Održivi razvoj - prelazak na zelenu ekonomiju – bezbednosne implikacije

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Rezime: Termin "zelena ekonomija" nije nov. Zelena ekonomija se spominje u više navrata u prošlom veku, posebno imajući u vidu rastući globalni interes za ekološke probleme i klimatske promene o kojima se najviše raspravlja u svetu. Mišljenje da globalna ekonomija zasnovana na potrošnji fosilnih goriva za proizvodnju energije nije održiva ubrzano raste. Povećanje emisije gasova staklene bašte praćeno uništenjem ili oštećenjem ekosistema dovodi ljude u opasnost od izlaganja i istovremeno smanjuje sposobnost prilagođavanja. Ako želimo da naša budućnost bude sigurnija na bilo koji način, ekonomija mora da se promeni kako bi obezbedila blagostanje za ljude, ali bez uništenja ekosistema, od toga u velikoj meri zavisi dobrobit.

Ključne reči: Zelena ekonomija, održivi razvoj, klimatske promene, bezbednost

Sustainable development – going over to green economy – security implications

Abstract: The term "green economy" is not new. Green economy is being mentioned repeatedly in the last century, especially considering the increasing global interest for environmental problems and climate changes taking the place of the most discussed topic in the world. The opinion that the global economy based on the consumption of fossil fuels for energy production is not sustainable is rapidly rising. The raising emission of greenhouse gases followed by the destruction or damage the ecosystem put humans at risk from exposure simultaneously reduces the abilities to adapt. If we want our future to be safer in any means, the economy must change in order to provide well-being for humans, yet without the destruction of the ecosystem, that well-being largely depends on.

Keywords: green economy, sustainable development, climate change, security

1. Introduction

1.1 What is the green economy?

We still cannot speak about a unique definition and the main constituents of green economy on the international level. Yet, if the opinion that the term of green economy should be defined by every state on its own and adapt it to its own reality prevails, there are many attempts to uniquely define this concept. The UN program for environmental protection (UNEP) defines green economy as an economy with the result to increase the well-being of people and social union, while reducing the risk for the environment and economic insufficiencies. In other words, green economy is considered an economic activity with low emissions, efficient resource use and is socially inclusive. In green economy, the growth of income and employment is achieved through public or private investments that reduce gases and other pollutants, create energetic efficiency and efficiently use resources, prevent losses of biodiversity and provide ecosystem services. These investments should aim and be supported through public expenses, political reforms and changes in jurisdiction (Stošić-Mihajlović, Đurić, 2008a).

Even though the basic idea can be traced back for years, if not decades, promotion for green economy only happened in the last couple of years (successfully, we hope) as a crucial change of mind.

While looking at the ruins of neoliberal economic paradigms, the need for something new is entirely obvious. Yet, it is not always easy to introduce something new into the practice. The neoliberal opinion has been turned into the leading (and nearly exclusive) paradigm of development, ever since the Reaganomics and Tacherism, through the affirmation of the Washington Consensus. At one point, it almost became its own religion. It is believed that this form of economic organization, implemented or imposed is one of the most successful way to achieve human well-being within the concept of human rights and freedom. The economic crisis we witnessed lead many to sober up. In the search for an economic organizational form that would not make the same mistakes like the neoliberal economy, some things become evident (Đurić, Stošić-Mihajlović, 2008).

We cannot separate economy from what represents its (economic and social) basis. On the other hand, economy must be organized in a way that economic growth simultaneously leads to new work places and new values, but also to a faster elimination of social marginalization (Đukanović, 1996).

At the same time, economic growth must be based and result in reduction of resource use and destruction of ecosystem. The ability to create new values and well-being, efficiency and competitiveness (the traditional measures of economic activities) should not be neglected (Mihajlović, Đurić, Stošić-Mihajlović, 2008).

On the contrary, these measurements should be expanded with new measures from social and environmental justice, since this is the only way to secure a future and to build up new natural capital resources as sources of public purpose, especially for the poorer population (since this population largely depends on nature). The report made by the General Secretary of the UN at the First UNCSD summit mentions four principles that represent the basics of green economy:

- Deficiency analysis of the market and the internalization of externals;
- System approach to the economic structure and its influence on important aspects of sustainable development;
- Focus on social goals (new work places e.g.) and defining politics to incorporate social goals with other goals of economic policy; Focus on the macroeconomic frame and development strategies with the aim to achieve sustainable development faster (O’Riordan, 1995).

