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## Environmental Awareness in Polish Society with Respect to Natural Resources and Their Protection (Overview of Survey Research)

*Świadomość ekologiczna społeczeństwa polskiego w zakresie  
zasobów naturalnych i ich ochrony (przegląd badań)*

### ABSTRACT

The article comprises an analysis of public opinion surveys concerning the environmental awareness in Polish society concerning natural resources and their protection, which issue has not been presented to date comprehensively in the literature on the subject. To this end, i.e. to present the degree of this awareness, the results of opinion surveys on the following topics have been presented and analysed: environmental protection as a social problem and the sources of knowledge on this subject, climate change, natural resources as sources of energy, attitude to the nuclear power plant construction, and air quality. The study has been based on representative surveys carried out by public opinion polling centres. The above-mentioned analysis has been preceded by terminological findings on such terms as "environmental security", "natural resources", "environmental awareness" and "public opinion", with a proposal for a new definition of environmental awareness, referring to elements of legal awareness. It has been assumed that the knowledge of the degree of public awareness is useful in designing legal solutions conducive to environmentally sound behaviour and in taking decisions on a gradual increase in the extent to which public participation in natural resource management is allowed. The research hypothesis that awareness of natural resources among the Polish population is not optimal but is gradually increasing was confirmed. It has been pointed out that legal measures to promote environmental measures need to be complemented and strengthened by instructional and educational measures.

**Keywords:** environmental security; natural resources; environmental awareness; public opinion; nuclear power plant

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## INTRODUCTION

The study discusses the ecological awareness in Polish society with regard to natural resources and their conservation. Due to the broadness of the subject, the deliberations were limited to selected issues considered particularly relevant. To determine the degree of awareness, it was necessary to analyse the results of the opinion surveys which have addressed the subject in question. First, we had to identify the ways of understanding such key terms as “environmental awareness”, “natural resources”, “environmental security” and “public opinion”.

An important assumption for this study is that the identification of the degree of environmental awareness can be an important element to be taken into account when designing legal solutions concerning this issue. A low level of environmental awareness would require stronger stress through law on conservation measures aimed at protecting natural resources, regardless of educational activities in this area. Following Petrażycki's thought, the formation of habits of proper conduct and implementation of the educational effect of law would allow the pressure of law to gradually decrease.<sup>1</sup>

Undertaking research into environmental awareness of natural resources is also of particular importance in view of the relationship between the degree of ecological awareness concerning natural resources and the degree to which the public is allowed to manage those resources. The literature on the subject notes that natural resources should be viewed as a public good.<sup>2</sup> This high position to be enjoyed by issues relating to natural resources runs counter to the low priority that has been given to the issue of the management of natural resources in public debate.<sup>3</sup> It is proposed to develop specific regulations to define the manner of social participation in the process of managing natural resources in the face of new global challenges related to “the shrinking of natural resources, their deterioration in quality and their growing importance for the functioning of the modern economy”.<sup>4</sup> Action should be taken to promote a culture of “sustainability, i.e. the sustainable use of natural resources by Poles”.<sup>5</sup> In the context of the need for greater involvement of citizens in the process of managing natural resources, an important link appears between the

<sup>1</sup> The basic environmental legislation on natural resources includes: Act of 27 April 2001 – Environmental Protection Law (consolidated text Journal of Laws 2020, item 1219 as amended); Act of 27 March 2003 on spatial planning and zoning (consolidated text Journal of Laws 2020, item 293 as amended); Treaty on the Functioning of the European Union, consolidated version (OJ C 202/47, 07.06.2016).

<sup>2</sup> *Obywatele zasobni w zasoby. Biała Księga zarządzania zasobami naturalnymi w Polsce*, eds. K. Blusz, T. Håkon, J. Inderberg, P. Zerka, Warszawa 2015, p. 72.

<sup>3</sup> *Ibidem*, p. 85.

<sup>4</sup> *Ibidem*, p. 72.

<sup>5</sup> *Ibidem*, p. 88.

state of environmental awareness of society and allowing these citizens to manage them: a high degree of environmental awareness would constitute a good basis and an argument for entrusting their management to wider groups of society.<sup>6</sup>

As a research hypothesis, it was assumed that the degree of environmental awareness in the Polish society in the field of natural resources is not yet optimal, although it has been gradually increasing in recent years.

## RESEARCH METHODS

The research methods used in this study are the analysis of the literature on the subject and public opinion surveys. One should agree with the statement that data from surveys should be interpreted cautiously: as a manifestation of the opinion climate rather than as a direct indication of how people actually think and act.<sup>7</sup> The above is particularly visible in relation to the issues discussed, since declarations of the need to act for the benefit of environmental protection, especially in the individual dimension, often contradict real attitudes when confronted with, for example, the necessity to incur greater costs or suffer certain inconveniences not translated into financial considerations.

The article presents the most important results of selected, most recent studies on environmental awareness of the Polish society with respect to natural resources, while older studies were only served for comparative purposes. It should be stressed that the most valuable surveys are those carried out on a regular basis, allowing monitoring of the ongoing changes.<sup>8</sup>

## ENVIRONMENTAL SECURITY, NATURAL RESOURCES, ENVIRONMENTAL AWARENESS, PUBLIC OPINION

As far as terminological matters are concerned, the starting point for the considerations is the concept of environmental security closely related to its subject and, what is particularly important, placing it in the legal perspective. There are

<sup>6</sup> *Ibidem*, p. 76.

<sup>7</sup> M. Strumińska-Kutra, *Świadomość ekologiczna Polaków – analiza wyników badań ilościowych z lat 1992–2011*, [in:] *Barometr zrównoważonego rozwoju 2010–2011*, Warszawa 2012, p. 28.

<sup>8</sup> Such type of research is the cyclical survey of awareness and environmental behaviour of Poles carried out as part of the multi-annual research programme of the Ministry of Climate and Environment, which started in 2011. See *Badania świadomości ekologicznej*, [www.gov.pl/web/klimat/badania-swiadomosci-ekologicznej](http://www.gov.pl/web/klimat/badania-swiadomosci-ekologicznej) [access: 5.01.2021].

many definitions of environmental security in the literature.<sup>9</sup> This is mainly due to different perspectives on this concept, e.g. economic, legal or political.<sup>10</sup> For the issues discussed herein, however, the definition proposed by K. Rogers, who defines environmental security as the creation of conditions in which the physical environment of society meets the needs of the population without depleting natural resources, may be particularly useful.<sup>11</sup> A significant factor in discussing the concept of environmental security is the fact that it has a normative character. It is contained in Article 74 of the Constitution of the Republic of Poland of 2 April 1997,<sup>12</sup> in chapter two, in the part on economic, social and cultural freedoms and rights. It appears in the context of the principles of state policy, since, according to its wording, public authorities pursue a policy ensuring environmental security for present and future generations (Article 74 para. 1). According to L. Garlicki, this type of state policy (apart from environmental protection and support of civic activities in this field) complements the citizens' right to information on the state and protection of the environment.<sup>13</sup> The provision of Article 74 para. 1 is of a programmatic nature, i.e. it is addressed to state authorities and contains targeted directives.<sup>14</sup> The enforcement of norms derived from such provisions does not take the same form as e.g. personal rights, i.e. through judicial proceedings<sup>15</sup>.

