

Manfred SCHRENK, Vasily V. POPOVICH, Peter ZEILE (Eds.)

CHANGE FOR STABILITY LIFECYCLES OF CITIES AND REGIONS

The Role and Possibilities of Foresighted Planning in Transformation Processes

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The Role and Possibilities of Foresighted Planning in Transformation Processes**

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Manfred SCHRENK, Vasily V. POPOVICH, Peter ZEILE

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Management of Rapid Growth in the Rift between the Principles of Sustainability, Market Requirements and Strategic Planning – the Possible Approaches to Local Planning of National Park Kopaonik Area

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1 ABSTRACT

This paper deals with the structural changes of the development of the National Park Kopaonik region and discusses different points of view. The emphasis has been put on the relation between seemingly opposite concepts: different aspects of sustainable planning on one side, and market requirements on the other.

Sustainable planning and market requirements in the current planning practice in Serbia are predominantly observed as opposing concepts which, in many cases exclude each other. In that context, environmental – ecological sustainability is mostly the only aspect treated by local, regional and republic government bodies, whilst the market demands and the growth of local economy are practically viewed only as profitability and economic gain.

As a result, this paper will emphasize the pros and cons of both approaches, giving the possibilities of coexistence and potential compatibility these two concepts through the example of local plan for valuable natural area within National Park. Therefore, the framework for local planning is based on preservation of natural resources and outstanding potential for tourism, sport and recreation. Sustainability through intelligent resource management seems to be the only acceptable concept where regional values and local needs can meet.

The paper presents the course of research and practical application of selected principles which, unifying and giving equal importance to ecological, institutional, social and economic sustainability, create realistic conditions for the development of local communities and spatial units with special natural values on the basis of good managing and preserving resources and the revival of local economy.

2 INTRODUCTION

“Think global – act local”, the well known slogan built in the foundation of sustainable policies all over the world seems to be one of the most difficult principles to be applied in the countries with turbulent political, economic and social changes.

Planning practice in Serbia, a small country in South East Europe, have faced different challenges in past decade, many of it related to the processes of privatisation and transition from former socialistic to market oriented economic and social framework. In such circumstances the principles, goals and solutions given by the theory of sustainable development on a global and/or local level can be hardly applied always. There is no doubt about the general choice of the sustainable planning and urban design at all levels – from national to local. The problem arises when it comes to the local planning level where the conflicts, interests and lack of appropriate instruments, procedures and financial support is more visible (Vujošević M., 2003.).

This situation in planning practice in Serbia creates two opposite poles: at one side there are long term spatial development policies defined at the national or regional level and specific long term strategic oriented plans for areas with special values, such as national parks; at the other side there is politically driven, profit oriented, arbitrary short term local decision making about spatial development/growth and singular locations. Both sides are related to the application of sustainability principles, but often real operationalization is omitted.

3 SUSTAINABLE FRAMEWORK

The most important definition of sustainable development is based on the idea of ecological, economic and social cohesion, while sustainable cities and regions follow integrative and long term development which doesn't question the development of future generations. Some of the most important characteristics of the

sustainable spatial development are: continual care and protection of natural resources, effective economy, less external and social expenses, along with social progress and reinforcement of civic society, together making a solid foundation for a long term high-quality development (Haughton, G., Hunter, C., 1996.). Although primarily understood as environmentally oriented approach at the beginning, sustainable development today also relies upon: quality of life as the most important value, respect for the human dimension, comprehensive and integrative approach to the planning and urban design, preservation of natural, economic and social resources for future generations, social equity, etc (Lucas K., 2001.).

Having in mind the above context, this paper emphasizes the economic, social and institutional component of sustainability through the vision of social/economic/ecological balance and social cohesion within the spatial framework. The focus of the concept is optimal and equal share of three dominant aspects of sustainability, as well as the balance between national/regional and local level. The precondition for the implementation of the concept is coordination of needs and interests of all social groups.

