THE CONCEPT OF SUSTAINABLE DEVELOPMENT AT JORDANIAN UNIVERSITIES

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Abstract

The current world is struggling with many global problems which threaten more or less every country of the world and the countries of global South usually even in a higher extent. The interest of the international community in reducing these problems and achieving sustainable development of the world has been therefore graduating. However, in order for these efforts to be successful it is necessary to be active and also spread awareness among people. In particular, young people must be aware of the problems and possibilities to be able to operate actively in achieving sustainable development. Therefore, the paper will examine the importance of sustainable development concept in the countries of global South which are usually more affected by global problems, and especially its place and importance in Jordan as selected global South country. The main part will consist of the examination and analysis of the implementation of sustainable development concept in Jordanian higher education as the sphere which influence the personality and future conduct of young people in a high extent.

Keywords: Jordanian sustainable development strategy, Jordanian universities, global problems, global South countries, sustainable development concept

JEL classification: Q01, I23, I28

1 Introduction

Sustainable development (SD) concept and the strategy for its achievement have been resonating in all spheres of societies today. This world is struggling with
many global problems and their consequences threaten the entire world. The current state of individual societies and their exerted functioning still do not correspond to the sustainable course of the world. The interest of the international community in achieving SD of the world has been therefore starting to graduate, and individual countries are trying to eliminate global problems through setting common global goals. However, in order for these efforts to be successful it is necessary to spread awareness and inform as well as educate people about it. In particular, young people must be aware of all the problems and possibilities which they have to be able to operate actively in achieving SD, and to become active and conscious citizens in local as well as global dimension. The situation is problematic especially in developing countries which face many problems that directly affect and often threaten their very existence. Therefore, the importance of implementation of SD strategy and common goals is even more important for them and their education system (not excluding the tertiary level). The process of globalization goes hand in hand with the technological development and significantly changes the university education. The current demands on the graduates of the universities relate to the development of a new global environment (Svitačová – Pechočiak, 2017) and must be in harmony with the SD strategy.

1.1 Sustainable development strategy in global South countries

SD is an important concept and widespread strategy today. Generally, we understand this term as the “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987, p. 43). It is connected mainly with social and environmental problems that harm the world and its content should represent common strategy of the world community to remove or at least reduce these problems.

We can state that global South countries struggle on the consequences of the global problems generally more than countries of global North, although just the unsustainable behaviour of these more developed countries has been endangering the entire world more. Therefore, more prosperous, just and safe global future depends on new forms of behaviour at all levels and in the all interests (Elliot, 2006). “The notion of SD encompasses a wide range of concerns. It includes the capacity of the planet to absorb the changes brought about by human activities and of the substantially compromised development opportunities for many people in the world, particularly in the developing countries” (Elliot, 2006: 235-236). They have different interests in SD and contested views on what should occur in future. “More than ever today, development that respects the value of the natural environment is necessary, especially for those beset by poverty and whose natural resources are being degraded by the adverse impact of current patterns of
economic and social activity and lack of protection from natural disasters” (Strachan – Vigilance, 2011: 1).

SD is based on socio-cultural wellbeing, good governance, economic growth and environmental protection, which all contribute to reducing the risk of a disaster (Strachan – Vigilance, 2011). An added element of this is the role of the international community mainly in developing countries which includes technical and advisory support and resource mobilization. This is crucial mainly because a lack of finances is often one of the greatest obstacles in achieving SD. Also, for this purpose, 17 Sustainable Development Goals (SDGs) were adopted in 2015 as a part of the 2030 Agenda for Sustainable Development (United Nations, 2015) which currently represent one of the highest international priorities. These goals are precisely prepared and critically important for the development results of the countries. They address the universal need for development that works for all and there is a big support of global South countries too.

After adoption of the 2030 Agenda the efforts of less developed countries are more intensive, and the help of international community is more effective. Many of these countries are very active in this also in the context of governmental initiatives. However, they are facing many challenges. Mainly, the institutional capacity and effective institutional arrangements to implement SD strategies, the need for technical assistance, etc. Individual countries face their own challenges at local, regional and national level (Bryde – Mouzghi – Al Rasheed, 2015: 1 – 2). Those are interconnected with the global problems, so the implementation of national SD strategies and the international aid in those strategies can help to reduce most problems of these countries and make their lives better. It must be stated that for many less developed countries, SD is imperative rather than being a matter of choice. For many of them, the negative impacts of climate change not only pose major obstacles in achieving SDGs, but also threaten their very existence. In these countries generally, disasters cost more than in developed countries, causing serious setbacks to economic and social development. Therefore, a common challenge remains to address SD issues over the long-term, and to transform policies and strategies into programs and initiatives that make a positive impact on these countries. The implementation of national SD strategy needs to be an integral part of government policies. However, this is not only the responsibility of governments because SD can only be achieved through individual and collective efforts of all responsible actors (Strachan – Vigilance, 2011: 12 – 15).

