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Sustainable Development as a Part of the "Third Mission" of the Universities" [1]

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Abstract. **The aim of the article is to display the impact of sustainable development on the higher education policy, particularly on the "third mission" – the relation between the university and its environment. The article is based on a case study of Loyola University of Chicago. The paper consists of the following parts: the first part explains the challenges of sustainable development for universities, then selected elements of sustainable change at Loyola University of Chicago are shown; finally, in the last part, the paper examines ethical problems concerning sustainable change at universities.**

Keywords**: university and public duties, sustainable development, Loyola University of Chicago**

I. Introduction

Sustainable development policy refers to key global issues concerning world development, namely global warming, protection of endangered species, zero carbon economy, deforestation, reducing pollution, enhancing education in developing countries and cohesion policy aiming at reduction of social inequalities, as well as ethical and cultural issues, such as forming new social obligations, developing environmental ethics and awareness. The first Climate Summit in Rio de Janeiro in 1992, where Millennium Goals were defined, the next one in 2012 continuing climate policy, past and future political events, as well as Climate Change Conference (COP19) in 2013 that is going to take place in Warsaw renegotiating the Kyoto agreement – all together function only as examples of political tools of politicians from all over the world dealing with the above-mentioned problems.

Sustainable development is one of the key points in the new draft budget of the European Commission. Sustainable development integrates various policies, namely economic, environmental, and social policy. So what role is sustainable development going to play in the higher education policy? Just a few years ago it was of marginal importance, but now it has become one of its key policies forming a part of global environmental policy.

The aim of the present article is to show the impact of sustainable development on the higher education policy, particularly on the "third mission" – the relation between the university and its environment.

To be more specific, the article is going to be a case study of Loyola University of Chicago. The article consists of the following parts: in the first part we will try to explain the challenges of sustainable development for universities, then selected elements of sustainable change at Loyola University of Chicago will be shown, finally, in the last part, we would like to examine ethical problems concerning sustainable change at universities.

II. Sustainable Development as a Challenge for a University

We will start our analysis with the following theses**: sustainable development is a factor of changing public commitments of university.** Public commitments may be described through the influence of universities on their external stakeholders as well as local societies, communities, cooperating institutions and companies, but also their missions and goals. Sustainable development policy transforms ethical context of university mission; universities not only provide knowledge, but also create public scholarship, they transfer knowledge into wider, non-academic circles, thus providing values embedded in knowledge. The university is becoming an impact body, which not only provides highly specialized knowledge, but also forms a widely held belief about social consensus towards sustainable ideas.

The second thesis: sustainable development is treated as a method of accelerated way of university transformation, which entering the present research paradigm, aims at improving its position and attractiveness when compared to other knowledge institutions.

Starting point will be a reference addressed to the higher education policy. The most fundamental document of sustainable development policy is the Millennium Declaration from 1992. In 2002 the United Nations issued a document, which encourages organizing education for sustainable development, and started a decade of education for sustainable development [2], [3]. Several publications present case studies of the implementation of the education systems for sustainable development around the world [4], [5]. The first one is a research mission; the main research in this area is targeted to the issues like a climate change (global warming, ecology), society (justice in wealth distribution), and economy (developing zero carbon economy). Some of the issues are dealing with interdisciplinary perspective, mainly the research on the new sources of energy [6]. The second mission is education. In the recent years a need for new occupations has arisen, e.g., energy manager, environmental administrator or environmental educator. As a result, schools are launching new courses to meet these needs. Finally, the third mission to be treated as the right direction within sustainable development; these are universities which should incorporate and introduce sustainable development policy in their higher education policy.

Universities play an important role in shaping a climate policy. We can talk about a relationship between a symbolic change between the way of thinking about climate in a public sphere and the role of the universities and scholars. Although some predictions do not work, e.g., the issue of overpopulation having more and more critics, still majority of climate arrangements have not been questioned, namely the impact of CO2 emission on public health [7]. Contemporary environmental issues are interrelated to the various factors and subjects. According to Dryzek and Schlosberg, the environmental policy includes:

"Particular concerns have featured energy shortages, toxic wastes, air and water pollution, the hazards of nuclear power, biotechnology, species extinction, biodiversity, pesticides, animal rights, wilderness protection, climate change, and inequality in the distribution of environmental risk and benefits. Environmental politics today encompasses discussion of the various political, social and economic causes of the ecological problems and crises" [8].

