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## Conference Paper

# Challenges and Possibilities of Sustainable Development in Regional Government Units

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## **Challenges and Possibilities of Sustainable Development in Regional Government Units**

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### **Abstract**

*The main goal of this article is to demonstrate whether the awareness of key actors and the application of the sustainable development concept can find appropriate solutions for the preservation of the environment in the contemporary conditions of economic development. Humanity today is facing an increase in resource utilization, climate change, environmental pollution, starvation and diseases, energy sector crises, population growth imbalances and similar challenges. For all the reasons mentioned, sustainable development model is more important than ever. This research focusses on municipalities and cities in Croatia, specifically on the concept of sustainable development and its relation to budget fiscal policy. Descriptive analysis method, comparative method and primary research method (interviews) used in this research have given the results shown in this article. Results pointed out that all the interviewees are aware of sustainable development concept and they agreed that more financial resources should be invested in this area. Furthermore, the results have shown that lifelong education is the key investing point. In addition, based on the results, there is a need for greater cooperation between state and local authority units with the goal for joint investments and projects but also for strengthening human resources in sustainable development projects.*

**Keywords:** *sustainable development, local self-government units, municipality, city, fiscal policy, local development*

Track: *Management & Leadership*

Word count: 3.820

### **1. Introduction**

In order to maintain the balance between ecological and social sphere, the crucial thing is to understand the roots of ecological problems; they derive the human influence and their need for development. Research based solely on the ecological sphere does not suffice because the main problem is human behavior and human interference or, “knowledge about objective changes in ecosystem without the knowledge about social influences is not sufficient to understand global ecological problems or ecological crisis” (Rončević, N; Rafaja, B, 2012).

The key factor to sustainable development on local level is investing in ecofriendly communal systems such as public lighting, sewerage and similar. Ecofriendly investments have a direct fiscal and ecological effect because in a long-term period it provides significant budget savings. In addition, it is important to include entrepreneurs and the private sector in this process so that the entire society works on preserving the environment with the final goal of improving life quality of the local population.

Hypothesis of this article is that current fiscal capacities of local and regional units are a limiting factor for implementation of sustainable development model. Hypothesis has its basis

in the work of Jurlina-Alibegović (2018) who claims that only a small number of towns can meet the current level of public needs and manage development without the help of central state.

Subject matter for this article is therefore to research the possibilities of implementing sustainable development models in regional self-government units.

To prove the hypothesis, the following methods were used:

- Descriptive analyses method to analyze theoretical knowledge based on secondary sources and practical experience,
- Comparative methods to analyze the possibilities of local and regional units in using sustainable development model,
- Interview method to analyze current level of implementation of sustainable development model in regional self-government units.

The survey was conducted in 2017, by telephone survey of the officials in the 11 counties in Croatia: Zagreb County, Krapina-Zagorje, Međimurje, Varaždin, Koprivnica-Križevci, Bjelovar-Bilogora, Karlovac, Sisak-Moslavina, Požega-Slavonia, Virovitica-Podravina and Brod-Posavina.

## **2. Theoretical approach to sustainable development model**

Sustainable development paradigm has become the leading solution to ecological problems in the 1990s. The term *sustainable development* did not appear in *The Limits to Growth*, although it contained the idea of quantitative stability and equilibrium in society. Sustainability represents a stricter demand than balance: they are connected terms, but not equal.

Sustainable development needs to be balanced, but the balance itself does not show whether development is sustainable or not. While discussing balance, the question is what is in balance: the surroundings, ethics, economy and ecology, human needs and nature or something else? Sustainable development represents the capacity to preserve itself and endure for an unlimited period of time and not to threaten the conditions for its own reproduction (Kirn, 2000:149).

