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A Review Paper – II on "Analysis of Watershed Development in Rural Area"

Prof. A. I. Deshmukh[1], Pooja H. Nandane[2], Tejas S. Bhoare[3], Aniket R. Suwaimul[4]
[1]*Assistant Professor,* [2, 3, 4]*Students, Department of Civil Engineering, Jagadambha College of Engineering and Technology Yavatmal*

Abstract: ***This review paper delves into the watershed development programmes have been define in term environmental impacts, bio- physical impacts, socio-economic impacts and overall economic impacts. Watershed management is the indicate to containing the degeneration of natural resources for maintaining the ecological balance and sustainable economic development. There is effectively done various water conservation works under the Watershed Development Programme. It has positively impact on agricultural development and agricultural land use. Watershed development programme has managed soil and water, large development have came about in agriculture with increasing overall productivity, where, increases agricultural land use. There is effectively done various water conservation works under the Watershed Development Programme. It has positively effect on agricultural development and on agricultural land use. The watershed development improve the ground water resources, and it help to conserve the soil, reduce soil erosion etc.***

Keywords: Ecological balance, Agricultural development, Land use, Improve the ground water, Conserve the soil, Reduce soil erosion.

I. INTRODUCTION

Watershed management indicates the use of soil and water resources within a given geographical area so as to enable sustainable production and to minimize floods. Watershed development is an essential component of sustainable development as economic development is encouraged by increase in water use. The technique used to avoid this soil and water loss are one of the greatest techniques of watershed development. Watershed Development program is a thorough program aimed at satisfying the water need in the drought prone area. Watershed development aims to balance the conservation, regeneration and use by humans of land and water resources within a watershed. Common benefits of watershed development is increase ground water table, improved agricultural yield, increase lifespan of plants, improve soli nutrient, store rainwater, and reduce soil erosion. Due to watershed development adequate amount of water available in a ground which is use for future various purpose. It helps to soil and for water conservation, plantation, agronomical development, and institutional developments.

II. OBJECTIVE AND SCOPE

1) To control damaging runoff.
2) To improve groundwater storage.
3) Increasing planting intensity in watershed area.
4) Enhancing the socio economic status of farmers.
5) To improve and increase the agricultural production.
6) To restrained the floods peaks at down stream areas.
7) To reduce the soil erosion.
8) Increasing the soil quality production rates.

III. LITERATURE REVIEW

1) *Biswas A. K. et al. (2005):* Quite often Integrated Water Resources Management (IWRM) is promoted as an efficient method of improving quality of life, poverty alleviation, employment generation, and achieving sustainable development. Regrettably, two fundamental questions have never been assessed: whether IWRM is an implementable concept or not, and, if applicable, to what extent. This book, edited by three distinguished water experts, aims to find out the current status of IWRM in South and Southeast Asia and determine the extent to which this concept is implementable.

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2) *K. Palanisamia* and D. Suresh Kumarb (January 2009):* The watershed development activities generate significant positive externalities which have a bearing on improving the agricultural production, productivity, socio-economic status of the people who directly or indirectly depend on the watershed for their livelihood. The environmental indicators include water level in the wells, changes in irrigated area, duration of water availability, water table of wells, surface water storage capacity, differences in the number of wells, number of wells recharged /defunct, differences in Irrigation intensity and Watershed Eco Index.
3) *Gobinder Singh1*, Vijay Kumar3, K.R. Sharma1, Angrej Singh1, Tejbir Singh Buttar1, Raj Kumar Gupta2, Gowhar Mir2and Ajay Kumar4(2017):* Watershed management is the meant to containing the deterioration of natural resources for maintaining the ecological balance and sustainable economic development. This paper presents the brief review about various aspects of the Participatory rural appraisal (PRA) approaches in watershed management.
4) *Arun Kumar Singh (April2017):* Watershed development programmes have been conceived as a strategy for protecting the livelihood of people inhabiting in the fragile ecosystem experiencing soil erosion, water scarcity and forest degradation. It is seen as a panacea for overall economic development and improvement of other socio economic conditions of the resource poor sections of people inhabiting the programme areas through natural resource enhancement.
5) *Dr. Lingade V. B.1 and Dr. Gharge R. R.2 (June 2019):* Due to watershed development programme has managed soil and water, huge development have occurred in agriculture with increasing overall productivity, where, increases agricultural land use. Therefore, Watershed Development Programme and Agricultural land use have correlated to each other it was realized that sustainable development is synonymous with the maintenance of productivity of natural resources and the maintenance of ecological equilibrium.
6) *Prof Sanjib Kumar Dutta (March 2022):* The participation of beneficiaries in and motivation required Effective use of land and water is fundamental for growth and sustainable development. The concept of watershed management has evolved to ensure the effective use of both natural and social capital. Thus, the watershed development programs include land, water and human resources as essential the planning and execution of the watershed was seen not up to the mark components.