In this regard, green economy differs from today’s dominant economic paradigms used by the creators of economic policies or taught in classic economic faculties in three different ways:

- In its core, green economy is tightly connected to social justice. For traditional economists, “welfare economy” is just something peripheral, something that complements dominant economic theories. For green economists, justice and equality are in the centre of the performance and are the important parameter for traditional measures of economic values, like e.g. efficiency. Many green economists have been researching developing economies of developing countries, and even those who do not have any experience stick to the principles of equality and necessity to change the business requirements to cater to the less developed.
- Green economy has its roots in the ecological global movement. It rose from the bottom to the top and is being built based on practical experiences instead of abstract theories.
- Green economy is still not an academic field and is not largely present on universities and in academic circles. The reason being is that green economy and its followers do not have anything to offer to science that academic discussions about the economy and the role of economy, largely based on globalized economic systems (whose foundation mainly contributes to non-sustainable production and consumption) did not already offer.
- Considering the prior mentioned principles, many instruments were or are still developed, together with the policy that could accelerate the development towards greener economies. The cited report mentions following policies as the most frequent:

- a) Policies of real value and real prices, including the removal of subventions, valuing natural resources and introducing tax for everything harming the environment in order to internalize external costs, support sustainable consumption and make righteous business decisions possible. These instruments and policies are based on the source principles of environmental economy;
- b) Policies with green public procurements promoting “greener” markets and business in general;

- c) Reforming environmental taxing. This is largely based on the experience of developed European states. In its core, this reform tends to change the tax focus from “positive” production factors (e.g. employment) towards “negative” factors (e.g. pollution). This way, two benefits would be achieved: more work places through reduction of extreme environmental protection costs;
- d) Investment of publicly available resources into the sustainable infrastructure (including public traffic, renewable energy and improvement of existent infrastructure with the goal of better energetic efficiency) and natural capital in order to renew, keep and (wherever it’s necessary) increase natural capital. This is of utmost importance now, in the aftermath of the economic crisis, where more and more states turn towards stimulation packages from public resources in order to reanimate production;
- e) Leading resources from public funds into research and development of technologies for environmental protection, partially to reduce investments in these fields coming from private funds and to stimulate investment in critical sectors (e.g. renewable energy), with the potentially high economic frame. This would also reduce the participation and the importance of research in the fields of “dirty” and risky technology;
- f) Strategic public investments through different support programs and partnerships in anything that can be considered as “expenses” when connected to development in order to create basics for self-efficient and sustainable process of social and ecological sustainable economic growth;
- g) Social policies where the social goals would get in line with the suggested economic policies (Đurić, Stošić-Mihajlović, 2008).

What are the direct advantages of turning to green economy for society?

Green economy recognizes the values of natural capital and invests in it:

- A lower level of deforestation and renewable forests is economically possible and efficient and has a positive impact to agricultural production and better living conditions in rural areas;
- Making agriculture “greener” gives hope that in future there would be enough food for an increasing population without damaging basic natural resources needed for agricultural production;
- The increasing lack of drinking water can be adjusted through policies that implement investments in new water supply systems and increasing the efficiency of existent ones; Investments in sustainable levels of fish population will secure needed income in the long-run (Stošić-Mihajlović, Đurić, 2008a).

Green economy is needed if there is a desire for real reduction of poverty in the world:

- Turning agriculture “greener” in developing countries, based on the improvement of economic force of smaller agricultural producers influences the reduction of poverty while simultaneously investing in natural capital (since poorer households depend on it largely);
- Increasing investments in natural resources, which the poorer population to achieve their income, is using, ensures better quality of life in many parts of the world with low household income rates. In many countries, one of the most common possibility to switch to greener economy is the investment in drinking water supply and sanitary systems for the poorest members of society;
- Renewable energy can be efficient for eliminating energetic poverty; Finally, developing tourism (when projected and lead the right way) can incredibly increase the local economy and reduce poverty (Mihajlović, Đurić, Stošić-Mihajlović, 2008).