According to World Commission on Environment and Development, sustainable development means “satisfying needs of our generation and, in the same time, not jeopardising the development of the future generation”. Extended definition also includes social equality and equity (Herceg 2013, in Glavač, 2001:145). Hence, social development assumes a political system that ensures human rights, freedom, citizen participation, social welfare, possibility to develop cultural identity and an ethical system that encourages social responsibility in achieving sustainability. Sustainable development becomes a new local and global concept that includes and enhances importance of making decisions towards development on every level possible (Dragičević, 1997).

Economic efficiency, social progress and environmental responsibility are the three main goals of sustainable development model (Herceg, 2013:256).

Global recognition of sustainable development model came after the second United Nations Conference of Environment and Development – UNCED, held in July 1992 in Rio de Janeiro where the world leaders accepted the *Gro Harlem Brundtland* commission recommendations (Herceg, 2013:256). Accepting those recommendations lead to signing of The Declarations of

Environment and Development but also the development of Agenda 21 (Action plan for sustainable development for the 21st century).

Three basic principles of sustainable development are:

1. Environmental sustainability that assures development in balance with vital environment processes, biological diversity and biological resources,
2. Social and cultural sustainability that assures development in balance with cultural and traditional values,
3. Economic sustainability that assures functional economic growth that manages its resources in a way that enables their further use for the next generations.

Also, while taking in consideration general models, we can define that sustainable development has four basic models (Rončević, Rafajac, 2012, in Anđić, 2010:7):

1. Multidimensional models mostly used by United Nations and UN declarations, commonly known as three pillars or circles of sustainable development (economy, ecology and society);
2. Models with one dominant dimension. The main two models that developed within this model are the cultural model and the environmental model. In the beginning of the 21st century, this model transformed itself to a social-sociological model;
3. Rare model. This model mainly enhances only two dimensions and, today, this model is a very rare concept;
4. Development-modified models. Based upon variations of previously mentioned models, this model tends to develop new and different thinking in implementing sustainable development model.

Industrial, agricultural and the development of other economic activity depends on the possibility of environment to ensure basis for long-lasting or sustainable development. In an interesting quip by Šimleša (2010), the corporations today, while mentioning the concept of sustainable development, develop better and more advanced technology, which will only in the future result in environmentally friendly products. Situation in Croatia is not as alarming as in other countries with more developed industry; however, even the rare industrial complexes in Croatia should be modernized to ensure emission reduction.

In addition, main economic branch in Croatia, tourism, must adjust to the concept of sustainable development. Tourism in Croatia is by far the most popular and well-developed economic branch but in the last few years it threatens the environment. The key problem tourism causes are that many municipalities and towns, during the tourist season, have twice as many tourists than local population and that leads towards problems with waste management and many other ecological problems. Not only can this problem be solved by dealing with waste management and other problems tourism causes but also sustainable development model needs to be implanted in the process of lifelong education in making our services sustainable through longer period.

Among other things, education and training for sustainable development has received high priority through the document of the United Nations Economic Commission for Europe called the Strategy on Education for Sustainable Development. The document was adopted in 2005 in Vilnius at the High-Level Meeting of Environment and Education Ministries. The document states that education for sustainable development must be a complement to current

environmental education and that priority is given to education for sustainable development, that is to encourage and support appropriate initiatives in this area at the international, national and local level (Uzelac, 2008).

Global changes made an impact on education, especially in implementing the concept of lifelong education towards sustainability. Education in sustainability must include a strong connection between political education, global teaching, environmental and health education. (Borić, Jindra, Škugor, 2008; according to Linder, 2004)

Education in sustainability cannot be disconnected from the concept of lifelong education. Lifelong learning is an activity of studying throughout an individual's life in order to enhance knowledge, skills and abilities within a personal, civil, social and business perspective (Borić, Jindra, Škugor, 2008, according to Maravić, 2003). Apart from a global and local level, the change needs to happen on a personal level of each individual. Future generations have to be willing to accept and use the concept of sustainability, but also must change their perception and thinking about environment. Mere learning of facts does not necessarily influence the value system which would result in appropriate behavior and decision making (Borić, Jindra, Škugor, 2008, according to Devernay, Garašić, Vučić, 2001).