Guidelines concerning global warming mainly issued by politicians are a consequence of adopting the authority of science. They are deeply rooted in the belief in accuracy of climate change predictions. The second trend stems from the analyses of environmental research that is also based on the authority of science. Polluted cities, increase in cancer diseases, junk food and unhealthy lifestyle, using cheap, unhealthy materials etc. are intended and scientifically proven practices that cause the rise of ecological awareness and change of one's lifestyle. At the same time, the increase in such awareness contributes to recognition of the authority of scientists in a public sphere. Environmental changes bring a new view on the role of knowledge institutions and their role in political, economic and social transitions of the sustainable policy.

The above-mentioned trends have an impact on the change in the high education policy itself on a macroscale. There is much literature specifying the diversity of these changes. For example, *Agenda 21*, which is a key document, provides significant postulates recognized by governments for introducing ESD (Education for Sustainable Development). In recent years, ESD has been flourishing at the universities in several European countries, such as Germany and the UK. Interestingly enough, the German Academic Exchange Service (DAAD) and the United Nations University issued a document: "The Role of Education for Sustainable Development in Higher Education" [9]. They opted for the need of special care to this issue in college activities to be given. The document focuses on the milestones of the sustainable education at German universities. International peaks with scientists and politicians have been devoted to the issues above. Relevant documents, events, conferences and summits have also taken place, including "Sustainable Summit" organized by UNESCO in 2011 in Lueneburg at Leuphana University. Similar document was a report co-financed by UNESCO concerning HESD. The main HESD global problems are (a) limited financial resources, (b) lack of school curricula in that matter, (c) non-sustainability oriented vision.

Beringer, Adomßent in the article "Sustainable University Research and Development: Inspecting Sustainability in Higher Education Research" points to the issue of change at the university itself. Schools should change their internal management (e.g., set interdisciplinary activities), and external one (modify their attitude towards external cooperators, e.g., opt out of junk food):

"Many universities and colleges worldwide now showcase sustainability initiatives. Whether this ranges from an ecological design of new campuses [….] to single-issue initiatives (e.g. a paper-cutting campaign or a sustainable transport initiative); from systems approaches such as sustainable procurement or ethical investment to life-cycle analysis (resource use, material and energy flows); or from the low-hanging fruits of campus sustainability to the more challenging, systemic-institutional issues, 'greening the campus' has become mainstream and a force in the economic-fiscal sustainability of universities which can no longer be ignored […]" [10].

In the article "In Search of the Knowledge Triangle for Regional Sustainable Development: the Role of the Universities", Maik Adomßent listed the tasks of the universities within the implementation of the sustainable agenda:

"Universities can contribute to regional sustainable development mainly by: bringing in their own institutional management practice (improvement of energy efficiency, introduction of environmental management systems, etc.); serving as sources of technical expertise (technical and cross-disciplinary issues such as global climate change); accomplishing their cultural mission – reaching beyond skills development toward employability by promoting ideals and critical thinking skills for a well-functioning democracy; acting as leaders during their work with local authorities and other societal stakeholders when setting up and implementing regional sustainability plans" [11].

Dlouha and Burton write about the need to modify school curricula for achieving the regional output in sustainable education [12]. They describe the regional – university networking of sustainable education. The successful learning includes the following levels: 1. network of research, education and regional policy of the sustainable development; 2. clear indicators; 3. the evaluation process of the sustainable learning; 4. and then the result: strategy, policy making, new networks and governance [12]. The university cannot do it alone; the success of sustainable learning requires the commitments of regional stakeholders and working within well defined regional sustainable strategy. Wraas, Verbruggen and Wright described the research policy driving towards sustainable development [13]. They mentioned that sustainable oriented research needs the multidisciplinary and international approaches, different normative views to the sustainable development, the problem oriented approaches (it

means the learning of skills toward the sustainable requirements), transdisciplinarity of research (oriented to the external stakeholders like a government, private sector and organizations) [13].

