

Importance of Water Resource Management in Kotputli Tehsil of Jaipur District

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Abstract

Water resource management is the task of planning, developing, distributing and managing the optimum use of water resources. Fresh Water is limited on the earth so it becomes very important to conserve and protect for sustainable use of it. Major techniques of water resource management are "Top-down planning and management" and "Bottom-up planning and management". Human being requires water for various uses. Our biodiversity needs water for its survival and growth. Nature takes care of water resources through replenishing them by precipitation, surface run-off and ground water level recharge. The life of flora and fauna of every ecosystem depends on water. Agriculture is the largest user of freshwater resources, consuming 70 percent of it. Industries are also using an enormous part of fresh water. For the sustainable development of any region, water-management has become inevitable.

Key words: water resource management, sustainable development, Flora, Fauna

Introduction

Water is an essential resource for all alive creatures on the earth. Only 2.5 percent of water resource is fresh and most of this is not available for immediate use for human. Two-thirds of freshwater is locked up in Ice-caps and glaciers. Life exists only on the Earth planet where forms of the life starts from single-celled creature called unicellular to many trillion-celled organisms called multi-cellular. The biodiversity receives the energy from the Sun. Oxygen, carbon dioxide, water, food and other things are necessary for the parts of biodiversity. There are many types of aquatic ecosystems as river ecosystem, lake ecosystem, pond ecosystem and others. Where lives various types of plants and animals. Human being is promoting new techniques by exploiting our natural resources, so that releasing of green house gases has increased. not only wrong and excessive uses of water but also climate change are determined as dangerous threats to plants and animals. The study area is also facing these problems. Many species of flora and fauna are at hazardous spot and it is frighten phase for human being. So management of water has become mandatory.

Study Area

Kotputli is a tehsil in Jaipur District of Rajasthan state. This is located between Jaipur and Delhi. Kotputli town is the tehsil Head Quarter which is situated at 27°70' N Latitude and 76°20' E Longitude. Kotputli was formed from the main town of Kot and the nearby village of Putli. It has many

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historical places. Western boundary of the study area touches to Sikar district, north- east border touches to Alwar district and Haryana state. Study area has average elevation of 439 meters. The total area of this tahsil is 81434 hectares and according to 2011 census, total population is 232195. Sex ratio is 898 females per 1000 males and literacy rate is 62.28%. Forest area of this tehsil is 10628 hectares. Average rainfall is 49.5 cm in the region. Total irrigated area (mostly by tube wells and wells) of the study region is 44522 hectares. Its economy has blossomed in the last few years because of substantial infrastructure projects. Asia's largest cement industry 'Grasim' is also situated here.



Location Map: Kotputli Tahsil

Objectives

- (i) To study about the needs of water management in the study area.
- (ii) To study about the Importance of Water Resource Management

Hypothesis

- (i) At present time, water resource management has become the most essential task for survival of biodiversity.

Methodology

Methodology in this paper is expounded as the systematic method to sort out the research problem. From various sources data have been collected, by using various techniques, delivering an exposition of data gathered and drawing conclusions about the research data. Primary data have been collected from survey. Secondary data collected from various departments, reports, books and research works.

The Importance of Water Resource Management

Water resource management influences several particulars of our lives. Water is so common that we

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often do not think about where it comes from or where it is managed. But, bad management of water resource can really hit us hard.

Water management plan – 2019 (Block – Kotputli)

Category as per latest Ground water assessment- over exploited

Average annual rainfall- 607.45 mm

Discharge of dugwells - 1.30 to 1.50 lps

Discharge of borewells/ tubewells - 1.40 to 1.60 lps

Water quality- Fresh

Fresh water availability- 28.39 mcm

Annual water consumption (agriculture) - 39.31 mcm

Annual water consumption (domestic) - 05.68 mcm

Average depth (dugwells) -25-30 mbgl

Average depth (borewells/ tubewells) - 180-200 mbgl

Average depth to water level (pre Monsoon) – 48.60 mbgl

Average depth to water level (post monsoon) – 49.09 mbgl

Below are some general ways in which water management is foremost.

1. Drinking Water

Human being needs to drink water around eight glasses in a day to get sufficient hydration. That's why it is necessary to save fresh water. Without water we can survive only few days. All species of animals also need water to drink. In other hand plants also require water for their survival. Fresh drinking water is an essential element for all living creatures because most of the minerals are found in drinking water. So water management is considered as the proper way to save the drinking water.

2. Washing and Cleaning

Besides the drinking, water is used in washing, cleaning and sanitation. It is used to clean various places like – hospitals, airports, railway stations, departments, industries, houses, etc. For washing the clothes water is also used not only at home but also in laundries. By washing and cleaning we make all things hygienic.

3. Agriculture

Without water, we can't imagine to grow crops such as grains and fruits. we grow Kharif crops by the using of rainfall water and at the time of Rabi season, irrigation is essential to grow the crops. To produce the healthy and hygienic crops, fresh and pure water is the basic requirement. So water management is an important task in the present scenario of Kotputli tehsil .

4. Leisure and Fun

Swimming, boating and many other leisure activities involve water. Swimming pools and other

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facilities need to be well maintained so that they remain safe and enjoyable places to be. Swimming pool-water needs to be managed by treating it with chlorine and regularly testing its levels of bacteria and other substances, for instance, to ensure that it is safe for people to swim in.

5. Biodiversity

Biodiversity is the biological heterogeneity that contains various species on the earth. Biodiversity comprises different plants, animals, their genes and ecosystems. The natural diversity is necessary to healthy environment that maintains human beings wellness in many dimensions. Every species need water for their survival. In the study area, there are many aquatic ecosystems (like lake, pond, river, dam ecosystems etc.) and these water bodies are natural habitats for a wide range of birds, mammals, fish, reptiles and amphibians as well as water dwelling plants. So water management has become the most essential task to maintain all ecosystems healthy.

Conclusion

Water resource management has become very essential in this period because there are many natural and human created threats are effecting the fresh water composition. As population has increased in very large number so human is using natural resources in very huge scale. As a result, environment degradation, biodiversity loss, lack of fresh water and other problems are increasing. For saving flora and fauna it has become necessary to save water. Human has less options in the context of using Methods of water resource management for our better future and sustainable development.

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