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LEGAL ASPECTS OF REMEDIATION OF CONTAMINATED POST-INDUSTRIAL REAL ESTATE AS INVESTMENT LAND, ON THE EXAMPLE OF POLAND AND GEORGIA

1. INTRODUCTION

Economic growth was an undertaking pursued on a wide scale in the countries of the Soviet Bloc in the 1950s. There was social consensus on the extensive exploitation of the environment to increase wealth and the quality of life, with no consideration of the consequences of such a one-sided approach to the future. “The environment” was a good that was available free of charge and in ostensibly unlimited quantities. This perception of land resources led to the contamination of large areas throughout the Eastern Bloc, in both Poland and Georgia, the countries studied in this paper. In particular, soil quality deteriorated due to landfills, especially ones consisting of post-industrial waste buried in earth pits, with no consideration of the potential risks that could arise from such procedures, especially to groundwater (or drinking water), and from soil contamination. There were no effective regulations, only ones which would now be illegal. Unfortunately, especially the public sector set a bad example. In Poland, state-owned chemical plants were particularly notorious in this respect, which led to massive soil degradation

and contamination.¹ In the Georgian Soviet Socialist Republic, there was a dramatic increase in environmental problems, many of which are still impacting on the health of the people of Georgia today. Although most of the country's industrial plants stopped polluting the soil with heavy metals after 2000, and emission from mineral extraction and oil refineries can no longer be considered a factor affecting public health to the same extent as during the Soviet period, Georgia is still facing very significant long-term problems related to soil contamination.² In both countries, it took a long time for decision-makers to understand that soil is a resource which is very difficult to restore because of the very long time such processes take, and that many of its functions are of fundamental importance for survival.

As urban development automatically reduces the amount of land available for investment, especially in cities, it is becoming more and more common for investors to acquire post-industrial, degraded land, buildings or industrial infrastructure that was once contaminated, in order to transform it for new investment. Such areas require a comprehensive clean-up and these investments are generally referred to as brown-field³ investments.⁴ The use of degraded land to fill urban gaps should be seen as a beneficial and necessary phenomenon. The redevelopment of brownfield sites supports urban development and preserves green

¹ City of Bydgoszcz website, announcement on the history of Zachem; https://www.bydgoszcz.pl/fileadmin/multimedia/aktualnosci/zzz_pojedyncze_Z/Zarys_historii_ZACHEMU.pdf; [accessed 3 December 2023]; also a press release in Polish dated 9 May 2023 from the website of the Commissioner for Human Rights on the contamination of the area of the former Zachem industrial plant, <https://bip.brpo.gov.pl/pl/content/skazenie-terenu-zachem-wsa-skarga-rpo-wyrok>; [accessed 3 November 2023].

² M.R. MGALOBlishvili, L. HENS, C. HORTON, *Environmental Problems and Their Effect on Human Health in the Republic of Georgia*, «Human Ecology Review» 3(2)/1996-97, pp. 204-206.

³ The concept of brownfields appeared in the 1970s in the United States, when specialists observed that many industrial areas remained unused and were falling into disrepair. In response, the U.S. federal government introduced programmes and initiatives to revitalise these areas and attract investors.

⁴ K. OBŁÓJ, A. WĄSOWSKA, *Zarządzanie międzynarodowe*, Warszawa: Polskie Wydawnictwo Ekonomiczne, 2014, p. 68.

spaces; however, due to contamination and the poor quality of the soil and surface water on such properties, restoring their value is a necessary but costly and complex process.⁵ Such properties are subject to strict regulations in terms of environmental legislation, with the resulting obligations incumbent on the property owner. However, investors do not always initiate procedures to remove the inherent contamination of the soil and surface water, instead trying to take shortcuts that result in the land not reaching the standard required to make them suitable for development, especially for residential or public utility investment. In Poland in 2019, an audit of local government authorities carried out by NIK, the Polish Supreme Audit Office, found that 28.5% of the local authorities and cities subject to the audit had constructed or were constructing housing estates or public buildings on land with a confirmed record or probability of contamination. Cases were found of land on which the required “remediation”⁶ had not been carried out, despite the fact that the relevant public authorities were well aware of the contamination which had occurred there.⁷ Such practices should be subject to penalties severe enough to discourage investors from embarking on such illegal activity. The legal measures required should counteract the inclusion of compensation claims and impose administrative penalties in the costs of their business activities. It is often very difficult to enforce the obligation to eliminate or reduce the environmental

⁵ C. DE SOUSA, *Brownfield redevelopment versus greenfield development: A private sector perspective on the costs and risks associated with brownfield redevelopment in the Greater Toronto Area*, «Journal of Environmental Planning and Management» 43/2000, p. 832.

⁶ Remediation is defined in Article 3 point 31b of Poland’s environmental protection law of 27 April 2001 as the treatment of soil, land and groundwater to remove or reduce the amount of dangerous substances, control them and stop them from spreading, to prevent the contaminated area from posing a threat to health or the environment, taking into account current and, where possible, future use of the area. Remediation may involve self-cleaning if it brings the maximum environmental benefit.

⁷ For the results of the Supreme Audit Office audit, ref. no. KSI.430.004.2018, Registration No. 2/2019/P/18/047/KSI, on the activities of public administration bodies for the removal of historical soil pollution, see <https://www.nik.gov.pl/plik/id,21303,vp,23937.pdf>; [accessed 13 November 2023], p. 3.

impact of dangerous substances, including dangerous waste deposited in the soil, because over the years the properties may have changed owners and/or been subdivided or merged with neighbouring plots, which means that the original boundaries are likely to have changed.

The legislator has tried to remedy such problems in the case of land contaminated by state-owned industrial plants⁸ by enacting *Ustawa z 16 czerwca 2023 r. O wielkoobszarowych terenach zdegradowanych* (the Act on Large-scale Degraded Areas of 16 June 2023).⁹ This regulation, although beneficial, is still not good enough, as it does not solve all the problems, but applies only to land contaminated by state-owned chemical industry plants.

Our research problem was defined as follows: what is the normative content and scope of obligations to remediate contaminated land prior to the construction project? Specified in this way, our aim generated the following research hypothesis: the normative content and scope of the obligations imposed on investors to remediate contaminated land remains a controversial issue in both Polish and Georgian law, as there are still no legal instruments to stop the implementation of investments on contaminated land. We used a theoretical legal research method to verify our research hypothesis.

