

JOANNA WNEK-GOZDEK

## Forms of teachers' training and improvements in the area of sustainable development

*The beauty of this land makes me call  
for preserving it for the future generations.  
If you love this fatherland,  
may not this calling be left without an answer!*

John Paul II  
Zamość, June 12th, 1999

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### Abstract

Violent exploitation of our planet caused the existence of a real threat of using up the natural resources and causing an ecological cataclysm. The future of the next generations depends on the consciousness of the decisions made by the current inhabitants of our globe. The conception of sustainable development is to form anew the way of thinking of our mutual relations: man – natural environment. The most crucial means of introducing the conception's assumptions is education. Its quality and effectiveness will depend on the level of the teachers' factual and methodical knowledge. In the article some selected forms of teachers' training and improvements in the area of sustainable development are presented.

**Key words:** sustainable development, continuing education, teachers, competencies for the future

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### The conception of sustainable development – the assumptions

A sharp economic, social and technological development causes irreversible changes in the natural environment and the depletion of natural resources. A modern man faces a real threat of an ecological catastrophe and a crisis of a worldwide range. Being aware of that fact forces one to ask the question: how to protect our planet and manage the development in order to minimize the previous exploitation of environment. The conception of sustainable development has become the answer to this existential

question. The term itself was first used in the Conference Declaration in Stockholm in 1972. The first attempts to define it were made three years later, during the second session of UNEP (United Nations Environment Programme) Managing Council.

Due to the complexity of the term “the sustainable development”, it is not easy to define it. The literal sense of the English expression *sustainable development* is a given society’s “ability to survive”. Another element, which is stressed the most often, is an increase of social and individual welfare, as well as creation of harmonious relations between the man and nature. There also appear the postulates of living in such a harmony, so that it could be possible to achieve welfare, together with keeping justice inside and between generations, and, what is extremely important, to achieve security. The analysis of the determinants of economic and social development in different parts of the globe have made the theoreticians of this conception aware that one cannot talk about sustainable development without taking the basic human needs into consideration, the needs necessary for the proper physical and psychological development of the man. It is significant to think in a long-range way while realising these needs. One of the most popular definitions proposed in Brundtland Report spotlights this aspect: “A sustainable development is one in which the needs of the present generation can be fulfilled without decreasing the chances of their fulfilment for the future generations”<sup>1</sup>.

The current changes occurring in the world are of diverse nature, which implicates the necessity of versatile and multifaceted preservative and repair interactions. In order to expedite the strategies undertaken, three main areas of development have been specified: environmental, economic and social ones. Some theoreticians postulate the distinction of the fourth area – a cultural one<sup>2</sup>, however, there are many premises to regard it as an element of the sustainable development’s remaining three pillars.

The basis of this development is constituted by conscious responsibilities for another man and an individual’s environment, as well as social groups. In *Agenda 21*<sup>3</sup>, one of the banner documents accepted during the United Nations Conference “Environment and Development” in Rio de Janeiro in 1992, a lot of space was devoted to these groups. To introduce the assumptions of the sustainable development were specially invited:

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<sup>1</sup> ONZ Commission Gro Harlem Brundtland – Raport Brundtland.

<sup>2</sup> The conception of chair of sustainable development. The chair is standing on four feet – economical, ecological, social and cultural.

<sup>3</sup> *Agenda 21 – United Nations Sustainable Development*, sustainabledevelopment.un.org/content/documents/Agenda21.pdf, access 21.11.2014.

women, children, the youth, native people, local authorities, council organizations, workers and trade unions, business and industry workers, educational society, and farmers. Especially big hopes are placed in the youth. In the document mentioned, the propositions and possibilities of practical usage of the conception's key assumptions were also included. They involve:

- special means and mechanisms of financing,
- national mechanisms and international cooperation in the creation of the possibilities of realisation,
- institutional changes in the international forum,
- international mechanisms and legal instruments,
- a cooperation and creating possibilities in the range of pro-ecological technologies' transfer,
- use of scientific achievements; promoting education, forming social awareness and training in the range of sustainable development of the environment protection<sup>4</sup>.

Among the postulated actions, the actions of educational character play the key role (making an equal access to different forms of education available, creating alternative ways, a correction of previous curricula, a construction of new systems and educational-pedagogic programs which integrate the aims and contents related to the sustainable development and the dynamics of the social-economical transformations)<sup>5</sup>.

