Water Management In Rural Areas (Ambade)

Mrs. Kashmire.M.S.[1] , Ms.Pinjarkar.S.S[2], Mr. Alok Raj.[3], Mr. Sandesh Kolkar[4], Mr.Narayan Kawde[5], Mr.Mahesh Kurhade [6]

HOD of Civil Department [1]

Co-Ordinator of Civil Department [2]

Lecturer, Department of Civil Engineering[3]

Student of Civil Engineering Department[4, 5, 6 & 7]

BhivrabaiSawant Polytechnic, Wagholi, Pune, India.

Narayankawde2005@gmil.com, Mr. Alok Raj

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Abstract –

In Maharashtra, there are 29 Districts 41,000 villages, and 378 urban centres. In which the village Ambade of Bhortaluka in the Pune district has a net areaof686.366Hectareswithpopulationof1484 and 326 households.

Water is one of the most essential natural resources for sustaining life. Its development and management play a vital role in agriculture production. Given the rapid increase in population, urbanization, and industrialization, the demand for water to meet various requirements is continuously increasing. The quality of surface water and groundwater is also deteriorating because of increasing pollutant loads from various sources. Climate change may also adversely affect the availability and distribution of water resources.

This article presents an overview of relevant issue spertaining to the development and management of water resources.

1. INTRODUCTION

At a the process of planning, producing, distributing, and managing the most efficient use of water resources is known as water management. Water is an absolute necessity for all living beings. Water resources are getting depleted very fast and also there is a shortage of water in many places due to various factors. To avoid this shortage of water, it needs to be managed efficiently.

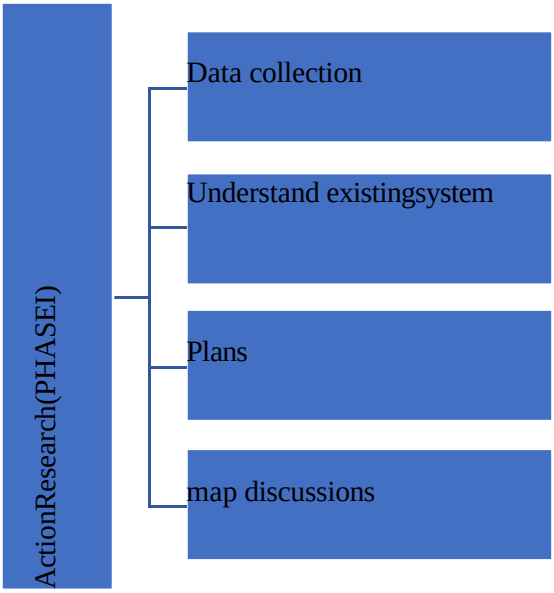
It is one of the most important basic needs for living beings. But with the modernization and development of human lifestyles, consumption of water has been at its peak. The shortage of water has been thus increasing at a very rapid rate. States like Kerala and Tamil Nadu which had once ample of water is now running out of it. Wastage of water has been

proven to be one of its major causes. Water overflow over an hour and careless draining of freshwater from residential, hospitals, and municipal tanks adds flavor to the shortage of drinking water.

3. OBJECTIVE

The study aims to develop a management to be implemented for regular uses & Agricultural purposes in the village of Ambade in Bhor.