In Polish doctrine, the remediation of contaminated land has for years received only marginal treatment. By „remediation,” we mean subjecting the soil and groundwater to operations for the removal or reduction of the amount of dangerous substances down to a level low enough to stop the contaminated land from posing a threat to public health or the environment, taking into account the current and prospective use of the land. The same holds for Georgia. However, nowadays the subject is being addressed more and more frequently. Jerzy Janusz and Piotr Ćwiek’s practical commentaries in their paper on procedures

⁸ Including the areas of the ZACHEM chemical plant in Bydgoszcz, the Organika-AZOT chemical plant in Jaworzno, the Tarnowskie Góry chemical plant in Tarnowskie Góry, the Boruta dye industry plant in Zgierz, and the Wistom chemical fibre plant in Tomaszów Mazowiecki. There is also a need to identify other areas of a similar nature which have not been diagnosed.

⁹ *Dziennik Ustaw*, 2023, item 1719.

for the remediation of historical contamination deserve special mention in this respect.¹⁰ Other relevant publications include K. Gruszecki's assessment of remediation, and B. Draniewicz's paper on the key legal aspects of „ecological bombs” (land surface pollution).¹¹ In Georgia, these topics have been addressed in publications by Mariam Kharebashvili, *Bioremediacja gleb zanieczyszczonych produktami ropopochodnymi przy użyciu mikroskopijnych grzybów*,¹² Lali Shavliashvili, Gulchina Kuchava, Mariam Tabatadze, Ekaterine Shubladze, *Arsenic contamination of natural waters, soils and food products in Georgia*,¹³ and C. Tetrauli, *Ways and methods of waste management*.¹⁴

It should also be pointed out that up to now no study has been published on the remediation of post-industrial contaminated land in Georgia, so we recognised this as a research gap and targeted it for scientific investigation.

2. CONTAMINATED AREAS IN POLAND AND THEIR MAPPING

To inventory the pollution generated in the past, Article 1(12) of Ustawa z 11 lipca 2014 o zmianie ustawy – Prawo ochrony środowiska

¹⁰ J. JANUSZ, P. ĆWIEK, *Remediation of historical land surface contamination – procedures*, «Lex/el.» 2023 – practical commentary.

¹¹ B. DRANIEWICZ, 'Environmental bombs' (land surface pollution) – knotty legal aspects, «Palestra» 11/2023, pp. 71-88.

¹² ნავთობპროდუქტებით დაბინძურებული ნიადაგების ბიორემედიაცია მიკროსკოპული სოკოების გამოყენებით: დისერტაცია/ მარიამ ხარებაშვილი, წელი: 2008 [M. KHAREBASHVILI, *Bioremediation of Oil-Contaminated Soils Using Microscopic Fungi: PhD Dissertation*, Tbilisi 2008], p. 20 seq.

¹³ L. SHAVLIASHVILI, G. KUCHAVA, MARIAM TABATADZE, E. SHUBLADZE, *Arsenic contamination of natural waters, soils and food products in Georgia* «AiBi Revista de Investigación, Administración e Ingeniería» 2025/1/1, pp. 1-10.

¹⁴ C. TETRAULI, 'Ways and methods of waste management' published post-conference presentation Ivane Javakhishvili Tbilisi State University Paata Gugushvili Institute of Economics International Scientific CONFERENCES „ECONOMY – XXI CENTURY”; <http://www.conferenceconomics.tsu.ge/?mcat=&mcat=pers&leng=eng&adgi=783&title=THE%20WAYS%20AND%20METHODS%20OF%20WASTE%20MANAGEMENT>; [accessed 1 December 2023].

oraz niektórych innych ustaw (the Act Amending the Environmental Protection Law and Certain Other Acts of 11 July 2014) added Article 101c to the Environmental Protection Law of 27 April 2001 (hereinafter EPL).¹⁵ This introduced the obligation to maintain a register of historical surface pollution.¹⁶ Pursuant to EPL Article 3(5a), the legislator defines historical surface pollution as any pollution which occurred before 30 April 2007, or which is the result of activities that stopped before 30 April 2007. In addition, the category of historical surface pollution also includes environmental damage to the soil caused by an event or emission that occurred more than thirty years ago.

For investors, it is very important to determine the type of contamination and the time it first occurred on the property, due to the different legal rigour and potential liability regime for the resulting environmental damage. The register of historical pollution is maintained by the General Director for Environmental Protection (GDOŚ) and contains an up-to-date database of information on pollution levels. This register collects information on historical surface contamination, including its characteristics, time and place of occurrence and the current status of the area where it has occurred, including remediation carried out and the environmental effects achieved.¹⁷ Entries in the register are intended to inventory all the hazards, for effective measures to be taken to eliminate them. The register is the basic source of information for prospective investors about contamination on land envisaged for development.¹⁸ The substantive legal grounds for the entry are provided in EPL Article 101c(3), according to which the regional director for environmental

¹⁵ See the full amendment in Dziennik Ustaw 2022, item 2556, Ustawa z 16 czerwca 2023 r. o wielkoobszarowych terenach odgradowanych, hereinafter EPL. Dziennik Ustaw, 2023, item 1719.

¹⁶ *Rejestr historycznych zanieczyszczeń powierzchni ziemi*; Szkody i historyczne zanieczyszczenia (gdos.gov.pl); [accessed 12 February 2025].

¹⁷ The detailed scope of data is specified in Rozporządzenie Ministra Środowiska z 1 września 2016 r. w sprawie rejestru historycznych zanieczyszczeń powierzchni ziemi (Regulation issued on 1 September 2016 by the Minister of the Environment on the register of historical surface pollution) Dziennik Ustaw 2016, item 1397, as amended.

¹⁸ Decision handed down by the Voicodeship Administrative Court in Warsaw of 22 January 2021, ref. no. IV SA/Wa 2126/20, «Lex» no. 3166611.

protection makes an entry in the register of potential historical surface contamination, by means of a decision addressed to the landowner within six months from the date of receiving respectively:

1. the list referred to in Article 101d(6);
2. the update of the list referred to in Article 101d(8);
3. the notification referred to in Article 101e(1).