Moving on to the concept of natural resources, it should be pointed out that in encyclopedic terms they are an economic category covering both organic (plants, animals, ecosystems) and inorganic objects (atmosphere, waters, minerals), used by

<sup>9</sup> See the discussion on various approaches to environmental security: P. Korzeniowski, *Bezpieczeństwo ekologiczne jako instytucja prawa ochrony środowiska*, Łódź 2012, pp. 47–69. See also K. Górska-Rożej, *Bezpieczeństwo ekologiczne w ogólnym systemie bezpieczeństwa państwa*, „Obronność. Zeszyty Naukowe Wydziału Zarządzania i Dowodzenia Akademii Obrony Narodowej” 2013, no. 4(8), pp. 85–100.

<sup>10</sup> For example, see M. Pietraś, *Bezpieczeństwo ekologiczne w Europie. Studium politologiczne*, Lublin 2000, p. 85; J. Ciechanowicz-McLean, *Międzynarodowe prawo ochrony środowiska*, Warszawa 2001, pp. 46–47.

<sup>11</sup> See J.H. Herz, *The Rise and Demise of the Territorial State*, [in:] *International Politics and Foreign Policy: A Reader in Research and Theory*, ed. J.N. Rosenau, New York 1961, pp. 80–81, as cited in P. Korzeniowski, *op. cit.*, p. 60.

<sup>12</sup> Journal of Laws 1997, no. 78, item 483 as amended. English translation of the Constitution at [www.sejm.gov.pl/prawo/konst/angielski/kon1.htm](http://www.sejm.gov.pl/prawo/konst/angielski/kon1.htm) [access: 10.04.2021].

<sup>13</sup> L. Garlicki, *Polskie prawo konstytucyjne*, Warszawa 2008, p. 115.

<sup>14</sup> P. Tuleja, *Konstytucyjna regulacja statusu człowieka i obywatela w państwie (Podstawowe wolności, prawa i obowiązki)*, [in:] *Ustrój konstytucyjny Rzeczypospolitej Polskiej*, ed. R. Mojak, Lublin 2000, p. 88. More on programmatic norms in general in T. Gizbert-Studnicki, A. Grabowski, *Normy programowe w Konstytucji*, [in:] *Charakter i struktura norm Konstytucji*, ed. J. Trzciński, Warszawa 1997. With regard to the issue addressed herein, see M. Czekalska, *Problem konstytucyjnych norm programowych dotyczących ochrony środowiska na tle wybranych regulacji ustawowych*, „Acta Iuris Stetinensis” 2015, no. 11.

<sup>15</sup> P. Winczorek, *Prawo konstytucyjne Rzeczypospolitej Polskiej*, Warszawa 2003, p. 93.

humans in the production and consumption processes.<sup>16</sup> They are both renewable and non-renewable. Due to the existence of closed cycles of matter: oxygen, water, nitrogen, the first ones include, e.g., water, atmosphere, wood, fish resources, while non-renewable natural resources are primarily energy resources (fossil fuels) and minerals.<sup>17</sup>

Natural resources, combined with the national assets (anthropogenic resources), are part of the national wealth,<sup>18</sup> and their excessive exploitation becomes an ecological barrier to development.<sup>19</sup>

The literature on the subject points to the ambiguity and multidimensional nature of the term “environmental awareness”<sup>20</sup> This is due to the multiplicity of disciplines that deal with environmental awareness and the fact that the concept includes both the elements of social sciences (relating to “awareness”) and natural sciences (relating to the “environmental” issues).<sup>21</sup> Environmental awareness covers the problems of ecology – a science, according to the etymology of this concept, about habitats of organisms (from the Greek words *oikos*, which means home, place of living, and *logos* – science), and more about the “relationship of organisms to the external environment, but also the relationship between man or human societies and nature”<sup>22</sup>

The literature on the subject proposes many definitions of environmental awareness. According to T. Burger, environmental awareness is “a set of information and beliefs about the natural environment and the perception of the relationship between the state and character of the natural environment and the conditions and quality of human life”.<sup>23</sup> It is a definition that approaches ecological awareness from an axiological and normative perspective, where the emphasis is on the system of values and moral norms and attitudes towards nature,<sup>24</sup> as opposed to the

<sup>16</sup> *Zasoby naturalne*, [in:] *Encyklopedia PWN*, <https://encyklopedia.pwn.pl/haslo/4000548/zasoby-naturalne.html> [access: 12.03.2021].

<sup>17</sup> *Ibidem*.

<sup>18</sup> K. Górska, *Zasoby naturalne jako czynnik rozwoju społeczno-gospodarczego*, „Gospodarka w Praktyce i Teorii” 2014, no. 3(36), p. 36.

<sup>19</sup> *Ibidem*.

<sup>20</sup> A. Papuziński, *Świadomość ekologiczna w świetle teorii i praktyki. Zarys politologicznego modelu świadomości ekologicznej*, „Problemy Ekorozwoju” 2006, no. 1, p. 34; L. Tuszyńska, *Świadomość ekologiczna społeczności lokalnych. Oczekiwania a rzeczywistość*, „Rocznik Świętokrzyski. Seria B – Nauki Przyrodnicze” 2013, no. 34, p. 152; L. Domka, *Kryzys środowiska a edukacja dla ekorozwoju*, Poznań 1996, p. 85.

<sup>21</sup> W. Mirowski, *Świadomość ekologiczna współczesnego społeczeństwa polskiego w świetle badań naukowych*, [in:] *Świadomość ekologiczna i społeczne ruchy „zielonych” w Polsce*, ed. W. Mirowski, Warszawa 1999, p. 9.

<sup>22</sup> *Ibidem*.

<sup>23</sup> T. Burger, *Świadomość ekologiczna społeczeństwa polskiego*, Warszawa 2005, p. 10.

<sup>24</sup> *Ibidem*; W. Mirowski, *op. cit.*, p. 9.

descriptive and technical perspective encompassing “the entirety of knowledge about phenomena and processes occurring in ecosystems and the ecological imagination that it constitutes a specific disposition (ability) to predict the consequences of actions undertaken”<sup>25</sup>

Environmental awareness is related not only to social awareness but also to the awareness of the individual.<sup>26</sup> The literature on the subject presents both a narrower and a broader understanding of it,<sup>27</sup> with the advantages and disadvantages of both these perspectives being noted.<sup>28</sup>

It should be mentioned that definitions of environmental awareness appear not only in the literature on the subject, but also are devised for the purposes of conducting specific empirical studies.<sup>29</sup> The definitions developed by scholarly opinion are used as a starting point for deriving more general conclusions from studies carried out over a given period of time.<sup>30</sup>

It seems that we may assume herein an approach to environmental awareness (as an analogy to the understanding of legal awareness) which implies the presence of elements such as knowledge, assessment, attitudes and possible environmental postulates in the human mind. This understanding of environmental awareness (through its constituent elements) is close to the three main spheres of ecological awareness as distinguished by W. Mirowski: 1) information, i.e. the state of knowledge about nature and environmental hazards; 2) assessments, entailing emotional engagement; and 3) attitudes on which the motivation to act depends.<sup>31</sup> A growingly important role in the concept of environmental awareness is played by the third element, namely the attitudes towards environmental problems, consisting of three components: 1) the cognitive component – knowledge of the subject of

<sup>25</sup> L. Domka, *op. cit.*, p. 86.