Green economy also creates new work places and increases the level of social equality:

- Switching to greener economy also means switching to new employment policies and create more work places than the traditional economic model;
- If investments would flow to green economy, agriculture, citizenship, forestry and infrastructure, there would be a significant increase of employment – in all terms (short, middle and long terms);

- Realign at least one percent of the global GDP to improve energetic efficiency and use renewable energy would additionally lead to higher employment and produce “clean” energy;
- Employment in the waste management and recycling sectors would additionally grow, just like the amount of waste due to the increasing population and consumption, yet, in this sector, there are still challenges tied to working conditions.

Greener economy also influences the replacement of fossil fuels with renewable energy and technologies with low carbon emissions:

- Many possibilities to improve energetic efficiency are self-beneficial;
- Investments in renewable energy and technologies of getting green energy today is a business branch with huge growth potential on the market, because of the fact that it has become very competitive. From 2002-2009, investment in renewable energy grew at an annual rate of 33% (Global Trends in Sustainable Energy Investment 2010: Analysis of Trends and Issues in the Financing of Renewable Energy and Energy Efficiency. Paris: UNEP/SEFI, pp.13).
- Technologies of renewable energy are additionally desired, if we consider the high costs of using fossil fuels for the society as a whole. For now, these are ignored or postponed for future generation (Stošić-Mihajlović, Đurić, 2008a).

Green economy also leads to greater resource efficiency and energies:

- The industry today meets bigger challenges and possibilities for efficient use of resources. There are many indicators that global economy still has unused possibilities to produce the same amount of well-being by using less materials and energy;
- Recycling waste and getting energy from waste becomes a more profitable industry branch and continues to increase with raising awareness about the value of waste as a recycling resource and for energy production; reducing waste and increase efficiency in agriculture and food production would lead to globally secured foods today and in the future.

Green economy brings solutions to secure sustainable cities and urban mobility based on low carbon emission technologies.

The most investments will be in cities of the future, especially in developing countries. By making our cities “greener” (projecting them to have large population density, many work places and open space for trade and entertainment, as well as better public transport), we also increase its efficiency and productivity

- A key marker of efficiency for green economy will be tied to building and reconstruction of objects with the aim to raise energetic efficiency and save resources;
- Improving energetic efficiency in infrastructure, the switch to clean fuels and better public and non-motorized transport in urban mobility must contribute to important economic and health purpose (Stošić-Mihajlović, Đurić, 2008b).

Green economy grows faster in comparison to traditional economy, while maintaining and reconstructing natural capital:

- The investment scenario in green economy on a level of 2% of the global GDP in the time from 2011-2050, being promoted by leading international development institution should lead to an economic growth equal to the growth in world economy if current trends would continue. Yet, this scenario significantly reduces the risks of climate changes, lack of drinking water and loss of biodiversity.

1.2. Does green economy replace the concept of sustainable development?

The concept of green economy does not replace sustainable development. However, today, we have more and more evidence that achieving sustainable development largely depends on movement in the economic sphere. Decades where new values and well-beings were created based on principles and by using traditional economic models have not been able to cope with social marginalization and over the top consumption of resources have lead us to still be far away from reaching millennial high development goals today (Đurić, Stošić-Mihajlović, 2008).

Sustainability is still the first class long term goal, but additional efforts must be aimed towards achieving the concept of green economy if someone wants to reach that goal.

1.3. Green economy in the context of sustainable development and the sustainability of the environment

Sustainable development is a concept and a great paradigm that connects economy, society and environmental protection, within which the strategies of green growth can be treated as an adequate frame of practical policies. With that in mind, it is clear that green economy represents something more concrete than sustainable development. The principles of sustainable development refer to long term striving, while green economy combines the striving to create new possibilities that would lead to more robust economic recovery in short terms, together with new, ecologically efficient sources of economic growth in the long term.

Most importantly, the policy of green growth especially take into account places where economic and environmental protection interests meet and overlap and try to find the best options for development in these areas. Therefore, strategies of green economic growth create better political frames, needed for achieving the concept of sustainable development and thus, contribute to sustainable development (Stošić-Mihajlović, Đurić, 2008a).

How much more will green economy cost?