It is clear from the wording of this provision that it is not based on administrative discretion, which means that an administrative body which becomes aware of potential historical contamination in a given area, even due to one of the sources listed in points 1-3 of this provision, is obliged to make an entry in the register. The legislator has not provided for any discretion on the part of the authority in this respect, as long as the information has been disclosed from which it follows that hypothetically pollution could have occurred on a particular site. The obligation to make such an entry should be associated with EPL Article 101(3), from which it follows that surface protection includes the prevention of pollution by dangerous substances requiring remediation. Information obtained by the environmental protection authorities on the potential occurrence of surface contamination in a specific area and recorded in the register will allow for a definitive investigation whether such contamination actually took place and what potential effects it has had on the environment. It will also let them take the necessary steps to determine the measures needed to remove the contamination and its effects.

The list referred to in EPL Article 101d is a schedule of potential historical surface contamination identified and drawn up by the local (powiat) administrator and submitted to the regional (voivodeship) director for environmental protection. The powiat administrator identifies potential historical contamination using all the available information on environmental contamination and economic activities carried out in his powiat, determines the activities likely to have caused contamination on the site in question before 30 April 2007, i.e. the activities likely to have caused historical surface contamination, establishes lists of dangerous substances which might be expected to be found in the soil, and analyses the available information on the risk of soil or surface contamination.

In addition to the sources of information relevant for the assessment of the risk of soil or land contamination indicated in §8 of the Regulation of 1 September 2016 issued by the Minister for the Environment on the assessment of surface contamination,¹⁹ the powiat administrator may also use any other sources of information on operations likely to have caused soil pollution, as well as available data on existing contamination. Each site is unique as regards the availability of archival data. Potential sources of information may be found in the archives of the powiat administrator's office (e.g. the registers with information on sites where soil quality standards have been found to be inadequate), information on inspections carried out by the Voivodeship Environmental Inspectorate, including any violations or irregularities discovered during such inspections. Pursuant to EPL Article 101c(3)(1), voivodeship directors for environmental protection analyse the lists of potential historical surface contamination provided by powiat administrators to issue decisions to enter cases of potential historical contamination into the register of historical surface contamination.

Poland's General Director for Environmental Protection also maintains a second register of direct threats of environmental damage, pursuant to PEDR Article 26a.²⁰ This concerns pollution which is not historical, i.e. pollution which has occurred since 30 April 2007. This register contains information on notifications, including the type, characteristics, place and time of the damage, information on preventive and remedial measures taken and the environmental effects achieved. It also contains data identifying the business entity involved and specifying the economic activity it conducts, details of the entity using

¹⁹ Rozporządzenie Ministra Środowiska z 1 września 2016r. w sprawie sposobu prowadzenia oceny zanieczyszczenia powierzchni ziemi, Dziennik Ustaw 2016, item 1395 as amended.

²⁰ Obwieszczenie Marszałka Sejmu Rzeczypospolitej Polskiej z 18 listopada 2020 r. w sprawie ogłoszenia jednolitego tekstu ustawy o zapobieganiu szkodom w środowisku i ich naprawie (Publication by the Speaker of the Parliament of the Republic of Poland of the Consolidated Text of the Act on the Prevention of Environmental Damage and its Repair of 13 April 2007; consolidated text: Dziennik Ustaw of 2020, item 2187, as amended), hereinafter referred as PEDR.

the environment whose operations caused the direct threat of environmental damage and its residential or registered address, as well as information on the administrative and administrative court proceedings pending in cases of direct danger of environmental damage.

An investor may obtain access to these registers by submitting an application in accordance with the Act on the Provision of Information on the Environment and its Protection, Public Participation in Environmental Protection and Environmental Impact Assessments (APIE),²¹ which does not require the prospective investor to prove that he has a legal or factual interest in access to this information.²² The application should be addressed to the powiat administrator, who is obliged to analyse the available information on the risk of ground contamination, commission an accredited laboratory to carry out the preliminary analyses,²³ and to draw up a list of potential historical surface contamination, which is to be updated every two years.²⁴

It should be noted that, even if the registers maintained by the public administrative authorities do not show that pollution has occurred on a given property, if that property is found to be contaminated then remedial actions will still be required.²⁵ Legally, as in the case of the obligation

²¹ Article 12 of Obwieszczenie Marszałka Sejmu Rzeczypospolitej Polskiej z 7 kwietnia 2022 r. w sprawie ogłoszenia jednolitego tekstu ustawy o udostępnianiu informacji o środowisku i jego ochronie, udziale społeczeństwa w ochronie środowiska oraz o ocenach oddziaływania na środowisko (Publication by the Speaker of the Sejm of the Republic of Poland of the Consolidated Text of the Act on the Provision of Information on the Environment and its Protection, Public Participation in Environmental Protection and on Environmental Impact Assessments of 3 October 2008); consolidated text: Dziennik Ustaw 2022, item 1029, as amended, hereinafter APIE.

²² T. FILIPOWICZ, *Komentarz do art. 21, [in] Ustawa o udostępnianiu informacji o środowisku i jego ochronie, udziale społeczeństwa w ochronie środowiska oraz o ocenach oddziaływania na środowisko. Komentarz*, ed. T. FILIPOWICZ, A. PLUCIŃSKA-FILIPOWCZ, M. WIERZBOWSKI, Warszawa 2020, p. 181.

²³ EPL Article 101d.

²⁴ EPL Article 101d section 7.

²⁵ A. KAWĘCKA, *Prawno-środowiskowa problematyka inwestycji typu brownfield. Nieruchomości przemysłowe, na których wystąpiło zanieczyszczenie powierzchni ziemi*, «Folia Iuridica Universitatis Wratislaviensis» 2.10/2021, p. 114.

to submit an energy performance certificate,²⁶ it is the seller or lessor who is obliged to present a document showing that the property has been examined for pollution.