## Education as the main tool of introducing the sustainable development assumptions

Education constitutes a necessary condition of introducing the sustainable development's guidelines. The realisation of respective strategic aims requires professionally trained and qualified workers. The training's aims in this area are focused on four categories: knowledge, value system, the ability to communicate and act reflectively<sup>6</sup>. The information concerning mutual connections of different forms of life on the Earth, and the consequences of

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<sup>4</sup> E. Kośmicki, *Zrównoważony rozwój w warunkach globalizacji gospodarki*, Wydawnictwo Ekonomia i Środowisko, Białystok–Poznań 2010, p. 296.

<sup>5</sup> P. Domeracki, W. Tyburski, *Podstawy edukacji i kształtowania świadomości społecznej w duchu zrównoważonego rozwoju*, [in:] W. Tyburski (ed.), *Zasady kształtowania postaw sprzyjających wdrażaniu zrównoważonego rozwoju*, Wydawnictwo Naukowe UMK, Toruń 2011, pp. 233–281.

<sup>6</sup> H.-Ch. Boppel, *Edukacja globalna i międzykulturowa w kontekście kształcenia na rzecz zrównoważonego rozwoju*, [in:] *Ocena efektywności edukacji na rzecz zrównoważonego rozwoju. Sposoby podejścia i strategie wdrażania*, Instytut na rzecz Ekorozwoju, Warszawa 2006, p. 47.

uneven economic, financial and social development, can be qualified into the knowledge area. The information being given should be accompanied by a transfer of a certain value system (justice and equality of prospects, tolerance, peaceful attitude towards others and the world). As part of the training of communicative skills, the knowledge of how to get access to information, how to communicate cross-culturally and use the most popular foreign languages should be taken into account. The last criterion – the skill of reflective action – includes systematic planning, making decisions, realising ideas and projects<sup>7</sup>, learning critical thinking and supplying oneself with the tools helpful to save our planet's resources, and achieving a balanced life quality. "Education towards changes", also defined as EduC, was created to support teachers, educators and animators in the process of introducing the sustainable development's assumptions into didactic work<sup>8</sup>.

Modern education is supported with four pillars characterized in the Report "Education. There is a treasure hidden in it"<sup>9</sup>. The man of tomorrow should "know", be able "to act", "be", representing an adequate value system, and "live" with other inhabitants of the globe<sup>10</sup>.

The imperative aim of the 21<sup>st</sup> century education is to equip in competence in the field of shaping the future. This competence consists of "the active usage of one's abilities, innovative approach to the surroundings and shaping it as part of existing possibilities"<sup>11</sup>. This competence is a sum of many specific competencies. The ones most frequently mentioned are:

- perspective and multidimensional thinking;
- holistic interdisciplinary knowledge;
- self-knowledge, self-assessment and self-controllability;
- the ability to keep the distance and reflection;
- dialogue and intercultural cooperation;
- the ability to participate competently in social decision-making processes<sup>12</sup>.

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<sup>7</sup> Ibidem.

<sup>8</sup> G. Jutvik, I. Liepina (eds.), *Edukacja ku zmianie. Podręcznik edukacji na rzecz zrównoważonego rozwoju*, Vides Vestis, 2008, [http://www.balticuniv.uu.se/index.php/component/docman/doc\\_download/204-education-for-change-handbook-polish](http://www.balticuniv.uu.se/index.php/component/docman/doc_download/204-education-for-change-handbook-polish), access: 02.01.2015

<sup>9</sup> J. Delors, *Edukacja. Jest w niej ukryty skarb*, Stowarzyszenie Oświatowców Polskich Wydawnictwa UNESCO, Warszawa 1998.

<sup>10</sup> E. Pyłka-Gutowska, *Nowatorskie formy i metody pracy z uczniami w zakresie edukacji dla zrównoważonego rozwoju*, [http://www.rceeplock.nazwa.pl/files/rcee/mater\\_szkol/5\\_nowatorskie\\_formy.pdf](http://www.rceeplock.nazwa.pl/files/rcee/mater_szkol/5_nowatorskie_formy.pdf), access 11.01.2015.

<sup>11</sup> M.J. Welfens, *Edukacja na rzecz zrównoważonego rozwoju w Niemczech – stan i wyzwania*, [in:] *Ocena efektywności edukacji...*, op. cit., p. 20.

<sup>12</sup> Ibidem.