From all mentioned above, we can conclude that Europe's policy is changing a great deal towards sustainable development model and lifelong sustainable development education especially when keeping in mind that many international and national sustainable development programs have been implemented. Sustainable Development Program in Local Communities is a program brought by Croatian Ministry of Regional Development and European Union Funds with the goal of helping regional development by using the sustainable development model. This program is helping economic growth of less developed areas and social perspective through enhanced availability of local infrastructure. In addition, focus is on social cohesiveness and sustainable development education.

On a global level, sustainable development model faced some challenges. First, the idea of sustainable development as a model of improving economic and social prosperity did not necessarily reach the desired effect. A large share of population remains impoverished, climate changes are rapidly advancing, inequality between rich and poor still exists and the environment is still being polluted. By 2050, if humanity does not make the sustainable development model our primarily goal, it is estimated that the planet will have thrice as much inhabitants who will not have basic infrastructure as water, electricity, health insurance, education and similar (World Economic and Social Survey, 2013). Globally, sustainable development in towns and municipalities demands integration and cooperation of government bodies in questions of spatial and traffic planning and regulation, creating new jobs, ensuring food safety, preserving biological differences, water and renewable energy sources, waste management and recycling and other educational, health and living issues (Pupavac, 2015).

Lay (2007) emphasizes that government and high business officials often do not see the problems in lack of sustainability of ecological and sociocultural processes. The main problem with those in positions of power is that they are usually distanced from those who have real problems. Furthermore, they turn sustainability into an object of their own will. If that is the case, countries cannot turn to sustainable development model. Only if countries and political elite prevent this from happening can society apply sustainable development on a strategical level (Lay, 2007).

### **3. Sustainable development model analyses in local authorities**

Many circumstances taking place currently forced the local and regional units to seek new ways of dealing with the problem of changing the economic approach to budgeting and planning. Sustainable development balances out the economic and social growth because in better economic conditions, social problems are easier to solve. Since many of economic problems are mostly visible on a local level, it is only logical that they were the first seeking for new ways to deal with them by using sustainable development model and ecological approach. In Croatia in 2005, average investment in infrastructure by local authorities was 11,884 HRK per capita. The problem was that regional investments were not balanced because the range of investments went from 3,782 HRK per capita in Virovitica-Podravina County to 22,874 HRK per capita in City of Zagreb (Koprić, I, 2010). Other problems include are lack of liquidity in many of the local units, and even the City of Zagreb has economic problems no matter how high investments are. Fortunately, many local municipalities and towns have managed to solve their basic infrastructure problems but are unable to achieve further progress due to a lack of funding.

As mentioned before, statistic results have shown many differences between regions in Croatia especially in economic development, economic activity and investment potential. In 2006, NUTS regions in Croatia were compared to the European Union average: Northwestern Croatia had an index of 73,2%, Pannonian part had 42% and Adriatic part 56,2%, while the Croatian average was 58,4%. The differences between Northwestern Croatia and Pannonian Croatia are clearly visible. Difference between them is even more emphasized because GDP per capita in Northwestern Croatia in 2005 was 72,370 HRK and in Pannonian Croatia GDP per capita was only 38,839 HRK. If we compare manufacturing in these three parts, Northwestern Croatia is by far the one with most developed industry (Koprić, 2010 according to Rajko, 2010). However, it is important to mention that Northwestern part of Croatia makes only 37,4 % of Croatia's population.

Tax autonomy is an important factor while talking about economic growth and development possibilities in local authorities. Research conducted between 2002 and 2016 has shown that most towns in Croatia have very low tax autonomy apart from 2010 to 2014 when the situation was different because the tax autonomy index was above 50. Low tax autonomy index means that cities cannot invest or develop further without the help of central state. This was a very important conclusion this research has brought because it changed the perception of the role that cities will have in the future while taking on new public functions, decentralization of the central state and territorial organization (Jurlina-Alibegović, 2018).