The legal standards defined in *Ustawa o zapobieganiu szkodom w środowisku i ich naprawie* (the Act on the Prevention of Environmental Damage and Its Repair) impose an obligation on proprietors to notify the public administrative authorities of any pollution discovered on their property. If an imminent threat of environmental damage has been caused with the consent or knowledge of the owner of the property, he is obliged to take preventive and remedial measures jointly and severally with the entity using the environment pursuant to APIE Article 12(2). The premise of joint and several liability set out in the provision of APIE Article 12(2) holds the owner of the contaminated land liable for the repair of the damage also if he did not contribute directly to, and did not cause the damage.²⁷ This legal construct assumes the proprietor's indirect contribution to the damage, either by his passive conduct (knowledge of the occurrence of the damage and failure to report it to the applicable authority) or by consent, viz. wilful intent to cause the damage. If the authority is to carry out the remedial operations, the user of the environment is assumed liable for the reimbursement of the costs, even if he was not obliged to carry out the work himself.²⁸ The introduction of a civil law construct such as joint and several liability in the Act on the Prevention of Environmental Damage and Its Repair

²⁶ The aim of this document is to provide information on improving energy efficiency and is important for transparency and accountability in the real estate sector. The obligation to issue the document is prescribed by *Ustawa z 17 sierpnia 2023 r. o zmianie ustawy o odnawialnych źródłach energii oraz niektórych innych ustaw* (Act of 28 April 2023 amending the Act on the Energy Performance of Buildings of 29 August 2014; *Dziennik Ustaw* 2023, item 1762).

²⁷ B. DRANIEWICZ, *Odpowiedzialność za szkodę w środowisku w ustawie o zapobieganiu szkodom w środowisku i ich naprawie – wybrane zagadnienia*, «Monitor Prawniczy» 5/2008; *Odpowiedzialność za szkodę w środowisku w ustawie o zapobieganiu szkodom w środowisku i ich naprawie – wybrane zagadnienia* (beck.pl); [accessed 12 February 2025].

²⁸ B. RAKOCZY, *Komentarz do ustawy o zapobieganiu szkodom w środowisku i ich naprawie*, Warszawa 2008, p. 95.

enhances environmental protection by ensuring that the obligation to take preventive or remedial measures is fulfilled.²⁹

Joint and several liability is waived if the property owner submits a notification under APIE Article 24 immediately upon becoming aware of an imminent threat of environmental damage or environmental harm. Thus, the regulations provide for the possibility of obliging the holder of the contaminated land to remedy damage that he did not cause.

3. THE PROPERTY OWNER'S OBLIGATION TO CARRY OUT PREVENTIVE REMEDIAL MEASURES AND RESTORE CONTAMINATED LAND ON THE TERRITORY OF POLAND ENVISAGED FOR INVESTMENT

Failure to remediate sites formerly used for industrial purposes prior to new construction is potentially a ticking ecological time-bomb. More and more residential development projects are being built, often together with the construction of office and commercial buildings, on post-industrial sites contaminated with heavy metals or other carcinogenic substances.

When the owner of such a property is ready to embark on an investment, he is obliged to take measures to prevent environmental damage and, in the case of contaminated land, to take remedial measures if the contamination could not be avoided or if the condition of the environment requires it.³⁰ Every owner of such land is obliged to report the need for remediation to the voivodeship environmental inspector. However, as the law does not define an obligation on him to carry out specialised tests for chemical pollution, in practice many investors do

²⁹ A. DOLIWA, *Konstrukcje cywilnoprawne w zakresie odpowiedzialności z tytułu szkód w środowisku i szkód spowodowanych oddziaływaniem na środowisko – wybrane zagadnienia*, [in] *Kryzys prawa administracyjnego? III: Wypieranie prawa administracyjnego przez prawo cywilne*, ed. A. DOLIWA, D. KIJOWSKI D. RYSZARD, S. PRUTIS, P. SUWAJ, Warszawa 2012, p. 48.

³⁰ D. WAŁKOWSKI, *Od rekultywacji do remediacji*; 14.11.2013, <https://codozasadypl/p/od-rekultywacji-do-remediacji> [accessed 29 November 2023].

not do this due to high costs or lack of technological capacity. There is no obligation to carry out such tests, but there is an obligation on the owner to remediate land known to have been contaminated, if it is to be used for investment.

So a paradoxical situation may arise if a property is not inspected for contamination and is not subject to the necessary remediation measures, because there is no compulsion to remediate.

4. LEGAL PENALTIES FOR THE IMPLEMENTATION OF AN INVESTMENT ON CONTAMINATED LAND IN POLAND

The Polish legislator decided to make failure to remediate an offence. EPL Article 101h defines the property owner's obligation to remediate.³¹ However, given the possibility of conducting remediation without prior examination and analysis of contamination, this sanction is ineffective. In any case, the penalty is relatively low (a fine of up to PLN 5,000)³² and does not serve as a deterrent, especially for investors who are professional developers.

However, if an investor shows that the historical surface pollution was caused by another entity, the obligation to remediate rests with the actual perpetrator.³³ In this way, liability can be avoided quite easily, leading to a situation where a different party will be obliged to carry out the remediation and a different party will be liable for the offence.

In addition, criminal liability is personal and individualised on the principle of guilt, so the penalty is imposed on a natural person, not a company. Conduct in the form of both a failure to conduct

³¹ J. JERZMAŃSKI, *Komentarz do art. 101h*, [in] *Prawo ochrony środowiska. Komentarz*, ed. M. GÓRSKI, M. PCHAŁEK, W. RADECKI, Warszawa 2019, p. 277.

³² The penalty is a fine imposed within the limits specified in Article 24 § 1 of *Kodeks Wykroczeń* (the Polish Code of Petty Offences) of 20 May 1971 (consolidated text: *Dziennik Ustaw* 2023, item 2119).

³³ K. GRUSZECKI, *Commentary on Article 335c* [in] *Prawo ochrony środowiska: Komentarz*, ed. KRZYSZTOF GRUSZECKI, Warszawa: Wolters Kluwer, 2022 www.sip.lex.pl; [accessed 11 December 2023].

contamination tests on the property and a failure to carry out effective remediation should be subject to administrative liability, which is independent of fault, because it is based on the principle of risk and may be borne by a business entity, including companies under commercial law. Only severe penalties can secure the performance of obligations to eliminate contamination on property envisaged for development.

