” 2007, No. 1–2, p. 72.

<sup>73</sup> For more see E. Oliveira, J. Leuthard, S. Tobias, *Spatial planning instruments for cropland protection in Western European countries*, “Land Use Policy” 2019, No. 87, p. 6; BIO by Deloitte, *Study supporting potential land...*

other hand, noting the importance of agricultural land for food production, set a target of 0.3 km<sup>2</sup> per day by 2020 in its 2016 National Strategy for Sustainable Development.

4. Basically, there are two policies aimed at reducing the environmental impacts of land use: one is the changing the methods of land transformation (artificialisation) and the ways in which the resulting artificial spaces are organised, and the other is by controlling the spread of artificial land uses.<sup>74</sup> In the context of counteracting soil sealing, a complementary formula is proposed, based on the principle of prevention, reduction and compensation.<sup>75</sup> These instruments of public policy and management are commonly regarded as the main determinant of land take,<sup>76</sup> and many Member States have already implemented various instruments that are now available in both policies.

The most common of these are land use and spatial planning instruments adopted primarily at the local and regional level.<sup>77</sup> However, it should be noted that even instruments that are binding may not be effective if they are poorly enforced in areas exposed to high investment pressure (e.g. on the outskirts of a metropolis or along the coast).<sup>78</sup> It is even questioned in the literature whether spatial planning and land use tools are adequate in this respect. They are in fact instruments for ensuring sustainable spatial development while taking into account economic, social and environmental conditions at the local level but may prove ineffective in solving environmental problems of a supra-local dimension such as the land take.<sup>79</sup>

Another group of measures consists of economic instruments of different nature and purpose, e.g.: incentives for investment in the existing urban fabric (regeneration and compaction); those relating to various forms of land management (governance and stewardship), measures to support agricultural activity; land taxes. Some of these are controversial in terms of their effects,<sup>80</sup> others may produce the opposite effect (increase land take) by subsidising transport or encouraging investment in green areas.<sup>81</sup> It is noted, for example,

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<sup>74</sup> M. Desrousseaux et al., *Artificialised Land...*, p. 150. On the review of the measures concerning land take see: BIO by Deloitte, *Study supporting potential land...*; A. Colsaet, Y. Laurans, H. Levrel, *What drives...*; G. Prokop, H. Jobstmann, A. Schönbauer, *Report...*

<sup>75</sup> G. Prokop, H. Jobstmann, A. Schönbauer, A., *Report on best practices...*

<sup>76</sup> A. Colsaet, A.Y. Laurans, H. Levrel, *What drives...*, p. 348.

<sup>77</sup> O. Ludlow et al., *Land Planning and Soil Evaluation Instruments in EEA Member and Cooperating Countries. Final Report for EEA – December 2013*, S. Naumann et al., *Land Take...*, p. 103 et seq.; E. Oliveira, J. Leuthard, S. Tobias, *Spatial planning...*

<sup>78</sup> BIO by Deloitte, *Study supporting potential land...*

<sup>79</sup> A. Colsaet, A.Y. Laurans, H. Levrel, *What drives...*, p. 348.

<sup>80</sup> *Ibidem*, pp. 346–347.

<sup>81</sup> S. Naumann et al., *Land Take...*, p. 106.

that the participation of municipalities in the revenue from charges levied for the conversion of agricultural land to non-agricultural use may be potentially dangerous.<sup>82</sup> There are also other measures that may be classified as cooperative policies, consisting of guidance and strategy instruments, or public-private partnerships.<sup>83</sup>

Finally, it is pointed out that a sound framework of national law is key to addressing the land take issue.<sup>84</sup> This should primarily concern the legislative basis and the objectives of spatial planning. The legislation of the Member States in this respect is highly diversified, reflecting the multiplicity of spatial planning systems in Europe.<sup>85</sup> Another legislative area through which it is possible to counteract land take processes is environmental law, mainly concerning the protection of natural, green, agricultural and forest areas. However, also in this area it is necessary to bear in mind the side effects of protective legislation, such as an indirect change in the use of land, that may occur even in distant parts of the world.