The concept of social cohesion is based on ensuring the conditions for meeting the needs of different groups of the population of the local community, regardless of their political, economic or social power. We could say that the verification of the concept is based on the number and quantity of actors which support it, rather than on the power/dominance of actors who are able to impose their model of development. Inclusion of a wider circle of actors has a strategic importance because it goes beyond short-term effects of activities and tendencies and the dominance of free-market behaviour (Mitrovic, 2006.). Socially and economically balanced territory tends to minimize social and economic differences that manifest through the spatial differences and create the inconsistency of the development. The equal spatial development improves social and spatial cohesion through minimizing the difference between centre and periphery, the development of small centres and optimal standardization of quality of life (Kazepov, 2005.).

Starting points of the socially sustainable territory are related to the imperfection of market mechanisms, the effects of economic growth and points of conflict which thus arise (Stiglitz J., 2004). Therefore, operationalization of the principles of socially sustainable development needs to be expressed through:

- Social sustainability and the application of the principle of equality through the creation of physical conditions for the minimization of social differences and favouring social and spatial cohesion.
- Sustainable urban planning - local planning strategies that are developed to take into account the welfare of the local economy and population;
- Sustainable land use;
- Institutional sustainability, which includes the improvement of procedures and institutional arrangements, which contribute to the application if the integrated approach.

4 SUSTAINABLE TOURISM – REALITY OR UTOPIA?

In the last two decades, tourism has, both in positive and negative sense, developed into an important factor in the context of sustainable development. Within the EU framework tourism represents one of the largest economic sectors, with 9% of employees and 9% share in consumption. It also represents one of the five export categories in 83% of all world countries and a major source of foreign exchange earnings in almost 38% of countries. Hence has a major role in the economy of many countries as a source of employment and a way to fight poverty. According to the forecasts of the World Tourism Organization (WTO) the number of tourist arrivals in Europe will be doubled by 2020. year, amounting to 720 million. This expected development implies a serious risk to the environment and welfare of the population, but also for tourism as an industry.

There is different understanding of the meaning and the definition of sustainable tourism throughout the world and it depend on various factors, such as type of actors involved in defining it, driven by different interests, needs and points of view. Usually there is a great difference in understanding sustainable tourism between local and national/regional level, while at the same time there is a consensus in understanding among various relevant international organizations, such as: World Tourism Organization (WTO), United Nations Environment Programme (UNEP), Global Development Research Centre, Sustainable Travel International, The International Ecotourism Society, Responsible Tourism Partnership, The International



Centre for Responsible Tourism, European Charter for Sustainable Tourism in Protected Areas, and many more.

The simplest definition of the sustainable tourism includes "any form of tourism that contributes to environmental, social and economic integrity and improving the natural, artificial and cultural values on permanent basis" (Ministry of Environment and Spatial Planning, Republic of Serbia).

According to the information "The possibilities of the sustainable tourism development in Serbia" sustainable tourism includes activities that have a slight negative impact on the environment. Unfortunately, Serbia lacks suitable infrastructure that would support sustainable tourism, as well as an effective and appropriate planning of waste management in tourist areas. Special emphasis should be put on "the development of environmentally friendly" technologies (Ministry of Environment and Spatial Planning, Republic of Serbia, 2009.). Global Platform for change in Serbia was made through (verified) documents such as the Global Code of Ethics in Tourism (WTO), Declaration on eco-tourism in Quebec, Recommendations for sustainable tourism development in sensitive areas of the Directive for the conservation of biodiversity, etc. They point to the new paradigm of development of tourism: multi-sectored activity planning which maximizes local welfare, contributes to the sustainable management of the environment and provides cultural exchange, leading to the necessary dialogue at all levels.

To complete the sustainable framework for tourism it is necessary to mention few more documents referring to the principles, criteria and forms of activities defined by the above mentioned world and European organizations. First of all, there is Agenda 21- for tourism industry adopted by the WTO and World Council for Travel and Tourism. The aim of this document is to assist government agencies responsible for tourism, national tourism organizations, business associations and enterprises in the tourism industry to realize their potential in order to achieve sustainable development at local, regional, national and international level.