These competencies can be shaped mainly by using participatory forms and learning methods: projects, *open space*, role-play simulations, workshops, dramas, valorization methods, seminars and conferences. Ewa Pyłka-Gutowska postulates to practise them in such a way, so that they could enable students to: absorb new knowledge, engage in solving a problem, deepen the interest in a common issue, develop one's own ideas, get to know different viewpoints and discuss and negotiate different solutions<sup>13</sup>. Among the methods which support creating proper pro-ecological attitudes, the *Theory of Overcoming Limits* (TOC) is being mentioned more and more frequently. Respective TOC tools: a cloud, a logical branch, and a tree of an ambitious aim, allow to analyse in a clear way the motives and consequences of the undertaken action.

In the education for sustainable development it is really important to enable students to have a direct contact with the surroundings/natural environment and teaching cooperation. The educational work is more and more frequently carried out in the open air.

One of the ruling models of education for the future is critical-creative education<sup>14</sup>, which highlights the skill to get and verify knowledge independently, the skill to make critical choices, as well as to develop the attitudes of continuous self-improvement and to creatively conform with the social changes which are taking place<sup>15</sup>. The most important and the most difficult in realisation assumption of education is openness. There are no ready solutions, formulations or directives. The participants of the process of education work the final effect out independently.

The guidelines concerning the ways of running education in the field of sustainable development can be found, *inter alia*, in the *Strategy of Education for Sustainable Development*. In the document's point 19 it can be read that EZR is "a process lasting the whole life [...] and it goes outside formal education [...]"<sup>16</sup>. Informal education is run mainly by non-governmental organisations, education centres in national and landscape parks, and the media. Informal education "focuses on, *inter alia*, programs and the promotion of proper behaviours"<sup>17</sup>.

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<sup>13</sup> E. Pyłka-Gutowska, *Nowatorskie formy...*, op. cit.

<sup>14</sup> T. Lewowicki, *Przemiany oświaty. Szkice o ideach i praktyce edukacyjnej*, Wydawnictwo Akademickie „Żak”, Warszawa 1994.

<sup>15</sup> G. Kosiba, Doskonalenie zawodowe nauczycieli – kategorie, kompetencje, praktyka, *Forum Oświatowe*, 2012, 2(47), pp. 123–138, <http://forumoswiatowe.pl/index.php/czasopismo/article/view/17/30>, access 01.01.2015.

<sup>16</sup> *Strategia Edukacji dla Zrównoważonego Rozwoju*, p. 7, <http://nauczyciele.mos.gov.pl/index.php?app=docs&action=get&iid=1274>, access: 01.01.2015.

<sup>17</sup> *Strategia Zrównoważonego Rozwoju Polski do 2025*, [http://snep.edu.pl/obywatele\\_malych\\_szkol/publikacje/strategia%20zrównowazonego%20rozwoju%20polski%20do%20roku%202025.pdf](http://snep.edu.pl/obywatele_malych_szkol/publikacje/strategia%20zrównowazonego%20rozwoju%20polski%20do%20roku%202025.pdf), access: 01.01.2015.

The training programmes being formulated should serve in equipping one in knowledge and the skills in the range of broadly defined sustainable development, and they should take the needs of different profession groups, the teachers included, into account. The questions raised should concern the basic responsibility in a given profession and the economic, social and environmental effects. The educational work should be based on the results gained from interdisciplinary research and projects<sup>18</sup>.

The success of education in the range of sustainable development is conditioned by the teaching staff's preparation level. Due to this, one of the priority actions is to work out educational materials and training offers which aim at the educators' improvement of competencies and qualifications.

### Professional improvement as a means of achieving the competence of the future

The competencies gained during the professional training must be continuously developed, modified and complemented, because it is impossible to foresee the direction of the civilizational development. Besides, as Ulrich Beck noticed, a modern man lives in a global society of risks. This situation imposes on him shaping competencies of universal character, which will let him function in all conditions, even those which accompany a crisis. The competencies can be improved by different forms of continual education.

The teachers, because of the profession they exercise, and the mission they have, are especially obliged to broaden their knowledge and skills. There are many forms of teachers' improvement. In the literature, the three categories, which are used most often, are mentioned: self-education, intramular improvement, and institutional improvement<sup>19</sup>. As it can be seen, the forms of teachers' professional improvement can be realised in schools or outside them. Within these categories, the following forms can be highlighted:

- distance improvement,
- university training, which additionally gives qualification,
- improvement in improvement institutions,

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<sup>18</sup> *Strategia Edukacji dla Zrównoważonego Rozwoju, Luban 2008–2014*, Regionalne Centrum Edukacji Ekologicznej przy Miejskiej Bibliotece Publicznej w Lubaniu, [http://www.eko.luban.com.pl/pliki/Strategia\\_calosc.pdf](http://www.eko.luban.com.pl/pliki/Strategia_calosc.pdf), access: 01.01.2015.