Green economy does not go against economic growth. On the contrary, it should represent a new wave of growth, generate new, decent working places, and secure the necessary strategy for reducing existing levels of poverty. The opinion that the goals of environmental sustainability and economic progress are irreconcilable and it is necessary to give concessions to one or the other side can still be seen today. However, there is a lack of evidence that green economy reduces income or has any kind of impact on employment opportunities. Many sectors tied with green economy use this example to show that important investments and great economic growth and employment can be achieved in green economy. The key factor is to create better transition requirements towards green economy. There is much more to be done in that regard, mainly through creating an adequate environment and practical policies. Additionally, another myth burdens the creation of a strong green economy: Ever so often, it can be heard that this is a luxury that only the richest states can afford, or that it is just a way for rich states wants to border the development of undeveloped countries and leave them in a state of poverty. Yet, there are various examples in different sectors of developing countries showing that the transition to green economy is something beneficial to these countries and can be used in any part of the world (Radović, 2013).

However, we still cannot talk about a certain amount of money needed in order to turn the global economy green. Existing estimates mainly deal with investments for achieving the required goals of lower carbon emissions (Stošić-Mihajlović, Đurić, 2008b).

E.g., the “Blue Map scenario” of the International Environmental Protection Agency (IEA), according to which carbon dioxide emissions in energy production should be lowered until 2050, estimates the needed investments at 750 billion Dollars from 2010-2030 and 1.600 billion dollars annually from 2030-2050. The World Economic Forum and the Bloomberg Group, on the other side, estimate that investments in renewable energy must increase to 500 billion Dollars annually until 2020, if we want to reduce global warming to under 2°C.

How do we know that growth is “green”?

For this, we need objective markers and data. The estimate system, developed by OECD, bases on four internally connected indicator groups pointing towards the following:

- Energetic efficiency for consumption and production;
- Level of natural resources;
- Environmental quality of life, and
- Political and economic response.

Today, there are at least 30 sufficient developed possible indicators to follow green growth, with the representative group of “leading” indicators following the most important elements of the concepts of green economy (Stošić-Mihajlović, Đurić, 2008a).

The data we have today points to the following existing trends:

1. Pressure to the global environment is still growing, yet new increase of economic growth individually has less pressure on the environment today than in the past,
2. There are indicators that carbon gas emissions are slowly fading from OECD member states and developing countries,
3. The industry of products and services for environmental protection today play a much larger role in creating additional values and employment.

1.3. How can green economy be additionally achieved?

There are various requirements to fulfil on the way to green economy. These requirements generally mean changes in national regulations, policies, subventions and support systems, but also changes on international markets, international trade and development support.

It is clear that the existing environment leans more towards traditional models and the use of fossil fuel energy. E.g., if the subventions for fossil fuels would still exist (reaching more than 650 billion Dollars globally), it will be hard to talk about any kind of possibility switching to renewable energy sources and lean towards green economy.

The state is still the most responsible for pursuing green agenda, and the state would have to find a way to change the fiscal policy with reforms and elimination of subventions that aren't environmental friendly (energy, agriculture, industry, fishery, water supply and other spheres). After that, it is necessary to create conditions for investments through the development of new and refreshing the existing market mechanisms, improving regulations and their implementation, and direct investments in sectors contributing to green economy. A big step in this regard can be implementing policies and procedures of “green” public procurements and green bills.

A nation would have to put additional effort to clear the conditions in global markets, improve the rights of free trade and channels of international development support, as well as to encourage international cooperation (Stošić-Mihajlović, Đurić, 2008b).

Strategic eco-management planning possesses the necessary integrative potentials for managing environmental changes, long-term time horizons and positions of catalysts for merging public, social and private interests. The concept of ecologically sustainable socio-economic growth under modern conditions gets to be the foundation of development planning with influence on every type of human activity. Yet, the road to sustainability is a complex and long lasting process, requiring changes in behaviour and mindsets of all social factors. To paraphrase, it requires accepting the fact that the ecological development factor is as important as the economical (Radović, 2013).

The planning process manifests itself in very complex activities, which could have long-term effects for many people. It is very important to investigate the effects and precautions of the factors causing them, with supporting the positive and preventing or at least knowing the manifestation aspect of the negative.