Sustainable development is increasingly becoming the main factor in creating and developing new strategies on local and global levels. However, sustainable development model is not a precisely conceived model but only the contextual framework for stimulating economic and every other development facet (Dragičević, 1997:378).

In the current state of business, in which profits and earnings are the dominant goals, little account is taken of the environment where they are procured. The subordination of everything to earning has made individuals lose sight of the environment in which they live and work, leading to an ecological crisis. Certainly, the ecological crisis did not appear by itself, but was produced by the people by their irresponsibility to the environment. Local communities are the ones who need to bring the change in thinking and perceiving ecological crisis because they can influence a large amount of people and make a political statement, but

they need to have some knowledge, power and decision-making abilities. (Herceg, 2013:261 according to Caring for the Earth – 7th principle) Sustainable development in local authorities should have its basis on continuous development activities and projects that specifically relate to preserving the environment and natural, cultural and traditional heritage of local municipalities and towns. Furthermore, sustainable development in local units must focus on developing communal and social infrastructure and the establishment of a stimulating social and development environment. An important segment of sustainable development in local units is the state of economic development. While discussing correlation between sustainable development, economic growth and local authorities, we must take in consideration restructure and development of sustainable agriculture, rural tourism, crafts and small entrepreneurship and creating new jobs. The main task of local authorities is to direct, coordinate and stimulate development activities and to be leaders in development while in the same time securing legal framework.

Many problems connected with economic growth, quality of life and pollution have their roots in local activities, but a positive thing is that solutions are also available on local level. The local governments have the main role in sustainable development concept because the local level is the one closest to people and they play a key role in education and sustainability (Pavić-Rogošić, 2010). In addition, it would be crucial for each local authority to make its own Agenda 21. A defamatory fact is that we do not have a single local authority in Croatia with this kind of strategy. By having this kind of strategies, it would be much easier to collect all the information, to take note of problems and their solutions and arrive to joint conclusions about the sustainable development strategy (Pavić- Rogošić, 2010).

#### 4. Challenges and possibilities of sustainable development in counties – research results

Table 1 shows statistical results with key demographic and development indices for counties tested - value of development index and indicators for calculating the development index according to the new county-level calculation model (2014 – 2016) - preliminary results of the research. Yellow color represents counties that were included in the research.

Table 1 - value of development index and indicators for calculating the development index according to the new county-level calculation model (2014 – 2016)

	County	County Development Group	County Development Index	GDP per capita	Per capita income
1	City of Zagreb	4	117,758	44.733,21	6.232,49
2	Istria	4	108,970	35.191,17	5.535,63
3	Dubrovnik-Neretva	4	108,580	30.904,76	4.848,62
4	Zagreba County	4	105,890	32.579,23	3.222,84
5	Primorje-Gorski Kotar	4	105,278	35.367,41	5.229,00

	County	County Development Group	County Development Index	GDP per capita	Per capita income
6	Zadar	3	104,654	26.630,15	3.908,88
7	Split-Dalmatia	3	103,930	28.190,12	3.476,57
8	Varaždin	3	101,713	28.714,71	2.387,25
9	Međimurje	3	100,502	24.835,25	2.077,08
10	Krapina-Zagorje	2	98,976	28.783,48	2.092,17
11	Koprivnica-Križevci	2	98,493	24.587,95	2.703,28
12	Šibenik-Knin	2	97,041	27.315,29	3.283,90
13	Osijek-Baranja	2	96,009	26.216,25	2.271,75
14	Karlovac	2	95,191	29.715,33	2.547,26
15	Požega-Slavonia	2	93,947	22.925,23	1.550,25
16	Brod-Posavina	1	93,449	22.105,97	1.550,91
17	Bjelovar-Bilogora	1	92,576	23.529,44	1.912,61
18	Lika-Senj	1	92,387	27.401,26	3.392,29
19	Vukovarsko-Srijem	1	91,992	22.256,51	1.627,30
20	Sisak-Moslavina	1	91,701	27.197,16	2.502,17
21	Virovitica-Podravina	1	90,666	21.297,29	1.872,32