The European Charter for Sustainable Tourism in Protected Areas is a practical management tool that enables protected areas to develop tourism sustainably. The core element of the Charter is working in partnership with all relevant stakeholders to develop a common sustainable tourism strategy and an action plan on the basis of a thorough situation analysis. The aim of all Charter projects and activities is the protection of the natural and cultural heritage and the continuous improvement of tourism in the protected area in terms of the environment, local population and businesses as well as visitors. The Charter and the Charter Network is coordinated by the EUROPARC Federation and it represents around 440 members in 36 European countries, who themselves manage the green jewels of Europe's land, sea, mountains, forests, rivers and cultural heritage. The vision of the European Charter for Sustainable Tourism includes:

- To increase awareness of, and support for Europe's protected areas as a fundamental part of our heritage, that should be preserved for, and enjoyed by, current and future generations.
- To improve the sustainable development and management of tourism in protected areas, which takes account of the needs of the environment, local residents, local businesses and visitors.
- To reflect the wish of authorities managing protected areas, of local stakeholders and representatives of the tourism business to support and encourage tourism that accords with the principles of sustainable development.
- To ensure the long-term protection and preservation of natural, cultural and social resources and to contribute in a positive and equitable manner to the economic development and well-being of individuals living, working, or staying in protected areas.

The complexity of the criteria defined at the Cape Town Conference (2002.) makes it a valuable platform for integral planning and managing in the field of tourism. Cape Town Conference was organised by the Responsible Tourism Partnership as a side event preceding the World Summit on Sustainable Development in Johannesburg in 2002. The principles of the Cape Town Declaration are related to the 'Responsible Tourism' which should:

- minimize negative economic, environmental, and social impacts;
- generate greater economic benefits for local people and enhances the well-being of host communities, improves working conditions and access to the industry;
- involve local people in decisions that affect their lives and life chances;

- make positive contributions to the conservation of natural and cultural heritage, to the maintenance of the world's diversity;
- provide more enjoyable experiences for tourists through more meaningful connections with local people, and a greater understanding of local cultural, social and environmental issues;
- provide access for physically challenged people; and
- be culturally sensitive, engenders respect between tourists and hosts, and builds local pride and confidence.

Cape Town Declaration also defines a set of Guidelines specifically related to the Economic Responsibility, Social Responsibility and Environmental Responsibility, thus giving the practical and useful tool to be implemented in national policies.

What specifically deserves the attention and is directly related to the case study presented in this paper is the set of Global Sustainable Tourism Criteria (GSTC), launched at the World Conservation Congress in October 2008. It is a set of 37 voluntary standards representing the minimum that any tourism business should aspire to reach in order to protect and sustain the world's natural and cultural resources while ensuring tourism meets its potential as a tool for poverty alleviation. The GSTC were developed as part of an initiative led by Rainforest Alliance, the United Nations Environment Programme (UNEP), the United Nations Foundation, and the United Nations World Tourism Organization (UNWTO). Over 40 of the world's leading public, private, non-profit, and academic institutions joined together to analyze thousands of worldwide standards and engage the global community in a broad-based stakeholder consultation process. The criteria are part of the response of the tourism community to the global challenges of the United Nations' Millennium Development Goals. Poverty alleviation and environmental sustainability – including climate change – are the main cross-cutting issues that are addressed through the criteria.

The Global Sustainable Tourism Criteria are organized around four main themes: effective sustainability planning; maximizing social and economic benefits for the local community; enhancing cultural heritage; and reducing negative impacts to the environment. Although the criteria are initially intended for use by the accommodation and tour operation sectors, they have applicability to the entire tourism industry. Some of the expected uses of the criteria include the following:

- Serve as basic guidelines for businesses of all sizes to become more sustainable, and help businesses choose sustainable tourism programs that fulfil these global criteria;
- Help consumers identify sound sustainable tourism programs and businesses;
- Help certification and other voluntary programs ensure that their standards meet a broadly-accepted baseline;
- Offer governmental, non-governmental, and private sector programs a starting point for developing sustainable tourism requirements; and
- Serve as basic guidelines for education and training bodies, such as hotel schools and universities.

Global Sustainable Tourism Criteria cover 4 groups of criteria: A) Demonstrate effective sustainable management; B) Maximize social and economic benefits to the local community and minimize negative impacts; C) Maximize benefits to cultural heritage and minimize negative impacts; D) Maximize benefits to the environment and minimize negative impacts. The list of criteria most directly related to the research and case study presented in the paper is as follows:

A.1. The company has implemented a long-term sustainability management system that is suitable to its reality and scale, and that considers environmental, socio-cultural, quality, health, and safety issues.