<sup>26</sup> W. Mirowski, *op. cit.*, p. 9. B. Poskrobko (*Społeczne czynniki ochrony środowiska*, [in:] *Ochrona środowiska – problemy społeczne, ekonomiczne i prawne*, eds. K. Górska, B. Poskrobko, W. Radecki, Warszawa 1995, p. 32) considers environmental awareness a part of social awareness. Similarly L. Kłos, *Świadomość ekologiczna Polaków – przegląd badań*, „Zeszyty Naukowe Uniwersytetu Szczecińskiego. Studia i Prace Wydziału Nauk Ekonomicznych i Zarządzania” 2015, no. 42(2), p. 36.

<sup>27</sup> B. Poskrobko, *Zarządzanie środowiskiem*, Warszawa 1998, p. 88.

<sup>28</sup> In particular, see L. Kłos, *op. cit.*, p. 36; A. Papużyński, *op. cit.*, p. 34.

<sup>29</sup> As an example, the definition adopted in the survey commissioned by the Ministry of Environment and performed in 2013 by PBS of Sopot. As cited in L. Tuszyńska, *Edukacja i świadomość ekologiczna polskiego społeczeństwa*, [http://cejsh.icm.edu.pl/cejsh/element/bwmeta1.element.desklight-4f9c319d-e04e-40d3-b631-418db18dcc79/c/Edukacja\\_i\\_swiadomosc\\_ekologiczna.pdf](http://cejsh.icm.edu.pl/cejsh/element/bwmeta1.element.desklight-4f9c319d-e04e-40d3-b631-418db18dcc79/c/Edukacja_i_swiadomosc_ekologiczna.pdf) [access: 10.02.2021].

<sup>30</sup> For example, the definition proposed by A. Papużyński was used in the study *Raport z analizy badań świadomości, postaw i zachowań ekologicznych Polaków przeprowadzonych w Polsce w latach 2009–2015. Analiza TNS Polska dla Ministerstwa Środowiska*, 2015 (July), [http://www.3xsrodowisko.pl/uploads/media/badanie\\_dr\\_ekologia\\_ministerstwo\\_srodowiska.pdf](http://www.3xsrodowisko.pl/uploads/media/badanie_dr_ekologia_ministerstwo_srodowiska.pdf) [access: 10.02.2021], p. 7. The definition proposed by T. Burger was adopted by M. Strumińska-Kutra (*op. cit.*, p. 25).

<sup>31</sup> W. Mirowski, *op. cit.*, p. 15.

attitude; 2) the emotional (emotional and evaluative) one; and 3) the behavioural one, consisting of a permanent inclination to a certain behaviour towards the object of the attitude.<sup>32</sup> It is noted that studies of environmental attitudes focus more on their emotional and cognitive aspects than on behavioural one. This is so because declared attitudes do not always take this form in fact. It is even stated that “The greater the risk of divergence, the greater the official consensus about the norms of behaviour and opinions on the subject covered by the survey”.<sup>33</sup> The three main attitudes distinguished by T. Burger should be noted: pro-environmental, environmentally indifferent and anti-environmental.<sup>34</sup> However, it is also worth pointing to the role of the postulates towards environmental problems, although as a rule, they only appear when the other components of environmental awareness are of a higher degree than average. Then, based on a certain knowledge of ecology, assessments of the pro-environmental solutions adopted (or an assessment of their absence) and attitudes, the postulates on how the environment should be protected are defined.

Environmental awareness has been the subject of empirical research (and scientific reflection) as a result of the attention paid to environmental degradation and deterioration of living conditions as a consequence of social behaviour which undermines the values important for opinion-forming groups and social institutions.<sup>35</sup> It is possible to monitor the state of environmental awareness of Polish society through an analysis of the results of public opinion surveys. There is no consensus among researchers about the content of the term “public opinion”, hence the literature on the subject proposes as many as fifty definitions. There is no dispute that the important role in creating public opinion is played by the fact that a particular community, or more specifically a social group, differs in terms of opinion from another group and that these are at least two groups. However, there are many more contentious issues, such as whether the concept of public opinion should be considered the sum of individual opinions, or rather as a product of interaction, communication and mutual influence.<sup>36</sup> Regardless of existing disputes, it may be assumed for the purposes of the deliberations undertaken herein that “the public opinion of a given community is a set of prevailing opinions on public matters of importance to this community at a given moment”.<sup>37</sup>

<sup>32</sup> *Raport z analizy badań świadomości...,* p. 7. See also A. Pieniążek, M. Stefaniuk, *Socjologia prawa. Zarys wykładu*, Warszawa 2014, pp. 192–195.

<sup>33</sup> M. Strumińska-Kutra, *op. cit.*, p. 27.

<sup>34</sup> T. Burger, *Świadomość ekologiczna – między lękiem a działaniem*, Warszawa 1992, as cited in B. Poskrobko, *Zarządzanie...,* pp. 92–93.

<sup>35</sup> L. Tuszyńska, *Świadomość ekologiczna...,* p. 153.

<sup>36</sup> S. Nowotny, *Opinia publiczna*, [in:] *Encyklopedia socjologii*, vol. 3, Warszawa 2000, p. 16.

<sup>37</sup> *Ibidem*, p 18. For more detail on this topic, see E. Młyniec, *Opinia publiczna – elementy teorii i praktyki politycznej*, Toruń 2015, *passim*.

## RESEARCH ON THE ENVIRONMENTAL AWARENESS

**1. The beginnings of environmental awareness research in Poland,  
the researching entities and the degree of awareness in the literature  
on the subject**

The first surveys focusing entirely on environmental awareness in Poland began in the early 1980s and broadened their research field in the subsequent years.<sup>38</sup> The entities involved in the surveys included, in particular, the following: Institute for Sustainable Development (Pol. Instytut na rzecz Ekorozwoju), Ministry of the Environment (currently Ministry of Climate and Environment), environmental organisations, Centre for Social Opinion Research (Pol. Centrum Badania Opinii Społecznej) (besides commissioned surveys it also conducts its own independent cyclic research).<sup>39</sup> There were also fragmentary surveys profiled as requested by the ordering party.<sup>40</sup>

In general, one can find in the literature on the subject diverse opinions on the assessment of the degree of ecological awareness of Poles. On the one hand, the environmental awareness is growing, and the group of people showing the attitude of so-called environmental indifference is shrinking while there is an increase in the number of pro-environmentalists,<sup>41</sup> with the attitudes becoming emotionally toned.<sup>42</sup> This increase can be seen, among other things, in the everyday practice of consumer purchasing preferences, where ecological criteria are taken into account in purchasing decisions.<sup>43</sup> However, there is still a large discrepancy between de-

<sup>38</sup> See T. Burger, *Konflikt i współdziałanie. Świadomość ekologiczna i postawy społeczeństwa*, [in:] *Świadomość ekologiczna i społeczne ruchy...*, pp. 36–37; L. Kłos, *op. cit.*, pp. 35–39; L. Tuszyńska, *Edukacja i świadomość ekologiczna...*; T. Burger, *Świadomość ekologiczna społeczeństwa...*, p. 47; B. Poskrobko, *Zarządzanie...*, p. 90. It is worth pointing to the studies by B. Poskrobko who distinguishes the so-called ostensible environmental awareness. See idem, *Jak postrzegam ochronę środowiska, „Aura”* 1987, no. 8, 10; idem, *Proekologiczne zachowania przedsiębiorstw przemysłowych w okresie zmian ustrojowych w Polsce*, Białystok 1991, p. 49.