The concept of sustainable development is not new, yet sometimes it fails to secure a balanced organization and space management in order to protect the environment. The contradiction of different opinions and interests regarding “social and economic development – urban planning – environmental protection” affected the creation of partial and mutually disconnected approaches to environmental protection. The existing models of strategic eco-management planning mainly involve environmental protection as a special planning sector. From a sustainable development standpoint, this will not lead to wholesome results (Stošić-Mihajlović, Đurić, 2008b).

The mentioned conditions hint that, at this moment, there is a lack of requirements for achieving the main part of eco-management planning in environmental protection. Yet, disregarding the borders and honouring the fact that planning is a key factor in the system of environmental changes; with attempts to determine frames for formulating strategies of environmental management and planning under new and changed conditions. If we want to achieve positive development of urban agglomeration, the ecological picture of cities and ecological valorisation of their surroundings. By using the experience of developed countries and signed global declarations, cities and their surroundings can find the right way to sustainable development of their regions. At the same time, it is required that sustainable development of a city does not take into account only planning decisions but also the permanent education of decision makers (locally and state wide), as well as the total (eco) information for citizens about the necessity of a healthy environment. One of the ways on how to bring these opinions closer to the citizens is an effective eco-marketing of the government and institutions, promoting a healthy mindset. All these aspects would be covered by the eco-management system. This system must be the leading role in future development of urban areas (Radović, 2013).

2. Sustainable urban development

Sustainable development secures using goods in such a way that it meets the developmental requirements of today's generations, whilst securing that the future generations also meet their requirements. Sustaining and improving the quality of life and protect the health of people is an ever so increasing necessity. Meeting goals in environmental protection requires that all actors accept the fact that, systematically, they must introduce an environmental management system (EMS) and improve it constantly (Stošić-Mihajlović, Đurić, 2008a).

The urban environment pays a high price for its development. Without any regards for ecological laws and ecological criteria, further development simply would not have been possible. We can already witness that environmental quality in cities is getting more and more problematic. Bearing that in mind, urban areas must conduct following two activities:

1. Reconstruct the already degraded environment so that it does not get in the way of functional living.
2. Protect the existing quality of life.

Both activities cannot be achieved just by using measures and management. A system of different measures that, through the system of social organization, secures the quality of life can be defined as environmental management. When management conducts these measures in practice, their starting point must be the organizational, financial and legislative consolidation in environmental protection (Lješević, 1998).

The ecological system possesses characteristics of a dynamic and open system. Within this system, the anthropogenic influence constantly disturbs the existing balance and threatens to impose balance at the expense of humans at one point. Using existing space in the formation and development of urban settlements is one of the most important factor for humans to influence the conditions in their ecosystem (Đurić, Stošić-Mihajlović, 2008).

Figure 1: Components of sustainable development of urban settlements.

We could say that the goal of urban eco-management is to increase the environmental quality in cities. This requires the existence of several measures to secure the optimal natural and social actors who have a direct impact on the quality of urban environments and the quality of life (Filipović, 2000).

Social standards, national standards, regulations and acts of local governments define environmental quality. These laws secure norms that aim to meet the requirements of a certain environment so that it can be suited fit for living, working and resting (Radović, 2013).

3. Principles of environmental management

Eco-management must be one of the main principles in urban planning. Since the city is a complex poly functional system, elements and functions are crucial for a functioning community and the quality of life in a city. Environmental management is not only important for water, air and soil pollution, but also for securing balance in ecosystems and protect nature, managing resources, develop technological processes and equipment, perfect regulations, provide ecological education etc. (Stošić-Mihajlović, Đurić, 2008b).

The functional basics of effective environmental management systems are adapted principles, delimited jurisdictions, as well as modern and effective social and governmental measures (Filipović, 2000).

By observing the specialties in an urban environment, we can separate five activities. Interacting with each other, they result in an effective eco-management system.

1. Economic space management aspects.
2. Judicial management basics.
3. Technical and technological aspects.
4. Organizational (institutional) management level,
5. Informational Systems as a management principal.

The desired quality, environmental conditions, urban characteristics and organizational and technical possibilities of a community to perform certain measures dictates the type of above-mentioned actions they will undertake in order to improve the quality of life.