When looking for a model of relationship between the university and environment many options are to be chosen. The approach of Roland Scholz is worth mentioning as environmental literacy [14]. Scholz starts with the definition of environment as a conglomerate of nature-society and rational organizational activities. The understanding of the complicated environmental changes needs a new approach from science and research. Scholz explains that science has to operate through transdisciplinarity. He distinguishes interdisciplinarity from transdisciplinarity in the following way:

"Transdisciplinarity […] organizes mutual learning among members of science and society that can generate socially robust knowledge. For the most part this mutual learning takes place in transdisciplinary processes in which members from the science community interact with decision makers, stakeholders, or the public at large" [14].

In other words, transdiciplinarity based on earlier multidisciplinary integration, involves the problems, people and institutions outside the academia. The author distinguishes the following relationships within the school and environment. The first is the "swallow action research". It states that research should be conducted in such a way that they cooperate with public scholarship. Science is becoming more and more as knowledge conglomerate. For this reason, scientific language has to be translated into the language understood by public opinion. Another element is participatory research that involves external stakeholders in the research process. Finally, the last modus is consultancy process, in which science becomes the subject of the debate. It means it is incorporating in community forming activities.

In conclusion of this chapter, it can be said that sustainability has a major influence on the university, and the modus of the sustainable operation within the university (education, research, governance) based on the transdisciplinarity, cooperation with external stakeholders.

III. Sustainable Development Policy on the Basis of Loyola University of Chicago

When analyzing the case of Loyola University of Chicago (LUC) it is worth emphasizing its cultural significance. The USA belongs to the countries that have not signed the Kyoto Protocol. Many politicians keep distance from renewable sources of energy or even reject climate arrangements. Thus, American universities are at the cultural forefront of sustainable development, very often acting in opposition to trends in politics. Such an approach has been slightly changed under the presidency of Barack Obama.

Beringer, Adomßent described the mainstream sustainable change at the American campuses:

"The dominant mode to facilitate the transformation toward a more sustainable campus and institution in North America is via an institutional Sustainability Coordinator and/or students […]. Therefore, the focus tends to be on operational transformations (i.e. resource conservation and efficiency improvements) and curriculum initiatives. Systemic institutional, integrated sustainability-related research initiatives are rare […] – in part because research remains the individual academic's prerogative and occurs independently and separate from institutional sustainability programs." [10].

At almost every American university a sustainable office has been formed with the aim of monitoring energy consumption, supporting initiatives of "green campuses", promoting cultural changes. Sustainable offices are designed not only to monitor energy costs, but also to introduce cultural changes. One example may be the University of Florida in Gainesville that cooperates with the county. Shuttle buses have been introduced on working days but also parking fees have been raised. It should be mentioned that it is not a theory; offices cooperate with each other in determining bus routes and schedule. The activity described above is a commonplace within the American universities. However, Loyola University of Chicago implements the sustainable development as part of its mission.

Loyola University of Chicago (LUC) is going to be analysed as an example of sustainable change. This is to show how this change brings new challenges when it comes to the mission and university management. LUC focuses on professional training especially in the field of medicine (nursing, dentistry), business and education. In recent years the university stepped into the direction of development as a medium range university. LUC that occupies a high rank among universities in Northern-West region of the USA (students mostly from Illinois, Wisconsin, Indiana) has become the university that goes beyond the region and the USA itself. The goal may be defined as placing itself in the group of leaders among international universities of medium range.

Basic information about Loyola University of Chicago is the following. In 2011 there were 16040 students, in 2012 the number of students increased to 18169 (the limit is 18500 students). In 2011 there were 4731 graduate students. 1453 students were from law and medicine departments. Total endowment in 2011 was more than 388$M. According to the Higher Education Chronicle, the average salary of a full-time professor was 128600$, associate professor – 88000$, assistant professor – 75300$. Salary increase when compared with 2000: the average salary of a professor increased by 45000$, and the salary of an assistant professor by 25000$. The university had 658 full-time staff members, 710 part-time staff members and 512 graduate assistants. This data shows the development tendency; salary increase is a measure of development. However, a negative relationship is observed in the number of full-time staff members when compared with the number of part-time staff members.

