

Irena Fudali
Aneta Smolińska

Jan Kochanowski University
in Kielce, Poland

**ENVIRONMENTAL AWARENESS IN POLAND
AND IN THE UNITED STATES OF AMERICA
– CONTENT-RELATED ANALYSIS**

Introduction

The concept of environmental (ecological) awareness has been characterised by different approaches in a variety of countries due to cultural diversity, in which reality is perceived through a prism of dissimilar filters and expressed in different culture-oriented approaches.

Environmental (ecological) awareness is created and developed during appropriate environmental education – it is also embedded in the social and/or cultural reality. Environmental awareness as an attitude refers to the so-called cultural ecology, namely, studies of how people use culture to adapt to their surroundings and environment. Subsequently, environmental awareness, as demonstrated by human actions, which are undoubtedly influenced by the specific society and/or culture, impacts on the environmental policy of a particular country.

Thus, it is commonly believed that environmental awareness can be mirrored in certain spheres, such as respect for nature, environmental protection, the prevention of environmental hazards etc.

“Awareness shapes a hierarchy of values, and at the same time has an influence on the sense of responsibility for inappropriate choice of values and indifference towards wrongdoing” (**United Nations Environmental Programme**).¹ That is why public awareness in relation to the environment is so important. People, due to their actions or shortages, are responsible for the state of the natural environment, since they act accordingly to their culturally influenced hierarchy of values. According to B. Poskrobko, environmental awareness refers to a state of knowledge, views and people’s vision of dealing with the role of the environment in their lives, their anthropogenic load, degree of overexploitation, threats and protection, including the state of know-

¹ *United Nations Environmental Programme*, <http://www.unep.or.jp/ietc/publications/techpublications/techpub-11/4-2.asp> [June 4, 2015].

ledge about the methods and tools used for managing and developing environmental protection.²

Consequently, environmental awareness is shaped under the influence of social and/or cultural norms that can be changed by appropriate environmental education, changes in the family, social and cultural environment etc. Therefore, it must be understood that social norms are conditioned by the social origin (family environment), the process of upbringing and education (formal, informal and non-formal education), but they are also subject to change and/or modification based on information conveyed by teachers, the media and so on.

Environmental awareness is also perceived as a part of social/public consciousness. It is directly associated with certain attitudes on the basis of which the people's patterns of behaviour patterns can be created, e.g. emotional response, referring to the third level of risk awareness, illustrated by stress, which can lead to mobilization for action, so-called "eco-correction" (e.g. participation in environmental movements). Environmental awareness in such cases can be understood as a motivating factor to cultivate ecological behaviour.³

The aforementioned perception of the concept is in line with official statements from the United Nations: "Public awareness of the environment means the ability to emotionally understand the surrounding world, including the laws of the natural environment, sensitivity to all the changes occurring in the environment, understanding of cause-and-effect relationships between the quality of the environment and human behaviour, an understanding of how the environment works as a system, and a sense of responsibility for the common heritage of the Earth, such as natural resources – with the aim of preserving them for future generations [...] Environmental public awareness comes from a result of general knowledge, specialist knowledge of a particular problem and also sensitivity to, and a sense of, responsibility for the environment".⁴

It must be underlined, though, that "environmental public awareness is shaped throughout the whole life of particular people living in a given local community, performing specific work and having definite personal characteristics which have a deciding effect on their sense of responsibility and ability to emotionally perceive the environment as having value in itself. The knowledge acquired during school education, and then systematically improved in adulthood, is an essential factor in heightening the environmental awareness of an individual and, at the same time, an indispensable condition for development of a pro-ecological lifestyle".⁵

Therefore, in the *United Nations Environmental Programme*, it is suggested that member states create appropriate environmental programmes for their own nations,

² B. Poskrobko, *Zarządzanie środowiskiem*, Warszawa 2007, p. 61.

³ W. Mirowski, *Świadomość ekologiczna współczesnego społeczeństwa polskiego w świetle badań naukowych*, [in:] *Świadomość ekologiczna i społeczne ruchy „zielonych” w Polsce*, eds. W. Mirowski, P. Gliński, Warszawa 1999, pp. 9-10, 29.

⁴ *United Nations Environmental Programme*.

⁵ *Ibidem*.

taking into account the fact that environmental public awareness is based on the level of environmental awareness of particular members of society, which is, in turn, influenced by many other factors, such as cultural, ethnic and religious associations, the organization of the family, one's professional and social life, type and level of education, social status and the like. Only the consideration of such factors can allow the creation of optimum environmental programmes and activities focused on public participation in decision-making processes related to resolving specific environmental problems.