5. THE POLISH SPECIAL ACT ON LARGE-SCALE DEGRADED AREAS AS A REMEDY FOR POST-INDUSTRIAL POLLUTION

The Polish legislator observed that the difficulties to enforce the obligation to eliminate or limit the environmental impact of waste accumulated on certain sites many years ago necessitated the introduction of new legal instruments in a special act to improve the environmental condition of large-scale degraded areas.³⁴ This led to the enactment of *Ustawa z 16 czerwca 2023 r. o wielkoobszarowych terenach zdegradowanych* (the Large-scale Degraded Areas Act of 16 June 2023, hereinafter LDAA).³⁵ This legislation introduced a legal definition of large-scale brownfields, which can be found in Article 2 point 7, according to which the term should be understood as an area of at least 10 ha where there is a storage site for historical waste, together with adjacent areas, leading to a significant threat to health or the environment caused by emission within the meaning of EPL Article 3 point 4. However, an annex to the Act includes a list of identified large-scale degraded areas where it is necessary to take action to improve the condition of the environment. One of the drawbacks of this definition is its limited scope. Under LDAA Article 3 section 2, it applies only to identified large-scale degraded areas specified in the annex to the Act. The schedule of areas

³⁴ Draft bill of 17 May 2023 on large-scale degraded areas, submitted by the Prime Minister, the Hon. Mateusz Morawiecki, on behalf of the Government of the Republic of Poland to the Hon. Elżbieta Witek, Speaker of Sejm, with a cover letter (No. 3280), grounds, and other annexes; <https://www.sejm.gov.pl/sejm9.nsf/druk.xsp?nr=3280>; [accessed 30 December 2023].

³⁵ *Dziennik Ustaw* 2023, item 1719, hereinafter LDAA.

listed in the annex may be expanded only by means of an amendment to the Act. LDAA imposes a number of obligations on municipalities. The first includes the obligation to identify previously unrecognised large-scale degraded areas and provide information on them. Pursuant to LDAA Article 3 section 3, the mayor or chief administrative officer of the municipality, and in the case of a closed area³⁶ the local director for environmental protection, provides the voivodeship environmental protection inspector with information on previously unrecognised large-scale degraded areas identified in the locality or closed area within six months from the date of receiving the information. The information includes the data referred to in LDAA Article 3 section 11. The authority responsible for carrying out operations for the improvement of the environmental condition in large-scale degraded areas is primarily the mayor or chief administrative officer of the locality, who is obliged to conduct comprehensive contamination tests. For this purpose, under LDAA Article 6 section 6, the executive body of the locality issues a decision to the property owner, setting a deadline for making this property accessible to the applicable authority or a person authorised thereby, in order to perform a comprehensive assessment including tests, as well as the scope and method of performing this assessment and tests. When setting the date for making the property accessible, the applicable authority takes into account the type of activity conducted on the property and the time necessary to prepare the property for a comprehensive assessment and tests. The decision is subject to immediate implementation. Pursuant to Article 6 section 7, second sentence, if the owner of the property cannot be determined, the decision gives the authority,

³⁶ The definition of a closed area is given in Article 2(9) of Ustawa z 17 maja 1989 r. Prawo geodezyjne i kartograficzne (the Act of 17 May 1989. Geodetic and Cartographic Law). According to its wording, closed areas are precincts reserved for reasons of national defence and security, as determined by the applicable ministers and heads of central offices. The boundaries of a closed area enclose that area and its protective zone. Restrictions shall be established in protective zones on the development and use of the land, including a ban on development. These restrictions are described in the Local Sustainable Development Plan or designated in the decision on conditions for development.

or a person authorised thereby, the right to enter the property in order to perform a comprehensive assessment and tests.

Local authorities have been equipped with an instrument for the expropriation or temporary occupation of property. Due to the fact that operations to improve the environmental condition of a large-scale degraded area constitute a public goal within the meaning of Article 6 of Ustawa o gospodarce nieruchomościami (the Real Estate Management Act of 21 August 1997),³⁷ LDAA Article 9 section 2 prescribes that expropriation or temporary occupation of property to improve the environmental condition of a large-scale degraded area is applicable to properties where:

1. there is waste or
2. surface contamination,
3. or it is necessary to instal environmental decontamination and/or purification devices.

Pursuant to LDAA Article 9 section 3, expropriation to improve the environment on a large-scale degraded area is applicable if:

1. the entity in possession of the property is the perpetrator of the pollution, or the legal successor to the perpetrator of the pollution, or has taken ownership or the right of perpetual usufruct to the property from the perpetrator of the pollution, and where the implementation of the plan without expropriation could violate the principle set out in EPL Article 7 section 1, or
2. the owner of property in a large-scale degraded area fails to perform the obligations regarding this property imposed by a final decision for the protection of the environment, and the property is to be expropriated in order to carry out these obligations, where:
 - a. the deadline for the implementation of this decision has expired and enforcement proceedings cannot be initiated, or enforcement has turned out to be ineffective, or

³⁷ Amended 11 January 2023 (consolidated text: Dziennik Ustaw 2023, item 344).

- b. the decision does not specify a deadline for the performance of these obligations, and more than 10 years have passed since the date on which it became final.

Expropriation is preceded by negotiations conducted by the powiat administrator in consultation with the authority applicable (LDAA Article 9(9)). Pursuant to LDAA Article 9 section 16, on the day when the decision to improve the environmental condition becomes final: 1) expropriated properties become the property of: a) the State Treasury, if the applicable authority is the voivodeship director for environmental protection, b) the locality, if the applicable authority is the municipal/local executive body; 2) the right of perpetual usufruct to property owned by the State Treasury or a local government unit expires; 3) other rights to the property referred to in points 1 and 2 expire.

However, temporary occupation of property under LDAA Article 11 section 2 is possible in cases other than those specified in Article 9 section 3 (grounds for expropriation). In a decision to improve the environmental condition, the powiat administrator may have a given property occupied on a temporary basis, specifying the date and manner of occupation and the operations to be performed there. Temporary occupation may take place for the period necessary to perform these operations.

Another important issue is the high cost incurred for operations specified in LDAA, such as a comprehensive assessment of the environmental condition followed by corrective measures. A significant financial outlay will be required to purchase the property or pay compensation for expropriation and temporary occupation, or compensation for damage sustained in connection with the restricted use of the property and implementation of the restoration plan (LDAA Article 18(1)). LDAA specifies the sources of financing projects of this type. EU funds are the predominant source, but the municipality's own funds also make a contribution.