5. What, then, does the Polish legal system look like in this context? Polish legislation does not directly refer to the concept of land take and the term does not appear in the legal language. Poland has not adopted a national target (not even of a legally non-binding nature) corresponding to the EU objective of no net land take to 2050. However, although not directly, the provisions of Polish law refer to the problem of land take. And as in other European countries, also in Poland the main factor influencing land take processes is the law on spatial planning. Unfortunately, as it transpires from the results of a review of planning documents, the existing Polish regulations contribute to maintaining resource-intensive spatial management, to the effect that the demographic capacity in those documents exceeds significantly the number of the inhabitants in Poland today.<sup>86</sup> Urbanisation processes are shaped first and foremost by market mechanisms.<sup>87</sup> The regulations that are currently in place provide that certain requirements must be taken into account, such as spatial order, efficient space management or economic advantages of space in

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<sup>82</sup> E. Vejchodská, M. Pelucha, *Environmental charges as drivers of soil sealing? The case of the Czech charge for agricultural land loss*, "Land Use Policy" 2019, No. 87, pp. 1–10.

<sup>83</sup> BIO by Deloitte, *Study supporting potential land...*

<sup>84</sup> S. Naumann et al., *Land Take...*, p. 110.

<sup>85</sup> BIO by Deloitte, *Study supporting potential land...*

<sup>86</sup> *Raport o ekonomicznych stratach i społecznych kosztach urbanizacji w Polsce*, Warszawa 2013, p. 3.

<sup>87</sup> J.M. Halleux, S. Marcinczak, E. van der Krabben, *The adaptive efficiency of land use planning measured by the control of urban sprawl. The cases of the Netherlands, Belgium and Poland*, "Land Use Policy" 2012, No. 29(4), p. 889.

the case of new buildings,<sup>88</sup> but they are programmatic in nature and cannot constitute a substantive basis for administrative decisions. Such a system of spatial management regulations together with the inefficiency of tools for the management of spatial development serves first of all investors who take advantage of the extensive nature of local spatial development plans and the ease with which they are adopted.<sup>89</sup>

The provisions of the Act of 27 April 2001: Environmental Protection Law (EPL)<sup>90</sup> which apply to the protection of the land and the soil are of a similar character. They provide for the obligation to use the land economically during the preparation and implementation of a given investment project (article 74 of ELP) and to ensure in municipal spatial planning documents comprehensive solutions to the problems arising from urban and rural development, which are seen as one of the measures for maintaining the natural balance, implementing rational management of environmental resources (article 72(1)(3) of ELP). Moreover, according to its article 101 p. 5, the protection of the land surface consists, *inter alia*, in minimising the degree, and mitigating the effects of soil sealing, by limiting to the necessary minimum the area of soil covered with constructions, and preserving or creating biologically active soil surfaces capable of mitigating the degrading effects of built-up areas and environmental pollution. Therefore, the Environmental Protection Law refers directly to the problem of soil sealing, also through general and programme standards, albeit not further developed and specified.

The legal system in Poland is one of the few in EU Member States to have a separate legal regulation on land protection.<sup>91</sup> The Act on the protection of agricultural and forest land constitutes a *lex specialis* in relation to regulations on environmental protection law.<sup>92</sup> It should be stressed that

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<sup>88</sup> Article 1 Section 4 of the Act of 27 March 2003 on Spatial Planning and Development. Added by article 41 item 1(b) of the Act of 9 October 2015 (Journal of Laws 2015, item 1777) amending this Act as of 18 November 2015.