It must also be emphasised that appropriate public environmental awareness is directly connected with so-called national security, which covers risks to ecological safety. National security refers to aspects of military, political and environmental security (closely related to social security), energy security (concerns about energy sources and energy efficiency), economic (economic solutions and natural balance), food (quantitative and qualitative resources for healthy food).⁶ Thus, understanding the concept of environmental awareness includes many different issues reflected directly in the life of every society. For this reason, a high level of environmental awareness has a huge impact on the implementation of environmental policy realized by individual countries. Only a society aware of the risks and consequences of its actions is able to fully implement an environmental policy in its own country.

An examination of environmental awareness in Poland

The first studies dealing with social issues concerning environmental protection, environmental awareness and attitudes towards them were conducted in the 1980s. These studies found an inappropriate and unsatisfactory level of public awareness among Poles. Furthermore, they demonstrated that Polish society was only motivated to take action in cases of risk. Such risks, though, had to be directly associated with humans. Thus, these could include, for example, the pollution of drinking water and/or energy saving. Polish society tends to disregard and ignore threats such as forest destruction, air pollution etc.⁷

The studies of T. Burger on public environmental awareness demonstrated that issues related to the need of protection of the biodiversity and natural aesthetic values were less important, if important at all, than issues referring to health and economic aspects. Only aspects connected with health and economics were perceived as pro-environmental ones. Additionally, the concern and responsibility for one's own health has increased only because of economic implications, namely and metaphorically

⁶ J. Barnett, *The meaning of environmental security, Ecological Politics and Policy in the New Security Era*, New York 2001, pp. 33-46.

⁷ A. Majchrowska, *Świadomość ekologiczna i podstawy wobec środowiska wśród mieszkańców Lubelszczyzny*, Kapitał intelektualny Lubelszczyzny 2010-2013, Lublin 2014, pp. 8-9, <http://www.kil.lubelskie.pl/wp-content/uploads/2013/08/%C5%9Awiedomo%C5%9B%C4%87-ekologiczna-i-postawy-wobec-%C5%9Brodowiska-naturalnego.pdf> [June 4, 2015].

speaking, 'it can be rather expensive to be ill'. Nevertheless, the studies suggested that, at that time, ecology and ecological correctness were fashionable, i.e. it was trendy to say that you were interested in ecology and ecological issues. T. Burger underlined the existence of the phenomenon of so-called 'eco-snobbery', which along with health and economic arguments created a path leading to better environmental habits, as well as ecological consciousness, environmental knowledge and sensitivity.⁸

But studies carried out in 1997, conversely, revealed that Polish society acknowledged and understood the hazards of civilization, such as health risks associated with drug addiction, AIDS and/or alcoholism. Unfortunately, environmental pollution came second on the list of risks. Importantly, (probably also after Chernobyl in 1986, Polish society was aware of the risks involved in the failure of nuclear power plants. On the one hand, the public in Poland were alert to environmental threats, namely, the hole in the ozone layer, air pollution, water pollution and/or acid rain etc. On the other hand, Poles were not aware of the dangers related to the depletion of natural resources (only 7% of respondents), or the extinction of certain species of flora and fauna.⁹

Fortunately, the outcomes of research studies conducted in 2008 are slightly different and demonstrate considerable diversity in the levels of knowledge and patterns of people's behaviour towards environmental issues. Public environmental awareness in Poland has been modified and has improved (Poles in the ecological mirror).¹⁰ A similar situation can also be observed in studies carried out in 2013 by the *Ministry of the Environment*. According to them, only one out of nine respondents believed that environmental protection was a major challenge for Polish society (Report for ME).¹¹ The outcomes appeared to duplicate those from the previous studies; however, environmental protection was mainly motivated by concerns for human health and future generations. The studies conducted also indicated an insignificant increase in the number of people who could see the impact of good legislation and its enforcement on the state of environment protection. It must be emphasised, though, that according to studies from 2011, 75 per cent of respondents suggested that the segregation of waste should be compulsory – included in legal regulations.¹²

Additionally, the studies from 2013 reported very positive changes in the environmental awareness of Poles, since they acknowledged the need for environmental protection for the sake of environment values.¹³ For example, 74 per cent of respondents, while washing the dishes or having a bath, considered the idea of reducing water con-

⁸ T. Burger, *Uwagi o świadomości ekologicznej*, "Zielone Zeszyty PKE", 1997, pp. 8-9.