<sup>19</sup> C. Day, *Rozwój zawodowy nauczyciela*, Gdańskie Wydawnictwo Psychologiczne, Gdańsk 2004.

- other forms of continual education,
- methodical counselling,
- supporting professional adaptation,
- improvement within intramural improvement (which exploits other schools or institutions' experiences, and also counsellors and other experts),
- self-improvement.

The teacher improvement institutions' obligations were described in the Minister of National Education's Ordinance from November 19<sup>th</sup>, 2009. These institutions should:

- work out, in cooperation with the institutions which exercise pedagogical supervision, the priorities of the teachers' improvement in a voivodeship;
- organize different forms of cooperation and exchange of experiences – workshops, conferences and seminars included;
- support the teachers' initiatives and help in self-education and the professional improvement of lecturers;
- cooperate with the institutions that run schools and with institutions in the range of methodical counselling for teachers<sup>20</sup>.

The teachers decide to use additional forms of education because of different motives, which are often very individual. The existence of every phenomenon is determined by the functions which it performs – both the evident, which can be easily described, and those which are hidden. Z. Wiatrowski mentions the four functions of professional improvement which are the most often highlighted. The first of them, the *adaptation* / introductory one, lets one begin professional life, the *compensatory* one lets a person raise or develop competencies and achieve qualifications to new tasks. The *renovation* function consists in creating possibilities of learning the newest trends and achievements. Thanks to that function the education is updated and adjusted to the needs of the market. The last function, the *reconstructive* one, is equated with the pursuit of innovation, changes, creativity and the openness already mentioned<sup>21</sup>. The last two seem to be the most desired ones. Thanks to them a teacher can continuously keep a guide and companion status on the road of omnipresent changes.

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<sup>20</sup> *Ekspertyza dotycząca edukacji dla zrównoważonego rozwoju w Polsce. Raport końcowy*, Poznań 2012, p. 84.

<sup>21</sup> Z. Wiatrowski, *Powodzenia i niepowodzenia zawodowe*, Wszechnica Mazurska, Olecko 2002.

## A teacher as the sustainable development's idea's guide

The Conception of Sustainable Development is continuously evolving, new areas of interest and new challenges are appearing. This situation brings forth a need of continuous broadening of knowledge and improving the skills one has. The educational offer is very abundant. It comprises trainings, courses, didactic materials, and it is realised by different institutions: education institutions (schools for adults, Practical Education Centres and Continual Education Centres, professional training and improvement centres), universities, scientific institutions, R&D centres, training – improvement of staff centres, associations, foundations and others. The teachers are obliged to introduce the Sustainable Development's assumptions by using the core curriculum. School reality shows that it is not an easy task. Among the reasons which make the introduction difficult are such factors as: a lack of time, support, funds, a lack of knowledge or didactic materials<sup>22</sup>.

Other aspects of continual education in the range of sustainable development were also the subject of the teachers' evaluation. The respondents expressed their view on the subject of educational offers of respective institutions responsible for the teaching staff's competencies and qualifications' enhancement. As it results from the data, generally, the activities whose aim is to improve the teachers in the range of the issues mentioned are not carried out. Teacher Improvement Centres have a narrow offer of trainings, which does not meet expectations. The proposed problematic aspects limit themselves to the issues connected with ecological or global education. Among the postulates raised appeared a proposition to increase the number of trainings concerning e.g. an obligatory middle-school educational project<sup>23</sup>.

### "Sustainable" websites for teachers

The Internet is the main source of information for teachers. Training, courses or seminars are organized within different projects, for instance GLOBE – UNEP/GRID programme. In Poland it is realized on the grounds of an agreement concluded in 1997, between the Republic of Poland's Ministry of National Education and the Office for Atmospheric and

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<sup>22</sup> Research conducted among teachers by the workers of Uniwersyteckie Centrum Badań nad Środowiskiem, *Ekspertyza dotycząca edukacji...*, op. cit.

<sup>23</sup> *Ekspertyza dotycząca edukacji...*, op. cit.



