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SUSTAINABLE DEVELOPMENT AND PROJECT MANAGEMENT[3]

Abstract

The very concept of sustainable development is very complex, as evidenced by a number of definitions of the term. The International Institute for Sustainable Development has defined this concept as an idea where intragenerational and intergenerational equity affects the design or change of national economy and global development. Performance functioning of projects related to sustainable development as a system depends on how the defined goals are implemented and how the purposes are accomplished in a dynamic environment. The basic elements of the concept of project management are time, resources and costs on the one hand and the planning, monitoring and control of individual phases of projects on the other. The aim of this paper is to briefly describe the basic concepts related to the project management of its definition and characteristics, the concept of sustainable development management, the significance and indicators of sustainable development and the institutional and legislative framework for the implementation of sustainable development policy.

Key words: *Management, Sustainable Development, Project Management*

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ОДРЖИВИ РАЗВОЈ И УПРАВЉЕЊЕ ПРОЈЕКТИМА

Апстракт

Сам појам одрживог развоја је врло сложен, што потврђују бројне дефиниције овог појма. Међународни Институт за одрживи развој је дефинисао овај концепт као идеју где унутаргенерацијска и међугенерацијска једнакост утичу на обликовање или промене националне економије и глобалног развоја. Успешност функционисања пројеката везаних за одрживи развој као система зависи од тога како се реализују дефинисани циљеви и остварују сврхе у динамичком окружењу. Основни елементи концепта управљања пројектима представљају време, ресурси и трошкови са једне стране и планирање, праћење и контрола појединих фаза пројеката са друге стране. Циљ овог рада је да укратко опише основне концепте везане за управљање пројектом његове дефиниције и карактеристике, концепт

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управљања одрживим развојем, значај и индикаторе одрживог развоја и институционални и законодавни оквир за спровођење политике одрживог развоја.

Кључне речи: *Управљање, Одрживи развој, Управљање пројектима*

Introduction

The concept of sustainable development is very complex, as evidenced by a number of definitions of the term. International Institute for Sustainable Development has defined this concept as an idea where intra and intergenerational equity affect the design or changes in the national economy and global development.

According to the report of The World Commission on Environment and Development in 1987, sustainable development is development that meets the needs of nowdays without compromising the ability of future generations to meet their own needs.

Performance functioning of projects related to sustainable development as a system depends on how the defined goals are implemented and how the purposes are accomplished in a dynamic environment. However, it must be emphasized that the system of this type is acted by the external and internal disturbing factors. From those simplest disturbing factors, which effects can be predicted and which consequences of the system is known, so taking control measures to eliminate them is known, to such interference, which can not be predicted, and appropriate management measures for their removal are not known. If all what we cited added too low degree of determination of such systems, it is entirely clear that project management is essential.

Due to the dynamic environment, there is a need for greater elasticity and flexibility of companies to adequately respond due to the turbulent market developments.

Concept of project management

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The basic elements of the concept of project management are (Deželjin, Vujic, 1995):

- the time, resources and costs on the one hand and
- the planning, monitoring and control of individual phases of the projects on the other side.

The essence of project management is an attempt that through planning, monitoring and control of time, cost and resource project is implemented in minimal time, with

minimal use of resources, and with minimal costs necessary for the realization of the project (Deželjin, Vujic,1995)

Project Quality Management aims to ensure the quality of the project implementation in all its segments to the end. It is important that the terms of reference do not deviate from the prescribed quality standards. A measure of quality is the extent which we succeed to fulfill requirements, needs and expectations of the project task on which we engage the project team. Quality assurance is a management component, ie, the aspect of quality management. It includes management processes harmonization of the organization, concepts, objectives and resources in the project according to the standards provided for execution of the project and defined objectives. Quality needs to be looked at, in terms of importance, at the same level as the project scope, time and cost (Bobera, 2007).

Quality Management Project, globally speaking, involves two processes:

- Quality Assurance
- Project and quality control of the project.

Quality assurance represents essentially preventive activities, whose purpose is to create the preconditions for the parent organization, primarily through achieving quality of the process from which these products are formed (Rakovic, 2007). One of the most common forms in which quality is ensured is establishing, maintaining, improving and promoting the management system by quality within the organization and its certification to the ISO 9001: 2000 (Bobera, 2007). In every industry, in every business and every activity there are visible and hidden possibilities of fault, inaccurate or wrong doing the job. It is a fact that reflects a realistic and uncertain environment in which we live and work. However, there are, unfortunately, very real opportunities, especially in business processes, enterprises and systems that bugs are reproduced and multiplied, and that error or poorly done activity or work in one part of the project or system - related causes an error or bad performance of activities in other parts. In this way, the chain usually cause new mistakes and problems requiring tremendous time for finding, controling and correcting (Bobera, 2007).

