

The role of resource management and environmental factors in sustainable development

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Abstract

The main objective in this article is to study the issue of development and lasting competitiveness and to study its dimensions and also to acquainted with its related components and how to achieve it. In fact, to get acquainted with competitiveness is as a development that would prevent imposition of cultural, Economical, and social and/or environment damages on future generations. In this article a reference has been made to roles and requirements and correct management of resources in safeguarding and protecting environment and aims of technology strategy in lasting and permanent competitiveness has been discussed and analyzed. Finally, strategic approaches conclusion and also its related proposals have been delivered and explained. Since the resources are limited and the needs are increasing in the developing countries, writing the required strategy as a framework for optimized allotting of the resources is necessary for all three types of development. This is a fact that the developing countries demand new needs for the people of these societies due to the weak technology and because the public media demonstrate the new life styles on the one hand and they confront dangerous and critical situations on the other hand. On the one hand the gap between these countries with the developed countries is increasing and on the other hand their facilities are decreasing due to various political, social and economical crises and the shortcoming of the initial resources and energy for growth and development. Therefore, there will remain little opportunities for compensating the weaknesses.

Keywords: Resource Management; Environment; Sustainable Development; Technology

1. Introduction

By the commencement of the 21st century, the traditional structures are not capable of administrating the complicated development issues. Currently, the old theories have grown pale confronting the countries' experiences and also the thought and social evolutions.

The modern sustainable development is a novel field which in the end years of the 21st century which has opened in the way of human being and since it aims at the wise survival of human being, it soon became prevalent and was admitted by hearts.

In spite of the hopes which went by the

development, it was a trend which yielded no results but more poverty and inequality for the third world and developing countries. Therefore, the sustainable competition-ability was a true solution for the development issue in the evolutionary circumstances within the last years of the 20th century.

The sustainable development is a modern field which simultaneously pays attention to the politics and culture and emphasizes the economical, commercial and industrial prosperity and also supports the living environment and symbiosis with the nature, the equal rights of individuals and also pays attention the to the interior and international affairs of the countries.

The sustainable development is human-based and immediately has become one of the most currently discussions and also one of the issues

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of the 21st century so that the sustainable competition-ability principles and its realization is inevitable.

The goal of this article is surveying the sustainable development and competition-ability and studying its aspects, legalization of its factors and the way to achieve it. In fact recognition of sustainable competition-ability is as a development by which we do not impose the social, economical and cultural or environmental damages to the future generations which is a significant and necessary factor for achieving the sustainable development.

Also in this article we discuss and research about resource management to show how some of the human and natural resources deals with various factors on sustainable development in order to obtain the main goal of this article.

1.1. The goal of the research

The goal of the research is studying the issues about the role of environment and resources management in sustainable competition-ability and elaborating on various aspects thereof, which is investigated by studying various references and from various viewpoints and then the significance of this subject will be pointed out in relation to the developing and developed countries. Since Islamic Republic of Iran has been one of the undesigning countries of this program, it was necessary to elaborate on the history and the

subjects discussed at the international conferences in relation to the sustainable development.

1.2. Methodology

The methodology of this research was in base of review of literature and interpretation of the conceptual model that it shows. Also analyzing the effective conclusions of elements and different factors.

2. The goals of the sustainable competition-ability

The sustainable competition-ability and development in the current world is born with a glance over the 21st century and in this discussion economy, politic, culture, living environment, security and ... have been considered.

This sustainable competition-ability, principally human has been considered as the basis and regarding the expansion of the subjects and their lots of capabilities, it has been immediately turned into the most significant current discussion and also one of the most significant issues of the 21st century.

In this persistency the principle is that the natural resources have to be utilized and protected in a way that the future generations can produce and consume at least as much as what we do today, while there is not such an emphasis in the current development.

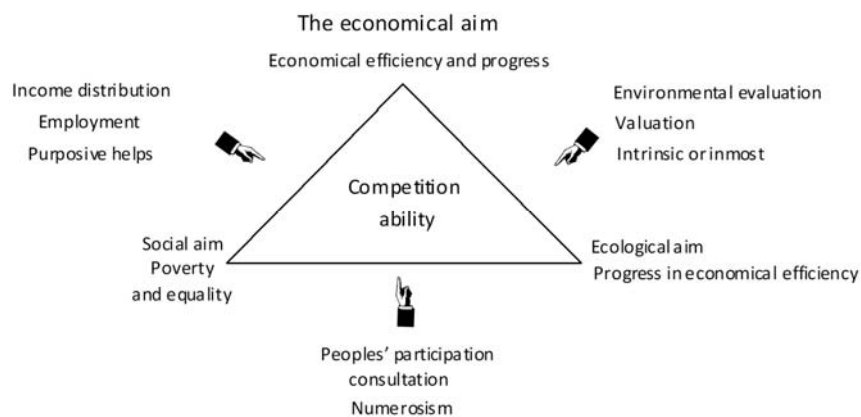


Fig. 1. Competition ability

As it shows in the figure 1, competition ability is result and emerging of the three factors of economical aim, social aim and ecological aim which express the dimensions of the goal and sustainability.