Oceanic Research of the USA. As it can be read on the official website, the participation in the programme enables one to become acquainted with the global threats to the environment and to shape ecological awareness. The contents are realized within the lessons of physics, chemistry, biology, geography and mathematics. The research results gained by students are sent through the network to the Programme's database, and respective tools enable their visualization online. The first condition of a school's joining the Programme is at least one teacher's participation in the trainings. The workshops are realized every year in May and October, and information about them is placed on the portal. What is essential, it is possible to find some materials from the previous training editions there, as well as educational stores devoted to participation in international projects<sup>24</sup>. The participation in the training may be an inspiration for individual conceptions of the action for the Sustainable Development.

Another website frequently visited by teachers is The Centre of Development of Education portal. It organizes different stationary trainings and e-learning courses concerning global education<sup>25</sup>. One of interesting initiatives is a project: *a changing school* – professional improvement of foreign language teachers in the intention of sustainable development. As we can read, “the project's aim is to present the new solutions for schools in Europe, training the teaching staff according to the assumptions of the sustainable development, oriented to gaining competencies and initiating a European dialogue about education and professional improvement of teachers”<sup>26</sup>. Different didactic materials concerning the project can be downloaded from the website.

The University Centre of Research on Natural Environment and Sustainable Development also takes up some action for teachers' training in the range of sustainable development. It offers presentations from different conferences and seminars, the results of the research carried out and reports, training propositions and open lectures<sup>27</sup>. a training offer *How to run education for the sustainable development* realized in 2012 is worth some attention. The aim of the training was “to raise competencies and inspire teachers to introduce the problems of the sustainable development during different school subjects in upper secondary schools and during

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<sup>24</sup> *Program Globe*. Międzynarodowy Program Edukacyjny w Polsce, <http://globe.gri-dw.pl/nauka-i-edukacja/kacik-nauczyciela/zasoby-edukacyjne>, access: 12.01.2015.

<sup>25</sup> *Ekspertyza dotycząca edukacji...*, op. cit.

<sup>26</sup> Ośrodek Rozwoju Edukacji, [http://ore.edu.pl/index.php?option=com\\_content&view=article&id=1712&Itemid=1587](http://ore.edu.pl/index.php?option=com_content&view=article&id=1712&Itemid=1587), access: 12.01.2015.

<sup>27</sup> Uniwersyteckie Centrum Badań nad Środowiskiem Przyrodniczym i Zrównoważonym Rozwojem, <http://ucbs.uw.edu.pl/>, access: 11.01.2015.

extracurricular classes”<sup>28</sup>. The trainings took place in five cities and were realized by Centres of Teachers’ Improvement. The Centre coordinates BEAGLE project (Biodiversity Education and Awareness to Grow a Living Environment), within which trainings for teachers are conducted. The main aims of the project are:

- encouraging teachers to carry out field observation of biological diversity;
- improving their skills in the range of motivating the youth to take part in such classes and interpreting the results of the observation done in a broader context of important problems of the sustainable development.
- The aims set are reached by, inter alia:
  - working out educational materials for teachers and didactic helping materials;
  - teacher trainings;
  - cooperation with scientific centres<sup>29</sup>.

For those interested in these problems, open lectures are organized every year. This year the subject matter is focused on the role of the third sector and the media<sup>30</sup>.

Another Centre’s valuable initiative was to work out and publish a collection of lesson scenarios in 2002. The whole work was published under the title “The Internet in education for the sustainable development”. The materials are available both in the Internet and in the form of a book with a CD enclosed. The teachers interested can find there a number of instructions connected with organizing a class and its detailed course. The respective scenarios have been equipped with some problematic questions and useful links.

The information on the subject of the sustainable development and the opportunities of improving one’s knowledge in this field are also placed on the websites of: The Ministry of Environment’s Department of Education and Promotion of the Sustainable Development ([www.mos.gov.pl/edu/](http://www.mos.gov.pl/edu/)), The Centre of Information and Trainings of the National Fund of Environment Protection and Water Economy ([www.nfosigw.gov.pl](http://www.nfosigw.gov.pl)), Environment Protection Institute, on which the teachers can find the information on biodiversity (UN agreements, biological diversity in Poland, the action for its protection etc.), Centre of Information and Trainings NFOŚiGW ([www.nfosigw.gov.pl](http://www.nfosigw.gov.pl)).

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<sup>28</sup> Ibidem.