IV. METHODOLOGY

A. *Site Selection*

1) To control damaging runoff and degradation and thereby conservation of soil and water.
2) To rehabilitate the deteriorating land.
3) To increase infiltration of rainwater.
4) To improve the ground water recharge, wherever applicable.
5) To manage and utilize the runoff water for useful purpose.
6) To moderate the floods peaks at downstream areas.

B. *Field Investigation*

In preliminary survey we studied about the selected region considering on various parameters. Observation of previous soil and water conservation structure. In pre-field work we collected Topographical sheet from Survey of India and studied previous literature data about watershed management and development in India.

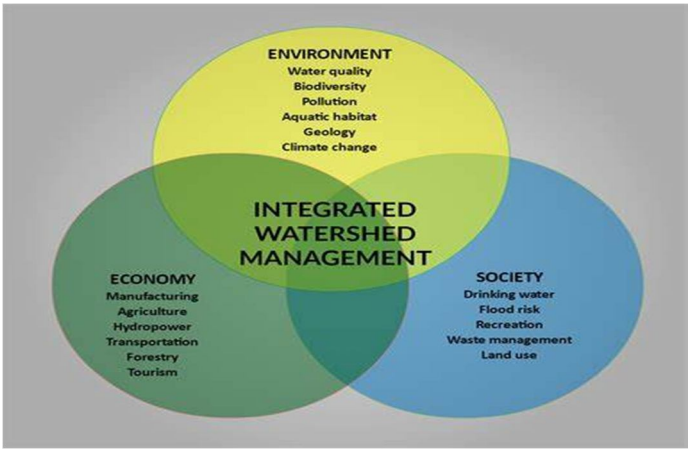


Figure- Integrated Watershes Management

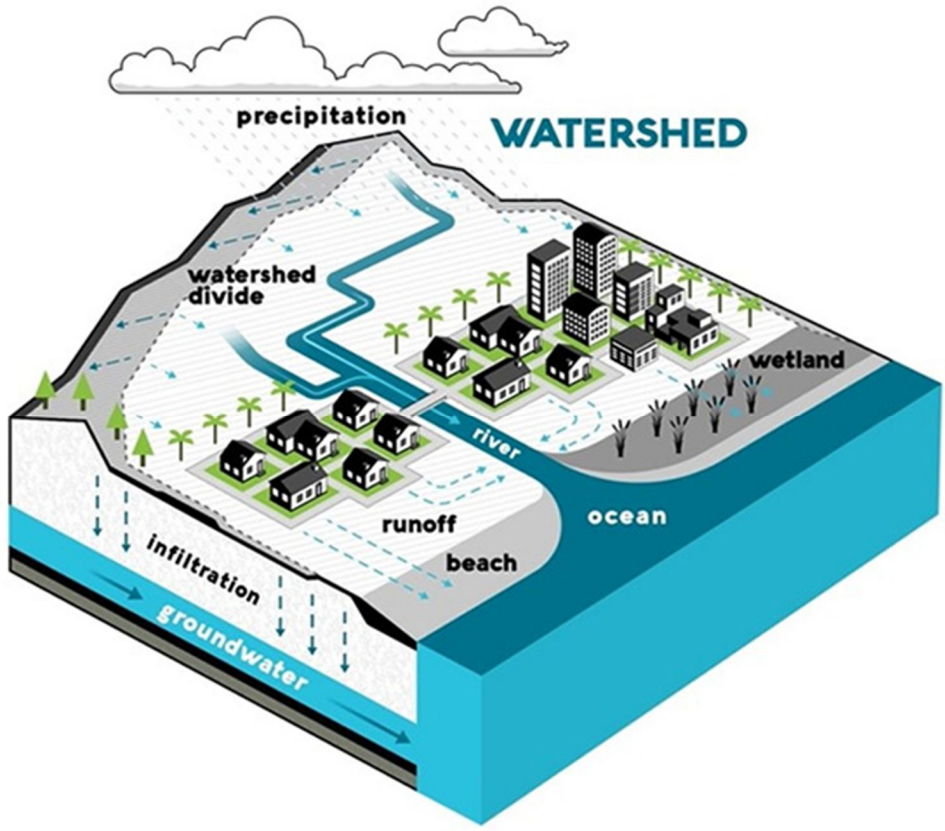


Figure- Drainage Basin Of Catchment Area

V. RESULT

Watershed development programs aim to restore rainwater for future use it increase their capacity to capture and store rainwater, reduce soil erosion, and improve soil nutrients and carbon content so they can produce greater agricultural yields, increased biodiversity and other benefits.