#### ASSISTED AREAS

Source: Ministry of Regional Development and European Union Funds - <https://razvoj.gov.hr/UserDocsImages/Vijesti%20-%20dokumenti//2.%20Preliminarni%20rezultati%20novi%20model%20C5%BEupanije%2020171026.pdf>

Research was conducted in eleven counties with the following questions asked:

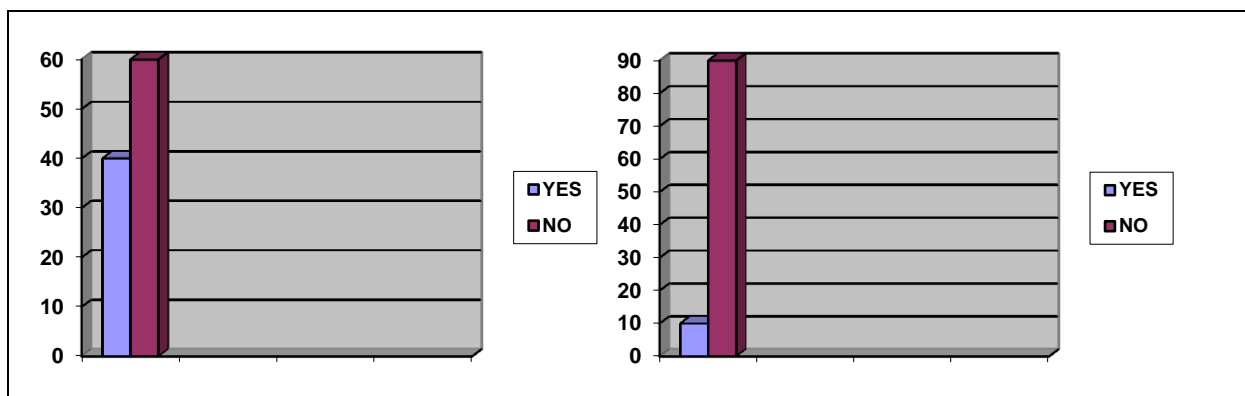
1. Does your budget include funds for renewable energy sources? (YES-NO)
2. Does your budget include funds for lifelong education programs for sustainable development? (YES-NO)
3. Does your budget include funds for investments in wastewater removal systems? (SUFFICIENT-INSUFFICIENT)
4. Does your budget include funds for energy efficient buildings? (SUFFICIENT-INSUFFICIENT)



5. Are you pleased by the implementation of the EU funds for sustainable development? (YES-NO)
6. Do You consider more funds should be allocated to sustainable development? (YES-NO)

### Social or environmental / climate challenges / education

Graph 1 – Answers to the first and second question



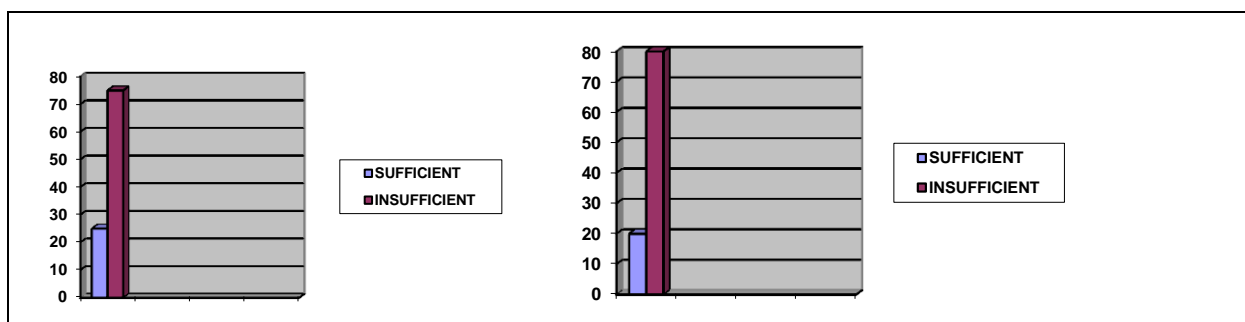
Source: Authors research, 2017.