A.2. The company is in compliance with all relevant international or local legislation and regulations (including, among others, health, safety, labour, and environmental aspects).

A.6. Design and construction of buildings and infrastructure:

A.6.1. Comply with local zoning and protected or heritage area requirements;

A.6.2. Respect the natural or cultural heritage surroundings in siting, design, impact assessment, and land rights and acquisition;



- A.6.3 Use locally appropriate principles of sustainable construction;
- A.6.4 Provide access for persons with special needs.
- B. Maximize social and economic benefits to the local community and minimize negative impacts:
- B.1. The company actively supports initiatives for social and infrastructure community development including, among others, education, health, and sanitation.
- B.2. Local residents are employed, including in management positions. Training is offered as necessary.
- B.5. A code of conduct for activities in indigenous and local communities has been developed, with the consent of and in collaboration with the community.
- B.9. The activities of the company do not jeopardize the provision of basic services, such as water, energy, or sanitation, to neighbouring communities.
- C. Maximize benefits to cultural heritage and minimize negative impacts:
- C.3. The business contributes to the protection of local historical, archaeological, culturally, and spiritually important properties and sites, and does not impede access to them by local residents.
- C.4 The business uses elements of local art, architecture, or cultural heritage in its operations, design, decoration, food, or shops; while respecting the intellectual property rights of local communities.
- D.1. Conserving resources:
- D.1.3. Energy consumption should be measured, sources indicated, and measures to decrease overall consumption should be adopted, while encouraging the use of renewable energy.
- D.1.4. Water consumption should be measured, sources indicated, and measures to decrease overall consumption should be adopted.
- D.2. Reducing pollution:
- D.2.1. Greenhouse gas emissions from all sources controlled by the business are measured, and procedures are implemented to reduce and offset them as a way to achieve climate neutrality.
- D.2.2. Wastewater, including gray water, is treated effectively and reused where possible.
- D.2.3. A solid waste management plan is implemented, with quantitative goals to minimize waste that is not reused or recycled.
- D.2.4. The use of harmful substances, including pesticides, paints, swimming pool disinfectants, and cleaning materials, is minimized; substituted, when available, by innocuous products; and all chemical use is properly managed.
- D.2.5. The business implements practices to reduce pollution from noise, light, runoff, erosion, ozone-depleting compounds, and air and soil contaminants.
- D.3. Conserving biodiversity, ecosystems, and landscapes:
- D.3.1. Wildlife species are only harvested from the wild, consumed, displayed, sold, or internationally traded, as part of a regulated activity that ensures that their utilization is sustainable.
- D.3.2. No captive wildlife is held, except for properly regulated activities, and living specimens of protected wildlife species are only kept by those authorized and suitably equipped to house and care for them.
- D.3.3. The business uses native species for landscaping and restoration, and takes measures to avoid the introduction of invasive alien species.
- D.3.4. The business contributes to the support of biodiversity conservation, including supporting natural protected areas and areas of high biodiversity value.
- D.3.5. Interactions with wildlife must not produce adverse effects on the viability of populations in the wild; and any disturbance of natural ecosystems is minimized, rehabilitated, and there is a compensatory contribution to conservation management.
- Contrary to the views and principles expressed above, the standpoint of the local people living in protecting areas is not very optimistic about the possibilities of making tourism industry sustainable. According to the numerous reactions of people living in the protected areas with high level of potential for tourism, it's hardly possible to balance the interests of mass tourism and a small society. The huge impact of the former affects

all aspects of life of the local community, such as land use, property market, infrastructure and traffic, even the social life and behaviour. Some even think the phrase ‘sustainable tourism’ is a contradiction in terms, such as ‘fair colonialism’ or ‘peaceful war’¹. On the other hand, according to the authors’ research, the reactions of people from local community were addressed more to the competences upon the protected natural areas and the disability to affect the course of the development, which was mostly conducted at the national level².