Interviews with the authorities of Loyola University have revealed two main development goals. The first being

multicultural one stemming from the concept of the world as a global village, the second focuses on a sustainable change. The authorities of LUC started the change from ordering the report in Deloitte, titled *Positioning Loyola in the Future. Improving Educational Quality While Maintaining Costs* [15].

According to the interviews with the university authorities, a modern student should be ready to function in a multiethnic and multicultural environment. Interesting thing is that the USA being a multiethnic country does not have to introduce such a condition. However, the ability to function in a multiethnic world is not only an everyday experience but it deals with communicative skills. For this reason, LUC launched its branch universities in Rome, Beijing and Vietnam (still in progress), where students may spend one semester as part of their curriculum. Another form of development was related to employing academic staff from all over the world. In other words, a multiethnic group of students is trained not only by multiethnic, but also by multinational staff. In the interview, the authorities stated that the university has to educate students as world citizens who are supposed to face global challenges. In this sense, LUC is an open university when it comes to culture and the one that prepares students to function in a multicultural environment. Not only students acquire knowledge but also relevant experience in this field.

The second goal for LUC was implementing the policy of sustainable development. According to the authorities, it has to do with its cultural mission. In the interview, LUC stakeholders claimed undoubtedly that a sustainable change determines ethic goals of the university. Sustainable development refers to the key issues to be brought about in the future, namely global warming, increase in pollution or justified distribution of wealth. Accepting this mission, LUC follows the concept of transdisciplinarity by Roland Scholz, more specifically participation. Thus, its mission becomes part of global changes. As a result, students become actively involved in sustainable development when it comes to culture and ethics. The university actively participates in public discourse aiming at building consensus for sustainable development and politics. In the American higher education system, graduates usually come from middle–class families. It can be said that universities highly influence education of elites, thus making a significant impact in the future. In the interview, the authorities proved the importance of education for sustainable development as it is far beyond cultural differences, because such problems neither have boundaries nor identity. They are our problems regardless of our origin. The future of the planet lies in the environmental consensus that should be promoted and supported by universities being the intuitions of knowledge and training.

A practical reference to sustainable development is building relevant infrastructure to support education. The first visible change in Chicago was setting a 5-are garden between skyscrapers in a northern district. The problem seems to be trivial in Europe, nevertheless in the USA awareness of food origin, the way it is grown and cooking basics have been missed. Consequently, it is equal to the lack of social awareness of famine and nonchalance in the agricultural policy (e.g., full approval for genetically modified food). A table posted on the garden fence states that the energy used for annual food transportation to Chicago exceeds the energy necessary required to its production. Thus, introducing alternative consumer friendly solutions in the future will be a pro-environmental activity taking into consideration that cities are going to develop intensively.

Another example of sustainable development is a farm in Woodstock (IL) [16]: "The mission of the Loyola University Retreat and Ecology Campus is twofold: to serve as a place for spiritual and intellectual growth through retreats and adventure programs; and to serve as a campus for study and research of the environment and ecological sustainability" (from the Internet). The farm has its educational goals; it shows the importance of plants and origins of food. The food grown during warm seasons is sold by students in Chicago. Getting back to nature may be interpreted not only as a comeback to Rousseau's philosophy, which glorified the country and treated it as a safe and peaceful place, but it also is the effect of lack of awareness of the issues concerning food origin and more and more expensive process of delivering food to metropolises. Tim Schubert, a plant pathologist from the University of Florida stated this problem in the following way:

"Promote urban agriculture, especially of fruits and vegetables […]. Reinvigorating agriculture in the open spaces and landscapes will reduce food transportation cost, promote community spirit, beautify living spaces, align with the trend toward smaller and more diverse cropping systems for the pest management advantages, reduce waste of food [...]" [17].