<sup>39</sup> A. Majchrowska, *Świadomość ekologiczna i postawy wobec środowiska naturalnego wśród mieszkańców Lubelszczyzny. Kapitał Intelektualny Lubelszczyzny 2010–2013*, <https://docplayer.pl/7545094-Swiadomosc-ekologiczna-i-postawy-wobec-srodowiska-naturalnego-wsrod-mieszkancow-lubelszczyzny.html> [access: 15.02.2021], p. 14.

<sup>40</sup> For example, the survey commissioned by Bayer Sp. z o.o. “Research on the ecological awareness of Poles” (“Badania świadomości ekologicznej Polaków”). For more detail on other surveys of this type, see L. Kłos, *op. cit.*, pp. 40–42.

<sup>41</sup> *Ibidem*, p. 43.

<sup>42</sup> A. Majchrowska, *op. cit.*, p. 29.

<sup>43</sup> J. Nycz-Wróbel, *Świadomość ekologiczna społeczeństwa i wynikające z niej zagrożenia środowiska naturalnego (na przykładzie opinii mieszkańców województwa podkarpackiego, „Zeszyty Naukowe Politechniki Rzeszowskiej. Ekonomia i Nauki Humanistyczne”* 2012, no. 19, p. 74.

clared values and actual actions.<sup>44</sup> On the other hand, however, one can encounter a different view, according to which the degree of environmental awareness is low, and this concerns not only ordinary people or businesses<sup>45</sup> but also, which is very important, decision-makers, hence, for example, the high energy intensity of the economy, which is largely based on coal.<sup>46</sup> It seems that the reason for such divergent opinions is that environmental awareness can vary depending on the specific issues being studied.<sup>47</sup>

## **2. Environment protection as a social problem and the sources of knowledge about this issue**

In public opinion polls, questions on environmental awareness of natural resources usually appear not alone, but as an element of broader research on environmental issues. The use of natural resources brings with it specific consequences for the environment, often negative ones. Increasingly, environmental protection is perceived by respondents as one of the most important problems our country is facing. In the 2020 survey, environmental protection was even ranked first among the areas with the most problems to solve (52%). It was followed by health care (48%) and the economy and economic development (20%) in third place.<sup>48</sup> If compare the above results to those of 2014, a significant difference may be noticed. In 2014, environmental protection was only ranked twelfth (8%). Health care (59%) and solving problems related to labour and social and family policy (53%) were then considered most important.<sup>49</sup> It turns out that 6 years ago, according to

<sup>44</sup> A. Majchrowska, *op. cit.*, p. 30.

<sup>45</sup> The research conducted in 2016 among entrepreneurs from the region of Małopolska with surveys, subsequently analysed statistically, showed a relatively low degree of environmental awareness of small and medium-sized enterprises. See D.K. Zuzek, *Świadomość ekologiczna przedsiębiorców jako element zrównoważonego rozwoju*, „*Studia Ekonomiczne. Zeszyty Naukowe Uniwersytetu Ekonomicznego w Katowicach*” 2017, no. 326, p. 170.

<sup>46</sup> L. Tuszyńska, *Edukacja i świadomość ekologiczna...* For the low environmental awareness among university students, see A. Bednarek-Gejo, M. Mianowany, P. Skoczylas, A. Głowacka, *Świadomość ekologiczna studentów*, „*Hygeia Public Health*” 2012, vol. 47(2), p. 206.

<sup>47</sup> Based on the research, certain factors were identified which point to high environmental awareness when occurring cumulatively. In more detail, see *Ekologia w energetyce – deklaracje i postawy*, comp. M. Gwiazda, „*Komunikat z badań CBOS*” 2016, no. 32, [www.cbos.pl/SPISKOM.POL/2016/K\\_032\\_16.PDF](http://www.cbos.pl/SPISKOM.POL/2016/K_032_16.PDF) [access: 11.03.2021], p. 8.

<sup>48</sup> *Badanie świadomości i zachowań ekologicznych mieszkańców Polski. Raport z badania trackingowego*, October 2020, [www.gov.pl/attachment/46bbf400-4c36-4419-b861-25bd38235a6d](http://www.gov.pl/attachment/46bbf400-4c36-4419-b861-25bd38235a6d) [access: 10.02.2021].

<sup>49</sup> *Badanie świadomości i zachowań ekologicznych mieszkańców Polski. Badanie trackingowe – pomiar: październik 2014. Raport TNS Polska dla Ministerstwa Środowiska*, comp. D. Kachaniak, J. Skrzynińska, A. Trzasańska, November 2014, [www.gov.pl/attachment/13eca2bb-7099-464c-bf30-c81893afbc68](http://www.gov.pl/attachment/13eca2bb-7099-464c-bf30-c81893afbc68) [access: 10.02.2021], p. 20.

respondents, environmental protection was an area which “traditionally” was not among those causing most problems. Only sport and culture and national heritage used to be mentioned less often.<sup>50</sup>

The prominence of environmental protection is significant, although at the same time it should be noted that the difference in percentage points compared to health care is not significant, and moreover, these are closely related problems. After all, a good condition of the environment, especially air quality, significantly affects the health of society.

It is characteristic that Poles are more concerned about the condition of the environment generally in Poland and abroad than locally where they live. In the survey of 2020, respondents assessed better the current state of the environment in the area where they live (65% of positive responses) than in Poland as a whole (44% of positive assessments).<sup>51</sup> Similar results were recorded in surveys from previous years. In 2014, the condition of the environment in their local area was positively assessed by 73%, while for the whole country by 63% of respondents.<sup>52</sup> More significant differences in the assessment of the state of the environment can be seen in the results of the survey of 2016, when respondents did not express serious concern about its condition in the place where they live (75% little concern or not concerned at all), but were more concerned about the condition of the environment in Poland as a whole (41% concerned and 47% expressed little concern) and even more concerned about its condition in the world (71% concerned).<sup>53</sup> The above leads to the conclusion that “the more distant the threats are, the greater they seem to the respondents”.<sup>54</sup> Thus, the public looks at environmental issues from the global point of view differently than from a local one.

As regards the reasons why the environment is worth protecting, recent surveys show that the reason is primarily a concern for future generations. The survey of 2020 was the first time that such a high score has been obtained of all editions of the research (73% of respondents) and this reason was ranked the first. The second reason indicated was care for human health (63%), while nature as a value in itself achieved 49%, which is also the highest score among all the editions of the survey. Economy and economic considerations were indicated by one in ten respondents (10%).<sup>55</sup>

<sup>50</sup> *Ibidem*. In the survey of 2018, the first area was health care (55%). See *Trackingowe badanie świadomości i zachowań ekologicznych mieszkańców Polski. Raport z badania*, September 2018, [www.gov.pl/attachment/a93a177c-6eb5-4631-98a5-335b746c12f0](http://www.gov.pl/attachment/a93a177c-6eb5-4631-98a5-335b746c12f0) [access: 10.02.2021].

<sup>51</sup> *Badanie świadomości i zachowań ekologicznych..., 2020*, p. 50.

<sup>52</sup> *Badanie świadomości i zachowań ekologicznych..., 2014*, p. 20.

<sup>53</sup> *Stan środowiska i zmiany klimatu*, comp. M. Feliksak, „Komunikat z badań CBOS” 2016, no. 39, [www.cbos.pl/SPISKOM.POL/2016/K\\_039\\_16.PDF](http://www.cbos.pl/SPISKOM.POL/2016/K_039_16.PDF) [aaccess: 10.01.2021], p. 1.