Most of the respondents, about 60%, say that they do not have budgeted funds for renewable energy sources while only 40% of them have some form of budgeting for this cause.

Most of the respondents, about 90%, say that they do not have budgeted funds for lifelong education for sustainable development planned while only 40% of them have some form of budgeting for this cause.

### Budgeting/fiscal capacity

Graph 2 – Answers to the third and fourth question



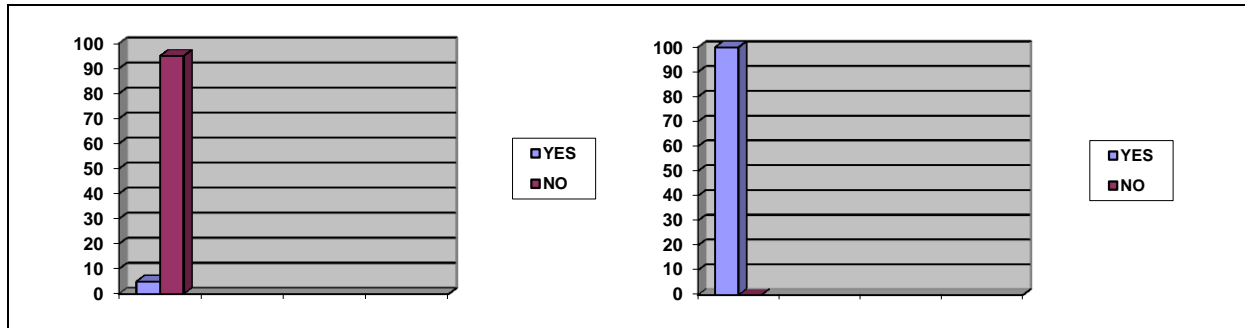
Source: Authors work, 2017.

Most of the respondents, about 75%, say that they have budgeted funds for investments in wastewater removal systems but not in a sufficient amount.

Most of the respondents, about 80%, say that they have budgeted funds for energy efficient buildings but not in a sufficient amount.

### Sustainable development/renewable sources

Graph 3 – Answers to the fifth and sixth question



Izvor: Autorski rad, 2017.

Most of the respondents, about 95%, say that they use the EU funds but not in a sufficient amount.

All the respondents say and agree that more funds should be directed towards using renewable sources.

Results of this research have undoubtedly shown that budget planned for sustainable development is insufficient on every level possible. In addition, all the respondents agree and think that more funds should be directed towards sustainable development and renewable sources. All of the respondents do know that they should work more on sustainable development, but their budgets are insufficient for implementing sustainable development models. Local authorities just cannot implement model of sustainable development on their own; they need assistance from the central government. The real problem is funding and that is where further research should focus.

## 5. Conclusion

Both research methods, primary and secondary, have shown that regional self-government units cannot implement sustainable development model on their own because they lack the financial abilities. Furthermore, results show the need for better cooperation between central state and regional units with the goal of budget consolidation and strengthening to improve awareness of human resources in the field of sustainable development. Implementation of lifelong education in sustainable development model, investing in energy efficient buildings and cooperation between the levels of government are just some of the solutions to this problem. Primarily, cooperation between central, regional and local governments is crucial because it must lead to simplifying the legislative procedure in the application procedures for European and domestic funds. Formal barriers, enacted by the central government itself, represent is the main reason why a lot of the available funding is not being allocated to the regional and local level.

From all that has been mentioned in this article, it is visible that Croatia has significant investment potential on a regional level. However, without better cooperation with both central government and the local units (municipalities and towns) it will not be possible to overcome the contemporary challenges and trends of sustainable development.

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