⁹ Ibidem, p. 11.

¹⁰ *Polacy w zwierciadle ekologicznym*. Raport z badań nad świadomością ekologiczną Polaków w 2008 roku.

¹¹ Raport: PBS przygotowany dla Ministerstwa Środowiska, *Badania świadomości i zachowań ekologicznych mieszkańców Polski*, Sopot 2013, p. 11.

¹² Ibidem, p. 12.

¹³ Ibidem, p. 50.

sumption, not only for financial reasons but also to protect our environment, e.g. avoid the threat of depletion of water resources in the world.¹⁴

Fortunately, this is in line with previous studies regarding the environmental awareness of Poles, in particular as presented by the **Institute for Eco-development** in 2008, where Poles' environmental awareness was modified and improved, which was noticeable not only in declarations, but also in the behaviour patterns of Poles (Poles in the ecological mirror).

Additionally, studies published in 2013 also clearly demonstrate the positive impact of existing Polish legislation on the environmental awareness of Poles. For example, *Amendments to the Waste Management Act* in municipalities encouraged Poles to segregate waste more often and this also resulted in an increase in the number of people with a sense of personal influence on and responsibility for the environment.¹⁵

Examination of environment awareness in the United States

Environmental awareness in the United States is believed to have reached a high level due to environmental education. Thus, the *National Act of Environmental Education* (dealing with the promotion of environmental education and other aims) itself emphasises the importance of environmental awareness in the United States (Public Law 101-619-Nov.16, 1990).¹⁶ It states that the US Congress acknowledges that an: "Effective response to complex environmental problems requires understanding of the natural and built environment, awareness of environmental problems and their origins (including those in urban areas), and the skills to solve these problems" (Public Law 101-619-Nov.16).¹⁷ Additionally, the same law states that the Federal Government acts through the *Environmental Protection Agency* and should cooperate with local educational institutions, state education agencies and education centres, as well as environmental organizations (such as: non-profit non-commercial broadcasting entities), not to mention the fact that it should also cooperate with private sector interests to promote development of educational programmes (and/or projects), and other activities to raise awareness connected with the environment (Public Law 101-619-Nov.16).¹⁸ It is worth emphasising that children in the US have to learn ecology in elementary school due to a nationwide awareness campaign, which strives to raise their consciousness.

In 1962, a book entitled "*Silent Spring*" by Rachel Carson, was published as a wake-up call to America. She demonstrated the so-called horrors of DDT use, which resulted in killing the nation's bird population. The book is considered to have raised

¹⁴ Ibidem, p. 118.

¹⁵ Ibidem, p. 10.

¹⁶ *Ustawa z dnia 16 Listopada 1990 r. An Act to promote environmental education and other aims. 1990*, "Public Law 101-619-Nov.16, 1990", <http://www2.epa.gov/sites/production/files/documents/neeaa.pdf> [June 4, 2015].

¹⁷ Ibidem, p. 3325.

¹⁸ Ibidem, pp. 3325-3326.

a firestorm of concerns for the environment, embracing a call for environmental awareness. It resulted in the passing of new laws, such as the *Wilderness Protection Act*, the *Water Quality Act* and the *Air Quality Act*. The book, the activities of young Americans and legal acts probably contributed to the formation of an activist organization, *Greenpeace*, in 1969. Additionally, President Nixon, even though well known for his antipathy to the earth movement, signed legislation creating the *Environmental Protection Agency* in 1970. It was supposed to be a so-called federal watchdog dedicated to proper care of the planet. He also set standards for emissions and waste with more restrictive *Clean Air* and *Clean Water Acts*. Furthermore, the *Endangered Species Act* provided much more essential protection for endangered wildlife.¹⁹ Many environmentalists were dissatisfied with the environmental policy of the country, and so the introduced changes improved the quality of air and water; furthermore, the nation became aware of the urgent need to preserve the planet.²⁰

Environmental awareness is shaped by continuous environmental education, as well as strong connections between business and private interests. According to M. Rickinson, the environmental education conducted in 2001 was inappropriate. He claimed that the real knowledge of students dealing with ecology was at a very low level. In 1,800 schools only 36 per cent of students referred correctly to five or more environmental issues.²¹ Nevertheless, it must be stated that such knowledge is not really inappropriate since, comparing it with the knowledge of students from some other countries, American students recognised a lot of issues, including air pollution and recycling, and they were familiar with endangered species, the ozone layer, waste collection and rainforest destruction. They had to work, however, on recognising the issue of water contamination and the existence of water shortages.²²