<sup>54</sup> M. Strumińska-Kutra, *op. cit.*, p. 28.

<sup>55</sup> *Badanie świadomości i zachowań ekologicznych..., 2020*, p. 35, 50.

It is worth looking here at the sources from which Poles usually learn about environmental issues. The survey of 2020 states that Polish residents learn about environmental issues generally from the Internet (73%), television (65%), the press (27%), and radio (27%).<sup>56</sup> Television has ceased to be the first and basic source of information on this subject, as was apparent from the surveys of the early 1990s (97%)<sup>57</sup> and later – in the 2014 and 2018 surveys, television was specified by 76% and 75% of respondents respectively.<sup>58</sup>

### **3. Climate change and global warming as an event of the year**

It is the mass media that bring information about what is happening home and abroad, but the degree of interest and internalisation of the content presented there is not high in Polish society. In public opinion polls containing questions about the most important events in Poland and in the world, respondents generally have problems with the answer, especially in relation to the global scale. The above also applies to the results of the survey regarding the year 2019. It was difficult for the respondents to indicate what fact deserves to be called the “event of the year” in international politics, which was evidenced by the fact that over 60% of respondents did not remember any issue.

However, people who had an opinion on this subject indicated in the first place disasters related to climate change and global warming (6.5%) and the awakening of environmental sensitivity, awareness of these changes and attempts to take collective action to stop further degradation of the natural environment (6.3%). In this context, international conferences and initiatives taken at the state level, talks at climate summits, the adoption of a global climate protection plan, activities for ecology and climate improvement undertaken by various civil movements, climate marches and the activity of Greta Thunberg were mentioned.<sup>59</sup> It seems that although the above data do not look significant in terms of percentage, the issue of climate, to a more extent than other things, has found its way to the awareness of Poles who are little interested in global affairs. The recognition of climate change is confirmed by the environmental awareness survey of 2020, according to which climate change is an important problem for 94% of respondents, while the percentage of people who consider this problem as very important has increased

<sup>56</sup> *Ibidem*, p. 41. Three answers at most were allowed to be selected.

<sup>57</sup> *Świadomość ekologiczna społeczeństwa polskiego*, Badania OBOP 1992, [http://tnsglobal.pl/archiv\\_files/M.1015b.pdf](http://tnsglobal.pl/archiv_files/M.1015b.pdf) [access: 3.06.2017], p. 1.

<sup>58</sup> *Badanie świadomości i zachowań ekologicznych..., 2014*, p. 35; *Trackingowe badanie świadomości i zachowań ekologicznych..., p. 19.*

<sup>59</sup> *Rok 2019 pod znakiem wyborów i obaw przed zmianami klimatycznymi*, comp. A. Cybulska, „Komunikat z badań CBOS” 2020, no. 14, [https://cbos.pl/SPISKOM.POL/2020/K\\_014\\_20.PDF](https://cbos.pl/SPISKOM.POL/2020/K_014_20.PDF) [access: 20.02.2021], p. 5.

compared to the previous edition of the survey. In 2020, there were 68% of such people, compared to 39% in 2018.<sup>60</sup>

#### 4. The importance of natural resources for human life

The issues related to natural resources and their conservation covered by public opinion surveys include, in particular, those necessary for human life, such as water and energy.

The role of water is one of the most notable. People value water as the most important raw material for them – in the 2009 survey a total of 85% of respondents said so, and only a small percentage of respondents indicated oil (5%), gas (4%) and coal (3%).<sup>61</sup> However, the problem of depletion of drinking water resources has been mentioned (after starvation, environmental pollution and economic problems) only in fourth place among the most important problems of the modern world.<sup>62</sup> Moreover, not everyone has heard of the global problem of potable water depletion in the world (72% of respondents have heard of this problem while 28% have not).<sup>63</sup>

There is a noticeable increase in awareness concerning the readiness to pay more for energy if produced from renewable sources. The survey of 2020 showed that many more Poles are willing to spend more money on “clean”, environmentally friendly energy (78%). This is the highest result achieved over years and at the same time the largest recorded increase (in 2018 it was 20%, and in 2014 – 21%, in 2016 – 52%).<sup>64</sup> If such declarations translated into a real readiness for this kind of behaviour, this would be an optimistic forecast for the future. The fact is, however, that this readiness is very limited, as most respondents in 2020 declared that they would be willing to pay between 6% and 10% more than their current energy cost.<sup>65</sup>

As regards the way Poles perceive various raw materials used as an energy source, the results of the survey identified differing assessment of them from the point of view of energy efficiency, energy production costs, safety and prospects for use.<sup>66</sup>

<sup>60</sup> *Badanie świadomości i zachowań ekologicznych...,* 2020, p. 81; *Trackingowe badanie świadomości i zachowań ekologicznych...,* p. 11.

<sup>61</sup> *Polacy a świadomość oszczędzania wody*, comp. T. Tybora, Report of the National Geographic Channel performed by TNS OBOP, February 2009, p. 8.

<sup>62</sup> *Ibidem*, p. 7.

<sup>63</sup> *Ibidem*, p. 10.

<sup>64</sup> *Badanie świadomości i zachowań ekologicznych...,* 2020, pp. 109–110.

<sup>65</sup> *Ibidem*, p. 110

<sup>66</sup> In particular, see *Polacy o przyszłości energetycznej kraju*, comp. M. Gwiazda, „Komunikat z badań CBOS” 2016, no. 28, [www.cbos.pl/SPISKOM.POL/2016/K\\_028\\_16.PDF](http://www.cbos.pl/SPISKOM.POL/2016/K_028_16.PDF) [access: 10.02.2021], p. 2.

With all the above criteria taken into account, a very positive picture of renewable energy sources emerges.<sup>67</sup> This is all the more valuable because the use of renewable energy sources is mentioned as the most important way to achieve air quality improvement in Poland (48%).<sup>68</sup> Referring to the strategy Poland should adopt by 2030 for the development of electric power generation, Poles have put much emphasis on renewable energy sources, which would increase clean environment standards and increase the influence of citizens and local communities on energy decisions.<sup>69</sup> “This policy considerably outruns the other possibilities”.<sup>70</sup> It should be noted, however, that one of important information gaps that Poles have with regard to environmental issues is their knowledge (or rather lack thereof) about renewable energy sources.<sup>71</sup>

As the survey of 2016 on the energy future of Poland shows, the overall assessment of renewable energy sources such as solar radiation, wind, water and biomass is definitely positive. As many as 87% of respondents considered them safe and prospective sources of energy (82%).<sup>72</sup> Moreover, two-thirds of respondents expressed confidence in the efficiency of renewable energy sources (68%). The cost of producing energy from renewable sources was assessed relatively the worst, but also from the point of view of this criterion, positive assessments far outweighed the negative ones (55% vs. 28%).<sup>73</sup>

As regards traditionally used energy sources, coal is the main energy raw material used in Poland, and Poland is also the largest producer of coal in the European Union. As far as the criterion of prospective use is concerned, it is clear that Poles are aware that coal resources will run out in the future. In the survey of 2016, 59% of respondents considered coal not to be a prospective source of energy (29% considered it prospective),<sup>74</sup> which confirmed a previous survey (2015) stating that, according to the majority of Poles (61%), Poland should gradually move away from coal-based energy and develop other ways of producing energy.<sup>75</sup> Opinions differ considerably depending on the education of the respondents. While

<sup>67</sup> The concept of renewable energy sources is one of the most recognizable concepts related to environment protection, since 81% of respondents declared that they know it. See *Badanie świadomości i zachowań ekologicznych..., 2014*, p. 32.