<sup>89</sup> S. Staszewska, *Bariery rozwoju przymiejskich obszarów wiejskich*, in: E. Rydz, R. Rudnicki (eds.), *Procesy przekształceń przestrzeni wiejskiej*, "Studia Obszarów Wiejskich" 2009, Vol. XVII, p. 182; *Koncepcja Przestrzennego Zagospodarowania Kraju* (National Spatial Development Plan), Annex to Resolution No. 239 of the Council of Ministers of 13 December 2011 on the National Spatial Development Plan 2030, Monitor Polski 2012, item 252, p. 145.

<sup>90</sup> Act of 27 April 2001 Environmental Protection Law (i.e. Journal of Laws 2001, No. 153, item 259, Journal of Laws 2019, item 1396 as amended).

<sup>91</sup> M. Szalewska, *Należność i opłata roczna za wyłączenie gruntów z produkcji rolniczej – uwagi de lege lata i de lege ferenda*, "Człowiek i Środowisko" 2018, No. 2(40), p. 79.

<sup>92</sup> P. Czechowski, K. Marciniuk, *Ochrona gruntów...*; M.A. Król points out in this context that the Act on the protection of agricultural and forest land concerns the protection of the area of land with a productive function in agriculture and forestry, as opposed to the Environmental Protection Law, which protects the area of land independently of its function (M.A. Król, *Wpływ*

the subject of protection in this Act is arable land and forest areas treated in isolation from the ownership aspect.<sup>93</sup> Under article 3 of the Act on the protection of agricultural and forest land, two directions of land protection are distinguished: the quantitative and the qualitative, while Elżbieta Kremer also distinguishes the third one: the obligation of reclamation.<sup>94</sup> From the point of view of the land take concern the former, which consists in restricting the use of arable and forest land for non-agricultural and non-forestry purposes is of greater importance.

The above principle expressed in article 3(1)(1) and article 3(2)(1) of the Act on the protection of agricultural and forest land has been complemented by the principle of the protection of soils with the highest production capacity (article 6 of the Act).<sup>95</sup> The change of the use of arable land should apply to uncultivated land and the lowest class land, and only in exceptional cases to a top-class land. However, this principle is not absolute. The decision allowing a change of the use of an arable land or a forest for non-agricultural or non-forestry purposes is discretionary. This, however, does not imply discretion of a decision to be taken by a relevant body<sup>96</sup> who should always weigh the public and individual interests, and in doing so be guided primarily by the objectives of land protection under the Act.<sup>97</sup> An yet, as is emphasised in case-law, the protection of arable land does not go far enough to result in depriving, or significantly limiting, the possibilities of municipalities to develop.<sup>98</sup>

The financial and legal instruments for the protection of arable land provided for in the Act, such as fees payable in the event of an exemption of land from agricultural production (annual fees and charges) are linked to the administrative and legal mechanism of rationing. They are assumed to have an incentive function (be an economic barrier to exempting from production high-quality lands); a regulatory function (include exemption fees in over-

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*regulacji prawno-rolnej na zakres korzystania z gruntu rolnego*, “Studia Prawno-Ekonomiczne” 2005, Vol. LXXII, pp. 103–128).

<sup>93</sup> P. Czechowski, K. Marciniuk, *Ochrona gruntów...*, p. 393

<sup>94</sup> E. Kremer, *Ustawa o ochronie gruntów rolnych i leśnych z dnia 3 lutego 1995 roku*, “Przegląd Sądowy” 1997, No. 5, p. 37.

<sup>95</sup> J. Bieluk, *Comments to Article 6 (Nb 1)*, in: J. Bieluk, D. Łobos-Kotowska, *Ustawa o ochronie gruntów...*

<sup>96</sup> A. Fogel, *Zmiana przeznaczenia gruntów rolnych i leśnych na cele nierolnicze i nieleśne*, “Człowiek i Środowisko” 2012, No. 4(36), p. 77.

<sup>97</sup> M. Woźniak, *Ochrona interesu publicznego wobec interesu indywidualnego na gruntach rolnych i leśnych – zagadnienia wybrane*, “Człowiek i Środowisko” 2018, No. 1(41), pp. 33–47.