4. METHODOLOGY

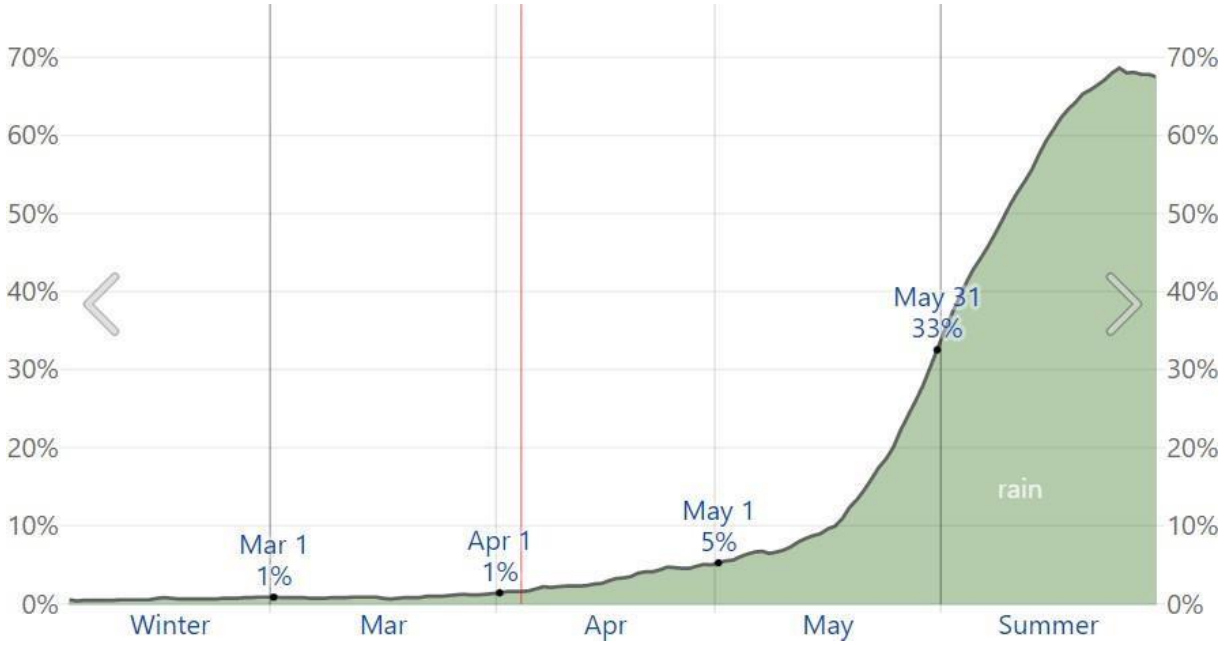


Data Collection

Rainwater

The common source of water in village is 'Rainwater'. Rainfall comes in in Ambade village from June to September as their local people talk Rainfall is the amount of precipitation, in the form of rain (water from clouds), that descends onto the surface of the earth, whether it is on land or water. It develops when air travels to water bodies or over wet land surfaces.

Probability of precipitation in the spring anchor



The percentage of days in which various types of precipitation are observed excluding trace quantities: rain alone, snow alone, and mixed (both rain and snow fell on the same day).

History

The first European depiction piston pump, by Taccola,c.1450.

Irrigation is underway by pump-enabled extraction directly from the Gumti, seen in the background, in Comilla, Bangladesh.

One sort of pump once common worldwide was a hand-powered water pump, or 'pitcher pump'. It was commonly installed over community water wells in the days before piped water supplies.

In parts of Britain and Ireland, it was often called the parish pump. Though such community pumps are no longer common, people still use the expression parish pump to describe a place or forum where matters of local interest are discussed.

Because water from pitcher pumps is drawn directly from the soil, it is more prone to contamination. If such water is not filtered and purified, consumption of it might lead to gastrointestinal or other water-borne diseases. A notorious case is the 1854 Broad Street cholera outbreak. At the time it was not known how cholera was transmitted, but physician John Snow suspected contaminated water and had the handle of the public pump he suspected removed; the outbreak then subsided.

Population

Aambade Local Language is Marathi. Ambade Village Total population is1484and number of houses are

326. Female Population is50.1%. Villageliteracyrateis73.0% andtheFemaleLiteracyrateis33.1%.

Particulars	Total	Male	Female
Total Population	1,484	740	744

Understanding Existing System

Field visits and primary research indicated that the village is heavily dependent onwatertankthough there exist surface water sources also. It is the single major source for meeting all the water demands of the village, both domestic as well as agricultural. The majority of the population is using it for drinking purposes

Future Plans

There is a need for rainwater Harvesting in a village. Also, the need of villagers is for a Water StorageTank should be constructed with a capacity of 10 Lakh liters.

At the village level, water security planning should start with knowledge of water resources management in the village, aquifer, or watershed. A water budgeting exercise should consist of understanding the water resources available, and methods of appropriate utilization of available water resources, for meeting water requirements of different sectors like drinking water, livestock, agriculture, industry, and commerce. Monitoring of groundwater levels and rainfall with rain gauges will lead to knowledge of the availability of water resources. Understanding water conservation and recharge should lead to the planning of water harvesting and groundwater recharge structures, which maximize recharge and minimize evaporation losses. Demand management of water by the irrigation sector would focus on the use of less water-intensive crops, efficient irrigation methods like drip and sprinkler, reuse and recycling of water, and regulation of groundwater over-abstraction. The water budgeting exercise should culminate in arriving at a shared Village Water Vision on managing this resource and equitable allocation for landless villagers and land-holding agriculturists, while protecting the domestic requirements. This collective approach requires considerable work, by trained persons with the villagers. The Village Water Vision should deal with the impact of declining groundwater tables, increasing competing demands, and vagaries caused by climate change.

CONCLUSIONS

The water supply through the public water system is intermittent and when provided, the supply is for just an hour, in the morning and insomecasesinthe evening. Inadequate and inefficient systems of Piped Water Supply (PWS) have forced people to depend on individual borewells.

There is no focus on surface water management currently. With climatic change looming large, there is a severe threat to groundwater resources if the increasing population continues to extract groundwater in an unregulated manner. Although people do accept this over-dependence on groundwater resources and the resulting falling groundwater table, they have yet to embrace any harvesting measures.

Village needs Rain water harvesting System.

Villagers also need Water tank of capacity of 10Lakh Litres

REFERENCES

- https://www.embibe.com/exams/water-management/
- https://www.geeksforgeeks.org/project-idea-water-management-system/
- https://wgbis.ces.iisc.ernet.in/energy/water/paper/wastewater/scope.html
- https://www.slideshare.net/victoriamoyapichardo/water-management-agriculture
- https://www.slideshare.net/CIFOR/pierzgalski-glf-2013
- https://www.ritewater.in/water-management-in-rural-india-scope-challenges-solutions/
- Research Papers