That searching, checking and correcting or remaking requires a large number of people and considerable time, so in this way they cause enormous costs, expensive manufacturing and business process and make inappropriate and expensive products and projects (Rakovic, 2007).

Management of sustainable development

Sustainable development, as a complex concept, combines the three dimensions - environmental sustainability, economic efficiency and social responsibility. This concept of the above concept is known as the "three pillars model" (Đekić, Hafner, 2013). The environmental dimension is concerned, first of all, conversation of biodiversity, preservation and rational use of natural resources, reducing pollution of the environment, concerns about endangered species, their habitats, ecosystems, etc. (Đekić, Hafner, 2013). There are five areas based on which to monitor the environmental dimension of sustainable development (Miltojević, 2011):

Atmosphere, land, oceans, sea, water, biodiversity.

The social dimension refers to (Miltojević, 2011):

Social relations, human rights, the achievement of social welfare, transparency of social activities and, involvement of people in decision-making.

The social dimension is monitored through five areas (Miltojević, 2011):

Health, social justice, education, population, safety and housing.

The economic dimension of sustainable development is based on the principles of economic development compliance with the resources and the production capacity and it is observed through the two areas, namely (Miltojević, 2011):

- production and
- economic structure and consumption;

Serbian national economic development strategies also identified this the three pillars of sustainable development. All three dimensions of sustainable development links the existence of an adequate institutional framework, which is a necessary precondition for the implementation of objectives, policies and regional development policy. That is why institutional framework is highlighted as a fourth dimension of sustainable development in recent scientific analyzes and conclusions. Also, some authors believe that the culture is a specific dimension of sustainable development (Đekić, Hafner, 2013).

Some key recommendations for improving the institutional dimensions of sustainable development at the global level are also highlighted at the summit. The recommendations are:(Đekić, Hafner, 2013):

- changes to international contracts in the field of environmental protection,
- the introduction of new regulations in the international management by concept of the sustainability
- conflict management when concluding multilateral agreements,
- strengthening public-legal partnerships and networks and
- to strengthen the national system of sustainable development management.

Importance of sustainable development

Natural resources are at the base of the industrial development of each country. Natural resources are natural sources of raw materials and energy on which development of all industries is based.

With the exception of land and water, as renewable sources, we conclude that the higher part of industrial development are non-renewable mineral resources. (Đekić, Hafner, 2013):

- the ore,
- nonmetals and
- energy resources - coal, oil and gas.

We see absurd in the correlation between the achieved level of industrial development of mineral resources and available mineral resources. Specifically, industrial production recorded a constant growth rate and its development base, shaped in natural mineral resources, has a constant rate of reduction in available reserves.

Therefore, there is the question whether a given rapid growth of industrial development lead to the complete exhaustion of its raw material base, and thus to its collapse (Đekić, Hafner, 2013).

The world economy is, therefore, faced with the issues where is the border of economic growth. Dramatic warnings on such a future in the past decades are less and less denied. The protagonists of the drama challenging situation, as one of the main arguments, emphasize the fact that the Earth is still little explored and that the

possibility of finding new mineral reserves are still high, especially sources renewable energy sources (solar, wind, geothermal, biomass).

This is true, or rather partly true, but not enough to relax and neglect the following facts (Đekić, Hafner, 2013):

- accessible part of the earth's crust, where are the deposited prospecting mineral raw materials is limited;
- Most rich deposits of mineral raw material is largely exhausted, and amongst the newly discovered and explored deposits, there are more poor than rich, with tendency of a constant decline of quality;
- soil, water and air are exposed to an increasing degradation and contamination due to intensive exploitation of natural resources
- population of the Earth is growing rapidly, and thus the need for food, water and industrial products.

Thus, in conditions of limited natural resources, compensating exhausted newly found reserves don't remove collapse, but it only postponed for a while.

Mankind is aware of these facts, the first global conference on the environment in Rio de Janeiro in 1992. passed a resolution on the promotion of the sustainable development strategy, which has the same targets as new philosophical direction in the further development of human civilization (Đekić, Hafner, 2013).