<sup>29</sup> Uniwersyteckie Centrum Badań nad Środowiskiem Przyrodniczym i Zrównoważonym Rozwojem, <http://ucbs.uw.edu.pl/2009/05/05/projekt-edukacja-i-podnoszenie-swiadomosci-dt-srodowiska-ozywionego-i-roznorodnosci-biologicznej>, access: 11.01.2015.

<sup>30</sup> Ibidem.

The Institute for Eco-development's website: [www.ine-isd.org.pl](http://www.ine-isd.org.pl) contains a lot of documents concerning sustainable development (brochures, bulletins and reports.) The Sustainable Development's Barometer is worth special attention. The Institute organizes e-trainings, too.

Only some chosen portals have been indicated. The teachers, who desire to deepen the knowledge they have, will, for sure, find other interesting propositions.

### Summer and winter school "The challenges of the sustainable development in Poland"

The school has been held since 1998 and its main initiator has been up to this day Sendzimir's Foundation. The University of Florida, The University of Science and Technology in Kraków, Partnership for Environment Foundation, Baltic University Programme and the Centre of System Solutions in Wrocław are its current partners. The school's objective is to transfer the knowledge in the subject of sustainable development, activating and organizing a movement for sustainable development, supporting sustainable development's introduction in companies and other institutions, helping local societies in solving real problems and filling in studies' programmes of the cooperating universities<sup>31</sup>. The final effect is the creation of a society of professionals cooperating with one another. Presently, as it is indicated by the school's creators, this initiative has become a centre of long-range and multi-area activities. Experts from our country, and from abroad, lecture in the school. Thirty people, teachers included, take part in each edition. The organizers crave for the group of participants in course to be very much diversified, as the problems being solved need an interdisciplinary approach. Before the classes start, each participant is given an extensive five-modular material for an individual study and the clues which are necessary to take up a preparatory action to realize a real project planned for a particular edition. a single module consists of: an introduction to the sustainable development, a presentation of ethical issues, a notice on how to manage the resources, a description of ecosystems' dynamics and ecological economy. The schools programme includes over 100 hours, and the classes are based on the philosophy of learning through action. In each edition of the school a project for some local society is realized.

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<sup>31</sup> T. Bergier, J. Kronenberg, K. Maliszewska, Szkoła letnia „Wyzwania zrównoważonego rozwoju w Polsce” – dwanaście lat doświadczeń, [in:] T. Borys (ed.), *Edukacja dla zrównoważonego rozwoju. Główne problemy*, Wydawnictwo Ekonomia i Środowisko, Białystok–Wrocław 2010, pp. 197–208.

## Workshops for teachers

One of the most interesting and quite frequently used forms of improvement is workshops. After the introduction of the Decade of Education for the Sustainable Development<sup>32</sup>, over 100 centres of field education came into existence, organized in landscape and national parks, State Forests or regional centres of ecological education, or special centres, e.g. scout centres<sup>33</sup>. For example, Kampinoski National Park, in cooperation with Leszno's, Izabelin's, Łomianki's and Leoncin's county councils, organized an educational workshop titled "The sustainable development in practice". The park is one of several hundred model areas in the world, in which the rules of the sustainable development are introduced and promoted. The workshop's participants were creating a strategy of the sustainable development of a chosen administrative district, taking the following aspects into consideration: environmental, economic, social and a one concerning individual residents' quality of life. The organizers are planning next editions<sup>34</sup>.

The workshops for teachers were also held within the project "Regions for education in the range of the sustainable development and international solidarity" (REDDSO) organized by Lesser Poland voivodeship. The project's assumption is "the creation of a cooperation platform in the range of using resources, an exchange of information and carrying out experimental pedagogical projects in the subject of global education<sup>35</sup>. The workshops in the range of global education included four workshop meetings (two in Kraków, and in Tarnów and Nowy Sącz), in which, as the statistics show, over 160 teachers working in Lesser Poland schools participated.

## Non-governmental organizations' offer

As it results from an expert opinion concerning Education for the Sustainable Development which has been carried out, over 600 Non-governmental Ecological Organizations run informal education. Non-governmental

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<sup>32</sup> Announced by United Nations lasted from 2005 till 2014.

<sup>33</sup> *Przewodnik po wybranych ośrodkach i organizacjach zajmujących się edukacją ekologiczną w Polsce*, Ministerstwo Środowiska, Warszawa 2001.

<sup>34</sup> Kampinoski Park Narodowy, <http://www.kampinoski-pn.gov.pl/aktualnosci/wydarzenia/329-warsztaty-edukacyjne-zrownowazony-rozwoj-w-praktyce-dziekujemy-za-udzial>, access: 09.01.2015.