The aim of LDAA is to counter and eliminate the threat to life and health posed by large-scale post-industrial areas and recover as much land as possible for reuse, in some cases by assigning it for redevelopment, so it deserves a favourable assessment. However, doubts are raised

about the limited scope of the act and the burden of financing the tasks going largely on municipalities, with no guarantee of European funding. This may result in failure to accomplish the target of the special act, which turns out not to be the best solution for the improvement of the quality of post-industrial contaminated areas. General solutions should be considered rather than ones intended for a specific cases, because over 5% of the territory of Poland has been affected by various types of contamination.³⁸ These areas are in need of urgent remediation and, if necessary a change of designation should be considered for them.

6. INVESTMENT IN POST-INDUSTRIAL AREAS IN GEORGIA

Investment in the post-industrial areas of Georgia, especially in its capital Tbilisi, are a hot topic. Like Poland, Georgia is a rapidly developing country, especially as regards construction. Brownfields cover as much as 1,500 hectares of the capital.³⁹ Former factory sites are particularly important due to their location in post-production areas far from the city centre, but attractive for investment because they have a developed transport network.⁴⁰ These factories operated during the Soviet period

³⁸ H. TERELAK, *Monitoring chemizmu gleb ornych Polski w latach 2005-2007*, Warszawa: Inspekcja Ochrony Środowiska, 2008, p. 27; H. KLETA, *Ocena degradacji terenów uprzemysłowionych*, Politechnika Śląska <http://www.kleta.neostrada.pl/materialy/Ocena%20degradacji%20terenow%20uprze.pdf>; [accessed 16 December 2023]; R. KRUPA-DĄBROWSKA, *Blok na skażonym gruncie to tykająca bomba ekologiczna, a prawo nie zawsze działa*, «Prawo.pl» pub. 21 October 2021; <https://www.prawo.pl/biznes/budowa-mieszkana-skazonam-gruncie,511283.html>; [accessed 11 December 2023].

³⁹ Brownfield sites are former industrial areas no longer in use. There are approximately 60-70 post-industrial areas in Tbilisi with an area of 1,500-1,800 ha of abandoned, overexploited and devastated buildings and installations. The broad definition used in the doctrine is given in N. AHMAD, Y. ZHU, M. IBRAHIM, M. WAQAS, AND A. WAHEED, *Development of a Standard Brownfield Definition, Guidelines, and Evaluation Index System for Brownfield Redevelopment in Developing Countries: The Case of Pakistan*, «Sustainability» 10(12)/2018; <https://doi.org/10.3390/su10124347>; [accessed 13 December 2023].

⁴⁰ <https://mua.ge/ka/blog/industrial-heritage-of-tbilisi>; [accessed 1 December 2023]

until 1991, supplying products for other parts of the Soviet Union in quantities far exceeding Georgia's needs. Such areas were overexploited for the Soviet economy.⁴¹ The attractiveness of these lands is rising because they are located along the main railway lines.

During the Soviet period, there was a huge chemical and toxic waste dump at Martkhopi near Tbilisi. This site was used to dispose of radioactive residue from scientific and medical centres for cancer treatment, which led to serious soil contamination. Former Soviet military bases and the Sukhumi and Mtsketa nuclear reactors near Tbilisi which have been closed down constitute another problem. The Sukhumi reactor was once under military control and part of the Soviet defence system. Currently, due to the complicated political situation following the armed conflict in Abkhazia, data on the status and environmental impact of the reactor are difficult to access. In 1991, due to the age and potential safety issues, the reactor was shut down thanks to the efforts of Georgia's Green activists.⁴² This makes contaminated land a ubiquitous problem, and finding a solution is a daunting prospect, because the main weakness of the law is the lack of a sufficiently uniform, legally coordinated system for the recultivation of contaminated sites.

As regards the legal grounds for the regulation of the clean-up of contaminated land in Georgia, it should be noted that Article 2(2)(c) of the country's Waste Management Code defines the scope of the provisions, which apply to issues of land including contaminated soil. Article 40(3) of the Code stipulates that a person who has contaminated the environment by depositing 2 to 10 tonnes of waste on an illegal landfill site will be fined 2,000 GEL and the fined entity will be obliged to immediately remove the waste and clean up the contaminated land. There is no regulation in the Georgian national law for a procedure to remediate contaminated land.

However, the by-laws introduced for the new Tbilisi Master Plan of 15 March 2019 state that the remediation of these areas and

⁴¹ J. BURROWS, *Former Industrial Areas ("Brownfields") in Tbilisi*, Tbilisi 2017; <https://tas.ge/DownloadServlet?downloadCase=56&docId=52056>; [access 1 December 2023.]

⁴² M.R. MGALOBlishvili, L. HENS, C. HORTON, *op.cit.*, pp. 204-206.

the transformation and/or restoration of brownfields is one of their priorities. Such properties offer an opportunity for further useful and purposeful development in the large cities of Georgia.⁴³ This is all the more pressing given the urgent need to move the population from dilapidated residential apartment blocks in Tbilisi and Batumi to properties developed with modern, structurally safe and energy-efficient buildings. A lively discussion on degraded areas as a new investment resource is going on in the country.

In recent years, a project has been put forward to build a giant multi-functional complex on the premises of a silk and wagon repair plant in Tbilisi.⁴⁴ However, the provisions in force do not prescribe detailed regulations applicable to investment in areas of this type, nor on the method of their remediation, and there are still no comprehensive legal solutions in this respect.⁴⁵ Nonetheless, depending on the size of brownfield areas, each type of investment on them requires the development of a detailed zoning plan, that is an act regulating spatial planning and urban order, as well as the conditions for allocating local areas for construction purposes.⁴⁶ For degraded areas, it is mandatory at the first stage to draft a detailed zoning plan, which, due to its normative nature, is undertaken by the municipality's decision-making body. Therefore, the development of degraded areas is only possible after the adoption of such a plan.

⁴³ In accordance with the Tbilisi Zoning Plan of 15 March 2019, priority should be given to the creation of new recreational spaces and green functions in the process of reusing degraded areas (Decision No. 39-18 of 15 March 2019 of the Tbilisi City Council, section 4).

⁴⁴ <https://commersant.ge/news/busuness/yofili-abreshumis-qarkhnis-teritoriaze-qartu-jgufis-tsatabmjenebis-proeqti-52-sartulamde-shemtsirda>; <https://www.radio-tavisupleba.ge/a/31980875.html>; [accessed 2 November 2023].