The essence of the sustainable development strategy comes to the requirement that each generation works and develops satisfying their needs, but not denying editing capability for further development of future generations. Basically, this means development through rational use and saving natural resources and environmental protection, which is just the most vulnerable of their exploitation and processing.

Therefore, management of natural resources, as narrow scientific area, aims to promote and explore the economic specifics of the industry that deals with the exploitation and processing of natural resources, and overall economics of basic industries and study in the context of sustainable development strategies.

This goal gives it a much wider significance than its name and puts it in a multidisciplinary field, with fundamental significance for future industrial and socio-economic development in the world (Đekić, Hafner, 2013).

Resource management as a basis for sustainable development

Some natural raw materials and fuels are non-renewable. Their quantities in the earth's crust are limited. Once extracted and spent reserves of ore, coal, oil and gas, nature is no longer compensated.

Therefore, their rational exploitation, in accordance with the principles of sustainable development, is the strategic question of the survival of human civilization. The strategic importance of the rational exploitation of non-renewable resources stems from the fact that their exploitation, and the use are followed by a lot of environmental pollution (Đekić, Hafner, 2013).

Renewable natural resources, such as land and water, in the era of rapid industrial development become conditionally renewable, since that they are exposed to environmental degradation and pollution.

Sustainable development is a harmonious relationship between the economy and ecology, in order to preserve natural wealth and healthy environment for future generations. In other words, sustainable development means the development harmonized with the limits of nature and the economic and environmental interests, both locally and globally (Đekić, Hafner, 2013).

Correspondingly, sustainable development is defined as development which meets the needs of the present without compromising the ability of future generations to meet their own needs (Miltojević, 2011).

It also includes the need of compromise between excessive consumption of natural resources in the rich countries and the need of poorly developed countries for faster development, and achieving social approaching the poor people to the rich.

In addition, in the foreground stand out requirements for the protection of nature and the long-term conservation of natural resources. This can be achieved only through rational global reduction in use of non-renewable resources, in order

to achieve development that connects the needs of present and future generations. National Sustainable Development Strategies are defined as the process of planning and action that allows the integration of economic, social and environmental objectives towards achieving sustainable development. An integral part of such a strategy is a strategy for environmental management, which includes design, manufacturing, sale and use of the product with minimizing environmental impact during the entire "life cycle" of a product (Miltojević, 2011).

The conference in Rio de Janeiro is a watershed moment for the global acceptance of the concept of sustainable development. Several important documents for the establishment of procedures were signed which should change condition for the better (Đekić, Hafner, 2013):

- Declaration on Environment and Development
- The Convention on Climate Change
- The Convention on Biological Diversity

Indicators of sustainable management

Sustainable development indicators are easily understandable, useful and complex information to investors and shareholders to make decisions on development planning. Indicators must be suitable for the analysis, communication, clarifying and assessing the performance of alternative solutions, through easily comparable value, in order to facilitate a proper decision.

There is no single approach to the definition of sustainable development indicators, but each state creates its own model of sustainable development, in accordance with natural resources, historical, political, cultural and environmental

conditions, with the possibility of redefining the goals. Indicators should provide the information necessary to make decisions that allow you to move the country towards sustainable development. They must be easily identified through the entire "life cycle" of the development system.

When we defining the indicators we should bear in mind that sustainable development, in addition to demands for environmental protection and long-term conservation of natural resources, involves a compromise between excessive consumption of natural resources in the rich countries and the need of the poor to accelerate the development and approaching to the rich.

Sustainable development indicators should specifically define the mechanism of providing funds for achieving the goals of sustainable development. Overall, indicators of sustainable development can be classified into the following groups (sets) (Miltojević, 2011):

Indicators of use of resources, indicators of management, indicators of product, regional indicators, local indicators and sectoral indicators.

Each set of indicators should include indicators of (Miltojević, 2011):

Prosperity, benefits for people, structure of the population, production, recycling, waste storage, climate and climate impact, the quality of soil, water and air, biodiversity, use of non-renewable and renewable energy sources, the impact of production on human health and others.

For effective monitoring of realization of the National Strategy for Sustainable Development it is necessary to establish a system of measuring the degree of realization of the objectives defined by the Strategy in given time by indicators. Indicators should enable forecasting acceptability of business, providing information on current conditions and assumptions about changes over time. In order to be effective over time it is necessary that indicators are constantly upgraded in accordance with technological innovations and changes in social values. A good indicator indicates a problem and helps identify ways to solve it (Đekić, Hafner, 2013).