<sup>35</sup> Województwo małopolskie. Współpraca zagraniczna, [http://malopolskie.pl/Edukacja/e\\_wspolpraca/?id=2750](http://malopolskie.pl/Edukacja/e_wspolpraca/?id=2750), access: 09.01.2015.

organizations realize trainings for educational institutions' principals too, entitled "Climate for children", an initiative realized by the Foundation for the Sustainable Development<sup>36</sup>.

One of the most dynamically working organizations is Sendzimir's Foundation. It can be read in its mission that it promotes the sustainable development through popularization and practical introduction of its assumptions, rules, values.

Among the specific objectives appears "an educational-scientific activity, leading to building an ecologically-conscious civil society"<sup>37</sup>. On the official website the information on different trainings can be found, and it is possible to overview the materials (publications and multimedia). a sequence of e-learning trainings from the series: the Challenges of the Sustainable Development is to start this year. The subject of the first edition is working out innovative solutions concerning the management of packaging waste in a city and a company. The first part of the training takes place on the platform, and then stationary classes will be organized in Warsaw. The publications prepared by the experts cooperating with the Foundation encompass a series of guidebooks devoted to the environment protection in a city and an interdisciplinary textbook "Challenges of the sustainable development in Poland". Its content is targeted at different social and professional groups, and it is to "serve practices in business, local governments and non-governmental organizations, as well as individual people who want to take up some action for the sustainable development"<sup>38</sup>. The proposed multimedia include a rich offer of videos concerning sectional topics focused on the idea of sustainable development: from the presentation of different good practices, through instructive videos on the subject of the creation of rain gardens of different type, to the presentation of the ways of engaging metropolis residents in decision making. The reports worked out within the projects realized during the Summer and Winter School are also available on the website.

"Our Earth" Foundation has been organizing Campaign for the Sustainable Development for several years. Its aim is to promote a lifestyle based on the rule of sustainable development, simple ways of environment protection, biodiversity protection, rational economy of waste materials, using water resources and increasing energetic effectivity included. Within the Campaign, trainings and workshops, including e-learning trainings

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<sup>36</sup> *Ekspertyza dotycząca edukacji...*, op. cit.

<sup>37</sup> Fundacja Sendzimira, [http://www.sendzimir.org.pl/o\\_nas](http://www.sendzimir.org.pl/o_nas), access: 02.01.2015.

<sup>38</sup> Fundacja Sendzimira, [http://www.sendzimir.org.pl/publikacje\\_Fundacji](http://www.sendzimir.org.pl/publikacje_Fundacji), access: 01.01.2015.

were organized. The Foundation prepares free didactic materials for the participants and schools<sup>39</sup>.

Another active organization is the Regional Centre of Ecologic Education in Płock, which has been running education for sustainable development for years. The problems brought up within the activities are: effective usage of the resources, minimisation of the amount of the produced waste, its recycling, limiting the emitted pollution, biodiversity protection, health, residents' safety, access to culture and entertainment, and the development of information society, participating in decision making and activating social groups to act eco-developmentally<sup>40</sup>.

The Foundation of the Sustainable Development "Horizons" runs strategic activities in three areas: for the development of science, entrepreneurship, social responsibility of business, informal education, different forms of learning throughout all life, sport, culture and art, and protection and promotion of health; for the public welfare in the range of the environment protection and the development of democracy and civil society<sup>41</sup>.

## Textbooks and guidebooks

Writing about the forms of education and improvement, one should mention a broad publishing offer concerning the problems of sustainable development. a part of the documents is available within the Open Educational Resources. One of the newest textbooks is the Baltic University group's work, the group associating about 225 universities and other institutions of university education in the Baltic Sea region<sup>42</sup>. On the first pages of "Education towards change: a textbook of education for the sustainable development" it can be read that "the book was written by teachers for teachers as a textbook for practical teaching – learning about the sustainable development. It is targeted at teachers, apprentices, leaders of youth groups and – as the material broadening knowledge and skills – for people, which already have some experience in teaching ecology and the action for

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<sup>39</sup> Fundacja Nasza Ziemia, <http://naszaziemia.pl/programy/kampania-na-rzecz-rozwoju-zrownowazonego-2011-2014>, access: 08.01.2015.