<sup>98</sup> Judgment of the Supreme Administrative Court in Warsaw of 11 January 2012, II OSK 2013/10, also see M. Woźniak, *Ochrona interesu publicznego...*, passim.

all investment costs); a compensatory and redistributive function (specific compensation and source of financing of remedial actions in the arable land resources).<sup>99</sup> The need to obtain a decision authorising the exemption of land and the charges associated with it is sometimes the only factor that has a real impact on decisions whether to invest on lands of high productive use.

Unfortunately, despite the seemingly comprehensive approach, the provisions of the Act on the protection of agricultural and forest land do not meet the assumed goals. Contrary to the intended function of protecting the shaping of agricultural production space, local spatial development plans are drawn up with a view of changing arable land to non-agricultural land, and as such they become tools to be used for scattered urbanisation rather than for a systemic shaping of the space.<sup>100</sup> It is a very rare occurrence that plans concerning agricultural and forestry production space are adopted.<sup>101</sup> In view of the high demand for land, discretionary decisions allowing a certain land to be exempted from agricultural production may not be based on axiological grounds, but on other conditions, including political, or may even result from the mistakes committed by clerical staff or other officials.<sup>102</sup> Meanwhile, as the practice of the spatial planning system in Poland shows, the provision stating that it is sufficient to indicate the change of the purpose of arable land of classes I–III merely in the local plan has become one of the main instruments used for the rationing of land development.<sup>103</sup> The evolutionary trend of the regulation, featuring a tendency to weaken the restrictions put on a non-agricultural use of arable land,<sup>104</sup> results in an actual illusion that the agricultural land is protected against its irrational use for other purposes<sup>105</sup> and that it deepens the spatial chaos while hindering a rational investment activity.<sup>106</sup>

<sup>99</sup> M. Szalewska, *Należność i opłata...*, pp. 81–82.

<sup>100</sup> A. Zdanowicz, *Zmiana przeznaczenia gruntów rolnych klas I–III na cele nierolnicze w kontekście stosowania tzw. obiedni*, „Człowiek i Środowisko” 2012, No. 4(36), p. 62.

<sup>101</sup> S. Prutis, *Instrumenty planowania przestrzennego w rolnictwie (założenia modelowe a rzeczywistość)*, „Studia Iuridica Agraria” 2012, No. 10, p. 41.

<sup>102</sup> M. Geszprych, *Antynomie aksjologiczne...*, p. 31.

<sup>103</sup> A. Fogel, *Zmiana przeznaczenia...*, p. 76.

<sup>104</sup> M.A. Król, *Review of the Legislation...*, p. 86.

<sup>105</sup> More on this in: D.R. Kijowski, *Ochrona gruntów rolnych...*, pp. 116–132. This is also confirmed by empirical research which indicates that the highest quality agricultural land is often allocated for development in favourable locations and good transport accessibility. See e.g. L. Poniży, *Presja urbanizacyjna i jej wpływ na zmiany przestrzennej struktury użytkowania ziemi na wybranych obszarach podmiejskich Poznania*, „Problemy Ekologii Krajobrazu” 2008, Vol. XII, pp. 335–342; A. Bielska et al., *Problematyka ochrony gruntów rolnych w procesie suburbanizacji*, „Infrastruktura i Ekologia Terenów Wiejskich” 2015, No. IV/1.

<sup>106</sup> K. Marciniuk, *Inwestycje budowlane na gruntach rolnych położonych w granicach administracyjnych miast*, „Studia Iuridica Agraria” 2011, No. 9, p. 374.

The analysis of Polish legal regulations from the point of view of their adequacy to counteract land take allows identification of other potential regulations related to it. They include among other things the environmental impact assessment,<sup>107</sup> the inter-municipal cooperation within urban agglomerations, instruments to support rural development under the EU's common agricultural policy; or revitalisation (both urban and rural). However, these issues should be seen as having an indirect impact on land take processes, or indicating areas where the legal basis for protection instruments may require further development.