The expression of persisting development was first declared at the global commission of

living environment and development in 1987 where the living environmental issues in the economical development were emphasized. In Laheh conference held in 1991, the concept of sustainable development was investigated and it was emphasized that the sustainable development does not merely mean living

environment protection but a new concept of the economical development: a development which brings all the people and generations of the world the justice and life facilities without overusing the capacity of the limited resources of the globe.

At this conference some fundamental policies and methods were suggested for settlement of the modern regularity and system of the world and achieving the sustainable development.

At the Earth Conference held in Brazil on 1992 the significance of the immediate measures for achieving the sustainable development was emphasized. The message of the Earth to all the people of the world was that development is not possible without protecting the living environment and we should look for a way which helps all the current and future people of the world can equally benefit the gifts such as clean water, clean air and fertile lands.

A general utilization and optimized development of all of the resources (natural, human, financial and renewable) in which all of the rights of the future generations are observed. Implication of sustainable competition-ability and development among the developing countries has its own problems.

In fact the sustainable development and competition-ability depends on the frameworks and special social and cultural situation of every nation. Among the countries, for Iran with a high population growth and necessity of economical and employment growth and also a varying and fragile nature, passing the development and competition obstacles is more complicated and complex.

The requirements of sustainable development:

- A political system which cooperates with the people by supplying their living needs or helping them in decision making affairs.
- An economical system which can do excogitation in tensions made by inequality of the development process.
- A productive system which is required to support the living environment and puts the environment as the basis of development.

3. The roles of the sustainable development

- Originally, the sustainable development includes the arrangement and organizing the interaction between human on one hand and human by human on the other hand.
- It is a development in which the continuous supplying the needs and providing the satisfaction of persons along with the life quality of the people is of the most importance.

- Helping the poor, because they inevitably and unintentionally destroy the living environment more than the other people.

- The self-sufficiency attitude regarding the natural resources exploitation.

- Giving ideas and affecting the development using the economical criteria different from the traditional ones which believes that the development should not terminate the quality of the environment without shortening the exploitation in a long period of time.

- The sustainable development has multilateral aspects such as environmental, ecological, social, economical, legal, cultural, political and psychological, therefore this is a general field in which the concepts of human, social justice or the physical constancy, universal equality, and generation equality and knowledge and science are emphasized.

- The sustainable development is a process which facilitates the accessibility to the continuous, persisting and increasing production for a secure life, social welfare, food security, justice among the generations, places, humans social stability and peoples' participation by organizing and regulating the relationship between human and environment and by management of the living environment resources (adjoining the economical systems with the ecological systems).

- This development meets the human needs without destroying the natural resources which belong to the future generations.

- This is a development which supports the people, provides job opportunity, and does not harm the living environment. At this kind of development reducing the poverty level, productive employment, social integrity and recreation of the living environment will have the utmost priority and the population of human society and the responding capacities of the societies for the needs on the one hand and the attracting capacity of the nature and the places will become balanced.

4. Some of the environmental issues

In persistency of the living environment this was pointed out that we believe that all the people and societies of the world should have control over the biological resources and also should have the right to lead the trend of agriculture development on the ground or in water towards the models which are biologically and social-culturally sensitive and are based on the environmental protection and life variety promotion.

The true resource management is the basis and foundation of the sustainable development. The traditional and local science which has developed within long periods should be formalized. The changes in water and air are important issues to all countries resulting in universal impacts. We want the remaining countries join the Kyoto Protocol.

5. Technology and the renewable natural resources as the sustainable development competition-ability

Principally, today the resources are divided into four sections as follows:

1. Ordinary resources such as the minerals and mines which will be finished after specific amount of exploitation.
2. The fuel and fossil resources such as oil, gas, coal which are attributed to two view points: limited and productive.
3. The renewal resources such as forests, pastures, water and land, and in the fourth section there are the human resources and the role and status of technology which some of the scholars say they result in the renewable natural resources in the sustainable development and competition, while the valuable resources of forces can provide the basis and foundation of sustainable development and competition by programming and participation.

6. Studying the sustainable development and technology

Technology is basically the primary and original force of the development and this

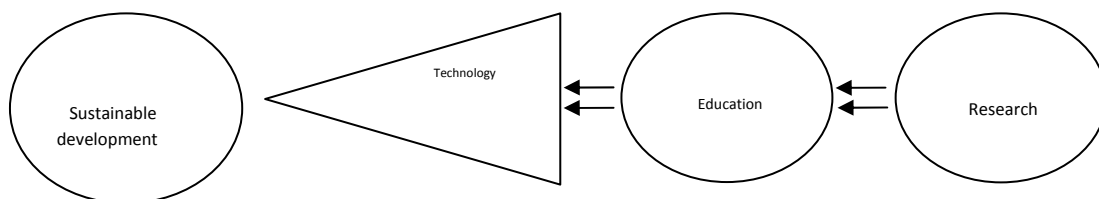


Fig. 2. Sustainable development process

7. The aim of writing the strategy for technology and development

The aim of writing the development programs is offering a prediction beyond the sustainable development function, a prospective which should specify what should a country produce in future and what will be its economical and social structure.

changes the economical structure of the society which is followed by the sustainable development and also causes the increase of the competition in goods production and services in the organizations.