⁴⁵ In the case of Tbilisi, if the development area exceeds 7,000 sq.m, construction is allowed only after a detailed development plan has been drawn up, and since brownfields usually cover a much larger areas, their development is only possible on a detailed plan.

⁴⁶ A detailed development plan divides the local area into functional zones, establishes building parameters (which may not correspond to/be different from those established in the development plan), and provides for transport and communication networks, land development, etc.

This means the planning authority has the obligation to assess the extent of soil contamination in a given area. The plan is adopted in two stages. The first stage involves the approval of the planning concept, and the second stage involves the approval of the detailed plan. The example of Tbilisi shows that it takes about six months to get this type of document approved. This is due to two main factors. Firstly, the detailed plan has a normative content and its adoption requires a resolution taken by the municipal council. Secondly, in addition to determining functional zones, the detailed plan also takes into account the following issues: traffic organisation, potential easements, communication networks, spatial development design, replanting/felling/replacing existing trees, recreational zones, building pavements and basic technical and construction parameters, as well as obligations for investors in relation to degraded areas as a condition for starting the investment. Research and studies on these issues are, of course, very important, because in the case of Tbilisi the main brownfield is adjacent to the central railway line, a section of which passes through the very centre of the capital. Therefore, before planning a development for this type of area, the municipality is obliged to familiarise itself with the content of the investment project in detail and determine the potential negative impact it may have on existing communication hubs and traffic safety, as well as on the existing communication network.

In recent years, the city of Tbilisi has devised an interesting way of developing this type of area. In particular, the municipality tenders similar plots which already have an adopted detailed development plan to prospective investors.⁴⁷ The municipality not only examines and establishes the type of pollution, but also participates in the costs of remediating the area, while the private investor implementing the investment provides a specific pool of apartments for people displaced from occupied areas and evicted from dilapidated buildings, which also serves a public purpose.

⁴⁷ In these cases, the entrepreneur does not have to wait for six months. Building permits are issued as soon as a tender of this type is accepted, which speeds up the investment and construction process.

The WHO guidelines for Georgia observe the need for a legal framework for the examination of degraded sites and their remediation in conjunction with urban plans to redevelop recovered land for new purposes.⁴⁸ The document highlights elements such as

- conducting desk research to obtain information on previous land use and potential sources of contamination;
- identifying remediation/decontamination strategies;
- creating supportive policies such as grants or special financial programmes, regulations and legal requirements, removing barriers to communication and other tasks which are a prerequisite for the effective regulation of contaminated land remediation;
- consulting the public and identifying the different stakeholders and their needs as an essential step in all remediation projects, particularly important for adequate project implementation in privately owned and/or privately financed areas.

7. CONCLUSIONS

Investment in degraded and contaminated areas is necessary due to the decreasing number of properties available for investment. However, such areas increase the risk to life and health. For investors, investing in such properties involves a significant risk of incurring costs that may exceed the costs of implementing the investment, which is why it is so important that the statutory provisions should include regulations imposing obligations to make the area comply with environmental protection law and penalise non-performance effectively and proportionally.

In Poland, the legislator has attempted to adopt a special act on large-scale degraded areas, which should be welcomed, but this legislation has not provided a full solution to the problem of contaminated land. In addition, the special act imposes numerous obligations and financial

⁴⁸ For the guidelines for Georgia, see *Health protection contaminated Territories through urban development*; <https://greenalt.org/app/uploads/2024/0/>; [accessed 12 April 2024].

burdens on municipalities, such that they may not be able to cope financially unless they are subsidised with external sources of financing. Although the provisions of Polish law prescribe obligations to remediate contaminated land, decision-makers may not learn of the contamination due to loopholes concerning the entry of contaminated properties in the appropriate registers and the lack of an obligation to perform soil tests for environmentally harmful pollutants. Some pollutants, e.g. heavy metals, may pose a serious threat to the environment, life and health.⁴⁹ While their detection does not necessarily disqualify the property from the prospect of investment, the site's remediation, i.e. soil and ground-water purification, is certainly necessary. The cost of this work may increase the expenses of the entire investment significantly, therefore the prospective buyer or investor should obtain such information well in advance of making the investment. The fact that Polish law does not give a clear regulation on the performance of soil tests should be considered a shortcoming. This is a legal loophole that developers take advantage of to avoid carrying out such examinations; the penalties for non-performance of remediation, or for not carrying it out correctly, are not at all preventive because the fine is disproportionate to the profit obtained from the investment. In addition, the Polish legislator decided to make defaulters liable for misdemeanour, which is difficult to prove. Undoubtedly, administrative penalties would be more effective in this case.

A developing country like Georgia, which has sustained substantial damage owing to the extensive industrial operations conducted in the past on its territory for the benefit of the Soviet Union, faces problems which show that planning instruments are one of the means to restore degraded areas for new development.

It should be emphasised that the comprehensive regulation of locating investments in degraded areas requires a clear definition of the financing and zoning instruments that may make a significant contribution

⁴⁹ For more information, see A. KABATA-PENDIAS, M. PIOTROWSKA, *Podstawy oceny chemicznego zanieczyszczenia gleb. Metale ciężkie, siarka i WWA*. Biblioteka Monitoringu Środowiska, Warszawa, 1995, p. 28 et seq.

to accelerating the remediation of areas situated in lucrative locations. Restoring contaminated areas for economic reuse requires a high level of financial commitment from the State and other public institutions, along with a commitment to adopt the necessary planning instruments. On the other hand, it is also necessary to involve scientific institutions in assessing contaminated areas and the possibility of changing their purpose to make them safe for life and health. Our findings show that both Poland and Georgia need a coherent legal policy in order to make further progress in the remediation of contaminated areas. This will help them move forward as fast as possible in the renovation of contaminated land and restore it to the economic and natural cycle. This can be achieved by the systematic registration of contaminated areas and the adoption of legislation on the recultivation of damaged areas, regardless of the entities that caused the pollution and the dangerous substances deposited there. It will also help to secure financial resources for local government to carry out tasks related to mapping and cleaning up polluted areas, introduce obligatory control of contaminated land, or even bring the rule of remediation into planning legislation. Currently, the Georgian planning act on zoning and development prescribes that the provisions of the general plan must specify areas requiring transformation, restoration, recultivation or remediation, taking into account the municipality's zoning conditions. The provisions of construction law, such as the issue of a building permit subject to remediation requirements, could make the private recultivation of contaminated areas more attractive.

