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A PROJECT REPORT
ON
RAINWATER HARVESTING
AT
LINGAYA'S UNIVERSITY



in partial fulfillment for the award of the degree

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BACHELOR OF TECHNOLOGY
IN
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Submitted by

Manender Kumar (SCE-029)

Amit Kumar(SCE-003)

Amit Vashisth(SCE-004)

Ashish(SCE-006)

Deepak Chhabra(SCE-013)

Dushyant Sehgal(SCE-014)

LINGAYA'S UNIVERSITY, FARIDABAD
CERTIFICATE

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"Straight from the heavens into your bucket":
domestic rainwater harvesting as a measure to
improve water security in a subarctic indigenous
community

Nicholas Mercer & Maura Hanrahan

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Model of Rainwater Harvesting System

Prof. Akash N Ka Patel¹, Paver P. Nandalingi², Paver V. Satpalatogh³, Prof. Purvesh Revell⁴
¹Professor, Department of Civil Engineering, Apollo Institute of Engineering and Technology, Gujarat Technological University Nava Narda, Ahmedabad, Anand, Gujarat, India
²US Scholar, Department of Civil Engineering, Apollo Institute of Engineering and Technology, Gujarat Technological University Nava Narda, Ahmedabad, Anand, Gujarat, India

ABSTRACT

As the world population increases, the demand increases for good quality of drinking water. Surface and groundwater resources are being consumed faster than they can be recharged. Rainwater harvesting is an old practice that is being adopted by many nations as a viable decentralized water source. This project is to prepare a model for rainwater harvesting from rooftops and we are designing Rainwater harvesting system in a residential building to use the rooftop rainwater and recharge ground water from excess water & concrete roads of residential houses then making demo mode to show different collaborative techniques.

Keywords : Rainwater Harvesting, Rooftop Rainwater Harvesting, Bore-Well Recharge, Reuse of Stored Water

I. INTRODUCTION

Water is our most precious natural resource. Its uses are innumerable and its importance cannot be overestimated. Its role ranges from domestic uses, agriculture, and industry to religious ceremonies, recreation, landscape decoration and even therapy. Water is basic to life. Despite the obvious need for a sufficient, year-round water supply to sustain life, there is still a lack of water, much less clean water for many of the world's poor. The lack of water is bound to get worse. Estimates of the number of people without water put the number at about one-fifth of the world's population. For developing countries the number could be one-half.

Due to over population and higher usage levels of water the surface sources are being over stressed which has led to boring of tube wells at individual as well as at local government's level. The replenishment of ground water (GW) is drastically reduced due to paving of open areas. Indiscriminate exploitation of GW results

in lowering of ground water table (GWT) rendering many bore-wells dry. To overcome this situation bore wells are drilled to greater depths. This further lowers the GWT and in some areas this leads to higher concentration of hazardous chemicals such as fluorides, nitrates and arsenic. In coastal areas, over exploitation of GW results in seawater intrusion thereby rendering GW bodies saline. In rural areas also, government policies on subsidized power supply for agricultural pumps and piped water supply through bore wells are resulting into decline in GWT. The solution to all these problems is to replenish GW bodies with rainwater by manmade means.

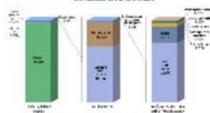


Fig 1. Distribution chart of water on earth