<sup>68</sup> However, slightly less respondents supported the idea of replacing old heating stoves with low-emission ones. See *ibidem*, p. 44.

<sup>69</sup> *Polacy o przyszłości energetycznej..., p. 8.*

<sup>70</sup> M. Strumińska-Kutra, *op. cit.*, p. 51.

<sup>71</sup> *Raport z analizy badań świadomości..., p. 18.*

<sup>72</sup> *Polacy o przyszłości energetycznej..., p. 5.*

<sup>73</sup> *Ibidem.*

<sup>74</sup> *Ibidem*, p. 2.

<sup>75</sup> *Co dalej z polskim górnictwem węgla kamiennego*, comp. B. Badura, „Komunikat z badań CBOS” 2015, no. 167, [www.cbos.pl/SPISKOM.POL/2015/K\\_167\\_15.PDF](http://www.cbos.pl/SPISKOM.POL/2015/K_167_15.PDF) [access: 10.03.2021], p. 2.

the view on abandoning coal-based energy dominated in all the distinguished socio-demographic groups, this opinion was supported most often by respondents with higher education (70%) and least often by poorly educated people (50%).<sup>76</sup> These opinions correlated with party affiliations, as supporters of Law and Justice (Pol. Prawo i Sprawiedliwość) were most likely to support basing the Polish energy industry on coal.<sup>77</sup>

According to the survey of 2016, hard and lignite coal is perceived as an efficient (70% positive estimates), expensive (57% vs. 32%), and not prospective (59% vs. 29%) source of energy. Safety assessments are divided, with 52% of respondents considering that its combustion does not pose a risk to the environment and 41% recognizing this risk.<sup>78</sup> It also turned out that the assessment of oil is similar to that of coal. According to the respondents, this fuel is efficient (60% vs. 11%), rather safe (47% vs. 34%), expensive (54% vs. 24%) and not prospective (44% vs. 38%).<sup>79</sup> On the other hand, natural gas is perceived as efficient (70% vs. 9%), safe (6% vs. 30%), expensive (51% vs. 31%), but prospective (55% vs. 29%).<sup>80</sup>

## ATTITUDES OF POLES TOWARDS NUCLEAR ENERGY AND NUCLEAR POWER PLANT CONSTRUCTION

The question of the use of nuclear energy causes many doubts and discussion, which makes it justified to discuss it separately. Regarding the assessment of nuclear fuel, the 2016 survey found that respondents considered it efficient (58% positive vs. 8% negative), the cheapest of those assessed (42% vs. 22%), prospective (52% vs. 21% negative), but not very safe (58% negative vs. 24% positive).<sup>81</sup>

At this point, the issue of attitude of Poles towards the construction of a nuclear power plant in Poland appears, repeatedly examined in public opinion polls. Generally, the attitude can be described as at least cautious. In recent years, the negative attitude on this issue seems to be predominant, but we went far from the extreme position expressed in the past, if we take into account that in 1992 as many as 73% of respondents were against and only 19% for the construction of a nuclear power plant.<sup>82</sup> According to the results of the survey, the highest percentage of supporters

<sup>76</sup> *Ibidem*.

<sup>77</sup> *Ibidem*, p. 3.

<sup>78</sup> *Polacy o przyszłości energetycznej...*, p. 2.

<sup>79</sup> *Ibidem*, p. 3.

<sup>80</sup> *Ibidem*, p. 4.

<sup>81</sup> *Ibidem*.

<sup>82</sup> *Świadomość ekologiczna...*, p. 8.

of nuclear energy in Poland was in 2009, but then “the nuclear energy gained better support at the expense of all other solutions”.<sup>83</sup>

However, in the survey of 2011, again more respondents were against (51%) than in favour (35%) of the construction of a nuclear power plant in Poland.<sup>84</sup> Similarly, in 2013, it turned out that opponents of construction prevail in Poland (52% vs. 35%).<sup>85</sup> The survey of 2016 on the energy future of our country shows that 50% of Poles were against the construction of a nuclear power plant, 38% supported the project, while 11% could not take a position on the issue.<sup>86</sup>

It is believed that the support for the construction of a nuclear power plant in Poland is dependent on international events, as the decline in the support in recent years has been caused by the crisis in Ukraine, the Fukushima disaster and the decisions of some countries, primarily Germany, to abandon nuclear energy.<sup>87</sup>

Furthermore, the number of opponents of the construction of a nuclear power plant increased in the surveys when asked about the location of the power plant in the place of residence of the respondents. Then, as in the survey of 2013, as many as 70% of respondents would be against construction and 25% would be in favour.<sup>88</sup> Even if the respondents were generally in favour of the project to develop nuclear power in Poland, more than a quarter (27%) would change their mind if the nuclear power plant were to be located near their place of residence.<sup>89</sup> This is a manifestation of a phenomenon referred to as NIMBY, which is a colloquial expression of the attitude of people who object to certain projects in their immediate neighbourhood, without, however, claiming that they are unnecessary. They are in favour of the projects, but in a completely different place, away from their homes.<sup>90</sup> This

<sup>83</sup> A. Bołtromiuk, *Świadomość ekologiczna Polaków – zrównoważony rozwój – raport z badań 2009*, <https://pl.scribd.com/document/28079208/Raport-z-badań-2009-Świadomość-ekologiczna-Polaków-zrównoważony-rozwoj> [access: 10.02.2021], p. 6.

<sup>84</sup> *Poparcie i sprzeciw dla elektrowni atomowej*, „Komunikat z badań TNS OBOP” 2011, no. K.040/11, <https://docplayer.pl/30180722-Poparcie-i-sprzeciw-dla-elektrowni-atomowej.html> [access: 10.02.2021].

<sup>85</sup> *Polacy o energetyce jądrowej i gazie łupkowym*, comp. K. Pankowski, „Komunikat z badań CBOS” 2013, no. BS/51/2013, [www.cbos.pl/SPISKOM.POL/2013/K\\_051\\_13.PDF](http://www.cbos.pl/SPISKOM.POL/2013/K_051_13.PDF) [access: 20.02.2021], p. 2.

<sup>86</sup> *Polacy o przyszłości energetycznej...*, p. 12.

<sup>87</sup> A. Gawlikowska-Fyk, Z. Nowak, *Energetyka jądrowa w Polsce. Raport*, Warszawa 2014, p. 47. See K. Kamienecki, *Notatki ekologiczne 2010 i 2011*, [in:] *Barometr...*, p. 21.

<sup>88</sup> *Polacy o energetyce jądrowej...*, p. 3.

<sup>89</sup> *Ibidem*, p. 4.