5 CASE STUDY OF KOPAONIK NATIONAL PARK

Kopaonik, the biggest mountain of the central Serbia, spreads its wide mountain-ridge 82.7km long and its greatest width being 63km. There are few peaks higher than 1600m: Gobelja (1934m), Karaman Vucak (1936m), Suvo Rudište (1976m) and Pancicev vrh (Pancic Peak) (2017m). The mountain is 250km away from Belgrade, the capital. Kopaonik is rich in cold and radioactive waters at higher altitudes and hot ones in the lower parts. In Kopaonik region, besides the usual ores: metals iron, lead and zinc, there are rare metals silver and gold and rare minerals: volastonite, fluor-spar, asbestos and other. What is the most important, there are many natural monuments: geological and geomorphologic monuments-stone granite sculptures and monuments, as well as hydrological monuments-springs and fountainheads and strictly protected water-courses of the river basins: Samokovska reka, Gobeljska reka, Barska reka, Brzecka reka and Duboka reka. Favorable natural conditions of this high mountain massif enable development of almost all the forest mountainous belts with prime and autochthonous forest vegetation. Pine and spruce forests are the best known and they can be found up to the altitude of 1500m. The animal world of the present Kopaonik is various despite it has been reduced in number. Such elements have formed an environment of exceptional beauty and values which are formally protected within the National park. Mountain climate of Kopaonik with great number of sunny days during the year and snowy cover which lasts approx 6 months per year enables the development of various recreational and sports activities as well as the development of tourism. However, the protected areas of natural beauties along with protected species are a great constraint to the development of tourism.



Fig. 1: Natural beauties of Kopaonik mountain

¹ For example, such attitude was expressed during the procedure of adopting Goa Regional Plan 2021, when the people from local community tried to reject the development based on mass tourism and destruction of natural inheritance. <http://www.navhindtimes.in/goa-news/agonda-villagers-oppose-notified-regional-plan-2021>

² Based on the research for the Local regulatory plan for the locality ‘Jaram’, Kopaonik National park in Serbia (Faculty of Architecture University of Belgrade).