The Hashemite Kingdom of Jordan belong among the countries of global South which need to adapt widely to the worldwide changes in parallel with an international aid. Although it is a modern western oriented monarchy, it is endangered by many global problems belonging to global SD strategy.
2 Data and Methods

This research study is based on the qualitative research and theoretical analysis of the strategy of SD in Jordan and its higher education system. In order to achieve these goals, we are going to use various research methods. Mainly we are going to map, describe and identify the SD concept and common goals adopted by the international community and their achieving in Jordanian Kingdom. Then we will explore, analyse and determine the place of SD concept in Jordanian higher education, amplified with the examination of the specific ways of its implementation and approaches of selected Jordanian universities in this issue. Our research should bring us closer the situation in these serious issues and allow us to make potential proposals for progress in the examined area.

2.1 Support of sustainable development strategy in Jordan

There has been considerable progress in many developing countries in terms of their pushing forward SD, although each country is in distinct stage. We are going to put our attention on the state of the application of SD strategy and SDGs in Jordan as a selected global South country.

According to UN, “Jordan has made considerable economic, social and human development achievements over the past decades, investing significantly in infrastructure, human resources, and improving upon living standards” (UN Knowledge Platform, 2017). Jordan was one of the first countries globally, and in the Arab Region, to act towards achievement of the Millennium Development Goals (UNDP, 2000) and it was very successful. However, during the last decade, it has faced many serious challenges.\(^6\) That put increased pressure on Jordan’s limited resources, especially sustainable management of water resources, increased the budget deficit and public debt. The country must face these problems with the help from international community.

Despite this, Jordan is strongly engaged in the 2030 Agenda and it tries to involve everyone in its society, also because the country was intensively involved in the global consultations for the development of the post-2015 agenda, and Queen Rania was one of the 27 world leaders who provided advice to the UN Secretary General on the shape of the 2030 Agenda’s framework. This led to a natural adoption of the Agenda. Jordanian government presented plans for its implementing and achieving the SDGs, and priorities of Jordan in this field. The first was raising awareness of the 2030 Agenda and of the SDGs, targets, indicators and means

\(^6\) Mostly the global financial crisis, region instability and the huge impact of the Syria war.
of implementation (UN Knowledge Platform, 2017) as a key basis for all other efforts.

Many important national strategies, plans and laws have been developed for the application of the 2030 Agenda in Jordan. The most important is the strategy Jordan 2025 which contains several SDGs, mainly the eradication of poverty, the improvement of the education system, the provision of clear water and sanitation, the guarantee of decent work and economic growth, and the development of the sustainable communities and cities (UN Knowledge Platform, 2017).

There was established the UN Country Team (17 UN agencies' work in Jordan) to support achieving SDGs and assist to support national institutions to increase performance and improve capacities to deliver on Jordan 2025 and the SDGs (UN Knowledge Platform, 2017), increase individuals’ knowledge of rights, access to information, education, skills, capacities and services, support engaging people and youth in economic, environmental and social processes, support Jordan to respond to the refugee crisis, etc. (SDG Knowledge Hub, 2017).

Jordan is an important global partner in achieving SDGs. However, it needs sustained and expanded financial and technical support in ensuring this. Important is Jordanian´s approach as they consider the 2030 Agenda as a collective responsibility. Also, the UN representatives stressed the exemplary cooperation of Jordan in achieving SD agenda. Notable progress is this country doing mainly in the field of water scarcity and food security (The Jordan Times, 2017).

According to the international community the 2030 Agenda has the potential to change our planet. Jordan welcomes it and it’s doing a considerable progress in its achieving. Energy, water and climate change, are cross-cutting issues fundamental to all SDGs, and also to development, security, and poverty reduction in Jordan. The SDGs are important for this country; therefore, the actions must be done comprehensively and collectively involving the entire community.