<sup>90</sup> The acronym stands for “not in my backyard”. See *Obywatele zasobni w zasoby...*, p. 83 footnote 51. A similar situation took place during surveys of opinion of residents of Lubartów, who generally supported the construction of a waste management plant (ZZO), but mostly opposed it at the designated location. L. Liżewski, M. Łacek, S. Pilipiec, *Mieszkańcy Lubartowa wobec budowy i lokalizacji Zakładu Zagospodarowania Odpadów (ZZO). Ekspertyza z procesu ankietyzacji w dniach 1–15 października 2011* (manuscript), p. 21, 37.

is particularly important with regard to such a sensitive issue as the construction of a nuclear power plant, especially as public knowledge regarding the safety of such facilities is still insufficient – it is another information gap to be filled in the course of environmental education.<sup>91</sup> The attitude of local communities towards the possible location of a nuclear power plant depends to a large extent on the activity of local authorities and efforts to present the risks, but also the benefits that may arise from such a project. Hence, in a local referendum held in 2012, residents of the municipality of Mielno strongly voted against the project of location in their neighbourhood, as 94% of them voted against,<sup>92</sup> while in other municipalities – Choczew and Żarnowec nearly 60% voted in favour of the construction of a nuclear power plant. In the latter case, this was due to the involvement of local authorities, consultations and information campaigns. Residents realized that the power plant could stimulate the development of the municipality, provide an opportunity for the development of infrastructure and human capital.<sup>93</sup>

Slightly different results, breaking the persistent opposition to the construction of a nuclear power plant in Poland, were obtained in opinion polls conducted by the Polish Institute of International Affairs (Pol. Polski Instytut Spraw Międzynarodowych) in 2014 to verify the public opinion on nuclear power, in which it turned out that 63.9% of Poles are positive about plans to build a nuclear power plant and the opposite opinion is maintained by 24.4% of respondents.<sup>94</sup> Given the distribution of answers taking into account the territorial aspect, there are significant differences in the perception of nuclear energy between the eastern and western parts of Poland. The greatest support for the construction of a nuclear power plant was declared by residents of Kuyavian – Pomeranians (88.7%), Lublin (85.5%) and Lesser Poland (84.9%) regions and the smallest support was declared by residents of West Pomerania (17.4%), Greater Poland (27.3%) and Lower Silesia 36.8%.<sup>95</sup> The above distribution of answers is explained in such a way that in western Poland there is a strong conviction about the negative impact of nuclear power plants located in the neighbouring countries on the environment, health and safety, and there are greater fears of an accident or terrorist attack if it is built in Poland. In the east of the country, however, more people are convinced of the possible economic benefits of such an investment.<sup>96</sup>

<sup>91</sup> *Raport z analizy badań świadomości...,* p. 18.

<sup>92</sup> A. Gawlikowska-Fyk, Z. Nowak, *op. cit.*, p. 56.

<sup>93</sup> *Ibidem*, p. 57. See also K. Smolińska, A. Przemieniecka, *Respondenci wobec inwestycji w energetyce jądrowej w Polsce. Wyniki i omówienie badań, „Refleksje”* 2013, no. 7, pp. 123–137.

<sup>94</sup> A. Gawlikowska-Fyk, Z. Nowak, *op. cit.*, p. 48.

<sup>95</sup> *Ibidem*, p. 49.

<sup>96</sup> *Ibidem*, pp. 49–50.

Regardless of the results of opinion polls, in accordance with the “Energy policy of Poland by 2040” a nuclear power plant is to be built in Poland.<sup>97</sup> It is planned that the first of the six nuclear power plant blocks with a capacity of about 1–1.6 GW will be operational in 2033, and the next ones will be implemented every 2 to 3 years. The construction of the power plant is expected to begin in 2026, but its exact location is not yet known, although it will most likely be located in Pomerania.<sup>98</sup> It is expected that between 2040 and 2045, about a third of energy production in Poland is to come from nuclear power.<sup>99</sup> However, it is difficult to ignore the fact that there are serious delays on the part of the investor in the implementation of the nuclear power plant construction schedule, and the further implementation of the nuclear energy programme needs to be intensified.<sup>100</sup>

## THE PROBLEM OF AIR QUALITY

More and more often, people’s own everyday experiences, backed up by collected data, present on an unprecedented scale the problem of air pollution in Poland. They are by no means optimistic. According to the World Health Organisation, 72% of cities in Poland exceed the air quality standards defined to be achieved before 2020, which places Poland second only to Bulgaria.<sup>101</sup>

The smog problem has appeared in recent years as a separate subject in public opinion polls, which may, however, indicate that its importance has been noticed. Comparing public opinion polls relating to smog conducted in 2018 and 2019, it appears that 44% (the same result in both polls) of Poles perceive smog as a serious problem in the area where they live. A total of 29% of respondents in 2018 and 34%

<sup>97</sup> *Polityka energetyczna Polski do 2040 r.*, [www.gov.pl/web/klimat/projekt-polityki-energetycznej-polski-do-2040-r](http://www.gov.pl/web/klimat/projekt-polityki-energetycznej-polski-do-2040-r) [access: 10.03.2021].

<sup>98</sup> *Minister klimatu zdradza lokalizację polskiej elektrowni atomowej*, 2021, [www.bankier.pl/wiadomosc/Minister-klimatu-zdradza-lokalizacje-polskiej-elektrowni-atomowej-8036799.html](http://www.bankier.pl/wiadomosc/Minister-klimatu-zdradza-lokalizacje-polskiej-elektrowni-atomowej-8036799.html) [access: 20.01.2021].

<sup>99</sup> *Ekspert: Budowa elektrowni jądrowej w Polsce zbyt kosztowna i czasochłonna*, 11.08.2020, [www.energetyka24.com/ekspert-budowa-elektrowni-jadrowej-w-polsce-zbyt-kosztowna-i-czasochlonna](http://www.energetyka24.com/ekspert-budowa-elektrowni-jadrowej-w-polsce-zbyt-kosztowna-i-czasochlonna) [access: 10.02.2021].

<sup>100</sup> *Są poważne opóźnienia po stronie inwestora w realizacji harmonogramu budowy elektrowni jądrowej – Ministerstwo Klimatu*, <http://biznes.pap.pl/pl/news/pap/info/3033928,sa-powazne-opoznienia-po-stronie-inwestora-w-realizacji-harmonogramu-budowy-elektrowni-jadrowej---ministerstwo-klimatu> [access: 12.01.2021].

<sup>101</sup> World Health Organization, [www.who.int/airpollution/data/cities/en](http://www.who.int/airpollution/data/cities/en) [access: 10.01.2021]. See also B. Grygiel, *Ranking 50 najbardziej zanieczyszczonych miast w Europie. 36 jest z Polski!*, 2018, [www.focusnauka.pl/artykul/ranking-smogu-na-50-najbardziej-zanieczyszczonych-miast-eu-az-36-jest-w-polsce-180509043616%20](http://www.focusnauka.pl/artykul/ranking-smogu-na-50-najbardziej-zanieczyszczonych-miast-eu-az-36-jest-w-polsce-180509043616%20) [access: 10.01.2021]; *Liczba polskich miast w czarnym rankingu WHO rośnie*, 2018, [www.greenpeace.org/poland/aktualnosci/1667/liczba-polskich-miast-w-czarnym-rankingu-who-rośnie](http://www.greenpeace.org/poland/aktualnosci/1667/liczba-polskich-miast-w-czarnym-rankingu-who-rośnie) [access: 10.01.2021].

in 2019 commented on the small scale of the problem, while 24% of respondents in 2018 and 19% in 2019 did not notice this problem at all.<sup>102</sup>

Respondents state as the most common reason for poor air quality in Poland the emissions from home heating stoves (37%), this reason coming in first place in the 2020 survey. In second place are emissions from motorised transport (24%), and in third place are large emissions from, e.g., factories (35%).<sup>103</sup> According to the respondents, to improve air quality in Poland, it is necessary to replace old coal-fired stoves with low-emission ones (54%) and to use renewable energy sources (33%). This is consistent with the answer that it is stoves which are the main cause of poor air quality.