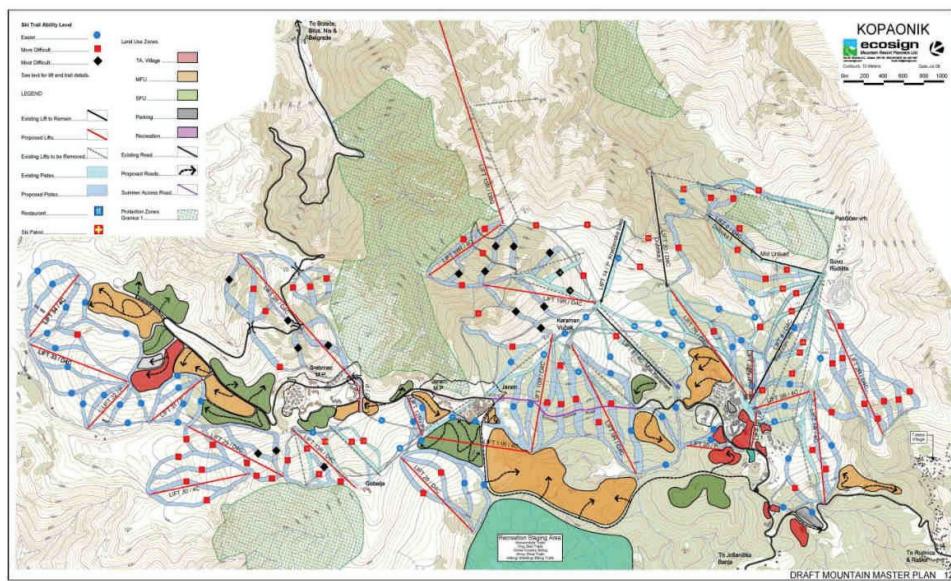


Fig. 2: Kopaonik master plan for tourism

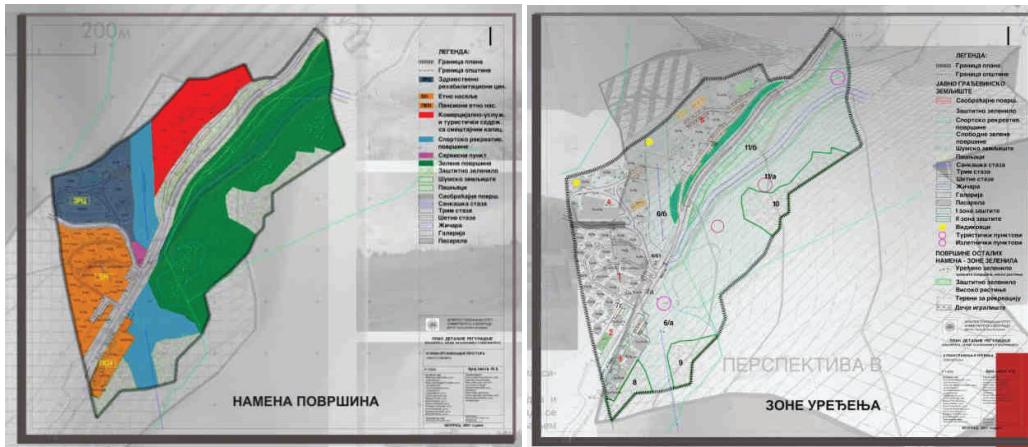
Kopaonik was declared a National Park in 1981, and covers the area of 11,800 hectares, while the protected area covers 19,986 hectares. 698 hectares are under the special protection which consists of 13 localities and 26 natural monuments, classified as immovable cultural property. Kopaonik National park, as well as other national parks in Serbia is also the area of special planning treatment. According to the main legal framework (national Planning and building law, 2009.), the areas of national parks are to be treated through the Spatial plan of special purpose, which sets the zoning related to the rules and constraints about building and land use. Being a plan of special purpose with very complex data base and covering a large area, Spatial plan of special purpose for Kopaonik has been done over few years. At the same time, Kopaonik was a target of various investors, who were attracted by the natural beauty and extreme potentials for the growth of winter tourism centres.

Administratively, Kopaonik is part of two local community areas – Raska and Brus. While the Raska area has been developed for many years, containing large and most significant tourism region in Serbia and one of the most important in the Balkans, the Brus area has been neglected. The tourism capacities of the Raska area can be classified as mass tourism, while at the same time Brus area was predominantly oriented to the winter sports and recreation, with a lack of tourist capacities. The local government of Brus therefore decided to initiate the local planning framework, supporting 3 Local regulatory plans within the Kopaonik National park. One of the localities to be planned through local regulatory plan was "Jaram", the area of approx. 20 hectares at the highest altitude of 1700m. The purpose of the plan was to establish the solid foundation for the development of local community economy through tourism, sports and recreation and additional compatible activities, within the sustainable principles.

Having in mind the sustainable framework, Local regulatory plan for the locality "Jaram" in Kopaonik National park have faced many problems and dilemmas. The constraints were numerous: protected natural areas, some of which were under total restriction of building, the lack of infrastructure, relatively poor accessibility, the lack of the financial resources of the local community for implementation of the public interest and generally bad social and economic situation and high unemployment rate. On the other hand, the opportunities were related to the relatively preserved areas which had not been 'attacked' by the informal settlements and buildings, which was not the case at in Raska area. The only way to try to reach optimal solutions was through the dialog of all actors and stakeholders involved, resulting in compromise and compensation, specially related to the infrastructure network, waste management and employment of the local people at one hand, and to the possibilities for the forming of new tourist centre. Though it could not exactly be named as cooperation between public and private sector, the local community and the private sector set a sequence of local agreements and rules related to the funding of the traffic and infrastructure network for the wider area, as well as about the local employment policy to be implemented in new tourist

centre. In turn, area defined by local plan for the development of tourism, recreation, sports and cultural activities were interesting and worth investing.

The urban design concept was based on the principle of total protection at one side, and concentration of activities and built area on the other. In order to protect the area under special conditions related to local endemic fauna species and prevent the change of land use, the tourist centre was to be formed at the other side of local road, far enough from vulnerable area. Having in mind severe climate, exposure to the strong winds during the winter period and elements of local architectural heritage, the new tourist centre area was defined as a dense structure with maximum height of 3 floors and with a green belt of high pine trees protecting it. New tourist centre was also defined as one whole, rather than a group of scattered structures, thus preventing negative influence of climate, as well as the possibility of (unwanted) informal buildings. The result in the form of planning solutions and rules through Local regulatory plan was a compromise between listed constraints and aspirations of the investors.