The institutional and legislative framework for the implementation of sustainable development polices in Serbia

Although the role of the state is often challenged in the past, however, when it comes to achieving the goals of sustainable development, as a complex concept that combines several dimensions, the active role of the state is more than desirable (Miltojević, 2011).

One way of directing the development in the direction that ensures intergenerational equity is to create a sustainable strategy. With this move, the Government of the Republic of Serbia showed interest in the issues of sustainable development and a willingness to develop adequate policies and take appropriate action in this area (Đekić, Hafner, 2013).

The strategy was written in accordance with international strategies in this area and also it is complied with numerous other development strategies which the government of the Republic of Serbia adopted. The report on the analysis of the National Strategy for Sustainable Development of the Republic of Serbia, which is made by the Research Institute for Sustainable development in Vienna, the development process and institutional solution that strategy propose are positively assessed (Đekić, Hafner, 2013).

The key institution that should take the lead role in delivering and implementing sustainable development policies defined in the Strategy, is the Office for Sustainable Development. It prepares decisions and coordinate the work of the Council for

Sustainable Development and it is accountable to the Government. Office for Sustainable Development should perform professional, administrative and operational tasks in connection with coordinating the work of all ministries that their actions are involved in the process achieving sustainable development (Đekić, Hafner, 2013).

Office for Sustainable Development is responsible, on behalf of the Government, implementing the Strategy, implementing projects and activities from the Action Plan for the implementation of the Strategy, as well as to monitor the achievement of sustainable development goals, coordinate inter-ministerial group and cooperation of the state administration in promoting and monitoring the implementation of sustainable development , inform the public and promote activities in achieving sustainable development (Đekić, Hafner, 2013).

In addition to the Office for Sustainable Development, it is necessary to establish a Council for Sustainable Development, which would be an inter-ministerial body, which composition they would make the ministers responsible for environmental protection, economy and regional development, finance, labor and social policy, telecommunications and the information society and Science, as well as other ministers of the relevant ministries of the Republic of Serbia. In addition to these institutions, the issue of sustainable development should be also dealt with (Đekić, Hafner, 2013):

The agency for environmental protection, Energy efficiency agency, Institute of public health of Serbia, Republic hydrometeorological service, Republic institute for statistics , Republic institute for development, Institute for nature conservation of Serbia, Center for cleaner production, and National center for climate change.

Sometimes a large and disorganized institutional apparatus may negative affect the achievement of the objectives of the Strategy, and should therefore be taken into account which ministries, agencies and offices will be involved in activities related to the concept of sustainable development. It is important that among these institutions there is a high level of cooperation and connection, since that sustainable development consolidate several dimensions (Miltojević, 2011).

Until now the most effective approach is the Norwegian approach, where the main responsibility of the Prime Minister's office with the support of a special Council chaired by the Ministry of Finance. As an institutional solution to the level of transferred liability particularly outstanding example of Sweden, which in 2005

established the Ministry for Sustainable Development. The Ministry was formed by merging three previous individual departments (Đekić, Hafner, 2013)

- energy,
- environmental protection,
- planning and housing.

Sweden is one of the countries of the European Union is a leader in key areas of sustainable development (Miltojević, 2011).

Conclusion

Modern business conditions, numerous global crisis, the growth of world population and limited natural resources have popularized the issue of sustainable development.

Each market-oriented country, which takes account of the issues of ecology, environmental protection, social welfare of its citizens and their standards, pays great attention to the issue of sustainable development. This concept incorporates three dimensions: economic, social and environmental, and recently it was joined the fourth, institutional dimension. It should coordinate the activities of the past three dimensions and to provide them with support in achieving their policy. Looking at the global, institutional aspects of sustainable development has so far shown a number of failings that need to be eliminated in the coming period. Primarily it refers to the changes in international contracts in the field of environmental protection, the introduction of new regulations in the international management of the concept of sustainability, avoiding conflict when concluding multilateral agreements, strengthening of public-legal partnerships and networks and national authorities who will deal with these issues, and certainly raise awareness of all citizens when it comes to the issue of sustainable development. The Republic of Serbia by adoption of the National Strategy for Sustainable Development showed serious intention to address this issue, since it is a prerequisite to join the European

Union. The strategy, in addition to economic, social and environmental dimensions, and provided the institutional framework.

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