A number of local and nationwide measures have been taken to address the problem of smog. Some cities in Poland have already taken appropriate decisions in this field, and the effects are becoming visible. For example, the city of Krakow decided that heating systems in residents' homes be replaced and coal-fired stoves are eliminated.<sup>104</sup> They have brought concrete results, as the air quality in the capital of Lesser Poland is systematically improving. Moreover, in a poll carried out by "Gazeta Wyborcza", the effective fight against smog was considered the greatest success of Krakow in the last 30 years (27% of votes).<sup>105</sup> Although this was only a newspaper plebiscite and not a survey conducted in line with methodological rules, it is hard not to notice that one-third of the participants considered the problem of smog so important that they considered its reduction an unquestionable success. It should be noted that nationwide action has also been taken to combat smog. The programme "Clean Air" (Pol. "Czyste Powietrze") is the first of its kind and provides subsidies for the replacement of old stoves and the thermal insulation of detached houses, but its real effects will still have to be seen.<sup>106</sup>

<sup>102</sup> *Jak Polacy radzą sobie ze smogiem?*, comp. M. Feliksiak, B. Roguska, „Komunikat z badań CBOS” 2018, no. 45, [www.cbos.pl/SPISKOM.POL/2018/K\\_045\\_18.PDF](http://www.cbos.pl/SPISKOM.POL/2018/K_045_18.PDF) [access: 10.03.2021], p. 1; *Polacy o smogu*, comp. M. Feliksiak, „Komunikat z badań CBOS” 2019, no. 33, [https://cbos.pl/SPISKOM.POL/2019/K\\_033\\_19.PDF](http://www.cbos.pl/SPISKOM.POL/2019/K_033_19.PDF) [access: 10.02.2021], p. 1.

<sup>103</sup> *Badanie świadomości i zachowań ekologicznych...*, 2020, p. 53.

<sup>104</sup> It was calculated that in January 2013, air pollution in Krakow was comparable to the situation if each inhabitant of Krakow smoked 25,000 cigarettes a year (in Vienna, carbon dioxide pollution reached the level comparable to 160 cigarettes smoked per one inhabitant during one year). See L. Tuszyńska, *Edukacja i świadomość ekologiczna...*

<sup>105</sup> *Skuteczna walka ze smogiem sukcesem 30-lecia w Krakowie*, 2020, [www.krakow.pl/aktualnosci/239817,1926,komunikat,skuteczna\\_walka\\_ze\\_smogiem\\_sukcesem\\_30-lecia\\_w\\_krakowie.html](http://www.krakow.pl/aktualnosci/239817,1926,komunikat,skuteczna_walka_ze_smogiem_sukcesem_30-lecia_w_krakowie.html) [access: 10.01.2021].

<sup>106</sup> *Skorzystaj z programu „Czyste powietrze”*, [www.gov.pl/web/gov/skorzystaj-z-programu-czyste-powietrze](http://www.gov.pl/web/gov/skorzystaj-z-programu-czyste-powietrze) [access: 10.01.2021].

## CONCLUSION

To sum up the considerations undertaken herein, one should agree with the statement that “Polish society can be generally described as friendly towards the environment”,<sup>107</sup> but there is also much ambivalence in the attitude of Poles towards the environment, in the sense that the willingness to bear social and economic costs decreases if the issue is “getting closer” to the everyday life of the respondents.<sup>108</sup> Poles are increasingly aware that the energy sources used so far, especially hard coal, are not future-proof, they appreciate renewable sources, but they are only willing to bear higher costs to a small extent. However, if we go beyond the attitudes declared in the research, the degree of environmental awareness, although growing also in terms of natural resources, is not yet optimal. There are still many gaps to be filled in the field of knowledge, i.e. the element of environmental awareness that determines the occurrence of others. Currently, the main source of this knowledge is the Internet, replacing television in this area. Even if there is a definitely positive climate of opinion around renewable energy, it turns out that the respondents are not well acquainted with this topic. Poles are still cautious about nuclear energy: the public support for its development was growing until 2009 and then it began to decline. There are still many information gaps concerning both nuclear energy and renewable sources that need to be filled in the course of environmental education, especially with regard to plans to build such facility in Poland. However, the phenomenon of NIMBY is still present. The respondents, even recognizing the need to undertake various types of investments, including the construction of a nuclear power plant, oppose them in their immediate vicinity.

The thesis proposed herein that although the ecological awareness in Polish society is growing, it has not reached the optimal level, has been confirmed. Such a conclusion can be drawn from public opinion polls. As a novelty in relation to theoretical issues, an approach to environmental awareness was proposed, covering: the knowledge about environmental problems, assessment, attitudes and postulates. The knowledge of the level of environmental awareness should be taken into account when designing legal solutions aimed at the protection of natural resources, although educational and awareness-raising activities should not be underestimated. Actions involving people with social authority or well-known figures from the field of culture, art or sports, can be particularly effective as the pro-environmental message may reach the public better.

<sup>107</sup> M. Strumińska-Kutra, *op. cit.*, p. 52.

<sup>108</sup> *Ibidem.*

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## ABSTRAKT

W artykule dokonano analizy badań polskiej opinii publicznej dotyczących świadomości ekologicznej polskiego społeczeństwa w odniesieniu do zasobów naturalnych i ich ochrony. Kwestia ta nie była dotąd w sposób zbioryczy prezentowana w literaturze przedmiotu. Dla realizacji celu, tj. przedstawienia poziomu owej świadomości, zaprezentowano i przeanalizowano wyniki badań opinii publicznej dotyczące: ochrony środowiska jako problemu społecznego i źródeł wiedzy na ten temat, zmian klimatycznych, zasobów naturalnych jako źródeł energii, stosunku do budowy elektrowni jądrowej i jakości powietrza. Oparto się na reprezentatywnych badaniach przeprowadzonych przez ośrodki badania opinii publicznej. Powyższe poprzedzone zostało ustaleniami terminologicznymi dotyczącymi takich terminów, jak „bezpieczeństwo ekologiczne”, „zasoby naturalne”, „świadomość ekologiczna” i „opinia publiczna”, przy czym zaproponowano nowe ujęcie świadomości ekologicznej, nawiązujące do elementów konstrukcyjnych świadomości prawnej. Przyjęto, iż poznanie poziomu świadomości społecznej jest przydatne w konstruowaniu rozwiązań prawnych sprzyjających postawom proekologicznym oraz w podejmowaniu decyzji o stopniowym zwiększeniu stopnia dopuszczenia społeczeństwa do zarządzania zasobami naturalnymi. Potwierdzono hipotezę badawczą, zgodnie z którą poziom świadomości społeczeństwa polskiego w zakresie zasobów naturalnych nie jest optymalny, ale ulega stopniowemu podwyższeniu. Wskazano na potrzebę uzupełniania i wzmacniania rozwiązań prawnych sprzyjających działaniom proekologicznym poprzez działania edukacyjne i wychowawcze.

**Słowa kluczowe:** świadomość ekologiczna; zasoby naturalne; bezpieczeństwo ekologiczne; opinia publiczna; elektrownia jądrowa