

Formulation of Strategies and Techniques of Water Conservation and Management for the Sustainable Growth of the Nation

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Abstract- Water conservation is the use and management of water for the good of all consumers. It incorporates the entire the policies, strategies and techniques to effectively and sustainably manage the natural resource of fresh water in order to meet the current and future human demand. It is used in agricultural production, industrial production, navigation, fish and wildlife management and at home. Over the years rising populations, growing industrialization, and expanding agriculture have pushed up the demand for water. Moreover, the change in the climate has amplified the pressures on natural water resources. Water conservation has become the need of the day. Though attempts have been made to collect water by building dams and reservoirs and digging wells; some countries have also tried to recycle and desalinate (remove salts) water but, these efforts are not properly managed and implemented. The most important step in the direction of finding solutions to issues of water and environmental conservation is to change people's attitudes and habits that include each one of us. We can follow some of the simple things and contribute to water conservation for instance, the idea of ground water recharging by harvesting rainwater which is gaining importance everywhere. Conserve water because it is the right thing to do. The purpose of this paper is to study how different techniques can help in conserving water and suggests some fruitful and workable strategies for managing water at different places.

Keywords: Management, Strategies, Techniques, Water conservation

INTRODUCTION

Water conservation plays a vital role in our day to day life. It is the need of hour moreover water conservation can be defined as to preserve or save water for the future use or future generation.

Conservation in simple words can be termed as to maintain or care for the time ahead. Water

Conservation management is proper utilization of water and ensuring to preserve it for time to come. Management helps in sustainability of all natural resources without real observation these resources are wasted more and utilized less. Sometimes underutilization affect overall environment and lack of management results in reckless use which affect the time ahead and leads to suffrage.

Sustainability –

Sustainability refers to using available resources presently and saving it for future use.

Sustainable development is a concept which is required in today's scenario because our natural resources are used rigorously and it contains more wastage and less utilization. So, it is observed destruction is more than operation.

Water Conservation-

The demand of water is increasing day by day people are using water in various unnecessary activities and are wasting it. There is a prime requirement of creating awareness for saving water among people which in future helps to save various life on earth. Water is an important natural resource which should be used keeping in mind the sustainable efforts. There are various methods through which water can be conserved for future such as by using rainwater harvesting technique, terrace farming, roof top water harvesting and many more advanced techniques can be used to preserve water.

Management –

This involves various practices in which there is proper usage of water so that it can be preserved and saved. This includes practice of different irrigation methods which involves use of sprinkler system, Drip irrigation system, contour and terrace farming in hilly

areas. Apart from that awareness should be created regarding its preservation, fruitful and efficient use. Management covers usage and distribution of water in an efficient and effective way so as to minimize wastage and optimal use. Excess population growth and cutting of trees has a negative impact on monsoon which in future will affect the availability of water. Due to this shortage of water occurs.

Objectives –

1. To highlight the ways of conserving water.
2. To Understand the sustainability in context to water conservation.
3. To Suggest strategies through which water can be conserved.

Methodology –

This paper is a review paper, based on secondary data in which information has been collected through journals, articles and from various research papers.

Strategies –

There can be various strategies through which water can be saved. Better conservation has economic benefits which also helps our environment. The demand of water is increasing day by day and scientist has forecasted shortage of water in near future. Sustainable management and preservation has become an important part of our daily life.

Strategies to be followed for saving water and its sustainability are as follows:-

Rain water Harvesting –

The rainwater collected under roof top can has ample of uses such as for washing vehicles it can be used, for cleaning floor, for gardening purpose it can be used. Collecting rainwater not only helps in preservation of fresh water but also helps in achieving sustainability. Further, it helps in reducing the chances of pumping underground water. Moreover prevents flooding to sea prone areas. It is also helpful for areas having more of saline water and less of fresh water.

Irrigation practices-

In India a major portion of water is used for irrigation purpose mainly. So, over irrigation must be avoided. Various practices and means of proper irrigation tools and techniques should be known and even some

training programmed session must be organized for creating awareness to conserve water.

a) Sprinkler / spray irrigation -

It is an irrigation method in which sprinklers are used to irrigate fields instead of water pipe . This helps in less consumption of water and more preservation further it also assist in irrigation of complete field area because sprinklers are rotators instrument which covers complete field area.

b) Mulch tillage –

Mulch tilling involves coverage of bare soil with plant litter, animal manure, cow dung, kitchen scrap etc.

c) Afforestation –

Planting trees helps in holding excess water with roots and reduces soil erosion, thus helps in underground storage of water.

d) Dams-

Dams are built to store excess of water therefore assists in holding up water for future use.

e) Purification / Detoxification –

To prevent depletion of fresh water resources in coastal areas because of desalinate like electro dialysis and reserve osmosis are available. Selection and use of processes is site specific.

Public Awareness –

Creating awareness and making citizens aware with the concept of sustainability will be a helpful measure and citizens plays a important role in achievement of sustainability.

Some of the common techniques to preserve water are:-

Leakage taps should be repaired immediately or in short span of time.

Close the tap water when not in use. Avoid wasting pure water for washing vehicles such as cars , mopet etc. Water harvesting strategies should be implemented in houses at the time of building home. At the time of building houses water harvesting techniques should be kept in mind and applied so as to conserve rain water for future use. Citizens should also follow all the planned norms and strategies of government launched, so as to preserve more water.

Finding –

This paper finds ways which creating awareness among people is of utmost importance to save this natural resource. It is essential to adopt the concept of

sustainability so that the concept of sustainability so that the future should not get affected. Thus, this paper helps in providing complete knowledge about sustainability, water management and various other measures which are taken into importance.

Conclusion-

Due to improper management water resources are deteriorating day by day, due to increase in population, urbanization, overutilization, industrialization. Therefore it is necessary to conserve water and adopt various strategies in a correct and manageable way. The concept of 3R's reduce, reuse, recycle if followed correctly helps a lot in conserving water. The government must implement some latest and sustainable technologies to manage the available water.

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