Figure 2: Activities in the eco-management system

The current passed resolutions, programs, declarations and other documents included general directions cities need to follow in their development. In ecological planning of sustainable development, a city must take care about the ecological space capacity. This concept is based on investigating and defining the capacity of certain spaces (ecosystems) to accept the emission of polluting materials and neglect the negative impact to a point where normal functioning is guaranteed. In other words, we need to determine the amount of stress an environment can take without its ecosystem being disturbed. There, we also need to take into account the measures of controlling and limiting the emission of pollutants from any source. The definition of ecological capacity, especially urban capacity, requires certain investigations including the application of system analysis methods, experimental modelling and direct observation. These complex investigations hint at the existence of a certain ecosystem and its capability to withstand load and internal pressure. The definition of ecological capacities in an urban environment is the strategical basis and a planning requirement for any sort of changes planned in a certain environment. It is also a requirement for active protection and environmental management planning (Stošić-Mihajlović, Đurić, 2008b).

Ecological standards are imperative to strategic planning of sustainable development in modern conditions. According to numerous authors, the main principles in this planning are:

1. Mutual dependence of ecological factors,
2. Tolerance limits.
3. Relation complexity in ecosystems.

It is important to mention that ecological planning of sustainable urban development must represent a qualitatively higher level of planning than the urban planning itself. Urban planners in general did not think of a city as an ecosystem, but rather gave advantage to the economic, hygienic and aesthetic principles. Without going into a detailed analysis of advantages and disadvantages of such an approach, we need to mention that, according to global standards and principles of sustainable development, the accent must be on ecological principles of urban development. This means that by applying ecological principles in planning of urban development and respecting ecological standards, there must be a synthesis between ecology, management and urbanism with the aim to keep the sustainability of urban planning. Additionally, by respecting ecological factors in planning, this would prevent the possibility of going above the ecological capacity of an environment and secure a higher quality of life for the population (Stošić-Mihajlović, Đurić, 2008b).

4. Environmental management strategies

The Environment and Development summit (Rio 1992) is a turning point in global approach of environmental protection. The concept of sustainable development was accepted as a long-term development strategy, which reforms the right of humans to a healthy and productive life within nature. The passed documents represent the basis of relations for the international community towards the environment. The document Agenda 21 as a waypoint for formulating national and local policies, strategies, plans and programs for managing the environment based on the concept of sustainable development is especially important (Stošić-Mihajlović, 2007).

For a long time, the doctrine that production is the driving force of economic growth, capital is gained through economy, natural resources are mutually replaceable and nature is free influenced modern economic ideas. New approaches replace the term “economic growth” with “sustainable development”.

Their difference is in the following: “Growth” relates to increasing the physical production frame (changes in size or number), while “sustainable development” refers to qualitative changes of physically unchanged economic systems. The main thought behind this approach is to create a new and effective way of distributing and using resources based on the principal that the use of natural resources must not reach above the regeneration limits (Radović, 2013).

Even though it seems like it, sustainability is not a final concept. Moreover, it is one goal of development. Supporting that are the facts that the EU mentions that the current economic structures need to change in order to secure the switch to a sustainable economy. The important efforts made in the last couple of years refer to define main elements, relations and approaches in the strategy of sustainable development, based on equal treatment of economic, ecological and social goals. The integral approach and treatment of mutual dependency of the mentioned factors can only exist if there is a balance of all three sustainability aspects in the developmental planning. A sustainable social community is therefore a community that secures the material and intellectual equality in one generation with the requirement that such a community can exist in future generations (Đurić, Stošić-Mihajlović, 2008).

The ecological aspect of the concept of sustainable development refers to the formula of strategies for maintaining ecological integrity. In other words, it refers to environmental protection and bases on three main factors:

1. **The relation to the use of final irrecoverable resources.** The use of irrecoverable resources should not exceed the development pace of an adequate replacement resource.
2. **The usage type of renewable resources.** The use of renewable resources must not exceed the capacity of their recovery. Many of these resources can recover within the limits of the ecosystems they originate from, like sources of drinking water, soil, forests, agriculture and animal fund.
3. **Maintaining emission frames within the limits of the absorption capacity of the environment.** The level of emitting gases, liquid and solid waste must be kept in the limits of the local ecosystem or the global ecosystem to absorb it. Otherwise, it disturbs the balance of energy and matter flow (Stošić-Mihajlović, Đurić, 2008b).

