

Security and Sustainable Development by Damage Reduction Methods in Areas with Water Shortage

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ANNOTATION

Sustainable security and development by damage reduction methods in areas with water shortage of the country can play a very effective role in the development of aquatic environments, as it is one of the indicators for sustainable development of clean and healthy water supply that it is possible to neutralize its effects when water damage is reduced. In this article, addressing new and effective methods in this field have tried to have a new perspective on this issue and on secure providing clean and healthy drinking water.

Keywords: Sustainable Development, water shortage, Saving Methods, Security, Chabahar water shortage

INTRODUCTION

From the very beginning, mankind has faced the need for the water, and with its development, this need has been growing. The most important direct impact of water shortage is on the country's resources.

To prevent the occurrence of Water shortage or reduce its destructive effects, the most important issue is the proper management of water resources. In this regard, the importance of defining indicators for sustainable use of water resources is obvious. What is certain today is the existence of various empirical and scientific approaches that are not difficult in the light of

global communication. But according to the author, the main problems in the transfer of theoretical concepts to practical work, which is almost possible, except when the various elements of society are in relation. This paper examines the new management approaches for optimal water consumption in different sectors and highlights the importance of sustained dialogue between these sectors.

WATER AND ITS IMPORTANCE

Due to water shortage crisis, the water of the rivers decreases and it is possible that the permanent river turns into the temporary stream or dry completely. By reducing the water volume of a river, due to water shortage crisis, in addition, to become salty, it is possible to infect and infect the germ of poisons and other chemicals, and so on.

From a hydrological point of view, Water shortage occurs when not only atmospheric precipitation but also river flows, runoff and stored water are also in short supply.

According to the definition of hydrologists, Water shortage is referred to as a period when the flow of the river is lower than the natural value, and the runoff with the storage of water resources is greatly reduced, and the cause of all cases is less than normal, excessive evaporation or reduce the snow accumulation.

Due to geographical location and climatic conditions, in many parts of Iran, water shortage is a definite and inevitable threat; our country is located 25 to 40 degrees north that is in dry or desert areas of the planet. The most important factor affecting our country's climate is tidal pressure, after which winds are realized that affect the regions below the latitudes of 30 to 35 degrees north of the country, in the central dry areas and the south of the country is effective. Iran, like many countries, with an average annual output of 250 mm, is considered as part of the arid and semi-arid regions of the world. This rainfall is less than one-third of the world's annual rainfall.

Water shortage is a natural phenomenon that occurs every year throughout the world. There are now about 80 dry and semi-arid countries around the world. The population living in these sectors accounts for 40% of the world's population. By 2020, the number of countries facing severe water shortages will reach 35 countries.

The water is one of the most important elements in human life. The human life and the political and military powers of the state depend on the basic human needs and is undoubtedly the most basic human need for the provision of food, and in this regard, water is the most vital substance that can be cited. In other words, water is one of the most important natural resources that have a great impact on the development and survival of human societies.

DROUGHT PHENOMENON

Water shortage can cause a lot of damage to human and have economic, and environmental negative impacts.

This phenomenon will be damaged in any climate regime and every sector, including economics, energy, transportation and tourism.

In the 1990s, compared to the 80's, more than 30 percent of the world's largest casualties have been caused by unintentional events, most of which are floods and water shortage crisis. Today, rivers, lakes and underground aquifers show widespread signs of deterioration or loss of quality. Water consumption has tripled since the middle of the century and this has led to the excessive utilization of water resources. Especially in the last few years, despite numerous water shortages, there has been plenty of irreparable pressure on natural and environmental water resources. Just take a quick look at the statistics over the last few years to make it more difficult to solve problems quickly. In the year 1378, the severity of water damage is 10,000 billion rials, of which the share of damage to farms, grasslands, livestock and poultry is 8000 billion rials. The first step in providing solutions to such problems is to identify the problem and to determine the method of study.

There are several methods for studying water shortage crisis. The most important of these are the following:

- a) Water balance study
- b) Flow analysis method
- c) Rainfall data analysis method.

THE EFFECTS OF WATER SHORTAGE CRISIS

In general, the effects of Water shortage can be classified into economic, environmental and social impacts. There are many economic impacts in the agricultural sector and its dependent sectors, due to the trust of this sector in surface water and underground water resources. Social impacts include water users' involvement, reduced quality of life, and the issue of immigration from village to city or abroad. The likelihood of a conflict between consumers in the case of water shortage is much more severe in areas where there is a problem with water scarcity. In the environmental dimension, Water shortage generally reduces the quality of the environment.

Indirect losses are much more severe than direct losses, but because of the nature of their dispersal and diminution, it is difficult to detect and evaluate them, and they are often unknown.