According to R. J. Bord et al: "It can be concluded that the public, both in the United States and in other regions:

- displays solid environmental awareness and support for environmental goals at the general level;
- demonstrates a general awareness and concern for global warming;
- has a somewhat flawed understanding of global warming due to the application of a general pollution model;
- perceives substantial threat from global warming, but the threat levels tend to be significantly less than those from other environmental and social problems; and

¹⁹ *U.S. History, Pre-Columbian to the New Millennium, Environmental Reform*, <http://www.ushistory.org/us/57e.asp>. [June 4, 2015].

²⁰ *Ibidem, U.S. History, Pre-Columbian to the New Millennium* [June 4, 2015].

²¹ M. Rickinson, *Learners and Learning in Environmental Education: a critical review of the evidence*, "Environmental Education Research", vol. 7, no. 3, 2001, p. 227.

²² *Ibidem*, p. 227.

- expresses a willingness to pay and to make sacrifices for coping more adequately with environmental problems in general and global warming specifically, but that willingness may be contingent and limited”.²³

As mentioned earlier, environmental awareness in the US is also shaped by strong business associations with private interests. It is believed that a company's success is inextricably linked to the success of the local community, namely, closer links between social problems and business as well as more chances to use a company's resources are understood as a benefit to the local community.²⁴

It is exemplified by the activities of the company called *Whole Foods*, which sells organic foods. Such food is bought from local farmers. Additionally, the company's success stems from functioning on the basis of environmentally friendly practices, e.g. all branches of the company buy 100 per cent of the energy they need from renewable sources, in this particular case generated by wind turbines.²⁵ All in all, in the U.S., people very often deal with social initiatives in order to create environmental programmes, which indicates that the citizens have a very high level of environmental awareness.

Nevertheless, K. Coyle claims that in America, “While the simplest forms of environmental knowledge are widespread, public comprehension of more complex environmental subjects is very limited. The average American adult, regardless of age, income, or level of education, mostly fails to grasp essential aspects of environmental science, important cause/effect relationships, or even basic concepts such as runoff pollution, power generation and fuel use, or water flow patterns”.²⁶ Interestingly, she also claims that 83 per cent of children get more environmental information from the media than from any other source. Moreover, the media are the only steady source of environmental information for most adults in the US.²⁷ Additionally, K. Coyle claims that 80 per cent of Americans are under undue influence of inappropriate and/or incorrect or outdated environmental sources of knowledge (myths)²⁸, and only 12 per cent of Americans can successfully pass a basic quiz about environmental awareness and a range of energy issues/ topics.²⁹

²³ R.J. Bord, A. Fisher, R.E. O'Connor, *Public perceptions of global warming: United States and international perspectives*, “Climate Research”, vol. 11, no. 12, 1998, p. 83.

²⁴ M.E. Porter, M. R. Kramer, *Strategy and Society: The Link Between Competitive Advantage and Corporate Social Responsibility. Making a real difference*, HBR Spotlight, “Harvard Business Review”, no. 2, 2006, p. 10.

²⁵ Ibidem, p. 11.

²⁶ K. Coyle, *Environmental Literacy in America. The National Environmental Education & Training Foundation*, Washington D.C. 2005, p. vii.

²⁷ Ibidem, p. x.

²⁸ Ibidem, p. vii.

²⁹ Ibidem, p. vi.

According to K. Coyle, environmentally knowledgeable people are 10 per cent more likely to save water, 50 per cent more likely to recycle and 10 per cent more likely to buy environmentally safe products etc.³⁰

Easy common access to data and widely-understood accessibility to different types of information result in a much better implementation of environmental policy in the U.S., since well-informed citizens support activities of a pro-ecological character and are quite willing to deal with all their obligations as a result of the generally accepted benefits for all citizens. The *Act on Safe Drinking Water* appears to be a very typical example of the provisions introduced which guarantee the right to information about what is included in drinking water, where it comes from, what processes it is subjected to and/or what to do to protect it.

Additionally, U.S. citizens understand the need for social advertising, pointing to the need to raise the environmental awareness of citizens. According to a survey conducted in 2000 and 2001, the main sources of environmental knowledge among adults are: television (59–63%), newspapers (57–59%) and environmental groups (30–31%). Thus, social advertising campaigns tend to be very appropriate for the aim of increasing environmental awareness.