In Serbia, there is still no consensus about the choice for sustainable development. The tendency to align its own political, social and economic systems with the examples of the developed West in the transition process causes a dilemma in the formulation of ecological development strategies within the following models:

1. The model of economic development from the West must be repeated, based on the economic growth at the expense of environmental degradation.
2. Force economic priorities during transition and leave environmental protection for later.
3. Accept the strategy of environmental sustainable economic development immediately.

We should consider that a consequence of today's industrialization models in the West is the degradation and pollution of the environment due to the enormous consumption and exhaustion of natural resources. Developed countries in the West go through a phase of removing ecological hazards from the past. High prices for the recovery of damaged environments led to the opinion that it is cheaper to act preventively, develop ecologically qualitative technologies and use natural resources more rationally, together with a rational use of space (something the majority of countries did not manage adequately) (Stošić-Mihajlović, 2007).

Some transitional countries show the presence of the idea that economic and ecologic development goals need to be separated. This variant does not disregard the strategic goals of protection and improvement of the environment. Instead, it postpones the solutions for it for later, after a certain economic growth has been secured. Such an approach is not perspective at all, since new investments would not include environmental protection and calculate the cost for it. This would lead to great environmental damages and more expenses in the future (Stošić-Mihajlović, Đurić, 2008b).

Independent from the strategic choice, the cost of application must be paid through the cost of today's generation (including the transfer of the costs to future generations). Each of the mentioned alternatives

would have long-term consequences for national economy, the environment and the social status of citizens. The elements of sustainable development are included in the national investment plans, with defined goals of a rational organization and improvement of space within the capabilities and limits of the naturally created resources, aligned with the needs for long-term social and economic growth. To achieve the mentioned goals, there are definitions that include the following:

- Preventing further degradation of space and the endangerment and destruction of natural resources and goods.
- Equal spread of population, business and other activities, according to the needs of the proclaimed equal regional development of the country.
- Aligning the dynamics of de-agrarization, industrialization and urbanization.
- Environmental protection.

Environmental protection defines the following goals:

1. **Environmental quality of life.** This goal requires the following: Securing fresh air, enough drinking water, preserved arable land, ecosystems and biological diversity, healthy food, regulated settlements and living comfort at work and at home.
2. **Rational use of natural resources.** This goal is observed in the natural use of renewable and partially renewable resources, better use of resources and energy, reduction of waste and increasing recycling, safe deposits of all waste, sanitation of ecologic and space consequences from resource exploitation.
3. **Prevention of further environmental degradation.** Especially important in critically polluted urban and industrial centres and ecologically most valuable areas.
4. **Protection of natural areas, ambient and landscapes.**
5. **Support for educational programs in environmental protection** (Stošić-Mihajlović, 2007).

5. The Models of eco-management

The current approach of environmental protection did not deliver satisfying results in environmental improvement. Given that the use of soil and other natural resources have a strong connection to the condition of the environment, applying the criteria of environmental protection in planning of soil purpose, industrial activities, energy, tourism and other sectors should be the key factor for securing a higher quality of life. Hence, planning and especially the control of planned and improved documentation and activities should be the main thing for protecting and improving environment. In order to achieve this goal, it is necessary to develop and perfect instruments and methods for managing and protecting the environment in the process of planning and in the process of realizing plans. Actions include decision making, chose variants and aim towards effective choices (Stošić-Mihajlović, Đurić, 2008b).

Decision-making has following different models of classification:

- Open/closed models,
- Democratic/non-democratic,
- Rational/irrational,
- Effective/ineffective models.

The main goal is to present management as a regulated system with a known and determined order. Modelling is one of the ways of achieving the main goal. The priority is to create a rational and efficient model. Through modelling, the possibility of “deviation” from the prior determined order of priorities or unpredicted influences is included, since it is nearly impossible to create an ideal model (Radović, 2013).

The lack of a systematic method for managing the quality of the environment in eco-management is no coincidence, since each environment has its own characteristic complex natural structure and constructions. Hence, there is the variation of conditions and a stochastic protocol of natural and artificial processes in space and time (Stošić-Mihajlović, 2007).

A systematic approach for environmental management gains many interests, yet nobody has reached beyond the conceptual model, especially in regards to the complicity of environmental protection systems. This is why projecting models use combined techniques, such as:

- Conceptual models.
- Hierarchic modelling.
- Protocol diagrams.