<sup>40</sup> J. Kawalczewska, *Organizacje pozarządowe na rzecz zrównowazonego rozwoju – ich współpraca ze szkołami*, [http://www.rceeplock.nazwa.pl/files/rcee/mater\\_szkol/11\\_organizacje\\_pozarządowe.pdf](http://www.rceeplock.nazwa.pl/files/rcee/mater_szkol/11_organizacje_pozarządowe.pdf), access: 01.01.2015.

<sup>41</sup> [www.fundacjahoryzonty.pl/](http://www.fundacjahoryzonty.pl/), access: 01.01.2015.

<sup>42</sup> Program Uniwersytet Bałtycki, <http://www.balticuniv.uu.se/index.php/welcome>, access: 23.12.2014.

the sustainable development"<sup>43</sup>. Sendzimir's Foundation has also prepared a thick textbook devoted to the questions of the sustainable development. The information compiled in it constitutes the aftermath of the summer and winter school. The textbook's advantage is its interdisciplinarity.

Another interesting proposition for teachers is "The Internet in the education for the sustainable development" – a textbook published in 2002. On the Ministry of Health's website there is an educational package for teachers available, which includes ready-to-use lesson scenarios<sup>44</sup>. The scenarios are also available on the Week of Global Education's website<sup>45</sup>.

## Conclusions

In the professional evaluation concerning the Education for the Sustainable Development, the teachers' level of engagement in improvement enterprises in this field has been evaluated. Primary and secondary school teachers engage in trainings and courses the most often. Post-secondary school teachers do it much more rarely. The teachers also use the conferences and workshops<sup>46</sup>. The difference between the levels of education may result from the amount of initiatives targeted at the students. The projects and contests are the most often targeted at the middle-school students.

In the recent years, an increase in different publications and materials, the multimedia concerning the sustainable development included, can be seen. It is an effect of the realization of the assumptions of the Decade for the Sustainable Development (2005–2014) and an increase of social awareness. Yet, there still exists a want, especially in the field of training offers, both stationary and long-distance ones. The teachers who desire to realize the general assumptions of the sustainable development's idea must search for the materials, first of all, on the websites devoted to ecological or global education. According to the experts in Poland, the model of education characteristic for its earlier phases, only just leading to education

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<sup>43</sup> [http://www.google.pl/url?sa=t&rct=j&q=&esrc=s&source=web&cd=27&ved=0CEUQFjAGOBQ&url=http%3A%2F%2Fwww.balticuniv.uu.se%2Findex.php%2Fcomponent%2Fdocman%2Fdoc\\_download%2F204-education-for-change-handbook-polish&ei=YwzMVL2KLaut7gbIsIHIDQ&usq=AFQjCNG\\_HrYIKLUHYax95ZVtf6zB-kS-5gA](http://www.google.pl/url?sa=t&rct=j&q=&esrc=s&source=web&cd=27&ved=0CEUQFjAGOBQ&url=http%3A%2F%2Fwww.balticuniv.uu.se%2Findex.php%2Fcomponent%2Fdocman%2Fdoc_download%2F204-education-for-change-handbook-polish&ei=YwzMVL2KLaut7gbIsIHIDQ&usq=AFQjCNG_HrYIKLUHYax95ZVtf6zB-kS-5gA), access: 01.01.2015.

<sup>44</sup> *Człowiek – Środowisko – Gospodarka. Zasady zrównoważonego rozwoju*, <http://nauuczyciele.mos.gov.pl/index.php?mnu=45&id=282>, access: 01.01.2015.

<sup>45</sup> [http://fed.home.pl/teg/index.php?option=com\\_content&view=category&layout=blog&id=51&Itemid=209](http://fed.home.pl/teg/index.php?option=com_content&view=category&layout=blog&id=51&Itemid=209), access: 02.01.2015.

<sup>46</sup> *Ekspertyza dotycząca edukacji...*, op. cit., pp. 85–86.

for the sustainable development, still prevails<sup>47</sup>. In this situation teachers should feel especially invited to create their authorial educational resources concerning the sustainable development, and to share them with other residents of the globe. Apart from this, it is worth creating room both in the virtual and real world, in which teachers could meet and exchange their experiences, good practices and the ideas of other interesting educational initiatives. Peer education can become the answer to the lack of a sufficient amount of forms of improving competencies in the range of education for the sustainable development.

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<sup>47</sup> *Ekspertyza dotycząca Edukacji dla zrównoważonego rozwoju w Polsce, final report*, Poznań 2012.



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