University farm in Woodstock meets these needs. At present, there is large-scale food production, which means that contact with nature is weakened and basic cooking skills are not known. The problem is not trivial, but its consequence is the uncritical and highly exploitative way of thinking about the environment and full approval for experiments, such as GMO. Without doubt, farm activities help students to restore ecological awareness and to learn in what way people live and work in developing countries.

LUC has also changed its infrastructure policy. According to the Deloitte report, the university reduced by half CO2 emission thanks to its modernized buildings. When being asked about the costs, the interviewed representatives responded that they were aware of the cost of innovations. Tuition fees support the university budget (in 2012 increased by about 3.3%) together with sponsoring, mainly from alumni. However, it is important to emphasize that the fact of realizing how high the costs are for implementing the sustainable development policy actually proves that the university is actually turning towards a sustainable change.

Finally, the important factor is the input of catholic mission at Loyola University of Chicago in shaping the sustainable development policy. This university is not like traditional religious universities in the USA, such as Brigham Young University, Calvin College, Messiah College and above all Mormon University of Utah. Despite the ownership position of Jesuit LUC, the university strictly implements fully objective curricula, without imposing any religious attitudes.

Another Jesuit university that is Boston College acts the same. In this way, the University of Chicago remains catholic in its mission but neutral in action. Sustainable development, as it was said in one interview, is in harmony with catholic social teaching whereas the pro-environmental movement protects nature. However, it cannot be stated that this model will be characteristic of catholic schools in general. The same person being questioned admitted that LUC is the only Catholic university so much focused on sustainable development not only in the USA, but also among all catholic universities worldwide. Other Catholic schools in the USA, e.g., Catholic University of America in Washington, Boston College, or Notre Dame in South Bend, being on the highest position among Catholic universities, would prove that. It can be stated that LUC is an unusual exception.

Sustainable development is implemented in education; students from all departments have to take compulsory courses in sustainable development. Educational policy allows strengthening this trend beyond infrastructure; thus it is becoming part of curriculum.

IV. Conclusions

Sustainable development starts to reflect the mission of a modern university. It means educational and research involvement, but above all it is an internal administrative and institutional change. The case of Loyola University of Chicago, on the one hand, shows the change on the level of its mission and infrastructure, on the other hand, true objectives of this policy. It is an attempt to catch up with other research universities.

The report ordered from Deloitte proves that the university puts on the fourth place "urban environmental sustainability" among its four objectives aiming at being more competitive and distinguished from other universities. According to the report, LUC would become a recognized leader worldwide in this field. Both Deloitte and the strategy mentioned in interviews together with university activities prove that LUC aspires to a rapid change of its status and transforming into a research university. It can be concluded that the third mission is indirectly becoming the tool to strengthen the position of the university but not the aim itself. While ethical goals, such as an attempt to cultural integration around the idea of protection of natural resources, are achieved, they will not be goals themselves.

Thus, more general questions arise, e.g.: to what extent does the third mission improve the status of the university? Marek Kwiek in the paper "What is an Attractive University? Variety of the Consequences of Institutional Transformation for Various Stakeholders" claims that "knowledge is increasingly gained beyond higher education" [18]. Kwiek continues: "universities have to respond to new demands from stakeholders, including regions" [18]. One might add that in the symbolical sense there is a need for policies created within international organizations, which have applications in regional policies. In such sense, sustainable development is undoubtedly this kind of policy. It is perfectly seen within the sustainable development policy; Millennium Goals are applied to national and regional policies. Reduction of CO2 emission is transformed into particular levels of policies, including the higher education policy and technological development that requires new patents in science. The massive scale of the above-mentioned changes and their increasing importance (CO2 reduction was announced by Russia and China that used to be resistant to the climate policy) inevitably result in the undertaking of new actions. The application of the mechanism described above, which is incorporating global and regional political and management trends into the level of a university, undoubtedly transforms the mission of university and redefines its goals. Let us consider the following questions: Is a university going to be more attractive in this way? Does the sustainable policy boost the competitevness of the knowledge institutions? Loyola University of Chicago is an exception for implementing the sustainable development policy on a large scale. Sustainable policy still is an experiment, so its assessment is yet to come in the future.

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