Conceptual models are a short description for the observed part of the real world in text and picture. Such models simplify the communication between the participants in planning and decision making, since they include the main structure of the observed system, define model limits and create conditions for the further development of the model. One such conceptual model includes objects inside a system and their relations. Objects are mainly groups of separate entities with similar functional abilities. Objects have different functional ties pointing to the position of the object inside the system structure and the mutual influence of one object on another. The simplest conceptual model of a space with borders is theoretically possible with a black box model. This model aims to point at the basics of the concept and the management process of changes inside a space by using feedback between input and output system factors (Stošić-Mihajlović, Đurić, 2008b).

A projecting approach of the integral model bases on the fact that environmental transformation also involves the implementation of plans, generally depending on the following:

- Identification and analysis of the existent environment.
- Evaluation of ecological factors in planned activities and space processes.
- Means and measures for achieving protection policies and environmental improvement (Stošić-Mihajlović, 2007).

The ecological approach bases on the evaluation of the ecological capacity of space. This further requires large databases about the environmental condition, extraction of environmental indicators and, more recently, indicators of sustainable development. Especially important for environmental protection and preventive protection is the application of evaluation system for the influence of planned solutions for the environment. This allows the creation of a strategic form in order to create new conditions to align environmental protection plans on the national, regional and local level. Planned activities and actions in space could present sources of degradation and pollution of the physical parts of the environment, through changes such as energy, water, air consumption and material consumption. Disturbances in the physical environment reaching over the ecological capacities of space can cause negative consequences for people, ecosystems, natural and cultural goods. By connecting the mentioned relations between objects, we gain a wholesome flashback model for environmental management (Stošić-Mihajlović, Đurić, 2008b).

The planning process overlaps with the decision-making process. Additionally, without adequate informational system, the management process is unthinkable. Adequate decision-making based on reliable information is vital for the management process. By applying transparency, it is possible to achieve a higher level of openness and democracy of the chosen model. Internet presence with basic information, public procurement for choosing a supplier, precise and clear formulation of contract duties between the supplier and the supplied party are just the first step in a new organization system of sustainable development planning of cities (Radović, 2013).

6. Conclusion

Problems in urban development and environmental protection in Serbia have been very clear. Mainly, this is due to the dramatic political and social changes, deepening of socio-economic crisis and a large number of migrations. Limits to real development strategies (in long-terms), in regards to efficient and rational planning, using, organizing and regulating are a large insufficiency, given that nothing is happening within a space without the space itself interfering with socio-economic development processes. Since planning is a valuable factor in managing environmental changes, it is necessary to create a frame for the formulation of eco-management strategies under new and variable conditions. Additionally, we suggest an environmental managing approach in planning, securing complex solutions of environmental problems and flexibility in decision-making. Furthermore, this would enable combining preventive and sanitation measures by choosing adequate methods and instruments to be applied on different planning levels.

Strategic eco-management planning possesses the necessary integrative potentials for managing environmental changes, long-term time horizons and positions of catalysts for merging sector development policies and strategies. When the concept of sustainable development is accepted on the global level (under modern conditions), strategic planning in eco-management becomes even more important, since it is clear that the conditions of current forms of critical destinations for expenses of economic and social development and for expenses for securing higher quality of life.

The socio economic situation and the relation to the environment in our country (Serbia) hints that the country now lacks many predispositions for the goals of general urban planning. Yet, disregarding the limits, and regarding the fact that planning is a key factor in sustainable management of environmental changes, we suggested frames for formulating strategies of environmental management.

The strategies of eco management in sustainable development planning of urban environment bases on the following:

- Protection of natural and cultural values (absolute priority).
- Rational use of soil, water, energy and natural resources as a whole.
- Rational use of prevention principles for activities that could put the environment at risk or cause environmental damage.
- As a better and more elegant variant in solving ecological perplexities, we suggest the “prediction and prevention” method rather than the “reaction and restoration” method.
- Securing aligned policies and strategies of environmental protection and a higher public participation in decision making about urban and space planning development.

A new approach secures a higher flexibility in decision making, since the ecological and technical factors largely consider socio-economic questions, and therefore, through a consensus of interested parties, the interests of the state, investors, local communities and citizens will align.

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