### 2.1.1 Continuation in sustainable development efforts

In July 2017, Jordan presented its Voluntary National Review (VNR) report to the Political Forum on SD at the United Nations. The VNR facilitates multi-stakeholder partnerships and details the Jordan´s plan to implement the SDGs. Jordan wants to focus on capacity-building and community awareness raising, as well as on support the statistical system to implement the SDGs at the local and national level (UNESCO, 2017). It highlights the need for support in SDGs from policy-makers and scientists. Jordan wants to support fully involved civil society and the private sector in achieving SDGs. Jordan wants to improve access to information and implement these issues into the education (also to tertiary level).
The goal is to let people know they have a real place in the development process (UNESCO, 2017).

There is also a specific UN project which focuses on 3 key goals that are essential for Jordan challenges in SD: SDG 6: Ensure access to water and sanitation for all; SDG 7 Ensure access to affordable, reliable, sustainable and modern energy for all; SDG 13: Take urgent action to combat climate change and its impacts. The project should mainly provide a framework within which policy makers can better understand the process of achieving these SDGs, situate the goals within existing environmental projects and develop strategies for how they can be achieved (WANA Institute, 2017).

2.2 Education for sustainable development as a part of Jordanian higher education

As the public awareness about SD concept and Agenda 2030 is not suitable in Jordan, there is a significant need to spread the knowledge and information among all people, and show them that everyone has a place in achieving SD. Even more important is to implement these issues to the education in Jordan, mainly to the tertiary level, as the universities form the personality of young people strongly and influence their direction how to behave. Therefore, our aim is to examine and analyse the integration of SD concept at Jordanian universities.

Rapid educational reform is taking place in Jordan today. The main goals are development of curricula, teacher education, using information and communication technology, improving teaching and learning strategies, and integrating new subjects. Education for SD can equip concerned citizens with critical thinking and problem-solving skills to build an economically, environmentally, and socially sustainable world. The main challenge in Jordan is how to merge all sustainability ideas and principles within various educational activities in different universities as there are about two hundred thousand university students who have a direct effect in any social change. The integration of this education is important also in order to find new ways to create knowledge needed in a world characterized by a turbulent environment and increasing changes (Abu-Hola – Tareef, 2009).

Various studies show that in past years the Education for SD was not clear enough among most of the researched staff at Jordanian universities, as well as among students. Most of academics did not consider different sustainability issues in their teaching (unless these issues came by the way). Lack of training towards gaining skills in teaching for sustainability was the leading problem. New staff training programs started to be realized together with other improvements, in order to raise awareness among academics and students as well (Abu-Hola – Tareef, 2009).
3 Results and Discussion

3.1 Implementation of sustainable development concept at selected Jordanian universities

After the unsatisfactory results in Jordanian higher education the challenge was to create innovative institutional and organizational structures in research and in teaching, that lead to innovative solutions for future development via the mutual learning process of all those concerned. Therefore, in this part we are going to analyse the findings from our examination from six selected universities in Jordan and the current situation in our researched area there.

3.1.1 University of Jordan (UJ)

This university as the oldest and one of the biggest in Jordan is very active in the implementation of SD concept and spreading awareness in these issues among students, teachers and broad public. It is very active mainly in launching SD study programs. For example, in 2014 UJ has launched a new master’s program in sustainable development, as the first such specialisation in Jordan, with support of the Columbian University and the Jordanian Government. The programme seeks to provide students with the skills and knowledge required to design SD projects in sectors they are involved and enable them to tackle a variety of challenges including poverty, climate change and infectious diseases (The Jordanian Times, 2014).

This university has also a broad cooperation with European universities within EU Erasmus+ program in supporting these issues. One such a project is focused on creation of another study program called: Smart Control Systems for Energy Management. Its main objective is to increase public awareness and utilization of renewables, promote for energy saving and management and develop new research areas in those fields. In this project other two Jordanian universities (MUTAH and JUST) are involved too (UJ, 2017). Another program – “Master on sustainable development and Renewable Energy” – established within the cooperation of UJ, MUTAH, and JUST through the TEMPUS European program is also very important in this field. It is designed to discharge professional experts who will play a key role in the field of the renewable energy of energy efficiency future projects (UJ, n. d.).

Important is the Water Energy and Environment Center at UJ. It undertakes project research and assessment studies to address environmental challenges at local and regional levels. Its main task is to spread the knowledge about water, energy and environmental challenges in Jordan. It creates an active partnership
among academia, laboratories, industry, and government (UJ, 2016). There are also many academics at UJ who pay attention to the SD issues mainly in the context of renewable energy in their research work and in their publications.