**6.** The considerations that have been conducted so far allow the following conclusions to be drawn in order to assess the perception of the concept of land take in the law and its usefulness for the legal system ensuring the protection of land, and in particular increasing the effectiveness of the regulation in this area:

Land take is an elaborated concept that describes one of the main threats to the protection of land as a resource, which is widespread worldwide, including in Europe. First attempts of incorporating this formula into the legal system of the protection of land have already been made. In European Union law, this has been done by setting the goal of no net land take by 2050. This target, however, is neither binding, nor is it specified in further secondary legislation. It is also noted that it is exactly this lack of binding legal instruments for land and soil protection that constitutes a major gap in the EU's environmental law system, which applies particularly to urban soil protection.<sup>108</sup> It remains to be hoped that the instruments announced in the EU Biodiversity Strategy for 2030, and in the EU Strategy for a sustainable built environment in particular will address this problem effectively.

The establishment of a no net land take by 2050 goal ought to be assessed positively. It offers Member States a clear strategic objective and a political support in their efforts to set their own national targets, while leaving them free to choose the means in which to achieve the targets.<sup>109</sup> Basing on the available and well-established and harmonised monitoring methods, makes it possible to assess the achievements and progress of the measures taken. The inclusion of land reclamation issues in this formula also allows to take a broader perspective regarding land management processes. Until now, the EU concept of no net land take by 2050 target has not found a wider interest

<sup>107</sup> For more see e.g. P. Kosińska, A. Michalski, *Ochrona gruntów rolnych i leśnych w ramach systemu ocen oddziaływania na środowisko*, "Człowiek i Środowisko" 2018, No. 1(41), pp. 105–117.

<sup>108</sup> N. Glæsner, K. Helming, W. De Vries, *Do current...*, pp. 9538–9563.

<sup>109</sup> BIO by Deloitte, *Study supporting potential land...*

in the Member States. There is also frequent criticism that setting national targets is a very weak tool for land use control and cropland protection. Only the legally binding nature of such targets at all levels of public governance and the combination of planning tools with inter-institutional cooperation in different public policy areas may produce the desired effect.<sup>110</sup> Following this viewpoint, it may be observed that the environmental policy adopted has already developed formulas which combine the establishment of legally binding general objectives, leaving at the same time freedom of their implementation to Member States that might have inspired them.<sup>111</sup>

Land take is a particularly important issue in the agrarian context. It is considered to be one of the two main causes of agricultural land's loss in Europe (the other is the abandonment of agricultural activities, partially stimulated by EU policies).<sup>112</sup> From the agricultural point of view, the effects of land take processes are as negative as land and soil degradation. Moreover, these phenomena are interconnected.<sup>113</sup> So far, land take as a factor in the depletion of agricultural land has been taken into account insufficiently in the decision-making processes at various levels. There is also still a lack of complementarity between the individual policies and relevant regulations.

The importance of a broad, multi-faceted and contextual analysis of land take issues should be stressed. It should reflect the complexity of the phenomenon studied. Similarly, building an effective legal and regulatory framework in this respect must be based on this approach as well.<sup>114</sup> There is also a need for the harmonisation of terminology, especially as the concept is linked to other complex phenomena and processes which, as mentioned above, are sometimes too simplistically identified.

The Polish legal system reiterated the concept land take indirectly. The term of land sealing has been incorporated into the legal language. The national target for land take has not been adopted. The Polish system of the protection of agricultural and forest land is an example indicating that a special and extensive legal regulation does not guarantee an effective protection. It also illustrates the importance of interlinking individual legal regulations as well as the act that the weaknesses of one of them (in Poland, the inefficiency of spatial planning) cannot be compensated for by developed instruments in another area of law. However, in this context, the observation

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<sup>110</sup> E. Oliveira, J. Leuthard, S. Tobias, *Spatial planning...*, p. 9.

<sup>111</sup> See e.g. Directive No 2016/2284 of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants.