Conclusion

“Many social analysts argue that there has been a world-wide revolution in environmental awareness (Milbrath 1984, Dunlap & Scarce 1993) to the degree that traditional ways of understanding the world have been replaced by a ‘New Environmental Paradigm’ (Dunlap & Van Liere 1978)”.³¹ Nevertheless, 1988 was the banner year for raising environmental awareness in the United States, especially as regards global warming. The public in the United States and most other countries are both environmentally aware and concerned.³²

The situation in Poland is considered to have improved since 1989 as a result of the reductions in heavy industry and growing environmental concerns. However, air pollution tends to be a serious problem due to sulphur-dioxide emissions from coal-fired power plants and the resulting acid rain, which damages the forests. There is also a serious problem with water pollution from industry and municipal sources, which are regarded as disposers of hazardous waste. There is a chance, however, for a reduction in pollution levels due to bringing the facilities up to satisfy the EU code at substantial cost to business and government (**Environment, Current issues: Countries Compared**).³³

³⁰ Ibidem, p. xi.

³¹ R.J. Bord et al., *Public perceptions of global warming: United States*, p. 75.

³² Ibidem, p. 80.

³³ *Countries Compared by Environment > Current issues. International Statistics at Nation-Master.com*, <http://www.nationmaster.com/country-info/stats/Environment/Current-issues#2011> [June 4, 2015].

The United States is characterised by air pollution resulting in acid rain, since the U.S. is the largest single emitter of carbon dioxide from the burning of fossil fuels. Moreover, this country suffers from water pollution caused by the runoff of pesticides and fertilizers and limited natural fresh water resources, which require careful water management to avoid the problem of desertification (**Environment, Current issues: Countries Compared**).³⁴

U.S. citizens show a higher level of environment awareness than Polish ones. Considering the data referring to the issues of energy alone, it is shown that:

- natural gas consumption per capita is ranked 7th in case of the U.S., and 41st in case of Poland;
- hydroelectric power production in the U.S. is in 5th place, while Poland is 73rd;
- geothermal power use – the U.S. (20th place) uses ten times more than Poland (38th place);
- Wind-energy installations – the U.S (13th place) has 14 times as many as Poland (32nd place);
- Ecological footprint – the U.S (2nd place) has twice that of Poland (28th place).

It can be concluded that environmental education in the United States brings better results in the sphere of environmental awareness of its citizens. Furthermore, the accidental appearance of such education in Poland tends to be on an inappropriate level. For that reason, Polish citizens have a lot to catch up with.

Additionally, the arrival of social advertising has also resulted in a higher level of environmental awareness in the United States, especially among adults. Unfortunately, there is a lack of such advertising messages in Poland, which results in inappropriate levels of environmental awareness among many Polish people.

Summary

ENVIRONMENTAL AWARENESS IN POLAND AND IN THE UNITED STATES OF AMERICA – CONTENT-RELATED ANALYSIS

The multi-faceted and heterogeneous concept of environmental (ecological) awareness has been characterised by different approaches in various countries. It is due to cultural diversity, in which reality is perceived through a prism of dissimilar filters and expressed by different culture-oriented approaches. Environmental awareness is created and developed during appropriate environmental education – it is also embedded in the social and/or cultural reality. Environmental awareness as an attitude refers to so-called cultural ecology, namely, studies of how people use culture to adapt to their surroundings and environment. Consequently, environmental awareness, as demonstrated by human actions, which are undoubtedly influenced by the specific society and/or culture, impacts on the environmental policy of a particular country. Thus, it is

³⁴ Ibidem.

commonly believed that environmental awareness can be mirrored in certain spheres, such as respect for nature, environmental protection, the prevention of environmental hazards etc.

Keywords: environmental awareness, environmental policy, education, culture, Poland, USA

Streszczenie

ŚWIADOMOŚĆ EKOLOGICZNA W POLSCE I STANACH ZJEDNOCZONYCH AMERYKI – PRAGMATYCZNA ANALIZA ZJAWISKA

Koncepcja świadomości ekologicznej jest zjawiskiem wieloaspektowym i niejednorodnym. Ponadto determinują ją zróżnicowane podejścia charakterystyczne dla konkretnych państw, np. Polski czy USA. Jest to spowodowane różnorodnością kultur na świecie, w których rzeczywistość jest postrzegana przez pryzmat konkretnych warunkowań społeczno-politycznych, mających swoje odzwierciedlenie w heterogenicznych podejściach do rozumienia świadomości ekologicznej. Ponadto świadomość ekologiczna jest tworzona i rozwijana w czasie prowadzenia odpowiedniej edukacji środowiskowej różnej dla Polski i Stanów Zjednoczonych. Jest ona głęboko osadzona w społecznej i/lub kulturowej rzeczywistości. Dodatkowo świadomość ekologiczna jest rozumiana jako stosunek/podejście (postawa) do tak zwanej ekologii kulturowej, a mianowicie badań, jak ludzie wykorzystują kulturę, aby przystosowywać się do otaczającego ich środowiska.