### 3.1.2 Mutah University

Although, this university is technologically less advanced it pays quite significant attention to the concept of SD. The main activities are in the study programs content, for example, in Mechanical engineering. The growing concern for the environment has opened new opportunities for engineers. Mechanical engineers play major role in many fields of interest which include: energy utilization and conservation, production and processing machinery and their preserving, etc. They have responsibility for research and development, testing and maintenance, control, and manufacture in many diverse fields (Mutah University, 2018a).

Mutah University has got also a Sustainability Website. There it has identified the main key areas where sustainability can be achieved. The goals of the university presented there are, for example, to apply a solar power system and everything will run on 100% renewable energy. It has its own Mutah University Sustainability Plan which is considered the roadmap for building and operating more sustainable projects that strengthen their core research and teaching mission. The website supports also other university programs with significant environmental impact such as Water Conservation Programs, Recycling Activities, and Energy Conservation Programs (Mutah University, 2018b).

This university is interested also in spreading the SD concept through the conferences on sustainability (the next one prepared for April 2018 is called Our Heritage between Sustainability and Crisis). Similarly, at Mutah University there are many academics who publish various valuable papers and do the research in SD issues.

### 3.1.3 Jordan University of Science and Technology (JUST)

JUST is very modern and highly-developed university. Despite the fact, that generally the content of the education does not pay special attention to the application of SD concept itself, this university has minimally one study program, named Renewable energy and Sustainable Development at the Department of Mechanical Engineering (JUST, n. d.) created in above mentioned cooperation with other Jordanian universities. As JUST is really advanced in the scientific and technological field this program plays a significant role there.

There are also many academics who pay attention to the SD, mainly in the context of renewable energy, in their research work at JUST. JUST has also the
Jordan University of Science and Technology, Queen Rania Al-Abdullah Center for Environmental Science and Technology. The research in this center is focused on the water issue – its pollution, degradation and sanitation, efficient use management, and productivity (MENA NWC, 2016).

3.1.4 Al- Balqa' Applied University (BAU)

This university is very active in the implementation of SD concept, with wide range of activities directed to these issues. Its current scientific research is focused on several global problems of sustainability, mainly in the field of water resources and environment management, nutrition and food processing (BAU, 2014a). BAU see that the environmental challenges are complex and there is a need for all concerned institutions contribute to effectively manage the environment sustainably and ensure a sustainable management of these resources. BAU has therefore its study programs as well as specialized International Research Center for Water, Environment and Energy, focused on the mentioned issues, devoted to develop the understanding of the complexity of environmental problems and key issues at this university. The center has adopted water resources management, environmental impact assessment, and climate change issues as special priorities. It has also developed training programs that cover many disciplines in the examined issues to train experts in the field of natural resources management in the context of water, energy, and environment. The center also provides effective cooperation with other educational and other institutions in the field of SD. Emergence of the center was the result of cooperation among BAU, UNESCO, and UN Special Coordinator for achieving the Millennium Development Goals which even highlights its importance and university’s interest in achieving SD (BAU, 2014c).

Important is also the Faculty of Agricultural Technology in which the most active is the Department of Water Resources and Environmental Management. The Faculty is focused on protecting natural resources and the environment to maintain the sustainable agriculture. It has three other departments – Plant Production and protection, Biotechnology, and Nutrition and Food Processing focused on SD issues (BAU, 2014b).

Also, BAU has many academics whose research work is focused on SD. They publish many papers important for awareness rising in Jordan and do many international research and development projects focused on this field.

3.1.5 Al al-Bayt University (AABU)

AABU is another Jordanian university interested in SD concept at least at some extent. This university has own Renewable and Sustainable Energy Department
with the study programme *Sustainable and Renewable energy engineering*. To achieve its ultimate goal in spreading awareness about SD issues, AABU has established the *Institute of Earth and Environmental Sciences*, and the *Water, Environment and Arid Regions Research Centre* with own study programs. “Both have enabled AABU to conduct several researches on the neighbouring region in the areas of groundwater, soil and environmental pollution. They carry out environmental impact assessment studies for projects that will be established in this area, and serve the local community, governmental agencies and the private sector in conducting environmental monitoring programmes and environmental awareness campaign” (Egreen, n. d.).

AABU has many academics who are focused on these issues in their research work, too. They publish many papers important for awareness rising in this country, as well as do many international research and development projects focused on SD. Another specific field in which the AABU is active is the examination of SD in the Muslim context what has the potential to bring closer this important concept to the people with Islamic faith.