The developing countries are deemed less developed technologically, although most of the poor countries are rich from the aspect of natural resources and culture etc., anyhow such countries confront three fundamental problems:

A- Their population rate is high and is increasing immediately of which around 75% reside at the villages.

B- Their technological basis is so weak and small.

C- Their natural resources are going to be run out due to lack of planning and inappropriate exports. In order for them to realize their own natural and existing capital they should endeavor to:

1. Control their population growth.
2. Reinforce their technological base.
3. Protect and use their resources appropriately.

Regarding the fact that population growth control and appropriate exploitation of these resources require implication of technology. Therefore reinforcement and development of the technology base is one of the most important duties of the developing countries and in other words is a master key for sustainable development and competition.

The continuous relationship among the technology research and training centers for sustainable development can be illustrated as the following design:

This affair requires us to design the various prospective and scenarios for the future. Naturally this prospective should be supported by the technological policies and meanwhile it should be so flexible to become in compliance with the unpredictable evolutions and crises of technology and the requirements of the society. Regarding the aforesaid issues:

The technology strategy is a general image from the future for identifying the policy providing organizations development and programming for encouragement, creation, transferring, and technology development and science production for technology meant to solve the problems of the country with the research aims in national development.

Moreover, the main aim of each technology strategy is to provide a framework for science and technology programming and unification in the economical-social plan. In this case the technology development strategy should specify the technical pre-requirements for the technologic development. Among these pre-requirement strategies there are the competition for searching for the better products, more suitable initial materials, high level skills, programming the technology, creation, modeling, amendment and attracting the technology inside the country.

8. Effective approaches:

In the third economical, social and cultural development program of Islamic Republic of Iran, the subject of environmental and agricultural sustainability are considered with the following effective approaches:

- Exploitation of natural resources should be according to the potentiality of the resources.
- The balance among the domestic animals, exporting from the jungles and the fuels supply and especially emphasis on the peoples' participation in programming, decision making and executing the plans.
- Necessity of environmental evaluation of the production large projects.
- Unification of water and agriculture affairs.
- Prediction of the credits required for executing the natural resources, agriculture, water and land resources development plans and the annual fund of the government.
- Optimized utilization of water resources in agriculture section.
- Performing the economical policies and guidance of the consumers, controlling the surface water wastage and the increasing the efficiency of watering.
- Concession of natural resources sites and properties.

9. Conclusion

Since the resources are limited and the needs are increasing in the developing countries, writing the required strategy as a framework for optimized allotting of the resources is necessary

for all three types of development. This is a fact that the developing countries demand new needs for the people of these societies due to the weak technology and because the public media demonstrate the new life styles on the one hand and they confront dangerous and critical situations on the other hand. On the one hand the gap between these countries with the developed countries is increasing and on the other hand their facilities are decreasing due to various political, social and economical crises and the shortcoming of the initial resources and energy for the grow and development. Therefore, there will remain little opportunities for compensating the weaknesses. Today, writing the strategies and strategic programs for achieving competition-ability and sustainable development have become of a great importance. Technology may be the most important factor in economical and social framework. Because today technology is deemed the most powerful lever for the economical sustainable growth and development. Consequently no general economic program will be effective unless both science and technology is mingled in the programming.

Recommendations

1. since the competition-ability and its sustainable development has a beyond-field concept and bears social, economic and environmental aspects, it should be investigated from all of its three aspects and the required steps shall be taken to promote the social justice, living environment protection and preventing the overuse of the renewable natural resources because the role of the local and international cooperation of the governments and non-state organizations is of a huge significance.
2. Since the national committee of sustainable development has undertaken the responsibility of organizing the performed measures in the country, this is necessary for the committee to increase its cooperation with the universities authorities and scholars vastly and generally.
3. Iran, as on of the developing countries needs the experiences of others especially of the developed countries, so there should be much emphasis put over the experience exchange on various levels.

Appendix

Table 1. Information about natural resources consumption and production in Iran (British Petroleum Statistical Review of World Energy June 2008)

| Item | Quantity | Unit |
|-------------------------------|----------|------------------------------|
| Oil Proved Reserves | 138.4 | Thousand Million Barrels |
| Oil Production | 212.1 | Million Tones |
| Oil Consumption | 77.0 | Million Tones |
| Natural Gas Proved Reserves | 27.8 | Trillion Cubic Meters |
| Natural Gas Production | 100.7 | Million Tones Oil Equivalent |
| Natural Gas Consumption | 10.8 | Million Tones Oil Equivalent |
| Coal Consumption | 1.1 | Million Tones Oil Equivalent |
| Hydro-electricity Consumption | 18.1 | Tera-watt hours |
| Primary Energy Consumption | 182.9 | Million Tones Oil Equivalent |
| Electricity Generation | 193.3 | Tera-watt hours |

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