To sum up, it is necessary to close the loopholes in the legal systems of both countries and implement a coherent administrative policy on remediation, which can be ensured by the implementation of the following points:

- the legal framework should ensure that polluters report environmental damage and the related financial consequences, regardless of the time when the offences were committed;
- a need to define a financial legal framework for local government bodies responsible for the detection of contamination;

- a need to define the legal framework for co-financing from the State's aid programmes to attract investors from the private sector to challenging areas, where the chances are low of the costs of renovation and remediation being compensated by prospective gains.

To maintain public confidence, administrative authorities should respect the rules of transparency and consistency in their decisions regarding remediation and act quickly and transparently to dispel public concerns about the impact of contaminated sites on environmental health and safety.

From the experience of Poland so far, it follows that local and regional authorities should prepare in advance for the forthcoming closure of post-industrial facilities and promote the effective management of prospective remediation projects.

LEGAL ASPECTS OF REMEDIATION OF CONTAMINATED POST-INDUSTRIAL REAL ESTATE AS INVESTMENT LAND, ON THE EXAMPLE OF POLAND AND GEORGIA

Summary

This study presents the legal issues concerning land that has been contaminated to varying degrees by human activity. The contaminated areas refer in particular to sites formerly overexploited for industrial purposes and waste dumps. The remediation of contaminated areas helps to replenish urban land to create more open and public spaces, provide local services, reduce the need for displacement, and ensure better opportunities for development. Meeting these major challenges on the road to "building a better future" requires investment in sustainable and green regeneration and the construction of new urban infrastructure. Thus, repurposing contaminated areas for urban planning will do more than just solve the problems of the past, but will also help create new opportunities for healthy and sustainable cities in the future. The problem of contaminated land is one of the main environmental policy challenges in the modern world – from a technological, financial and above all legal point of view. The remediation of contaminated sites usually involves considerable costs, which of course means significant problems with the performance of these obligations by those who want to change the use of such land. This article discusses selected problems arising from the legal regulations on remediating contaminated land. Even where the entities responsible can be

identified, in many cases public authorities are unable to carry out the remediation for economic or technological reasons. The article explores the current Polish regulations and those of other post-communist countries, using Georgia as an example, and shows the provisions still give insufficient protection to the future use of such land. Hence, the article reviews legal instruments such as keeping records of contamination, along with legal obligations on the part of the landowner as well as of the local authorities where such properties are located. It lists ways of carrying out preventive and remedial measures in relation to environmental damage that has occurred or may occur, as well as historical surface contamination, including the issue of remediation, i.e. the procedure for cleaning up the land. We attempt to assess the legal status and address the problems related to abortive attempts to remediate contaminated land.

PRAWNE ASPEKTY REMEDIACJI ZANIECZYSZCZONYCH NIERUCHOMOŚCI POPRZEMYSŁOWYCH JAKO TERENÓW INWESTYCYJNYCH NA PRZYKŁADZIE POLSKI I GRUZJI

Streszczenie

W opracowaniu przedstawiono zagadnienia prawne dotyczące gruntów, które zostały w różnym stopniu zanieczyszczone przez działalność człowieka. Za obszary zanieczyszczone uważa się w szczególności dawne obszary intensywnego użytkowania przemysłowego, wysypiska odpadów. Rekultywacja wcześniej zanieczyszczonych obszarów pomaga uzupełnić tereny miejskie, aby stworzyć więcej otwartych i publicznych przestrzeni, zapewnić lokalne usługi i zmniejszyć potrzebę przesiedleń, a także zapewnić większą odporność na przyszły rozwój. Sprostanie tym głównym wyzwaniom na drodze do „budowania lepszej przyszłości” wymaga inwestycji w zrównoważoną i zieloną rewitalizację oraz budowę nowej infrastruktury miejskiej. W związku z tym zmiana przeznaczenia zanieczyszczonych obszarów na potrzeby planowania urbanistycznego może nie tylko rozwiązać problemy z przeszłości, ale także pomóc w stworzeniu nowych możliwości dla zdrowych i zrównoważonych miast w przyszłości. Problem zanieczyszczonych gruntów jest jednym z głównych wyzwań polityki ochrony środowiska we współczesnym świecie – z technicznego, finansowego i przede wszystkim prawnego punktu widzenia. Remediacja terenów zanieczyszczonych zazwyczaj wiąże się ze znacznymi kosztami, co naturalnie pociąga za sobą znaczne problemy w realizacji tych obowiązków przez osoby, które zamierzają zmienić sposób użytkowania takich gruntów. Artykuł wskazuje na wybrane problemy wynikające z regulacji prawnych dotyczących remediacji zanieczyszczonych gruntów. Nawet jeśli można

zidentyfikować podmioty odpowiedzialne, w wielu przypadkach organy publiczne nie są w stanie faktycznie przeprowadzić remediacji ze względów ekonomicznych lub technicznych. W artykule zbadano obecne przepisy polskie i innych krajów postkomunistycznych, na przykładzie Gruzji, i wykazano, że są one nadal niewystarczające do ochrony przyszłych pokoleń korzystających z takich gruntów. W tym kontekście omówiono instrumenty prawne, takie jak prowadzenie ewidencji wskazującej na zanieczyszczenie, a także obowiązki prawne spoczywające na właścicielu gruntu, jak również na władzach lokalnych, na których terenie znajdują się takie nieruchomości. W rozważaniach wymieniono sposoby prowadzenia działań zapobiegawczych i naprawczych w odniesieniu do szkód środowiskowych, które wystąpiły lub mogą wystąpić, a także historycznych zanieczyszczeń powierzchni ziemi, w tym kwestię remediacji, czyli procedury oczyszczania gruntów. Autorzy podejmują próbę oceny stanu prawnego, a także rozwiązania problemów związanych z nieudanym procesem remediacji skażonych gruntów.

Keywords: legal aspects of land contamination; remediation; historical contamination; protection of the environment; construction projects.

Słowa kluczowe: prawne aspekty zanieczyszczenia nieruchomości; remediacja; skażenie historyczne; ochrona zasobów środowiska; projekty budowlane.

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