### 3.1.6 German Jordanian University (GJU)

GJU is unique university with obvious activities in applying SD concept to the education as it is interconnected with German University of Leipzig. GJU is, for example, involved in the project *Master on sustainable development and renewable energy* with objective to improve the capacities of 3 Jordanian Universities on renewable energies and energy efficiency, training new experts prepared for the labour market. Important is also that all students of GJU must complete one-year of study at German partner university where they meet SD in the education.

GJU has an individual *Department of Energy Engineering* focused mainly on the SD issues connected with energy – looking for new sources of sustainable energy – renewable energy – in all kinds for saving environment and solving global energy problems. These are rapidly growing fields of sustainability which are a great challenge to human contrivance. Each study program of this department is focused on this. The priority is to provide students with energy engineering education, especially in renewable energy and sustainable systems (GJU, 2018a).

GJU has an active cooperation with Italian University Research Centre for Sustainable Development which aim is to disseminate knowledge in SD. Another department focused on SD in the context of environment and renewable energy is the *Civil and Environmental Engineering Department* and mainly the program *Environmental and Renewable Energy Engineering*. As GJU sees that world is rapidly facing the prospects of climate change and depletion of cheap fossil fuel resources it wants to prepare qualified professionals to rise to the challenges that will flow
from these threats. It wants their students to acquire a deep understanding of the issues of sustainability and of other connected issues (GJU, 2018b).

### 3.2 Summary

To summarize the results of our research of Jordanian higher education in the context of implementation SD concept and strategy, and interest of selected universities’ in applying these issues within their education, we can make several statements.

- **Jordanian higher education is generally active in disseminating SD issues and strategy among students, teachers and public.** There are intensive efforts in the awareness rising about these issues mainly through individual study programs present at each examined university that pay attention to the SD issues. Then, various research centers are established at most of examined institutions. Also organizing different scientific events, mainly conferences at national and also international level, is popular as well as broad research work of academic staff realized mainly through the research projects.
- **There are still more frequent the international conferences held on the issues of SD organized by Jordanian universities also in common cooperation.**
- **There is a strong and active partnership among individual Jordanian universities also in the field of implementation of SD issues into their education systems.**
- **Strong and active partnership of Jordanian universities is clear also together with European universities through various EU projects, for supporting important topics of the current world, current challenges, and also issues connected with SD.**
- **Jordanian universities are mostly active in the issues of energy resources, water scarcity and environment as priority SDGs in the context of Jordan challenges.**
- **All the examined universities are active in SD education.** According to the findings of our research, we can say that BAU and UJ are the most active in this field.
- **The awareness rising is visible at all examined universities and the staff asked to help us with the research were mostly informed well about this concept.**
- **At each examined university there are still more academics focused on issues connected with SD concept, largely active in the field of renewable energy, water management and climate change which suits to the most important SD priorities settled for Jordan.**
4 Conclusion

On the basis of the results we can state that there is a significant and growing interest in the implementation of SD issues in Jordanian higher education. Although, we can see there still some areas where the presence and the depth of the interest of the SD concept and strategy can be improved. In this context as the conclusion we present few following recommendations based on the result of our analysis and examination.

There is still a need to increase public and civil society awareness of the 2030 Agenda, including understanding the nature and potential of the SDGs and how institutions and individuals must adapt to address SD across all the education systems, not only in selected study programs or centers. SDGs are cross-cutting issues which can be implemented in every study program so that everyone will gain appropriate information, knowledge and skills. The national governmental support is also needed there. Similarly, bigger help from the private sector would be appropriate and helpful. There is “a need to develop new global skills for today’s global labour market in the context of the demands of modern society” (Šeben Zaťková, 2015: 1144) influenced by globalization and all connected problems.

There is a need to promote bigger transparency and wider access to data and information to the government, institutional authorities as well as entire civil communities, through ICT, online social networks and community media to spread the issues among people.

Higher education system in Jordan can be improved in the field of SD education also through more practical learning. Gaining theoretical information and knowledge is important, however the proper importance will be gained only through the appropriate connection with practice. Students must see the reality and must learn how to contribute to the world sustainability personally. Mainly youth must see their role in this process more clearly.

On behalf of improving the education for SD at Jordanian universities there is a need to support academics training continuously as there are still new demands for globally prepared and educated teachers (see more in Šeben Zaťková et al., 2014) and other professionals today, so that students and broad public can acquire the proper information and knowledge in an effective and sustainable way from the highly trained experts.

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References