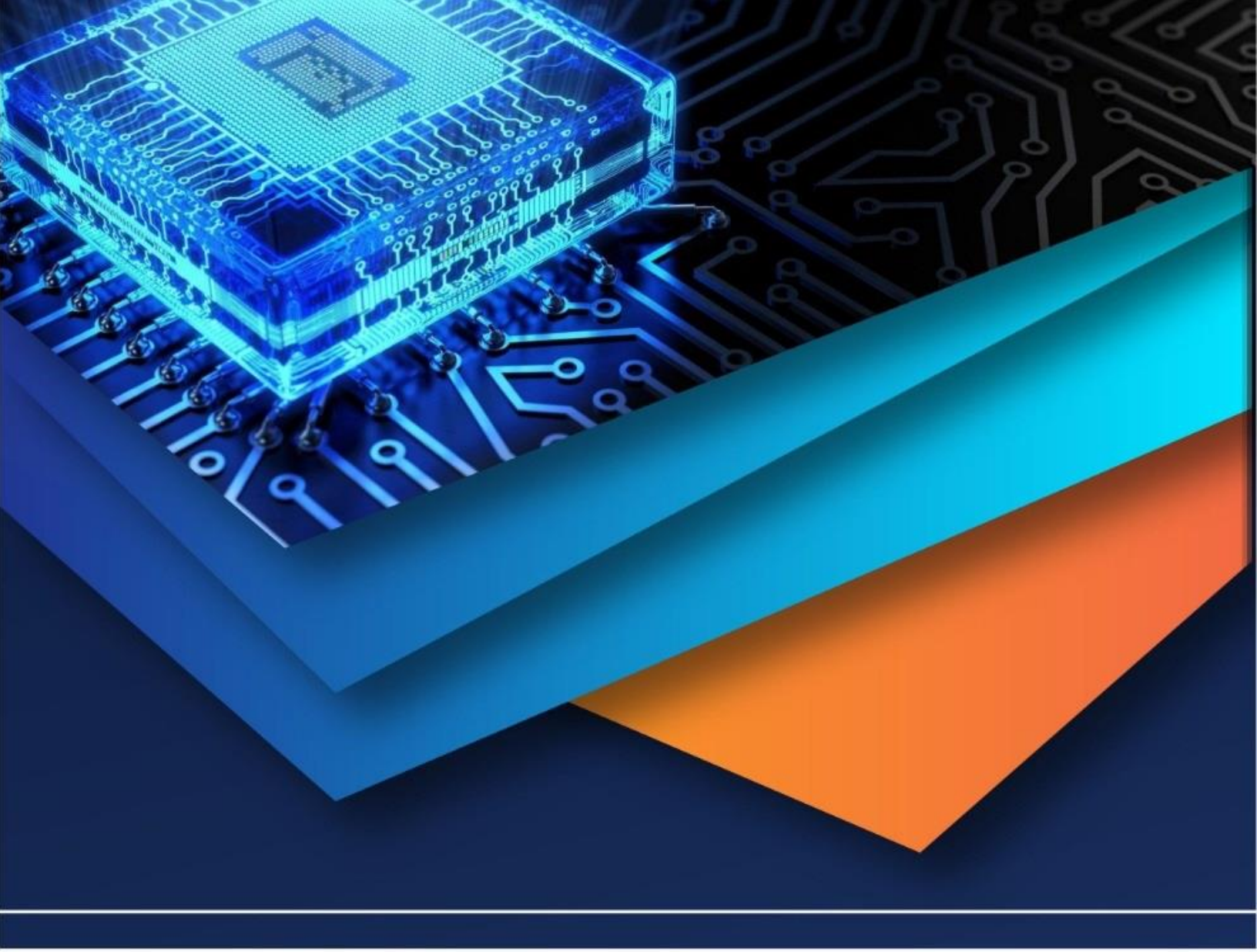
VI. CONCLUSION

Watershed management providing multiple benefits makes it very important points. These benefits depends on the proper implementation of suitable management practices. An integrated approach considering both land and water resources is needed for effective watershed management. Watershed is an essential In day to day life, a vast Range of activities of every day life depends upon adequate supplies of water for example agriculture and industry, power production, inland Transportation , sanitation etc.

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