6 CONCLUSION – IS SUSTAINABILITY SUSTAINABLE?

The paper discussed wider framework for sustainable development in Serbia, specifically putting the stress on the possibilities of the sustainable tourism in protected natural areas. Having confronted different points of view, as well as the different standpoint of the local and national level policies and constraints, the paper emphasizes the importance of the local characteristics and local economic and social setting to the implementation of global sustainable policies. Best possible result gained in particular setting can be a compromise, optimal solution, while maximal solutions can be obtained in highly economic and socially developed societies and environment. In search of better solutions, more favourable to natural resources and environment a set of criteria should be set in order to prevent arbitrary behaviour of some of the actors involved in the planning process, which can give good but also poor solutions. Furthermore, the true introducing of participatory and collaborative planning should result in the implementation of bottom up approach and more visible involvement of local community, given the chance to influent planning solutions and procedures better, would make a difference and result in more effective and implementable plans in Serbia.

7 REFERENCES

- Haughton, G., Hunter, C.: Sustainable cities, Jessica Kingsley Publishers, London 1996.
- Kazepov, Y. (ed.); Cities of Europe - changing contexts, local arrangements, and challenge to urban cohesion, Blackwell Publishing, UK, 2005.
- Mitrović, B.: City of social balance, in: Milić, V. Djokić, V. (eds.): "Belgrade Capital", Faculty of Architecture University of Belgrade, Berlage Institute, Rotterdam, Fakultat fur Architektur der RWTH Aachen, 2006.
- Stiglitz J.: Ekonomija javnog sektora (Economics of the Public Sector), Ekonomski fakultet, Beograd, 2004.
- Vujošević M.: Planiranje u postsocijalističkoj političkoj i ekonomskoj tranziciji, IAUS, Beograd, 2003.
- Vujošević M.: Otvorena pitanja rekonstituisanja javnih inrteresa u Srbiji: narušeni legitimizacioni osnov i obnova proaktivnog planiranja, in: Gligorijević, Ž. (ed.): Javno dobro – Komunikacije 2004, Proceedings, CEP, Belgrade, 2004.
- www.rec.org/REC/Programs/Sustainable_cities
- Darnton A. et al: Promoting Pro-Environmental Behaviour: Existing Evidence to Inform Better Policy Making, Summary Report, A Study for The Department for Environment, Food and Rural Affairs, The Centre for Sustainable Development, University of Westminster , London, 2006.
http://randd.defra.gov.uk/Document.aspx?Document=SD14002_3822_FRP.pdf



- Lucas K. et al: Environment and Social Justice: Rapid Research and Evidence Review, Final report, IESR, CfSD, Policy Studies Institute, University of Westminster, London, UK 2004.
<http://www.psi.org.uk/sdrn/SDRN%20environment%20and%20social%20justice%20report%20-%20revised.pdf>
- Excellence in Sustainable Business, Strategies and Practices for Business Growth and competitiveness, Executive brief, CII-ITC, Centre of Excellence for Sustainable Development, 2010.
http://www.sustainabledevelopment.in/events/pdf/Excellence_Sustainable_Business.pdf
- Lucas K. et al.: Local Agenda 21: When is it a model for joined-up community based activity?, Centre for Sustainable Development, University of Westminster, London, 2001. http://home.wmin.ac.uk/cfsd/reports/JRF_LA21_Literature_review.pdf
- Issues for the practice of sustainability appraisal in spatial planning - a review, Final Workstream Report, 2008, Sustainable Development Research Network by Land Use Consultants and the Royal Town Planning Institute, <http://www.sdrn-research.org.uk/wp-content/uploads/sdrn-spatial-planning-workstream-final-report-21-10-08smallerpublished.pdf>
- <http://www.european-charter.org/home/>
- Local regulatory plan for the locality 'Jaram', Kopaonik National park in Serbia (Faculty of Architecture University of Belgrade), 2006.