METHODS FOR REDUCING THE EFFECTS OF WATER SHORTAGE

These two processes are roughly aligned. The proper knowledge of the problem, the opportunity to find a solution and to prevent it, and in the event of a discharge of water will increase, and the lack of recognition of the problem will lead to the choice of the best solution and, consequently, the loss of time and cost. Regardless of the type of water shortage study, it is necessary to define and estimate the indices. Various indicators have the capability to define and measure.

The study of indicators for the sustainable development of water resources and their quantitative analysis also contributes to understanding the problem, and their quantitative and statistical analysis allows for optimal prevention. Strengthening water shortage awareness systems can also help to prevent a problem or help reduce our destructive effects.

MANAGEMENT SOLUTIONS

Management Solutions include planning senior officials, allocating sufficient funds to water affairs, approval of executive and research projects, ongoing studies, and the introduction of new management systems, the development of comprehensive water drainage and replacing risk management rather than crisis management. The more exploration of participatory irrigation management in the agricultural sector and integrated management systems can greatly to opening up new horizons. contribute Development of management systems that have a sustainable balance in the application of groundwater and surface water resources are essential, such as integrated management systems. It should be noted that one of the ways to use all the potential to address the problem of water scarcity is the reuse of water resources such as sewage. Reuse of water as one of the most effective methods is found all over the world, even in regions where there is no shortage of water. The management solutions for using water resources from another perspective will be as follows:

- 1. Management based on water supply.
- 2. Integrated Water Management: Taking Social Dimensions into Water Resources Management.
- 3. Strategic Approaches.

- 4. Preserving the efficiency of freshwater ecosystems.
- 5. Ecosystem-based management.
- 6. Review of how to allocate water in the future.

INCREASED PRODUCTIVITY

The ways to increase water productivity generally are as follows:

- 1. Reduction of water resources that are evaporated out of reach.
- 2. Increased water use efficiency in different sectors, including the agricultural sector
- 3. The control of waters that are used without sea and lake and desert.
- 4. Changing water consumption and water use where it has higher productivity.

EXECUTIVE SOLUTIONS

Executive Solutions include the implementation of approval plans, whether nationally, in the long run, and short-term projects at high costs, or in the majority of the people's participation in small water resources management, in other words, the implementation of managerial plans in practical ways in the sector. For example, an Irrigation Participatory Management System in agricultural sector can be applied experimentally in a region and, after successful management; the analysis could be extended to other parts of the country. It is worth noting that the most important point in the success of the decision-making circles and their decision are both sustained and planned. The most important components that should be constantly connected and interlinked. The dialogue of these inputs together leads to the elimination of operational imperfections in practice. It also employs solutions from the dominant theory. Obviously, the effective solutions of this dialogue are countless. Because the plurality of perspectives and the plurality of problems lead to the abundance of solutions, this issue is considered to be good, more than defective. Particularly, if you look at a vision of commitment and commitment and expertise, add it. What is certain is that the enhancement of the influencer and influence of these two entities is not possible, except in the light of their continued relationship with each other.

RESULTS

Various empirical and scientific approaches are known to the world through strong global communications, or it is easy to find out them. Specifically, water resource management systems are not constant and changing. But according to the author, the main disadvantage in the transfer of theoretical issues is in practice, which is not possible to archive except when various elements are in communication. If we consider the importance of water use in different sectors, such as urban, agricultural and industrial, we will undoubtedly evaluate the role of the consumer as a key factor.

SUGGESTIONS

Having a two-sided look at this dilemma will, in addition to creating new strategies, lead to greater arrogance on the subject, coordination and, as a result, early arrival to the goals. A look at which consumers from different sectors, along with planners, officials, and manufacturers, are looking for promotional issues, also provides macrolevel solutions for saving. As long as the consumer is concerned about the importance of water resources in today's world, it is clear that the dry nature of our country and the non-observance of global standards in various sectors during the occurrence of water shortage crisis, the damage to the society will be much more in future.

The problem of water shortage is a national problem that will not be solved except in a collaborative way. Or, in a correct way, public participation is an inevitable necessity in managing water scarcity. Regardless of the solutions offered to prevent the problem of Water shortage and the options proposed to deal with it in a manner that minimizes damage. The most important issue in solving the water crisis is a continuous dialogue between the various management and executive departments, planners and consumers, and scientific institutions.

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Citation: O. Kaveh, E. Saeid, C. Theodore, P. Vijay, R. Nicolas, R. Maedeh, S. Morteza, N. Hossein, G. Mohsen, D. Shahide, Y. Yohannes and S. Hamid-Reza, "Security and Sustainable Development by Damage Reduction Methods in Areas with Water Shortage", International Journal of Emerging Engineering Research and Technology, vol. 6, no. 1, pp. 32-55, 2018.

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