<sup>112</sup> EEA, *Urban sprawl in Europe...*

<sup>113</sup> E. Aksoy et al., *Assessing and analysing...*, p. 684.

<sup>114</sup> M. Desrousseaux et al., *Artificialised Land...*, p 156.

of A. Colsaet, A.Y. Laurans and H. Levrel should be taken into account. These authors claim that the “poor management” narrative may blur the deeper structural causes of the problem.<sup>115</sup> The analysis of the Polish legal model confirms that an adequate application of the economic instruments for the quantitative protection of arable land is difficult, which has also been found in a case study involving a Czech case.<sup>116</sup>

## LAW IN THE FACE OF THE PROBLEM OF LAND TAKE

### Summary

The aim of the considerations is to determine how the concept of land take and the related EU target of no net land take by 2050 function in the law (especially in Poland), and then to assess to what extent the perception of this formula in the law is relevant to the model of land protection and whether it has the potential to increase the effectiveness of the legal regulation in this respect. Land take is a concept that describes one of the main threats to the protection of land as an environmental resource. First attempts to incorporate this formula into the legal system of land protection have already been made. In European Union law, this was done by setting the goal of no net land take target by 2050. This objective, however, is neither binding nor specified in secondary legislation. The concept of land take and the target related to it may have a positive impact on the effectiveness of the land protection system. However, it is essential that the legal instruments are integrated and are of a binding character. The Polish legal system has reiterated the concept of indirect land take, and no national target in this respect has been adopted. This model is an example confirming the thesis that special and extensive legal regulations do not always guarantee that the protection measures are effective. Also, while it illustrates the importance of integrating individual legal regulations, it shows as well that the weaknesses of one of them (in Poland the inefficiency of spatial planning) cannot be compensated for by developed instruments in another area of law.

## IL DIRITTO DI FRONTE AL PROBLEMA DI OCCUPAZIONE DEI TERRENI

### Riassunto

L'articolo si propone di determinare come il concetto di occupazione dei terreni/consumo di suolo (*land take*) e il relativo obiettivo dell'UE di arrivare a quota zero entro il 2050 funzionino nel diritto (soprattutto polacco) e, di seguito, di provare a valutare in che misura la percezione di questa formula in diritto sia importante per il modello di tutela dei terreni e se abbia il potenziale per aumentare l'efficacia giuridica dei regolamenti in questo ambito. La *land take* è una concezione sviluppata, descrive una delle principali minacce alla tutela della terra come risorsa. I primi tentativi, per includere questa formula nel sistema giuridico di tutela della

<sup>115</sup> A. Colsaet, A.Y. Laurans, H. Levrel, *What drives...*, p. 348.

<sup>116</sup> E. Vejchodská, M. Pelucha, *Environmental charges...*, passim.

terra, sono stati intrapresi. Nel diritto dell'Unione Europea ciò è stato fatto fissando l'obiettivo di arrivare, per quanto riguarda l'occupazione dei terreni, a quota zero entro il 2050. Tuttavia, esso non è vincolante, né specificato nelle disposizioni di diritto derivato. La concezione di occupazione dei terreni e il relativo obiettivo possono influenzare positivamente l'efficacia del sistema di tutela dei terreni. Tuttavia, è necessario combinare gli strumenti giuridici sotto molteplici aspetti e a multilivello, e renderli vincolanti. Il sistema giuridico polacco ha adottato la concezione di occupazione dei terreni in maniera indiretta, nessun obiettivo nazionale al riguardo è stato prefissato. Il modello polacco è un esempio di conferma per la tesi che una regolazione giuridica specifica ed estesa non garantisce l'efficacia della tutela stessa. Illustra inoltre quanto è importante collegare le singole regolazioni giuridiche, nonché l'incapacità di compensare le debolezze di una di esse (in Polonia l'inefficienza dei piani regolatori) con strumenti sviluppati in un'altra area del diritto.