W konsekwencji świadomość ekologiczna ujawnia się w działaniach człowieka, które niewątpliwie ulegają wpływowi konkretnego społeczeństwa i/lub kultury, jak również objawiają się we wpływie na kształtowanie polityki ochrony środowiska konkretnego państwa. Dlatego też powszechnie uważa się że świadomość ekologiczna jest odzwierciedlana w konkretnych sferach życia człowieka, takich jak: szacunek dla środowiska naturalnego, ochrona środowiska, zapobieganie niebezpieczeństwom zagrażającym środowisku itd. Przedmiotowe podejście jest różne dla Polaków i Amerykanów.

Słowa kluczowe: świadomość ekologiczna, polityka ekologiczna, edukacja, kultura, Polska, USA

Bibliography

- Badanie świadomości i zachowań ekologicznych mieszkańców Polski. Raport PBS przygotowany dla Ministerstwa Środowiska*, Sopot 2013, https://www.mos.gov.pl/g2/big/2013_12/ee41d9c93bc700729faf03103120a38c.pdf. [June 4, 2015].
- Barnett Jon, *The meaning of environmental security, Ecological Politics and Policy in the New Security*, New York: Era, Palgrave, 2001.

- Bord Richard J., Fisher Ann, O'Connor Robert E., *Public perceptions of global warming: United States and international perspectives*, "Climate Research", vol. 11, no. 12, 1998, pp. 75-84.
- Bołtoniuk Artur, Burger Tadeusz, *Polacy w zwierciadle ekologicznym. Raport z badań nad świadomością ekologiczną Polaków w 2008 roku*, Warszawa: INE, 2008.
- Burger Tadeusz, *Uwagi o świadomości ekologicznej*, "Zielone Zeszyty PKE", 1997.
- Coyle Kevin, *Environmental Literacy in America. The National Environmental Education & Training Foundation*, Washington D.C.: NEETF, 2005.
- Majchrowska Anita, *Świadomość ekologiczna i podstawy wobec środowiska wśród mieszkańców Lubelszczyzny, Kapitał intelektualny Lubelszczyzny 2010–2013*, Lublin 2014, <http://www.kil.lubelskie.pl/wp-content/uploads/2013/08/%C5%9Awiadomo%C5%9B%C4%87-ekologiczna-i-postawy-wobec-%C5%9Brodowiska-naturalnego.pdf> [June 4, 2015].
- Mirowski Włodzimierz, *Świadomość ekologiczna współczesnego społeczeństwa polskiego w świetle badań naukowych*, [in:] *Świadomość ekologiczna i społeczne ruchy zielonych w Polsce*, eds. Włodzimierz Mirowski, Piotr Gliński, Warszawa: Wydawnictwo IFiS Pan, 1999, pp. 9-35.
- Porter Michael E., Kramer Mark R., *Strategy and Society: The Link Between Competitive Advantage and Corporate Social Responsibility. Making a real difference*, HBR Spotlight, "Harvard Business Review", no. 12, 2006, pp. 1-9.
- Poskrobko Bazyli, *Zarządzanie środowiskiem*, Warszawa: Polskie Wydawnictwo Ekonomiczne S.A, 2007.
- Raport PBS przygotowany dla Ministerstwa Środowiska, Badania świadomości i zachowań ekologicznych mieszkańców Polski*, Sopot 2013, https://www.mos.gov.pl/g2/big/2013_12/ee41d9c93bc700729faf03103120a38c.pdf [June 4, 2015].
- Rickinson Mark, *Learners and Learning in Environmental Education: a critical review of the evidence*, "Environmental Education Research", vol. 7, no. 3, 2001, pp. 207-228.
- United Nations Environmental Programme*, <http://www.unep.or.jp/ietc/publications/techpublications/techpub-11/4-2.asp> [June 4, 2015]

The date of submitting the paper to the Editorial Staff: February 13, 2016.
The date of initial acceptance of the paper by Editorial Staff: February 27, 2016.