

Pioneer in Sustainable Rural water Supply – Success stories of Indian Villages, India

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KEYWORDS

Water scarcity, Drinking water supply, rain water harvest, Prosperity

ABSTRACT:

Day by day the available water resources becoming unable to fulfill the increasing demand of water due to various reasons. The exhausted water resources have created major problems in sustainable rural water supply. Yield of deep tube wells are inadequate. The water problems are more severe in summer days. These problems are resolved very successfully, in various villages in India. In the last five years, 35 villages situated in arid zone of Dhule District, Maharashtra state, India, have successfully over come the acute water scarcity. The dried streams are now become live and have flow in summer days also. Along with domestic water need, sufficient water is made available to fulfill the environmental and agriculture need in near by areas. It proves to improve the prosperity and eradicated the poverty to reckonable extent. Their innovative, wise full and revolutionary measures are highlighted in this paper.

Introduction

Monsoon rains are the only source of water in most part of India. Duration of the monsoon is small. It is erratic in nature. The average annual rainfall is 533 mm. The development in the availability of electrical power and pumps has increased the ability to lift water from a greater depth and competition among the farmers to lift the ground water. The result is the rapid depletion of the ground water. As in the other parts of India , Sirpur taluka of Dhule District was facing the acute water scarcity due to above reasons. The ground water is depleted to more than 100 meter. Geologist and director Suresh Khanapur overcome the draught with easy and comparatively economical water conservation techniques named as Shirpur patterns.

Success of water conservation by Shirpur pattern

The depleted Ground water level in the Shirpur area of Dhule district, India, has gone up significantly and water scarcity is a thing of past. The incredible situation is changed with the excellent efforts and water conservation works executed in the last three years by senior Geologist Mr. Suresh Khanapurkar with support of Mr. Amrishbhai Patel; Member of Legislative Council, Maharashtra State, India. The Ideal Project practically running is known as Shirpur_Pattern.

Activity

The water conservation works is executed in 150 square Kilometer **Km** area, situated in between Satpuda Mountain and Tapi River. Till the end of year 2012, 35 villages are covered. Series of concrete and stone weirs are constructed from top to bottom of the stream. A very big crater is made, on the upstream of the weir, by deploying heavy machineries. The depth of crater excavation is around 6 to 10 meter below the river bed level and the width is kept equal to the maximum possible width of stream. The total storage capacity of all the crater and weirs on a stream is such that every drop of rain is harvested. The harvested water in these storages seeps in to the ground under the pressures develops by the high water column. Various streams of total 30 Km length are excavated deep and widened. Total 91 stone masonry and concrete weirs are constructed in series across the streams to harvest every drop of water and recharge the ground in the vicinity. Recharging of 59 wells are done. In addition 3 water storage tanks are constructed.

Results

The immediate result is that, there is surprising increase in ground water level of surrounding area. The work is done in 35 villages but the dry infertile lands in 45 villages of Shirpur taluka have become fertile. In the year 2012, they have receive only 63% rains as compare to annual rainfall in this area, despite of scanty rains they have ample water. The sized agriculture activities before implementation of project are now accelerated due to water availability in to their open wells. The farmers are now producing more than 25 types of crops including fruits and vegetables. Their average farm income is \$6000 per hectare. The fishery is also established over one of the storages, which is surprising because, there was very few water available in Hilly area. Almost 90% land was not under cultivation.

Conclusion

This pattern of conservation of water is definitely practical and effective to improve rural economy in all respect. So need to establish such type of Projects at maximum places. Especially in rain fed areas with low rainfall.

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